

ANNUAL REPORT
OF THE
DEPARTMENT OF AGRICULTURE
& STOCK

1925-1926



QUEENSLAND

ANNUAL REPORT

DEPARTMENT OF AGRICULTURE
AND STOCK

THE YEAR 1921-1922

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AND STOCK

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PRESENTED TO PARLIAMENT BY COMMAND.

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REPORT OF THE DEPARTMENT OF AGRICULTURE AND STOCK FOR THE YEAR 1925-26.

TO THE HONOURABLE THE SECRETARY FOR AGRICULTURE AND STOCK.

SIR,—I have the honour to present herewith my Report for the year ended 30th June, 1926.

The year generally was marked by abnormal dryness. In certain pastoral districts and some agricultural areas an unusually low rainfall was recorded. Provident farmers in some affected localities, who had had the foresight to conserve hay and ensilage, were able to maintain their stock satisfactorily, but others were forced to seek relief country. On the North Coast, in the Mary Valley, parts of Stanley, and in the Upper Brisbane River areas more favourable conditions ruled. A prolonged dry spell was experienced in the Maranoa, Darling Downs, West Moreton, South Coast, and South Burnett districts. In Central Queensland last year's beneficial winter rains were followed by light but useful falls in the spring, permitting the preparation and planting of an appreciable acreage of maize and cotton. Summer rains, however, were not so generous. Their scantiness and capriciousness prevented the realisation of anything like full crops, and, in respect to maize particularly, some failed altogether. In the Northern Division of the State conditions were nearer normal, particularly on the Atherton Tableland, where good seasonal rains were the rule, and in consequence a record maize crop is in sight. Other localities outside the favoured tropical belt, however, especially those west and south of Townsville, suffered severely through missing the benefit of a normal wet season.

A direct outcome of the hard driving of necessity was a close and increasing interest in fodder conservation. In common with most countries, Queensland has its periods of restricted rainfall, and his experiences of the past year must convince the average stockowner, who is not always so provident as he might be, that the cultivation and conservation of fodder crops are among the most important points in animal husbandry. In some districts, however, notably in the Dawson Valley, reinforced concrete silos are becoming pleasing landscape features, but if security is to be made reasonably certain against otherwise inevitable losses in lean years, this form of insurance must become more general. Modern farming practice, particularly in regions where sufficient rains are more or less irregular, demands closer and more practical attention to this elementary essential in agricultural economy.

The Departmental wheat programme for the season, details of which are set out in supplementary reports, is a continuation of tests already in progress with the object of evolving improved types for Queensland conditions and for the propagation of special strains of seed. Experience has demonstrated the importance of producing varieties suitable to the environment in which they are to be grown. To meet the requirements of Queensland wheatgrowers, the Department has carried on wheat-breeding over a long term of years at the Roma State Farm. Wheats with improved field characteristics, including rust-resistant strains, have been bred to comply with regional conditions, and as a consequence a number of promising varieties has been brought into general cultivation. With the object of gaining the full effect of this work, and of increasing its benefit to the individual farmer, a conference between officers of the Department and the Wheat Board was arranged just prior to the planting season, at which a comprehensive departmental scheme was submitted and accepted by the Board. This scheme covered the raising each year, by agreement between the Board and the individual grower, of supplies of pure seed for delivery to the Board under the premium system, and its cleaning and grading at suitable district centres, from where it could be distributed as required. Other proposals for benefiting the industry generally were discussed and adopted at this conference.

The price paid for last season's wheat, just over 6s. per bushel, has induced the preparation this year of a larger acreage. It is expected that the area cropped will constitute a record. Since sowing, however, the rainfall in the wheat-belt has not been heavy enough to promote a satisfactory general germination, and in some localities heavy frosts proved a retarding factor. Good general soaking rains are now needed to establish the crop and ensure a satisfactory harvest.

The 1925 wheat crop returned in the aggregate, omitting grain retained for seed and farm feed, 1,799,263 bushels. Yields were irregular in some districts, notably in Maranoa and Inglewood. In some instances on the heavier soils, through ineffective germination, an odd failure was reported. On the Darling Downs, where most of our wheat is produced, the average yield was reduced by insufficient rain and late frosts.

Following the general experience of former years, the indications are that, with ordinarily favourable conditions of production, the wheat industry offers encouraging prospects.

An extraordinary demand for grain for feeding stock in dry areas concurrently with a reduction in yield of the 1925-26 crop created a very favourable market for maize. Most of the big maize-producing provinces suffered from rain deficiency, and yields were much below normal. Light crops resulted from early plantings, but the main crop more or less failed. In contrast, the maize-growing tract on the Atherton Tableland enjoyed one of its best seasons, and more than 20,000 tons of good quality grain is the estimated yield.

Through the efforts of the departmental officers the type and quality of seed maize are being vastly improved. Probably no better grain of the respective varieties in process of improvement could be found. Such a result is, of course, only made possible by years of careful technical work. An attempt to evolve a type of grain to suit the very wet seasonal conditions of the far Northern Tablelands is also in progress.

Malting barley was cropped on limited areas on the Darling Downs, sufficient to supply, evidently, a purely local demand. Crops generally were short, but yields were fair to good.

Peanut production is becoming a staple and stabilised crop, particularly in the Kingaroy district, where the peanut plant finds the rich red volcanic, friable loams of the South Burnett altogether congenial. Last year, with the assistance of the Department, a shelling machine was installed by the Peanut Pool Board, whose base is at Kingaroy. Up till then the crop was marketed in the pod, and although the grower got some return, the profit went elsewhere. The shelled "nuts" command a better market and are in ever-improving demand. The fact that in 1924-25 only 691 acres were cropped for peanuts in the whole of the State, and that in the following year 3,000 acres were cropped in the Kingaroy district alone, shows how this minor industry has expanded. On present reports there is a probability this year of the area under peanuts in the South Burnett being extended to 10,000 acres. The light rains of this year proved a serious yield-reducing factor, but owing to the deep-rooting habit of the plant it survived the dry weather much more satisfactorily than maize. Reference to seven years' statistics of the peanut crop shows the average return, in the shell, to be 1,141 lb. per acre.

The tobacco industry, both in respect to the production of pipe and cigar leaf, is not pro-

gressing. Flue-curing to produce the quality and colour required by manufacturers was given a trial at Texas, but the slightly increased value of the product as a result of this process did not allow of a sufficient margin of profit in its favour as compared with the air-drying method. The limited tonnage produced is still air-dried. A monopoly in manufacturing, and consequent absence of market competition for the leaf, militates against the progress of the industry in Queensland. Cigar-leaf growers have also met with marketing difficulties in the disposal of their product. Departmental inquiry has elicited the information that the main reasons for unsatisfactory prices are attributable to faulty curing and marketing of immature leaf. The Department has continued to encourage the industry by importing and distributing seed of the choice varieties of pipe and cigar leaf.

Crops and fertiliser experiments were continued in the Southern, Central, and Northern Divisions of the State in the course of the year. Details of trials and results are shown in appended reports.

Pasture improvement has received close attention, particularly in respect to the renovation of paspalum grass lands. Four sets of experiments—at Atherton, Cooroy, Maleny, and Runcorn—are in progress. Comparisons are being observed between ploughed and unploughed, and fertilised and unfertilised plots, respectively. Interesting data are appended in which green tonnage weights and other related information are given. Results from ploughed and unploughed land are sufficiently interesting to command special mention. One plot unmanured and *unploughed* gave an aggregate green tonnage weight of 4.58 tons per acre, equal to a growth of 31 lb. of grass daily per acre over a period of 326 days, in the course of which seven cuttings were taken. Another plot, unmanured and *ploughed*, gave a corresponding return of 16.31 tons and 112 lb. of grass grown daily per acre. Eighty-one pound of grass daily, approximately a ratio in favour of four to one, was the gain effected by ploughing. The value of this method of reviving grass lands and increasing their stock capacity, is, as a result of this and other tests, fairly convincing. In the course of the year the Agricultural Field Staff has carried out, in addition, much other important work of general benefit to the farming industry.

Queensland and its agricultural resources were very effectively represented at the New Zealand and South Seas Exhibition at Dunedin. The comprehensive display of Queensland products exhibited there aroused much interest in the social and industrial conditions of this State, and very favourable comment was strongly and generally expressed. The fullest advantage was

taken of this opportunity to make known Queensland's remarkable crop range, products, and sound prospects. A very complete Departmental exhibit was also displayed at the Royal National Show at Brisbane.

STATE FARMS.

Dry weather influenced results at Roma, but the experimentalist, despite the seasonal handicap, was able to accomplish much useful work. Valuable data were accumulated. In the course of the year wheat-breeding experiments, plant improvement work, and the propagation of selected varieties of several economic plants were continued.

Seasonal adversity was also experienced at Hermitage. Though near the annual average, the rainfall for the year was not well distributed. Thirteen varieties of approved wheats were sown, and fair yields were obtained. The best yielding wheats returned 26 and 23 bushels per acre, respectively. Other wheat trials were carried on; some varieties showed exceptional qualities, but, owing to lack of moisture, results were inconclusive. Late and continuous frosts also affected returns. Other grain and fodder crops were affected similarly.

The infusion of Merino blood in the crossbred flock, referred to in the last Report, has brought about a marked improvement.

Kairi was favoured with nearly 42 inches of rain for the year, but these figures are below the annual average for the Atherton Tableland. The arrangement with the Bureau of Sugar Experiment Stations for the revitalising of varieties of sugar-cane by changing their habitat to a more temperate climate was continued. Soya beans in four varieties were tried with excellent cropping results. Stock from the Jersey stud is in strong demand, and representatives of the farm herds continue to obtain showing honours. The farm I.M.S. stud has also won favour among district dairy farmers as a base of herd improvement. The value of the stud piggery is also widely recognised.

At Home Hill the nature of the season served to demonstrate the value of irrigation. Most of the watering was restricted to the sugar-cane areas. Tests under irrigation were also made in respect to rice, tomatoes, potatoes, maize, lucerne, and other crops. Fertilising experiments were also carried out.

Although the rainfall was under the average at Gindie, natural grasses maintained a satisfactory growth throughout the season, and dry winter feed was plentiful. The three studs maintained on the station—beef Shorthorn cattle, Clydesdale and Suffolk Punch horses—have each an established reputation, which was sustained

in district show rings. Fodder conservation is practised on the property as a principle of sound station management.

The Ayrshire herd at Warren is proving its value to the dairy farmers of the district it serves, and stock from the farm stud have generally won their way to favour. Pig-breeding is also a successful activity on the farm. Winter cereal trials were carried out, and a large number was sown for general observation under field conditions. Fertilising and spacing experiments were continued successfully with Durango and other varieties of cotton.

THE SUGAR INDUSTRY.

The sugar industry in Queensland has made enormous progress in recent years, and last year the highest yield of sugar was produced—viz., 485,585 tons of 94 net titre. The tonnage of cane grown was 3,668,252. This was largely due to the remarkable expansion which took place in the growing of sugar during the past five years, combined with a particularly good season in 1925. The area under cane last year was approximately 268,500 acres, which carried over 6,000 growers. Of this great area about 180,000 acres were crushed. The number of acres returned for 1925 as being under cane has increased by over 100,000 acres since 1921. The average and approximate yield of cane was high—viz., 20.38—while the yield of sugar was the best on record, being in the region of 2.70 tons per acre, the highest yield so far in the history of cane-growing in Queensland. The final revised figures for the 1925 season are not yet available, but these figures are a close approximation.

The tonnage of cane taken to make one ton of sugar was 7.55, which is also the best on record. This figure is always an extremely interesting one, and has improved considerably in recent years, due to the better efficiency of the mills and the work of the Sugar Experiment Stations and the Cane Prices Board.

The high yield of sugar in 1925 was considerably in excess of the Australian consumption, and it became necessary to export some 200,000 tons of sugar at a much lower price than that obtained for the sugar sold in Australia. This led to the price paid to the grower of the cane being much less than was the case in the immediately preceding years.

The sugar produced was handled by the Sugar Board appointed by the Queensland Government. Their duties involved much careful consideration and anxiety in finding markets for the surplus sugar.

The cane farmer is further protected by the Cane Prices Board, which ensures to the grower his fair share of the general price.

During the year provision has been made for the establishment of a Cane Growers' Council to safeguard the interests of the cane farmer.

The largest sugar-mill in Australia has been opened in the Tully River district since the last issue of the report. The machinery is almost entirely of Queensland manufacture, and the mill has been erected by the Queensland Government. A small trial crushing was made towards the end of last year, but this season a large tonnage will be crushed. Already a flourishing township is in existence, and a large population settled on what was hitherto tropical jungle.

The erection of a power alcohol distillery, which is proceeding at the Plane Creek Central Mill at Plane Creek, Mackay, with the help of Government assistance, is another interesting development. Power alcohol will be manufactured from molasses (a by-product of sugarcane) and from cassava roots, which contain a high percentage of starch. Cassava is now being grown at Plane Creek for the purpose. This industry will be of the utmost importance to Australia, and will doubtless be watched with the keenest interest. In this connection it may be pointed out that out of the 18,000,000 gallons of molasses produced last year, over 6,000,000 gallons were run to waste and over 3,000,000 gallons were burnt, making over 9,000,000 gallons of molasses, from which about 3,500,000 gallons of power alcohol could have been manufactured.

Proposals are also afoot for the utilisation of the megass or fibre of the cane after its juice has been extracted, for the manufacture of a building board. By the use of these by-products it is hoped to materially lessen the cost of the manufacture of sugar.

The present season has been an exceedingly dry one, and the drought has considerably affected the cane crop. At the present moment it is considered that the estimated Queensland yield of sugar this year will be about 120,000 tons below that of last year, so that there will be much less to be exported. This will mean a much better price for the cane grown. The districts below Townsville have suffered to a much larger extent from drought than those above that place, and frost has also done considerable damage in many of the Southern areas.

The educational work of the Sugar Experiment Stations commands considerable attention from growers, and the attendances at the annual field days are increasing every year. Advice on cultivation and fertilising is given by the director and field assistants, and itinerant entomologists and pathologists assist in the combat with insect pests and diseases. The pro-

pagation of new seedling varieties at the South Johnstone Station is progressing satisfactorily.

A full report of the work of the Sugar Experiment Stations, as statutorily provided, will be published later in the year.

PIG RAISING.

The year generally was not a good one for the pig raiser. The growth of grain, green, and root crops was restricted by unfavourable meteorological conditions. Where the season was good, as at Atherton, marked progress was observed in the industry. Largely through the continuous efforts of the Department, a considerable improvement in the quality and condition of stock received at the curing and canning factories was noted, though there is still room for improvement.

Pig raisers are now looking more and more to the Department for information and advice on matters connected with every phase of their calling. On most farms pigs have been made to pay, even though the price (6½d. dressed weight) for prime baconers was below normal in the second half of the term. Prices have, however, been more stable this year than for many years past, and for this advantage the Department may fairly claim some credit. Constant advocacy of closer study of the economics of the industry has produced evident results.

The industry is increasing in popularity. The commercial value of the pig is being increasingly appreciated, and consequently more attention is being given to feeding, breeding, housing, piggery management, and marketing.

Marketing conditions have improved largely as a result of the educational campaign conducted by the Department. The quality of Queensland pig products, either cured or canned, is securing wider recognition and appreciation in Commonwealth commercial circles. This is borne out by the fact that at least half of our production is marketed profitably outside the State, and inquiry for Queensland brands is keener than ever. Further improvements in the conditions of the industry are planned, and a still closer co-operation of pig raisers with the Department is being sought. Feeding experiments are being conducted in co-operation with the Northern Pig Board, and, as deemed advisable, this method of assisting the pig farmer will be extended.

Pig clubs have been established under a scheme of co-operation with the Department of Public Instruction, and educational work—by film, radio lecturettes, lantern lectures, and otherwise—is being extended. Much time has also been devoted with success to organising young judges' competitions.

POULTRY RAISING.

The importance of poultry raising is being more widely appreciated. Increasing annual export values indicate what is possible by a further development of oversea trade in poultry products. When eggs have been properly graded and packed, our experience of this trade has been encouraging. Practical interest in the industry is increasing, and many farmers are now including poultry raising in the general range of their activities.

The regulatory influence of the Queensland Egg Board has been observed in the improvement of marketing conditions. Under its aegis our export trade is developing, and its efforts to stabilise demand and distribution are meeting with some success. Prices throughout the year were wide in range, wholesale values varying from 1s. to 3s. a dozen. The average price, however, compared favourably with that of previous years.

The quantity cold stored (about 220,000 dozen) showed a slight decrease. Most of the export consignments were tested, graded, and packed under Departmental supervision. According to report, they opened up very satisfactorily.

Prices for table poultry compared favourably with past values. Production costs increased as a result of the prevailing dryness. Sound instructional work—by personal visits, lantern lectures, radio talks, and Press contributions—was carried on throughout the year.

COTTON.

Climatically the cotton-grower met with a season of adversity. Unfavourable conditions ruled at the beginning of the planting season. Low soil temperatures and heavy rains were followed by strong drying winds which caused such loss of soil moisture as to severely affect seed germination. This condition prevailed until early in November, when the first relieving summer storms were experienced. Subsequent planting was followed by a good strike in nearly all sections. From then on to the middle of January growing conditions promised to be the best in a five-year term. Rains of the proper intensity and timely occurrence fell in nearly all the main cotton areas, and a fine development of the fruiting system of all properly cultivated crops was general. This was especially noticeable in the early-planted fields.

Then followed a period of abnormal dryness accompanied by high temperatures that continued with little change to March. Such weather prevailing at a critical stage of crop development was most unfortunate. The total yield for the whole State has, in consequence, been much below earlier seasonal estimates, and

considerably below the 12,000 bale crop ginned last year. By 5th June only 5,147 bales, averaging 481 lb. each, had passed through the gins. Prospective later receipts indicated only a slight augmentation of this total. These figures, however, do not represent a lower yield per acre. Seed for a 40,000-acre planting was applied for, but it is doubtful if 25,000 acres reached maturity through inability to obtain a strike. Late-planted crops failed under the dry conditions.

In several districts the yield per acre was from 800 lb. to 1,200 lb. of good-bodied, full $1\frac{1}{8}$ -inch cotton, and in a few cases as much as 1,500 lb. Returns like these demonstrate the drought-resistant capacity of the Upland type, and indicate that farmers in Southern and Central areas, where cotton can be grown profitably, should include planting of this crop in their farming plans.

Cultural methods have shown a decided improvement. The remarkable results obtained last year by growers who applied methods of sound agricultural practice provided an excellent object lesson in this connection. Standards generally have been improved, especially in the preparation of the seed-bed.

Gratifying results are reported from the Callide Cotton Research Station. A crop grown on new land, though planted late, yielded between 1,200 and 1,500 lb. of seed cotton of excellent quality per acre.

Pure seed propagation work has continued along approved lines with satisfactory results. Satisfactory progress has been made also in progeny breeding operations, and one strain has appeared of sufficient uniformity and of desirable characteristics as to warrant its increasing. Further tests are in progress.

Investigations into the various cultural, thinning, and spacing problems were continued along lines similar to those of last year. This work is being continued, for it will require some years of investigation before conclusions can be definitely fixed.

It is noteworthy that growers in the Callide Valley who have been most interested in the farm's activities are securing, as a whole, exceptionally good crops.

In addition to progeny and bulk selection investigations in the Durango variety which were conducted at the Research Farm this season, other varieties are being subjected to similar inquiry.

Cotton cultural investigations, however, have not been confined to the Callide Research Farm. Several sets of experiments, formulated by officers of the field staff, are being conducted

throughout the cotton areas. Unfortunately, owing to irregular and unfavourable conditions of climate, results, so far, have been inconclusive.

The grading staff has had a successful year in handling the Durango variety in the first season in which it has been available for general distribution.

One effect of the unusually dry season, while greatly reducing yields, has been the production of a very bright, white cotton remarkably free from stains or tinges of colour. This is attributable to the elimination of the possibility of moisture-staining and the absence of insect pests and the accompanying fungoid diseases. The result has been a remarkably high percentage of top grades. This condition should assist in the satisfactory disposal of the crop.

A remarkable freedom from insect pests has characterised the past season, the maize grub being the only one that caused appreciable damage. Valuable entomological data were accumulated in the course of the year.

FRUIT.

As with other branches of husbandry, the year was not a satisfactory one for the orchardist.

Improvement in marketing arrangements have produced better returns, and the industry generally is on a more satisfactory basis, both in respect to fresh fruit and the canned product.

Stanthorpe growers had a fairly good year. Fruit-fly losses and disease affection were considerably reduced. Prices generally were satisfactory for all good quality produce. Grape-growers did well, and their product attained a very high standard.

Damage by hail and frost was comparatively negligible. The mandarin crop was reduced in some localities by the effect of heavy winter rains.

There was an increased yield of custard apples, and fruit of very fine quality was marketed. There were many instances of the marketing of inferior, undersized, and immature fruit, which was anything but creditable to the producers.

An all-round improvement in quality, packing, and grading was observed; but there is still room for improvement generally. The production of a high-class fruit and its marketing in the best possible condition and most attractive form was a gratifying business tendency that did not escape observation.

The educational side of fruit culture was steadily progressive. An opportunity of receiving a special scientific training at the Queensland

University was welcomed, and seized by several members of the Fruit Branch staff.

Diseases of the banana have occupied much time and attention of officers of the branch in collaboration with the scientific staffs of the Department, and in association with the Science Faculty of the Queensland University. "Bunchy top," "squirter," "leaf spot," and the ravages of the banana beetle borer received special attention.

In respect to "Bunchy top," the special committee appointed to investigate this disease performed important work, details of which are set out in appended reports.

The pineapple-grower is now in a much better position, due to better marketing arrangements. Specific pathological investigations were continued in the course of the year.

Queensland has gained a reputation for the excellent quality of its citrus fruits, and the sustaining of this reputation is of the utmost importance. This can only be done by applying the principles of sound orchard practice as detailed in supplementary reports.

A number of experiments were conducted in the course of the term under review. These included manuring tests, pest destruction, and disease eradication.

Strawberries proved a profitable crop, and where irrigation was practised returns were fairly constant. The installation of irrigation plants in some localities proved a good investment.

Tomato cultivation has grown to the dimensions of an important industry, and the export trade to Southern markets has increased greatly in volume.

At the Bribie State Nursery good results were derived from an experiment to determine the possibility of improving smooth-leafed pineapples by careful selection. The fruit produced was of a very even type, especially adapted for canning. The experiment is being continued. At the nursery an effort was made to evolve a new strawberry to replace varieties now grown and which are showing signs of deterioration. Prospects of success, so far, are promising, but no definite results can be expected until the experiments are completed. Tests of little known varieties of passion fruit are also being made with the object of determining the possibility of obtaining plants free from "leaf-spot" capable of producing marketable fruit of high quality. Many other tests, details of which appear in the appended report of the Director of Fruit Culture, were carried out in the course of the year.

DAIRYING.

Favourable seasonal conditions governed the industry in the early part of the year, but the prevailing dry spell in the second half of the term was responsible for a diminution in production. Figures for the year show that 60,496,753 lb. of butter, 12,515,895 lb. of cheese, and 9,771,763 lb. of condensed milk were manufactured. First-grade butter attained a higher average quality and uniformity. The general high quality of Queensland butter was the subject of favourable comment and commendation of the experts appointed to judge the entries at the world's butter test in New Zealand. Second place in the test was gained by the Oakey District Co-operative Dairy Company with only half a point lower than the winning competitor—a New Zealand company.

An increase in the quantity of second-grade butters is attributable to unfavourable climatic conditions during the high-production period.

Modernisation of dairy factory buildings and lay-outs was completed in our chief dairying districts, and the industry is now served with factories equipped most modernly at a cost ranging from £30,000 to £60,000 for individual plants.

Suction gas and crude oil units are replacing steam, and the use of electricity in sections of the working plant is being extended. Economy was the aim and attainment. Industrial efficiency has evidently been studied by most butter factory directorates.

Pasteurisation of cream for butter-making is an accepted principle of manufacture in every butter factory in the State, and the product is now more uniform in character with increased durability. Since the pasteurising process became general, however, no marked improvement in the quality of cream has been observed; in fact, in some districts the reverse is the case. This is probably due to the erroneous idea that pasteurisation will eliminate all defects in cream. Efforts are being made to counteract this tendency.

Road transport of cream is claiming the attention of factory directorates. Motor road and rail service have proved their efficiency. Two rail motors for conveyance of cream are now under construction by the Railway Department.

Uncontrolled competition in cream cartage in several districts has proved wasteful and generally unsatisfactory, and the necessity of a systematic transport organisation as a factory auxiliary is becoming more evident.

Improvement in dairy management and methods is becoming general. Dairy farm premises are also undergoing improvement, and modern equipment is coming to be regarded as indispensable on many dairy farms.

Instructional effort directed to the raising and maintenance of high standards for dairy products was a constant factor during the year.

Modern methods of cheese manufacture have also been adopted throughout the State, and efforts are being made to improve the quality of this commodity.

Factory managers have met with some difficulty in manufacture through having to treat weed-tainted milk, which during the past season was frequently received. Even with the aid of the pasteuriser the finished product was, for this reason, often below the quality of cheese in normal times. The use of conserved fodder in dry times would minimise this difficulty.

Factories generally are well managed, and when the milk supply is up to standard they are quite capable of turning out a first-class product.

The defect of the unevenness in colour, commented on last year, has been largely remedied.

The general finish of our cheese has much improved and crates and packing are now quite attractive.

A regulation dealing with the crating of cheese for export was enforced with the object of preventing avoidable damage in transit.

Cold storage of cheese is receiving the attention of the Department. It is evident that unsuitable temperatures and conditions under which the commodity is stored while awaiting shipment or sale is responsible for much deterioration in quality and consequent financial loss. Cheese manufacture is now firmly established in Queensland and its future prospects are bright.

The activities of the several Commodity Boards operating under the Primary Products Pools Acts have benefited the dairying industry very considerably. Marketing has been co-ordinated throughout the State, and a more orderly system has been evolved.

The Paterson (Delroy) Price Stabilising Scheme has had a beneficial influence on inter-state markets.

The adoption of an all-Australian brand for high-grade butter exports has also had an influence in enhancing oversea prices.

The Hamilton Cold Stores, one of the most modern and capacious cold stores in the Southern Hemisphere, were utilised during the season, and in the period of high production were satisfactorily supported.

A conference of Ministers of Agriculture representative of every State was held in Brisbane on the 7th June and following days, at which many matters of importance to the dairying industry and agriculture generally were discussed and appropriate conclusions reached. Full publicity has already been given to the deliberations and decisions of the conference.

The health of dairy stock was good, and no outbreak of disease was reported in the course of the term.

A better bull scheme, which provides for a £1 for £1 subsidy to purchasers of approved dairy sires, was inaugurated.

The manufacturing and marketing departments of the industry have reached a stage in advance of the producing section. Herd testing, culling, and feeding on correct production lines, have not received the attention from the producer that those important matters warrant. Unless the dairy farmer does his part in the general scheme for industrial betterment, he cannot expect to receive the full benefits of the modernisation of the commercial side of his business. Educational effort is being directed towards remedying this weak spot in dairying economy.

Herd testing, however, is receiving an increasing measure of support, and interesting details relating to this subject are set out in attached reports.

The dairying industry needs only the cordial co-operation of all associated interests to ensure its rapid and continued progress.

STOCK DIVISION.

Preliminary figures at present available show an increase in the number of sheep, but a decrease in the number of horses and cattle as at the 1st January of the current year.

The grazing industry has, unfortunately, experienced a seriously adverse season. In the North, Central-West, and South-West graziers are passing through a period of extreme anxiety. Many have either suffered serious stock losses or have been forced to incur the heavy expense of hand feeding or removing their stock to relief country.

Conditions on the country south of the Western Railway, as far as Mitchell, are nearer

normal, but generally all hopes are centred on the early coming of relieving rains.

Cattle values have not materially altered. Northern meatworks opened the season at 19s. per one hundred pounds, but deliveries were short. This season only 4,000 head were trucked as compared with 40,000 up to the same period last year.

The health of Queensland stock has been generally satisfactory. *Pleuro-pneumonia contagiosa* still causes considerable trouble, but where prescribed precautions were observed this disease was kept in check.

The Stallions Registration Act came into operation in Southern and Central Queensland in the course of the term, and the examination of sires is proceeding under its provisions.

Interesting accounts of the work of the Stock Experiment Stations at Yeerongpilly and Townsville are included among the Appendices hereto.

Advantage is being taken of the Departmental wool scheme by increasing numbers of small flock owners.

Blowfly infestation, on account of the dry season, has been little in evidence.

The Deputy Registrar of Brands reports fewer registrations of new brands and earmarks, but an increase in transfers.

Killings in the metropolitan area as set out in slaughtering returns show an increase in all classes of animals treated with the exception of sheep and lambs. Bacon factories also show an increase of 28,000 pigs treated in the course of the year.

Within the period under review 208 ponies and 342 horses were exported from the State.

The tuberculin test was applied to 80 animals, as compared with 319 in the previous year, the number of positive reactions being 9.

Registered cattle dips now total 4,390, distributed throughout the State.

Tick infestation was successfully counteracted in one district in which an outbreak occurred. Effective work was performed in the several tick-cleansing areas.

Fat stock prices at the Newmarket Yards were averaged as follows:—Sheep, 5d. per lb., plus skin value; lambs, 7d. per lb., plus skin value; bullocks, 25s. per cental; cows, 22s. 6d. per cental; calves, 25s. per head; pigs—suckers, 5s.; slips, 15s.; stores, 25s.; porkers, 30s. to 35s.

The average price for calves appears high, but a large number of big weaners was sold through the calf-pens in the course of the year.

In spite of the adverse season, there has been no shortage of stock for slaughtering purposes, and the export meat trade showed an improvement on previous figures.

As indicated in previous reports, the inspection of meat cannot be complete until public abattoirs are established.

THE AGRICULTURAL CHEMISTRY BRANCH.

The analyses completed by the Agricultural Chemist numbered 3,105, an increase on the previous year's figures. Samples of glassware tested totalled 5,336.

Interesting and important information is contained in the appended report, which includes analytical notes on the modification of Kjeldahl's nitrogen determination, moisture determination in meat extracts, soils, waters, dipping fluids, viscera, dairy produce, foods, and stock foods.

The analyses of a thin-shelled variety of the Queensland nut (*Macadamia ternifolia*) are particularly interesting. Details are set out in the report attached. Details of analyses of varieties of peanuts are also among the interesting data appended. Added notes on stock foods and their relative value are of particular interest at the present time.

The largest number of soil samples was received in connection with sugar-cane, cotton, and maize culture, and some valuable data were obtained from the several analyses.

No further samples of waters were received with reference to the suitability of saline waters for stock, and this important question has not yet been determined.

Valuable analyses of dipping fluids were carried out. Of 435 analysed, only 114 were found to be of effective strength, and 78 showed oxidation more or less. Further interesting particulars are contained in the summary of the work of the branch, which is included among the Appendices hereto.

This branch also collaborated with the agricultural branch in pasture renovation and improvement and fodder plot trials, and the results as described and tabulated, together with records of other analyses, are particularly interesting, and illustrate the importance of the work accomplished by the Chemist and his staff.

SEEDS, FERTILISERS, PEST DESTROYERS, AND STOCK FOODS INVESTIGATION BRANCH.

Seed samples to the number of 1,663 were examined in the course of the review period, and a study of the attached survey of the year's activities of this branch and of the supplementary tables will disclose the way in which the interests of the farmer are conserved, and also the importance of its work to the State generally.

Samples of stock foods numbering 264 were examined, and tabulated results are set out herein.

The prolonged dry spell in the Western areas was responsible for a much strengthened demand for concentrated stock foods. Many inquiries respecting a concentrate suitable for feeding to sheep were received. These stimulated investigation, with the result that valuable data were obtained, particulars of which are also set out in the accompanying report of the officer in charge.

Until quite recently the sale of fertilisers was confined mainly to canegrowers in the Southern districts. In the course of the year no fewer than 99 applications for licenses to sell fertiliser were received, many from districts in which there had been no previous appreciable demand. This great increase is probably due to inquiries made of country storekeepers for fertilisers suitable for the top-dressing of lucerne and grass land, which has proved a payable proposition.

Official samples of fertilisers to the number of 203 were taken by officers of this branch, and 67 were received for analysis from wholesale dealers in different parts of the State. No samples were received from farmers or other users.

Two hundred and sixty-four samples of pest destroyers were also obtained for analyses.

The work of this branch, as stressed in previous reports, is of the utmost importance to farmers whose interests are safeguarded in a way not often readily recognised.

THE ENTOMOLOGICAL DIVISION.

Investigations into the numerous entomological problems affecting primary industry are being carried on systematically and effectively.

The worst pest in our banana plantations is the banana beetle borer, and apparently few

banana-growing districts are free from infestation. A special investigation is being continued, and as a result of careful study recommendations have been published which, if generally adopted, are expected to materially improve the present position.

As a result of extensive investigations into the fruit fly problem, covering a series of years, much detailed information regarding the habits of the pest and measures for its control has been gathered. A fruit fly of a different species to the Queensland fruit fly (*Chætodacus tryoni*, F.), reported to be infesting banana plantations in the far North, is now engaging special attention, and valuable data bearing on this important subject is being steadily accumulated. A considerable amount of field control experimental work, covering a very wide field, was also conducted with a view to improving or adding to control measures at present practicable against the several insect pests that affect our national economy.

Pathological investigations were also continued and much useful information was added thereby to our general fund of knowledge. One of the outstanding features of the year in plant pathological work was the publication of the results obtained by the "Bunchy-top" Investigation Committee. Its findings and recommendations based thereon are such that the campaign against the disease now presents a more hopeful aspect.

GOVERNMENT BOTANIST.

The field work of the Government Botanist included a continuance of a study of the Eucalypts of the Brisbane district. Work of this nature shows the value, from a botanical point of view, of the detailed study of special groups of plants in a limited area. Other valuable field work was performed in the course of the year.

A year of activity also covered work of an educational character, including lectures to public bodies and field instruction to students of the Teachers' Training College. A second edition of Mr. White's "Elementary Text Book of Australian Forest Botany" was also published in the course of the year. The fact that the first edition was exhausted within about three years

is evidence that students of forestry in Australia appreciated being able to obtain a textbook of botany with special application to Australian forest flora.

The work of the herbarium absorbed much attention, and large accumulations of material were classified for reference purposes. In addition to general administrative work many papers on botanical subjects were prepared and published.

POOLS.

Action was taken with respect to the following pools in the course of the year:—

Atherton Maize.—The following alterations to the constitution of the pool were made during the year:—

On the 19th November, 1925, the term of office of the then members was extended to the 31st December, 1925, and provision was made that the members appointed thereafter should hold office from the 1st January, 1926, to the 31st August, 1927, and that members appointed after the 31st August, 1927, should hold office from the 1st September in each year to the 31st August in the following year.

On the 16th April, 1926, it was provided that, on the hearing of any complaint against any person dealing in maize other than the board, if it was alleged in the complaint that the maize dealt in is or was maize declared to be a commodity under the Pools Acts, the onus of proof that such maize is or was not maize declared by the original Order in Council to be a commodity should be on the defendant.

On the 21st May, 1926, the board was empowered to give a mortgage or other charge over any book or other debts that might hereafter accrue or become due or owing to the board on account of the sale of the maize and maize crops, to secure the repayment of any moneys borrowed by the board and interest thereon and other accustomed charges.

On the 28th May, 1926, two members of the board, duly authorised by the whole board, were empowered to sign documents for the board.

On the 5th June, 1926, the powers of the board to give a mortgage over books debts were made clearer.

Atherton Pig.—On the 7th January, 1926, the pool was extended for a period of five years, from the 1st January, 1926, to the 31st December, 1930. On the 30th July, 1926, the pool was authorised to take a lease of a bacon factory.

Butter.—On the 16th April, 1926, the term of office of the existing board members was extended to the 31st July, 1926.

On the 27th May, 1926, the constitution of the board was altered so that in future the board would be elected by cream suppliers to butter factories, and not by the factories, as formerly.

Broom Millet.—On the 11th March, 1926, a pool was created for all broom millet produced in Queensland from seed sown after the 1st July, 1925, for a period of three years. The board to administer the pool consists of two members elected annually and one appointed by the Minister.

Canary Seed.—A ballot was held in December, 1925, to decide whether or not a canary seed pool should be reconstituted, with the result that 188 voted for the pool and 47 against. As the necessary majority was obtained, the pool was constituted on the 7th January, 1926. It applies to all canary seed harvested in Queensland during the seasons 1925-26 and 1926-27. The board to administer the pool consists of three members, one appointed by the Minister and two elected by the growers. The board is given power to give security by bill of sale or otherwise over any canary seed delivered to the board in respect of any advance made to the board for the purpose of the Acts.

Cotton.—A pool for seed cotton was constituted on the 11th March, 1926, and it applies to all seed cotton produced in Queensland after the 1st January, 1927, for a period of five years. The board to administer the pool consists of seven representatives of the growers and one member appointed by the Minister. The board is empowered to make arrangements for the ginning and marketing of cotton and seed and by-products of Australia and overseas. It is also empowered to co-operate with the Department of Agriculture and Stock with respect to the distribution of seed for planting.

Eggs.—The following was the result of a referendum to decide whether or not the Egg Board should be extended to the 31st December, 1928:—

Board to deal with owners of 50 fowls and over—

For the board, 939 or 66.92 per cent.

Against the board, 464.

Board to deal with owners of 100 fowls and over—

For the board, 500 or 78.74 per cent.

Against the board, 135.

As a result there was constituted on the 14th January, 1926, an Egg Board for all persons living in that portion of Queensland lying east of a straight line drawn from the Kolan River north of Bundaberg to Goondiwindi who at any time during the currency of the pool own 50 fowls or more. This pool will remain in force until the 31st December, 1928, and it is administered by a board of five representatives of egg producers elected annually and one appointed by the Minister.

Honey.—A referendum was conducted on the 11th January, 1926, to decide whether or not there should be a honey pool over a period of two years. The voting was 275 or 62 $\frac{3}{4}$ per cent. for the proposed pool and 163 or 37 $\frac{1}{4}$ per cent. against. As the necessary two-thirds majority was not obtained the proposed pool lapsed.

Peanut.—On the 16th April, 1926, the constitution of the pool was amended in order to give the Pool Board power to insist that the delivery of the peanuts to the board should be effected in an unshelled condition.

On the 6th August, 1925, the electorates for the return of the board members were altered so as to provide for the peanut growers in the neighbourhood of Rockhampton having direct representation on the board.

A referendum was held in June, 1926, to decide whether or not the Peanut Pool should be continued, with the result that 153 voted for continuance and 17 against. At the same time growers were asked to advise whether they desired a pool for five or three years, with the result that 128 voted for five years and 31 for

three years. Following on this the Peanut Pool was extended for a period of five years as from the 1st July, 1927.

Grain.—In July, 1926, a referendum was held as to whether a maize pool should be formed for the whole of Queensland (exclusive of the Atherton Tableland) for a period of six years. 2,904 voted for the proposed pool and 2,531 against. As the majority was insufficient, the proposal lapsed.

OPENING OF THE OPOSSUM SEASON.

An open season for opossums during the months of June and July, 1926, was declared after a close season of three years.

"*The Animals and Birds Act of 1921*" was amended in 1924 to provide for the formation of opossum boards throughout the State, the issue of trappers' permits by these boards, and the collection of royalty by the Government on the market value of the skins.

Eight boards were established, as follows:—

Board.	Headquarters.
Moreton	Brisbane
Darling Downs	Toowoomba
South-Western	Roma
Wide Bay and Burnett	Maryborough
Central Coast	Rockhampton
Central-Western	Emerald
Northern Coast	Mackay
Northern	Townsville.

A total of approximately 9,000 trappers' permits was issued, and the indications are that the number of skins obtained will constitute a record for an open season in this State.

REGISTRATION OF STALLIONS.

Under "*The Stallions Registration Act of 1923*" stallions boards were constituted to carry out examinations of stallions in Southern and Central Queensland between the months of July and September, 1925.

The following are the results of these examinations:—

Breed.	Number Examined.	RESULT OF EXAMINATION.			
		Number Passed and Certificated.	Percentage Passed and Certificated.	Number Rejected.	Percentage Rejected.
SOUTHERN DISTRICT STALLION BOARD.					
Blood	294	175	59.5	119	40.5
Draught	324	152	46.9	172	53.1
Pony	172	130	75.6	42	24.4
Trotter	83	45	54.2	38	45.8
Total	873	502	57.5	371	42.5
CENTRAL DISTRICT STALLION BOARD.					
Blood	157	95	60.5	62	39.5
Draught	93	62	66.6	31	33.4
Pony	35	22	62.85	13	37.15
Trotter	7	4	57.14	3	42.86
Total	292	183	62.67	109	37.33

JOURNAL.

The *Queensland Agricultural Journal* has maintained a high standard of agricultural journalism and as an official publication. That as a vehicle of current technical and practical information on farming problems and practice it is becoming more and more appreciated is evidenced by its widening circulation. It con-

tinues to be an active and useful educational medium. The aim of the Editor is to issue a publication of all-round value to the agricultural industry, and in this he has succeeded. Necessarily limited to the presentation of what may be termed educational matter, it cannot be regarded altogether as a journal of light agricultural literature, nor is it desired that it should

be so. The Journal has, however, attained the position of a recognised authority on technical and scientific subjects in relation to the industry it serves. Officers of the Department engaged in scientific and technical work have been generous in regard to the number and value of their contributions. Their notes, observations, and findings as recorded have been quoted widely in the scientific Press of this and other countries; and through their efforts the Journal has acquired a high reputation which it continues to sustain.

DEPARTMENTAL LIBRARY.

In the course of the year visitors to the departmental reference library for the purposes of obtaining information numbered 1,118. Three thousand and thirty-six new publications were received, classified, indexed, and catalogued. Monthly lists of publications received were circulated among officers interested in the subject they covered. Fifty-two translations were made by the librarian of works and documents written in foreign languages. In addition, his services as interpreter were enlisted on numerous occasions by several of the State and Commonwealth Departments.

CONCLUSION.

In a general survey of the year's operations, if weather vagaries are eliminated from consideration, good reasons for optimism are presented.

Improvement in processes and the adoption of better practices in all branches of the agricultural industry has been followed by an upward tendency in acre yields. Improved methods of organisation are being followed gradually by the elimination of waste in marketing and the promotion of orderly distribution.

This progress should be continued as better methods are applied and the use of modern farm appliances and machinery extended.

Other factors, of course, on which departmental influence must have some effect are the extension of knowledge and fuller adoption of crop rotation practice where conditions are suitable; the planting of crops better adapted to prevailing local conditions; development of

disease- and insect-resistant varieties; the more general application of disease and insect control measures; more practical use of fertilisers on lands on which soil enrichment is essential; and further efficiency in crop production generally.

The value of organisation in rural industry is being increasingly appreciated and more widely recognised. Large fluctuations in production are not in the interests of either the producer or the consumer, and the risk of market gluts and consequent serious loss must be minimised. The aim should be to secure a steady flow of products sufficient in volume to supply an increasing demand at prices that will return the farmer a decent wage and a fair profit on his investment.

Farming is a business, and like other enterprises it must be made to pay. The "drift to the city" plaint and the "back to the land" cry will soon lose their force when farming is made more profitable and rural life more attractive. When this stage is reached there will be no need to worry about the number of farmers and the adequacy of our agricultural and stock production.

Consumers must be willing to pay prices for farm products that cover the cost of economical production and allow a margin fair enough to enable the efficient producer to maintain a satisfactory standard of individual and community life.

A closer study of the economics of agriculture is becoming increasingly necessary. It has become evident that the prosperity of the industry depends as much upon good business methods as upon sound field practice and animal husbandry. Accurate knowledge of the cost of production, farm organisation, land utilisation, and business co-operation at the commercial end has, it is clear, a most important bearing on the farming industry.

Agriculture is developing into a complex industry, showing at each step in its progress the direct influence of science. The investigation of new problems, the formulation and testing of new theories, their advance to the stage of practical experiment, and the general diffusion of the newly gained knowledge is engaging the close attention of the field and scientific staffs of the Department. The forces and resources of modern science, invention, and investigation, to

the extent to which they are available, are being invoked by the Department, to the advantage of the industry, in its field and laboratory work.

As extraordinary progress and development followed the application of science to our cultural and manufacturing processes, so must similar benefits be derived from the application of modern scientific business principles to the marketing of our produce. The business end of production demands the employment of the keenest brains, the daily study of market movements, the compilation of reliable production and marketing statistics, and the supply of other services necessary to the maintenance of our place in the world's markets. Complete organisation in our instructional, field, manufacturing, and transportation activities must be followed naturally by thorough organisation in the marketing and distribution of our products.

In other words, the pooling of interests in industry predicates the pooling of brains.

Appended are reports from the Directors of Agriculture and Fruit Culture, the Supervisor of Dairying, the Chief Inspector of Stock, the Cotton Specialist, Agricultural Chemist, the Officer in Charge of the Seeds, Fertilisers, Pest Destroyers, and Stock Foods Investigation Branch, Government Botanist, Chief Entomologist, and the Registrar of Co-operative Societies.

With this Report are also statistical tables compiled by the Registrar-General and containing much interesting and valuable information bearing on the position and progress of agriculture and its related industries.

E. GRAHAM,
Under Secretary.

REPORT OF THE DIRECTOR OF AGRICULTURE.

SIR,—I have the honour to submit herewith my Report for the year ended 30th June, 1926.

The 1925-1926 Season.—Within the borders of such a vast State as Queensland it is only to be expected that marked differences would be noted in the class and character of the seasons experienced from year to year. Unfortunately, certain pastoral areas have suffered for many months and are still suffering from the effects of drought. When the toll is taken in the affected country it will be all too patent that stock and financial losses will be very heavy indeed. In some of the agricultural districts in the southern portion of the State drought conditions also prevailed, the most affected area being in and around Gayndah. Here a few provident farmers who conserved hay and ensilage maintained their stock satisfactorily, but the majority had to move every hoof and were lucky to get agistment country in the Upper Burnett, at no great distance from their holdings, until the drought broke several weeks ago. In contrast to droughty conditions the immediate North Coast district on the Blackall Range enjoyed a good season, whilst in the Mary Valley and parts of the Stanley and Upper Brisbane River districts fairly satisfactory rains fell. A rather prolonged dry spell, however, occurred in the Maranoa, Darling Downs, West Moreton, South Coast, and Kingaroy districts, and was the direct cause of a lessened production of dairy and agricultural produce of all kinds.

In Central Queensland beneficial rains in the winter of last year were followed up by light but useful rains in the spring, which permitted of the preparation and planting of appreciable areas of maize and cotton. Summer rains, however, proved all too scanty. Most of the maize crops failed, and the main stand-by, cotton, gave generally only light yields.

North Queensland, particularly the Atherton Tableland, enjoyed a splendid summer season, and the maize crop promises to be a record one. Other districts, outside of the favoured tropical belt of country, particularly those west and south of Townsville, suffered through lack of sufficient rain. Conditions were most unsuitable for agriculture in the neighbourhood of Charters Towers. Here a good deal of capital was spent over a few seasons in an endeavour to promote cotton growing, but the company interested in the project had to abandon it.

Hay and Fodder Conservation.—Brief as the reference was under the previous heading to the spell of dry weather, which was felt in quite a number of important agricultural districts, its incidence and probable recurrence cannot very well be ignored. Although interest has latterly been shown in silo construction, the greater perhaps being in the Dawson Valley, where several reinforced concrete silos were recently built, it is only too evident that the Queensland stockowner will have to be more provident in the future, both in the matter of hay and ensilage conservation. Hay sheds, to avoid the extraordinary waste due to stacking hay in the open; and silos, to conserve the thousands of tons of maize plants rendered valueless, as they were this year, for grain production through spells of dry weather, require to be made more familiar land marks than they are to-day.

If it were possible for each stockowner to hold reserves of fodder on his property (and this is applicable also to the grazier, who in the generality of cases has superabundant supplies of natural grasses available in good seasons) drought would be robbed of its disastrous aftermath, a safer living assured, and the live stock, a national asset, not only saved but kept in a state of production.

Although liberal provision has been made under the Agricultural Bank Act for the erection of hay sheds and silos and the purchase of plant for harvesting and conserving fodder, the would-be borrower is brought face to face with difficulties. Obviously, where the security is sound, he must have some easier means of getting money than at present. And if this latter object were more readily attainable, other matters, in the way of construction of suitable buildings and the use of portable plant, could be provided for on a much more advantageous basis.

A brief survey of some of the more important crops and of Departmental activities in connection therewith is as follows:—

Wheat.—The 1925 crop, the marketing of which under the Wheat Pool Act is directly in the hands of the growers' representatives, gave an aggregate return, exclusive of seed and feed requirements on farms, of 1,799,263 bushels of grain, which was delivered to the Board. In certain districts, notably Maranoa and Inglewood, yields were irregular; and in some instances, on the heavier soils of the Maranoa, seed failed to germinate, with the result that odd failures occurred. On the Darling Downs, where the major part of the wheat is produced, the average yield was reduced by two circumstances—insufficient rain, principally on a belt of country near Nobby and Clifton; and, secondly, by two late frosts in September, which affected the wheat belt generally and caught Florence and Pusa largely, two frost-susceptible but popular varieties, whose early maturing characteristics had accounted for the crops being in a forward and rather susceptible condition (the flowering stage) when the frosts occurred. Wheats of later maturing habit more or less escaped, and it is reasonable to infer that in frost-labile situations the tendency will be to choose less susceptible varieties, or sow as late as possible consistent with local conditions.

Turning away from these disabilities and risks which the farmer is up against by the nature of his calling, the other and more pleasing prospect is presented. On hillside and slope of the picturesque Darling Downs the vista presented itself at harvest time of field after field of superb crops yielding in the main from seven to eight bags of grain to the acre, and on occasions ten and twelve and even up to fourteen and fifteen bags.

With anything like satisfactory conditions for production, the possibilities of expansion of the wheat industry are most encouraging. Expansion undoubtedly means much to the State.

How the Department is Assisting to Stabilise the Industry.—Experience has proved how important it is to produce varieties suitable to

the conditions under which they are to be grown. To meet requirements here, the Department has carried on wheat-breeding work consistently for a long term of years at the Roma State Farm. Wheats with improved field characteristics, including rust resistance, have been bred to meet special requirements in different districts, and the co-ordination of effort between the wheat-breeder and the Departmental Field Staff has been the means of bringing several promising varieties into general cultivation. With the object of making this work more fully effective and of the greatest possible benefit to the individual grower, a conference was held, before the 1926 planting season commenced, between officers of the Department and the Wheat Board, when a far-reaching scheme was brought forward by the Department and approved of by the Board. This included the raising each year, under agreement between the individual grower and the Board, of supplies of pure seed for delivery to the Board under the premium system and its cleaning and grading at suitable district centres, whence it would be distributed as required. Between thirty and forty growers were supplied with pure Departmental seed. Additionally, the Board is assisting the Department in its effort to eliminate smut (bunt) from Queensland-grown wheat in an endeavour to have all seed wheat pickled with copper carbonate before it is sown.

1926 Wheat Season.—This year it is expected that the area cropped will constitute a record, the price for last season's wheat (slightly over 6s. per bushel should be realised) acting as an inducement to growers to prepare as much land as possible. The Maranoa district had better rain than elsewhere throughout the main Darling Downs wheat belt. Generally speaking the rains over the latter stretch of country were light; the first fall, which was a few weeks late for the seasonable sowing of slow-maturing wheats like Currawa and Cleveland, came just in time for the general planting of mid-season varieties, and a second fall, a week or two later, permitted sowing generally. Those who had prepared land early and kept it in good tilth obtained a very satisfactory germination. In a few localities, particularly on heavy black-soil country that was at all late in being worked, the rain was barely in sufficient quantity to permit of the preparation of a good seed bed. Here the soil was inclined to remain in coarse nodules, and on this account some of the seed wheat malted and had to be resown.

In a number of localities on the Darling Downs sufficient rain fell to moisten both soil and sub-soil, and here the crops are doing well and will carry on for some time. Elsewhere the rain only penetrated about six inches, and although the young wheat got away nicely (there was some damage on flat country by heavy frosts to embryo plants of low vitality) good soaking rains are urgently needed to thoroughly establish and carry on the young crops.

The Departmental wheat programme for the season, referred to in detail in accompanying reports, is a continuation of tests in progress, with the object of evolving improved types of wheat for Queensland conditions and for the propagation of special strains of seed. The wheat-breeding work at Roma State Farm has also been designed on an extensive scale this season.

Maize.—The high prices realised this year, with the certain prospect of an advance, were due in the first place to the reduction in the aggregate yield of the 1925-1926 crop, and concurrently, to the extraordinary demand for grain for feeding to sheep in the drought-stricken pastoral areas.

In the Southern division of the State, with the exception of the Mary Valley and the Upper Brisbane River districts, where more rain fell and good crops resulted, all the other big maize-growing centres in the Southern Burnett, South Coast, West Moreton, Lockyer, and Downs districts were not favoured with sufficient rain to ensure even a good average return. Generally speaking, the early and late planted areas yielded light crops, but the main planting more or less failed. In contrast to the partial failure in the Southern and Central divisions, the Northern maize-growing area on the Atherton Tableland enjoyed one of the most favourable seasons possible. Here the yield promises to exceed 20,000 tons, and on account of the nature of the season (freedom from an excess of drizzling rains) the quality of the grain will be good.

Seed Maize Improvement.—The type and quality of the stud seed maize produced this year by the efforts of the Departmental Maize Specialist is remarkable for its evenness and uniformity; and it is questionable whether better grain of the respective varieties undergoing improvement could be found. Such a result is only possible by years of careful technical work, which in such an important maize-growing country as this is should have a far-reaching beneficial effect.

Establishment of a Stud Maize-breeding and Research Farm.—The work of the Department has now been brought to a stage when very considerable assistance would be derived by the establishment of a specialised Stud Breeding and Research Farm, where problems intimately connected with the progress and development of the maize-growing industry could be investigated.

Additional work was designed and is in progress to evolve a type of grain to suit Atherton Tableland conditions, where difficulty has been experienced in past wet seasons with the locally-grown type of maize, which produces a rather soft grain, somewhat susceptible to moulds.

Maize Harvesting Machines.—Reference was made last year to the excellent work witnessed at a trial on the Downs of a Toowoomba manufactured maize reaper-thresher. The Northern Instructor in Agriculture in his annual report has referred to another machine designed for harvesting maize which was imported by Messrs. Faichney Bros., of Kairi. Obviously, the perfecting of a machine for harvesting and threshing maize is a matter of very great importance in the development of the industry.

Malting Barley.—Limited areas only were cropped last year on the Darling Downs, the market evidently being restricted by the capacity of the two Toowoomba malt houses to absorb the output; and to some extent also by the competition by Southern-grown barley. The crops generally were somewhat short, but the yields were fair and in some cases good.

Canary Seed.—Although a more co-ordinated system of handling and marketing was instituted

under the existing Canary Seed Pool, the 1925 crop was not up to expectations, due to the fact that the belt of country in the Nobby and Clifton districts, which ordinarily produces the major part of the Queensland crop, suffered from the dry spell. Canary seed crops consequently did not stool out and develop satisfactorily, and light yields were all too common. The plant does much better in seasons when there are ample supplies of soil moisture.

Peanuts.—Interesting and important developments have taken place at Kingaroy in connection with the peanut growing industry. Here the peanut plant finds a congenial home on the rich red volcanic, friable loams of the district. Last year, with the assistance of the Department, a peanut-shelling machine was secured and installed by the Peanut Pool Board, whose centre of operations is at Kingaroy. Prior to this the marketing of the crop was done on the shell, and although the grower got a fair return, the profit went elsewhere. The installation of the machine was the "open sesame" to the Australian market, and full advantage is being taken by the enterprising secretary and members of the Board to popularise their shelled peanuts. In the season 1924-25 691 acres were cropped throughout the State. In the present season, 1925-26, it is estimated that 3,000 acres were cropped in the Kingaroy district alone, and present indications point to the probability of placing 10,000 acres under peanuts this season in the same locality. An electrically driven cleaning, grading, and shelling plant has been put in at a cost of about £1,500, and the sheller will turn out a ton of shelled peanuts per hour.

The crop this season was reduced through the incidence of the dry weather, but owing to the deep-rooting nature of the plant it gave a return under weather conditions which proved disastrous to maize. Reference to seven years' statistics of the peanut crop shows the average return, in the shell, to be 1,141 lb. per acre.

Tobacco.—The industry is not progressing. As a matter of fact, this applies to both pipe and cigar leaf.

The centre of operations of the former class of tobacco is at Texas and the latter at Bowen. With few exceptions, pipe leaf is grown on the share system by Chinese.

Flue curing to produce the quality and colour required by manufacturers was given a trial on Texas station, but the slightly increased price did not leave a sufficient margin of profit at the time between it and the ordinary air-dried leaf to warrant a continuation of the process.

The limited tonnage produced is still air-dried, and the tendency on the part of the Chinese is to grow heavy-yielding types in preference to varieties which may not in the generality of cases produce quite such heavy crops.

Another difficulty which militates against the progress of the industry is the lack of competition in buying, marketing having to be effected principally through the British Australian Tobacco Company, which has a monopoly in manufacturing.

The cigar leaf growing industry is also in a parlous condition, growers also having had difficulty in obtaining payable prices through Melbourne brokers who deal direct with cigar

manufacturers. Inquiries made by the Department on behalf of growers showed that the principal reason for this was attributable to faulty curing and marketing the leaf in an immature condition.

The Department makes a practice of regularly importing choice kinds of pipe and cigar leaf seed for use of growers. There appears to be a promising field for work by an instructor in tobacco culture with a knowledge of both growing and curing.

Renovation of Paspalum Pastures.—Four sets of experiments at Atherton, Cooroy, Maleny, and Runcorn are in progress—sixteen plots each at the three first-mentioned and forty plots at the latter centres. In all cases comparisons are being made between ploughed and unploughed, and fertilised and unfertilised plots respectively.

In the progress report submitted by the Assistant Instructor in Agriculture, Mr. C. S. Clydesdale, interesting data are given respecting the green tonnage weights cut from special areas enclosed for this purpose. Taking the lowest and the highest yielding plots merely as an example, it is shown that Plot 1A, unmanured and *unploughed*, gave an aggregate green tonnage weight of 4.58 tons per acre, equal to a growth of 31 lb. of grass daily per acre over a period of 326 days, 15th June, 1925, to 22nd April, 1926, in which seven cuttings were made. Plot 8B, unmanured and *ploughed*, with a corresponding return of 16.31 tons and 112 lb. of grass grown daily per acre, a gain effected by ploughing of 81 lb. of grass daily, approximately a ratio in favour of ploughing of four to one.

No more convincing proof could be had of the effectiveness of this method of resuscitating old paspalum lands, nor of improving their stock-carrying capacity. It also opens up great possibilities in the matter of renovating and improving the stock-carrying and milk-producing capacities of paspalum country, by the introduction of protein-yielding plants such as clovers and lucerne, which could more readily be established on inverted sod land before the renewed growth of paspalum is made.

The possibilities opened up by this experiment are very great indeed, and serve to illustrate that the rich tract of volcanic country of which Maleny is the centre may readily be brought back to its original stock carrying capacity, which was a beast to the acre.

Agricultural Instruction and Departmental Experiment Plot Work.—A fairly comprehensive scheme of crop and fertilizer experiments was designed and carried out in the Northern, Central, and Southern divisions of the State, details of which are furnished in the reports of Messrs. Pollock, Brooks, and Gibson, Instructors in Agriculture for the respective divisions.

Good work is being done by the whole of the members of the Field Staff. The duties of the Instructors are of a varied nature. By coming into personal touch with the farmers the instructors are brought face to face with the problems confronting them. It affords an opportunity also of introducing and testing new varieties of crops of economic value and of imparting advice on cultivation and soil treatment; on methods of fodder conservation; how to recognise and treat the more common plant pests and diseases, and

on agricultural matters generally, all of which exercise an important bearing on production.

Instructors in Pig and Poultry Raising.—The services of both of these officers, Messrs. Shelton and Rumball, have been largely availed of by farmers interested in the respective callings, and a perusal of the reports submitted will indicate the character and scope of work each was actively engaged in, which is undoubtedly exercising a very important influence in the industries concerned.

Advertising the Agricultural Resources of the State.—A comprehensive exhibit was prepared and dispatched to the New Zealand and South Seas Exhibition at Dunedin, where the Queensland exhibits excited much favourable comment. Nothing but good should result from such a splendid opportunity of advertising the resources of the State.

A very complete exhibit was also prepared and displayed at the Royal National Show in Brisbane.

The preparation of two complete exhibits of this character entailed a great deal of organisation and of resourceful work on the part of officers of my branch, to whom much credit is due.

State Clydesdale Stallions.—Four stallions—General Wallace, Bold Wyllie, Premier Again, and Glenalla—were allocated to the Laidley, Murgon, Cunningham, and Crow's Nest districts, where seventy-four, fifty-five, seventy, and fifty-

seven mares were respectively served, making a total of 256 for the season.

In addition to mares previously examined and passed, a veterinary examination for soundness and for type and conformation was made in the undermentioned districts, but the number of mares brought forward proved insufficient to warrant the placing of a stallion in any locality. A comparison between the number respectively examined and passed will serve to indicate that the quality and type of animals in the neighbourhood of Mackay and Rockhampton did not conform to the desired standard:—

District.	Examined.	Inspections.	Passed.
Lowood	77	2	38
Clifton	38	2	25
Bundaberg	13	1	9
Mackay	8	1	0
Rockhampton	11	1	1

Attached hereto are the annual reports of the undermentioned officers on my Staff:—The Instructors in Agriculture for the Southern, Central, and Northern Divisions, Messrs. Gibson, Brooks, and Pollock respectively; Assistant Instructors Clydesdale and McKeon, of the Head Office Staff, who dealt specifically with Wheat and Maize Improvement and the extension work connected with each Industry; the Instructors in Pig and Poultry Raising, Messrs. Shelton and Rumball; and the reports of Managers of State Farms, Roma, Hermitage, Warren, Gindie, Kairi, and Home Hill.

H. C. QUODLING,
Director of Agriculture.

EXTRACTS FROM AGRICULTURAL INSTRUCTORS' REPORTS.

SOUTHERN DIVISION.

The Instructor in Agriculture for the Southern Division, Mr. A. E. Gibson, reports:—

From the viewpoint of the agriculturist and live stock owner the period under review will go down in the history of the State as one of the "lean" years, and whilst conditions have varied in different portions of the State it will be generally conceded that 1925-26 was well below the average year of prosperity associated with primary production as a whole.

The wheat crop in its initial stages met with fairly satisfactory climatic conditions, but late frosts experienced during the critical stages of the wheat plant's life, at which a sudden lowering of temperature to frost readings is calculated to damage its ultimate grain production, had the effect of considerably lessening the expected yield of grain from a large area of the Darling Downs.

Later on when early harvesting was about to commence excessive moisture delayed operations. Late maturing crops, however, benefited to some extent by the rainfall experienced at that period.

Coincidentally these conditions affected the potato crops, causing a considerable amount of second growth to develop. Many crops were thus late in harvesting and were of inferior quality when placed on the market. Sound potatoes of good keeping quality were at a premium on the Brisbane market, and prices rose to £27 per ton for such.

The early months of the present year were remarkable for the low rainfall recorded, to such an extent that the so-called rainy season was noted entirely by its absence. Maize crops sown in the latter part of last year and depending on moisture during the tasselling stages were a failure, and as the result considerable areas of land devoted to this crop were grazed off. Although not a total loss in those dairying districts where cream supplies are considerably augmented for a period by dairy stock being given access to areas of more or less succulent material, at the same time a considerable decrease in the grain production of this State naturally results. Maize values have risen in sympathy, whilst at the same time importations of overseas-grown maize are at present being made by the Southern States.

Many farmers, profiting by their former experiences, provided reservations of fodder, and considerable quantities of silage have been made in many of the dairying districts, particularly in those adjacent to the coastal line. At the same time it is a matter to be regretted that large areas of good, useful material suitable for conversion into ensilage were allowed to go practically to waste.

The attention which this Department has given to the establishment of fodder plots throughout the different areas of the State and the publication of results obtained is undoubtedly bearing fruit. Recent experiences have shown that considerable notice is being taken of articles appearing from time to time in the "Agricultural Journal" dealing with this subject, and several instances have been met where farmers have profited by the information made available and are extending operations in this direction.

It is worthy of note that in a certain district of the southern portion of this State where between some thirty and forty farms have been temporarily abandoned during the past few months (the occupiers thereof being absent with their stock on agistment in more favoured localities) amongst the few remaining farmers who have not had to purchase fodder or provide for their stock by agistment elsewhere is one who has profited by the information given to him on silage and fodder matters generally. This farmer voiced the opinion that if more attention were given to annually conserving fodder in the form of ensilage, and supplementing these supplies where possible by growing winter fodder crops, very little ill-effects would be felt by the average man on the land from periods of insufficient rainfall.

In furtherance of the Department's policy in this direction, fodder plot trials have again been established—on this occasion the Beaudesert and Canungra districts being chosen as suitable centres for the demonstrations, details of which are appended.

Plots which were established on the farm of Mr. T. Coleman, Toogoolawah, early in last year and sown on 31st March, 1925, were harvested for yields on 30th July, 1925, consequently each yield submitted represents four months' growth of fodder, and judged on this basis alone may be considered as highly satisfactory.

More vigorous growth was noticed in the case of Florence wheat with peas or tares and the skinless barley with similar mixtures, both of which were well out in ear and rapidly maturing. Rye had made a more vigorous growth, but only a few heads were in evidence. Owing to the balance of the plots (six) not having reached their maximum growth as green fodders, comparative cuttings were again made of these on the 26th August, 1925.

The primary cuttings gave the following computed yields:—

	T.	Per Acre.		
		C.	Qr.	Lb.
Cape barley and peas	9	11	1	0
Skinless barley and peas	10	15	1	12
Rye and peas	8	10	1	12
Algerian oats and peas	8	3	3	20
Canary seed and peas	11	8	0	24
Florence wheat and tares	7	4	2	16
Cape barley and tares	9	0	0	0
Skinless barley and tares	11	1	3	4
Rye and tares	12	13	3	20
Algerian oats and tares	10	15	1	12
Canary seed and tares	8	10	1	12

Secondary cuttings were made of the following on the 24th August, 1925:—

	T.	Per Acre.		
		C.	Qr.	Lb.
Algerian oats and peas	11	9	3	12
Rye and peas	8	13	2	8
Canary seed and peas	7	17	2	0
Rye and tares	9	9	2	16
Algerian oats and tares	13	19	2	16
Canary seed and tares	13	14	0	8

As will be seen, a further growing period of twenty-five days elapsed between the two consecutive cuttings, which resulted in the mixture of Algerian oats and peas yielding an increase of 3 tons 5 cwt. 3 qr. 20 lb. during that period, whilst in the case of the mixtures of Algerian

oats and tares the increase amounted to 3 tons 4 cwt. 1 qr. 14 lb., the slight difference being in favour of the mixture of peas and Algerian oats. Owing to field peas maturing much earlier than tares, these figures no doubt would be reversed were further tests made when the tares were

more fully matured, and would counteract the over-mature condition (as a green fodder) of the oats.

Compared with these figures are those of the remaining plots:—

	Harvested 30th July, 1925.				Harvested 24th August, 1925.				Decrease.				Increase.			
	Tons	cwt.	qr.	lb.	Tons	cwt.	qr.	lb.	Tons	cwt.	qr.	lb.	Tons	cwt.	qr.	lb.
Rye and peas	8	10	1	12	8	13	2	8					0	3	0	24
Canary seed and peas	11	8	0	24	7	17	2	0	3	10	2	24				
Rye and tares	12	13	3	20	9	9	2	16	3	4	1	4				
Canary seed and tares	8	10	1	12	13	14	0	8					5	3	2	24

The above results clearly show the loss which is sustained when fodder crops are allowed to become matured or are dealt with before they reach that stage.

Arrangements were entered into with Mr. F. Barton, of Boat Mountain, Murgon, on 27th March, 1925, for the establishment of dairy fodder plots on his farm at Boat Mountain. These plots were ultimately sown on the 12th May, 1925, the delay being due to the fact that the amount of cultivation given in the first instance to the areas selected for the trials was deemed insufficient, and subsequent to this matter being remedied insufficient soil moisture was present for the purpose of ensuring germination. This latter state of affairs remained unaltered until the 9th May, 1925, when a sufficiency of rainfall was experienced and the plots were sown under perfect conditions of tith and soil moisture on the 12th May, 1925.

The following varieties were sown in plots of one-tenth of an acre each:—

Rye and tares
 Canary seed and tares
 Skinless barley and tares
 Cape barley and tares
 Algerian oats and tares
 Florence wheat and tares
 Rye and peas
 Canary seed and peas
 Skinless barley and peas
 Cape barley and peas
 Algerian oats and peas
 Florence wheat and peas.

The majority of the above plots were computed for yields on 14th October, or a period of 155 days after sowing.

Heavy growth on portion of the area was very noticeable, no doubt due to the fact that it had been fallowed during the early portion of the year.

In all the plots the field peas did remarkably well, making vigorous growth throughout, averaging 3 ft. 3 in. in height. Tares, on the other hand, gave rather poor results, due to their immaturity and slow growth. Rye was backward and had made very little progress, and for purposes of yield was regarded as of no value.

The following are the computed results:—

	T.	cwt.	qr.	lb.
Florence wheat and tares	3	12	1	8
Algerian oats and tares	Not harvested			
Cape barley and tares	5	6	0	18
Skinless barley and tares	4	13	0	24
Canary seed and tares	5	6	0	8
Rye and tares	Not harvested			
Florence wheat and peas	5	14	0	12
Algerian oats and peas	7	14	1	4
Cape barley and peas	5	2	3	12
Skinless barley and peas	6	2	0	16
Canary seed and peas	7	14	1	4
Rye and peas	Not harvested			

These results fall far short of those obtained from the Toogoolawah plots, and may be accounted for by the delay which occurred in connection with the initial preparation of the soil and lack of surface moisture, thereby delaying operations at a most favourable growing period.

Pig and dairy fodder trial plots were arranged for early in the year with Messrs. F. W. Thiedeke, of Beaudesert, and Peel Caswell, of Wangalpong. But owing to the lack of sufficient soil moisture sowing operations were delayed until early in the present month—too late, unfortunately, to give full effect to the trials, but at the same time they will be of instructional value to the surrounding farmers who are interested in the dairying and pig keeping branches of general agriculture.

The following fodders are under trial in plots of one-tenth of an acre, and in some instances one-thirteenth of an acre each:—

Pig Fodder Plots.

Thousand-headed kale
 Dwarf Essex rape
 Yellow globe mangels
 Long red mangels
 Purple-top swede turnips
 Elephant swede turnip
 Sugar beet
 White Belgian carrot
 Large drumhead cabbage

Dairy Fodder Plots.

Pilot wheat and peas
 Pilot wheat and tares
 Florida wheat and peas
 Florida wheat and tares
 Cape barley and peas
 Cape barley and tares
 Skinless barley and peas
 Skinless barley and tares
 Ruakura oats and peas
 Ruakura oats and tares
 Algerian oats and peas
 Algerian oats and tares
 Rye and peas
 Rye and tares.

Sowing was carried out under ideal conditions of tilth and surface moisture, and given average climatic conditions a rapid growth should result therefrom.

Following on arrangements made to hold a series of potato trials and the initial preparation of $1\frac{1}{2}$ acre of alluvial land on Mr. T. Coleman's farm at Toogoolawah, twenty-eight varieties of potatoes were planted under ideal conditions on 22nd August, 1925, as follows:—

- | | |
|--------------------------------|--------------------------------|
| 1. Satisfaction | 15. Early Rose |
| 2. Carmen | 16. Factor |
| 3. Scottish Triumph | 17. Cambridge Kidney |
| 4. Up-to-date | 18. Batlow Cross |
| 5. Brownell's Beauty | 19. Dalhousie |
| 6. Coronation | 20. Short's Prolific |
| 7. Manhattan | 21. Gold Jungle |
| 8. Dakota Red | 22. Early Vermont |
| 9. Langworthy | 23. New Era (blight resistant) |
| 10. Premier (blight resistant) | 24. Beauty of Hebron |
| 11. Arran's Comrade | 25. Templar |
| 12. Auster's Vermont | 26. Adirondack |
| 13. Redsmooth | 27. Bliss Triumph |
| 14. White Albino | 28. Cook's Favourite. |

The tubers were planted in drills spaced 3 ft. 3 in. apart, the land having previously been well ploughed and cultivated, and owing to ample subsurface moisture being available a good germination resulted.

Tubers prior to planting were immersed for one and a-half hour in a solution of formalin 1 pint to 10 gallons.

Spraying was carried out between the 16th and 19th of October, Burgundy mixture being used at a strength of 6 lb. copper sulphate and 5 lb. of washing soda to 40 gallons of water. Frosts were experienced during the latter part of September, but little or no damage to the potatoes was apparent at the time of spraying.

Arrangements had been previously made for a trial of a new form of fungicide now placed on the market under the title of cucal, which is in reality a finely triturated powder consisting of copper sulphate and lime specially treated—the intention being to apply it in dust form, using for the purpose a Pope knapsack dusting machine. It is a Queensland patent, manufactured in Brisbane.

In order to take advantage of any dew or moisture adhering to the leaves of the potato plants, dusting was carried out before sunrise on the 17th of October, but, due to the lack of sufficient moisture, the results obtained from the first trial were not satisfactory.

On the following evening a storm worked up, finalising in a light shower, and advantage was taken of this to apply another dusting on the following morning. On this occasion all conditions were favourable, and a perfect and even application of the dust throughout the foliage of the plants was obtained.

The dusting machine works satisfactorily, is easy to operate, and mechanically is a machine from which a good deal of service could reasonably be expected. As with all forms of dust fungicides, the necessary moisture must be present on the foliage of the plants treated before reasonable results can be obtained. Given these conditions there is no doubt that the "duster" has much in its favour, eliminating as it does the heavy work of transporting the necessary amount of solution, only a portion of which is really effective.

Under dry conditions, however, the spraying of plants with liquids has a reviving effect upon them which is obviously absent in the dusting operation.

The rainfall recorded during the period between planting and harvesting was as follows:—

	Inches.
From 22nd August	0.14
September	0.49
October	0.52
November	3.88
December	3.03
To 12th January	5.01
Total	13.07

Due to the excessive rainfall during the months of December (when the plots should really have been harvested) and January, and to the second growth that resulted therefrom, the keeping qualities of the tubers were seriously impaired, apart from which the actual work of harvesting the crop was made heavier by reason of the fact that the haulms had not died off, and consequently had to be cut and removed before the potatoes could be satisfactorily dealt with. Owing to the excessive rains the tubers were decidedly sappy and inclined to scald easily if exposed for a short space of time to the sun's rays.

The following weights are the results obtained from the main varieties, 1 cwt. of seed in each instance being planted:—

Main Commercial Varieties.	1st Grade.			2nd Grade.			Seed and Waste.			Total Weight.			Yield per Acre.			
	Cwt.	qr.	lb.	Cwt.	qr.	lb.	Cwt.	qr.	lb.	Cwt.	qr.	lb.	Tons	cwt.	qr.	lb.
Carmens	1	0	4	2	1	7	2	3	12	6	0	23	4	15	2	4
Satisfaction	1	3	0	0	3	9	2	0	24	4	3	5	2	18	1	2
Scottish Triumph	2	3	18	1	3	15	4	0	0	8	3	5	4	13	1	16
Up-to-date	3	0	3	3	1	6	4	1	9	10	12	18	3	15	0	26
Brownells	3	1	19	2	3	2	4	3	10	11	0	3	5	16	0	2
Coronation	0	3	4	2	2	16	3	2	7	8	0	7	4	4	3	26
Manhattan	0	3	6	2	0	22	3	2	16	6	3	16	3	10	2	12

The results obtained in the variety tests appear in some instances unduly high and will probably be accounted for by the restricted areas of the plots utilised, the results being confined to those obtained from the planting of three tubers only of each variety.

Variety.	Total Yield.	Yield per Acre.			
		Lb.	Tons.	cwt.	qr. lb.
Dakota Red	21½	7	3	1	0
Langworthy	20	6	18	1	19
Premier	14½	5	15	2	10
Arrans Comrade	16	6	4	0	25
Austers Vermont	19	6	3	3	8
Redsnooth	10	3	12	2	10
White Albino	16½	4	14	0	23
Early Rose	35	5	18	1	13
Factor	13½	4	3	0	14
Cambridge Kidney	33½	12	3	0	19
Batlow Cross	15½	4	19	1	0
Dalhousie	39	11	12	0	16
Short's Prolific	35	8	0	0	9
Gold Jungle	13	4	14	1	13
Early Vermont	17	4	1	0	18
New Era	2	0	14	2	2
Beauty of Hebron	22	4	13	3	26
Templar	24½	7	0	2	10
Adirondack	25	5	1	1	23
Bliss Triumph	13½	4	11	1	7
Cook's Favourite	24½	7	2	0	16

No traces of blight were in evidence in any of the potatoes harvested.

Seed reservations of 1 cwt. each of the main commercial varieties were made, but due to the sappy condition of the tubers, brought about by the excessive moisture experienced prior to harvesting, considerable depreciation took place before planting operations for the winter crop were concluded.

Seed was forced and again treated with formalin prior to planting. The area set aside for the winter crop plots had previously been sown with Algerian oats for hay, and the stubbles, together with a generous growth of herbage, were grazed off until the middle of January, when the area was ploughed and cultivated. Unfortunately lack of rainfall between the initial ploughing and the date of planting was not conducive to the conservation of moisture, although every effort had been made by surface cultivation to bring this about, and planting operations were carried out under somewhat unfavourable conditions. In view of the state of the seed, however, it was deemed advisable to take the chance of sufficient rainfall being experienced to carry the crop to maturity, consequently planting was finished by the first week in March.

The main commercial varieties were replanted with the exception of Satisfaction, the seed of which was deemed unsuitable. Similarly the variety trials were carried out under winter conditions, but two varieties (Early Rose and New Era) were omitted, being also deemed unsuitable.

Reports since received stated that in most of the varieties the plants were holding their own and small tubers were forming. Recent rains if unaccompanied by frosts should have a beneficial effect.

WHEAT TRIALS IN THE SOUTHERN BURNETT.

With the object of determining the suitability or otherwise of a number of new wheats bred at Roma State Farm, side by side with a few standard varieties, comparative trials both in the field and under experimental plot conditions were carried out by arrangement last season with Mr. F. Gustafson, of Murgon. The soil chosen was typical of the red volcanic friable loams of the district, and the farm prior to cultivation was partly forest and partly scrub country. Special attention was given in the preparation of the land to keeping the surface in a well worked condition, consequently when the wheat was sown on the 28th and 29th of May an excellent strike was obtained. Harvesting took place on the 1st and 2nd of November, 157 days from date of planting.

Rainfall records were—June, 3.12 in.; July, 0.69 in.; August, 2.09 in.; September, 1.45 in.; October, nil. Total, 7.35 in.

The commercial varieties of wheat used were—Amby, Bunge No. 1, Canberra, Gluyas, Pusa 4. Roma bred wheats—Waterman, Watchman, Redman, Red Chief, Ringer, Radio, Redskin, Amber, Florida, Warrior, Amberite, Marco, Beewar, Pinto, Cedric, Polo, Bindie, Ruby, Pilot, Three Seas, Pacific, Buffalo.

Three-acre propagation plots of Pilot and Florida were also planted. The other varieties planted by Mr. Gustafson were Gluyas 6 acres, Florence 6 acres, Currawa 3 acres, Roma Red 3 acres, Pusa No. 4, 3 acres.

As the conditions under which the wheats were grown proved favourable, the growth and development of individual varieties was exceptionally good, the straw ranging from 4 to 5 ft. in height and carrying well-developed ears. The results from the field plots showed that when land is well prepared and suitable varieties chosen good yields in average seasons may be expected. Florence returned 40 bushels, Florida 37 bushels, Pilot 33½ bushels, Pusa No. 4 and Roma Red 18 bushels each, and Gluyas 15 bushels per acre respectively.

Although some of the yields were undoubtedly good, the clean, well-grown, and attractive-looking crops were most promising from a hay point of view. Obviously farmers in this part of the State might well turn their attention to a dual-purpose crop, invaluable in such an important dairying and mixed farming centre.

That past experience has impressed upon farmers the necessity of conserving fodder is emphasised by the amount of correspondence dealt with relative to the construction of silos, the manufacture of silage, and the class of crops recommended for fodder purposes under different soil and climate conditions. It is regretted, however, that greater use is not made by dairy farmers generally of the facilities available within the Department in connection with the erection of silos and the making of ensilage.

A stack silage demonstration that was given on the Wunulla Estate, situated in the Kilcoy district, attracted a considerable amount of local interest, and it is understood that as a result of this particular demonstration other stacks were built in the district shortly afterwards.

In furtherance of the scheme for the standardisation of wheat varieties in Queensland arrangements were made in conjunction with a member of the Wheat Board for pure seed propagation areas at Kaimkillenbun, Bell, and Jandowae, certain farms being specially selected for the sites of these pure seed areas.

Owing to the depredations of the banded pumpkin beetle in the Allora district having made the growing of pumpkins as a farm crop a matter of difficulty, if not an impossibility, a demonstration was arranged for on the farm of Mr. G. Black at Goomburra, and the method of control as suggested by this Department practically illustrated. Beyond the use of certain repellants in a few isolated instances, nothing had been attempted in the direction of insect destruction by either spraying, dusting, or any other means of distributing poisons, consequently the beetles had had uninterrupted opportunities for increasing their numbers.

Owing to the lateness of the season the methods advocated—the use of arsenical preparations in dust form—could not be generally adopted, but it is reasonable to suppose that combative means will be employed by growers of pumpkins in this district in respect to future crops.

The preparation and display of exhibits in connection with the Departmental Court at the Royal National Association Exhibition of 1925, and the New Zealand and South Seas Exhibition, made considerable demands on the services of this Branch.

Invitations were accepted during the year to act in the capacity of judge of agricultural produce at the Royal National, Inglewood, and Gin Gin Agricultural Societies' exhibitions.

CENTRAL DIVISION.

The Instructor in Agriculture for the Central Division, Mr. G. B. BROOKS, reports:—

Conditions at the commencement of the year were most promising. The widespread rains that fell during June, 1925, approximately 5 inches, were sufficient to saturate and permit the breaking up of the soil for the early planting of summer crops. Very little rain fell in July, but useful showers were experienced throughout the subsequent months—August to December. Cotton and other crops made good headway during the early stages of growth, and in anticipation of the usual summer rains prospects for a heavy return looked very bright indeed. The rainy season unfortunately did not materialise, in consequence of which the maize crops were a comparative failure, while the cotton harvested was only about half the return expected.

In the northern portion of the Central District—extending from St. Lawrence to Bloomsbury—very little rain fell from June to December. Fairly heavy storms were, however, experienced during the latter end of December and of January, while scattered showers fell throughout February and March. From March to June conditions in this section have been very dry, the crops in many places showing the lack of bottom moisture. Fortunately feed for stock is in most places still plentiful.

The southern portion of the district, more particularly the area around Bundaberg, has suffered from the prevailing dry conditions. During the latter end of May a storm swept over

this part of the State, the rainfall being exceedingly heavy, the registration in places giving from 14 to 18 inches. Miriam Vale shared to the extent of 5 inches, while Gladstone, being on the fringe of the disturbance, received 2 inches.

Conditions in the Western District are deplorable. Enormous quantities of fodder have been railed daily from the coast for starving stock.

ACTIVITIES.

A very comprehensive scheme of experimental and demonstration plot work was undertaken during the year under review. It is hopeless, however, with only one Field Assistant, to give requisite attention to field work conducted over an area embracing some 400 miles of coast line. Personal visits in connection with the giving of advice to settlers, silage making, fodder conservation, office duties, attention to visitors (many from other States in quest of information), necessarily take up a considerable amount of one's time.

The carrying out of trials with various crops requires the almost continuous attention of Field Assistant Straughan, who takes a very keen interest in this most important work.

The establishment of the power alcohol industry in the Central district necessitated much attention being given to the growing of starch-producing crops suitable for the manufacture of the spirit.

An exhibit of cassava products was prepared and displayed at the Royal National Show in Brisbane.

During the year I attended several agricultural shows in the capacity of judge.

POWER ALCOHOL.

A considerable amount of time has been given to the matter of raising and testing starch-producing crops for the production of power alcohol. So far the following three products have received special attention:—Cassava, arrowroot, and sweet potatoes.

Cassava.—As the result of the arrangements made while in Java, 750,000 feet of cassava sticks arrived in Queensland at intervals extending from July to January. A large portion of this material was secured from the Government Plant Breeding Station, Buitenzorg. Arrangements were made with the Plane Creek Sugar Mill Company to distribute the cuttings amongst their respective cane suppliers. Over 100 acres were planted in the area extending from Flaggy Rock to Baker's Creek.

Although conditions were most adverse when most of the plants were distributed, a satisfactory germination resulted. Subsequent growth was very rapid until April, some varieties attaining a height of 12 ft. Although practically no rain has fallen since, a steady growth was maintained until June, when several frosts were experienced, accompanied by heavy cold winds. The low temperatures—more particularly on the flats—affected the tops of the tender branches on one or two varieties. In Java the variation in temperature is only a matter of 2 to 3 degrees. The cassava plant, until acclimatised to Central Queensland conditions, will undoubtedly be affected by low temperature.

Arrowroot.—A ton of arrowroot bulbs were procured from Redland Bay and planted out in various parts of the Plane Creek district. There was little or no moisture in the soil when put in, and as no rain fell during the subsequent two months, a crop failure was anticipated. When rain fell the germination was naturally somewhat patchy. The resultant crops will, however, provide sufficient material to plant out a fairly large area during the coming season.

Sweet Potatoes.—A number of varieties were introduced into the district, with the object of providing cuttings for the carrying out of comparative tests in conjunction with cassava and arrowroot.

Experiment Plots.—Two subsidy plots were arranged for, one on the farm of the Salter Estate at Koumala, the other at Sarina, on the farm of P. C. Brooks, representing the southern and northern portion of Plane Creek sugar-growing area. Comparative tests are being carried out on those farms with eleven specially selected cassava varieties procured from the Plant Breeding Station in Java. The varieties embraced in the mixed unnamed commercial types, also obtained, will be segregated and tested in conjunction with the selected material, together with arrowroot and sweet potatoes.

FODDER CROPS AND THEIR CONSERVATION.

The raising and testing of crops suitable for the feeding of dairy stock and pigs is probably the most important activity associated with the work of the Instructional staff.

Arrangements were made with farmers in the various agricultural sections to co-operate with the Department in the raising of fodder crops in order to demonstrate the most suitable

varieties to grow to maintain a continuous supply of succulent material for their cattle and pigs through the year.

In the matter of summer-maturing crops the suitability of sorghum, both as a stand-over winter feed and summer crop, has been consistently advocated by the field staff for many years.

It has been demonstrated that sorghum if planted early will give two cuttings during the season. The first, if desired, may be made into silage, while the second can be allowed to stand over and be used as required during the early part of the winter.

Sudan grass—a fine variety of sorghum—will also provide two cuttings, and has the advantage of being a crop that it is possible to handle with an ordinary binder. The first cutting can, should conditions be moist, be converted into silage, the following one dried and made into hay. Sudan grass has become a most popular fodder. In all probability 95 per cent. of the farmers in the Central division are now growing this useful crop.

The raising of sorghum is also largely on the increase, not only as a green fodder but as a grain-producing crop. Its value in the latter respect has not by any means been fully realised.

A number of farmers who were not engaged in cotton growing, planted their fodder crops early in the season and were fortunate in securing heavy yields. The majority, however, delayed until January, and as the wet season did not eventuate, most of the crops sown were complete failures.

Particulars in regard to trials carried out with sorghum are as follows:—

Grower and District.	Variety Grown.	Yield per Acre.	Planted Date.	Harvested Date.	RAINFALL.	
					During Growth.	Previous Month.
J. Jacobsen, Mount Larcom	Saccaline	11.78 tons ..	24-9-25	5-3-26	12.62	0.25
J. Coase, Mount Larcom	Red Kaffir	11 tons ..	24-9-25	4-3-26	12.62	0.25
J. Coase, Mount Larcom	Red Kaffir	94 $\frac{2}{3}$ bushels	24-9-25	4-3-26	12.62	0.25
E. A. Russell, Thangool	D. Cream Kaffir ..	49.6 bushels	10-11-25	25-2-26	..	..
A. E. G. Barnard, Deeford	Feterita	23.32 bushels	7-11-25	18-2-26	9.28	Nil

Other growers in the Marlborough, Mount Larcom, Dawson Valley, and Rosedale districts also planted, but owing to dry weather the crops made insufficient growth for comparative purposes.

WINTER FODDERS.

The work carried out was on lines similar to those of previous years, being more in the nature of actual demonstration than experimental. The object in view is to show the dairy farmers the most suitable crops to grow in order to provide

succulent feed for their stock over an extended period. These demonstrations are having a most beneficial effect. In the various dairying centres wheat, barley, and rape are now being grown for fodder purposes in increasing areas.

The results obtained from the plots established in the respective districts are as follows. In some localities the rainfall was not sufficient to bring the crops to their mature growth, therefore it was considered advisable to graze them off.

Crops.	H. E. Wolff, Ambrose.			F. Huntley, Mount Larcom.			J. Hales, Rockdale.			A. Barnard, Deeford.			Average.		
	T.	cwt.	qr.	T.	cwt.	qr.	T.	cwt.	qr.	T.	cwt.	qr.	T.	cwt.	qr.
Florence wheat	9	16	0	2	0	0	6	6	2	6	14	3	5	14	4
Cape barley	8	16	3	4	0	0	..	..	..	7	2	1	6	13	0
Skinless barley	8	10	1	2	0	0	5	3	2	5	10	0	5	5	0
Algerian oats	11	14	3	Nil	..	..	Nil	..	..	7	1	2	9	8	0
Ruakura oats	12	4	1	Nil	..	..	Nil	..	..	6	8	2	9	6	1
Wheat and blue field peas ..	8	4	0	2	0	0	6	1	1	7	3	2	5	17	1
Wheat and dun peas	7	14	1	2	0	0	6	1	0	7	3	2	5	14	3
Planted	28	4	25	10	8	25	7	7	25	1	7	25	..	..	..
Harvested	17	9	25	0	11	25	2	12	25	14	10	25	..	..	..
Rainfall on crop	937 points			386 points			..			383 points			..		
Previous month	Nil			25 points			..			420 points			..		

F. Huntley's plot was grazed off, the yields given being only approximate.

Other growers were—F. Ferguson, The Caves; J. Hoare, Alton Downs; A. Adams, Goovigen; A. Rake, Marlborough. Owing to dry weather these plots failed, growing only 6 in. high.

FERTILIZER TESTS WITH WINTER FODDERS.

These were conducted on the farm of Mr. A. J. Turner, Boyne Valley. The fertilizer and crops

used were similar to those of previous years and were applied to the same portion of land.

The results obtained were unsatisfactory through the cereals running into head during the very early stages of growth and before stooling had taken place, due in all probability to the mild nature of the weather prevailing at the time. The details are as follows:—

Manures, applied in Cwts. per Acre.	YIELDS—TONS PER ACRE.				Totals.
	Wheat.	Rye.	Barley.	Oats.	
2 dried blood	5.7	0.8	5.5	4.65	16.65
1 potash 2 basic super	5.85	0.8	5.85	4.1	16.6
1 dried blood 1 potash 2 basic super	5.45	0.8	5.65	4.35	16.25
½ dried blood ½ potash 1 basic super	5.75	0.8	5.45	4.00	16.00
1 dried blood 2 basic super	5.35	0.8	5.45	4.3	15.9
1 potash	5.45	0.8	5.3	4.05	15.6
3 meatworks manure	5.2	0.8	5.05	14.15	15.2
1 dried blood 1 potash 2 super	5.3	0.8	5.25	3.75	15.1
Control—no manure	5.1	0.8	4.7	3.9	14.5
Control—no manure	4.9	0.8	4.8	3.7	14.2
2 basic super	4.5	0.8	4.85	4.05	14.2
2 super	5.1	0.8	4.7	3.55	14.15
Control—no manure	4.65	0.8	4.4	3.45	13.3

Arrangements have been made for the carrying out of a similar fertilizer test on the farm of A. E. G. Barnard, Wowan district.

Mr. Turner's plot will be planted under roots, onions, and soy beans, of the following varieties:—

Roots.—Broad leaf rape, green-top yellow Aberdeen turnip, Grandmaster and champion purple-top swedes, long red and yellow globe mangels.

Onions.—Early golden globe, early Barletta, Silver King, and brown Spanish, and the soy bean varieties Laredo, Biloxi, Tokio, and Mam-

moth yellow. The fertiliser for this plot has been applied and the seed recently planted.

ROOT CROP DEMONSTRATION PLOTS.

The making provision for a supply of material suitable for pig raising purposes has by no means become a settled practice. It has been demonstrated that by adopting a system of early and thorough cultivation it is possible to grow heavy crops of roots—such as mangels, turnips, sugar beet, &c.

The results secured from the plots arranged for in the various districts are as follows:—

Crops.	J. A. Ross, Ambrose.			S. Larsen, Miriam Vale.			G. McRae, Biloela.			A. Rake, Marlborough.			Average.		
	Tons	cwt.	qr.	Tons	cwt.	qr.	Tons	cwt.	qr.	Tons	cwt.	qr.	Tons	cwt.	qr.
Rape	18	7	1	10	16	1	5	1	1	6	0	0	10	1	0
Silver beet	15	2	2	Nil			5	12	0	4	0	0	8	5	0
Chow moulter	27	0	0	Nil			4	8	2	3	6	3	11	12	0
Purple-top turnip	32	9	0	25	1	0	} Attacked by aphid	Nil	Nil	} Attacked by aphid	Nil	Nil	28	15	0
Green-top turnip	21	12	3	26	0	0							23	16	2
Khol rabi	15	0	0	Nil			Nil			Nil			15	0	0
Field carrots	14	0	3	27	0	0	7	19	0	2	12	0	12	18	0
Sugar beet	30	5	0	16	0	0	Nil			Nil			23	2	2
Cabbage	27	0	0	17	5	3	6	0	0	Nil			16	15	1
Swede turnip	25	18	2	37	18	0	Nil			Nil			31	18	1
Long red mangel	38	19	2	25	18	2	Nil			18	3	0	20	15	1
Yellow globe mangel	31	6	2	29	3	2	18	3	0	9	1	2	21	18	2
Planted	1	7	25	27	6	25	22	6	25	28	6	25	..	..	..
Harvested	30	11	25	21	12	25	19	11	25	25	11	25	..	..	..
Rain on crop	627 points			Not recorded			559 points			Not recorded			..		
Previous month	473 points			Not recorded			106 points			Not recorded			..		

Other growers were—F. Ferguson, The Caves; F. E. Sturm, Mount Larcom; H. Young, Wowan. Owing to the dry weather these plots did not sufficiently mature for the collection of data for

comparative purposes. The growers, however, realised the advantages to be gained from growing these crops.

A further series of plots have been arranged for in the following districts:—

Callide Valley, G. F. McRae.
Wowan, J. W. Lindley.
Miriam Vale, S. Larsen.
Ambrose, J. A. A. Ross, G. Heinche.
Mount Larcom, J. C. E. Jacobsen, F. Huntley.
Marlborough, A. Rake.

ONIONS.

In the growing of onions the main obstacle to success has invariably been the lack of early preparation of the land. This is essential in order to conserve bottom moisture, and more particularly to get rid of surface weeds.

Four trial plots were arranged for to ascertain the most suitable varieties for Central Queensland. Owing to the dry conditions prevailing only one plot was planted. Germination being irregular reduced the yield per acre very considerably; but in regard to size and quality, the crop was on the whole satisfactory.

The plot was planted on 14th July, 1925, and harvested 25th January, 1926, although immature. The total rainfall during growth was 321 points, and for the previous month was nil. The plot was on the farm of J. A. Adsett, Jambin. The yields were:—

	T.	cwt.	qr.	lb.
Early White Barletta	1	2	2	13
White Spanish	1	0	2	23
Extra Early Yellow Globe	1	0	0	26
Mammoth Silver King	0	19	1	18
Anderson's Selected Long-keeping Brown Spanish	0	15	1	19

SORGHUM PROPAGATION AREAS, 1924-25.

Grower and District.	Variety Grown.	Yield per Acre.	Date Planted.	Date Harvested.	RAINFALL.	
					On Crop.	Per Month.
G. Ambrey, Marlborough	Brown Kaoliang	47.7 bushels ..	10-12-24	20-3-25	Not recorded	
A. Skewes, Marlborough	Red Kaffir	31.24 bushels	8-12-24	20-3-25	Not recorded	
T. Seirup, Gracemere	Dwarf Cream Kaffir	10 bushels ..	..-1-25	5-4-25	Not recorded	
Pritchard and Wannop, Archer	White African .. .. .	.. .. .	1-11-24	22-1-25	Not recorded	
A. S. Narracot, Dululu	Feterita	35.46 bushels	14-11-24	18-3-25	14.72	1.52
A. McDonald, Ambrose	White Yolo	14 bushels ..	21-2-25	13-6-25	17.11	5.84
C. King, Ambrose	Feterita	20.15 bushels ..	..-12-24	22-3-25	10.62	3.08
J. C. E. Jacobsen, Mount Larcom	Dwarf Cream Kaffir	73.7 bushels ..	..-1-25	21-3-25	11.54	4.79
J. Coase, Mount Larcom	Early Amber Cane .. .. .	.. .. .	10-1-25	24-5-25	12.68	4.79

Other crops were planted, but did not mature owing to dry weather.

General Agriculture.

Maize is not being grown to the same extent as in former years. When the scrub lands in the Dawson Valley and Barmoya were being opened up corn was invariably planted as a first crop, the cleared areas being then grassed with either Rhodes or paspalum. During the past few seasons cotton has taken the place of maize on scrub soils.

Cotton.

The bulk of the cotton crop has been harvested, and, although high yields were not obtained, this is practically the only product that has withstood the adverse climatic conditions and brought in some return to the farmer.

The other growers were:—

A. E. G. Barnard, Deeford.
Jones Bros., Tanby.
J. Sinclair, Ambrose.

SOY BEANS.

The following varieties were planted out during November in the Dawson Valley, Boyne Valley, and Mount Larcom districts:—Tokio, Laredo, Mammoth Yellow, and Biloxi.

Although a fair amount of moisture was present in the soil when sown, results on the whole were unsatisfactory. The plants made very poor growth, and the pods produced ripened over an extended period, making it impossible to economically harvest the crop. While the bottom portions of the plants were bearing pods, the upper portions were in flower. The pods invariably shed with the sun as soon as mature.

Arrangements were made to try the soy beans as a winter crop in the Mount Larcom, Biloela, and Marlborough districts. The prevailing dry conditions have not so far permitted the planting of the seed.

EXPERIMENTS OF EX-SEASON 1924-1925.

Owing to the lateness of the season the following records were not completed before the compiling of the annual report for the previous year.

Potatoes.

The growing of English potatoes is to a large extent confined to localities where irrigation can be carried out. The principal potato areas are to be found along the Boyne River and in the Gracemere district.

Yields of from 4 to 6 tons per acre were generally secured and the price obtained was in the vicinity of £18 per ton. As two crops are raised during the year, potato growing under suitable conditions is a remunerative occupation.

Broom Millet.

Broom millet has received a good deal of attention and it is anticipated that an increased area will be planted during the coming season.

Agricultural Expansion.

The establishment of the power alcohol industry at Plane Creek has now become an established fact.

Efforts are being made to establish a butter factory at Mackay. Extensive areas on the fringe of sugar lands are suitable for dairying. Quite a large number of high-grade stock have recently been introduced into the Mackay district. A good deal of development has taken place in the lands adjoining the railway line in course of construction from Rannes to Monto.

The following facts are of interest in showing the expansion that has taken place in the dairying industry in the Central Division—Port Curtis district—for the last five years:—

	1920.	1924.	Per cent. Increase.
No. of dairies ..	930 ..	1,441 ..	56.0
Total dairy cows ..	26,732 ..	44,357 ..	66.0
Butter made—lb. ..	1,650,142 ..	3,420,353 ..	107.3

Five concrete silos have been erected in the Central district during the year.

NORTHERN DIVISION.

The Instructor in Agriculture for the Northern Division, Mr. N. A. R. POLLOCK, reports:—

The year from 1st July, 1925, to 30th June, 1926, has been remarkable for the generally poor rainfall experienced in most districts of the Northern Division. An inspection of the monthly rain map shows that in six of the months the rainfall over the whole of the division was much under the average, while in the other six months only odd centres experienced slightly over an average fall, but almost the whole of the pastoral areas had much less than the average fall in every month of this year as well as in the last three months of last year. Except in the districts of heavy average rainfall, the conditions have been those of a severe drought, such as have been characterised as the worst for at least forty years.

The pastoralists on the eastern coastal slopes with cattle have suffered much loss, but those with sheep on the Western rolling downs have felt the lack of rain and consequent shortage of pasturage most severely, their losses by death in many instances being heavy, while the expenditure in railing the sheep away to relief country, the cost of agistment and purchased feed either away or at home, has been so costly that in many instances it has exceeded the value of the sheep so far saved. Without relieving rains before the usual storms can be expected in November or December, these stockowners must be put to such a heavy expense in the purchase of feed as to seriously diminish their financial resources if not to run them heavily into debt.

While numbers of sheep are on grassed relief country in the Gulf districts, which is not expected to hold out for very long, others are depasturing on the eastern coast, and many are being fed on the sugar areas, notably the Lower Burdekin, by arrangement with canegrowers, who supply "chop chop" (chaffed cane tops or cane stalks) at a cost of £4 per ton delivered at the feeding troughs. The result of this feeding seems to be satisfactory, as the sheep appear to be more than holding their own.

On the holdings where the sheep are fed, maize and linseed oil cake are the feeds mainly used, for though hay in some cases was secured,

the congestion on the railway through the increased traffic in shifting starving sheep and in transporting fodder prevented the necessary prompt delivery of sufficient quantities of such a bulky food to render it popular. Some losses in sheep with symptoms of poisoning have occurred in odd cases where linseed oil cake only was fed. It is known that occasionally this product contains a hydrocyanic acid-yielding glucoside, so it is probable that sheep poisoned thereby have secured more of the feed than was intended.

Usually a daily allowance of from 6 to 9 oz. per sheep is made when feeding with either the oil cake, the balance of the ration being made up with the grass eaten.

Either maize or oil cake alone with the dry grass provides an unbalanced ration. The most economical feed with the material available would appear to be a mixture of 1 to 2 parts of oil cake to 8 or 10 parts of maize, especially as the landed cost of maize is less than that of oil cake.

As an aid against impaction, some of the experienced graziers are giving a lick made up mainly with linseed meal and salt. The hand feeding of sheep represents a daily expenditure of from £4 to £5 at least per 1,000 head, consequent on which any prolonged period of hand feeding, without allowing for deaths, must overtake if not exceed the present value of the animals. In addition to the heavy losses on the year's transactions by the death of sheep and the expenditure in purchasing feed and transporting to other parts, the owners will experience a lower price for their wool clip, the quality of which will reflect the droughty season in which it was grown.

In strong contrast to the previous year, when cattle were fat in large numbers early in the season and the meatworks had a long killing season, the supply of fats this year was very small, resulting in a short killing period of eight to ten weeks at three of the Northern meatworks, while the other two did not operate at all.

Fodder Conservation.—From time to time opportunity has been taken both orally and by articles in the "Agricultural Journal" and the Press to stress the necessity for the conservation of fodder as hay or silage in anticipation of a period of shortage that is bound to occur sooner or later. While some increase in that direction has been observed, chiefly amongst the smaller stockowners, the larger holders with few exceptions have studiously neglected the practice. It is needless to refer to the benefit that would have been experienced by stockowners had there been stores of conserved fodder on their holdings this year. All are fully seized of that fact, as they have been in other recent periods of shortage, when many determined, as doubtless they are doing now, never to be caught again. Yet, it is safe to say, when good rains come and the country is covered with an abundant growth of valuable grasses the big majority will decide that there is going to be a run of good seasons and there will be plenty of time in a year or two to build the haystacks and erect the silos.

A tour of the Rolling Downs convinces one that with the thousands of acres on every holding, large or small, on which hardly a stick or stone can be found to hinder harvesting operations, there is no reasonable excuse for the neglect to make hay. It is true that owing to the tussocky nature of the "Downs Mitchell" the first cutting of the grass cannot be made as close to the

ground as might be desired, equally true that no very great quantity can be cut off the average acre, yet it will be conceded that in ordinary seasons half a ton of hay to the acre can be obtained. To put up a stack of 100 tons consequently 200 acres must be cut, say an area of 40 chains by 50 chains. By placing the stack in the centre it will mean that the greatest distance the hay need be transported to the stack will be 25 chains. Using modern machinery, I am of opinion such a stack could be put up at a cost not exceeding 20s. per ton. Labour experienced in stack building and thatching is scarce, but will be available if the demand exists. Thatch for stacks is suggested in the bulrushes growing on so many bore drains, while cane grass in places is plentiful. Failing any natural grown material, a cultivated patch of sudan grass would provide abundance. In addition to hay from the natural grasses, large quantities of sudan grass or other species of the sorghum family could be grown under cultivation, the former for hay and the latter for ensiling, under the rainfall of an ordinary wet season, or, for that matter, under irrigation by bore water at another time.

Though the soil on these rolling downs is of a clayey nature, it is capable of being reduced to a fine tilth and is just such a soil as would be very suitable for wheat if seasonal conditions would allow.

The storage of fodder as silage necessitates the erection of overground silos, since the depth of soil is insufficient and the rock underlying it too hard to permit of receptacles being excavated with economy. The general absence of sand is a drawback to the construction of reinforced concrete silos, but it is thought by pulverising the stone procurable in practically every holding a suitable aggregate could be secured. Pise, for which the soil appears remarkable suited, suggests itself as a possible material for cylindrical silo construction if the walls were reinforced and made sufficiently thick. Without practical experience in this direction, however, such material could not well be recommended.

Value of Silage for Sheep.—Apart from the value of conserved fodder as hay or silage in periods of shortage, the value of such a succulent fodder as silage when fed to ewes and rams just prior to and at the time of mating, say during September, October, and November, when the pasture is usually very dry, will be evidenced in the increase of the lambing percentage and general wellbeing of the sheep.

Loss to the State.—The loss of stock by death in times of drought is recognised as very serious to the grazier. It is also serious to the State and, indirectly, to every individual citizen. The death of 500,000 sheep, which is quite probable if conditions do not soon change, without consideration of the loss of the natural increase, means a loss, to cite a few instances, of well over £12,000 to shearers and shed hands, probably 3,500,000 lb. of wool, worth at least £175,000 to graziers for several years, the transport of that wool to the railway, the freight on the railway, handling on the wharves, shipping, &c. In fact, it will be difficult to find a direction in which some ill-effect will not be experienced. The loss to the State will be evidenced in lower receipts from income tax, loss of freight on railways, loss by reason of more unemployment, and in divers other directions.

While instruction in cultural matters and conservation of fodder, &c., is provided by the State and a certain amount of propaganda work has been done, it is not thought that the results to be achieved by this means will ever be very satisfactory.

To overcome the natural inclination of people to follow the line of least resistance, it is suggested that some inducement might be held out to influence them to make provision for bad times. Compulsion is ever unpopular, and though conditions may be inserted in leases insisting on fodder conservation, it is thought that, as remarked in my last annual report, a provision for the remission of a portion of the rental, consequent on the annual storage of prescribed quantities of fodder, would be welcomed and result in the desired objective being attained.

Crops in General and Experimental Work.—As might be expected with the paucity of rainfall, agricultural production was reduced in many districts, notably in the Charters Towers and Gilbert River districts, where the crops were total failures except where irrigation was practised in odd instances in the former district. The coastal districts fared somewhat better, but production there was lower than usual even under irrigation, as in the Bowen and Lower Burdekin districts.

The district that stood out above all others in production was the Atherton Tableland, where the rainfall, above the average for January and lower for the other months, was all in favour of the maize and other summer crops.

Maize.—The Atherton Tableland, though the only district of the North producing a large quantity of maize, gains the record each year for the highest average yield per acre of any district in the State in which upwards of 10,000 acres are put under crop. Seasonal conditions this year were excellent, as there was sufficient rain during the growing period, with bright sunny days for the most part when the grain was filling and ripening in place of the continuous drizzling rain usual in the latter period. As a consequence, damage from fungus disease (moulds, &c.) was slight, the quality of the grain being absolutely prime. This year a larger acreage than usual was placed under crop, which, under the favourable seasonal conditions experienced, should enable the district to reach the million bushel output, not previously attained. The appearance of the crop and the results shown during the progress of the harvest point to an average in the vicinity of 50 bushels per acre being obtained over the whole district.

In the early part of the year, during which the harvest of last year's crop, grown under a heavy rainfall, was being concluded, much discussion took place regarding the inferior quality of the grain as well as the lower average yield being obtained, many holding that depletion of the elements of plant food in the soil was the cause of lower average yields as well as being a contributing cause of the prevalence of disease affecting the grain. An article, "Tableland Maize," published in the "Q.A. Journal" for October, explained that diminishing yields and poor quality in the grain were entirely due to the use of a variety or strain of several varieties that were not suited to withstand the excessively humid conditions prevalent during the period of ripening and drying off, and also to the lack

of sufficient care in the selection of seed. Recent analyses of the soil from farms where maize has been an annual crop for many years, in one case for nearly thirty years, as well as the result of present crops, show that the elements of fertility have not been depleted even on the oldest cultivation to such an extent as to seriously interfere with production, while the prime quality of the grain in the present crop emphasises the conclusion that disease will be overcome by the use of a variety suited to the climate.

In this latter connection, satisfaction amongst growers is expressed at the Department's action in making arrangements for the propagation and supply of pure selected seed of a resistant variety.

Fertiliser Experiments on Maize.—Trials with various fertilisers have been carried out each year for several years past both on forest and

scrub soils. But though the trials on the forest soil have consistently demonstrated the greatest profit to be obtainable from the use of superphosphate alone, those on the scrub soils have given no definite indication of the value of any one fertiliser or mixture of fertilisers, even where relatively large amounts have been applied. During the year three experiments were finalised on the previous year's crop, the results of which were published in the article "Tableland Maize." Owing to the favourable season, it was possible to record two of the three trials undertaken with this year's crop in time for inclusion in this report. In these trials the fertilisers were applied on land on which burnt lime at the rate of 10 cwt. to the acre had been broadcasted as well as on the land to which no lime had been applied.

Fertiliser applications were at the following rates per acre:—

Plot.	Superphosphate.	Meatworks.	Nauru Phosphate.	Sul. Pot.	Sul. Am.	Filler.	Total and Cost per Acre.	
							lb.	s. d.
1	180	..	..	..	..	20	200	14 6
2	..	180	..	..	..	20	200	17 2
3	..	..	180	..	..	20	200	16 6
4	90	90	..	..	..	20	200	15 9
5	Control	No manure	..	..	..	..	..	..
6	..	180	..	20	..	..	200	20 3
7	..	..	180	20	..	..	200	19 6
8	..	180	..	20	30	20	250	26 0
9	..	..	180	20	30	20	250	25 3
10	120	120	..	30	30	..	300	31 4

It may be noted that filler was used in order to facilitate an even application.

The results expressed in acre yields were:—

Plot.	WITH LIME.		WITHOUT LIME.	
	Scrub Soil.	Forest Soil.	Scrub Soil.	Forest Soil.
1	Bus. 53 lb. 0	Bus. 71 lb. 54	Bus. 41 lb. 6	Bus. 64 lb. 50
2	55 24	60 34	54 34	59 36
3	59 12	62 8	45 24	57 34
4	57 32	59 20	34 50	53 18
5	48 52	53 52	40 2	54 40
6	50 16	55 14	43 30	58 30
7	49 12	56 20	40 32	63 34
8	49 42	57 10	36 44	64 18
9	48 34	57 10	40 16	67 12
10	50 16	57 40	37 32	63 28

Samples of the respective soils were analysed by the Agricultural Chemist, showing the scrub soil to contain slightly greater quantities of nitrogen as well as of available potash, phosphoric acid, and lime. According to the analyses, it was to be expected that the yields of the plots on the scrub soil should be equal to, if not greater than, those on the forest soil when grown under similar seasonal conditions. The scrub soil gives an alkaline reaction, while the forest soil gives an acid reaction, but any influence in this direction is discounted by the higher yield on the alkaline soil where lime was applied. Similar disparities in the yields from the plots this year on scrub soil occur in each of the trials made in previous years, viewing which, one is inclined to the belief that the very variable and indecisive results of all fertiliser applications so

far on the scrub soils are due to some condition of the soil not revealed in the analysis, possibly in connection with bacterial action that does not obtain in the forest soil.

Maize Harvester.—The enterprise of the Faichney Bros., Soldier Settlement, Kairi, is reflected in the importation from America of an International Harvester Company's maize picker and husker, which has since been doing very satisfactory work picking and husking the cobs at the rate of an acre per hour at a cost of 1s. 1d. for oil and fuel on maize crops at Kairi. The machine is a somewhat bulky implement, being about 12 ft. wide, and weighs about 29 cwt., and is drawn by a 15-30 McCormack Deering tractor which also operates the machinery by power applied from the differential by a series of shafts connected by universal joints to the harvester. Provision is made also, in case the machine is horse-drawn, for power to be transmitted by chains from the large rear pair of wheels.

In operation the maize stalks are gathered between two jaws and guided by spiked endless chains called gatherers to two snapping rollers, between which the stalks pass until the cob is reached, when the latter is thrown off into an elevator which conveys it to the back of the machine, from which it drops into the husking rolls, against which the cobs are kept in position by moving guides until the husk is removed and carried through the rolls and dropped on the ground as the balance of the stalk is, after the cob has been removed, while the husked cob is dropped into another elevator and delivered into a wagon that can either be drawn by horses or by the tractor working the machine. Messrs. Faichney express themselves as well pleased with the work so far done with the machine.

Potatoes.—The publication of the results of the comparative trials of potato varieties carried out by the department in different centres on the Tableland and coastal districts last year has commanded much attention and resulted in a very much increased acreage being put under crop in the Northern Division during the year, both on the Tableland and coast. The lower prices realised last season for sugar-cane consequent on over-production directed the attention of many cane farmers to other crops which might be considered to return a good profit, and many have placed areas under potatoes. It is confidently expected that the acreage under potatoes this year in the North will be greater than in any previous year, and that each succeeding year will see a further increase.

In my last Annual Report the yields of ten varieties grown on the Tableland in two centres were recorded and mention was made therein of the seed from these trials being planted at Pentland and Woodstock respectively. The yields of these latter trials were, at per acre:—

Variety.	Pentland.				Small. per cent	Woodstock.				Small. per cent
	T. cwt.	qr.	lb.			T. cwt.	qr.	lb.		
Up-to-date ..	7	1	1	20	6	12	18	1	5	5
Scottish Triumph	6	8	1	26	6	11	4	3	26	7
Coronation ..	4	17	0	26	4	14	19	0	11	4
Carmen No. 1	3	7	3	2	12	8	10	0	17	5
Carmen No. 3	4	8	2	20	10	8	19	0	18	6
Clark's Main Crop	2	6	1	12	15	9	1	3	19	10
Manistee ..	2	15	3	26	11	8	2	3	23	4
Victory ..	3	12	2	20	8	5	17	3	22	6
Early Rose ..	1	11	2	14	19	2	5	3	19	14
Sussex Red ..	Failure					Failure				

These results must be regarded as very satisfactory, the yields at Woodstock, where the soil (alluvial from Major's Creek) was rich and season good, being exceptionally fine.

Seed from these plots was planted on the Tableland for the main crop grown there in the summer months, with Brownell seed from the coast replacing Sussex Red, and gave the following yields, at per acre:—

Variety.	Tolga.				Small. per cent	Evelyn.				Small. per cent
	T. cwt.	qr.	lb.			T. cwt.	qr.	lb.		
Up-to-date ..	4	16	1	0	22.4	4	0	2	4	10.7
Scottish Triumph	3	14	2	16	33.2	Failure				
Coronation ..	4	10	1	2	9.4	3	15	2	14	14.5
Carmen No. 1	4	4	1	24	11.5	3	12	2	20	11.0
Carmen No. 3	5	8	0	4	7.2	3	18	2	8	12.5
Clark's Main Crop	4	19	0	22	27.0	3	8	3	0	20.0
Manistee ..	4	0	2	4	17.0	2	9	0	12	20.0
Victory ..	6	1	3	4	6.0	5	2	0	16	9.6
Early Rose ..	Failure					Failure				
Brownell Beauty	3	4	3	8	27.2	2	1	1	0	28.1

These yields are not so satisfactory as those obtained in the case of Up-to-Dates and

Carmens, grown alongside the plots, the seed for which was brought from Victoria. The percentage of small or unsaleable potatoes in many of the varieties is also unduly high. The adage "Plant potatoes grown in a colder climate rather than in a warmer" appears to be exemplified. Seed from these plots is being tried again on the coast this season, the result of which will not be available for some months to come. In comparison with previous trials, Up-to-Date and Carmen justify their reputation as consistently good yielders, while Victory and Coronation have done very well. Victory is a very promising variety for the Tablelands, the tubers produced there being of nice size and shape, while the quantity of small and unsaleable potatoes was lowest of all. Advantage was taken of an opportunity to secure small lots of seed of further varieties at the Brisbane Exhibition last year, which were planted on the Tableland, to secure seed for comparative trials. Being limited to a few plants of each variety, a comparison of yields was not considered of value, but the yield of several varieties gives an indication of their suitability for the North.

In addition to these varieties, numbering 59, a little seed of 9 other varieties was later secured from Tasmania, thus making 68 varieties, which have been planted in three different coastal and one inland district in quantities sufficient to give some comparison in yield and to provide seed for trials on the Tableland during the approaching summer.

The Tableland crops harvested during the year have given exceptionally good yields, which with the high price secured, £20-£24 per ton, have made them very remunerative. One grower who followed Departmental advice has netted in the neighbourhood of £1,000 from a crop of about 10 acres. It is very satisfactory to note that, especially amongst new growers, Departmental advice in regard to treatment of seed prior to planting and the spraying of the foliage during growth has been largely followed, in all cases with the result of clean crops.

Instances of the presence of potato moth in seed secured from the South have been reported from Proserpine and the Tableland, evincing the need for a more rigorous inspection at the points of entry into the State.

Rice.—Australia each year imports practically the whole of the rice consumed within its boundaries, and thereby sends to foreign countries much wealth that should be produced within the States, of which Queensland climatically is the most suitable. The Department has conducted trials over a good many years, chiefly on the Tableland, with encouraging results in yield and quality of grain. This year further trials were made both there and in several coastal districts. The crop on the Tableland failed owing to want of rain just prior to and after the flowering period, but in two of the coastal districts excellent results were secured with four Japanese Upland varieties which mature in four months, while failures resulted from want of sufficient rain with three Javanese varieties which require six months in which to mature. The following yields were recorded on the Departmental plots at Mr. M. Boyle's farm, Carruchan, Cardwell district, and Mr. C. Daybell's farm, Waterson,

Proserpine district. A bushel of paddy or rough rice is calculated at 48lb.:—

Variety.	Mr. Boyle's Farm, Cardwell.	Mr. Daybell's Farm, Proserpine.
	Per acre. Bush. lb.	Per acre. Bush. lb.
Kirishima	50 20	50 4
Sensho	57 14	55 0
Owari	37 39	48 1
Tamasari	48 6	48 1
Si Rosaki	Failure	Failure
Si Lading	Failure	Failure
Gading Kaloewang ..	Failure	Failure

Reports from other farmers who experimented with small lots at Clump Point, Nerada, and the Bloomfield River speak very encouragingly of the behaviour of the Japanese varieties under the adverse weather conditions, which on the Bloomfield River were described as the worst for forty years.

There are large areas suitable for rice culture in the coastal districts of high average rainfall, such as from Mackay to Proserpine and from Ingham to Cooktown.

Lowland rice, which requires to be grown in water that is slowly flowing or renewed every eight or ten days, yields a much heavier average crop than the Upland rice, and should be a staple crop in the North and other parts of Queensland where large areas of level country with a retentive subsoil capable of being irrigated occur, such as at Proserpine and Ingham, on the eastern coast, and on the Gregory River, in the Gulf district. It is regretted that, owing to want of facilities for flooding, small experimental trials of varieties of Lowland rice cannot be carried out, but the yields of these Upland varieties gives an indication as to the profit that might be derived from their cultivation, more especially if rice hulling and dressing machinery were available locally.

In addition to the profitable yield of grain, the Upland rice makes a palatable and nutritious hay which is relished by all kinds of stock.

Tomatoes.—The tomato crop, which is the most important one in the Bowen district, engaging as it does the attention of the majority of farmers there, with the now universal use of wilt-resistant varieties, in the past season again gave a very large yield, but owing to fewer boats calling at the port, and the railway strike when the crops were yielding the heaviest pickings, the recorded yield for the district will be something like 100,000 cases (half-bushel) less than in the preceding year, which gave the record yield. The harvest of tomatoes in the Northern Coastal District commences in May and extends to October, the plants for the first pickings in May being set out in February, and from then onward for the later pickings until July, those for the main crop marketed from July onward being usually set out in May or early June.

Seasonal conditions for 1926 have not been very favourable at Bowen, as insufficient rain has fallen so far, but though the yield has been less the quality of the fruit has been excellent; a fall

of a couple of inches of rain during the next month will assure the success of the main crop.

The success attendant on the introduction of the wilt-resistant varieties, especially of those Departmental productions Denisonia and Bowen Buckeye, has induced farmers in other districts to engage in the industry, especially in the Cardwell and Innisfail districts, where the crop has proved most successful.

The arrangement with Mr. J. T. Moore at Bowen to grow the stud plots under Departmental supervision on his farm for the purpose of pure seed supply by Mr. Moore is working admirably.

Comparative trials carried out last season (in which the plants were manured with a fertiliser made up by mixing 40 lb. superphosphate, 15 lb. sulphate of potash, 35 lb. sulphate of ammonia, and 10 lb. of filler (lime carbonate) to constitute 100 lb., at the rate of 195 lb. per acre, which gave the best return in fertiliser trials the previous year) gave the following yields. Ten plants in each variety were set apart, from which pickings were made between 27th June and 26th September:—

Variety.	Yield.	Average pounds per plant.	Pounds per acre.	Cases per acre estimated.
	Lb.			
Denisonia	644½	64.45	33,514	1,396
Bowen Buckeye ..	564½	56.45	29,354	1,223
Norton	417½	41.75	21,710	904
Norduke	373½	37.35	19,422	809
Roselawn Buckeye	371½	37.15	19,318	804
Columbia	318½	31.85	15,560	690

After the fifth picking one plant of the Roselawn Buckeye died, the pickings thereafter being from nine plants only.

The publication of these results in the "Queensland Agricultural Journal" has resulted in inquiries for seed from all over Australia, from New Zealand, Papua, Pacific Islands, North Borneo, Ceylon, South Africa, and the United States, thus showing an appreciation of Departmental work, which is gratifying.

Cigar Leaf.—The growth of cigar leaf in the North, which has been undertaken chiefly in the Bowen and Proserpine districts, has had a serious setback this year owing to the low prices received, together with the adverse remarks made on the quality of the leaf, when marketed between January and March of this year. All growers complain that when they marketed the first portion of the crop in August and September, the prices obtained were satisfactory, while no adverse comment was made on its quality. Later in the year, when they marketed the remainder, which was harvested and cured at the same time as the first, and was of exactly similar quality, the price was dropped to half of that given previously, while the quality, previously considered satisfactory, was condemned. They feel, consequently, that they have been unfairly treated, and have intimated that unless assured of better treatment they will not give further consideration to the crop.

The marketing of cigar leaf has ever been unsatisfactory to growers, since buyers appear to be unwilling to purchase except through one particular firm in Melbourne.

There is no doubt that cigar leaf of excellent quality can be grown and cured in North Queensland, and that its growth, if not manufacture, should be a profitable industry in many parts, but until concerted action is taken by growers, such as is possible under the Pools Act, and assistance is rendered by the State in the appointment of a curing expert, whereby the whole of the output could be marketed in standard grades, the position will not be altered.

Cotton.—Interest in cotton as a crop has died out in most Northern districts. In the Bowen district one grower expressed satisfaction with his return from the crop; at Kennedy Creek, in the Cardwell district, two settlers are growing a little, but are not very enthusiastic. At Carbeen, on the driest area of the Tableland, two growers have areas of over 20 acres each under crop, the return from which they consider will be satisfactory, while next year a third grower will operate on a block of land he has purchased for that purpose.

Soil and climate at Carbeen are well suited to this crop, and there is a considerable area of Crown lands still available for settlement from there towards Parada and Mareeba.

At Charters Towers, as predicted in my last Annual Report, the cotton-growing company, who experienced great trouble in the harvesting of their crop, have gone out of business, and no attempt was made to grow the crop by anyone in that district this year.

At Gilbert River, one grower who had encouraging results in yield and quality of cotton last year, reports a total loss of this year's crop owing to lack of rain.

Green Fodder Crops and Legumes.—Experimental and demonstration plots of green fodders were almost total failures throughout the year in all districts except those of the Atherton Tableland. Seed selection areas where planted have largely been failures, while in many cases sowings were held back waiting for the rain that did not come. A great deal of interest is maintained on the Tableland in the Departmental plots, of which a series fronting the main road out from Atherton attracted much attention.

Though in some cases on the Tableland the growth on the plots of summer feeds was eaten down by caterpillars, the general yields were very fine throughout the year.

As in demonstration plots the farmers were encouraged to graze off and cut and feed in the early stages of growth, records of yields were not possible in many cases, and when made were necessarily at different stages of growth which, although not showing in all cases the maximum yield that could be obtained, provided much useful and interesting data.

CROPS FOR WINTER FEEDS.

District.	Yield per acre.			Sown.	Estimated.	
	T.	cw.	qr.	lb.		
FLORENCE WHEAT.						
Atherton ..	4	16	1	20	3 May	5 Aug.
Atherton ..	2	17	3	12	12 June	13 Sept.
Peeramon ..	8	17	0	0	6 June	28 Aug.
Evelyn ..	3	7	2	0	18 June	31 Aug.
Evelyn ..	5	10	3	16	18 June	29 Sept.
Malanda ..	9	3	0	24	23 May	28 Aug.
THREE SEAS WHEAT.						
Atherton ..	6	8	2	8	3 May	5 Aug.
Atherton ..	3	4	1	4	9 June	8 Sept.
Atherton ..	2	14	2	16	12 June	13 Sept.
Kulara ..	5	18	3	20	6 June	28 Aug.
Malanda ..	5	2	3	12	20 June	16 Sept.
Perramon ..	6	10	0	20	6 June	28 Aug.
SE X W8 WHEAT.						
Atherton ..	4	16	1	20	3 May	5 Aug.
Atherton ..	2	14	2	16	9 June	8 Sept.
Atherton ..	2	11	1	20	15 June	8 Sept.
Peeramon ..	6	10	0	20	6 June	28 Aug.
Malanda ..	2	14	2	16	20 June	16 Sept.
SKINLESS BARLEY.						
Malanda ..	9	3	0	24	24 May	28 Aug.
Millaa Millaa ..	3	17	2	20	21 May	29 July
Millaa Millaa ..	4	13	0	24	21 May	8 Aug.
Evelyn ..	6	5	1	12	18 June	31 Aug.
Evelyn ..	7	1	1	20	18 June	29 Sept.
CAPE BARLEY.						
Atherton ..	2	17	3	12	15 June	8 Sept.
FIELD PEAS.						
Atherton—						
Dun ..	6	8	2	8	3 May	6 Aug.
Partridge ..	4	19	2	16	3 May	6 Aug.
Millaa Millaa—						
Partridge ..	10	2	2	0	12 May	29 Aug.
GOLDEN VETCHES.						
Millaa ..	6	15	0	0	12 May	29 Aug.
SKINLESS BARLEY, GOLDEN VETCHES, AND PARTRIDGE PEAS.						
Peeramon ..	5	6	3	5	7 May	27 Aug.
SUMMER GREEN FEEDS.						
PEARL MILLET.						
Tolga ..	19	5	2	23	17 Dec.	4 Feb.
Kulara ..	38	11	1	20	15 Dec.	17 Feb.
Malanda ..	19	9	0	0	15 Dec.	15 Feb.
Moregatta ..	10	2	2	0	16 Nov.	26 Jan.
Ravenshoe ..	22	7	0	0	23 Dec.	4 Mar.
Ravenshoe ..	23	11	0	0	23 Dec.	4 Mar.
TEOSINTE.						
Millaa Millaa ..	16	12	0	0	2 Nov.	3 Mar.
Moregatta ..	14	5	0	0	16 Nov.	26 Jan.
Ravenshoe ..	16	0	0	0	23 Dec.	4 Mar.
SIBERIAN MILLET (White Panicum).						
Kulara ..	20	14	2	16	15 Dec.	17 Feb.
Malanda ..	18	12	3	12	17 Dec.	15 Feb.
Millaa Millaa ..	15	5	0	0	2 Nov.	3 Mar.
Ravenshoe ..	13	8	0	0	23 Dec.	4 Mar.
HORSE GRAM.						
Millaa Millaa ..	9	15	0	0	2 Nov.	3 Mar.
COW PEA VARIETIES.						
Millaa Millaa—						
Groit ..	14	0	0	0	2 Nov.	3 Mar.
Brabham ..	14	12	0	0	2 Nov.	3 Mar.
Malanda—						
Groit ..	6	0	0	0	18 Dec.	10 Mar.
Brabham ..	6	9	2	16	18 Dec.	10 Mar.
Victor ..	7	5	1	12	18 Dec.	10 Mar.
VELVET BEANS.						
Millaa Millaa—						
E. Black ..	18	0	0	0	2 Nov.	3 Mar.
E. Georgia ..	14	9	0	0	2 Nov.	3 Mar.
Mauritius ..	11	5	0	0	2 Nov.	3 Mar.

The value of winter green feeds is well indicated in a report from Messrs. Lowry Bros., of Malanda, who had 5 acres under crop. The additional returns in butter from their herd of 50 cows, most of which were approaching the end of the lactation period, for the fifty days, from 14th August to 3rd October, during which they were fed from the plots, were equivalent to £46 5s. factory payment. The increased return was calculated as that above the average daily return for the first fourteen days of August, no allowance being made for what would have been a natural decrease had they been grazed on the pasturage alone. Writing on the 15th October Messrs. Lowry state:

"We have since the 3rd October ceased to feed from the plots and have five fresh cows in. We have a tip-top paddock with three mixed grasses, viz.—paspalum, couch, and panicum (muticum), which has been spelled for over six months, and the grass is 6 to 8 inches high all over the 75 acres. Since the 3rd October our cows have been running in this paddock; on the 5th October they dropped 15 gallons per day, and by the end of the week had dropped 25 gallons per day in their milk yield, despite the fact that five fresh cows had been added to the herd in milk."

Figures like these are illuminating, and it is a matter of regret that other dairy farmers do not make similar calculations.

The yields of summer green fodders as well as those for winter are very fine and speak volumes for the fertility of the soil and the excellent seasonal conditions of the Tableland.

Some doubt was expressed as to the value of green feeds in summer when there was such a fine growth of paspalum and other grasses, but those who followed the advice to graze or cut and feed them off in the young stages of growth, have been amazed at the increase in the milk flow. Pearl millet and Siberian millet (white panicum) have earned golden opinions, while teosinte has been found to be most useful and palatable to stock in this, the first year in which crops were obtained, owing to defective germination in the seed supplied during the previous years.

The legumes for summer growing show excellent results. Their value is very high, as at any stage of growth they may be fed to improve, by their admixture, the nutritive ratio of the pasturage or of other crops.

Honey Sorgho.—Since the first trial of this variety of saccharine or fodder sorghum in 1924, the yields have been consistently high, as the following records show:—

Year.	District.	Per Acre.			
		T.	cwt.	qr.	lb.
1924	Carbeen	25	5	2	24
1925	Carbeen	31	16	1	20
1925	Carbeen	33	15	2	24
1926	Atherton	25	0	0	0
1926	Proserpine	34	9	1	24

It is a variety, as its name indicates, with a high sugar content, very much relished by all kinds of stock, and is likely to exceed the saccharine variety in public favour.

D

Pasture Improvement.—In my last annual report some remarks were made on the subject of the resuscitation or renewal of paspalum pasturage that had become decadent after being laid down for a number of years, the opinion being expressed that a ploughing up of the pasture was at once the best and most economical means of overcoming the trouble, and that as far as the Atherton soils were concerned, it was not thought, owing to their fertility, that the application of fertilisers would be followed with any economic result.

During the year, by arrangement with Messrs. Pink and Sons, a series of experiments were undertaken on 2 acres of a pasture that had been under paspalum for fourteen years. The area was divided into eight equal parts, half of which were ploughed and harrowed and half harrowed only with a heavy harrow.

Fertilisers were applied at the following rates per acre:—

- Plot 1—Unmanured.
- Plot 2—Carbonate of lime, 15 cwt.
- Plot 3—Burnt lime, 10 cwt.
- Plot 4—Nauru phosphate, 1 cwt.
- Plot 5—Unmanured.
- Plot 6—Nauru phosphate and superphosphate, 1½ cwt.
- Plot 7—Nauru, 1 cwt., sulphate of potash ½ cwt., nitrate of soda ½ cwt.
- Plot 8—Basic superphosphate, 1½ cwt.

There were thus eight plots on the area ploughed and eight plots on the area harrowed, allowing a comparison of the use of the same fertilisers on both ploughed and harrowed land.

The ploughing and harrowing of this area was done after the first heavy storm of the wet season in December and the fertilisers applied immediately after and harrowed in. The first cut was made on 14th February and the second on 14th June, as little or no rain fell during April and May.

The weights of green grass cut from 1 square yard on each plot are:—

Plot.	Ploughed Area.	
	14th February.	14th June.
1	12 oz.	10 oz.
2	6 oz.	14 oz.
3	nil	19 oz.
4	nil	15 oz.
5	nil	32 oz.
6	nil	25½ oz.
7	nil	24 oz.
8	nil	17 oz.

Plot.	Harrowed Area.	
	14th February.	14th June.
1	5 oz.	4 oz.
2	52 oz.	12 oz.
3	48 oz.	12 oz.
4	16 oz.	12 oz.
5	35 oz.	13 oz.
6	17 oz.	10 oz.
7	53 oz.	14 oz.
8	29 oz.	14 oz.

The ploughing, owing to the matted nature of the roots and the hardness of the soil, was uneven, parts here and there being missed. Where the ground was all turned over most of the grass was killed, which accounts for the

yield in Plots 1 and 2 only in the first cutting on 14th February.

So far, no indication is given of any benefit from the application of fertilisers.

On 13th June, the day before the last cutting was made, a thunderstorm giving upwards of an inch of rain fell.

The coming year should provide more useful data, as, owing to the season, no really definite conclusions can be arrived at just now.

PLANT DISEASES.

Maize.—The crops of maize on the Tableland have been subject every year, especially in those in which the rainfall was up to or above the average, to fungus diseases, chiefly species of *Diplodia*, *Mucor*, and *Penicillium*. In dry seasons loss from this cause is very greatly reduced, showing that the usual seasonal conditions adversely affect the variety now grown, thus evincing the need for the introduction of a disease-resistant variety or varieties, as explained in an article, "Tableland Maize," published during the year.

On the Tableland during the past season the incidence of leaf stripe, *Helminthosporium turcicum*, was greater than in previous seasons, but that of head smut, *Sorosporium Reilianum*, was much less.

Potatoes.—All crops were remarkably free from fungus disease, largely due to the treatment of seed and the spraying of plants given, according to the advice of the Department.

Tomatoes.—While the trouble of the wilt disease, *Fusarium lycopersici*, has been overcome by the general use of the resistant varieties introduced by the Department, there are other diseases to which the tomato plant is subject that have caused some damage.

Towards the close of the picking season, in September and October, at Bowen, when the weather was dry and daily temperatures high, practically the whole of the older plants died out or the leaves, except the newest at the tips of the branches, suddenly withered, remaining on the plant for some time in dried-up masses. This is considered to be due to a species of *Phytophthora*, which, unlike its congener *P. infestans*, is active only during the hot weather.

Cucumbers.—The whole of the cucumber crops in the Bowen district after July were attacked with disease, to their total loss. Specimens of fruit showing a peculiar spotted discolouration under the skin which caused it to be designated locally as the measles disease, with specimens of sections of the vines and stems, including the point of emergence from the soil, were submitted to the Vegetable Pathologist, who identified more than one specific fungus. Farmers of long experience at Bowen refer to a similar loss of the crop some twenty years previously.

As specimens, no matter how well packed, when sent through the post, necessarily take some time to reach Head Office, they cannot permit of such a satisfactory microscopical examination as would be possible if carried out on the spot. It is consequently suggested that provision might be made for a visit to the Bowen district by a pathologist should the disease mentioned recur this coming year.

INSECT PESTS.

Nematodes.—Trouble with nematodes is a frequent experience with many crops in the North, being most prevalent on a friable, easily worked soil such as a volcanic or sandy alluvial loam. A trial in control was made in tomato seedbeds at Bowen during the year with paradichlor., chlorocide A, and chlorocide B, with negative results for each. "Vaporite," which has been proved successful in this direction during past years, was unobtainable, but it is hoped that during the coming year further experiments, including this substance with those previously mentioned, will be carried out. Apart from nematodes, damage from other insect pests was not greater than in average years.

INSTRUCTION.

The call for instruction and visits to different localities increases each year, and it is now beyond the capacity of the Instructor. Application has been made for the appointment of an Assistant Instructor, to be stationed on the Tableland during the coming year, as well as for the supply of a motor car for the Tableland and Townsville respectively. In previous reports the slowness of transit per horse and the consequent limitation of the Instructor's usefulness has so fully been set out that no further reference should be needed. Indications point to the advisability of the appointment of an additional Assistant Instructor for the coast being made after this coming year.

WHEAT AND PASTURE IMPROVEMENT.

MR. C. S. CLYDESDALE, Assistant Instructor in Agriculture, reports:—

In the season under review the wheat crops throughout the State compared very favourably with those of past seasons.

Wheat crops generally in the early part of September were giving great promise of a record yield, but the late frosts experienced on the 18th and 24th of September did considerable damage on the low-lying and exposed country. This setback, followed by a continuation of the dry weather, proved detrimental to these latter crops, which in some instances proved a complete failure as far as grain was concerned. However, the incidence of these two factors was not so pronounced elsewhere, especially on the more elevated country, with the result that average yields were good and many individual crops gave splendid returns.

The variety "Florence," which at the present time is undoubtedly the most popular kind amongst the wheat farmers on the Darling Downs, suffered a good deal of damage this year from frost, when grown on the low-lying country.

Gluyas and Canberra did well; these being mid-season varieties and slower in development were not affected to the same degree as Florence. Yields of from 13 bags of Canberra were obtained, 7 and 8 bags being quite common, and Gluyas also gave good returns.

Novo (Bunge x Indian Pearl 9), a Roma cross-bred, did well generally. In one instance which

came under notice a crop in the Allora district planted at the end of June gave a remarkable return of 14 bags per acre. Splendid results were also obtained during the season from Pusa 4 wheat. It is interesting to note that this variety was introduced about sixteen years ago by the Department of Agriculture from Pusa, India, and after thoroughly testing it out on experiment plots over several seasons, it was grown under field conditions in the Allora district. Since then its cultivation has been extended. Last year there were several thousand acres cropped with this particular variety. It has one disadvantage—susceptibility to frost. Growers who planted it on low-lying situations suffered loss through the late frosts in September. On slopes and ridges, high returns of excellent grain were obtained, many yields ranging from 10 to 15 bags per acre. Wheat of this description should obviously be grown on the higher lands wherever possible.

WHEAT PLOTS.

The field work connected with the wheat propagation plots was carried out at Allora, Southbrook, Inglewood, Jandowae, Kaimkillenbun, Pittsworth, Pratten, and Murgon. Actually, a continuation of the wheat plot work which the Department has been carrying on for a considerable number of years.

With few exceptions, these wheats were bred at Roma State Farm and are first tested out in nursery plots, under field conditions, before being transferred to the propagation plots. Planting was carried out from 28th May to 18th June, 1925. In all districts good moisture was present and excellent germination resulted.

Seed which was treated with carbonate of copper at the rate of 1 oz. per bushel as a bunt preventive was sown at the rate of 45 lb. per acre, and the resultant crops were absolutely free from bunt. Nineteen varieties were tested out, representing 63½ acres, from which pure supplies of seed were drawn for future operations.

In localities affected by the drought, notably at Inglewood and Pratten, only a little more than seed was obtained, but elsewhere the yields were fairly good. The highest ones, Florida and Pilot, gave a return of 37 and 33½ bushels per acre respectively at Murgon, where a good deal of interest is being shown in wheat-growing.

NURSERY PLOTS, SEASON 1925.

Last year, at each of several centres where field tests were carried out, small nursery plots ranging from 28 to 88 varieties were established, interesting results being obtained.

The wheat which stood out prominently last year was planted in plots one-eightieth of an acre this year at Allora for observation and for the propagation of additional quantities of seed.

Certain new crossbred wheats gave most encouraging results. These in particular will be persevered with. In addition to these minor tests semi-field trials were undertaken with several promising Roma crossbreds.

SEED WHEAT IMPROVEMENT SCHEME FOR 1926 SEASON.

Following on a conference between officers of the Department of Agriculture and the Wheat Board, and the acceptance by the Board of the proposals made to extend the cultivation of certain standard varieties of wheat (which include 60 per cent. of Departmental varieties) an active campaign was initiated.

In company with the members of the Wheat Board, an itinerary was made of the principal wheat-growing districts, with a view of locating reliable growers to undertake the raising of pure strains of seed, which were to be supplied in the first place by the Department at a fixed price per bushel to the growers, on the understanding that, exclusive of the specified quantity which the individual grower was at liberty to retain for his own use, the resultant crop would be purchased by the Wheat Board at a premium of 6d. per bushel over and above the price of No. 1 milling wheat.

The scheme was well received by growers, and no difficulty was experienced in placing all the seed which the Department had available. Given a satisfactory season, the Board should have several thousand bushels of pure seed available for its seed extension work. As part of the scheme involves the installation of up-to-date cleaning and grading machinery, it is anticipated that a considerable improvement will soon be effected in the purity, type, and quality of the State's seed wheat.

DEPARTMENTAL WHEAT PROPAGATION PLOTS, SEASON 1926.

Early in the season arrangements were made to carry out a number of tests in nursery rows and to establish field propagation plots where special strains of new and promising varieties could be grown for seed purposes.

In the former case separate plots were laid down at Allora and Southbrook, with eighty Roma crossbreds and a few standard varieties, while in the latter case Cunningham, Southbrook, and Inglewood were chosen as centres for the production of several promising Roma crossbreds.

Light rains were experienced, which permitted of sowing all the wheats, which generally gave a very fair percentage of germination.

PROGRESSIVE REPORT ON PASPALUM PASTURE RENOVATION EXPERIMENTS.

On 2 acres chosen for this work at Maleny and Cooroy the results, since the establishment of the plots in 1924, go to prove that the rich volcanic soils at Maleny are of high stock-carrying capacity and eminently adapted to dairying, a fact manifested by the heavy yields obtained by cutting and weighing the grass produced on the experiment plots. At Cooroy the soil proved to be less responsive, due largely to its different physical characteristics and to the fact that the subsoil is a rather close-textured clay, which favoured rapid growth only during the warmer months of the year.

At each centre marked differences were to be noted between the quality and yield of the grass from the ploughed and unploughed plots, it being shown unmistakably that where breaking and aeration of the paspalum sod was carried out it proved itself to be the first and most certain method of renovation that could be applied to old, established pastures.

Later on, when the results of the analyses of grass cut from the respective plots are summarised by the Agricultural Chemist, it will be possible to make deductions as to the most suitable fertilisers to use.

On the ploughed area several months elapsed (two months at Maleny and eight months at Cooroy) before the new growth of paspalum established itself.

RAINFALL.

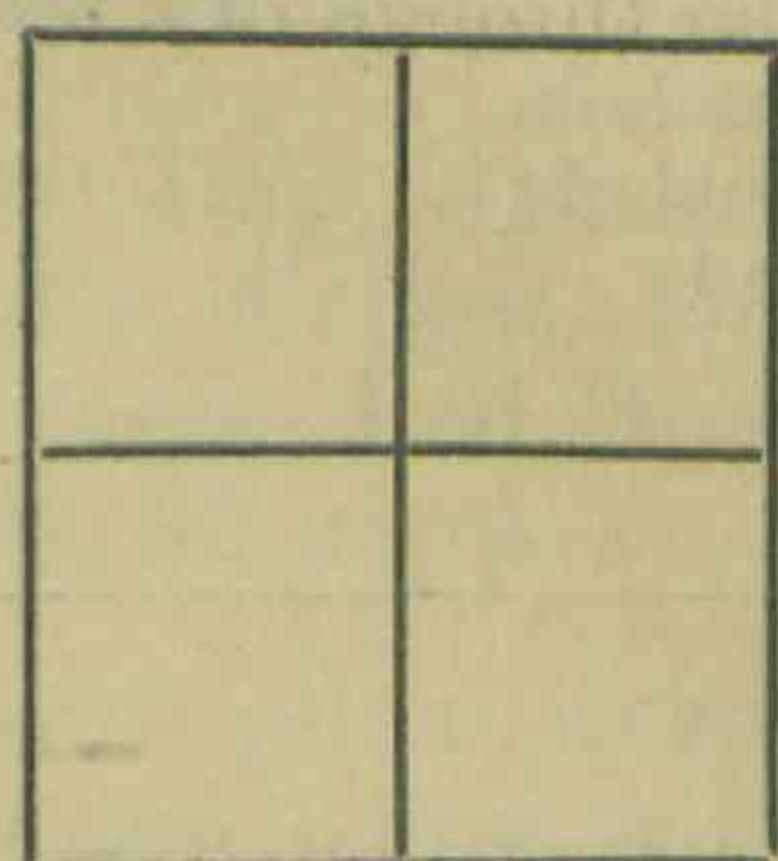
	COOROY.		MALENY.	
	Wet Days.	Points.	Wet Days.	Points.
1925.				
July	1	40	1	40
August	9	242	7	606
September	3	89	2	63
October	5	142	4	183
November	14	373	13	786
December	11	616	10	685
1926.				
January	11	701	11	1,129
February	6	185	1	10
March	16	404	11	418
April	12	425	9	565
May	9	558	7	646
June	13	549	11	677

The following list gives details of the individual and aggregate weights of green grass cut from each individual plot:—

COOROY.					MALENY.					
Plot Number Ploughed Area.	Plot Number Unploughed Area.	1924-1925.	1925-1926.		Plot Number Ploughed Area.	Plot Number Unploughed Area.	1924-1925		1925-1926.	
		Date of Cuttings.	Date of Cuttings— 19/11/25; 21/12/25; 18/1/26; 17/2/26; 23/3/26; 22/4/26; 24/5/26.				Date of Cuttings— 25/2/25; 15/6/25.		Date of Cuttings— 20/10/25; 23/11/25; 17/12/25; 18/1/26; 18/2/26; 23/3/26; 22/4/26.	
			Aggregate Weight per Cutting.	Total Weight of Grass.			Aggregate Weight per Cutting.	Total Weight of Grass.	Aggregate Weight per Cutting.	Total Weight of Grass.
			Tons.	Tons.			Tons.	Tons.	Tons.	Tons.
..	1	No cutting was made during the season	.929	6.502	1	..	2.13	4.26	1.65	11.57
1A	..		.62	4.33	..	1A	1.40	2.81	.65	4.58
..	2		.745	5.218	2	..	2.23	4.47	2.03	14.19
2A	..		.73	5.11	..	2A	1.91	3.82	.51	4.19
..	3		.95	6.68	3	..	3.11	Only one cutting made. Second cutting not recorded owing to temporary damage to hurdles and grass by stock	1.79	12.42
3A	..		1.17	8.21	..	3A	3.87		.81	5.70
..	4		.92	6.49	4	..	2.48		1.84	12.91
..	4		.69	.69	..	4A	3.14		.99	6.99
4A	..									
..	5			1.54	10.78	5	..	2.62	5.25	1.81	12.65
5A	..		1.19	8.35	..	5A	2.60	5.21	.96	6.72
..	6		1.90	13.33	6	..	2.73	5.47	2.29	16.00
6A	..		1.55	10.82	..	6A	3.50	7.00	1.35	9.42
..	7		1.54	10.78	7	..	3.04	6.09	1.89	13.20
7A	..		.91	6.36	..	7A	2.90	5.81	.80	5.59
..	8		1.25	8.75	8	..	4.24	8.48	2.09	14.61
8A	..		.69d	4.86	..	8A	2.36	4.73	.72	5.08
					7B	..	..	..	2.27	15.93
					8B	..	..	..	2.33	16.31

SKETCH PLAN AND DETAILS OF MALENY PLOTS.—AREA, 2 ACRES.

Unploughed, 1A to 8A inclusive.	Ploughed, 1 to 8 inclusive.
8A Basic super. 1½ cwt. per ac.	Basic super. 1½ cwt. per ac. 8
7A Nitrate of soda 1½ cwt. per ac. Nauru phosphate 1 cwt. per ac. Sulphate of potash 1½ cwt. per ac.	Nauru phosphate 1 cwt. per ac. 7 Sulphate of potash 1½ cwt. per ac. Nitrate of soda 1½ cwt. per ac.
6A Nauru phosphate ¾-cwt. per ac. Superphosphate 3 cwt. per ac.	Nauru phosphate ¾-cwt. per ac. 6 Superphosphate ¾-cwt. per ac.
5A Control. No manure.	Control. 5 No manure.
4A Nauru phosphate 1 cwt. per ac.	Nauru phosphate 1 cwt. per ac. 4
3A Slacked lime ½-ton per ac.	Slacked lime ½-ton per ac. 3
2A Pulverised lime ¾-ton per ac.	Pulverised lime ¾-ton per ac. 2
1A Control. No manure.	Control. 1 No manure.



Intersections of plots enclosed with wire-netting-covered stock-proof hurdles.

RUNCORN PASPALUM PASTURE IMPROVEMENT TRIALS.

In accordance with instructions received, arrangements were made to lay out twenty additional grass experiment plots in conformity with the plan supplied by the Manurial Experiments Committee. Series A and B, consisting of ploughed and unploughed experiment areas, ten plots each, were in this way extended by the addition of series C and D (ten plots each), ploughed and unploughed areas respectively, to which latter fertilisers were supplied.

Arrangements were made in the middle of December, 1925, for the breaking up on series C of the paspalum sod with an English type of mouldboard plough, in furrows 8 in. by 3½ in., the crown of the land being first opened out prior to "ridging."

Subsequent attention was given to the whole of the plots A, B, C, and D in the way of harrowing, mowing with a horse mower (two horses), raking and cleaning up the experimental area.

First cuttings were made later on in the season from the whole of the series for the use of the Agricultural Chemist. Although certain effects were observed through the use of quick-acting fertilisers, which in some instances promoted a fresh green shoot of grass on some of the plots, these latter failed to continue the improvement.

Generally speaking, the results were nullified by the lack of the usual monsoonal rains. Cattle were ultimately introduced to graze down these plots during the off season.

FODDER TRIALS AT RUNCORN.

At the request of the Manurial Experiments Committee, a small area of land adjoining the paspalum pasture improvement trials was utilised for the purpose of conducting fertiliser experiments with saccaline, maize, Sudan grass, and foxtail millet.

The land was brought into good tilth at the end of December, being ploughed and cross-ploughed and harrowed twice previous to the reception of the seed.

The seed was sown at the following rates:—

- Foxtail millet, 30 lb. per acre;
- Maize, 56 lb. per acre;
- Sudan grass, 20 lb. per acre;
- Saccaline, 30 lb. per acre.

These varieties occupied eight plots, each one-fiftieth of an acre, and were seeded down on 6th January, 1926. The seed and fertilisers were supplied from the Head Office.

The rainfall was as follows:—

- January, six wet days, 145 points;
- February, three wet days, 18 points;
- March, eleven wet days, 297 points.

The more rapid growing plants made use of the moisture to better advantage than those naturally requiring a longer period to mature in.

Striking differences were noticeable between certain of the manured and unmanured plots, reference to which is made in photographic records appearing in the report of the Agricultural Chemist.

In the case of the maize plots the results were influenced by the lack of sufficient moisture and by the depredations of pigeons, which removed a proportion of the seed after sowing.

MAIZE IMPROVEMENT.

MR. C. McKEON, Assistant Instructor in Agriculture, reports:—

The principal part of the year's activities embraced both the technical and practical field work connected with the Departmental scheme of seed maize improvement. It is gratifying to be able to report that, notwithstanding the indifferent season experienced in many districts, excellent yields were obtained from the propagation plots in the Kilcoy and Mary Valley areas, and large stocks of high-class seed were selected for distribution.

After carrying on the Departmental maize breeding and seed selection work for several years, the opinion has been formed that a marked improvement has taken place in the type and quality of the different varieties employed, and the high yields obtained in the field trials have unmistakably demonstrated the value of propagating high-yielding strains of seed.

Up to the time of submitting the previous report some of the maize plots had not reached maturity, and the undermentioned details were unavailable:—

Grower.	Variety.	Area.	Yield per Acre.
		Acres.	
J. Tinney, Kilcoy	Improved Yellow Dent	5	Damaged by flood; no yield taken
A. J. Casten, Hivesville	Funk's 90 day	5	70 bushels
G. B. Mouatt, Kilcoy	Leaming	3	Failed through dry weather
A. Ind, Beaudesert	Golden Beauty	3	Failed through dry weather
J. Richards, Kilcoy	Golden Beauty	4	60 bushels
E. Witton, Manyung	Funk's Yellow Dent	14	50 bushels
W. Beverley, Boonah	Improved Yellow Dent	5	Failed
F. Turnbull, Kandanga	Improved Yellow Dent	8 and ear to row	

SEED MAIZE IMPROVEMENT.

Although the maize crop for Southern Queensland, on the whole, will be a very light one, due to the dry conditions experienced in most of the

principal maize-growing districts, the results from the Departmental plots, under the circumstances, can be considered very satisfactory.

The yields on the whole were not high, but very few of the plots were total failures, and at the end of the season sufficient seed to sow approximately 4,000 acres will be available for distribution to farmers. The whole of the seed selected was grown in the Mary Valley and Kilcoy districts, the crops in the other districts where plots were established being too light, owing to dry weather, for seed purposes.

Cutworms were responsible in a number of cases for the light yields, as many of the plots were attacked when the plants were only a few inches above ground, and considerable damage done.

In the Kilcoy district parrots were very troublesome, and in two or three cases practically every ear in the whole crop was more or less damaged. The damage was not only done by king parrots, which usually attack corn, but more so by Blue Mountain parrots, which usually confine their attention to sorghums. The scarcity of sorghum crops in this district was probably responsible for this.

The damage caused by the maize grub, regarding both plants and ears, was again very light. None of the plots showed any signs of blight. Weevils also caused much less damage than usual, except in one case where the crop was left in the field too long. The reduction in damage was due, perhaps, not so much to the fact that weevils were less prevalent than usual, but because growers are beginning to realise the necessity of picking the crop as early as possible, especially those crops ripening early in the season. Each season it is becoming more apparent that maize growers are beginning to recognise the benefit of using pure strains of seed, and also to recognise the value of the seed maize improvement work, which has been carried out by this Department for a number of years past. This is admitted, not so much in words, but from the fact that farmers with whom the plots are established receive numerous inquiries from local growers for supplies of seed from what is left after the best of the seed has been picked out by Departmental officers. The fact that the Departmental supplies of seed have never yet been equal to the demand is also proof of this.

Although the total area of the plots sown this season was little more than half the area sown the previous season, due to dry conditions in some districts preventing arrangements being made for more plots, the amount of seed selected was greater than any previous season, and the quality and type of grain was more than satisfactory.

Eighteen individual plots were sown, and these totalled 84½ acres, of the following varieties:—

Funk's 90 Day, 8½ acres; Star Leaming, 13 acres; Reid's Yellow Dent, 7 acres; Golden Beauty, 14 acres; Red Hogan, 4 acres; Improved Yellow Dent, 36 acres.

Some small plots were also sown with the strains that are being worked up with the idea of testing them out under North Queensland conditions. An "ear-to-row" test of each of the standard varieties, with the exception of Red

Hogan and Reid's Yellow Dent, was also sown, the ears selected for the test plot of the latter variety being too badly damaged by weevils to be worth sowing.

Only three plots out of the total number sown failed to develop grain sufficiently good for seed purposes.

Funk's 90 Day.—This variety is becoming more popular each season, and in every district in which it has been tried it has been very highly spoken of, both by the growers and by local farmers who have seen it growing.

Three plots were sown, two in the Kilcoy district and one in the Mary Valley district. One of the former did particularly well and gave the very fine yield of slightly over 80 bushels per acre. The type and colour of grain and the size of the ears were very good. The field characteristics, on the whole, were very good, and show a very great improvement, particularly the husk covering. The other crop grown in the Kilcoy district suffered during the early stages of growth from dry weather. Germination was also irregular from the same cause. Portions of the crop where the land was better worked yielded very well, whilst other portions on the rougher land were only light. The ear-to-row test plot was sown in the centre of this plot, but was very irregular in germination and growth, and the ears were too small and irregular for further ear-to-row test work.

The plot sown in the Mary Valley district suffered right throughout from dry weather, and this, together with the heavy damage suffered by the young plants from cutworms, was responsible for the light yield. Portions of the area were so badly eaten out that the land had to be ploughed up and another crop sown.

Star Leaming.—Three plots were sown, two of which germinated poorly and consequently yields were light. Both crops also suffered from dry weather and were badly damaged by parrots when the grain was in the milk and dough stages. Owing to the light stand, and the excellent condition of the land when the seed was sown, the plants had a better chance of withstanding the dry weather and developed very large ears. The type of grain was very fine, and a fair quantity of good seed was selected from both plots.

The other plot, although patchy where cutworms had attacked the crop when young, did very well, and yielded slightly over 70 bushels per acre. The crop unfortunately was left too long in the paddock and was considerably damaged by moths and weevils, so the yield, all things considered, may be regarded as very good.

The ears were large and the type and colour of the grain was splendid. As 110 bushels of seed were selected from the crop—after discarding a large percentage of otherwise good ears owing to damage by weevil and moth, particularly the latter—it will readily be seen how even the type was.

The field characteristics were good, and are perhaps the best of any of the varieties.

The "ear to row" test plot gave fairly good results, the yields varying from 52.71 bushels per acre to 92.25 bushels per acre.

Reid's Yellow Dent.—Only one plot of this variety was sown and the result was good. The ears were very large, and, for this variety, were well covered. The grower remarked on the improvement in the husk covering, and it is to be hoped that this improvement will continue, as this is the only real defect in an otherwise wonderfully good corn.

As usual the type was very regular.

The grower, so far, has not advised as to the actual quantity of grain threshed, but the yield will not be under 75 bushels per acre. This yield is not nearly as high as some of the previous yields from this variety; but portion of the crop, which was sown a fortnight later than the first sowing, was much lighter owing to absence of rain during tasselling.

Golden Beauty.—One of the three plots of this variety failed owing to dry weather, and the other two gave fairly good yields. Both of these crops made splendid growth, and promised a very heavy yield, but the weather conditions during tasselling were very hot and dry, and consequently the yields were lighter than they would otherwise have been. The type of grain was very good, but naturally the ears were not as large as usual.

Field characteristics were good on the whole, and the position of the ears continues to improve, although there is still room for further improvement in this respect.

This variety has done particularly well in the Kilcoy district, and is now a very popular variety there. In the past great difficulty has been experienced in persuading farmers who do not know the variety to grow it, but in every case where it has once been grown the farmers have expressed a keen desire to continue growing it.

Results so far have proved that it is one of the best drought resisters of any of the varieties, and the grain when shelled makes a most attractive looking sample.

The "ear to row" test, in keeping with the rest of the plot, did not give any heavy yields, the best being 77 bushels per acre and the lowest 43.85 bushels per acre.

Improved Yellow Dent.—This is probably the most popular variety grown in Queensland today, the heavy yield and the large bright grain appealing to maize-growers, and no difficulty is ever experienced in getting areas of land for all the plots required by the Department.

Four large plots were sown and one, after making great growth, was ruined for seed by hot winds whilst out in tassel. Two plots were harvested with good results, whilst the fourth remains to be harvested. A large quantity of seed was selected from the two plots so far harvested, the type and colour of the grain being particularly good. The ears were very large, and some of the best of these were secured, and when weighed were found to be from 1 lb. 2 oz. to 1 lb. 6 oz. each. The yields in both plots worked out at approximately 75 bushels per acre. One plot was damaged, just after sowing, by bandicoots, and the other by cutworms, and

consequently they were rather patchy in places. Very few of the ears were damaged by weevil—due partly to ripening late in the season but more so to the exceptionally good husk covering. Although the majority of the field characteristics were good, there is room for considerable improvement in the height of the ears, a large number being carried far too high.

Half of the "ear to row" test plot was resown on three occasions owing to kangaroo rats digging out the seed and then was destroyed. The remainder was more or less damaged and of no use for comparison purposes.

Red Hogan.—Only one plot was shown, and was a failure owing to dry weather. This crop looked very promising up to the tasselling stage, but hot dry winds destroyed the pollen.

Unnamed Selections.—Two one-acre plots and a small plot were sown with strains which are being worked up in connection with the proposed seed maize improvement scheme for the Atherton Tableland.

One of the larger plots was practically ruined by dry weather, and the others were only light from the same cause. Parrots were also very troublesome and did considerable damage. The results, however, were more than satisfactory, the type of grain being much more regular than was expected. The ears were small owing to the dry weather, but the quality of the grain was good.

A detailed list of plots is appended.

General Duties.—During the past year the following places were visited on instructional and work other than seed maize improvement work:—

Kilcoy, to judge at the Show and to give advice on making stack silage.

Mount Garnet, to report on the suitability of the district for growing seed maize.

Atherton Tableland, in connection with the proposed seed maize scheme.

Runcorn and Cooroy on several occasions, in connection with the pasture improvement plots established in those districts.

Boonah, Kalbar, Wangalpong, and Beaudesert, to make arrangements for the carrying out of dairy and pig fodder trials.

Mount Walker, to give advice on silage.

With regard to stack silage, officers of this Department have given demonstrations at different times in all of the principal districts where maize-growing is carried on in conjunction with dairying, and are constantly pointing out to dairymen the necessity of making provision for the winter by conserving fodder in some form, and it is remarkable that in such a season as the past one, during which thousands of acres of splendid crops of maize were ruined for grain, but which would have made excellent silage, very few stacks of silage were seen. In most cases the stalks were either cut and thrown out to stock, with the result that much of it was wasted, or were left to mature a very light crop of pinched grain, which would in many instances barely pay for picking.

		Extracts from Reports.		
Variety.	Grower.	Area.	Yield per Acre.	
Funk's 90-day ..	T. W. Dunning, Kilcoy	3 acres ..	80 bushels ..	First sowing made 2-11-25 and the second sowing a couple of weeks later. The ground for both plantings was in very fine condition. Plants made very good growth and averaged about 9 ft. in height. Second sowing missed the rain when cobbing and was too pinched for seed purposes. First sowing did splendidly and gave a very good yield. Field characteristics were very good, particularly the husk covering, which shows a great improvement. Type and colour of grain were good. Ripening was fairly even. Selections were made in the field from early maturing plants possessing other desirable features and sufficient seed for next season's plot requirements was secured. One of the best crops of this variety to date. Period of maturity 108 days.
Funk's 90-day ..	J. Tinney, Kilcoy ..	3 acres ..	50 bushels ..	Sown 1-10-25. Weather was very dry for several weeks after planting and crop had a hard time. Crop responded well when rain fell, but patches, where the ground was a bit rough, had received too big a check to properly recover. This reduced the yield considerably. Ears on the whole were only of medium size but the type of grain was good. Husk covering much improved. A number of plants carried ears with exceptionally long shanks. This is a peculiarity of the variety and appears very hard to breed out. Selections were made from early maturing plants and about 3 bushels of seed were secured. Ear to row test was harvested, but the growth was too uneven and the germination too irregular to be of any use for comparison purposes. Period of maturity 113 days.
Funk's 90-day ..	H. Roselund, Imbil	2½ acres ..	No yield take	Sown 26-12-25 and germinated very well. Over half the crop was completely destroyed by cutworms just after germination and the remainder was badly damaged. Crop suffered from want of rain throughout and only gave a light yield.
Star Leaming ..	G. Meyers, Imbil ..	6 acres ..	70 bushels ..	Sown 2-11-25 and germination was only fair. Crop made good headway right throughout. Cobs were very large and very regular in type. Plants were between 9 ft. 6 in. and 9 ft. 10 in. high and of very upright growth. Portion of area was patchy owing to cutworms, but the remainder was very fair. Very fair quality seed was selected. Crop left too long in the field and a lot of damage was done by moth and weevil. Period of maturity 130 days.
Star Leaming ..	T. A. Beanland, Kilcoy	3 acres ..	40 bushels (approx.)	Sown 6-1-26 on a very nicely prepared piece of land. Germination was very poor for some unknown reason, and would not be more than a 50 per cent. strike. Dry weather prevailed practically throughout growth and only the splendid state of the land at planting time and the thin stand was responsible for any crop at all. All things considered the crop did remarkably well to produce ears of such size and quality as it did. The supply of seed available was very limited, but what there was of it was of very good quality. Period of maturity 138 days.
Star Leaming ..	G. B. Mouatt, Sandy Creek, Kilcoy	4 acres and "ear to row"	30 bushels (approx.)	Sown 18-11-25 and germinated very poorly. Ear to row germinated much better. Weather conditions throughout were very unfavourable. Considering this the crop made good headway and developed very fair ears. Quality and type of grain were very good. Parrots played havoc with the ears and practically every ear was more or less damaged. Seed selected was of very good type. Ear to row test was sown in the centre of the plot and was not damaged to the same extent as the bulk of the surrounding plot; yields in this were good considering. Time of maturity, 138 days.
Reid's Yellow Dent	F. Turnbull, Kadanga	7 acres ..	75 bushels (approx.)	Sown at the end of September and germinated well. Second sowing of about 1½ acres made a couple of weeks later. Plants made very strong upright growth and cobbled very well with the exception of the second-sown portion, which had very hot weather during tasselling. This was much lighter and reduced the yield for the whole area. Ears were very large and well filled. Grain was very true to type. Husk covering very good for this variety. Field selections were made and about 6 bushels of very fine seed was selected. This variety does particularly well in this locality. Period of maturity, 122 days.

Extracts from Reports.

Variety.	Grower.	Area.	Yield per Acre.	Extracts from Reports.
Golden Beauty	J. Richards, Sandy Creek, Kilcoy	4 acres and "ear to row"	50 bushels	Sown 18-11-25 on a very well prepared piece of land and a splendid germination resulted. Crop made very fine growth, plants reaching a height of 10 ft. 6 in. and looked very promising until dry weather set in during tasselling. Ears were small, but grain was of good type. Field characteristics were good. Position of ears much improved. Ear to row test yields were fair, varying from 43.85 bushels per acre to 77 bushels per acre. Period of maturity, 146 days.
Golden Beauty	G. B. Mouatt, Kilcoy	6 acres	60 bushels	Date of sowing not kept. Germinated wonderfully well, hardly a grain missing. Made very fine growth and cobbed very well. Had weather conditions been more favourable during the cobbing stage the yield would have been very good. Ears were of medium size and were very well filled. Field characteristics on the whole were good. Position of ears is still slightly irregular, but shows an improvement. Type of grain was very fine and the seed selected was of as good type and quality as any seed of this variety to date.
Improved Yellow Dent	F. Turnbull, Kangaroodang	10 acres and "ear to row"	75 bushels	Sown 15-11-25 and portion germinated splendidly. The other portion was eaten out by kangaroo rats and was resown, but was again practically eaten out. Crop made very good growth, plants reaching a height of 11 ft. Cobs on the whole were large and the type and colour of grain was excellent. Field characteristics, with the exception of the position of the ears, were good. Many of the ears were carried far too high, and there is room for considerable improvement in this respect. Ear to row test plot was sown but was too badly damaged by rats to be of any use for record purposes. Half of the rows were completely eaten out and were resown three times with the same result. The balance were more or less damaged. Period of maturity, 152 days.
Improved Yellow Dent	G. Meyers, Imbil	12 acres	75 bushels	Half the area was sown on 28-11-25 and the balance on 12-12-25. Both germinated splendidly, but cut worms thinned out the plants considerably, particularly in the first sown plot. First sowing made splendid growth and cobbed very well. Ears were large and particularly well covered. Height of ears was very irregular. Other field characteristics were good. Plants were very tall and upright. Second sowing did very well up to the tasselling stage, but suffered from then on from dry weather. Ears were small and the grain was too pinched to be used for seed purposes. No seed was selected from this. The yield given was estimated from the first sown portion. Period of maturity, 156 days.
Improved Yellow Dent	C. Behrendorff, Boonah	9 acres	..	This was a most promising looking crop up to the tasselling stage. Very hot, dry weather prevailed during this period, and the result was a very light crop of grain. Ears were very small and poorly filled and of no use for seed purposes.
Improved Yellow Dent	J. Tinney, Kilcoy	5 acres	Not harvested	Sown 12-1-26 and germinated well. Weather conditions were very unfavourable, practically no rain falling after planting took place. Crop did very well considering. Plants naturally were much shorter than is usual for this variety. Ears on the whole are small, and it is expected that much of the grain will be pinched. This will be only a light crop.
Red Hogan	W. Beverley, Boonah	4 acres	Failed	Crop ruined for grain by dry weather.

"EAR TO ROW" TEST—STAR LEAMING.

Row No.	Yield per Acre. Bushels.
403 x 141	61.5
403 x 142	70.28
403 x 143	55.64
403 x 144	67.35
403 x 145	73.21
403 x 146	52.71
403 x 147	61.50
403 x 148	92.25
Check	55.64
403 x 149	77.60
403 x 150	79
403 x 151	64.42
403 x 152	82
403 x 153	73.21
403 x 154	55.64
403 x 155	74.67

Sown 18-11-25; ripened 11-4-26; period of maturity, 138 days (five days allowed for germination).

"EAR TO ROW" TEST—GOLDEN BEAUTY.

Row No.	Yield per Acre. Bushels.
410 x 121	57.14
410 x 122	66.44
410 x 123	77
410 x 124	63.78
410 x 125	50.49
410 x 126	45.18
410 x 127	57.14
410 x 128	69.09
410 x 129	51.82
Check	51.82
410 x 130	54.48
410 x 131	61.12
410 x 132	75.74
410 x 133	57.14
410 x 134	57.14
410 x 135	43.85
410 x 136	54.48
Check	55.81

Sown 18-11-25; ripened 19-4-26; period of maturity, 146 days (five days allowed for germination).

PIG-RAISING.

The Instructor in Pig-raising, Mr. E. J. SHELTON, reports:—

The year generally, from the point of view of the pig-raiser, has been uncertain and unsatisfactory, for weather conditions have been unfavourable in the principal pig-raising areas, and even in those districts where conditions showed early signs of improvement the weather was uncertain and the rainfall insufficient for the growth of both green and root crops, as well as of grain. The Atherton Tableland, which is now an important pig-raising centre, has had quite a good year with a record maize crop. Under the circumstances it is very satisfactory to be able to report a very considerable improvement in the quality and condition of stock coming forward to the several bacon factories, also to note an increasing supply, though in regard to both numbers and quality there is still room for improvement. Numerically, the industry is as yet in its infancy.

It is equally satisfactory to note that pig-raisers are looking more and more to the Department for information and advice. The volume of correspondence is definite proof of this, while the demand for printed matter in the form of pig pamphlets, &c., is very strong and continuous. This augurs well for the successful organisation of the industry. Pigs have certainly proved a payable proposition on most farms, even though the price of prime bacon pigs has been below normal for the past six months (*i.e.*,

6½d. per lb. on a dressed-weight basis). The price has, however, been more stable this year than for many years past, and though in one sense the Department cannot claim the entire credit for this condition in the market, we know we have been directly instrumental in focusing more serious thought on the question of the price paid, and our constant advocacy of a better price for a better quality pig has to some extent been fruitful. It is confidently hoped that the superior quality of the stock coming forward will warrant a better price being paid by the factories. But it would be very unwise to rely on a higher price alone to make the industry more successful. By far the better way would be to aim at producing pigs more numerous and at a lower rate per pound, and to continue the propaganda for better prices as the industry develops. The farmer has nothing to lose by becoming more efficient at his job, and he has everything to gain by producing his stock cheaply on farm-grown foods.

The industry is becoming a more popular one. People generally are looking at pig-raising more from a pounds, shillings, and pence point of view. The sentiment that the pig is a filthy, unclean animal is passing as he becomes of greater commercial value, and as farmers everywhere are being educated up to better methods in regard to feeding, breeding, housing, and marketing.

Legislation in the form of a "Pig Industry Act" controlling the industry along similar lines (registration of premises, &c.) to those Acts controlling dairying, and which have meant so much to that industry both here and in other States, may be desirable.

PRODUCTION AND MARKETING.

Conditions in regard to marketing have improved considerably, all the factories reporting a much reduced loss in transit and by partial or total condemnation due to bruising and damage to carcasses *en route* to the factory. The quality of Queensland bacon, ham, and small-goods has also further improved and now compares very favourably with the pig products of any other part of the Commonwealth. The fact that we are finding profitable market outlets outside our own State for more than 50 per cent. of our pig products speaks for itself, especially as the inquiry for Queensland brands is keener than ever.

LOSSES DUE TO ACCIDENT AND DISEASE.

Though it is difficult to illustrate by graph or figures the loss the industry suffers from accident and disease, it is common knowledge among pig-raisers that far too large a percentage of pigs die or are killed prior to an age at which they could be marketed profitably. It is difficult also to submit accurate data as to the cause of these losses, for they are not due to notifiable diseases, otherwise the Chief Inspector of Stock would present the figures. The following are a few of the known causes. They are all being investigated as opportunity offers:—

(1) Losses due to unsatisfactory breeding stock, to the use of crossbred and mongrel boars, and to sows of no known breeding, and to inbreeding (the result frequently of purchasing stock from neighbours who have no records of

the breeding of their animals), or from purchasing indiscriminately at pig sales on the principle of "appearance" only, and anything so long as it is cheap.

(2) Losses due to inexperience, to improper foods and feeding, to insufficient food, and frequently also to overfeeding on fat-forming foods and foods of a very oily nature, such as peanuts.

(3) Losses due to insanitary piggeries, to low-lying, wet, or damp yards and sties, and to unsuitable pigsty buildings generally.

(4) Losses due to disease and abnormal conditions, particularly to such diseases as tuberculosis, frequently the result of a weakened constitution occasioned by improper care; neglected coughs and colds, pneumonia (pneumonia), pleurisy, or other bronchial or lung trouble, infection by bacteria of other diseases, parasitic infestation, both internal and external. Losses due to improper castration and to complications. These are very serious, and are forming the subject of a special illustrated pamphlet on the proper castration of pigs, which will be available shortly.

(5) Losses due to weaning pigs at too early an age, and to the sale of weaners six to eight weeks old in saleyards as store pigs; pigs which, unless very carefully handled, will fail to mature to advantage. Many losses are due to farmers offering for sale, at pig sales, animals which they know to be bad doers, and of whose health and constitution they have very grave doubts.

(6) Losses due to a lack of knowledge in so far as actual marketing is concerned. Many pigs reach the factories underweight and in very poor condition. Many are overloaded with fat. Quite recently many very soft "peanut-fed" pigs have been marketed. These have been unsatisfactory and unprofitable.

(7) Losses due to lack of proper exercise during fattening period, and to lack of sufficient green food (flesh formers) during this period.

(8) Overfeeding immediately before despatch has proved disastrous on many occasions.

(9) Absence of watering facilities whilst in transit.

(10) Slowness of trains carrying live stock; excessive bruising and damage to carcasses en route from farm to factory.

The deaths which actually take place under the eyes of buyers at saleyards, trucking stations, &c., chiefly arise from overfeeding shortly before delivery at yard. Other causes of death at yards arise from absence of proper loading facilities at the farm, bad handling during unloading, unsuitable waggons and exposure to heat on the way to the sale or trucking yards, and fighting at yard and consequent overheating.

Generally, losses by death in transit have been greater with pigs trucked long distances than those travelling short journeys; greater during hot weather than cold; greater with weighty fat pigs than with small or porkers; greater with crowded trucks than with uncrowded trucks. These losses are all referred to in detail in a series of illustrated pamphlets dealing with the marketing of pigs in Queensland, available for free distribution to farmers.

LOSSES DUE TO TUBERCULOSIS.

Losses due to condemnation in part or whole of the carcasses at bacon factories, while not unduly heavy, may be still further reduced by more efficient management and by having dairy herds tested regularly for tuberculosis, for in most cases it is evident that the disease germ finds its way to the pig's stomach per medium of diseased milk. The Department is anxious to assist in every possible way in an endeavour to clean up piggeries, and will investigate every case brought under its notice either by the meat or stock inspectors, factory managers, or by the farmers themselves.

LOSSES DUE TO RICKETS, STAGGERS, COUGHS AND COLDS AND DEFICIENCY DISEASES.

Losses due to a variety of causes such as rickets, staggers, coughs, and colds, and to deficiency diseases continue to take toll of a number of young pigs each year, and this will continue to be the case until the farmer himself realises the urgency of improving the conditions under which the pigs are kept. These matters are stressed continually in our farm visitation, and since visits are actually paid to farmers in every district to which Instructors go in the course of their itineraries, they are gradually reaching the people most concerned, and it is good to be able to report their co-operation with the Department in its efforts to assist in placing the industry on sound commercial basis. Preventive and remedial treatment are dealt with in special articles and pamphlets on these subjects.

Much more will be done to place the pig business on a still better footing as we proceed, and with the compulsory registration of all pig-raisers and of the premises in which their pigs are kept, and by still closer co-operation of the farming community with the Department, it is hoped to attain our principal objective of more and better pigs on every farm.

Experiments, in the feeding of maize and other farm products, being conducted at present in co-operation with the Northern Pig Board, will be extended to the Kairi State Farm, and possibly to other farms, in the course of this year. The Pig Clubs scheme being organised in conjunction with the Department of Public Instruction will also have more attention. This scheme presents almost unlimited possibilities, and should be productive of excellent results.

INVESTIGATION INTO THE PIG INDUSTRY.

In the course of the year the report of the Select Committee of Investigation appointed by the Council of Agriculture in the previous year was made available.

FIRE BRANDING OF BACON PIGS.

Compulsory fire branding of all bacon pigs coming forward to the proprietary factories is recommended. The co-operative factories, of course, are compelled to enforce "fire branding" as the only means of identification of pigs from a given centre.

CINEMATOGRAPH FILM.

Extensive views have been obtained of the internal operations of a bacon factory, a number

of field operations have been filmed, and further progress with the scheme is planned. The film would do much to enlighten people generally as to the possibilities of pig-raising.

NORTH COAST PIG CLUBS.

The formation of pig clubs has been largely confined to coastal areas this year as seasonal conditions were unfavourable in many of the pig-raising centres.

IMPORTATION OF STOCK FROM OVERSEAS.

It is hoped that as soon as conditions overseas in respect to stock diseases are more favourable, opportunity will offer for the introduction of fresh strains of the several breeds suitable to Queensland conditions. Other States are also moving in this matter.

THE AUSTRALIAN FARMS TRAINING COLLEGE SCHEME.

It is understood that the first batch of students are now in training as prospective farmers for settlement in Queensland. This scheme is important in that it aims at the settlement in this State of large numbers of comparatively well-to-do men, who among other vocations will devote time and capital to pig-raising.

STATE FARM PIG STUDS.

The progeny of the Berkshires at Warren State Farm continue to sell well and to secure a fair share of awards at district shows.

The Berkshires and Tamworths at Kairi State Farm have done well, and at Atherton Show created quite a favourable impression. Additions were made to the farm stock by transfer from Warren.

Other studs at hospitals and asylums have been inspected, and where required and approved fresh purchases made, these especially under the Home Secretary's Department control.

PIG RAISING PAMPHLETS.

Quite a large range of pamphlets, extracts from the "Queensland Agricultural Journal," on the subject of pig raising is now available for distribution. Reprints of Journal articles are regularly made by numerous newspapers and live stock journals in this and other States. Farmers of this State much appreciate the free and liberal issue of these pamphlets.

RADIO LECTURETTES.

By arrangement with the Council of Agriculture and Station 4QG Brisbane, a series of wireless lecturettes on Pig Raising have been broadcasted regularly.

YOUNG JUDGES COMPETITIONS.

A good deal of time has been devoted to young judges competitions and similar schemes with satisfactory results.

GENERAL.

Other matters receiving special attention are stabilisation of bacon pig prices; the price of pig products to the consumer; the humane slaughtering of pigs; encouragement of the more extensive use of purebred breeding stock; crop surveys; preparation of models of pig sties, fences, shelter

sheds; special pamphlets on construction of pig sties and paddock accommodation for pigs; and on castration of pigs; a special treatise with the object of encouraging greater consumption of pig products; and the cheapening of cost of production of bacon pigs.

POULTRY.

The Instructor in Poultry Raising, Mr. P. Rumball, reports:—

It appears that the importance of the industry is being more widely recognised. This is no doubt due to the fact that annual overseas export values have advanced from a few hundred pounds to a total of £800,000 in recent years. There is every indication of export increasing and becoming a recognised feature. It is only during the last few years that Queensland has made an attempt to export overseas. Our experience of export, when the eggs have been carefully packed and graded, has been encouraging, and it is anticipated that for every case exported last year there will be at least six or seven this season.

The importance of this industry cannot rightly be based upon what it produces. Consideration must also be given to it as a consumer of primary produce. A conservative estimate as a consumer of primary produce is £400,000. Thus the important part that the poultry industry plays in respect to other rural industries will be seen.

Although it is not possible at present to give a definite idea of what expansion has taken place during the last year, judging from the general activity of breeders, particularly those engaged in the sale of day-old chickens, and the early and increasing supplies of eggs coming forward for sale, the development has been considerable.

It is also very pleasing to be able to report that a number of general primary producers are not only making poultry raising a general feature of their general operations, but are improving the quality of stock kept, and are marketing their egg crop under better conditions.

MARKETS.

Eggs.—The Queensland Egg Board has played an important part in the marketing of eggs, and were directly instrumental in exporting the bulk of eggs that were sent overseas during the past season, and also in cold storing a considerable quantity of eggs for winter requirements. Export and cold storage play an important part in the stabilising of the market, but, despite what was done, the prices throughout the year had a very wide range, the wholesale prices varying from on 1s. to 3s. per dozen. The average price, however, compared favourably with previous years.

The quantity of eggs that were cold stored for winter requirements is estimated at 220,000 dozen. This is slightly less than the preceding year. With the continued growth of the industry it will be necessary to cold store increasing supplies.

The majority of the eggs exported by the Queensland Egg Board were candled, graded, and packed under my supervision, and opened up in good condition on arrival in England. In fact, their condition was so satisfactory that the Egg Board received a bonus of some pence per dozen. Overseas export is most essential during

the Spring months owing to supplies overtaking the demand at prices remunerative to the producer. The prices for table poultry have compared favourably with values received in previous years. Periodical inspections have been made of the stock offered for sale, and very few birds have had to be condemned. The diseases most common are chicken-pox, contagious catarrh or roup, and intestinal worms.

COST OF PRODUCTION.

The cost of production has been somewhat higher this year than last, the present period being very trying, particularly to the beginner

in poultry. This, unfortunately, may have the effect of retarding the extension of operations by many who have made a start in recent years, or it may cause them to abandon poultry keeping. The following table for the first six months of 1924, 1925, and 1926 will show to some extent how costs have been increased, and also the fact that this added cost has had to be borne with egg values on a par with normal years. At present rigid culling of unprofitable birds is the only means of reducing costs, but, unfortunately, it is a very difficult practice to apply to larger farms.

1924-1926.

	EGGS.			BRAN.			POLLARD.			WHEAT.			MAIZE.		
	1924.	1925.	1926.	1924.	1925.	1926.	1924.	1925.	1926.	1924.	1925.	1926.	1924.	1925.	1926.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Jan.	1 5-6	1 6-2	1 6-75	8 9	7 6	9 6	9 6	8 6	11 3	6 0	6 6	6 3	7 3	3 6	5 7
Feb.	1 10	1 10-75	1 11	7 0	7 6	10 0	8 0	8 6	11 3	6 2	7 0	6 6	6 9	3 9	5 10
March	2 3	2 4-5	2 0-25	7 0	7 6	9 6	8 0	8 6	10 9	6 0	5 9	6 0	6 0	3 4	6 8
April	2 5-75	2 7-75	2 5-5	7 0	9 6	9 6	8 0	10 3	10 9	5 8	5 0	7 3	4 3	3 6	6 6
May	2 9-1	2 9-8	2 6	7 6	9 9	9 6	8 0	10 9	10 9	6 0	6 6	7 3	4 6	3 9	6 6
June	2 2-19	2 5	2 3-75	7 9	9 9	10 3	8 3	10 9	10 6	5 11	6 1	7 3	3 9	4 11	7 3

STOCK.

Although most breeds of poultry are kept by poultry raisers in Queensland, White Leghorns and Black Orpingtons predominate owing to the laying ability of these birds being developed by various breeders. There are various other breeds of poultry which should not be neglected, such as Langshans, &c.

From inspection of egg-laying competitions in this and other States, I am fully convinced that Queensland stock compare favourably.

There is one feature, however, that breeders have to bear in mind continually, and that is size of egg. The development of the day-old chick trade opens up avenues for the wholesale distribution of stock carrying either good or bad qualities. Among the latter the principal feature to be borne in mind is the distribution of diseased stock or stock which are the progeny of hens in which the small-egg characteristic is dominant. The general breeder in Queensland is as honest of purpose as any person, but when it is considered that some may sell as many as 20,000 to 40,000 chickens annually, there is always the possibility of him becoming slightly indifferent. Just how this can be checked is difficult of solution, but possibly a conference of breeders who make a practice of selling day-old chickens would be able to make a few suggestions which would be some protection to the buying public.

VISITS AND LECTURES. &c.

Tours of the far North, Atherton Tablelands, Central Queensland, Dawson Valley, in addition to visits to some of the principal towns on the North Coast and Southern districts, have been made during the year. In each centre it has always been my policy to give lantern lectures and visit individual breeders. Inspections of farms and city markets, together with correspondence, lectures to clubs in the metropolitan area, wireless lectures, articles for the Journal of Agriculture, &c., and personal interviews with breeders have occupied a considerable portion of the year. With the growth of the industry, increasing correspondence, inquiries, and necessity for publications on poultry matters, it is becoming more difficult to find time for prolonged visits to country districts.

DISEASES.

Many cases of contagious catarrh were brought under my notice during the year. The climatic conditions of Queensland appear to make this disease more virulent than in the Southern States.

THE POULTRY TICK.

The principal pest met with is still causing considerable damage. Illustrated articles dealing with this trouble have been prepared, and every effort is made to educate poultry keepers as to the life habits of the tick and the simplest methods of treatment.

P. RUMBALL, Poultry Instructor.

REPORT OF THE COTTON SPECIALIST.

The climatic conditions during the cotton season under review have been in many ways the worst experienced during the last five seasons. At the beginning of the planting season conditions were extremely unfavourable to securing a stand either on account of the very low soil temperatures or to the heavy falls of rain which occurred after the planting operations were completed. By the time the soils had warmed up sufficiently to give a good strike over most of the cotton belt, the severe winds had caused such a loss of soil moisture as to preclude the possibility of obtaining a good germination. This condition of affairs continued until the first week of November, when general storms were experienced in nearly every cotton area. Planting took place immediately after this with the securing of a good strike in nearly all districts.

The season from then on until the middle of January developed as if we were to have the best growing conditions that had been experienced in the above-mentioned five years. Rains of the proper intensity and of not too frequent occurrence fell in nearly all of the main areas, with the exception of the Lockyer, resulting in a very fine development of the fruiting system of all properly grown crops. This was especially noticeable in the early-planted fields, the lower parts of the plants being heavily laden with bolls by the middle of January and the upper parts covered with a fine crop of squares and flowers.

A period of severe drought, accompanied by high temperatures, set in at this time, and continued with little interruption well into March. The results from such weather conditions occurring right at the critical stage in the development of the fruiting system were extremely unfortunate, as not only was the complete top crop of squares lost, but the middle and even the lower crop of bolls, in some cases, were severely reduced in size.

The total yield for the whole of the State has naturally been greatly reduced from that which was anticipated earlier in the season, and is considerably lower than the 12,000-bale crop of last season, as on 5th June a total of 5,147 bales, averaging 481 lb. each, had been ginned with a possibility of a few hundred bales more from the later receivals. This total does not represent a lower yield per acre, however, as of the 40,000 acres of seed which were applied for, it is doubtful if more than 25,000 acres came through to maturity owing to the inability to obtain a strike, late-planted crops failing under the droughty conditions, &c.

In the area which received the best rains early in January the yields have been excellent, considering the abnormally dry conditions which existed after that during the critical stage of the development of the fruiting system. In several districts many cases are on record where the yield per acre has averaged anywhere from 800 lb. to 1,200 lb. of good-bodied, full $1\frac{1}{8}$ -inch cotton, and in a few cases as much as 1,500 lb. Such returns received under extremely adverse conditions demonstrate the wonderful drought-resistant properties of the Upland type of cotton plant, and indicate that the farmers in the

Southern and Central areas, where cotton can be grown profitably, should include the growing of this crop in their system of farming.

The general standard of the preparation of the seed bed and the cultivation of the cotton crop has shown a decided advance during this past season. The remarkable results obtained last season by the growers who paid careful attention to these points afforded an excellent illustration of the advantages to be obtained by early and thorough preparation of the seed bed, careful planting so as to obtain the correct depth of covering of the seed, early thinning to the proper distance between the plants, and frequent cultivation during the early stages of the plants' development. The result was a decided effort on the part of nearly every district this season to improve the standard of every operation—especially the preparation of the seed bed—and it is extremely unfortunate that the climatic conditions have been so severe, as the total yield for the whole of the cotton belt probably would have been the highest and of the best quality so far recorded for the State.

CALLIDE COTTON RESEARCH STATION.

The development of this station, which is of the utmost importance to the cotton industry in Queensland, has continued this season with very gratifying results. Another portion of the farm has been cleared, and proved to be of exceptional uniform and fertile quality. The crop of cotton grown on this tract, while planted late owing to unfavourable planting conditions, has yielded between 1,000 to 1,200 lb. of seed cotton per acre of very excellent quality. The securing of such a fine plot of some 15 acres is extremely fortunate, as it affords the opportunity of conducting experiments of various natures without encountering the difficulties attending non-uniform soils.

The pure seed propagation work has continued along the approved lines, with satisfactory results. A plot of $6\frac{1}{2}$ acres was sown of bulk selected seed of the Durango variety, grown last season on the Demonstration Farm at Monal Creek, and averaged around 1,200 lb. of good seed cotton to the acre. This plot was carefully inspected plant by plant by Messrs. Henderson, Nagle, and myself, and some 220 lb. of seed cotton selected from 670 plants. This cotton will be ginned and the seed obtained will be used to plant the same plot next season. In addition to this lot of material, special plants were selected for further progeny investigation. The remaining plants of the plot were picked in bulk, and will be ginned separately from the rest of the crop from the farm. The seed obtained from this lot of cotton will be sufficient to plant all of the cotton acreage of the Research Farm next season, and any of the surrounding farmers' crops, so that the purity of the farm's crop may be maintained. At the end of next season there should be ample seed from these crops to plant the whole of the pure seed areas of the Callide and Upper Burnett Valleys, which in turn would yield sufficient seed to meet the requirements of the entire State in the season 1928-29.

Satisfactory progress has been made in the progeny breeding operations, and one strain has appeared sufficiently uniform and of desirable characteristics to warrant increasing. This strain will be planted on an isolated plot during the coming season, and if further tests demonstrate the superiority of this cotton over the bulk selected lots, the seed supply of it will be increased as rapidly as possible.

Investigations in the various cultural and thinning and spacing problems connected with the growing of cotton were continued along similar lines to those of last season. These investigations will be continued in the coming season, as it will require several years' work before we may hope to reach any definite conclusions.

It is particularly gratifying to observe that the growers in the Callide Valley, who have been the most interested in the various phases of the farm's activities, and who have endeavoured to put into operation the practices which have been found to be beneficial, are securing, as a whole, exceptionally good cotton crops. It is anticipated that the experience of these farmers, in conjunction with the results being obtained at the farm, will be of material assistance in raising the yield per acre for the whole of this valley.

PURE SEED PROPAGATION.

In addition to the progeny and bulk selection investigations in the Durango variety which were conducted at the Research Farm this season, similar operations were carried out in the other varieties which are being studied by the Department. Much of this work has been performed by Mr. R. W. Peters, especially in the Burnett and Kingaroy areas, where, with the assistance of Messrs. James Carew and N. E. Goodechild, bulk selected lots of the Durango and Acala varieties were obtained. This material will be grown by selected farmers in the same areas from which the seed was selected, for propagation for further investigations.

The selecting of bulk lots of the Durango variety in the Boyne Valley was continued this season by Mr. Nagle and myself. The material was collected from crops which had been planted with seed grown from selected seed of previous seasons, and the increased uniformity of length of staple and plant types was remarkable. Such excellent results from the method of selecting bulk lots of seed are exceedingly gratifying, and indicate that the continuation of our system of improving the stock of seed will have a marked beneficial effect on the supplies which will be available for general distribution in the future.

The investigations in the Acala variety at the Gatton Agricultural College and High School were continued again this season. Unfortunately, the extremely droughty conditions which have existed for most of the season have seriously affected the results of some of the experiments. The selection work was continued satisfactorily, however, several promising plants being obtained, from which a drought-resisting staple type of cotton may be developed, which will be suitable to the whole of the Southern areas. The opportunity is taken to express my appreciation of the hearty co-operation which Mr. J. K. Murray, the Principal, and his officers have given us in connection with this work.

EXPERIMENTAL PLOTS.

The investigations of the various problems of cotton culture have not been confined to the Callide Research Farm. Several sets of experiments have been formulated, which the officers of the field staff of the Cotton Section have arranged to be conducted by various growers throughout the cotton areas. These experiments touched on such subjects as the spacing of the rows and the plants in the row, the proper height at which to thin the plants, the effects of fertilisers on the growth of the plant, and the testing of different varieties as to their suitability for the various districts.

Unfortunately, the climatic conditions in some of the districts have been so irregular and unfavourable to the proper conducting of such experiments that inconclusive results have been obtained in many cases. Sufficient results have been obtained, however, to warrant the continuation of these experiments, and the interest shown by many of the growers in the areas in which the experiments have been located indicate that this is an important phase of the activities of the section.

GRADING.

The grading staff, under the able direction of Mr. L. L. Gudge, has had a very successful season in handling the Durango variety of cotton in the first year that it has been available for general distribution. Prior to this crop, this variety has been grown in segregated areas and all seed cotton produced has been forwarded to the Gladstone Ginnery, where the graders received periods of training in the handling of this type of cotton. The efficiency of the manner in which Mr. Gudge has trained the members of the staff in the intricacies of determining the length of the fibres of the cottons received at the various ginneries is amply demonstrated by the relatively small number of complaints received from the growers.

Investigations of the complaints received have shown, for the most part, that the growers have not realised the tremendous effect on the length of the fibres or "staple" exerted by such factors as poorly-prepared seed beds, soil types, irregular rainfall conditions, &c. When a better understanding of these points is reached, it is anticipated that a far greater degree of satisfaction on the part of the growers as to the efficiency of the grading will be obtained.

The unusually dry season since the middle of January over nearly all of the cotton belt, while greatly reducing the yields in several areas, has been of great benefit in producing a very bright, white cotton, remarkably free from stains or tinges of colour. Not only may this be attributed to lack of rain, thereby eliminating the possibility of moisture staining, but also to the absence of certain insect pests and the accompanying fungoid diseases. The result has been that a remarkably high percentage of the crop received at the ginneries was of the top grades. This will be of decided value in assisting in the marketing of the crop, as the bulk of it should arrive in Liverpool before the new American crop is received, and when there is generally a scarcity of white cottons.

Unfortunately, the drought has been so severe in some areas as to affect the length of staple, and consequently there has been some criticism of the Durango variety not producing the length of staple that it generally averages. The consignments of seed cotton of the ordinary variety from these same areas have generally shown a corresponding reduction in length of staple with a consequent lowering in the value of the cotton, so that it appears that while the Durango fibre may have been somewhat shorter than is usually the case, the grower has received more money for it than if he had been growing the ordinary cotton, which in many consignments received the lowest staple class.

INSECT PESTS AND DISEASES.

This past season has been characterised by a remarkable freedom from the pests which attack the cotton crop, with the exception of the maize grub (*Heliothis obsoleta*), which in some areas did a considerable amount of damage. This freedom from insect pests has been of enormous value to the crop in that, not only was there no loss of squares and bolls, but the bolls which developed opened well and produced cotton of good quality and free of stains from internal boll rots.

Inspections in the field and at the ginneries have shown that the seed of the crop just harvested has escaped from the attacks of any of the sucking insects to a marked degree as compared to other seasons. This, in conjunction with the consequent freedom of internal boll rot attacks, should make the planting seed for next season's crop some of the best that has been issued.

Mr. Ballard, the Commonwealth Cotton Entomologist, who is engaged in the investigations of the various insects affecting the cotton crop, has obtained some very interesting and valuable information during the past season on several of these insects, particularly the maize grub and the "stainers." In conjunction with these investigations, valuable data have been obtained which show the advantages which accrue from early as compared to late planting of cotton. Not only does the early planting of cotton assist in escaping the effects of the attacks of the maize grub, but the effects of the peach grub (*Conogethes punctiferalis*) are nullified to a great extent. In nearly every case of an attack from the peach grub which has been investigated, it has been found that the crop has been planted late in the season, and this also applies to the maize grub. This was shown this season at the Callide Research Farm, when an early-planted crop yielded around 1,000 lb. of seed cotton to the acre, while a late-planted crop was so badly affected as to not warrant picking.

In view of these results, it is to be hoped that the growers will pay more attention to the early preparation of the seed bed in order that the planting operations can be effected at the earliest moment in the spring after the danger of frosts is past.

ACKNOWLEDGEMENTS.

Through the kind services of Mr. Brünnich and his staff, valuable information has been obtained relative to the composition of the various soils on which the growing of cotton

is being tried. This subject is of extreme importance, and the assistance rendered has helped us to explain the failure of the cotton crop on some of the soils in the supposed cotton belt.

Valuable assistance has also been rendered by Mr. Coleman and his staff in the testing of the germination of the planting seed and also the seed in connection with the insect problems of the Entomologist.

STAFF CHANGES.

The personnel of the Cotton Section has been seriously depleted during the past season by several members resigning to take up duties abroad or to enter into commercial enterprises.

The Director of Cotton Culture, Mr. G. Evans, C.I.E., resigned on the 17th February, 1926, at the expiration of the term for which his services had been loaned to the Queensland Government by the Empire Cotton Growing Corporation. His leaving the service will be regretted by the members of the Cotton Section, who appreciated his untiring interest in their work and his enthusiasm in all matters pertaining to the development of the section. To them, more than to anyone else, was apparent his keen interest in developing the cotton-growing industry in Queensland, and it is to be hoped that, as the industry becomes more established, the full value of his services will be realised. We wish him good luck in his work in other lands.

The Assistant Cotton Instructor, Mr. Ross Anson, resigned on the 12th November, 1925, to take up the post as Cotton Instructor to the Fijian Government.

The Plant Breeder at the Callide Research Farm, Mr. I. G. Hamilton, resigned on the 10th August, 1925, to take up the post of Plant Breeder in the Cotton Section of the Southern Rhodesian Government.

The Manager of the Callide Research Farm, Mr. L. W. Ball, resigned on the 19th May, 1926, to enter into private enterprise.

The Junior Field Assistant, Mr. T. Y. Bonar, resigned on 14th June, 1925, to enter into private enterprise.

It is to be regretted that the section has lost the services of these officers, especially of Messrs. Evans and Ball, both of whom contributed greatly to the development of the Callide Research Farm. Mr. Ball, as manager of the farm, was untiring in his efforts to bring it to a state of development where results could be obtained which would help in solving the problems in connection with cotton growing. I wish to express my appreciation to both of them for the valuable help and suggestions which they gave me in the developing of this very important unit of the Cotton Section.

I desire to put on record my appreciation of the way in which the members of the section have assisted in the carrying out of the programme for the past season. Nearly every one has had additional work entrusted to them, due to staff vacancies and the enlargement of the programme of experimental work, and all have endeavoured to complete their work in the most satisfactory manner and have shown the keenest interest in the development of the industry.

W. G. WELLS, Cotton Specialist.

REPORT OF THE DIRECTOR OF FRUIT CULTURE.

The year ending 30th June has not on the whole been a satisfactory one for Queensland fruitgrowers, as the rainfall in the principal fruitgrowing districts has been deficient at those periods of the year when it was most badly needed, though ample during the latter part of last winter and autumn. Insufficient rain fell during the spring, and although there were fair rains in December, yet the long, dry, hot spell experienced during January and February and March retarded the growth of bananas, citrus, and other fruits, as well as of all kinds of vegetables. Since the recent rains, however, banana plantations have improved somewhat, but have not made up the leeway due to their lack of growth during what should have been their most active growing period. Citrus trees have, however, made a good recovery, and vegetables of excellent quality are now being marketed in large quantities.

Pineapples have not suffered to any great extent, and, thanks to the improved marketing conditions relating to this fruit, growers have received better returns, and the industry generally is on a more satisfactory basis, both as regards the market for the fresh fruit and the canned product.

The Stanthorpe fruitgrowers have had a fairly good year, and there was less loss from fruit fly and other diseases, and satisfactory prices were obtained for all good quality lines. Grape growers did well, as the hot dry summer was very favourable to this crop, which was of exceptionally good quality, very free from disease, and met with a ready sale, fancy lines realising a record price. I have never seen better grapes grown in this State than those produced during the past season, as, from the earliest coast-grown fruit to the latest ripening varieties of the Stanthorpe district, the crop, taken as a whole, was a very satisfactory one, and growers have done well.

Little damage was caused by hail or late frosts, but one particularly severe frost during last winter damaged bananas in several low-lying areas and checked the growth even where the temperature did not fall as low as freezing point, and heavy winter rains damaged the mandarin crop in some districts.

There was a considerable increase in the yield of custard apples, and a quantity of very fine fruit has been marketed; at the same time there has been far too much inferior, undersized, and immature fruit offered for sale at a low rate that has been anything but a credit to the producers. There is an increasing tendency to market immature fruit, both locally and in the Southern markets, pineapple growers being the worst offenders, as on several occasions immature pines totally unfit for human consumption have been offered for sale. The practice is a regrettable one, as nothing tends more to put a buyer off purchasing pineapples than to find that he has paid for an article that is not only inedible but actually dangerous to eat. Orange growers are nearly as bad, as they frequently market fruit containing as much acid as a lemon, and which is only fit for making an acid drink to be sweetened with sugar to taste.

Owing to a great scarcity of lemons in the autumn, and to the prevalence of influenza and dengue fever, there was a great demand for immature oranges for making cooling drinks, and much higher prices were obtained for the immature fruit than it would have realised had it been allowed to mature. This, however, is exceptional and should not be taken as a precedent, especially as the Southern States refuse to permit the sale of immature oranges or mandarins, and our growers have to comply with the maturity standards fixed in these States.

As a general rule there is an all-round improvement in the quality, packing, and get-up of the fruit offered for sale, both with respect to that locally grown as well as that imported from the Southern States; but there is still plenty of room for improvement, especially in grading, as there is frequently a great difference in the size of the individual fruits packed in the same case. This applies to both local and Southern grown apples and pears, and is frequently very noticeable in the case of bananas, where unfortunately the grade mark on the case cannot always be relied upon, and as a consequence Southern buyers have lost confidence in our fruit. In order to regain the confidence of our buyers, a minimum size of fruit that can be packed has been fixed in this State; and the States of New South Wales, Victoria, and South Australia, who take practically all our fruit that is sent South, have agreed to recognise the grade standard fixed by Queensland and not to permit the sale of any bananas that do not come up to such standard. This will have the effect of making our growers more careful in the class of fruit they pack, as once they find that undersized fruit will not be permitted to be sold, they will not attempt to send it, and the rubbish that now finds its way to the Southern markets and gives our Queensland-grown bananas a bad name will be cut out.

It is gratifying to know that the days of being able to dispose of inferior fruit are rapidly drawing to an end, as with the very greatly increased production of all kinds of fruit within the Commonwealth there is very little demand for rubbish at any price; and the only chance a grower now has of making a success of fruitgrowing is to produce a high class article and place it on the market in the best possible condition and in the most attractive form. This will mean the elimination of the careless and ignorant grower, who will not keep abreast of the time, as he will not be able to compete with the man who knows his work thoroughly and manages his business on sound business lines. The elimination of such growers will greatly benefit competent orchardists, as many of their orchards have been planted in unsuitable localities, with inferior varieties, and are so neglected that they are a serious menace to the adjoining properties, as they are simply a nursery for the breeding and dissemination of every kind of pest that fruit or fruit trees are subject to.

Unfortunately, many persons take up fruitgrowing who have not the faintest idea of what they are undertaking, and as a result we have thousands of acres of unprofitable orchards,

pineapple and banana plantations, many of which have been planted in unsuitable soil or in unsuitable localities or in land improperly prepared and never thoroughly looked after, that are now either abandoned or so neglected as to be valueless; and, as previously stated, nothing more or less than a breeding ground for all kinds of pests. The cleaning up of these worthless orchards and plantations is a matter that must receive immediate attention if the fruit-growing industry of Queensland is to make any progress. The cleaning up process will be in any case a costly one, and the longer it is delayed the more costly it will be. Growers must do their share of the work, as the Government cannot be expected to bear the whole of the expense. There is unfortunately a strong tendency on the part of many growers to shelve their responsibility, to put off anything that requires any expenditure of time or money, and expect the Government to come to their assistance. The sooner this idea is exploded the better for the fruit-growing industry, as growers must recognise that it is only right that they should do their share of the work and develop a spirit of self-reliance, instead of trying to pass their responsibilities on, and expect the Government to come to their assistance whenever they ask for it.

The educational side of fruit culture has, thanks to the increased staff, made steady progress during the year, and several matters of great importance to citrus, pineapple, banana, and deciduous fruit growers have received attention. There is, however, a very great deal to be accomplished, as any investigation work requires constant and careful supervision, and, if reliable results are to be obtained, the work cannot be hurried. Up to the present the Fruit Branch has been handicapped by not having a sufficient staff of efficient officers capable of carrying out research work, and in order to remedy this defect, three officers have been given special training both in the orchard and at the Queensland University. By this means it is hoped that a capable and highly efficient educational staff, possessing local knowledge and experience, will eventually be secured, and should it be necessary to obtain special information on any particular branch of fruit culture not obtainable in Australia, then one of our own officers should be sent to the country where such information is to be obtained, rather than import an expert from such country who has no knowledge whatever of our climate or local conditions, and is heavily handicapped in consequence. The policy recommended is to train our own experts rather than to depend on obtaining them elsewhere, and although we are somewhat late in making a start, it is a case of better late than never. The Fruit Branch has also been badly handicapped by not having a fruit experiment station within easy access of headquarters, as the lack of such a place has prevented us carrying out many important investigations, which require to be continued over a series of years, as well as many that are of a more temporary nature. Investigation work of any kind necessitates our having an absolute control of every detail, and this is not possible where the work is being attempted on private property.

Twenty-nine years ago the Department leased a suitable area of land at Redland Bay on which

to carry out the work of investigating the various problems confronting the growing of fruit and vegetables, and a comprehensive series of practical fruit experiments were initiated. Unfortunately, the Government of the day did not consider the work of sufficient importance to warrant the small expenditure incurred and closed the place down when little more than initiatory work had been completed and before any definite results had been obtained. This action was very unfortunate and undoubtedly retarded the development of the fruit industry of this State, as, had the work then initiated been continued, many of the problems that confront fruitgrowers to-day would have been solved years ago, and the establishment of a fruit experiment station would not be so essential as it is at the present time. The establishment of such a station should be undertaken at once, as it will be of the greatest assistance, not only to the Fruit Branch, but to the Biological Branch as well, as this branch, which is in close touch with the Fruit Branch, is also very badly in want of a convenient place in which to carry out practical investigations in the field on numerous fungus and insect pests—investigations that require to be conducted under conditions which can be absolutely controlled and which will permit of definite and reliable results being obtained. Such a system will also prove a very valuable training ground for the officers of the Fruit Branch, especially if combined with a special University course. The Fruit Branch requires highly efficient officers and, as such are by no means easy to procure, men showing a marked aptitude for the work will have to undergo a special training in order that they may attain that degree of efficiency, the possession of which is so essential to anyone engaged in the work of instruction or investigation.

THE BANANA INDUSTRY.

The banana is by far our most important fruit commercially, as its cultivation not only provides a living for a large number of white growers and their families but the marketing of the fruit gives employment to many transport workers, timber-getters, and sawmillers, and is an important source of revenue to the railways of this and the Southern States. The industry is of national importance, and should be fostered in every possible way, as, should it fail, either as a result of disease or neglect, its loss would be a very serious one to Queensland. In order to prevent the possibility of the industry failing, much more attention will have to be given in future to the selection of the land in which to grow bananas, the cultivation and manuring of the land, the systematic suckering of the stools, and keeping the plantation free from disease. Unfortunately, insufficient attention has frequently been given to these essentials, and many growers have been inclined to look upon banana culture more as a gamble than as a staple industry, and to plant up any available areas, take as much as they can off the plants with the least possible labour, and when the plantation is no longer profitable walk off and abandon it. This has been done in many instances, and very serious results have already followed, as these abandoned and neglected plantations are breeding-grounds for countless numbers of beetle borers,

and in districts where bunchy top is present are a fertile source of disseminating this disease. As stated in my opening remarks these worthless, abandoned, diseased, and neglected plantations must be destroyed. As long as they are allowed to remain in their present state, there is no possibility of keeping bunchy top or beetle borers in check, let alone exterminating these very serious pests.

There are some thousands of acres to be dealt with, and unless a determined attempt is made to clean them up the future success of banana culture in many districts in the southern part of the State is seriously menaced. Queensland cannot afford to lose its banana industry, and there is no reason for it to do so, provided we scrap our policy of procrastination and get systematically to work to place it on a sound and satisfactory basis. Far too much inferior fruit has been grown in the past, much of which has been sent to the Southern markets and has seriously injured the reputation of our bananas. Much of this fruit has been the produce of neglected or diseased plantations, or has been grown in land in which bananas should never have been planted, and the destruction of such plantations will materially benefit the growers of good fruit, as good fruit will sell on any market, whereas inferior rubbish is hard to dispose of at any time and is unsaleable on a glutted market.

The diseases of bananas have occupied a large amount of the time of the Fruit Branch, which has been intimately associated with the work of investigation that is being carried out by the Bunchy Top Investigation Committee, as well as with the investigations of the Biological Branch of the Department.

In the case of bunchy top, squinter, and leaf spot, that are receiving the special attention of this Committee, important headway has been made during the year, as in the case of the former disease it has been definitely proved that it is due to an ultra-microscopic virus which is carried by one species of aphid from a diseased to a healthy plant, and as far as is known cannot be transmitted by any other insect or to any other plant except those belonging to the banana family. This most important and valuable discovery was fortunately made prior to the discovery of the outbreak of bunchy top in the Dayboro' district, on the last day of December, 1925, as it has enabled us to take steps to restrict the transference of the disease; and I am of the opinion that, if the recommendations of the Bunchy Top Investigation Committee are given effect to, and every banana grower makes himself conversant with the symptoms of bunchy top, particularly in its initial stages, and immediately destroys any and every stool in which the disease is seen, that bunchy top can be so controlled as to be no longer a menace to the banana industry. Bunchy top can only be spread by the aphid carrying the virus from a bunchy top infested plant to a healthy plant, and therefore if every infested plant is destroyed as soon as seen, there will be no virus to transmit, and the aphids will do no harm, as they are not the cause of the disease but are simply the carriers of the disease from a diseased to a healthy plant. This is a very important point, and every banana grower is urged to systematically inspect his plantation at regular intervals so that, should disease make its appearance, it will be discovered

before it has become fairly established and can be stamped out. A detailed examination of every banana plantation in the State by Government inspectors is a physical impossibility, as it means an individual inspection of every banana plant in the State and cannot be carried out, but growers can do the work, as in the cutting of the fruit and the chipping of the plantation they see every stool and therefore, if they are thoroughly conversant with the disease, they are undoubtedly the best inspectors and can be of the very greatest assistance to the Department in its attempt to control this very serious pest.

Some growers do not even yet realise the seriousness of bunchy top and think other diseases, such as beetle borer, a greater danger. Let them make no mistake, however, once bunchy top gets the upper hand all other diseases are of a secondary importance, as there is no longer a fruit-yielding plantation but a number of stunted malformed plants that will not die but are a persistent menace to all adjacent plantations and to the State as a whole.

Unfortunately, before it was known that bunchy top was present in the Dayboro' district, large numbers of suckers had been sent from there to the Innisfail district as well as to other parts of the State. This necessitated a careful inspection of every plantation in the Innisfail district and bunchy top was found to be present. Immediate steps were taken to destroy all affected plants and two extra inspectors—banana growers who had been heavy losers from the disease in the Currumbin district, and were thoroughly acquainted with it—have been appointed temporarily; and are now making a thorough and detailed inspection. So far, the outbreaks have been isolated ones, and only a few plants have shown the disease, so that it is hoped we have it under control, and that there will be no further trouble. It is, however, premature to make any definite statement, and some time must elapse before we are sure that the disease has been stamped out and are able to declare the district free from bunchy top. In any case it is of great importance to keep this district clean, and no banana suckers will be permitted to enter that part of the State that is north of the Herbert River from any other part of Queensland or elsewhere.

At present the transfer of suckers in any part of the State is totally prohibited as, until it has been definitely determined how far the disease has spread and what districts are so far free, it is not advisable to shift any suckers even from plantation to plantation in the same district, as the disease is of such an insidious nature that no risks can be taken. In the meantime a careful inspection of the area lying to the north of the known infested area in Southern Queensland is being carried out, and as soon as it is safe to do so, the prohibition now in force will be relaxed under certain conditions so as to permit the planting of new areas during the coming season.

Beetle borer is a serious menace to banana growers, and is spreading rapidly, thanks mainly to the neglected and abandoned plantations which form an ideal breeding-ground for this pest. Numerous experiments have been carried out in order to determine the possibility of successfully combating it, but so far there is nothing better than trapping systematically with poisoned baits; and I feel certain that there will

not be any appreciable diminution of the pest until the large numbers of neglected, abandoned, and badly-diseased plantations are completely destroyed.

Rust has not caused any serious loss in the Southern part of the State, but has done considerable damage in the Innisfail district and parts of Coastal Central Queensland. The entomological staff is dealing with this matter, and as a result of their investigations remedial measures which promise well are being tested. Leaf spot is a disease that must be given more attention by growers, as when it appears in a severe form the crop is destroyed, and even when it is only present to a slight extent it throws the plants back and the fruit does not develop to perfection. During the year we had a visit from Mr. Campbell, the mycologist of the Fijian Department of Agriculture, who came here to investigate leaf spot, as this disease, or one very similar to it, caused serious loss to Fijian growers. Leaf spot can be controlled by the use of fungicides applied as a dust as can also fruit spot or Anthracnose. A fruit spot caused by the puncture of a sucking bug has also received the attention of the entomological staff, and an effectual remedy has been discovered.

Squinter is being specially investigated by Professor Goddard, who is carrying out a very large number of experiments to determine the cause of and the possibility of controlling this serious trouble, which causes such heavy losses in fruit sent to the Southern States during certain periods of the year. The results of Professor Goddard's investigations are awaited with interest as, until they are known, it is not advisable to definitely decide on any particular pack for the Southern markets.

During the year Mr. Wm. Ellison, junr., was temporarily appointed as banana packing instructor, and his appointment has given general satisfaction. In addition to being an expert packer, he possesses a good practical knowledge of banana culture, and has thereby been able, not only to give instruction in packing the fruit, but to advise on all matters connected with the growing of the fruit and the care of the plantation. He recently packed a quantity of fruit for the Melbourne and Sydney markets which he saw unpacked when it reached its destination. His pack was favourably commented upon, but, as I have already stated, no pack will be definitely decided upon until the results of our squinter investigations are known.

During the year there has been a resuscitation of banana growing in Northern Queensland, along the line of the Northern Railway from Cardwell to Cairns, and as the climate of this part of the State is more suitable for the growing of this fruit than that of the more Southern banana-growing districts, there is a probability of a large output of fruit from this district in the near future, which will more than make good any decreased yield that may occur in the South. The present decreased yield in the South is the result of last winter's cold and last summer's drought, but the yield will increase from now. Considerable areas of new land are being prepared for the present season's planting, despite bunchy top, beetle borer, and other pests, as growers have not lost faith in the industry; and if they will only plant in good soil, in suitable localities, take good care of their plantation,

grow nothing but good quality fruit, and market it honestly there is no reason why they should not obtain a good return for their labour and outlay provided the seasons are favourable.

THE PINEAPPLE INDUSTRY.

As already stated, better marketing arrangements have had the effect of stabilising and improving prices, and the industry is in a better position now than it has been previously. Despite the many years that have elapsed since the commercial cultivation of pineapples was started in this State, there are still many growers who fail to realise the importance of thoroughly preparing the land prior to planting, or of carefully selecting the suckers with which to plant the land when prepared. These factors, combined with the selection of unsuitable land on which to grow this fruit, are responsible for the failure of many plantations to produce good crops of first-class fruit or to suffer from the so-called pineapple disease or wilt.

Suckers should only be taken from plants that are free from disease, that produce fruit of good size, shape, and quality, and possess a healthy root system as well as the habit of suckering as close to the soil as possible, instead of taking suckers indiscriminately from any worn-out plantation, as very frequently happens. Careful selection of suckers will undoubtedly improve the yield and quality of the product, and this has been proved in no uncertain manner during the past season at the Bribie Nursery, where a number of suckers specially selected from healthy plants, that had produced high-class fruit, were planted in practically pure sand, and yet every sucker produced a fruit, 75 per cent. of which were the right size and type to fill a 30-oz. can. Results such as this could be obtained generally, provided the same care and attention were given to the selection of the suckers, and if carried out systematically by growers, the result would be that, instead of the summer crop yielding about 10 per cent. of fruit suitable to filling a 30-oz. can, at least 60 per cent. of such fruit would be obtained, and we would then be able to put up a pack that would be a credit to the State and that could hold its own anywhere, as there is no question that our pines cannot be beaten for flavour.

The work of investigating the various diseases of pineapples has received further attention during the year, but there is little to add to the advice that has been given by the Department for many years—viz., to select suitable land, prepare it properly, plant healthy selected suckers, keep the land in a state of thorough tilth, and maintain its fertility by judicious manuring. Most of the diseases of the pineapple are due to unsuitable soil, and in any soil that has an excess of mineral acidity there is always a likelihood of the root becoming injured and the plant dying of starvation owing to the inability of the root system to secure the plant foods essential to the healthy development of the plant. Any serious injury to the root system of the pineapple plant, whether same be due to insects, unsuitable, badly-drained soil, or mineral acidity, brings about the death of the plant sooner or later, and produces that decolouration of the foliage commonly associated with the so-called pineapple disease. There is no great extension of the industry nor is it same likely,

as a number of the plantations in the metropolitan area are far from healthy and, with the exception of the Gympie district, there is little new planting being done. The Gympie district grows excellent fruit, and there are large areas suitable for its culture, so that should the demand arise there will be no difficulty in producing large quantities of fruit suitable for canning. Bowen continues to produce very fine fruit, but its cultivation is not extending to any extent in the Northern part of the State.

Should the further tests that are being made to determine the possibility of pineapples being placed on the European markets in perfect condition prove successful, this will give growers a new outlet for their fruit, as once the difficulty in transport is overcome, there is no reason why large quantities of pineapples should not be exported and sold at a price that will tend to enormously increased their present consumption.

CITRUS CULTURE.

Queensland has gained a reputation for the high quality of its citrus fruit, which is fully borne out by the excellent exhibits that are seen at many country shows and at the annual exhibitions of the Royal National Association in Brisbane, and it is of vital importance to the citrus industry that the high reputation be maintained. This can only be done by keeping our orchards in a healthy and vigorous condition, by growing nothing but suitable varieties producing the best quality fruit, by eliminating all unprofitable and inferior specimens, destroying those that are useless and heading back and re-working with more suitable varieties all trees that are only producing thick-skinned, inferior quality fruit that is hard to dispose of. During recent years there has been a heavy planting of citrus trees in the Southern States, so that our only chance of maintaining or extending our markets in these States is to produce fruit of such superior quality that it will find a ready sale even on a congested market, as there is always a good demand for a first-class article.

Many growers have unfortunately planted many trees that will never yield profitable returns, as they will never yield a high-class product, and the sooner such trees are re-worked with first-class varieties, or, if diseased as well, taken out and burnt, the better for the industry. These remarks apply particularly to the growing of lemons in Coastal Queensland, where thousands of trees have been planted that are practically useless, as the fruit is very inferior and often quite unusable, as it has little or no juice and the flesh is a mass of gum. Such trees are usually smothered with scale insects, fungus pests, and other insects, and are nothing more than a breeding ground for all pests and a source of danger to all citrus trees growing in their vicinity. The lemon, on the other hand, when grown under suitable climatic conditions, which seldom exist in coastal districts, does well in Queensland, and there is a good market for such fruit, as, if cut at the right period, carefully handled, and properly cured, it can be kept in perfect condition for months and will supply the demand during our summer season when we are more or less dependent on imported fruit.

During the year the Department has conducted a number of orchard experiments in

order to determine the best way of dealing with neglected trees, by manuring or otherwise, as well as the best means of treating such pests as the bronzy and spiny orange bugs, scale insects, root borers, and other diseases. New methods of destruction have been tried, amongst others the use of calcium cyanide as a dust in place of generating hydrocyanic acid gas for fumigation purposes by using sodium or potassium cyanide with sulphuric acid. It is too soon to make a definite statement, but from the experience gained already, it appears that the use of calcium cyanide in the dust form will be likely to prove of value to our citrus growers.

An old enemy, the Queensland fruit fly, still takes a heavy toll from citrus growers, many of whom do not yet realise the importance of destroying all useless, fruit-bearing plants that harbour this pest and of systematically trapping every mature fly early in the season as well as gathering and destroying every fly-infested fruit.

There is an improvement in the packing and grading of citrus fruit, and many of the exhibits of packing seen at the various shows are a credit to the exhibitors and to their instructors.

So far the vexed question of a standard case for citrus fruit has not been settled, and until growers can come to a definite agreement on this matter it is impossible to fix grade standards for citrus fruits in this State, although it would be to the benefit of our growers if they would fall into line with the standards adopted in the Southern States. The question of obtaining a reliable supply of trees for planting out should also be settled, as many of the orchards planted during recent years contain a number of useless, unprofitable or unproductive trees, that have been propagated on unsuitable or diseased stocks, from scions taken from diseased, constitutionally unhealthy, or unproductive trees of inferior varieties, that cannot be expected under any conditions to produce a satisfactory tree that will yield regular and good crops of first-class fruit.

This is a matter I have dealt with many times, as I am confident that many of the most troublesome diseases of citrus fruits are capable of being transmitted both by the stock and scion, and nursery stock so affected is doomed to failure from the start. The only way to get over the difficulty is for co-operative bodies of citrus growers to establish their own nurseries and propagate nothing except on absolutely healthy stocks, worked with scions taken from healthy productive trees yielding fruit of the highest possible quality. If this is done, I am certain that the high reputations that our really good citrus fruits have attained will be maintained in the future, and that a ready market at a remunerative rate will be obtained for a first-class article.

DECIDUOUS FRUITS.

The granite belt is our main source of supply of deciduous fruits, though selected varieties of early-maturing peaches as well as Chickasaw and hybrid Chickasaw plums have been a profitable line on the coast, where the fruit fly has been kept in check by systematically trapping. In the Stanthorpe fruit district good crops of excellent peaches, nectarines, plums, apples, pears, and grapes were grown, and the prices realised for

quality lines were very satisfactory, though inferior lines were hard to dispose of.

A record of the examination of the different fruits sent to the Brisbane market showed a great improvement over previous years, in that the number of cases of fruit of all kinds ordered to be picked over for diseases of all kinds, decay, &c., only amounted to 5,091, of which only 355 were destroyed and 902 lost in repacking, as a result of overripe, rotten, and diseased fruit. This is very satisfactory as the loss was very much less than that experienced in any recent year. A dry season, greater care in handling and packing, and the destruction of fruit pests are responsible for the improvement.

The grape crop, both on the coast and inland, was of very good quality, and I do not remember having seen finer samples of several varieties of grapes than those grown in the Stanthorpe district. The officer in charge of the field inspection staff, Mr. T. W. Lowry, whose headquarters are in Stanthorpe, reports that, although the district as a whole escaped serious damage from hail or heavy storms, yet a portion of the district lying to the south and east of Stanthorpe suffered somewhat severely from hail. Unfortunately, there is always a danger of hailstorms causing serious loss, and an attempt should be made to test the possibility of breaking up the clouds in which hail is formed, before the actual formation of the ice particles takes place, by means of explosives or otherwise, as the experience of hailstorms in the Stanthorpe district is that they follow certain lines or belts of country, and it should therefore be possible to arrange means for breaking them up before they cause serious damage. Mr. Lowry states that two growers in the Glen Aplin district used fine wire-netting to protect their vines against hail and found that it paid them to do so, as the netting not only prevented the hail from damaging the vines and fruit but also protected the fruit from the attack of birds; which, especially in a dry season, when their usual supply of food is scarce, do a lot of damage to all kinds of fruit. He also reports that, probably as a result of the hot and dry season, fruit fly did comparatively little damage, and it was not until the latter end of January, when an influx of flies from outside the district took place in a number of orchards, that the fly did any damage to speak of, and even then some parts of the district were practically free from this pest.

A special officer was appointed temporarily to give instruction in fruit packing during the season, thus following up the work of the late Mr. Rowlands, and as a result of the instruction growers have received there is a very marked improvement in the manner in which the fruit is placed on the market for sale. Seven temporary inspectors were also employed during the fruit season in order to see that the regulations governing the gathering of fallen fruit and the destruction of diseased fruit were carried out. Action has also been taken to clean up a number of abandoned and neglected orchards, and this work will be continued, as such places are only a breeding ground for pests of all kinds and a source of danger to all neighbouring growers.

The marketing of the crop has been carried out mainly under the auspices of the Committee of Direction of Fruit Marketing with satisfactory results.

OTHER FRUITS.

There has been a good crop of custard apples, and this excellent fruit is steadily gaining favour in the Southern States, to which large quantities are now being sent. Papaws have also done well, and there is a fairly good demand for the fresh-fruit trade as well as for the manufacture of chutneys and sauces. Passion fruit is becoming more and more difficult to grow, and many of our best producing areas are now so badly affected with leaf spot that its cultivation is no longer profitable. The cause of the trouble is being investigated, and it is hoped that an effectual remedy will be discovered, as where the plants are free from disease they yield a good return to the grower and there is a steady demand for the fruit both for consumption in the fresh state and also for preserving.

Strawberries were a profitable crop and where they are irrigated the returns are fairly constant. Many growers have installed irrigation plants, and have proved the investment a profitable one, as the strawberry soon suffers from a dry spell. The quality of the fruit was excellent, both for table use and jam making.

The cultivation of tomatoes is now an important industry, as will be noted by the volume of the exports, as no less than 321,851 packages of fruit were forwarded to the Southern States during the year, in addition to which the local consumption is very heavy, as tomatoes are in daily demand as a staple food throughout the State. Potatoes, on the other hand, are not grown to anything like the extent they should be, and during the year this State has imported about 30,000 tons. This is largely due to the unfavourable season, but there is no reason, if more attention were given to this crop and better cultural methods adopted, that Queensland should not be able to produce the bulk of its requirements, instead of having to go outside the State for our supply.

BRIBIE STATE NURSERY.

A sudden drop in the temperature during the last winter injured a number of the trees and plants growing at the nursery, and this cold spell was followed by months of the driest weather ever known on the island. Fortunately, our water supply held out, but, with the extension of the bushhouses and other work, an increased supply is required, and arrangements are being made to secure it. There is practically an unlimited supply of very pure water within a few feet of the surface, so that all that is required is to increase the pumping capacity of the present plant. Experience has shown that bush-house propagation is essential, as the young plants require protection from the direct rays of the sun.

Very good results have been obtained from the experiment that is being conducted to determine the possibility of improving smooth leaf pine-apples by careful selection, as the fruit produced last summer was of a very even type, especially adapted for the canning trade, a very important consideration when we have to dispose of our surplus fruit to canners. This experiment will be continued and results carefully watched.

The young thin-shelled Queensland nuts, pecan nuts, and avocados have done well, and where they have been planted out in their permanent positions, the majority have made a

satisfactory growth. The worked trees imported from the United States of America have not yet fruited, but it is probable that several of the varieties will fruit during the year. Large numbers of banana plants have been propagated from the single eye, and, prior to the proclamation prohibiting the transfer of banana plants, a number was distributed to several parts of the State. Neither bunchy top nor beetle borer have been seen in the plants, and every possible care is taken to prevent the introduction of these diseases.

In order to produce a new strawberry that will take the place of the varieties now commonly grown, and which are showing signs of deterioration, a quantity of seed was obtained from Queensland grown fruit and was specially selected from plants that were of a vigorous habit, and heavy producers of high-class fruit. A number of seedlings were raised from the selected seed and some of them give promise of being heavy producers of good fruit, but no definite results can be expected until they have produced their second crop, which is now showing. A quantity of named varieties were also imported from England, but unfortunately the bulk of the consignment died in transit; one or two varieties that survived, however, promise to do well. A quantity of seed was also obtained from the United States of America, from which a large number of seedlings of many types have been raised and planted out in the bushhouse. Although the seed was only planted last spring, several plants have already borne fruit and many now show blossoms. Many of the plants are very vigorous growers, and amongst the large number we are testing, I am in hopes that we will get one or more plants that will show special merit and from which the future strawberry crops will eventually be produced, as once it is certain that a particular plant is just what is required, we will propagate from it as quickly as possible, in order to get enough plants to set out an area from which runners can be distributed to growers.

Tests are also being made with little known varieties of passion fruit in order to see whether it is possible to obtain plants that will produce a marketable fruit of high quality that is free from leaf spot.

A number of seedling apple trees are also being grown from seed obtained from England, and when big enough to be worked they will be budded or grafted with varieties suitable to the Stanthorpe district, to be planted there permanently in order to see whether they will be resistant to crown gall and hairy root. Many experiments have been carried out at the nursery during the year, and the work has been carried out in an efficient manner under the direction of the manager, Mr. T. Mitchell.

FRUIT DISEASES ACT.

As stated in the earlier part of this report, it is proposed to amend the present Act in order to give the necessary power to enable it to be administered in a more efficient manner, as it is imperative that the many abandoned, neglected, and diseased orchards and banana plantations be efficiently dealt with, as if this is not done the fruit-growing industry of Queensland is not

likely to make any progress. A number of temporary inspectors were appointed for the fruit season in the Stanthorpe district, and, as already mentioned in this report, there was much less loss there from fruit fly and other diseases than during previous years, and this decrease can be accounted for by the dry season and the care being taken to gather and destroy all infested fruit. On the last day of December, bunchy top was discovered at Rush Creek, in the Dayboro' District, and as a result it was necessary to make an inspection of all the surrounding banana plantations. This necessitated every available officer of the Fruit Branch who had any field experience being employed on this work, even at the risk of neglecting other branches of the fruit industry, as it was of vital importance to determine as quickly as possible how far the disease had spread and to which part of the State suckers had been sent from the infected area. This necessitated a large amount of extra work and expense, which has, however, been justified, as it has enabled the Department to follow up the plants sent to other districts, and in cases where bunchy top has broken out in the plants so sent to take steps for its immediate suppression.

The inspection work is still being carried out, and it is not possible to say when it will be completed. So far as is known at present, the disease, which was transferred to the Innisfail district by means of infected suckers, is now well under control, and it is hoped that the slight infestation that has taken place there will be stamped out. In order to bring this about, two practical banana growers, who were thoroughly acquainted with bunchy top, were appointed as temporary inspectors and sent to Innisfail, where they are still engaged in inspecting plantations, and should no further outbreaks occur, it would probably be possible to declare the district north of the Herbert River clean by about the end of the year.

More field inspectors are badly needed, and steps are being taken to train young men specially in order to fit them for carrying out the work of inspecting banana plantations, as this work requires not only special knowledge, but the inspector must be physically fit, if he is to carry out his work properly, as his duties necessitate his having to do some stiff climbing over pretty rough country.

The recent experience that has been gained by the field inspectors has made them much more efficient, and they are now capable of giving instructions to any new inspectors that may be appointed.

The work of the port inspectors, which includes that of the two officers stationed at Wallangarra, has been carried out in a satisfactory manner, as has also their work as plant quarantine officers.

I have to thank all members of the fruit staff for the assistance they have given me at all times during the year, and, in conclusion, I beg to attach hereto a detailed statement that has been prepared by the senior inspector, giving a return of the imports and exports of fruit, vegetables, &c., for this State for the year ending 30th June, 1926.

ALBERT H. BENSON,
Director of Fruit Culture.

IMPORTS AND EXPORTS FOR QUEENSLAND FOR THE YEAR ENDED 30TH JUNE, 1926.

EXPORTS TO SOUTHERN STATES.

	Bananas.	Canned Pines.	Citrus.	Fresh Pines.	Tomatoes.	Vegetables, Pumpkins, and Potatoes.	Miscellaneous Fruit, etc.	Jam.	Peanuts.
	Cases.	Cases.	Cases.	Cases.	Cases.	Cases and Bags.	Cases.	Cases.	Bags.
Brisbane	14,525	103,502	916	29,660	10,225	20,600	1,052	2,761	2,100
Wallangarra	734,922	..	21,440	188,505	166,537	76,998	38,823	..	..
Rockhampton .. .. .	..	..	..	..	..	..	..	..	..
Bowen	6	..	2	2,847	145,051	1,711	274	..	..
Townsville .. .. .	..	..	..	..	..	..	..	..	..
Innisfail	262	..	..	..	..	..	..	..	..
Cairns	2,829	..	1,427	327	38	..	226	..	..
Totals	752,544	103,502	23,785	221,339	321,851	99,309	40,375	2,761	2,100

	Arrowroot.	Grass Seeds and Plants.	Maize.	Chutney.	Pulp.	Passion Fruit.	Mangoes.	Cucumbers.	Strawberries.
	Cases.	Packages.	Bags.	Cases.	Cases.	Cases.	Cases.	Cases.	Trays.
Brisbane	7,809	4,211	1,677	3,283	2,504	1,008	133	19	..
Wallangarra .. .. .	..	4	..	..	..	..	..	..	9,269
Rockhampton .. .. .	..	..	..	..	..	..	..	..	..
Bowen .. .. .	..	..	..	..	..	..	2,548	1,636	..
Townsville .. .. .	..	..	..	..	..	..	52	..	..
Innisfail .. .. .	..	..	..	..	..	..	..	..	..
Cairns .. .. .	..	..	9,688	..	..	..	..	..	..
Totals	7,809	4,215	11,365	3,283	2,504	1,008	2,733	1,655	9,269

IMPORTS FROM SOUTHERN STATES.

	Fruit.	Potatoes.	Plants and Seeds.	Onions.	Turnips.	Vegetables.
	Cases.	Bags.	Packages.	Bags.	Bags.	Packages.
Brisbane	302,086	210,292	171	30,216	8,888	3,185
Wallangarra	373,549	154,403	3,165	..	..	11,612
Rockhampton	1,166	19,472	32	..	..	8,092
Bowen	328	4,055	..	448	..	..
Townsville	44,383	34,532	15	8,012	..	1,979
Innisfail .. .. .	..	250	148	49	..	..
Cairns	14,243	19,570	17	4,724	48	88
Totals	735,755	447,046	3,548	43,449	8,936	24,956

IMPORTS UNDER QUARANTINE ACT.

	Packages.
Brisbane	473,759
Townsville	10,026
Rockhampton	3,187
Cairns	12,738

EXPORTS UNDER COMMERCE ACT.

	Packages.
Brisbane	2,365

IMPORTS OF PLANTS, SEEDS, AND BULBS, PARCEL POST.

	Interstate Packages.	Quarantine Packages.
Brisbane	2,240	572

A. PERSON,
Senior Inspector, Diseases in Plants, Brisbane.

REPORT OF THE SUPERVISOR OF DAIRYING.

Seasonal conditions in the early part of the year proved favourable, and resulted in the production of increased quantities of dairy products. Dry weather was experienced during the latter half of the year, and as a consequence a falling off in production occurred during that period.

The following are the particulars of dairy produce manufactured during the season:—

	Lb.
Butter	60,496,753
Cheese	12,515,895
Condensed Milk	9,771,763

BUTTER.

The average quality of the first-grade butter was higher and the grade generally more uniform than previously.

The world's butter test held in New Zealand claimed attention, and brought into competition the finest products from centres of dairying throughout the world. The general high quality of Queensland butters was commented on by the experts to whom the duty of awarding the honours was entrusted.

The Oakey District Co-operative Dairy Company gained second place, being one-half point below the award allotted to Rangiwahia-Ruahine Dairy Factory, New Zealand. The result of the test has had the effect of drawing the attention of oversea traders to the excellent quality of our butters.

There was an increase in the quantity of second-grade butters, attributable to unfavourable climatic conditions during the period of high production.

Heavy falls of rain occurred in December and January, accompanied by abnormally high temperatures. Such conditions favoured the development of undesirable bacteria and produced rank growths of pasturage, especially on low-lying areas. Milk and cream produced from such pastures at that time was wanting in full natural flavour and aroma.

Interruption of operations occurred in several of our butter factories in consequence of the installation and additions to manufacturing plants. Such disorganisation was also a factor that tended to increase the output of second-grade butter during the season.

Want of care and attention in the production and handling of the cream was in evidence in many cases, especially during the period of the heat wave. Frequent and regular deliveries of cream will assist to improve the grade of butter generally, with benefit to the producer.

Modernisation of dairy factory buildings and equipment, rebuilding and remodelling of dairy factory premises have received a deal of attention in our chief dairying centres, and we have factories of the most modern type, the erection and equipment of which cost from £30,000 to £60,000 each.

The new factory of the Wide Bay Co-operative Dairy Association, Limited, at Gympie, constructed of brick, concrete, and iron, was completed and equipped with modern machinery. This factory is claimed to be the largest butter factory in Australia.

The erection of a new factory building for the Maryborough Co-operative Dairy Association at Kingaroy is nearing completion, which, when finished, will rival the Wide Bay Co-operative Dairy Association's factory in size and equipment. The superstructure is of wood and iron. The building of the Maryborough Co-operative Dairy Association's new factory at Mundubbera, which is being constructed of similar materials to the factory at Kingaroy, is also nearing completion.

The Port Curtis Co-operative Dairy Association, Limited, at Gladstone, erected cold stores with a storage capacity of 4,000 boxes of butter, and is now extending the stores to accommodate over 10,000 boxes. Further improvements to this factory are in hand.

The Queensland Farmers' Co-operative Association has erected a modern factory of brick and concrete at Grantham, fitted with the latest improved butter factory equipment. This factory compares favourably with the most modern of butter factories.

Power Plants.

Suction gas and crude oil units are taking the place of steam and are giving economical and satisfactory service.

The use of electric units to operate the various sections of the dairy factory has been found to increase economy in many instances.

Increasing operating costs render necessary the attainment of industrial efficiency by the installation and use of modern industrial units in all our dairy factories.

Glass-lined batch pasteurisers, cream fore-warmers, and cream-holding vats have been installed in butter factories recently built or reconstructed.

Manufacture.

Pasteurisation of cream for butter-making is carried out in all butter factories in this State, and the butter produced is now more uniform in character with increased durability.

It has, however, been noticeable that since the process of pasteurisation of cream at factories has been adopted that no general improvement has taken place in the quality of the cream supplied, and that in some districts the quality has tended to depreciate rather than improve. This is apparently caused by dairymen having the erroneous opinion that it is unnecessary to take particular care that pasteurisation will eliminate all defects in cream.

Mr. Dairy Instructor Watson states that a good deal of progress was made in manufacturing methods in his district, and that factory operatives were generally found to be eager to obtain information regarding both theory and practice of butter-making.

There is evidence that, in a few instances, the quality of the butter deteriorated owing to want of care in the neutralisation of the cream, prompted by a desire to economise in time.

Careful estimation of the quantities of cream to be treated, accurate determination of the acid content, and the addition of the correct quantity of neutraliser to the cream are essential in

obtaining the benefit of the process. Sufficient time must be allowed for the neutraliser to do its work.

The use of cream forewarmers would impart efficiency to the process of neutralisation.

Transportation from farm to factory.

The gap between the producer and his factory requires to be bridged with modern means of transport, ensuring rapid and economical delivery of the products of our dairy farms at manufacturing centres.

Motor road and motor rail service has proved efficient and satisfactory where utilised, and an extension of the system is urged. Two rail motors to be used for the conveyance of cream from the farm to the factory are under construction at the Railway Workshops.

Organisation of the systematic transport of dairy produce from the farm to the factory by the co-operative governing bodies is essential in producing a satisfactory delivery service. Uncontrolled competition in the cartage of cream has in several districts proved wasteful and unsatisfactory.

Dairy Farm.

Improvements to dairy farm premises are being gradually carried out in all districts. Milking machines are being introduced on many dairy farms throughout the State.

The modern milking plant is efficient and sanitary when controlled by a capable dairy hand, who will give attention in detail to the working, cleansing, and care of the plant. Installation of plant should provide efficiency in operating and facilities for cleansing and sterilising.

Instructional Work.

With a view of increasing the efficiency of the work of dairy inspectors, it is proposed to offer improved facilities for travel throughout their districts.

By co-ordinating the work of the dairy inspectors and dairy instructors it is hoped that the services of such officers will tend to be more instructional, and we look for the co-operation of all dairy farmers in an effort to raise the standard of our dairy products.

CHEESE.

Climatic conditions ruling in January, February, and March (heat wave) had a detrimental effect on the quality of the cheese produced at that period.

Pasteurisation has been adopted by factories and has resulted in the production of a more uniform and improved article generally.

Cheese from pasteurised milk cures slowly and has a more open body than the product of raw milk, but the clean flavour, improved storing qualities, and uniformity of the cheese warrants the application of the process in all cheese factories.

The process tends to lessen or eliminate food flavours, and destroys or checks the action of undesirable bacteria. Pasteurisation does not provide the means of renovating poor or low-grade milk and all milk should be carefully

graded. Pasteurisation of milk will become general in the cheese industry in the near future.

The quality of cheese has not been all that could be desired, low quality being particularly noticeable during the summer.

Mr. Cheese Instructor Snell advises that acid-cut has been a very prevalent fault in his district.

Immediate improvement was apparent on cheesemakers acting on his advice to lower the wheying off acidity by two or three points.

Weed taints are always with us and have been very prevalent during the past season. Factory managements experienced great trouble in making a first-class cheese from the milk so tainted. Even with the aid of the pasteuriser, the cheese was far below that of normal times.

This state of affairs could be greatly minimised if the farmers went in for some system of fodder conservation. The factories generally are in good order, and the managers and staffs are well acquainted with their work. If the milk is delivered in good order they are quite capable of turning out a first-class article.

Last year a good deal of trouble was experienced with uneven colour in cheese, but during the season under review there were very few complaints on this score, the colouring generally being very even.

The general finish of our cheese has much improved and the crates and packing are quite attractive.

The cheese industry is now firmly established, and with favourable seasons its future is bright.

Regulation No. 98A.

The despatch of cheese from factories to exporting agents uncrated resulted in a deal of damage to the product. Uncrated cheese arrived at the port of shipment marked with dust, while green cheese was found out of shape and in some cases broken open.

A regulation dealing with the crating of cheese intended for export was brought into force in order to overcome the loss occasioned thereby.

Cold Storage of Cheese.

The cold storage of cheese is a matter which is receiving the attention of the Department. It is evident that unsuitable temperatures and conditions under which cheese is stored at factories and stores awaiting shipment and sale is responsible for a deal of deterioration in quality and financial loss.

PRIMARY PRODUCTS POOLS ACTS, 1922-1925.

The activities of the various bodies operating under the provisions of the above Acts have been of much benefit to the dairying industry.

Interstate conferences of representatives of the producing interests have co-ordinated the work of marketing throughout the State, and a more orderly system has been evolved.

PATERSON (DELROY) PRICE STABILISING SCHEME.

Owing to serious fluctuations and decline in the butter market the Paterson scheme was brought into force as from the 1st January, 1926.

Although voluntary, this scheme has the support of practically all butter and condensed and

milk powder manufacturing managements throughout the States. The scheme has given stability to the prices ruling in interstate markets.

KANGAROO BRAND.

The adoption of an all Australian brand for all high-grade butter exported overseas has had a beneficial effect on the price ruling for Australian butter on the London market.

HAMILTON COLD STORES.

The Hamilton Cold Stores were utilised during the present season, and during the period of high production the support accorded was satisfactory. They are the most modern and spacious cold stores in the Southern Hemisphere. Special facilities for loading from cold stores to ships' hold, so as to avoid fluctuations of temperatures, are also important factors in maintaining the storing properties in butter intended for export and storage.

MINISTERIAL CONFERENCE.

A conference of Ministers of Agriculture, all the States being represented, was held in Brisbane on 7th June last, when the following matters, amongst others, pertaining to the dairy industry, were dealt with:—

- (a) Standardisation of the grading and examination of dairy products placed on the interstate and intrastate markets.
- (b) Co-ordination in experimental and research work relating to the dairy industry.
- (c) Question of the compulsory installation in dairy produce factories of thoroughly tried out and approved machinery.
- (d) Commonwealth financial assistance to the States in regard to the dairying industry.
- (e) That the Commonwealth Government defray shipping, rail, and quarantine charges on approved pure-bred farm or dairy stock imported from overseas.
- (f) Legislative control of the use of sires for the improvement in breeding of grade dairy cattle.

STOCK.

The health of the dairy stock has been good, no outbreak of disease having occurred during the period. The veterinary officers examine and deal with any animal reported as showing signs of ill-health. A number of animals suffering from minor ailments received veterinary attention.

IMPROVEMENT OF DAIRY HERDS.

The desire of the Department to assist in the all-important matter of herd improvement is evidenced by the inauguration, by the Minister for Agriculture, the Hon. W. Forgan Smith, of the better bull scheme, which makes provision for the payment of a subsidy of £1 for £1 to the purchasers of approved dairy sires. A number of applications have already been dealt with.

HERD TESTING.

The manufacturing and marketing departments of the industry are in advance of the

producing section. The matter of herd testing, culling, and feeding on production lines has not received the attention necessary to secure to the primary producer the full benefits of the modernisation of the secondary branch of the industry.

The following is the report of Mr. L. Andersen, Senior Herd Tester:—

“Generally speaking, the season under review has been very hard for the man on the land.

“The spring commenced very dry and hot with spasmodic thunder showers giving slight relief here and there.

“During the months of November and December good storms fell in most of our dairying districts and gave promise of a fair season, but unfortunately this was followed by a long spell of extremely hot and dry weather, which practically burned up the pastures in many places.

“With the exception of the coastal areas, the seasonal rain, which we look for in January, February, and March, did not occur, with the result that most of the dairymen were unable to plant any winter feeds. However, some relief was afforded by autumn rains.

“A slight alteration in the system under which herd testing has been carried out by this Department for some years was made at the beginning of this year. Each farmer applying for the services of a herd testing officer, was asked to sign an agreement to the effect that he would submit his herd at least four times during the lactation period in order that proper records of production of butter could be furnished at the end of the season.

“I think this is a step in the right direction and, judging by the applications received from all parts of the State, it appears that farmers generally realise the advantage of this system.

“Unfortunately, the drought compelled a number of dairy farmers to dry off their cows prematurely, thus losing the full benefit of the testing. However, a number of groups of farmers have again signified their intention of carrying out a further test during the coming season, and I anticipate an extension of the work in this department.

“Eighty-two Local Producers' Associations made applications for the services of herd testers and submitted 524 herds, comprising 15,701 cows.

“In districts, West Moreton submitted 98 herds, Darling Downs 130, Gympie 67, South Burnett 109, Central 73, Gayndah 20, Gin Gin 9, and Atherton 20 herds.

“The general average production of milk and butter fat is slightly below that of last year, while the average per cent. fat recorded was practically the same.

“The actual number of tests carried out during the year was 27,932, while in addition 150 samples of skim milk were also treated.

“This is approximately 6,000 more than last year, and had the season been even moderately good it is estimated that the number of tests would have reached 35,000.

“The compiling of records, which entails a great deal of work, is now in progress, and at the time of writing 300 dairymen have been

supplied with records of cows submitted during the season. These should supply the owners with very important information, and it is hoped that dairymen will make full use of this in the culling of their herd.

“Cases can be pointed out in almost any herd where cows, equal in production of milk, show a difference of 50 to 60 lb. of butter when submitted to the herd tester for a lactation period, while in some instances a difference of 100 lb.

is noted in the records of cows from the same herd and grazed in the same field.

“The highest production of butter fat for a cow tested during the season for a period of 290 days was 366 lb., while the poorest cow in the same period produced 133 lb., a difference of 233 lb., which, taken at 1s. 6d. per lb., equals £17 9s. 6d. in favour of the better cow.

“The following are detailed reports of the testing in each district:—

GENERAL AVERAGE ALL DISTRICTS.

	Year.	Number of Herds Tested.	Number of Cows Tested.	Average Daily Production of Milk.	Average Fat Per cent.	Average Daily Production of Butter Fat.
General Average	1925-1926	524	15,701	15.36	4.06	.62

SUMMARY OF YEAR'S OPERATIONS.

Daily Yield of Milk in Tested Herds.	Lb.	Amount of Milk Yielded by individual Cow Daily.	Lb.
Mean	15.36	Highest	62
Highest	36.5	Lowest	1
Lowest	4.15		

Butter Fat Content in Herd Milk.	Per cent.	Amount of Butter Fat Yielded by individual Cow Daily.	Lb.
Mean	4.06	Highest	2.73
Highest	6.42	Lowest	0.08
Lowest	2.92		

Daily Amount of Butter Fat Produced in Herd.	Lb.	Amount of Butter Fat Produced by individual Cow (tested four times) during a Lactation Period of 290 days.	Lb.
Mean .. .. .	.62	Highest	366
Highest	1.42	Lowest	133
Lowest .. .. .	.21		

District.	Number of Herds.	Number of Tests.	Average Daily Production of Milk.	Average Fat Per cent.	Average Daily Production of Butter Fat.
Darling Downs	130	6,609	18.5	3.86	.71
South Burnett	109	5,633	14.9	4.3	.64
Central	73	2,069	16.3	3.8	.61
West Moreton	98	7,759	15.7	4.4	.69
Gympie	67	3,903	14.4	4.0	.58
Atherton	18	1,071	14.6	4.36	.61
Gayndah	20	499	14.8	3.95	.58
Gin Gin	9	389	14.0	3.85	.54
Total	524	27,932	15.36	4.06	.62

LOCAL PRODUCERS' ASSOCIATIONS SUBMITTING HERDS DURING YEAR 1925-26.

L.P.A.	Herds.	Cows.	L.P.A.	Herds.	Cows.
DARLING DOWNS—			WEST MORETON—		
Kingsthorpe	10	205	Gatton	6	144
Nangwee	8	254	Helidon	16	397
Horrane	6	134	Grandchester	5	222
Oakey	3	65	Fassifern Valley	12	253
Kulpi	8	204	Charlwood	2	32
Yamsion	8	229	Tarome	6	95
Square Top	4	102	Lamington	4	146
Jandowae	7	342	Coomera	1	74
Tara	3	65	Stapylton	10	165
Canaga	7	244	Springbrook	13	711
Columboola	1	30	West Burleigh	8	284
Chinchilla	4	88	Currumbin	15	700
Djuan	6	214			
Geham	13	395	Total	98	3,223
Burncluith	5	366			
Rosehill	8	209	GYMPIE—		
Junabee	3	103	Downsfield	5	173
Yelarbon	10	325	Green's Creek	3	79
Omana-ma	9	302	Glastonbury	5	166
Swan Creek	7	148	Upper Veteran	6	208
Total	130	4,024	Chatsworth	3	148
			North Deep Creek	10	215
SOUTH BURNETT—			Wolvi	10	513
Goomeri	11	288	Gunalda	12	262
Wheatlands	7	129	Tiaro	4	103
Keyslands	16	293	Maleny	9	392
Abbeywood	12	263	Total	67	2,259
Kinleymore	14	549			
Lawson	3	46	ATHERTON—		
Winderera	3	103	Millaa Millaa	3	63
Cloyna	7	288	Tarzali	2	96
Tableland	11	370	East Barron	1	85
Moffatdale	1	11	Yungaburra	2	148
Wooroolin	9	265	Barrine	2	97
Inverlaw	8	204	Julatten	7	128
Glencliffe	7	250	Kulara	1	50
Total	109	3,059	Total	18	667
CENTRAL—			GAYNDAH—		
Bracewell	14	334	Degilbo	3	65
Butlerville	1	60	Wilson's Valley	2	50
Machine Creek	2	46	Binjour	8	177
Ambrose	5	121	Gurgeena	7	145
Raglan	7	155	Total	20	437
Bajool	5	100			
Marmor	6	105	GIN GIN—		
Miriam Vale	9	214	Tirroan	6	300
Kalapa	2	51	Gin Gin	1	20
Buneru	6	101	Goodnight Scrub	2	25
Dixalea	14	351	Total	9	345
Biloela	1	19			
Murray's Creek	1	30			
Total	73	1,687			

Grand Total Local Producers' Association, 82. Herds, 524. Cows, 15,701.

HERD-TESTING, 1925-26.

DISTRICTS.

District.	Month.	Number of Herds Tested.	Number of Cows Tested.	Average Daily Production of Milk.	Average Fat per cent.	Average Daily Production of Butter-fat.
				Lb.		Lb.
WEST MORETON.						
Lamington	October	4	103	17.4	3.7	.64
Lamington	January	4	119	17.6	4.1	.72
Lamington	March	4	102	10.1	4.4	.44
Lamington	May	1	32	5.9	5.99	.35
Helidon	December	16	295	20.7	3.9	.81
Helidon	January	14	280	21.1	4.0	.84
Helidon	March	10	186	13.1	4.4	.58
Helidon	June	8	101	9.7	4.86	.47
Grandchester	November	5	175	13.9	3.7	.51
Grandchester	January	4	151	20.4	4.1	.84
Gatton	January	6	137	21.0	4.2	.88
Gatton	March	2	41	14.9	4.4	.65

HERD-TESTING, 1925-26—continued.

DISTRICTS—continued.

District.	Month.	Number of Herds Tested.	Number of Cows Tested.	Average Daily Production of Milk.	Average Fat per cent.	Average Daily Production of Butter Fat.
				Lb.		Lb.
WEST MORETON—continued.						
Fassifern Valley	November	19	253	20.1	4.0	.80
Fassifern Valley	February	18	317	19.8	4.0	.79
Fassifern Valley	April	15	256	12.5	4.4	.55
Currumbin	December	14	522	18.8	4.1	.77
Currumbin	February	13	509	17.1	4.3	.73
Currumbin	April	13	456	12.99	4.98	.65
Currumbin	June	10	292	10.5	4.93	.52
Stapylton	October	8	129	17.5	3.6	.62
Stapylton	January	11	172	20.2	3.95	.80
Stapylton	March	9	152	13.6	4.2	.57
Stapylton	May	7	118	12.17	4.47	.54
Stapylton	June	5	79	11.4	4.5	.51
Springbrook	October	10	324	17.6	3.9	.68
Springbrook	December	12	496	21.7	4.2	.92
Springbrook	February	13	568	19.0	4.6	.87
Springbrook	May	11	417	13.33	5.13	.68
Springbrook	June	9	239	9.8	4.9	.48
West Burleigh	October	7	170	12.9	3.9	.50
West Burleigh	December	8	212	18.6	4.1	.76
West Burleigh	February	6	163	16.5	4.3	.71
West Burleigh	April	7	193	13.39	4.89	.65
General Average			7.759	15.7	4.4	.69
DARLING DOWNS.						
Yelarbon	December	10	325	23.0	3.8	.87
Warwick	December	11	312	21.17	3.85	.81
Swan Creek	November	7	127	23.8	4.3	1.02
Swan Creek	March	5	94	22.6	3.8	.86
Omana-ma	November	8	257	25.8	3.85	.99
Omana-ma	March	2	47	19.4	3.7	.72
Oakey	December	2	45	16.3	4.25	.69
Oakey	February	1	20	16.0	3.9	.62
Djuan	January	6	181	23.1	3.93	.91
Djuan	March	6	173	16.1	4.5	.72
Djuan	June	5	82	14.3	4.5	.64
Tara	February	3	65	20.7	3.74	.77
Geham	November	13	282	17.8	3.9	.69
Geham	January	12	308	20.2	4.04	.82
Geham	March	5	112	14.5	4.52	.66
Geham	May	1	25	10.3	5.8	.60
Kingsthorpe	August	6	64	20.6	3.95	.81
Kingsthorpe	September	7	102	23.3	3.79	.88
Kingsthorpe	December	6	87	22.8	4.01	.91
Kingsthorpe	February	7	114	20.5	4.05	.87
Kingsthorpe	March	4	68	14.4	4.6	.66
Kingsthorpe	June	3	37	10.1	4.9	.49
Nangwee	October	8	189	25.7	3.76	.96
Nangwee	December	7	184	30.3	3.88	1.18
Nangwee	February	4	95	18.0	4.02	.72
Nangwee	April	4	80	15.8	4.92	.78
Horrane	October	6	104	23.4	3.77	.88
Horrane	December	2	39	27.1	3.71	1.01
Horrane	February	2	33	21.3	3.72	.79
Horrane	April	2	38	18.7	4.16	.77
Square Top	November	3	45	22.0	3.82	.84
Square Top	January	4	79	26.2	4.04	1.06
Square Top	March	3	61	22.0	3.92	.86
Square Top	May	3	53	16.0	4.16	.66
Burnluith	December	4	173	22.0	3.5	.77
Burnluith	February	5	266	22.1	3.54	.78
Burnluith	April	3	126	17.2	3.75	.53
Canaga	November	7	195	19.0	3.47	.66
Canaga	February	4	156	18.3	3.75	.69
Canaga	April	1	42	10.9	4.1	.45
Chinchilla	February	5	105	16.0	3.59	.57
Chinchilla	April	2	48	16.8	3.34	.57
Chinchilla	June	1	25	7.3	5.4	.39
Yamsion	November	7	154	9.8	3.74	.37
Yamsion	January	4	128	18.4	3.95	.73
Yamsion	March	6	139	12.2	4.32	.53
Yamsion	May	2	48	12.1	4.73	.57
Jandowae	November	5	190	19.3	3.86	.74
Jandowae	January	6	275	25.1	3.77	.95
Jandowae	March	2	81	14.5	4.2	.61
Jandowae	May	1	49	14.8	4.1	.61
Kulpi	October	8	137	17.4	3.5	.61
Kulpi	December	7	143	19.4	3.56	.69
Kulpi	March	6	133	15.7	4.14	.65
Kulpi	May	3	69	8.5	4.69	.40
General Average			6,609	18.5	3.86	.71

HERD-TESTING, 1925-26—continued.

DISTRICTS—continued.

District.	Month.	Number of Herds Tested.	Number of Cows Tested.	Average Daily Production of Milk.	Average Fat per cent.	Average Daily Production of Butter Fat.
				Lb.		Lb.
SOUTH BURNETT.						
Kinleymore	December	12	393	21.20	3.83	.81
Kinleymore	March	11	341	17.43	4.07	.71
Kinleymore	April	11	309	9.83	4.86	.48
Kinleymore	June	8	189	8.7	4.52	.39
Abbeywood	December	11	206	20.43	3.72	.75
Abbeywood	February	11	215	14.70	3.95	.58
Abbeywood	April	8	114	9.25	4.56	.42
Abbeywood	June	5	47	8.84	4.32	.38
Inverlaw	January	4	99	22.55	4.19	.94
Inverlaw	March	7	151	14.22	4.27	.60
Inverlaw	May	8	125	10.64	4.72	.50
Inverlaw	June	5	80	12.40	4.63	.57
Wooroolin	January	4	86	28.81	4.11	1.18
Wooroolin	March	7	186	16.42	4.09	.67
Wooroolin	May	4	66	14.04	4.34	.61
Wooroolin	June	2	37	10.1	4.5	.45
Windersa	January	3	92	22.13	4.13	.91
Windersa	March	3	94	10.17	4.64	.47
Windersa	May	1	18	7.11	5.51	.39
Cloyna	January	7	270	21.57	3.95	.85
Cloyna	March	5	165	14.10	4.40	.62
Cloyna	May	2	23	9.03	4.66	.42
Cloyna	June	2	19	10.76	4.47	.48
Wheatlands	December	7	96	18.29	3.7	.68
Wheatlands	February	6	91	21.56	4.06	.87
Wheatlands	April	6	78	11.86	4.58	.54
Wheatlands	June	3	28	11.79	4.08	.48
Keysland	December	16	255	17.33	3.7	.64
Keysland	February	16	276	17.13	4.08	.70
Keysland	April	8	100	8.68	4.75	.41
Tableland (Murgon)	January	9	278	23.13	3.78	.83
Tableland (Murgon)	March	8	229	11.81	4.34	.51
Lawson (Proston)	March	3	46	17.64	4.47	.78
Lawson (Proston)	May	1	11	9.73	4.78	.46
Goomeri	December	11	264	18.17	3.74	.67
Goomeri	February	8	196	17.70	4.05	.69
Glencliffe	January	7	236	18.35	3.88	.71
Glencliffe	March	5	124	9.35	4.60	.43
Average .. .. .	.. .. .	..	5,633	14.9	4.3	.64
GYMPIE DISTRICT.						
Tiaro	February	4	103	10.7	4.0	.43
Upper Veteran	October	6	84	14.5	3.35	.48
Upper Veteran	January	4	142	18.9	3.65	.69
Upper Veteran	March	4	153	13.7	3.76	.51
Upper Veteran	May	2	87	9.5	4.35	.41
Green's Creek	November	3	79	13.4	3.94	.52
Glastonbury	January	5	166	20.2	3.8	.77
Dawnsfield	October	5	173	14.3	3.67	.52
Wolvi	October	9	303	12.6	3.52	.44
Wolvi	January	10	342	18.2	3.9	.71
Wolvi	March	8	228	11.7	4.14	.48
Wolvi	May	1	10	11.0	4.0	.44
Chatsworth	November	3	100	10.6	3.7	.39
Chatsworth	January	3	94	19.0	3.82	.72
Chatsworth	May	1	28	12.0	4.3	.52
North Deep Creek	November	7	125	12.3	3.58	.44
North Deep Creek	January	5	140	15.8	4.0	.63
North Deep Creek	April	6	138	11.7	4.8	.56
Gunalda and Glenwood	November	6	145	13.0	3.74	.48
Gunalda and Glenwood	February	10	200	17.0	3.87	.66
Gunalda and Glenwood	April	6	135	12.5	4.7	.58
Maleny	December	7	229	21.9	4.16	.91
Maleny	February	6	229	19.4	4.3	.83
Maleny	March	7	258	14.6	4.55	.66
Maleny	May	6	212	12.4	4.6	.57
Average .. .. .	.. .. .	..	3,903	14.4	4.0	.58
GAYNDAH DISTRICT.						
Degilbo	January	3	62	19.0	3.7	.70
Degilbo	March	3	65	13.0	4.1	.53
Wilson's Valley	March	2	50	10.4	4.1	.42
Binjour	February	8	177	17.5	4.0	.70
Gurgeena	January	7	145	14.3	3.95	.56
Average .. .. .	.. .. .	..	499	14.8	3.95	.58

HERD-TESTING, 1925-26—continued.

DISTRICTS—continued.

District.	Month.	Number of Herds Tested.	Number of Cows Tested.	Average Daily Production of Milk.	Average Fat per cent.	Average Daily Production of Butter Fat.
GIN GIN DISTRICT.						
Gin Gin and Tirroan	December	6	89	15.0	3.55	.53
Gin Gin and Tirroan	February	11	195	14.9	3.94	.59
Gin Gin and Tirroan	April	7	105	12.0	4.5	.54
Average .. .. .		..	389	14.0	3.85	.54
CENTRAL DISTRICT.						
Miriam Vale	December	9	181	17.9	3.51	.63
Miriam Vale	March	3	52	14.2	3.4	.52
Buneru	December	6	94	22.6	3.66	.83
Buneru	March	2	24	17.3	3.75	.65
Bajool and Marmor	February	6	111	20.0	3.7	.73
Milman	February	5	94	15.3	3.74	.57
Dixalea	December	13	273	19.0	3.67	.70
Dixalea	March	12	294	17.8	3.67	.65
Ambrose and Langmorn	January	5	121	21.0	3.7	.78
Hourigan Creek and Raglan	January	7	136	16.5	3.6	.58
Kalapa	February	2	48	11.9	3.8	.45
Kalapa	April	2	42	7.22	4.3	.30
Biloela	March	1	19	15.6	4.3	.67
Murray's Creek	March	1	30	12.0	3.7	.44
Mount Larcom	January	17	413	22.5	4.0	.80
Mount Larcom	April	7	137	9.8	4.3	.42
Average .. .. .		..	2,069	16.3	3.8	.61
ATHERTON DISTRICT.						
Julatten	February	6	71	13.9	4.0	.57
Julatten	May	7	89	13.3	4.0	.53
Julatten	June	4	54	11.25	4.4	.49
Millaa Millaa	December	2	40	13.5	4.2	.55
Millaa Millaa	February	3	31	17.8	4.3	.76
Millaa Millaa	April	3	42	18.0	4.3	.77
Millaa Millaa	June	2	29	17.5	4.6	.80
Tarzali	January	2	61	14.8	4.3	.63
Tarzali	March	1	35	18.0	4.0	.72
Tarzali	May	1	30	12.8	4.77	.60
Yungaburra	February	1	36	16.7	4.9	.82
Yungaburra	April	1	47	16.7	5.0	.83
Yungaburra	June	2	130	11.3	4.7	.53
Barrine	February	1	30	20.0	3.8	.76
Barrine	April	2	77	14.3	4.2	.60
Barrine	June	1	26	14.0	4.5	.63
East Barron	January	1	60	13.0	4.4	.57
East Barron	March	1	55	12.0	4.56	.55
East Barron	June	1	50	8.0	4.9	.42
Kulara	April	1	39	18.0	3.7	.67
Kulara	June	1	39	12.6	4.1	.52
Average .. .. .		..	1,071	14.6	4.36	.61

The following is the report of Mr. R. W. Winks, Senior Grading Inspector:—

“Compared with the previous season, that under review was at a great disadvantage owing to unfavourable weather conditions, particularly during the later months. This fact not alone accounts for a serious diminution in the quantity of the output, but also adversely affects its average quality. Owing to the shrinkage in supplies, cream is held too long at the farms, and thus, even in winter, though the temperatures are more favourable, over-acidity, faulty mixing, &c., are responsible for a far larger percentage of second and third class butter than otherwise would be the case. It may seem strange, but is nevertheless true, that better butter is often produced during summer than in winter, a fact due to the more frequent deliveries of cream when the supply is plentiful. During my experience I cannot remember when this was more exemplified than it has been by the season just closed.

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“Out of the grand total of 655,512 boxes graded, 8.39 per cent. was choice, 54.46 per cent. first class, 22.56 per cent. second, and 9.02 per cent. third class. Pats and tinned butter were about .55 per cent., and as the bulk of these was first class the percentage of first class butter, irrespective of that classified choice, would be about 60 per cent. of the grand total. But for the fact that under the Commonwealth regulations the minimum number of points for choice butter was 92, while that of the State was 93 points, a greater percentage of choice would have appeared under that heading. This anomaly, however, has been removed and 92 points is now the minimum standard for ‘Choice’ or ‘Kangaroo’ quality.

“The general standard of manufacture is good. Faults such as greasiness, sponginess, &c., often have been due to insufficient room and power to handle the cream at the factories during the busy part of the season. There is a general tendency to overcome this difficulty, and

several up-to-date factories quite recently have been established in districts where the production is heavy, and with additions and improved equipments in others the outlook for the ensuing season, so far as manufacturing conditions are concerned, is very favourable.

"Weed taints, with the exception of mustard cress in some localities, were not particularly noticeable.

"Fishiness, too, except in the case of a few factories, where it was very pronounced, was almost entirely absent. Streakiness and mottle, owing probably to the improved texture, the

results of pasteurisation, have been considerably reduced, though some factories still require attention in that respect.

"In conclusion, but for the droughty conditions, which, as already pointed out, so seriously interfered with both the production and the transport of cream, dairying generally is on the upward grade, and with the advent of favourable weather dairying will again take its place amongst the foremost of our primary industries."

The following are the details of grading conducted by the State officers:—

BUTTER GRADED BY STATE GRADERS.

Salted.

	Choice.	First.	Second.	Third.
July to December, 1925	22,711	150,813	31,727	7,919
January to July, 1926	22,807	199,796	83,574	29,434
Totals	45,518	350,609	115,301	37,353

Unsalted.

	Choice.	First.	Second.	Third.	Pats.	Tins.
July to December, 1925	4,975	15,155	13,541	6,358	1,928	20
January to July, 1926	4,522	24,043	19,071	15,408	1,694	16
Totals	9,497	39,198	32,612	21,766	3,622	36

Grand Total, 655,512 boxes.

GENERAL.

The period under review has been characterised by activities in all branches that have proved of benefit to the dairying industry.

The dairy inspector's efforts are directed to improving the conditions, production, and handling of dairy products on the farm. The work of the dairy instructors has been helpful in the manufacturing centres. The modernisation of dairy factories is an indication of the progressive ideas of the management of dairy companies, the most modern ideas of dairy factory buildings and equipment being featured in factories completed during the period reviewed.

The benefits of the Legislative Acts recently given effect to were in evidence during the period, and assisted in the stabilising of the markets for dairy products.

The elective boards functioning under the provisions of the Primary Products Pools Acts have rendered a distinct and valuable service to primary producers, and their efforts are now more fully appreciated by all whose interests they serve and whose confidence and support are essential in securing for primary producers a fair return for their labour.

It is pleasing to note that the testing of dairy herds is receiving a greater measure of support, and I appreciate the assistance rendered by the Local Producers' Associations throughout the State for the interest taken and support accorded the Department's Herd Testing Scheme.

With the co-operation of all interests associated with the industry its progress is assured.

CHAS. McGRATH,
Supervisor of Dairying.

REPORT OF THE CHIEF INSPECTOR OF STOCK.

STOCK STATISTICS.

The following preliminary figures supplied by the Government Statistician show an increase in the number of sheep, but a decrease in the number of horses and cattle as at 1st January, 1926:—

Year.	Horses.	Cattle.	Sheep.
1925	660,093	6,454,653	19,028,252
1926	624,243	6,441,223	19,186,516

It is regretted that the major portion of the State has suffered from drought conditions during the past year. The grazing industry generally has had a severe setback. In the North, Central West, and South-west, stretching as far south as Wyandra on the Cunnamulla line, conditions have been most serious. Stockowners in these areas have either suffered from heavy stock losses or have had to incur large expenditure in the purchase of fodder or in the removal of their stock to agistment country in more favoured areas.

Never in the history of the grazing industry of Queensland has the artificial feeding of stock attained such proportions. The important question has been the obtaining at a reasonable price of the large quantities of artificial foods required, and the immediate forwarding of same to the areas where they were required.

Stockowners on country south of the Western Railway line from Brisbane to Mitchell are experiencing normal seasons. Although it is known that the numbers of stock are very largely depleted, yet it is at present impossible to say to what extent losses have occurred.

The question is again raised—"Is there no means by which these drought conditions can be provided against? Cannot some scheme of fodder conservation be adopted that will meet the situation?"

It is reported by the Cloncurry district inspector that over 1,000,000 sheep have been taken to that district from the Central district for agistment purposes. The fact of travelling sheep eating out the stock routes made it impossible in some cases for cattle to get to the meatworks or Southern market. Cattle values were about the same as during the previous year. The Northern meatworks opened the season at 19s. per hundred pounds, but few cattle were forwarded. 47,104 cattle from this district were forwarded to the meatworks, the majority at the end of last season. This season only 4,000 head have been trucked as compared with 40,000 up to the same period last year.

The health of stock has been very satisfactory. *Pleuro-pneumonia contagiosa* still causes considerable trouble, as in many cases the disease is dormant until cattle are put on the roads to travel long distances. Inoculation gives good results if the operation is properly performed with good virus. Practical stockmen invariably inoculate their stock before starting to travel them, but it is regretted that there are still quite a number of owners who do not take this precaution.

"The Stallions Registration Act of 1923" came into operation in Southern and Central Queensland during the year. The Board visited various centres, where 1,188 stallions were examined, 483 stallions were rejected, 148 granted a twelve months certificate, and 557 granted life certificates.

At the request of the New Zealand Government, experiments were carried out at the Townsville Stock Experiment Station to ascertain whether the cattle tick found in that country (*Hæmophysalis bisponsa*) is capable of carrying and transmitting the *Piroplasma bigeminum*, the protozoan parasite which causes red-water or tick fever in this State. After a series of experiments had been made it was concluded that the New Zealand cattle tick did not carry the causal organism of tick fever.

Reports of the work carried out at the Stock Experiment Station at Yeerongpilly and Townsville will be found in Appendices A and B.

The Instructor in Sheep and Wool reports:—

The farmers' pool scheme is still progressing in numbers. Last year (1925) there were 352 small holders; this year up to the 30th June 465 farmers are on our books. Several disposed of their wool elsewhere, but in most cases it was because of our limit of 1,500 sheep in the flocks had been exceeded.

Blowflies, in consequence of the dry seasons, have been little in evidence. The nasal fly is now to be found all over Queensland. It causes extreme discomfort to sheep but is not specially dangerous.

The North and Central districts are suffering from probably the severest drought in their history. (See Appendix C.)

The Deputy Registrar of Brands reports fewer registrations of new brands and earmarks, but an increase in transfers. (See Appendix D.)

The killings for the metropolitan area show an increase in all classes of animals treated with the exception of sheep and lambs. The bacon factories also show an increase of some 28,000 pigs treated during the year.

PROSECUTIONS.

	No. of Prosecutions.	No. of Convictions.
Diseases in Stock Act	84	84
Slaughtering Act	73	73
Brands Act	11	11

ANALYTICAL EXAMINATIONS.

Thirty-four samples of viscera and contents were submitted to the Agricultural Chemist for analysis, and in 15 cases poison was detected. In North Queensland 21 samples were analysed, of which 10 contained poison.

HORSES EXPORTED OVERSEAS.

208 ponies.
342 horses.

TUBERCULIN TEST.

The tuberculin test was applied to 80 animals as compared with 319 the previous year, the number of positive reactions being 9.

DIPS.

The total number of registered cattle dips is 4,390, distributed throughout the State as follows:—

District.	Dips.	District.	Dips.
Barcaldine	3	Normanton	36
Bowen	226	Rockhampton	450
Brisbane	1,088	Roma	61
Cairns	207	Springsure	67
Clermont	116	Toowoomba	101
Cloncurry	46	Townsville	225
Cooktown	39	Warwick	34
Gladstone	324	Winton	4
Hughenden	34		
Longreach	2		4,390
Maryborough	1,327		

DIPPING FLUIDS.

Five hundred and seventy-nine samples of dipping fluids were analysed; of these 435 were

dealt with in Southern and Central Queensland, and 144 in North Queensland.

It is pleasing to record that the outbreak of ticks which occurred at Dalby, Pittsworth, and Cecil Plains early last year, due to travelling stock, has been successfully dealt with. In all ten holdings were found infested, between Dalby and Pittsworth, and later three holdings at Cecil Plains. All the holdings were quarantined and the regular treatment of cattle carried out. The Dalby Town Council and Wambo Shire Council rendered great assistance by having all straying stock within a radius of ten miles from Dalby regularly mustered and dipped under departmental supervision. Only one case of tick infection was found among these animals.

Helidon Cleansing Area.

During the period under review the total operations were as follow:—

No. of Holdings Inspected.	Total Stock Inspected.	Total Ticky Holdings.	Total Stock Dipped.	Remarks.
392	9,723	5	131	Various divisions
639	19,574	16	1,294	Helidon division
958	30,965	12	1,244	Ma Ma Creek division
720	24,865	104	5,940	North Helidon division
636	24,050	5	2,981	Hampton division
100	5,816	35	1,228	East Haldon division
162	9,905	66	6,804	East Haldon division
661	24,949	98	15,968	Ravensbourne
4,268	149,847	341	35,590	
Year 1924-1925.				
2,946	97,369	261	20,601	Previous year's figures

The winter of 1925 was very severe, and very little cleansing could be done. Towards the end of 1925 good rains fell and splendid progress was made in cleaning up, until about March, 1926, when droughty conditions set in and cleansing again became difficult.

Notwithstanding very adverse weather conditions, satisfactory progress has been made during the year in cleaning up the area, and at the end of June last a further area of 31,184 acres was declared clean, and the stock thereon, 4,883 head, removed from all dipping restrictions.

The approximate total area now declared clean is 133,381 acres (or about 208 square miles), comprising 552 holdings, on which there are approximately 19,514 head of stock.

The Helidon cleansing area is now approximately 330 $\frac{3}{4}$ square miles, or 211,727 acres, in extent, and consists of 351 holdings.

Practically the whole of the present area is hilly, rugged country, a fair portion of which is thick scrub and pear land, consequently cleansing is slow and difficult.

South Burnett Cleansing Area.

Holdings inspected	1,144
Stock inspected	67,640
Stock dipped	64,778
Infested holdings	86

Crow's Nest Cleansing Area.

Holdings inspected	798
Stock inspected	50,880
Stock dipped	8,734
Infested holdings	99

OUTBREAKS OF PLEURO-PNEUMONIA.

District.	1925.						1926.						Total.
	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	
Barcaldine .. ..	..	2	1	..	..	..	..	..	..	..	..	..	3
Brisbane	2	..	1	3	3	3	..	2	1	2	1	1	19
Bowen .. ..	..	..	..	..	..	..	..	..	..	1	1	..	2
Cairns .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Charleville	2	2	1	1	..	..	..	2	..	..	..	..	8
Clermont .. ..	..	..	..	1	..	..	..	..	..	..	..	1	2
Cloncurry .. ..	..	..	..	..	1	..	..	..	..	..	..	..	1
Hughenden .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Longreach .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Maryborough	1	..	..	..	2	1	1	..	..	..	..	..	5
Rockhampton .. ..	..	..	..	..	..	2	1	2	4	2	5	..	16
Roma .. ..	..	..	..	..	..	..	..	..	1	..	..	..	1
Springsure .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Toowoomba .. ..	..	..	..	..	..	..	..	..	..	..	..	1	..
Townsville .. ..	..	..	..	2	..	..	..	..	..	..	..	..	3
Warwick .. ..	..	..	..	..	..	..	..	1	..	..	..	..	1
Winton .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	5	4	3	7	6	6	2	7	6	5	7	3	61

QUARANTINE ACT.

The following animals passed through the quarantine period at Colmslie Quarantine Station, viz., 25 dogs (including 14 puppies).

The number of hides and skins imported and disinfected under supervision was—

Indian goat-skins ..	125,000	French ox-hides ..	150
New Zealand calf-skins ..	14,865	Italian ox-hides ..	400
New Zealand ox-hides ..	1,288	Danish calf-skins ..	3,000

The following table shows the stock movements in the various stock districts:—

TABLE SHOWING STOCK MOVEMENTS IN THE SEVERAL STOCK DISTRICTS.

District.	ENTERED DISTRICT.			REMOVED FROM DISTRICT.			MOVEMENTS IN DISTRICT.			STOCK DIPPED.		STOCK SPRAYED.	
	Horses.	Cattle.	Sheep.	Horses.	Cattle.	Sheep.	Horses.	Cattle.	Sheep.	Horses.	Cattle.	Horses.	Cattle.
Barcaldine ..	1,757	12,633	181,288	2,897	27,231	667,757	2,609	10,651	586,571	..	5,600	50	..
Bowen ..	1,266	13,973	90,831	3,125	27,321	..	10,165	95,820	26,468	..	2,030	17	1
Brisbane ..	2,910	231,152	363,867	3,199	44,311	56,437	6,843	156,024	58,152	517	77,585	1,064	191
Cairns ..	722	6,083	11,485	1,014	9,852	11	3,248	21,412	736	16	49,490	6	488
Charleville ..	4,376	95,386	426,508	13,791	3,278	984,551	17,027	130,656	1,389,825	..	..	..	..
Clermont ..	1,440	13,257	74,850	3,046	87,012	163,806	5,162	20,184	102,454	262	9,350	9	..
Cloncurry ..	2,686	43,108	570,767	4,649	95,033	168,600	10,410	53,398	898,998	893	49,205	..	25,368
Coolangatta ..	311	2,520	1,835	233	2,282	693	128	5,135	553	61	501	23	..
Gladstone ..	1,144	17,943	31	1,856	21,385	35	401	17,337	..	32	89	886	1
Helidon ..	811	9,607	4,549	1,247	12,466	43	1,113	44,152	..	729	36,413	38	544
Hughenden ..	713	12,063	97,409	2,079	38,972	249,608	1,801	8,080	182,865	100	8,227	..	..
Longreach ..	3,565	21,014	298,410	6,903	38,022	905,589	5,249	7,395	479,834	20	5,030	100	..
Maryborough ..	2,576	35,923	9,665	3,475	93,276	47	2,863	74,312	4,663	1,692	48,812	783	..
Normanton ..	1,081	2,104	373,941	1,708	27,875	..	1,481	3,769	80	..	26,412	..	..
Rockhampton ..	652	23,771	45,562	2,231	46,683	17,747	5,674	101,315	18,350	22	360	55	5
Roma ..	1,256	22,771	142,293	7,685	156,153	339,613	7,553	119,260	480,297	6	4,050	23	170
South Burnett ..	563	13,052	36,333	1,234	39,469	15,566	5,081	145,947	3,427	231	39,679	..	649
Springsure ..	485	31,719	200,674	4,485	63,161	185,530	3,737	46,303	100,697	557	22,347	193	..
Toowoomba ..	7,143	108,516	284,726	10,963	179,398	407,720	23,440	399,161	629,074	3,185	88,039	413	1,979
Townsville ..	1,233	88,995	98,745	2,217	4,867	15,026	6,868	41,240	17,871	..	11	52	23
Warwick ..	1,907	57,370	188,204	2,114	50,606	194,680	6,880	188,294	480,811	..	..	..	..
Winton ..	926	11,381	48,002	2,583	41,054	435,865	2,275	48,948	275,614	..	..	..	..

STOCK SALES.

The following are the particulars of stock sold through the Newmarket yards at Brisbane during the year:—

Date.	Sheep.	Lambs.	Cattle.	Calves.	Pigs.
1925.					
July	25,572	1,119	10,709	1,639	784
August	20,485	770	8,631	826	644
September	16,385	812	6,717	1,028	672
October	27,204	1,549	10,120	1,437	895
November	26,123	1,926	8,032	751	479
December	29,622	2,408	6,808	1,078	720
1926.					
January	26,845	2,083	5,597	1,474	526
February	25,565	1,979	5,325	931	941
March	28,638	2,340	5,928	1,614	1,200
April	25,074	2,443	8,789	1,491	1,117
May	28,327	1,067	8,440	1,470	936
June	25,685	1,072	9,740	1,652	1,814
Totals	305,525	18,888	94,679	15,400	9,637
Average value	5d. per lb.	7d. per lb.	Bullocks, 25s.	25s. per head	Suckers 5s., Slips 15s., Stores, 25s., Porkers, 30s. to 35s.
	Plus skin value	Plus skin value	Cows, 22s. 6d. per cental.	..	

The average price appears high for calves, but during the year a large number of big weaners were sold through the calf-pens.

"THE SLAUGHTERING ACT OF 1898."

The senior slaughtering inspector made visits to Wallangarra, Ballandean, Stanthorpe, Summit, Thulimbah, Dalveen, Warwick, Killarney, Clifton, Nobby, Greenmount, Toowoomba, Oakey, Warra, Chinchilla, Miles, Wallumbilla, Roma,

Ipswich, Lowood, Esk, Toogoolawah, Linville, Yarraman, Nanango, Kingaroy, Wondai, Murgon, Goomeri, Kilkivan, Manambah, Woolsloga, Gympie, Maryborough, Gayndah, Bundaberg, Gladstone, Rockhampton, Mackay, Bowen, Eumundi, Cooroy, North Arm, Yandina, Eudlo, Maroochydore, Buderim, Maleny, Caloundra, Peachester, Landsborough, Caboolture, Wamuran, Beaudesert, Beenleigh, Burleigh, and Tallebudgera.

As in previous years, constant supervision has been maintained; the majority of the premises inspected were reasonably clean and in good order. It has been observed in numerous instances that any laxity of inspection is quickly followed by carelessness and inattention to cleanliness; consequently, where it was found that verbal warnings and written orders (which exceeded those of former years) had no effect, action was taken to enforce the regulations under the Act.

The total number of prosecutions were as follows, viz.:—

Number of prosecutions, 73.
Number of convictions, 73.

Apart from the foregoing, a number of prosecutions are still awaiting hearing at various courts.

It is satisfactory to note that new regulations passed in 1924 are working exceedingly well. The regulation dealing with "How Swine shall be Kept" has been fully responded to by the owners of slaughter-house piggeries, as it largely contributes to the health of animals.

Regarding the inspection, &c., of country slaughter-houses, although various police officers act as inspectors, it is recognised that owing to their multifarious duties they are prevented in many cases from exercising rigid supervision, but it is customary for them to receive the usual notice of intention to slaughter and to collect the fees. Therefore the inspection of meat at these centres is negligible, and under such circumstances will always be a matter of difficulty. The prevalence to slaughter illegally still continues, and many complaints have been investigated. In some cases warnings have been sufficient, but in others prosecution has been necessary.

Twenty-seven new slaughter-houses have been erected in various parts of the State, and there are a number of others under construction.

The approximate number of slaughter-houses, meatworks, bacon factories, &c., in the State is as follows:—

Country slaughter-houses	561
City and town slaughter-houses	165
Farmers' slaughter-houses	100
Bacon factories	7
Meatworks	11
	844
New slaughter-houses previously referred to	27
Total	871

Forty new shops have been erected, many of which were costly structures in brick and tiles. In addition to new buildings, costly additions and improvements have been made to others. Shops generally have been maintained in a satisfactory condition.

In spite of the adverse season there has been no shortage of stock for killing purposes; their condition may not have been as good as in a normal season. There is a marked decrease in all classes of animals treated excepting sheep and swine.

The health of stock treated for human consumption is approximately on a par with previous years.

METROPOLITAN KILLINGS.

Concerning these, a marked increase in all classes of animals treated, excepting sheep and lambs, will be observed. The figures following are those returned under statutory authority to the Registrar-General:—

	1924.	1925.
Cattle	67,406	75,221
Calves	32,247	40,062
Sheep	223,714	212,784
Lambs	22,371	17,859
Pigs	17,167	21,449

In addition to the above, meat representing some 6,847 carcasses was supplied by the various export meat companies for metropolitan consumption. In determining the average number of cattle by weight the maximum of 622 lb. per beast was allowed.

The comparative return of killings for the whole of the State other than the metropolitan area is as follows:—

	1924-25.	1925-26.
Bullocks	95,348	96,666
Cows	108,156	98,185
Calves	11,740	10,543
Sheep	170,177	171,478
Pigs	28,656	48,001

Brisbane Central Depot.

The number of carcasses of veal and pork submitted for examination was as follows:—

	1924-25.	1925-26.
Veal	13,716	15,372
Pork	4,293	5,223

Bacon Factories.

It will be observed that there was a considerable increase in the number of pigs treated at the various bacon factories:—

	1924-25.	1925-26.
Pigs	206,505	235,006

Export Meat Trade.

According to official statistics the export trade improved on the year ended 1925. The slaughter of fat stock for overseas markets exceeded those treated in the year 1924, *vide* comparative table hereunder:—

	1924.	1925.
Cattle	380,274	552,000
Sheep	Nil	30,773
Calves	905	509

In all towns the motor is superseding the old-time horse-drawn vehicle for the carriage of meat. The "cash" or cutting carts appear to be on the increase in the metropolitan area.

As previously pointed out, until abattoirs are established the inspection of meat cannot be complete.

The following tabulated list shows stock slaughtered and condemned in the course of the period under review, and is compiled from returns furnished by permanent officers of the Department performing slaughtering duties at the following centres:—Brisbane, Toowoomba, Ipswich, Gympie, Maryborough, Bundaberg, Rockhampton, Mount Morgan, Townsville, Cairns, Warwick, Charleville, Bowen, Roma, Dalby, Clermont, Barcaldine, Cloncurry, Springsure, Gladstone, Mareeba, Longreach, Normanston, Charters Towers, Mackay, Gayndah, and Beaudesert.

The return of swine slaughtered is exclusive of those treated at bacon factories and those examined at the central depôt, a list of which is shown separately.

Description of Stock.	Number Slaughtered.	Carcasses and Portions Condemned.	Disease.	Percentage.
Bullocks	80,857	147 carcasses	Tuberculosis .. ..	.181
		117 forequarters	Tuberculosis .. ..	.144
		6 hindquarters	Tuberculosis .. ..	.0007
		219 heads	Tuberculosis .. ..	.2708
		24 carcasses	Bruised .. ..	.029
		20 forequarters	Bruised .. ..	.024
		11 carcasses	Emaciation .. ..	.013
		1 head	Emaciation .. ..	.001
		4 carcasses	Redwater .. ..	.0049
		88 heads	Actinomycosis .. ..	.108
		1 carcass	Actinomycosis .. ..	.001
		13 heads	Abscesses .. ..	.016
		1 forequarter	Abscesses .. ..	.001
		2 hindquarters	Abscesses .. ..	.002
		10 carcasses	Lantana poisoning .. ..	.012
		4 carcasses	Septicæmia .. ..	.0049
		1 carcass	Pleurisy .. ..	.001
		2 forequarters	Old pleural lesions .. ..	.002
		2 carcasses	Pleuro-pneumonia .. ..	.002
		4 hindquarters	Putrefaction .. ..	.0049
4 hindquarters	Septic wounds .. ..	.0049		
Cows	76,919	322 carcasses	Tuberculosis .. ..	.418
		137 forequarters	Tuberculosis .. ..	.172
		11 hindquarters	Tuberculosis .. ..	.014
		247 heads	Tuberculosis .. ..	.321
		23 carcasses	Bruised .. ..	.029
		89 forequarters	Bruised .. ..	.115
		5 heads	Bruised .. ..	.006
		2 hindquarters	Bruised .. ..	.002
		69 carcasses	Emaciation .. ..	.089
		11 carcasses	Redwater .. ..	.014
		59 heads	Actinomycosis .. ..	.076
		12 carcasses	Advanced pregnancy .. ..	.016
		4 heads	Abscesses .. ..	.005
		2 forequarters	Abscesses .. ..	.002
		4 carcasses	Gangrene .. ..	.005
		11 carcasses	Poverty .. ..	.014
		4 forequarters	Old pleural lesions .. ..	.005
		1 carcass	Pyæmia .. ..	.001
		1 carcass	Actinomycosis .. ..	.001
		1 carcass	Peritonitis .. ..	.001
Calves	33,913	621 carcasses	Under weight .. ..	.183
		1 carcass	Decomposition .. ..	.002
		1 carcass	Redwater .. ..	.002
		3 carcasses	Bruised .. ..	.008
		1 forequarter	Bruised .. ..	.002
		4 carcasses	Emaciated .. ..	.012
		4 forequarters	Old pleural lesions .. ..	.012
Sheep	342,372	2,217 carcasses	Emaciation .. ..	.647
		48 carcasses	Bruised .. ..	.013
		2 carcasses	Cancer .. ..	.0008
		3 carcasses	Decomposition .. ..	.0008
		2 carcasses	Lantana poisoning .. ..	.0005
Swine	63,563	544 carcasses	Tuberculosis .. ..	.855
		4,176 heads	Tuberculosis	6.569
		20 carcasses	Abscesses .. ..	.031
		424 heads	Abscesses .. ..	.667
		3 heads	Abscesses .. ..	.004
		6 carcasses	Decomposition .. ..	.009
		6 carcasses	Pleurisy .. ..	.009
		13 carcasses	Emaciation .. ..	.0204
		1 carcass	Dermodex .. ..	.001
		4 carcasses	Peritonitis .. ..	.006
		1 carcass	Pyæmia .. ..	.001
		2 carcasses	Septicæmia .. ..	.003
		3 carcasses	Pneumonia .. ..	.004
		2 carcasses	Bruised .. ..	.003
		1 carcass	Gangrene .. ..	.001
		66 carcasses	Unfit .. ..	.103

SWINE SLAUGHTERED AND CONDEMNED AT BACON FACTORIES FOR YEAR ENDED 30TH JUNE, 1926.

Swine Slaughtered.	Carcasses and Portions Condemned.	Disease.	Percentage.
235,006 ..	942 carcasses	Tuberculosis .. ..	.408
	9,741 heads	Tuberculosis	4.140
	555 heads	Abscesses .. ..	.236

ARTHUR H. CORY (M.R.C.V.S.),
Chief Inspector of Stock.

APPENDIX A.

REPORT OF THE GOVERNMENT BACTERIOLOGIST.

FEES AND MONEYS RECEIVED.

The following is the total amount of money received for work performed, bacteriological examination of samples of water, milk, blood, &c., and morbid specimens, also the supply of Pleuro Virus, Blackleg Vaccin, Mammitis Vaccin, and other laboratory products:—

	£	s.	d.
Immunisation of stud animals ..	342	16	4
Bleeders supplied	130	0	0
Blood for inoculation	63	16	10
Blackleg vaccin	59	1	10
Pleuro virus	172	2	6
Lactic cultures	19	15	0
Mammitis vaccin	22	5	0
Contagious abortion and other tests ..	25	0	0
Culture media	5	10	0
Stalling and feeding cattle during experiments for Institute of Science and Industry	223	9	2
Total	£1,063	16	8

TABLE OF SPECIMENS SUBMITTED FOR BACTERIOLOGICAL AND OTHER EXAMINATION.

Pathological specimens, including tubercle and actinomycosis	31
Blood for contagious abortion test	80
Pleuro virus examinations	60
Milk for contagious mammitis test	45
Water from butter and cheese factories ..	29
Blood films for tick fever organisms	8
Cream for bacterial contamination	4
Milk for bacterial contamination	22
Butter	2
Pickling brine	2
Fowls	10
Miscellaneous	9
Total	302

IMMUNISATION OF STUD CATTLE FOR TICK FEVER.

During the past year seventy-five stud animals of various breeds were stalled for tick fever inoculation. The list comprised the following animals:—

Hereford Bulls	14
Shorthorn Bulls	6
I.M.S. Bulls	12
Jersey Bulls	5
Hereford Heifers	19
Shorthorn Heifers	2
I.M.S. Heifers	5
Jersey Heifers	3
Aberdeen Angus Heifers	3
Guernsey Heifers	6

All these animals passed through the inoculation fever period successfully; in fact, it is over four years since an animal died during the immunising process. In this particular case the trouble was complicated through the animal being affected simultaneously with another obscure disease.

On several occasions officers of this institution have successfully inoculated stud animals on the stations where the animals were bred.

In April and May last, in the Warwick district, 8 stud bulls were inoculated for tick fever and tested for tuberculosis, while at Yeerongpilly 60 herd bulls were tested for tuberculosis. All these animals successfully passed the examination, and were shipped to Wyndham for the West Australian Government.

SUPPLY OF TESTED PLEURO VIRUS.

During the past year virus, for the inoculation of 36,343 cattle, was supplied to stockowners. Many of the applicants also requested to be supplied with sterilised setons.

The usual practice has been to introduce a seton (not previously sterilised), saturated with virus, under the skin near the tip of the tail, the precautionary measures for cleansing and disinfecting that part of the tail operated on being rarely taken.

Acting on the advice from this institution many stockowners now prefer to use tested virus only, and sterilised setons prepared in the laboratory, the operation being performed just after the skin at the end of the tail has been cleansed and treated with a reliable disinfectant, which is carefully washed off with sterilised water in order that the active properties of the virus may not be impaired.

Such a procedure must necessarily minimise the number of septic tails.

BLACKLEG VACCIN.

There has been a steady demand for this vaccin, which under ordinary circumstances will protect an animal for life from blackleg disease. In a comparatively few districts, however, blackleg exists to such an extent that it is necessary to vaccinate calves when only a few weeks old in order to protect them.

Calves which have been treated in this manner may soon lose their immunity, and it is a safe practice, under these unusual circumstances, to revaccinate calves when they are about five months old.

CONTAGIOUS MAMMITIS.

Mammitis vaccin for the curative and preventive treatment of 168 animals was supplied, chiefly to dairy farmers. The results were most encouraging, and reports to hand show that, with the exception of a few individual cases of long standing, the trouble readily responded to vaccin treatment. In almost every instance an auto-genous vaccin was employed.

When supplying vaccin to stockowners, full instructions are given as to the use of same, and also advice as regards the adoption of simple precautionary methods to prevent the spread of the disease.

During the year I was able to visit some of the centres where mammitis was known to exist and deliver illustrated addresses on the symptoms, treatment, and prevention of the disease.

CONTAGIOUS ABORTION.

A total of 80 samples of blood was received for examination, and approximately 30 per cent. gave a positive reaction. The information gained from the results of these tests has in some instances been of great practical value, enabling the owners of animals which show a positive reaction to take precautionary measures to prevent the spread of the disease, and to adopt treatment with the object of effecting a cure.

Many of the samples of blood were received from an institution that has already initiated a

systematic scheme for the elimination of the disease from the herd. The practice is to keep all the non-reacting animals isolated in a special division from the reacting animals. Periodical blood tests are carried out from animals in both divisions, and the results obtained to date are highly encouraging.

In this connection it may be mentioned that Mr. R. L. Montgomery's herd of Ayrshire cattle in Pennsylvania, United States of America, has, since it was founded in 1913, been kept entirely free of contagious abortion disease by means of the regular application of the agglutination test to every animal.

Breeders of dairy stock should more fully avail themselves of the advantages of this test—especially those contemplating the introduction of fresh animals into their herd.

Full particulars as to the method of taking samples of blood for the test and other particulars may be obtained on application to this laboratory.

LACTIC STARTERS.

Pure cultures were supplied to cheese and butter factories. During the warmer months, which are most favourable to bacterial growth, the most frequent use of pure cultures becomes necessary, as the propagations very soon become contaminated with a large proportion of extraneous micro-organisms.

The employment of pure lactic cultures in the manufacture of cheese should greatly improve the product, as a large proportion of lactic acid bacilli usually results in a good curd. In this connection the fact must not be lost sight of that, although taints are frequently diminished by the use of starters, they are not entirely destroyed.

TICK DIP INVESTIGATIONS.

Considerable time has been devoted to the continuation of these experiments. The natures of the experiments were as follows:—

- (a) To ascertain whether the percentage of arsenious oxide remaining constant, the efficacy of the dipping fluid is diminished by continuous use.
- (b) To find a suitable substitute for Stockholm tar. (Genuine Stockholm tar varies considerably in composition, and at times is difficult to obtain.)
- (c) To ascertain whether a decreased amount of arsenic can be compensated for by an increased amount of Stockholm tar (or substitute therefor). (It is considered that, to a certain extent, the injurious effect of the dip must be in proportion to the quantity of arsenic, whereas soap and emulsions have an emollient effect.)
- (d) Commercial concentrates: experiments to determine their liability or otherwise to oxidation.
- (e) The prevention of oxidation of dipping fluids.
- (f) To test the tick-destroying value of a diluted extract of Derris root.

These experiments, which are not yet quite complete, have been carefully carried out on an exhaustive scale. All the treated and control animals are infested on three separate occasions with approximately the same number (80,000) of larval ticks, so that at the time of treatment the ticks will be in different stages of development, one batch being in its second moult. At this stage the ticks are more tenacious and extremely difficult to kill in consequence of the protection afforded by the outer skin or moult.

All the ticks that become engorged after surviving the treatment with the medicament are then collected each day and placed in special receptacles, and kept under constant observation to determine their viability—*i.e.*, to ascertain whether they will lay eggs, and how many, and how many of such eggs are fertile, and finally, how long the larval ticks will live when kept under the most favourable conditions. These observations are essential in order to see if the medicament, although it may apparently have little or no effect on the adult engorged females, does affect the eggs of their progeny.

We have now acquired a large amount of accurate information, much of which, it must be admitted, is not entirely new, but of a confirmatory nature. The experiments demonstrated the efficiency of our old formula which contained 8 lb. of arsenious oxide per 400 gallons of solution, and which has been in use for the past twenty-seven years, and the inefficiency as a tick-destroying agency of solutions containing less arsenic.

As far back as April, 1899 (twenty-seven years ago), dipping experiments were conducted by the late Mr. P. R. Gordon, then Chief Inspector of Stock, and Inspector Maclean, at Bundaberg. The mixture used was Mr. Mark Christian's original formula—*viz.*, 10 lb. arsenic, 28 lb. soda, 5 lb. soap, and 7½ gallons of Stockholm tar, to 400 gallons of water.

INVESTIGATION INTO A DISEASE AFFECTING THE TAILS OF CALVES AT WONBAH.

On 25th November last I proceeded to Wonbah Station, and interviewed the owner, Mr. Eric Campbell, who informed me that he had an outbreak of the trouble about twelve months previously. During the present season he had lost about twenty calves, while, after amputation of the tail, about forty had recovered, and fresh cases were occasionally making their appearance.

Nature of the Disease.—The disease is a characteristic necrosed condition of the bone and surrounding tissues of the tail. In some cases it commences on the outside, half-way down the tail, while in others it commences underneath and near the butt of the tail.

Nature of the Affected Tissue.—The diseased area is distinctly circumscribed, sometimes greenish or bluish-white, homogeneous, and soft, of a cheesy or putty-like constituency, emitting a peculiar characteristic odour, somewhat like glue. As the disease advances the tissues become structureless, dry, and crumble.

Complications.—In advanced cases, where open wounds exist, numerous larvæ of the blow-fly are in evidence; these are destroyed by local treatment with an arsenical solution, or by passing the animals through the dipping vat.

Method of Inspection.—It was extremely difficult, at first, to understand why each calf should be infected primarily in some part of the tail. At first it appeared that, as all the calves had been recently weaned, the extremity of the tail of those infected had been cut or injured at the time they were banded; but, on closer observation of a number of infected tails, no injury could be detected at the extremity.

A noticeable feature on some of the calves was a number of scratches, many of which were parallel and about 2 inches apart; these could be found on the back, head, hindquarters, and tail. These lesions stood out most conspicuously on a six months' old light-coloured Jersey calf belonging to one of the milkers. Although this animal was running around the house it was observed for the first time by the owner (Mr. Campbell), to be infected in the tail.

The possibility of the injuries having been caused by native dogs or barbed wire also received consideration, but, from the nature and distribution of the scratches, I came to the conclusion that the injuries were not due to either of these causes.

In conversation with Mr. Alex. Craig, late of Charlotte Plains, that gentleman expressed the opinion that the wounds I described were originally caused by the attacks of eagles and crows, after having experienced and witnessed similar occurrences when managing cattle properties in mountainous districts.

Mr. Campbell called at Yeerongpilly some few weeks later, when I further discussed with him this phase of the subject, and he was quite satisfied that this was the only correct solution of his trouble as the country on and around Wonbah Station is decidedly wild and mountainous, while crows, hawks, and eagles are numerous.

It is very evident that, after weaning, the unprotected calf wandering by itself is liable to the attacks of such voracious birds as eagles and crows; and the wounds and scratches referred to are the primary cause of the trouble among the calves. Further, it can be readily assumed that these birds, by attacking a calf suffering from a caseo-necrotic condition of the whole length of the tail would have its talons, and possibly the beak, contaminated with the necrosis bacilli, and so carry the infection and inoculate other calves. In other words, these birds—eagles and crows—must be held responsible, in the case under review, as carriers of the disease.

As the bacilli of necrosis are strictly anærobic, it is very easy to see that when they are introduced under the soft skin of the tail by an eagle's claw, conditions are rendered increasingly favourable, as the wound is perfectly sealed almost simultaneously by the fæces, the result of the animal defecating through excitement, and at the same time keeping the tail firmly pressed against the body for protection.

The bacillus *Necrophorus* is also responsible for foot rot in sheep. This disease is characterised by a specific inflammation of the tissues just above the horny part of the cleft of the foot, which extends downwards, undermining the horny portion where conditions are favourable for the development of the anærobic bacilli.

The reason for making this reference is that, as so many farmers on the coastal country are going in for small flocks of sheep, they should be directed to the possibility of this trouble occurring among sheep that may be compelled to pasture on low-lying boggy ground where conditions are favourable to the disease becoming epizootic. Should cases occur, the sheep should be removed to, and kept on, higher lands.

During the wet season, when this disease is more prevalent, the sheep should be closely observed, and suspicion aroused if an animal is seen to limp in walking. The feet should be examined, and if one or more of the feet are found very hot with a swelling above the hoof, the suspected animal should be removed to higher and dry ground, and at once treated by thorough cleansing with a reliable disinfectant solution, preferably a teaspoonful of Hycol to a pint of water.

If the disease is neglected at this stage deep abscesses may develop and the pus may extend deep into the tissues under the horny wall, or the joint within the hoof may become inflamed and the articular attachment destroyed, in which case the treatment is very difficult, and recovery will be slow and tedious.

INVESTIGATION INTO HORSE SICKNESS IN THE WINTON DISTRICT.

In October last I was instructed by the Chief Inspector of Stock to proceed to the Winton district and report on an outbreak of the so-called Birdsville disease among horses. I visited Wantalayna Station, where for several years a number of horses (draught and saddle) had died of the disease.

Symptoms.—Some of the affected horses were in good condition; others were emaciated and weak. This latter condition was so prominent in certain unbroken animals that they could be handled without showing signs of fear; in fact, in the cases of two animals (a colt and a filly) they were so quiet that they could be held by a halter and drenched in an open yard.

As the affected horses were being driven around the stockyard they continually staggered and dragged their hind feet. Owing to the long spell of dry weather, the ground in this locality was very hard, and many of the horses with chronic sickness and accompanying lameness had their hoofs on their hind legs so worn that they appeared to be club-footed.

In many animals loss of appetite was noticeable, and anæmia was invariably present. The mucous membrane of the mouth and eyelids was particularly pale. In some cases the lips were thickened, having an œdematous appearance, and the cornea of the eyes had a peculiar staring, glassy look. Owing to the dry condition which had prevailed in the Western districts for many months, the fæces were hard and pelleted,

but during and just after heavy rains all affected animals often suffered from intermittent diarrhoea.

The disease may prove fatal in a few months, or become chronic as a result of injuries to the tissue, and the animal may exhibit the characteristic symptoms for two years or longer, while some animals may recover.

In very advanced cases, where an animal was forced to trot or canter, it exhibited symptoms of distress, breathing rapidly and with difficulty, thus causing a peculiar wheezy, roaring sound. The head was pushed forward, and the nostrils widely dilated; the body quivered, and when the animal tried to stop, the front legs were kept wide apart while the hindquarters were almost helpless and swaying from side to side. In this condition the animal frequently fell down and had great difficulty in rising, and sometimes was unable to do so for several hours.

Post-Mortem Appearances.—Several horses were killed for the purpose of examination. In the pleural and the abdominal cavity, particularly, there was considerable sero-sanguinous effusion, with particles of flocculent matter free and adhering to the serous membranes on the spleen, liver, and stomach.

The heart, spleen, and kidneys appeared to be normal, but the liver in one chronic case of nearly two years' standing had a melanotic appearance throughout, while in others there was only a slight discolouration.

In the affected horses killed the lungs presented an abnormal appearance. They were increased in volume, very firm to the touch, particularly the lower parts, which showed extensive small areas of congestive hyperdemia, resembling pneumonia patches.

Comparatively few worms were found in the stomach, but in the caecum and colon they were present in countless numbers. The most numerous, a small white worm, the *Strongylus tetra-canthus*, was distributed throughout the contents of the larger intestine.

The larger worm, *S. armatus*, distended with blood, was observed attached mostly to the inner walls of the intestine. There were also present in the large intestine, *Oxyuris equi*; this whip-like worm could be readily seen attached to the recently passed faeces.

A microscopical examination of the contents of the larger intestine and the rectum revealed the presence of eggs of these parasites.

On the mucous membrane of the larger intestine there were numerous red spots resembling ecchymosis, caused by the attachment of the parasites. On the upper part of the mesenteric artery an aneurism was observed, which contained disintegrated fibrinous material among which were some larvæ of the *S. armatus*.

I can come to no other conclusion but that the disease among horses at Wantalayna was primarily due to intestinal worms, particularly the *S. armatus*, which parasite, as is well known, is capable of producing aneurisms and complications. It is worthy of future investigation to determine the exact nature of the pronounced lung lesions. These may possibly be associated

with the aneurism of the thoracic vessels, or caused by particles from the mesenteric aneurism (of long standing) gaining access as a result of rupture into the adjoining vein. In this case the material would be taken back to the heart and carried direct by the pulmonary artery into the lung, producing embolism and a consequent patchy pneumonic condition.

Previous Investigation by the late Mr. James Irving, M.R.C.V.S.—In July, 1888, four horses affected with the Birdsville horse disease were procured from stockowners in the lower Diamantina district and forwarded to Brisbane. Two of the horses were killed and a post-mortem examination made by Mr. Irving, while the other two were kept under close observation and treated, as "the opinion appeared general in the district where the disease was prevalent that it was incurable, and that horses which had contracted the disease in a severe form were ever after unfitted for work."

Mr. Irving reported that to each horse he administered daily for about a week, oil of eucalyptus, oil of turpentine, eggs, and a vermifuge powder with the morning's food, and that on the last day a purgative ball was given, after which the animals received no medicine whatever, but were fed regularly on corn, chaff, and hay, and for six weeks were turned into a paddock to shift for themselves. After three months both horses were sharply exercised, but Mr. Irving states that he failed to detect any symptom of roaring or dragging of the toes of the hind feet. After being at work for a month they were in a perfect state of health.

In conclusion, Mr. Irving reported that "the disease is amenable to treatment, and that the two horses under observation have quite recovered."

THE SIGNIFICANCE OF STERILISING CREAM CANS.

The necessity for a more efficient method than now exists for the cleansing of cream cans used for the delivery of cream from the supplier to the butter factory is an all-important factor in the manufacture of butter of high grade and of keeping properties.

This is particularly apparent during the hot summer months. In the handling of milk and cream no single factor is of more importance than the cleanliness of the vessels used, and our laboratory experience and investigations have shown that steam sterilisation is an essential part of correct cleansing technique of dairy utensils.

I am forced to bring this subject under notice in consequence of the results of bacteriological examinations of samples of cream as received at the factory, and of the character also of the rinsings left in the cans after they have been cleansed and scalded ready to receive fresh cream supplies.

It would be extremely difficult to find a dairy farm with an installed apparatus for steam sterilisation. Practically all dairy farmers are content with less efficient methods, and many rely upon "scalding" as a final operation in washing a can, although the water used for this purpose is seldom at a sufficiently high temperature to kill many bacteria, the general practice being to pour the so-called boiling water from

one vessel to another with the idea of thoroughly finishing the cleansing process, while the water is only comfortably warm to the hands.

By this method the water is so reduced in temperature as to have comparatively little effect on the bacterial contents of the cream can. Even if 2 gallons of fresh boiling water is used for each can, the temperature of the water while being transferred from the copper to the can will fall from 10 deg. to 30 deg. Fahr., while immediately after scalding, allowing one-half minute for the operation, the temperature of the water falls to below 160 deg. Fahr., which brings out the interesting fact that nearly one-third of the heat of the water is lost during the carriage from the copper to the can and during the scalding process.

I have repeatedly collected the rinsings from cans so treated, and find by bacteriological tests that they contain from 2,000 to over 5,000,000 bacteria per c.c., including in most cases deleterious gas-producing organisms.

As a contrast, when similar cream cans, washed and cleansed in the same manner, were finally treated by being placed in a steam steriliser at 212 deg. Fahr. for only three minutes, the number of bacteria was reduced so remarkably that no sample of the rinsings contained more than 50 bacteria per c.c., while in the majority of tests the number was less than 4 bacteria per c.c., and in every instance all the gas-producing organisms were destroyed.

Assuming that the greatest care is exercised with regard to clean milking, and the milking buckets and the various parts of the separator after cleansing are steam sterilised, the cream produced must necessarily have a low bacterial count, and when run into a sterilised can will have its keeping qualities greatly increased; for the great point of interest to the dairy farmer and the factory manager is a long period of sweetness of the cream in the cans used for the transport of the cream to the butter factory.

Recently I had occasion to investigate the cause of a ropy condition of cream which had continued to exist for some time in each consignment from several farms supplying a butter factory; while all efforts on the part of the farmers and the factory management had failed to eliminate or even lessen the trouble. The factory manager pointed out that there was something very mysterious about the affected cream, because in some cans the ropy condition was throughout, while in others the bottom layer only was affected.

The principal cause of this slimy fermentation was the bacillus *Lactis viscosus*, an organism very resistant to heat, and which invariably passes uninjured through the method of cleansing and scalding used under ordinary dairy farm conditions, and because of the dairy utensils, and particularly the cream cans, when once infested, being a constant source of infection.

This organism usually develops in the upper layers, and will, if the cream is kept long enough, contaminate the whole mass. The sliminess which primarily developed in the lower layer

was found to be a facultative anaerobic micrococcus, conditions being made favourable through the cream being kept for two or more days before being sent to the factory.

The method of cleansing the cream cans at the factory was far from being even moderately efficient. After the bulk of the cream was removed the remainder was detached by steam: the cans were then washed and rinsed in two tanks of hot water, and then momentarily placed over a steam jet.

I drew the manager's attention to the fact that by this process there would still remain in the can numbers of unaffected microorganisms. He replied that that was all the company was prepared to do and the farmers would have to do the rest. On interviewing several of the farmers, I was informed that they did nothing further, as the cleansing of the cans was all done at the factory.

Later I delivered an address to a large gathering of interested persons, including cream suppliers and the manager and employees of the butter factory. I discussed the causes of ropy cream, and advised the adoption of special precautionary measures which would eliminate the trouble altogether, but unless the golden rule in dairy practice was carried out of systematic cleanliness and an efficient sterilising of all utensils, this and other serious troubles were likely to recur.

In my opinion, the work of sterilising cream cans cannot be done on the average dairy farm. This work, then, must necessarily be performed at the factory, where there should be an adequate supply of live steam and other facilities.

If this suggestion could be put into general practice, and the farmer ensured of the return of a bacteriologically clean can, both factory and the farmer must benefit by the production of butter of a higher standard.

LECTURES AND DEMONSTRATIONS.

During the past year I have visited Marburg, Rosewood, Kalbar, Boonah, Mount Alford, Wantalayna, Winton, Longreach, Rockhampton, Bundaberg, and Gympie, for the purpose of investigating animal diseases, and at each place I gave an illustrated lantern lecture or held a demonstration on the matter under investigation, or some other subject of educational interest.

LECTURETTES FROM 4 QG BROADCASTING STATION.

Under the auspices of the Council of Agriculture I have delivered several lecturettes for the "Farmers' Session." The following subjects have been dealt with:—

"Tuberculosis among farm animals,"

"The cattle tick, and how it may be eradicated," and

"The treatment of milk after it reaches the consumer."

C. J. POUND,
Government Bacteriologist.

APPENDIX B.

REPORT OF THE GOVERNMENT VETERINARY SURGEON TOWNSVILLE.

Seasonal.—The first six months of the present year were up to the average with fair grass and water over most of the pastoral areas, but with the absence of rain in the wet season the outlook in March last over most of the pastoral areas of the North was extremely grave, and the prediction that the coming season was likely to be one of the worst on record seems to be turning out correct.

A little rain fell over the stock districts of Townsville and Bowen, with a little on the coastal portions of the Cairns district, but the greater bulk of the pastoral area stretching westward to the Northern Territory from the coastal range has had very little rain, and that scattered, with the result that there has been considerable movement of sheep and cattle from the western areas, both to the coastal areas and the Gulf country, both places being better off for grass.

Up to the end of June the approximate number of sheep and cattle which have been transferred to the coastal districts was 130,000, and the Cloncurry inspector reports 1,000,000 sheep now in his district, mostly on agistment.

Some 600,000 sheep have left the Hughenden district mostly for agistment elsewhere. These movements and in such numbers are unprecedented, and indicate the serious condition that exists in the sheep districts of the Central West. As well as these extensive movements, the great majority of owners are feeding what sheep are remaining on their properties, and the cost of this over a large area is difficult to calculate. Since in some cases this artificial feeding was resorted to as early as February, such cost must have already reached enormous figures.

Some of the sheep which have been transferred to the coast are being fed on sugar-cane, an experiment which was also carried out in a few cases in 1902. The experiment can hardly be called a success, but many of the sheep and lambs arriving were in an extremely emaciated condition, and had little chance even under better circumstances.

In one or two instances mortality amongst sheep on the coast has been found to be due to poisonous plants. In one case a species of *Asclepias*, one of the milky cotton weeds, was found to be growing in considerable quantity on one of the farms carrying sheep, and there was little doubt that it was causing the trouble, since its eradication coincided with the marked reduction in the mortality. These plants—the milky cotton weeds—have been found to cause death in stock in certain other parts of the world. Under ordinary circumstances stock will not touch them, but with starving sheep it is another matter, and they will eat almost any green plant.

Some of the sheep on the coast are suffering from the effects of the spear grass, which is penetrating the skin, and is undoubtedly aggravating the poverty and increasing the mortality.

Taking all things together, reports show that the sheep industry is passing through one of the most disastrous, if not the most disastrous, period of its existence, and there is no doubt the results will be felt for years to come.

Stock Values.—All stock values are low. Even with the prevailing drought sheep can be had in

many places for a few shillings per head, off shears. Cattle prices at the meatworks opened about the same as last year, but with the closing of some works even these prices were weakened. Horses, except good draughts, are practically valueless. The low value of cattle, as well as the fact that it is mostly the sheep area which has been so badly affected by the drought, has accounted for the small movement of cattle for agistment purposes.

Stock Experiment Station.—During the year 139 head of cattle were received and treated at the experiment station. These mostly represented cattle received for inoculation against redwater, and they have been put through with but small losses. The dry weather at present is interfering with the introduction of stud and herd bulls into North Queensland. The number shows a marked falling-off from the previous year, when the movements of cattle were fairly large and considerable numbers were treated at the experiment station.

A series of experiments has been conducted on behalf of the New Zealand Government in connection with the question as to whether the cattle tick found in New Zealand (*Hæmophysalis bisponosa*) is capable of acting as the intermediary in the spread of Queensland redwater. The work has been done at the request of the New Zealand Department of Agriculture, the necessary arrangements having been made some two years ago through the Veterinary Research Institute, Melbourne. A start was not made, however, until some twelve months ago, since when a series of experiments has been carried out. The whole of the work has been the subject of reports to the Chief Inspector of Stock, and an account of the work need not be rewritten here.

Diseases in Stock Act.—As stated in my last report, the administration of this Act, together with the Slaughtering Act, in so far as North Queensland is concerned, is carried out from Townsville.

Outbreaks of contagious diseases can be said to compare favourably with those of other years. Bovine pleuro-pneumonia is undoubtedly the worst disease we have to contend with, and it is enzootic throughout North Queensland. Outbreaks keep continually occurring in various areas where the disease has perhaps been apparently unknown for a long time and where there have been no recent stock movements to account for the outbreak. The difficulty in diagnosis is accentuated by the insidious nature of the disease and the tendency to run a chronic course, which is the most common type in North Queensland.

The number of outbreaks is shown in the following list:—

Stock District.	Number.
Townsville	3
Bowen	2
Cairns	0
Cloncurry and Normanton	1
Hughenden	0

Recent research work in various countries along the lines of elucidating a serodiagnostic test for pleuro-pneumonia has produced encouraging results. The methods, however, are delicate in use, and have not been found to be

altogether reliable, and besides there are many reasons why they would be unpracticable in many parts of Queensland. The problem of eradicating such a disease from Queensland appears at the present moment to present features which make the problem almost insoluble. The disease has been eradicated from some countries by measures so drastic as to be out of the question here.

The present methods of dealing with the disease are the same as those which have been in vogue for years past—viz., vaccination of all incontacts, and quarantine for sixty days.

Swine Fever.—There have been no outbreaks of swine fever in North Queensland during the year under review. In this respect it may be noted that pigs are becoming quite an important item on the Atherton Tableland since the farmers have established their own factory.

Piroplasmiasis of Cattle.—The returns of the Stock Experiment Station quoted above show the number of stud stock dealt with at Townsville for vaccination against piroplasmiasis. Most of the outbreaks in the country are confined to instances where stock are brought into tick-infested areas from clean country outside.

A few cattle have been brought from the Western drought-stricken areas where there are no ticks to the coast for agistment purposes, and these have been inoculated against redwater.

During the winter months of each year there is usually a considerable number of store cattle passing southward from the tick-infested areas of the Gulf to the clean areas of Central and Southern Queensland. Most of these cattle cross into clean country at Julia Creek. This year, owing to the drought, the stock routes have become impassable and there have been practically no movements whatever.

In regard to the cleansing of cattle that pass over to clean from infested country, there are certain obscure points in connection with the use of dips that require clearing up, and it is to be hoped that the experiments now being conducted by the Bureau of Science and Industry will do so.

The number of stock dipped at Government dips or under Government supervision and which eventually passed into clean country from country tick-infested was—Horses, 977; cattle, 29,287.

The number of cattle entering from the Northern Territory and dipped at Lake Nash was 14,776.

The number of stud stock introduced was—Horses, 9; cattle (males) 230, (females) 20; sheep (rams), 3,974; and the number of fat cattle to the works was 100,245.

Prosecutions.—There have been thirteen prosecutions under the Diseases in Stock Act, with convictions in all cases.

Slaughtering Act.—During the year an additional inspector has been stationed in North Queensland, and has taken charge of the Innisfail district, which was allocated to him. As a result there has been considerable improvement in the slaughtering work generally in this area.

At the present moment the whole of the more thickly populated districts are divided up as far as practicable into separate areas, and each area is allocated to an inspector who, as well as attend-

ing to the slaughtering in the particular town he resides in, pays a periodic visit to the slaughter-yards and shops in the district. As a result, police acting in outside areas have been given considerable assistance, with a general improvement of conditions.

During the last six months, owing to the drought conditions prevailing, it has been found necessary to grant extensions of time to some butchers to complete improvements ordered.

Visits have been paid to many of the slaughter-yards and shops in various parts of North Queensland by myself during the year, and the indications are that the slaughtering work is being carried out in an efficient and thorough manner by the inspectors concerned.

The total number of stock slaughtered for local consumption for the year was approximately as follows:—

Cattle.	Sheep.	Swine.
56,166	49,405	16,493

the average weights being—Cattle 600 lb., sheep 40 lb., and swine 80 lb.

The total number of condemnations for the year was 96 cattle, 13 sheep, and 41 swine, as well as 790 partial condemnations.

During the year 15 new slaughter-yards have been erected and 2 have been renovated; 17 new butcher shops have been erected and 5 have been renovated.

The total number of slaughtering licenses held is 111.

Stallions Act.—This Act has not been in operation during the year in North Queensland.

Quarantine Act.—There have been no importations of stock of any kind from overseas through the port of Townsville.

JOHN LEGG, B.Sc., B.V.Sc., M.R.C.V.S.,
Government Veterinary Surgeon.

APPENDIX.

The number of dip samples submitted for analysis during the year was still very unsatisfactory, as only 144 samples were received, of which—

47.2% contained from 8 to 10 lb.	} Arsenious acid (As ₂ O ₃) per 400 gallons.
40.0% contained less than 8 lb.	
12.8% contained from 2 to 8 lb.	

with a maximum of 22.4 lb. and a minimum of 1.6 lb.

With regard to oxidised dips—

9.2% contained over 2 lb.	} Arsenic acid (As ₂ O ₅) per 400 gallons free
7.6% contained less than 2 lb.	
83.2% contained only a trace or were free	

Cause of death was detected in 10 cases out of a total number of 21 samples submitted. Two samples of cigar-leaf proved to be of fair average quality on analysis, with the exception of the salt content, which was rather high in each case.

Thirteen pints of standard iodine for dip-testing were despatched, mostly for the use of inspectors.

The number of dips registered for the year was 370.

Chemist.

APPENDIX C.

REPORT OF INSTRUCTOR IN SHEEP AND WOOL.

In a review of the pastoral industry for the year ending 30th June, 1926, in so far as sheep and wool are concerned, it is to be noted—

The season in Queensland for the past twelve months was a very mixed one. While the Southern, South-western, Darling Downs, and Peak Downs districts have been enjoying a good year, the Central, Central West, the Northern, and North-western districts have been and still are suffering under a calamitous drought, probably worse than any on record.

In regard to this drought, pastoralists generally who have not shifted their flocks to more favoured country are using artificial feed. All kinds of concentrated foods are being used, such as maize, linseed in the form of meal and cake, and other foods are being used by the hundred tons. In spite of this enormous expense, many holders have suffered serious losses. One thing appears definitely established: the pastures do not contain the nutriment they formerly held. The reason is not far to seek. Wool and mutton have been taken off the land for very many years, and nothing has been returned to the grasses or the soil to take the place of the constituents so removed. The Department has published a bulletin, "Stock Foods," by Mr. J. C. Brünnich, which is extremely valuable to the pastoralist. It is a guide to proper feeding. The Department is working in the direction of finding the best and cheapest way of dealing with such problems as conservation of fodder and renovation of pastures.

THE FARMERS' WOOL SCHEME.

This scheme is still working in the direction of assisting the smaller sheep farmers.

The number of farmers using our wool-rooms in the year 1926 was 405, an increase of 53 new clients. A number have sent their wool elsewhere, but mainly because of the increase of their flocks over our limit of 1,500 sheep. Prices for clips were reasonably good. Of course, we cannot realise the prices which high-class big clips realise, more especially as crossbreds are still under a cloud as regards the market, and the great bulk of our wools are crossed in various degrees.

BLOWFLY AND OTHER PESTS.

Blowflies have not been in serious evidence for the past two years, owing to the comparatively dry seasons experienced; moisture and warmth are essential to their propagation.

Nasal fly is now to be found everywhere in Queensland. Little can be done to combat it. A spoonful of petrol in each nostril will check it in the early stages.

I have continued to advise and on many occasions have addressed meetings in various centres on sheep, both coastal and inland.

I have judged at many shows in both wool and sheep classes, apparently with satisfaction to the show authorities; I have heard no complaints. This includes the Royal National Association's Show in August.

Mr. A. Wynne resigned his position as Assistant Instructor in Sheep and Wool in April last; a successor is to be appointed.

W. G. BROWN,
Instructor in Sheep and Wool.

APPENDIX D.

REPORT OF THE DEPUTY REGISTRAR OF BRANDS.

BRANDS ACT.

DETAILS OF REGISTRATIONS, TRANSFERS, &C.,
YEAR 1925-1926.

—	Number.	Fees Received.			Number since Inception of Legislation.
		£	s.	d.	
Three-piece brands registered	865	432	10	0	78,473
Cancelled brands registered	6	9	0	0	6,425
Transfers	1,344	336	0	0	36,174
Brands cancelled	25	..	..	..	..
Alteration of address	486	..	..	..	..
Symbols registered	42	210	0	0	1,306
Cattle marks registered	609	304	10	0	23,129
Distinctive brands registered	41	..	..	..	825
Sheep brands and marks registered	372	125	10	0	9,250
Sheep brands and marks transferred	353	44	2	6	3,802
		£1,461 12 6			

The drought conditions prevailing at present in the State are reflected in the registration of new brands and earmarks, which show a falling-off to the extent of 146 compared with last year's figures. The number of transfers of brands and earmarks, however, has increased by 277. During the year there were 11 prosecutions for breaches of the Brands Acts, and in each case a conviction was obtained.

In the last Annual Report reference was made to the proposed use of distinctive earmarks for cattle. Considerable attention was given to the subject during the year, but in view of adverse opinions having been received it was decided for the present not to make provision for the use of this class of earmark, or for the compulsory marking or branding of speyed cows.

H. S. ILIFF,
Deputy Registrar of Brands.

REPORT OF THE GOVERNMENT BOTANIST.

GENERAL.

Correspondence and personal interviews with farmers, pastoralists, and others, took up a considerable amount of time. The inquiries extended over a wide range of subjects dealing with various phases of plant life. The major portion dealt with plants sent in for identification by agriculturists as to their fodder value and other characteristics; by school teachers for help in their nature study lessons; by forest officers for identification of trees, &c.

FIELD WORK.

Owing largely to the fact that very large quantities of undetermined material are still on hand from previous expeditions, very little general collecting was done during the year. I have continued work on the Eucalypts of the Brisbane district, and am publishing the results of this work through the pages of the "Queensland Naturalist." I expect to finish up this work during the year and to start on other groups of trees. These studies show the value, from a botanical point of view, of the detailed study of special groups of plants in a limited area. Several brief trips were made to scrub areas for the specific purpose of identifying trees in the field for the advantage of persons desiring to utilise for specific purposes some of our secondary timbers not at present cut, or cut only to a very limited extent.

Visits were made in September to Wallumbilla and to Charleville for the purpose of collecting specimens of grasses and forage plants for exhibition purposes.

EDUCATIONAL.

Lectures were delivered during the year before various public bodies on "Trees and Tree-planting," "Ornamental Trees and Shrubs," "Queensland Forests and Forest Trees," and such subjects.

Field instruction was given by means of two field lectures, in May and June, to the second-year students of the Teachers' Training College. The localities visited were handy to Brisbane, and the trees and plants growing around formed the material of the lectures. It is intended to give two more lectures to the students, one in August and one in September.

It may not be out of place to mention here that in the course of the year a second edition appeared of my "Elementary Text Book of Australian Forest Botany." The fact that the first edition was exhausted within about three years of publication showed that students of forestry in Australia appreciated being able to obtain a text-book of botany with special application to the Australian forest flora.

HERBARIUM.

In my last report I mentioned that all the existing herbarium boxes had been filled; additional boxes have since been supplied and the work of getting the Australian section of the herbarium was put well in hand.

Large accumulations of exchange material from the Philippine Islands, Straits Settlements, and

Java have been put away during the year. It is very pleasing to have this material put away in classified order for reference purposes, as on a large herbarium collection largely rests the ability of this office to identify many of the specimens submitted to it for identification, much of which is of a very fragmentary nature. There is still a fair quantity of material from America and Java to place away.

Exchanges of herbarium material have been continued with the Royal Botanic Gardens, Kew, England; Botanic Gardens, Singapore; Botanic Gardens, Buitenzorg, Java; the Arnold Arboretum, Boston, U.S.A.; the U.S. National Herbarium, Washington, U.S.A.; and the Indiana University, Bloomington, U.S.A.

A considerable quantity of material has been sent away during the year to specialists for report. Prof. Martelli, Florence (Italy), has reported on several small parcels of pandanaceæ (Screw Pines) sent him. One of these, fairly common in the Western Gulf country, has been named as a new species under the name of *P. de Lestangii*. Some of our genera of Gramineæ (Grasses) are badly in need of revision, and I have started sending to the Royal Botanic Gardens, Kew, practically the whole of the grass material in our herbarium, starting with those groups in most need of revision. A set of duplicate material of all our *Aristida* material was sent to Kew for transmission to Prof. Henrard, who is monographing the Aristidas of the world. In addition to the foregoing, several smaller lots of material have been sent to various specialists for advice and to workers who have requested material.

The examination was completed, during the year, of the plant material collected in Papua by Mr. C. E. Lane-Poole during 1922-1923; the specimens make a valuable addition to our herbarium collections. The Arnold Arboretum of Boston, U.S.A., had a collector (Mr. Brass) in Papua from October to June, and, for help granted the Arboretum, a complete set of Mr. Brass's specimens are being retained for our herbarium. This Papuan material is of great value to us due to the close affinity of the flora of Papua with that of North Queensland.

In the course of the year Prof. Guillaumin, of Paris, finished the determination of the material collected by me in New Caledonia in 1923. The specimens, along with a lot of others from New Caledonia, have been put away in the non-Australian section of the herbarium. Like Papua, the flora of New Caledonia is of interest to us, owing to its relationship to that of Queensland, being more closely related to that of Queensland than any other land mass.

BOTANICAL MUSEUM.

Additions to the Botanical Museum have not been very numerous. Specimens of dried fruits, barks, and woods have been added from time to time.

LIBRARY.

The additions to the library, with the exception of a few periodicals, have been mostly exchanges with correspondents and institutions in various parts of the world.

The most important works added to the library by purchase were the volumes so far issued of the new editions of Engler and Prantl's "Die Natürlichen Pflanzenfamilien."

PUBLICATIONS.

The following publications were issued during the year:—*White, C. T.*: Queensland Forests and Forest Trees ("Queensland Agricultural Journal," August, 1925); Weeds of Queensland, No. 41 *Rivina lævis* ("Queensland Agricultural Journal," March, 1926); The Eucalypts or Gum Trees of the Brisbane District, Nos. IV. and V. ("Queensland Naturalist," Nov., 1925, and Jan., 1926); Introductory Note on "Ligneous Plants Collected in New Caledonia by C. T. White in 1923" (Journal of the Arnold Arboretum, vol. vii., No. 2, April, 1926); Descriptions

of Prickly Pears in "The Prickly Pears Acclimatised in Australia" (issued under the authority of the Commonwealth Prickly Pear Board). *White, C. T., and Francis, W. D.*: Queensland Trees.—*Olea paniculata* (Australian Olive) ("Queensland Agricultural Journal," Nov., 1925); Contributions to the Queensland Flora, No. 3 (Proceedings of the Royal Society of Queensland, vol. 37, No. 9—issued January, 1926). *Francis, W. D.*: A Contribution to the Theory of the Relationship of Iron to the Origin of Life (Proceedings of the Royal Society of Queensland, vol. 37, No. 5—issued August, 1925); Observations on the Plants of Charleville ("Queensland Agricultural Journal," December, 1925).

C. T. WHITE,
Government Botanist.

REPORT OF THE AGRICULTURAL CHEMIST.

WORK PERFORMED AND STAFF.

The work carried out showed a considerable increase, and at the end of the year we had 36 soils and 40 grass samples on hand.

	1923-4.	1924-5.	1925-6.
Ashes	4	2	76
Butters	823	783	794
Canned fruit	131	7	..
Cheeses	52	28	12
Condensed milk, milk powders	12	31	11
Dipping fluids	505	522	435
Fertilisers	289	191	161
Fruits, fresh .. .. .	..	..	13
Jams and preserves	6	2	9
Leathers	83	42	81
Limestones and lime	13	21	13
Margarins	1	26	..
Milk and cream	115	30	130
Miscellaneous	88	74	44
Parchment papers	25	7	45
Pest destroyers	109	148	135
Road materials .. .. .	..	72	150
Rocks	2	8	5
Salt, licks, and preservatives	15	4	3
Seeds, grasses, and plants	85	131	335
Soils	211	151	228
Soil moistures	506	306	144
Stock foods	257	176	144
Sugar-canes	4	5	6
Sugars, molasses, &c.	3	3	9
Viscera	40	22	34
Waters	132	52	88
Total	3,511	2,844	3,105
Glassware tested	6,444	4,743	5,336

There are no changes to record in the personnel of our staff, the whole of which did good work during the year.

ANALYTICAL NOTES.

Modification of Kjeldahl's Nitrogen Determination.

After reading the account of Markley and Hann on the Winkler boric acid modification of

the Gunning-Arnold Kjeldahl method (J. of Ass. of Off. Agric. Chemists, vol. viii., No. 4), I decided to have some experiments carried out in our laboratory to test the method, and the advantages and accuracy of this modification were so marked that we decided to adopt the method altogether.

A 4 per cent. boric acid solution is used for the absorption of ammonia, distilled through our water-cooled condensers, and this solution is titrated direct with 0.2 N. sulphuric acid. Methyl orange, brom phenol blue, and Congo red were tried as indicators, and finally Congo red (15 drops of a .25 per cent. solution in 50 per cent. alcohol) was adopted as the most suitable indicator.

Moisture Determination in Meat Extract.

Some difficulties were experienced with the determination of the amount of moisture in meat extract. We found that for cooling of the dried samples before weighing only desiccators charged with concentrated sulphuric acid could be used, as the dried meat extract is more hygroscopic than the usually used calcium chloride. Various methods of drying were carried out, but no constant weight could be obtained unless dried in a vacuum oven, on paper coils, at low temperatures of about 65 deg. C. For practical purposes approximate results can be obtained by drying in air or water oven for twenty-four hours, using ground pumice, sand, or paper coil. With further drying a steady decomposition takes place.

The direct determination of moisture, as proposed by Bidwell and Sterling, by distillation with toluene, gave excellent results, agreeing closely with the values obtained by drying in vacuum oven, and therefore this method can be strongly recommended as saving a lot of time.

Hours Drying.	Water over 98-100°C.		Water over 98-100°C.		Air over 105°C.		Vacuum over 60-65°C.		Vacuum over 60-65°C.	
	On Paper Coil.	Paper Coil.	Sand.	Sand.	Pumice.	Pumice.	Sand.	Pumice.	Paper Coil.	Paper Coil.
8 .. .. .	..	..	..	..	..	..	..	..	16.3	16.5
10	16.8	16.1	..	..	..	..	..	..	..	..
12 .. .. .	..	..	17.2	17.1	16.1	16.2	14.8	12.3	..	..
15	17.3	16.7	..	..	..	..	14.8	12.7	16.9	17.2
20	17.9	17.2	17.7	17.4	16.4	16.6	15.1	13.2	17.1	17.5
25	18.0	17.7	18.4	18.2	17.2	17.4	15.4	13.6	17.6	17.9
30 .. .. .	..	..	18.8	18.7	17.7	18.2	..	..	..	..
35	18.3	18.2	19.3	19.2	18.1	18.2	15.5	13.8	..	18.1
40	18.4	18.5	19.5	19.5	18.5	18.7	15.6	13.9	..	..
45 .. .. .	..	..	..	..	..	..	15.7	14.0	17.7	18.2
50 .. .. .	..	..	..	..	..	..	..	..	..	..
60	19.4	18.7	20.5	20.4	19.8	19.1	..	..	..	..
70 .. .. .	..	..	..	..	..	..	15.7	14.3	17.7	18.1
80	20.0	19.6	21.5	21.2	..	..	..	..	..	..
90 .. .. .	..	..	..	..	..	..	..	..	17.6	18.0
110 .. .. .	..	..	21.6	20.9	..	..	..	..	..	..
135 .. .. .	..	..	21.4	21.0	..	..	..	..	..	..
160 .. .. .	..	..	21.9	..	..	..	..	..	..	..

With sand or pumice the material could not be dried in a vacuum oven, but by absorbing the slightly diluted extract on a paper coil constant weights were reached at about thirty-five hours. The difference in the duplicates is due to the difficulties of getting a true average sample, and delay in weighing. The true amount of moisture

in this extract was between 17.8 and 18 per cent., as found by a large number of tests with the distillation method.

SOILS.

The largest number of soil samples were received in connection with sugar-cane, cotton, and maize culture.

The samples of soils taken in the Atherton Tableland from virgin land, normal land, and sterile patches (Nos. 2383-5) are of particular interest, as shown by the analysis given on Table I. The virgin land shows the largest amounts of total and available potash, with high humous and nitrogen contents. The sterile patches contain an excessive amount of lime. In many of the soils the available potash is too low for successful maize culture.

According to the results of experiments made by Mr. W. T. McGeorge with reference to the availability of potash in Hawaiian soils, the amount of available potash found, by treatment of the soil with 1 per cent. citric acid solution, is a valuable guide for the application of potash fertilisers to sugar-cane crops.

Soils with less than 0.02 per cent. of available potash will, with rare exceptions, respond to fertilising with potash salts, regardless of the lime contents of the soil. Soils with a range of available potash between 0.02 and 0.03 per cent. usually show a slight response, especially if the lime contents are also low. Soils containing more than 0.03 per cent. will not give, with few exceptions, a profitable return from application of potash fertilisers.

The availability of the potash appears to be closely related to the presence or absence of lime.

In looking over our table of soil analysis we find that only 6 soils contain more than 0.03 per cent., 21 more than 0.02 and less than 0.03 per cent. of potash, so that the great majority of our soils should respond to fertilising with potash salts for sugar-cane, maize, and many other crops.

The determination of soil acidity by various methods was continued, and in a few isolated cases we found high mineral acidity in samples of soil from Maleny, Cooroy, Bauple, Pialba, and Maroochy.

Investigations carried out elsewhere have clearly shown the association of mineral acidity with various root diseases in many crops, like sugar-cane, maize, and pineapples. The toxic alumina salts, the cause of high mineral acidity, can only be neutralised in the soil and in the plant tissues by a very heavy application of soluble phosphoric acid in addition to liming the soil, and in most cases the cost of such treatment would be prohibitive, and the simplest plan is not to cultivate such acid areas, which fortunately are very rare.

The three soils from Java, given at the bottom of Table I., were submitted by Mr. Brooks, and are supposed to be typical cassava soils. These soils show an enormous variation in their composition, and according to these analyses almost any soil appears to be suitable for cassava culture.

The analyses of the principal soil types from Woolthorpe and Walloon, on the Dawson River irrigation area (Nos. 2364-2370), are of considerable interest, and show that soils suitable for almost any crop are represented in this area.

The soils from the Callide cotton research farm show, with a few exceptions, greater uniformity, and analysis proves them to be of good fertility, rich in mineral plant foods.

WATERS.

No further samples of waters have been received from stock inspectors with reference to suitability of saline waters for stock, and this important question has not been cleared up.

DIPPING FLUIDS.

Out of the 435 dipping fluids analysed, we found only 114 of effective strength, containing between 7.5 and 8.5 lb. of arsenic per 400 gallons, and 78 showed more or less oxidation. In four cases, the addition of skim milk at the rate of 2 gallons to every 100 gallons of dipping fluid brought about a reduction of the arsenic acid to arsenious in about a week's time, and prevented further oxidation for several months.

This simple process, first recommended by Mr. L. Cohen, the chemist of the tick board of control of New South Wales, can be strongly recommended whenever skim milk or butter milk is available, and does away with the costly recharging of dips, in which oxidation of the arsenious acid with the less effective form of arsenic acid has taken place.

VISCERA.

Thirty-four samples of viscera and stomach contents were analysed, and in fifteen cases the presence of poison was proved.

DAIRY PRODUCE, &C.

Under the Dairy Act a large number of parchment papers used for butter-wrapping were analysed, and in several cases mouldiness of butters was traced to parchment paper containing, contrary to the regulations of the Dairy Act, large amounts of glucose.

GLASSWARE TESTED, &C.

	Tested.	Approved.	Condemned.	Broken.	Per Cent. Condemned.
Cream bottles	1,716	1,699	1	16	0.06
Milk bottles	1,188	1,182	4	2	0.34
Cream pipettes	268	267	..	1	..
Milk pipettes	451	447	1	3	0.22
Thermometers	1,685	1,633	49	3	2.9
Hydrometers	12	12	..	..	..
Various pipettes	16	16	..	..	..
Total	5,336	5,256	55	25	1.0

Prepared 168 bottles .1 N. alkali, and 126 pints standard iodine solution.

Rennet.—Samples of rennet, manufactured in New South Wales, were tested and found to be of excellent quality, equal to the best imported rennets.

FOODS AND STOCK FOODS.

Of interest are the analyses of a thin-shelled variety of the Queensland nut (*Macadamia ternifolia*) submitted by the grower, Mr. J. F.

Waldron, Upper Eungella, Tweed River, New South Wales.

	No. 1. Thin-shelled Nuts with hull rather green.	No. 2. Thin-shelled, hull ripe.	Ordinary Variety with hull ripe.
	Grammes.	Grammes.	Grammes.
Average weight of hull ..	8.7	..	9.75
Average weight of nut ..	8.2	7.8	14.8
Average weight of shell ..	4.8	4.7	10.8
Per cent. shell ..	58.7	59.9	73.2
Average weight of kernel ..	3.4	3.1	4.0
Per cent. kernel ..	41.3	40.1	26.8
Analysis of kernel—			
Moisture, per cent. ..	28.2	6.1	11.8
Protein, per cent. ..	8.9	8.7	8.6
Oil, per cent. ..	52.8	72.7	70.0
Carbohydrates and fibre, per cent.	8.2	10.5	7.1
Ash, per cent. ..	1.9	2.0	2.5
Hydrocyanic acid ..	trace	Nil	Nil

Green hulls contained 4.5 per cent. of tannin.

It will be noticed that, although the kernel of the thin-shelled variety is somewhat smaller than that of the ordinary variety, the percentage weight of the kernel is very much larger, so that 1 lb. of the thin-shelled nuts yields $6\frac{1}{2}$ oz. of kernel, as against $4\frac{1}{4}$ oz. of kernel in 1 lb. of the ordinary variety.

Peanuts.—Mr. F. F. Coleman obtained a nice collection of varieties of peanuts from the New South Wales Department of Agriculture; the analyses of which are herewith given:—

Variety.	Crude Protein.	Crude Fat.
	Per cent.	Per cent.
Sogatum	25.5	51.5
Pondicherry	23.6	51.4
Natal common	28.5	49.7
Brazil	23.1	50.4
Mauritius	25.5	50.8
Transvaal	23.6	49.6
Chinese	29.1	47.9
Valencia	29.9	47.4
Virginia runner	20.6	53.0
African	30.5	47.1
Virginia bunch	23.3	50.5
White Spanish selected	27.0	50.8
Carolina	26.4	51.7
Virginia	25.9	48.4
Barbadoes	24.7	52.0
Norfolk Island	25.5	52.9
Spanish	28.9	48.5
White Spanish	27.5	48.8
Carolina Rhodesia	23.6	49.1

The cultivation of peanuts should be very much extended, and many of our sandy loams are eminently suited for their culture.

Peanuts not only yield a large percentage of valuable oil, but the by-product, the peanut cake, is the most nutritious of oil-cakes, containing over 40 per cent. of digestible protein, which contains a particularly high amount of lysine, an amido-acid absolutely necessary for maintenance and promotion of growth.

The feeding of starving stock, more particularly of sheep, has been a serious and costly problem in a large portion of our pastoral areas during the present season. Grain, chiefly maize, was largely used, but it was soon found that the animals did not do well, after feeding with grain was carried on for some time, and this was chiefly due to want of suitable roughage.

It is quite impossible to feed sheep with the necessary amounts of concentrated foods, unless some roughage is given, which is required to form the "cud." If no roughage is available on the spot, the cost of handling and transport makes the cost of roughage obtained elsewhere quite prohibitive. The only solution of the problem is the conservation of fodder, whenever possible, to provide for the years of drought, and bush hay will keep its food value even after fifteen years or more of storage.

All sorts of schemes of feeding were tried by stockowners; in some instances meals, chiefly cotton-seed meal and linseed meal, were mixed with salt, and consequently a large number of sheep died of salt poisoning, as the drinking water was also rather too salty. Feeding of a good quality of white maize was also found to be disastrous, as white maize is deficient in certain vitamins which are present in yellow maize.

Feeding of chopped-up whole sugar-cane was not successful. Green sugar-cane tops have a fair food value, but are low in protein, but when using the whole stalk of the cane the food value, with regard to protein, is still much more lowered, and is not improved by the addition of molasses, which is only a condiment and makes dry foods more palatable. Sheep could not possibly consume a sufficient amount of chopped sugar-cane alone, and must die of protein starvation.

Proposals are made to utilise the megass of sugar-cane mills, with the addition of molasses, as a roughage to be put on the market, but there is practically no protein in the megass and molasses and, therefore, such a roughage would not be worth the cost of transport.

As I found that the local ideas on the value of stock foods and the principles of feeding are in many cases very elementary, I prepared a short pamphlet on "Stock Foods," which is just about to be published, and will be available to all interested on application to the Department of Agriculture and Stock.

I will just give a brief statement with reference to the amounts of various stock foods to be supplied to give a sheep the necessary amount of protein for its maintenance.

A 100-lb. sheep requires per day from 2 to $2\frac{1}{2}$ lb. of dry matter, containing 0.12 lb., or about 2 oz., of digestible protein. This amount of protein is supplied by about 6 lb. of couch grass, 8 lb. of good mixed pasture or saltbush, 10 lb. of green cane tops (a quantity just about as much as a sheep could consume in a day), 20 lb. of chopped whole sugar-cane and tops, $6\frac{1}{2}$ lb. of good bush hay (this gives about 6 lb. of dry matter, or more than double the amount a sheep could eat), 17 lb. of poor bush hay, $1\frac{1}{2}$ lb. of lucerne chaff, 120 lb. of wheat straw, 2 lb. of maize or barley, 1 lb. of bran, $1\frac{1}{2}$ lb. of kubettes, $\frac{2}{3}$ lb. of treacle cubes, and $\frac{1}{2}$ lb. of linseed meal.

From these figures it is easily seen that a sheep fed only on bush hay or on chopped sugar-cane must starve.

Megass feed would have not as much value as wheat straw, and pinewood sawdust or wood shavings might just as well be utilised as megass.

Licks are largely used at present by stockowners—who, however, have no idea what they contain, and in many instances pay high prices for licks which are practically only salt. Licks

do not come under the provisions of the Stock Foods Act, and, therefore, purchasers should demand some guarantee on the composition of licks before buying.

The following three analyses of licks, obtained from users, show that only the first has some medicinal value:—

	A.	B.	C.
	%	%	%
Moisture	3.89	1.47	0.60
Insoluble matter	4.50	trace	Nil
Iron and alumina .. ..	..	0.90	Trace
Magnesia	0.67	0.82	Trace
Lime	14.67	..	0.30
Phosphoric acid	7.85	Trace	Nil
Phosphoric acid, water soluble	3.26		
Sodium chloride (salt) ..	9.30	91.31	99.0
Sulphur	18.80	Nil	Nil
Sulphuric acid	7.27	2.69	0.30
Arsenic	0.40	Nil	Nil

Home-made licks, made up from special bone-meal and salt, or finely-ground Nauru rock phosphate, using 2 to 3 parts of phosphate with 1 part of coarse salt, are already largely used with highly beneficial results. A very interesting article on "Phosphorus in the Live

Stock Industry," reprinted from the South African "Agricultural Journal," appeared in the "Queensland Agricultural Journal" (March, 1925), which should be read by every stock-owner. Short articles on the same question appeared in the "Queensland Agricultural Journal," March and April, 1926.

PASTURE IMPROVEMENT.

Renovation of paspalum pasture has become an important question, and several experimental plots have been started by the Department in various places in Queensland, to ascertain the advantages of treating old paspalum pasture by ploughing and fertilising, leaving unploughed portions as controls.

At Maleny the ploughed portions recovered very quickly, and much larger cuts of grass were obtained from the ploughed plots than from the unploughed plots. At Cooroy, however, only the last cutting showed an increased yield in the ploughed plots over the unploughed ones, and this is due to the fact that the soil at Cooroy was shallower and the ploughing was done much more roughly.

The following table gives the yield of dry matter contained in the grass by all the cuttings made from time to time:—

Fertiliser Used per Acre.	MALENY.		COOROY.	
	Tons per acre of dry matter obtained by—			
	8 Cuttings 16/4/25 to 23/2/26.		6 Cuttings, 20/11/25 to 24/4/26.	
	Total tons per acre.	Gain or loss over average yield of unfertilised plots.	Total tons per acre.	Gain or loss over average yield of unfertilised plots.
PLOUGHED PORTIONS.				
Nil	Per cent. 4.88	Per cent. — .16	Per cent. 1.44	Per cent. — .21
$\frac{3}{4}$ ton agricultural lime	5.52	+ .48	1.80	+ .15
$\frac{1}{2}$ ton air-slaked lime	4.80	— .24	1.68	+ .03
1 cwt. Nauru phosphate	5.20	+ .16	1.50	— .15
Nil	5.20	+ .16	1.86	+ .21
$\frac{3}{4}$ cwt. Nauru phosphate and $\frac{3}{4}$ cwt. superphosphate	6.24	+ 1.20	2.64	+ .99
1 cwt. Nauru phosphate, $\frac{1}{2}$ cwt. potassium sulphate, $\frac{1}{2}$ cwt. nitrate of soda	6.16	+ .92	1.56	— .09
$1\frac{1}{2}$ cwt. basic superphosphate	6.72	+ 1.32	1.20	— .45
UNPLOUGHED PORTIONS.				
Nil	2.64	— .96	1.86	— .63
$\frac{3}{4}$ ton agricultural lime	2.80	— .80	1.86	— .63
$\frac{1}{2}$ ton air-slaked lime	3.54	— .06	2.16	— .33
1 cwt. Nauru phosphate	3.28	— .32	2.10	— .39
Nil	4.56	+ .96	3.12	+ .63
$\frac{3}{4}$ cwt. Nauru phosphate and $\frac{3}{4}$ cwt. superphosphate	4.80	+ 1.20	3.78	+ 1.29
1 cwt. Nauru phosphate, $\frac{1}{2}$ cwt. potassium sulphate, $\frac{1}{2}$ cwt. nitrate of soda	3.92	+ .32	3.06	+ .57
$1\frac{1}{2}$ cwt. basic superphosphate	3.60	..	2.46	— .03

The results of the weighings of square yards obtained from the enclosed portion of each of the plots showed great variations, and only one of the experiments, with the application of Nauru phosphate-superphosphate mixture, showed a decided gain in all four plots. The plots with complete fertiliser gave a gain in three plots and a loss in one, whereas the plots dressed with basic superphosphate showed a considerable increase in only one of the four plots.

A large amount of analytical work, both with

individual cuts of the grasses and of composite samples, was carried out, but no definite conclusions can be drawn from the results obtained. It is quite useless to publish complete tables of these analytical figures, but I will give a short summary of the results of the average analyses of all the cuts from the various plots, and also the maximum and minimum amounts found.

These amounts are calculated on the green material as cut, which contained an average moisture of 70 per cent., and, therefore, the

amounts in the dry materials would be about three times as much:—

	Protein.	Fibre.	Ash.	Phosphoric Acid in Ash.	Lime.
	%	%	%	%	%
IN GREEN MATERIAL.					
Cooroy, ploughed plots	3.9 (3.5—4.2)	9.9 (8.9—10.6)	3.2 (2.9—3.4)	.094 (.090—.111)	.222 (.085—.250)
Cooroy, unploughed	3.2 (2.9—3.4)	8.4 (9.4—10.6)	2.2 (2.0—2.4)	.068 (.059—.079)	.091 (.078—.102)
Maleny, ploughed plots	3.0 (2.5—3.5)	7.2 (6.1—8.2)	2.4 (1.9—3.1)	.112 (.097—.135)	.256 (.205—.325)
Maleny, unploughed plots	3.1 (2.4—3.7)	7.8 (5.6—11.5)	2.8 (2.0—4.2)	.110 (.088—.126)	.313 (.155—.630)

Runcorn Paspalum Trials.—Due to unfavourable season, only one cut of the ploughed and unploughed plots of this experimental area was made, on the 12th May, 1926; but no conclusions can be drawn from the weights obtained from 1 square yard of each plot. Difference in the growth apparent in the first growth, more particularly in the plots fertilised with fine bone-meal and with complete fertiliser, showing better growth and greener appearance than any of the other plots, disappeared as the grass got older. The difference between the growth of the grass on the ploughed and unploughed portions is very striking, and is clearly shown in the photograph. The grass on the ploughed portion is of much more vigorous growth and has more flag than on the unploughed plots. The bare patches left after ploughing between the furrows are at present covered with young seedling paspalum.

As the quantity of fertiliser applied at first was undoubtedly on the low side, trying to keep the cost low, a further application of fertilisers has been made this year, and the cuttings to be made in the coming spring should show great differences. Arrangements, however, must be made to obtain true average weights of grass from each plot, by cutting and weighing the whole of each plot, or at least a large proportion of it.

Fodder Plots.—An interesting series of experi-

ments with fodder crops were also carried out at Runcorn, and proved the great advantages derived from fertilising. The following table gives the results of yield and analyses of the crops grown under rather adverse climatic conditions, and we find in two cases the weight of the green and dry material practically doubled by the use of fertilisers. The fertiliser used was a 6-16-4 mixture applied at the rate of 645 lb. per acre.

The season was not all favourable, and between the time of sowing (6th January, 1926) and harvesting (2nd March, 1926), only 145 points of rain were registered in January and 18 points in February.

The crop of the fertilised maize was of much better growth than that of the unfertilised plot, only the weight is not any better because the crop was thinned out by pigeons getting at the freshly-sown maize. The sorghum yield was also very much better than indicated by the weights obtained, and the photograph given of these plots shows a very great difference between the fertilised and unfertilised plots.

Only a small amount of hydrocyanic acid, in quite harmless quantities, was found in the youngest stages of growth in Sudan grass and Saccaline sorghum.

These fodder trials will be repeated this year on similar lines.

RESULTS OF FODDER PLOT TRIALS.

	ANALYSES OF GREEN MATERIAL.							EIGHT WEEKS' GROWTH.		HYDROCYANIC ACID IN GREEN SAMPLE.		
	Moisture.	Crude Protein.	Carbo-hydrates.	Crude Fat.	Crude Fibre.	Crude Ash.	Lime in Ash.	Tons per Acre.		Cut 5-2-26.	Cut 25-2-26.	Cut 23-2-26.
								Green.	Dry.			
Foxtail millet (<i>setaria italica</i>)—	%	%	%	%	%	%	%					
Manured	53	2.6	25.6	.5	15.4	3.2	.49	4.9	2.3	Nil	Nil	Nil
Unmanured	52	2.2	24.5	.5	16.2	4.6	.42	2.5	1.2	Nil	Nil	Nil
Maize—												
Manured	77	1.0	13.0	.2	7.3	1.5	.13	11.3	2.6	Nil	Nil	Nil
Unmanured	80	1.1	10.6	.2	6.7	1.5	.07	12.1	2.5	Nil	Nil	Nil
Sudan grass (<i>sorghum sudanense</i>)—												
Manured	64	1.3	19.7	.4	11.9	2.8	.18	4.6	1.6	0.75	Nil	Nil
Unmanured	66	1.6	17.8	.3	10.9	3.4	.22	2.4	0.8	0.5	Nil	Nil
Saccaline (<i>sorghum vulgaris</i>)—												
Manured	71	1.0	17.2	.3	7.7	2.8	.12	7.8	2.3	2.0	Nil	Nil
Unmanured	68	1.3	17.7	.4	9.0	3.6	.17	6.2	2.2	1.0	Nil	Nil

9.0 = $\frac{1}{4}$ grain of H.C.N. per lb.

PEST DESTROYERS.

Two samples of alleged cures for Bunchy Top of bananas were obtained from the Tweed River, which were sold at exorbitant prices. The first, an earthy material, contained—

Moisture	Per cent. 0.8	Magnesia	Per cent. Trace
Sulphur	35.8	Arsenic	Trace
Carbon and other organic matters	4.5	Sulphuric acid	0.8
Iron and alumina	5.3	Phosphoric acid	0.3
Lime	1.2	Insoluble matter, sand &c.	51.3

and is evidently a mixture of sandy soil with sulphur and a little charcoal and lime. The second preparation is an oil, consisting of a high-boiling kerosene, with addition of small amounts of sulphonated oil, tar oil, and garlic or onion oil.

J. C. BRÜNNICH,

Agricultural Chemist.

TABLE I.—ANALYSES OF QUEENSLAND SOILS—continued.

Laboratory No.	Locality.	Description of Soils.	TOTAL ELEMENTS IN THE SOIL, CALCULATED ON SOIL DRIED AT 100° C.										Available Plant Food, Soluble in 1 per cent. Citric Acid.				Total Elements, Lb. per Acre, 12" Deep.				Available Plant Food, Soluble in 1 per cent. Citric Acid, Lb. per Acre, 12" Deep.			SOIL ACIDITY.			
			Humus.	Combina Water and Other Organic Matter.	Chlorine.	Nitrogen.	Soluble in Hydrochloric Acid, Sp. Gr. 1.115.				Phosphoric Acid.	Lime.	Magnesia.	Potash.	Total Insoluble.	Phosphoric %	Lime %	Magnesia %	Potash %	Nitrogen.	Phosphoric Acid.	Lime.	Potash.	Reaction with Litmus Paper.	Total Acidity (Jones).	Mineral Acidity (Hopkins).	Organic Acidity (J-H).
							%	%	%	%																	
Cook—continued:																											
2419	Redlynch	r. br. L.	1.36	4.93	.010	.134	.14	.18	.30	.52	78.83	.0047	.0552	.0068	.0090	4,699	4,772	6,241	18,355	165	1,931	316	Ac.	53	Nil	53	
2420	Ditto	y. br. cl. L.	.71	3.58	.008	.068	.12	.23	.33	.52	85.40	.0063	.0831	.0212	.0069	2,442	4,373	8,381	18,585	226	2,981	248	Ac.	30	.4	30	
2447	White Rock, Cairns	gr. L.	1.72	5.39	.016	.131	.02	.18	.28	.46	81.21	.0021	.0442	.0146	.0116	4,315	668	6,021	15,051	70	1,458	384	Ac.	59	1	58	
2448	Ditto	gr. cl. L.	1.00	3.56	.008	.091	.02	.16	.22	.41	88.10	.0052	.0236	.0120	.0116	3,181	707	5,656	14,495	183	830	406	Ac.	55	2	53	
2449	Ditto	l. br. L.	1.46	4.73	.010	.119	.02	.15	.15	.48	83.37	.0011	.0259	.0177	.0083	4,043	685	5,139	16,445	34	880	280	Ac.	66	17	49	
NORTH KENNEDY—																											
2273	Parish of Meunga	y. gr. L.	1.78	7.23	.005	.182	.11	.57	.52	.31	71.34	.0095	.1889	.0330	.0137	5,630	3,560	17,800	9,708	294	5,854	424	Alk.	..	..	..
2274	Ditto	y. gr. L.	1.03	5.33	.004	.116	.05	.26	.28	.21	79.92	.0027	.0677	.0247	.0131	3,868	1,727	8,634	6,908	90	2,262	439	Ac.	32	Nil	32	
2275	Ditto	gr. L.	1.76	5.33	.004	.122	.05	.31	.31	.19	78.14	.0021	.0833	.0240	.0102	4,172	1,768	10,605	6,364	71	2,849	350	Ac.	55	Nil	55	
2276	Ditto	ch. L.	5.02	14.01	.005	.272	.03	.24	.18	.03	61.22	.0013	.0218	.0010	.0048	7,469	889	6,817	889	36	598	133	Ac.	106	13	93	
2308	Ingham	gr. cl. L.	.94	3.97	.008	.094	.05	.26	.21	.16	87.20	.0029	.0488	.0342	.0025	2,912	1,618	8,089	4,854	91	1,505	78	Ac.	64	5	59	
2309	Parish of Lanneroost	l. br. s. L.	1.65	3.46	.005	.126	.06	.67	.52	.17	84.44	.0075	.1635	.0339	.0104	3,915	1,990	20,898	5,308	232	5,088	325	Ac.	53	1	52	
2310	Ditto	ch. L.	2.01	5.33	.005	.112	.07	.48	.57	.23	81.28	.0062	.0929	.0205	.0108	3,516	2,322	14,926	7,298	196	2,916	338	Ac.	104	.4	104	
2311	Parish of Leach	ch. L.	2.15	6.75	.005	.151	.12	.69	.73	.28	76.09	.0071	.1449	.0269	.0143	4,454	3,501	20,363	8,273	210	4,276	423	Ac.	85	.4	85	
2312	Ditto	d. gr. cl. L.	2.11	6.01	.005	.191	.10	.87	.70	.30	77.44	.0112	.2032	.0601	.0203	5,886	3,182	26,726	9,227	347	6,271	626	Ac.	45	.4	45	
2352	Ayr	d. gr. cl. L.	1.58	4.90	.010	.106	.11	1.26	.83	.61	78.96	.0231	.2106	.0219	.0276	3,874	4,098	45,830	22,352	842	7,685	1,018	Ac.	13	.4	13	
2391	Conway, near Proserpine	gr. cl. L.	.52	4.16	.026	.105	.03	.55	.15	.13	87.47	.0015	.0390	.0145	.0093	3,378	1,003	17,730	4,348	47	1,254	298	Ac.	68	17	51	
2392	Ditto	gr. cl. L.	1.20	4.68	.030	.104	.07	.68	.28	.23	81.23	.0027	.1013	.0408	.0052	3,763	2,608	24,590	8,196	97	3,673	190	Ac.	59	.8	58	
2393	Tully	y. gr. cl. L.	3.59	10.32	.002	.203	.10	.17	.35	.19	64.31	.0035	.0411	.0172	.0129	6,236	3,182	5,409	6,046	111	1,266	410	Ac.	108	22	86	



RUNCORN PASPALUM RENOVATION PLOTS.

On left, effect of ploughing; on right, unploughed. Ploughed April, 1925; photo taken 6th February, 1926.



RUNCORN PASPALUM RENOVATION PLOTS.

Close-up view of ploughed portion.



RUNCORN PASPALUM RENOVATION PLOTS.
Close-up view of unploughed portion.



FODDER PLOTS AT RUNCORN.
View of Foxtail millet crop; sown 5th January, 1926. Photo. taken 8th February, 1926.
On left, unmanured; on right, manured.



RUNCORN FODDER PLOTS.

Close-up view of Foxtail millet; unmanured and manured.



RUNCORN FODDER PLOTS.

Close-up view of Saccaline. Sown on 5th January, 1926; photo. taken 8th February, 1926. Unmanured and manured.

2319	Ditto (sterile patch)	bl. L.	..	1-27	8-33	.014	.119	.03	1-30	1-31	.53	70-61	-.0283	-.2598	-.0711	-.0087	3,777	1,011	41,480	16,860	900	8,266	277	Ac.	25	1	24
2300	Ditto	ch. L.	..	2-69	4-84	.010	.118	.12	.90	.63	.50	80-26	-.0240	-.2329	-.0185	-.0183	4,034	4,209	30,519	17,188	817	7,934	624	Ac.	28	Nil	28
2301	Ditto	ch. L.	..	2-63	7-51	.032	.144	.21	1-28	1-29	.45	69-31	-.0335	-.2675	-.0187	-.0199	4,471	6,526	39,811	14,031	1,037	8,278	617	Ac.	21	Nil	21
2302	Ditto	ch. L.	..	2-70	4-62	.009	.126	.12	.97	.69	.51	79-19	-.0237	-.2276	-.0208	-.0188	4,315	4,209	32,971	17,537	806	7,741	641	Ac.	28	Nil	28
2303	Ditto	ch. L.	..	3-09	6-84	.018	.176	.17	1-33	1-05	.45	73-31	-.0352	-.3607	-.0338	-.0232	5,299	5,045	40,065	13,563	1,059	10,865	770	N.	11	Nil	11
2315	Raglan	br. cl. L.	..	1-13	4-26	.025	.057	.08	.98	.64	.64	81-68	-.0043	-.0981	-.1179	-.0060	2,010	2,871	34,460	22,611	151	3,439	212	Ac.	34	.4	34
..	Ss. of S. 2315	d. gr. Cl.	..	.36	5-62	.026	.069	.04	.95	.98	.50	77-49	..	..	..	..	2,364	1,371	32,550	17,130	..	..	..	..	..	..	..
2316	Raglan	br. cl. L.	..	1-18	4-97	.007	.162	.07	1-35	.63	.44	78-81	-.0209	-.2365	-.0490	-.0108	5,980	2,665	50,259	16,370	773	8,742	400	N.	6	.4	6
..	Ss. of S. 2316	br. s. Cl.	..	.77	5-20	.007	.092	.09	1-18	.82	.47	78-70	..	..	..	..	3,304	3,231	42,355	16,870	..	..	..	..	..	..	..
2317	Raglan	gr. L.	..	1-27	3-60	.005	.148	.10	1-62	.30	.28	86-41	-.0098	-.4240	-.0385	-.0077	5,638	3,862	61,782	10,811	375	16,141	293	Alk.	Nil	Nil	Nil
..	Ss. of S. 2317	gr. s. Cl.	..	.31	4-47	.006	.029	.03	1-91	.54	.45	80-82	..	..	..	..	1,238	1,281	81,550	19,212	..	..	..	..	..	..	..
2318	Raglan	l. br. L.	..	1-17	3-74	.005	.131	.08	1-07	.52	.34	85-22	-.0073	-.2196	-.0834	-.0110	5,192	3,219	42,260	13,280	290	8,677	435	Ac.	8	Nil	8
..	Ss. of S. 2318	br. s. Cl.	..	.41	4-09	.006	.046	.04	1-11	.57	.49	80-64	..	..	..	..	1,876	1,632	45,280	19,988	..	..	..	..	..	..	..
2347	Yarwun	r. s. S.	..	.55	1-92	.006	.039	.02	.17	.11	.09	90-76	-.0010	-.0605	-.0119	-.0092	1,463	750	6,380	3,377	37	2,248	341	Ac.	15	Nil	15
2348	Ditto	gr. s. S.	..	.76	2-80	.005	.059	.01	.23	.16	.09	88-79	-.0011	-.0791	-.0065	-.0066	2,134	361	8,319	3,255	40	2,836	239	Ac.	13	Nil	13
2372	Carmilla	ch. L.	..	1-42	5-11	.012	.106	.06	.94	.35	.18	80-96	-.0018	-.1438	-.0304	-.0027	3,653	2,170	32,550	6,149	61	4,966	94	Ac.	51	Nil	51
2373	Ditto	gr. cl. L.	..	1-03	3-63	.009	.075	.03	.52	.10	.11	86-85	-.0011	-.0473	-.0215	-.0013	2,701	1,109	18,491	4,068	41	1,697	44	Ac.	53	2	51
2380	Curtis Island	r. L.	..	3-37	9-64	.011	.244	.29	.45	.32	.34	65-35	-.0117	-.2993	-.0813	-.0171	7,090	8,450	12,980	9,960	341	9,700	498	Ac.	76	1	75
2400	Unionville	br. L.	..	1-53	5-21	.005	.120	.07	1-06	.67	.33	77-97	-.0038	-.1356	-.0466	-.0093	4,589	2,724	40,440	12,441	143	5,160	353	Ac.	49	Nil	49
..	Ss. of S. 2400	d. br. Cl.	..	.62	6-32	.009	.040	.07	1-23	1-10	.43	67-86	..	..	..	..	1,294	2,322	39,150	13,935	..	..	..	..	..	..	..
2401	Unionville	br. L.	..	1-32	3-79	.012	.079	.05	1-22	.74	.36	81-18	-.0020	-.1170	-.0442	-.0080	3,118	1,999	47,970	13,999	79	4,589	315	Ac.	45	Nil	45
..	Ss. of S. 2401	br. Cl.	..	.51	6-32	.008	.035	.05	1-31	.87	.51	69-91	..	..	..	..	1,294	1,903	48,355	19,037	..	..	..	..	..	..	..
2426	Stanwell	ch. L.	..	1-44	7-77	.005	.098	.03	1-11	1-47	.27	64-61	-.0021	-.2501	-.0153	-.0045	3,617	1,142	41,120	9,899	76	9,322	167	Ac.	23	2	21
2427	Ditto	ch. L.	..	1-66	8-62	.005	.101	trace	1-04	1-48	.27	64-32	-.0007	-.2512	-.0176	-.0019	3,433	..	34,335	8,838	24	8,224	65	N.	27	1	26
2456	West Hill	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2457	Pandora, Alton Downs	ch. st. cl. L.	..	2-92	14-52	.005	.266	.18	.93	1-36	.15	51-49	-.0146	-.2039	-.0137	-.0203	6,211	4,124	21,902	3,608	340	4,759	474	Ac.	72	Nil	72
2458	Ditto	bl. cl. S.	..	2-68	12-86	.011	.128	.03	1-36	1-24	.04	53-07	-.0008	-.2267	-.0224	-.0015	3,723	955	39,455	1,272	22	6,593	44	Ac.	34	Nil	34

TABLE I.—ANALYSES OF QUEENSLAND SOILS—continued.

Laboratory No.	Locality.	Description of Soils.	TOTAL ELEMENTS IN THE SOIL, CALCULATED ON SOIL DRIED AT 100° C.										Available Plant Food, Soluble in 1 per cent. Citric Acid.				Total Elements, Lb. per Acre, 12" Deep.				Available Plant Food, Soluble in 1 per cent. Citric Acid, Lb. per Acre, 12" Deep.			SOIL ACIDITY.			
			Humus.		Combined Water and Other Organic Matter		Chlorine.		Nitrogen.		Soluble in Hydrochloric Acid, Sp. Gr. 1.115.		Soluble in 1 per cent. Citric Acid.		Phosphoric Acid.	Lime.	Potash.	Nitrogen.	Phosphoric Acid.	Lime.	Potash.	Reaction with Litmus Paper.	Total Acidity (Jones).	Mineral Acidity (Hopkins).	Cwt. Calcium Carbonate per Acre 12" Deep.		
			%	%	%	%	%	%	%	%	%	%	%	%												%	%
2459	PORT CURTIS—continued: ALTON DOWNS—continued. Pandora ..	bl. cl. S. ..	3.02	14.16	.008	.140	.03	1.65	2.03	.03	.14	.57	.30	.0008	.2668	.0341	.0017	4,282	1,003	50,510	1,003	587	53	Ac.	30	Nil	30
2462	Deeford, via Wowan ..	ch. L. ..	3.14	8.38	.008	.271	.15	1.47	.48	.046	.0393	.601	.0046	.4601	.0261	.0393	9,225	5,262	50,160	5,262	1,339	158	Alk.	4	Nil	4	
..	Ss. of S. 2462 ..	ch. L. ..	.72	9.52	.010	.080	.03	3.65	.99	.06	.68	.24	2,779	1,069	126,110	2,138
2354	BURNETT— Gayndah ..	r. L. ..	1.43	10.46	.005	.183	.17	.33	.16	.14	.57	.30	.0252	.1755	.0440	.0194	5,552	5,132	9,948	4,492	5,301	760	Ac.	28	Nil	28	
..	Ss. of S. 2354 (2 ft.) ..	r. L. ..	.54	10.24	.009	.084	.12	.26	.12	.09	.54	.95	2,461	3,470	7,571	2,839
..	Ss. of S. 2354 (3 ft.) ..	r. L. ..	.31	10.74	.009	.059	.09	.19	.09	.08	.53	.88	1,767	2,839	5,678	2,523
2359	Murgon ..	r. L. ..	1.84	11.45	.003	.246	.07	.31	.17	.14	.47	.32	.0026	.1416	.0417	.0098	6,902	2,055	8,810	3,818	3,964	73	Ac.	80	2	78	
2360	Ditto ..	r. cl. L. ..	1.88	9.96	.004	.245	.07	.50	.21	.12	.55	.62	.0011	.2435	.0469	.0053	7,413	2,208	15,140	3,785	7,365	35	Ac.	17	Nil	17	
2376	Mount Lawless ..	bl. Cl. ..	1.20	12.95	.011	.177	.12	1.52	1.65	.24	.51	.36	.0017	.3083	.0746	.0072	5,286	3,590	45,360	7,180	9,228	52	Ac.	42	4	42	
2398	Murgon ..	r. L. ..	2.26	9.06	.008	.277	.09	.71	.10	.09	.69	.92	.0057	.3845	.0538	.0061	9,070	3,034	23,260	3,034	12,580	189	N.	Nil	Nil	Nil	
2265	WIDE BAY— Millbank, Bundaberg ..	d. gr. s. L. ..	.91	3.57	.008	.091	.09	.56	.43	.29	.86	.25	.0119	.1056	.0297	.0096	3,426	3,426	21,320	11,040	3,986	449	Ac.	21	Nil	21	
2266	Ditto ..	d. gr. L. ..	1.36	8.03	.029	.149	.06	.22	.40	.19	.70	.10	.0015	.0280	.0503	.0048	4,811	1,991	6,967	6,303	2,674	49	Ac.	49	1	48	
2267	Nambour ..	gr. s. S. ..	.65	1.94	.006	.034	.06	.50	.44	.24	.89	.41	.0116	.0920	.0268	.0046	1,341	2,366	19,713	9,463	3,600	453	Ac.	4	Nil	4	
2268	Ditto ..	l. gr. L. ..	.81	3.93	.009	.079	.02	.21	.17	.24	.86	.48	.0008	.0371	.0237	.0070	2,587	663	6,966	7,961	1,207	26	Ac.	51	29	22	
2269	Ditto ..	gr. L. ..	1.91	11.22	.010	.195	.03	.24	.36	.20	.65	.02	.0022	.0542	.0540	.0132	5,597	938	6,879	5,629	1,557	62	Ac.	97	16	81	
2270	Woombye ..	r. s. S. ..	.81	2.21	.004	.017	.02	.15	.10	.08	.90	.57	.0014	.0277	.0139	.0116	666	787	5,874	3,133	1,073	55	Ac.	28	4	28	

TABLE I.—ANALYSES OF QUEENSLAND SOILS—continued.

Laboratory No.	Locality.	Description of Soils.	TOTAL ELEMENTS IN THE SOIL, CALCULATED ON SOIL DRIED AT 100° C.										Available Plant Food, Soluble in 1 per cent. Citric Acid.				Total Elements, lb. per Acre, 12" Deep.				Available Plant Food, Soluble in 1 per cent. Citric Acid; lb. per Acre, 12" Deep.			Soil Acidity.								
			Humus.		Combined Water and Other Organic Matter.		Chlorine.		Nitrogen.		Phosphoric Acid.		Lime.		Magnesia.		Potash.		Total Insoluble		Phosphoric Acid.		Lime.		Potash.		Total Acidity (Tones).		Mineral Acidity (Hopkins).		Organic Acidity (f-H).	
			%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
2346	WIDE BAY—continued:	r. L.	1.23	13.44	.019	.207	.35	.43	.20	.10	42.44	.0020	.1795	.0354	.0124	6.561	11,218	13,595	3,399	64	5,691	394	Ac.	39	4	39	39	39	39	39		
2353	Bundaberg	r. br. s. L.	1.32	6.27	.005	.123	.10	.43	.89	.74	74.85	.0122	.1220	.0656	.0159	3,624	2,912	12,620	21,682	359	3,590	466	Ac.	34	Nil	34	34	34	34	34		
2355	Kandanga	r. L.	1.47	9.60	.011	.176	.19	.45	.21	.11	51.78	.0045	.2054	.0707	.0076	5,574	5,972	14,275	3,649	143	6,502	242	Ac.	23	Nil	23	23	23	23	23		
2356	Kowbi	l. br. L.	1.73	9.64	.006	.194	.04	.36	.08	.04	62.95	.0008	.1801	.0279	.0025	5,938	2,654	10,949	1,327	23	5,517	76	Ac.	19	Nil	19	19	19	19	19		
2361	Ditto	gr. S.	.65	.74	.003	.022	.01	.06	under .01	under .01	96.76	.0007	.0034	.0032	.0025	873	397	2,501	trace	28	135	99	Ac.	21	5	21	21	21	21	21		
2362	Boonooroo Plains	gr. S.	.50	.51	.005	.022	.01	.06	under .01	under .01	98.12	.0008	.0017	.0018	.0028	891	405	2,553	trace	32	69	113	Ac.	21	8	21	21	21	21	21		
2363	Ditto	r. L.	1.81	12.13	.006	.196	.08	.44	.28	.10	40.90	.0038	.1809	.0427	.0036	5,886	2,545	13,045	2,863	114	5,413	108	Ac.	36	Nil	36	36	36	36	36		
2381	Kalkie	r. L.	1.92	8.81	.029	.161	.09	.22	.10	.05	67.15	.0032	.0651	.0257	.0056	5,051	2,676	7,024	1,672	100	2,040	173	Ac.	93	6	93	6	87	87	87		
2382	Nerada, near Maryborough	r. L.	1.96	13.38	.013	.232	.21	.51	.33	.08	41.01	.0023	.2013	.0358	.0035	6,718	5,993	14,825	2,208	66	5,829	101	Ac.	25	Nil	25	25	25	25	25		
2395	Kalkie	gr. s. L.	1.29	1.92	.005	.124	.04	.64	.31	.17	89.06	.0024	.0629	.0200	.0064	5,084	1,653	26,040	7,026	99	2,567	260	Ac.	25	1	25	1	24	24	24		
2396	Blackmount	r. L.	5.99	19.27	.009	.553	.33	.48	.43	.22	28.96	.0052	.2162	.0421	.0210	15,015	8,832	12,930	631	142	5,864	571	Ac.	83	1	83	1	82	82	82		
..	Maleny	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Ac.	123	3	123	3	120	120	120	
2407	Ss. of S. 2396	..	1.80	10.87	.006	.190	.16	.39	.04	.10	49.68	.0032	.1777	.0069	.0045	5,836	5,048	11,990	3,155	57	5,422	139	Ac.	42	Nil	42	42	42	42	42		
2408	Horton, Isis	d. r. cl. L.	.90	1.49	.004	.028	.02	.14	.53	.01	91.57	.0001	.0655	.0115	.0033	1,294	924	6,472	462	5	3,004	152	Ac.	21	Nil	21	21	21	21	21		
2415	Gooburrum	gr. s. S.	5.79	10.23	.020	.447	.05	.17	.24	.05	76.81	.0045	.0154	.0158	.0057	6,297	815	2,446	652	63	217	81	Ac.	212	12	212	12	200	200	200		
2421	Ditto	ch. H. silt..	1.37	3.93	.008	.103	.05	.42	.54	.44	83.64	.0258	.0426	.1103	.0226	3,653	1,808	14,830	15,550	919	1,519	807	Ac.	36	1	36	1	35	35	35		
2422	Bonna	br. s. S.	.65	1.88	.006	.028	.01	.09	.18	.03	94.80	.0036	.0304	.0302	.0052	1,226	438	3,940	1,313	158	1,322	228	Ac.	34	.4	34	.4	34	34	34		
2443	Branyan	br. s. S.	3.83	13.29	.030	.385	under .01	.38	.63	.13	46.96	.0054	.0726	.0484	.0075	10,320	trace	10,260	3,622	145	1,944	202	Ac.	117	.4	117	.4	113	113	113		
..	Maleny	r. L.	1.09	10.35	.030	.097	under .01	.23	.63	.14	49.49	..	..	..	..	2,590	trace	6,472	3,883	..	..	..	Ac.	..	..	..	..	..	..	..

2444	Maleny	r. L.	2.88	12.54	.031	.213	under	.14	1.27	.09	41.25	-.0018	-.0303	-.0229	-.0074	5,987	..	2,883	2,589	52	851	207	Ac.	104	3	101
..	Ss. of S. 2444	r. L.	1.41	11.85	.033	.066	under	.15	1.08	.07	42.57	1,828	..	4,242	1,958
2451	Gundiah	d. gr. st. cl. S.	2.87	7.81	.010	.265	.08	.29	.30	.12	.43	78.56	-.0079	-.0575	-.0187	-.0060	4,798	1,487	5,208	7,811	143	1,042	108	Ac.	148	70	78
2452	Bauple	br. st. L.	..	..	1.87	4.76	.030	.141	.06	.17	.12	.09	86.20	-.0052	-.0361	-.0179	-.0087	3,895	1,668	4,726	2,502	145	995	239	Ac.	108	29	79
2453	Ditto	Y. L.	..	..	1.03	5.12	.046	.133	.08	.82	.25	.17	82.64	-.0039	-.1094	-.0761	-.0045	4,630	2,872	28,716	6,102	136	3,820	158	Ac.	44	2	42
2454	Ditto	Y. st. L.	..	..	1.47	5.32	.034	.136	.06	.15	.12	.07	83.24	-.0021	-.0494	-.0199	-.0041	4,099	1,835	4,859	2,141	64	1,489	122	Ac.	104	23	81
2455	Ditto	r. st. cl. L.	..	..	1.39	6.74	.039	.162	.10	.28	.25	.28	74.51	-.0033	-.0509	-.0191	-.0044	4,324	2,754	7,435	7,435	88	1,357	119	Ac.	187	156	31
2460	Pialba	Y. L.	..	..	1.12	5.20	.134	.130	.04	.17	.14	.07	81.26	-.0014	-.0211	-.0111	-.0108	4,073	1,274	5,410	2,227	45	658	337	Ac.	120	120	Nil
2461	Ditto	d. br. st. s. L.	..	..	1.01	2.59	.094	.096	.02	.23	.19	.02	93.10	-.0018	-.0362	-.0244	-.0084	2,332	490	5,648	490	44	879	203	Ac.	32	2	30
2463	Lynwood, Childers	r. L.	..	..	1.68	14.30	.024	.240	.20	.39	.39	.07	42.48	-.0008	-.1347	-.0379	-.0030	7,596	6,302	12,275	232	26	4,253	96	Ac.	51	Nil	51
2464	Kowbi	d. r. L.	..	..	.89	10.13	.010	.210	.17	.42	.34	.16	53.14	-.0058	-.1876	1.511	-.0171	6,701	5,308	13,270	4,976	185	5,961	544	N.	17	Nil	17
MORETON—																													
2267	Nambour	gr. s. S.	..	..	.65	1.94	.006	.034	.06	.50	.44	.24	89.41	-.0116	-.0920	-.0268	-.0046	1,341	2,366	19,713	9,463	453	3,600	181	Ac.	4	Nil	4
2306	Brisbane	bl. cl. L.	..	..	1.94	6.49	.004	.159	.06	.26	.31	.25	80.21	-.0035	-.0475	-.0443	-.0048	4,605	1,893	7,579	7,255	101	1,377	139	Ac.	108	27	81
2328	Ditto	l. br. cl. L.	..	..	.88	5.54	.007	.128	.10	.66	.66	.54	79.72	-.0184	-.1950	-.0017	-.0350	3,981	3,236	20,709	16,825	572	6,087	1,093	Alk.	2	Nil	2
2329	Ditto	br. s. S.	..	..	.25	1.44	.004	.039	.07	.13	.13	.11	94.63	-.0077	-.0563	-.0015	-.0123	1,569	2,817	5,232	4,427	309	2,254	491	N.	6	Nil	6
2336	Bli Bli, Nambour	d. gr. S.	..	..	2.16	1.19	.008	.135	.01	.08	.07	.01	95.85	-.0030	-.0325	-.0145	-.0033	4,592	342	2,741	241	102	1,110	113	Ac.	97	9	88
2337	Ditto	r. s. L.	..	..	1.63	4.70	.010	.136	.06	.08	.13	.05	86.56	-.0034	-.0438	-.0316	-.0061	4,446	1,991	2,654	1,659	109	1,429	199	Ac.	59	1	58
2338	Bribie Island	P. S.	..	..	10.39	8.81	.019	.416	.02	.64	.20	.04	79.80	-.0044	-.0512	-.0355	-.0101	9,681	484	15,005	968	102	1,193	234	Ac.	487	16	471
2351	Queen Garden, Brisbane	d. gr. s. L.	..	..	2.20	10.70	.009	.215	.44	1.73	.60	.24	74.22	-.1224	-.3178	-.1047	-.0398	5,939	12,160	47,795	6,787	3,385	8,795	1,100	Alk.	8	Nil	8
2357	Aspley	r. L.	..	..	1.30	8.20	.008	.115	.10	.16	.06	.05	59.52	..	..	..	..	3,846	3,345	5,352	1,672	..	..	..	Ac.	..	..	..
2358	Ditto	br. s. L.	..	..	1.25	5.29	.008	.140	.16	.48	.11	.07	80.50	..	..	..	..	5,064	5,787	17,360	2,532	..	..	..	Ac.	..	..	..
2371	Rosemount, via Nambour	ch. s. S.	..	..	1.69	3.63	.002	.092	.06	.26	.01	.05	84.50	-.0021	-.1084	-.0120	-.0065	3,353	2,235	9,388	1,862	75	3,942	235	Ac.	34	1	33
2377	Bald Hills	d. gr. L.	..	..	2.85	5.18	.021	.240	.07	.68	.36	.27	82.58	-.0083	-.2580	-.0444	-.0168	7,669	2,284	21,861	8,815	264	8,258	538	Ac.	42	2	40
..	Ss. of S. 2377	Y. gr. cl. L.	..	..	1.05	3.64	.010	.090	.04	.96	.36	.19	84.12	..	..	..	..	3,231	1,436	34,103	6,820	..	..	..	..	..	..	..
2378	Bald Hills	bl. L.	..	..	4.01	7.40	.020	.370	.13	1.18	.51	.22	78.45	-.0109	-.3326	-.0799	-.0229	9,898	3,535	31,546	5,983	291	8,909	615	Ac.	21	1	20
..	Ss. of S. 2378	d. gr. L.	..	..	1.20	6.52	.010	.123	.08	.79	.43	.23	81.81	..	..	..	..	4,248	2,763	26,940	7,943	..	..	..	..	..	..	..
2399	Cleveland	ch. s. L.	..	..	2.05	2.52	.007	.092	.01	.21	.12	.02	85.11	-.0008	-.0488	-.0201	-.0198	3,647	405	8,104	810	32	1,929	782	Ac.	30	Nil	30

TABLE I.—ANALYSES OF QUEENSLAND SOILS—continued.

Laboratory No.	Locality.	Description of Soils	TOTAL ELEMENTS IN THE SOIL, CALCULATED ON SOIL DRIED AT 100° C.										Available Plant Food, Soluble in 1 per cent. Citric Acid.				Total Elements, Lb. per Acre, 12" Deep.				Available Plant Food, Soluble in 1 per cent. Citric Acid, Lb. per Acre, 12" Deep.			Soil Acidity.		
			Soluble in Hydrochloric Acid, Sp. Gr. 1.115.					Soluble in 1 per cent. Citric Acid.					Lime.				Phosphoric Acid.				Reaction with Litmus Paper.			Cwt. Calcium Carbonate per Acre, 12" Deep.		
			Humus.	Combined Water and other Organic Matter.	Chlorine.	Nitrogen.	Phosphoric Acid.	Lime.	Magnesia.	Potash.	Total Insoluble Matter.	Phosphoric Acid.	Lime.	Magnesia.	Potash.	Nitrogen.	Phosphoric Acid.	Lime.	Potash.	Phosphoric Acid.	Lime.	Potash.	Total Acidity (Jones).	Mineral Acidity (Hopkins).	Organic Acidity (J-K).	
MORETON—continued:																										
2402	Runcorn	ch. cl. L. . .	1.74	6.75	.005	.149	trace	.40	.72	.02	70.15	trace	.1306	.0120	.0034	5,241	13,999	718	..	4,581	118	53	1	52		
2403	Ditto	ch. cl. L. . .	2.00	8.04	.005	.202	.01	.49	.83	.03	73.54	trace	.1278	.0140	.0030	6,663	16,315	1,019	..	4,222	98	66	1	65		
2404	Ditto	ch. cl. L. . .	1.56	6.20	.005	.139	trace	.33	.70	.02	75.41	trace	.0943	.0098	.0043	4,811	11,489	718	..	3,255	147	59	1	58		
2416	Kilcoy	ch. L. . .	2.78	7.80	.010	.236	.08	1.86	1.72	.64	67.62	.0072	.1641	.0144	.0045	7,348	58,081	19,890	224	5,102	141	76	Nil	76		
2417	Ditto	gr. L. . .	1.16	4.45	.010	.091	.13	3.93	1.03	.41	72.82	.0048	.0840	.0123	.0041	3,304	142,420	14,682	172	3,039	146	68	Nil	68		
2423	Maroochy	l. br. s. L. . .	1.21	3.19	.086	.096	.01	.27	.13	.13	88.24	.0016	.0102	.0243	.0032	3,229	9,178	4,419	54	343	108	87	38	38		
2424	Ditto	bl. cl. L. . .	1.17	4.63	.032	.095	.01	.11	.21	.18	83.05	.0007	.1076	.0114	.0032	3,152	6,349	5,972	23	3,510	106	36	3	33		
2425	Ditto	d. gr. cl. L. . .	8.99	13.19	.075	.465	.08	.30	.29	.16	60.91	.0091	.0319	.0241	.0095	9,016	5,913	3,264	117	618	185	200	160	160		
2428	Ditto	d. gr. s. L. . .	.76	3.18	.040	.053	.01	.08	.37	.12	89.50	.0003	.0220	.0496	.0047	1,873	2,828	4,242	10	771	166	97	65	32		
2429	Ditto	d. gr. Cl. . .	1.46	9.26	.047	.157	.02	.67	.51	.32	69.28	.0006	.1518	.0512	.0080	5,256	696	10,790	21	5,068	268	53	Nil	53		
2430	Ditto	gr. br. Cl. . .	3.28	9.98	.074	.256	.09	.47	.60	.26	67.43	.0051	.0991	.0684	.0240	7,158	13,090	7,274	143	2,770	672	112	6	106		
2431	Ditto	br. L. . .	3.11	9.89	.064	.293	.09	.36	.83	.21	67.88	.0027	.0603	.0256	.0129	8,375	10,460	5,982	78	1,741	371	186	75	111		
2432	Ditto	br. L. . .	1.86	7.82	.049	.185	.09	.32	.69	.22	72.01	.0024	.0544	.0565	.0150	5,354	9,272	6,282	69	1,573	434	152	69	83		
2433	Ditto	y. br. Cl. . .	1.48	7.65	.066	.178	.03	.24	.25	.06	72.94	.0005	.0543	.0470	.0266	5,205	7,180	1,795	15	1,591	781	114	47	67		
2434	Ditto	br. cl. S. . .	1.38	5.33	.038	.143	.02	.50	.74	.16	79.96	.0017	.0790	.0501	.0067	4,607	16,120	5,265	56	2,543	217	87	28	59		
2435	Ditto	d. gr. s. L. . .	2.35	5.68	.053	.165	.05	.35	.54	.07	82.04	.0032	.0842	.0172	.0049	5,198	10,910	2,246	99	2,641	154	108	20	88		
2436	Ditto	d. gr. s. L. . .	1.60	7.65	.039	.231	.10	.60	.91	.03	71.04	.0035	.1658	.0135	.0038	7,188	18,610	962	109	5,157	118	44	3	41		
2437	Ditto	d. gr. s. L. . .	2.69	8.12	.067	.237	.06	.31	.36	.09	76.21	.0097	.0667	.0349	.0034	6,974	9,137	2,741	286	1,961	100	144	97	47		
2438	Ditto	d. gr. s. L. . .	2.79	8.03	.157	.276	.04	.21	.35	.12	80.74	.0049	.0311	.0276	.0111	8,163	6,091	3,655	146	920	329	117	26	91		
2439	Ditto	ch. L. . .	4.65	12.30	.180	.380	.13	.41	.70	.27	65.84	.0269	.0526	.0605	.0207	8,413	9,014	6,099	596	1,165	457	148	29	119		

REPORT OF SEEDS, STOCK FOODS, FERTILISERS, AND PEST DESTROYERS INVESTIGATION BRANCH.

SEEDS.

In the course of the year ended 30th June, 1926, 1,663 samples of seeds were examined, with the results as set out on Tables I., II., and III. The samples examined were derived from the following sources:—

Official samples taken by officers of this branch from vendors in different parts of the State, for the purposes of the Pure Seeds Acts	728
Official samples of imported seeds taken at Brisbane by officers of this branch for the purposes of the Commerce (Trade Descriptions) Act	456
Samples of agricultural seeds sent in by vendors for analysis	168
Samples from Department of Agriculture and Stock—	
Director of Agriculture	122
Cotton Branch	99
Samples received from shopkeepers, representing vegetable seeds offered for sale in pictorial packets	63
Samples sent in by farmers	27
	1,663

The weed seeds, weeds, and poisonous plants found in commercial samples of seeds and stock foods during the year under review are set out in Table A. For the better understanding of this table, in addition to the scientific name the usually accepted common name has been given, and a brief reference made to those known to be poisonous, suspected poisonous, or known to give a bad flavour to butter and flour, or likely to cause mechanical injury.

Table I. gives the analytical purity of the principal agricultural seeds examined, also the maximum amount of inert matter, weed seeds, or other foreign ingredients that is allowed in the seeds appearing in the table, together with the average amount of inert matter and weed seeds found in the samples that complied with the prescribed standard, and the average amount found in the samples that did not comply. In each case the total number of samples examined is given as well as the number that complied with the standard, those that did not, and the number of samples that contained prohibited seeds, such as *Datura* (thorn apple), *Cuscuta* (dodder), or contained diseased or insect-infested seeds. The weed seeds in order of frequency of occurrence are also given, and the prohibited weed seeds found are set out in heavy type.

Table II. gives the germinating capacity of the principal seeds examined during 1925-26. With each kind of seed the highest germination recorded during the year is given, the minimum germination required by the Pure Seeds Acts, the average germination of the samples up to standard, the average germination of the samples below standard, and the lowest germination recorded during the year. The total number of samples is also given.

Table III. gives the germinating capacity of the principal seeds imported from overseas during 1925-26; the country from which the goods were imported is set out in order of frequency of consignments. For purposes of comparison

the highest and lowest germinations are given, and the minimum percentage required by the Queensland Seed Acts. With the exception of lucerne seed, the germination standard of which is 80 per cent., the Commerce (Trade Descriptions) Act does not give definite standards. The regulations, however, require the trade description to state the seeds' condition as to soundness, cleanliness, and newness; soundness being described as freedom from disease, and from damage or decay, and newness that the seed has been gathered during the immediate preceding harvest time of the country or place named in the trade description.

In the absence of definite standards other than that for lucerne, the minimum percentage of germination required by the Queensland Seed Acts has been the basis of examination.

On reference to the table, it will be noted that 20 samples out of 456 were below the required minimum germination. In each instance suitable action was taken under the State Acts to ensure the seeds being destroyed or treated in such manner as would bring them up to the required standard. A sample of beet seed, with a germination of 52 per cent., was easily brought over 55 per cent. by removal of the small, light seeds. In the case of onion with a germination of 15 per cent., carrot with a germination of 28 per cent., and peas with a germination of 36 per cent., the importers destroyed the goods as being unfit for their requirements.

Seeds Suitable for Market Growers.

The ever-growing demand for such vegetables as cabbage, cauliflower, carrot, beet, onion, turnip, and tomato has directed many growers' attention to the necessity of sowing the varieties most suitable for market requirements. In the past little attention has been given to strains, the usual idea being that identical crops would be produced from any kind of cabbage, cauliflower, &c., and the buyers' principal aim was the price of the seed.

From even a casual glance at Table III. it will be apparent that seedsmen obtain their supplies from many countries. As every exporting country has a number of merchants doing an overseas trade, it follows that because A and B purchase cabbage seed from, say, the United States of America, it is more than probable that their supplies come from different merchants. Assuming both importers purchase cabbage under the same variety name, it is still possible for the seeds to be of different strains of the particular kind of cabbage invoiced.

New seeds of cabbage, beet, cucumber, cauliflower, tomato, turnip, and even carrot will easily retain their germination for a year if kept in a cool dry place. Market growers would, therefore, be well advised to purchase their requirements of cabbage, cucumber, tomato, &c., a year in advance and make a trial of each lot by putting a row alongside the main crop. If the seed proves to be the strain best suited for market requirements they have enough on hand for their next year's main crop. If unsatisfactory their loss is little more than the cost of the seed.

When buying it is well to ascertain the seedsman's stock number, and any other particulars regarding the strain purchased. This will enable the seedsman to supply the buyer's future requirements with seed from the same source. When a good source of supply has been found it is obvious that the buyer should again obtain supplies from the same merchant, as the buying of supplies from casual vendors of seed in most cases leads to monetary loss in the resulting crop.

Vegetable Seeds in Pictorial Packets.

Table II. mentions 63 samples of seeds in pictorial packets; the goods in question were offered for sale by shopkeepers who had obtained their supplies from what can best be described as itinerant dealers in seeds.

From the samples examined it appears that the packers had in many instances put prickly spinach into cabbage packets, turnip into packets marked "celery," also turnip into cauliflower packets. Many of the seeds were of poor germination, some as low as 20 per cent., and in a few cases even less. As a result of investigations, several thousand packets were destroyed by various vendors, who it appeared had paid cash for the goods on or before delivery.

Unfortunately the small traders selling these lines are absolutely without knowledge of seeds; further, they neglected the ordinary business precautions when purchasing goods from an unknown source, with the result that they not only lost more money than they could well afford but at the same time raised a considerable number of irate customers. If small shopkeepers must sell seeds, they should at least obtain their supplies from seed merchants of repute; and the general body of amateurs would also be well advised to obtain their supplies from legitimate seedsmen, or as an alternative from those storekeepers who sell pictorial packets bearing the names of merchants of good standing.

Agricultural Seeds.

Although nearly everyone will agree that better seeds mean better crops, it must not be overlooked that better cultivation means better seeds. On reference to Table I. it will be noted that, in many cases, samples of canary, prairie grass, *Setaria italica*, Japanese millet, Sudan grass, barley, and lucerne contained seeds of the poisonous thorn apple (*Datura* sp.); several samples of lucerne contained seeds of dodder (*Cuscuta* sp.); about one-third of the cowpea samples were infested with the cowpea weevil (*Bruchus* sp.).

The general body of merchants cannot be held to blame for these occurrences; the producer of the crop must know of the presence of such weeds as thorn apple and dodder, which should be eradicated from all crops, whether intended for seed or for use as feed.

With the cowpea weevil (*Bruchus* sp.), it is possible for it to be kept under control by the fumigation of the seed as soon as possible after threshing, and then storing it in an insect-proof container, such as a tank, otherwise stray insects will lay their eggs on the cowpeas, making a further fumigation necessary. From experiments made with cowpeas during 1925-26 it appears that 4 oz. of bisulphide of carbon is sufficient for 100 cubic feet of chamber space.

The round tanks usually sold as 500-gallon tanks, measuring about 4 feet in diameter with a height of 6 feet, with a capacity of about 75 cubic feet, would require 3 fluid oz. of bisulphide of carbon. To get the best results the tank should be filled with cowpeas, and some cotton waste placed near the opening, the quantity of bisulphide of carbon required being poured on the cotton waste and the tank quickly closed with an air-tight lid. The seed should remain in the tank (which must be airtight) not less than twenty-four hours or longer than thirty hours. The cowpeas should then be taken out of the tank and bagged for immediate despatch to a merchant, or stored in an insect-proof, airtight container, free from bisulphide of carbon.

In our report for 1924 reference was made to the increasing number of lucerne seed samples that had been attacked by the lucerne seed wasp (*Bruchophagus funebris*). At the time it was suggested that farmers would be well advised not to save any seed from infested paddocks, and to cut the crop before the seed had ripened, or utilise it as green feed. During 1925-26 several merchants found it necessary to fumigate their lucerne seed in the manner described for cowpeas, also to heavily machine-clean the bulks, and at our suggestion burn all the cleanings.

Whatever a merchant may do to bring a sample of lucerne seed up to the requirements of the Seeds Acts, it should not be overlooked that effective control of the pest must be on the farm. When lucerne seed is threshed a quantity of debris is always left. As this material often contains a large number of broken pods containing seeds infested with the hibernating larvæ, it is obvious that such debris should be burnt, and a general clean-up made before the warm weather sets in.

Bisulphide of Carbon.

Users of bisulphide of carbon have been repeatedly warned of the danger of explosion when a naked light is brought near air charged with its fumes. As a precaution against such an occurrence it is advisable to place the fumigation tanks in a position that does not exclude daylight. Further, it must not be overlooked that, when the fumes of bisulphide of carbon are present in the fumigation chamber for a longer period than is suggested, the germination of the seed may be adversely affected. With seed stored for any length of time the loss of germination will be particularly noticeable; this loss will not occur if the fumigant is used in the manner recommended.

Good Seed.

Seed to be good must have a high germinating capacity, be true to variety name, and free from weed seeds, inert matter, and diseased or insect-infested seeds. No matter how careful the grower may be, all crops will contain some plants other than the ones which it is intended to produce. A cleaning machine should therefore be used before the seed is offered for sale. In Queensland, as in every part of the world, the most critical buyers will be found in the merchants with efficient cleaning machinery.

An up-to-date seed-cleaning plant can make good samples of "As grown seeds" better, but it cannot make bad samples good. With a full

knowledge of their machinery possibilities, most merchants are willing to buy on a clean seed basis; they are not, however, inclined to purchase poor samples, and the usual market for seeds of indifferent quality is with dealers who have little appreciation of impurities. The actual seed user who insists on buying his supply on a price rather than a quality basis encourages the vendors of goods of inferior quality. Unfortunately, seeds of indifferent quality usually carry a large profit to the seller.

Good seeds cost money to produce and money to clean, and the general improvement of farm seeds rests largely on the farmers themselves. When practically every farmer insists on a high-grade product, the demand for poor-quality seeds will cease, and those unfit for sale as seed for sowing will disappear from the market.

During the year under review several complaints were received from farmers as to the germination and purity of such seeds as Sudan grass, lucerne, oats, &c. On investigation it was found that in most instances the seeds were purchased direct from the producers or from country storekeepers who were handling lines refused by the larger merchants. As usual with buyers from such sources they had neglected to obtain an invoice from the vendor, and would not give information sufficient to enable proceedings being taken under the Acts.

In several instances it was possible to find seeds of somewhat similar character in the local storekeeper's possession, with the result that a quantity of seed was destroyed or disposed of for feeding purposes.

It cannot be too widely known that samples representing seeds purchased by farmers for their own sowing are examined at the Seed Laboratory free of charge. During the year only twenty-seven farmers availed themselves of this opportunity. Although buyers are able to form a good idea as to the market values or prices of produce, experience shows that they are frequently misled as to the purity and germination of seeds. The time to ascertain this is before sowing; samples should be drawn from the goods actually delivered and in the buyer's possession, care being taken to make them truly representative of the bulk. One little matter is most important: the name and address of the sender should be written in ink on every sample.

STOCK FOODS.

The samples examined under the Stock Foods Act were derived from the following sources:—

(1) Samples sent in by wholesale sellers as required by Section 3 of the Act ..	114
(2) Official samples taken by officers of this branch from wholesale and retail sellers in different parts of the State ..	110
(3) Samples sent in by wholesale sellers for analysis	21
(4) Samples sent in by farmers or other buyers	10
(5) Samples received from Chief Inspector of Stock	9
	264

Tables IV. and V. give the names of the Queensland wholesale sellers who have sent in statutory declarations, specimen labels, invoices,

and samples as required by section 3 of "The Stock Foods Act of 1919." On reference to the tables it will be found that seller's guarantee as to the minimum amount of crude protein, crude fat, and the maximum amount of crude fibre is given. In most cases where the seller's guarantee did not appear to be substantially met an amending label has been received. The stock foods with an amended guarantee are indicated by an asterisk (*). Tables VI. and VII. give the average analysis of the various brands of bran and pollard now on the Queensland market. A summary of the analyses from 1923 to 1926 is also given, from which it will be noted that the average crude protein content of bran is 0.3 per cent. less than last year and 0.1 per cent. less crude fat.

As found in previous years, none of the samples were entirely free from bits of chaff and other extraneous matter.

The principal weed seeds found are also given in the table. Out of 28 samples examined, 8 contained from 0.1 to 0.4 per cent. of whole or partly crushed wheat, and 2 a trace of *Tilletia tritici* (bunt).

In the case of pollard the average crude protein content is 0.6 per cent. less than last year, and 0.1 per cent. less crude fat. With few exceptions, the 26 samples of pollard examined contained a trace of extraneous matter as well as of meal derived from barley and oats, 14 of the samples contained wheat by-products that would not pass through a 1½-mm. sieve. The actual amounts ranged from 0.1 to 3.1 per cent. over the percentage allowed. Although 9 samples contained a slight trace of *Tilletia tritici* (bunt), the amounts found were less than the maximum allowed—one-tenth of 1 per cent., the highest amount found being .07 per cent.

The analysis of the principal mixed or concentrated stock foods, other than wheat by-products (bran and pollard), are set out on Table VIII. On reference to this table it will be found that the kind of stock food is given, and the name under which such stock food is commonly sold, the average of the analyses made of the different foods, also the seller's guarantee. Reference has already been made to amended guarantees, which, in some instances, were due to variations in the raw materials used. On the whole it is pleasing to state that the sellers' guarantees have been substantially met.

Owing to the prolonged drought in the Western areas there has been a greatly increased demand for concentrated stock foods, and many inquiries have been made for a concentrate suitable for feeding to sheep. However good the concentrate suitable for this purpose may be, sheep still require a sufficiency of roughage. It must also be borne in mind that maize is not high in protein. Some samples representing large quantities sent to the Western districts had a crude protein content of less than 9 per cent., and contained a quantity of damaged and mouldy grain.

In the production of stock foods in cube form, manufacturers often use a proportion of molasses in order that the ingredients may adhere and take the desired shape. Owing to long transit from the place of manufacture, in some instances a considerable proportion of this material has

arrived in more or less a powder form, therefore not so suitable for feeding to sheep as would be foods arriving in an unbroken condition. Further, it has been noticed that molasses is apt to make the feed mouldy when stored for any length of time. This condition, however, has not been noticed in stock foods obtained fresh from the manufacturer.

Barley meal appears to be coming into favour as a food for pigs. The regulations under the Stock Foods Act define meal as the clean, sound, ground grain or finely crushed product of the entire grain cereal, or seed of which such meal purports to be made. Recently, several samples of barley were submitted for examination; most of them were badly smut-infested, and merchants have been warned that the making of meal from such material would render them liable to proceedings. A linseed oil meal manufactured by the new process is now on the market. As would be expected, the meal in question contains less than 1 per cent. of crude fat and more crude fibre than the ordinary linseed oil meals.

The large quantities of foxtail millet (*Setaria italica*) and Japanese millet seeds held by many produce merchants during the early part of the year induced several of them to make millet seed meals. Samples of the meals in question were analysed by the Agricultural Chemist, and the average results are given in the table.

For the information of several large produce merchants, samples of prime lucerne chaff, ordinary lucerne chaff, wheaten hay chaff, also wheat barley and oat straw, were analysed, and the figures given will be useful for the future guidance of both buyers and sellers, who often hold quite erroneous opinions as to the feeding value of straw as compared with lucerne hay. The Stock Foods Act defines chaff as being hay or straw cut into short lengths, and hay as any dried or cured cereal, grass, or legumes cut *before complete ripeness*, and from which the grain or seed has not been removed; straw being defined as any dried *ripe or mature* cereal grass or legume from which seed or grain has been removed by any process or by an insect or by storm.

On reference to the table some indications of the relative nutritive values will be found. Unfortunately, chaffing of lucerne hay makes the selling of inferior lucerne possible, as the buyer has difficulty in the detection of weeds and other foreign material frequently therein.

Last January, several complaints were made by merchants regarding the quality of a lucerne hay received from some of their sending stations. In the first place the battens ranged in weight from just over 3 lb. to just under 9 lb. each, and the material was badly infested with *Xanthium spinosum* (Bathurst burr). Several bales from these consignments were carefully examined. One contained just over 84 per cent. of lucerne hay and grasses, 13.8 per cent. of Bathurst burr, and 1.25 per cent. of other bad weeds. Another bale, representing goods purchased by a large baker in the Paddington district, contained 5.4 per cent. of Bathurst burr, and 8.3 per cent. of other bad weeds, dirt, roots, &c. The total weight of the battens on this bale was just over 60 lb., nearly 9 lb. each. A sample of lucerne chaff submitted for examination by

Chief Inspector of Stock contained over 2 per cent. of *Datura* seeds and capsules. The sample in question represented a line of fifty-three bags delivered by a farmer of the Kingsthorpe district to a Toowoomba merchant. An official sample taken on the merchant's premises was carefully examined, and found to consist of 90.47 per cent. of lucerne and useful plants, just over 2.3 per cent. of *Datura* seeds and capsules, 4.8 per cent. of weed seeds principally *Tribulus terrestris* (bull's-head) and *Hibiscus trionum*; the remainder of the sample consisted of soil.

As a result of these investigations, several lots of so-called lucerne chaff and hay were destroyed by the owners on account of the material being deleterious to the life and health of stock.

In consequence of these findings and at the request of the Brisbane Produce Merchants' Association, a lecture was given early in June on weeds and other substances found in hay and chaff, and known to be deleterious to the life and health of stock. The merchants attending this lecture were each given specimens of *Datura* seeds and capsules, and similar specimens put up in sealed bottles have since been distributed to the principal merchants in the Toowoomba, Warwick, and Kingaroy districts. For the information of both buyers and sellers, paragraphs have appeared in the papers published in the areas referred to, and specimens of *Datura* can now be seen at the offices of the respective papers. Further specimens are available for distribution to persons interested in the production or sale of produce likely to contain plants or seeds deleterious to the life and health of stock.

In June, 1924, several large users of maize consulted us regarding the commercial possibilities of maize storage. At the time a satisfactory method of examination had not been worked out, too much reliance being placed on the grains being free from external insects. Several of these buyers who were interested in maize for feeding to horses submitted samples of different lines then offered for sale at Roma street; and, acting under our advice, purchased samples with a heavy volume weight, free from (external) live insects, with a moisture content of less than 14 per cent., samples containing a number of live insects or otherwise of obvious poor quality being rejected. A sample from each of the lots purchased was kept at the Laboratory. As soon as the hot weather set in, the samples in question were found to be badly insect-infested, in spite of the fact that they were free from external insects when put into airtight containers.

The buyers of the maize in question were recommended to fumigate with bisulphide of carbon on delivery and then store in airtight tanks. One large firm of carriers carefully followed our suggestions and did not open the tanks until after fifteen months' storage. The maize came out in excellent condition, and they were able, after retaining a sufficient quantity for their ordinary requirements, to sell the remainder at the highest then ruling prices.

When the tanks were opened the maize was sampled and the grain examined by the methods now adopted. As anticipated, the grain contained traces of insects in developmental stages; these, however, had been killed by the 1924 fumigation.

Bisulphide of carbon, even in moderate concentration, is poisonous to man. Because of this fact, combined with its disagreeable odour and the risk of explosion attendant on its use, many inquiries for a fumigant free from these disadvantages have from time to time been received.

By the courtesy of a large firm of produce merchants, several tons of maize were placed at our disposal for experimental purposes. Briefly the principal experiments were—

- (1) Drying at high temperatures for periods ranging from 18 minutes to 3 hours.
- (2) Storage in bags treated with a saline solution.
- (3) Fumigation by—
 - Forty volumes of ethyl acetate and sixty volumes of carbon tetrachloride, at different concentrations;
 - Bisulphide of carbon at different concentrations;
 - Paradichlor.;
 - Carbon dioxide.

As a result, these experiments with grain in bulk proved that when it is free from external insects and from insects in developmental stages inside the grain it can be kept indefinitely, provided it is not brought into contact with infestation of some kind, such as may more or less always exist in barns, warehouses, or places where insect-infested grain has previously been stored.

Carbon bisulphide has proved the best fumigant; it is thoroughly effective and cheap in application. Provided the proper course is adopted, there will be no retention of smell when the grain is subsequently marketed. The quantity recommended for maize is 3 pints ($4\frac{1}{2}$ lb.) per 1,000 cubic feet, it being always remembered that the quantity to be used has a relation to the cubic content of the container, which should be full of grain.

At the request of the principal merchants dealing in maize, two lectures were given at the Laboratory, each being well attended by both buyers and exporters. An article giving details of the various findings appeared in the May number of the "Queensland Agricultural Journal," and reprints of same are available for distribution.

FERTILISERS.

Until quite recently the sale of fertilisers in Queensland appears to have been confined to the canegrowers and to such areas as Nambour, Redland Bay, Stanthorpe, &c. During the year under review no less than ninety-nine persons applied for licenses to sell fertilisers, many in districts from which hitherto there has been no demand. The reason for the great increase in the number of fertiliser dealers is probably due to inquiries made of country storekeepers for fertilisers suitable for the top-dressing of both lucerne and grass land. It is known that the use during the last three years of a few bags of fertiliser has now resulted in the selling of both super. and mixed fertilisers in quantities undreamt of two years ago.

A large lucerne grower who recently consulted us regarding the purchase of seed stated that he was this year buying several tons of fertiliser,

as his experience during the last three years had convinced him that the top-dressing of lucerne pays; the increased crops had fully satisfied him that his failures, if any, were in the application of too small quantities. Another grower some five years since applied super. at the rate of 1 cwt. per acre to a lucerne paddock now ten years old. Since the first year of application he has been using 2 cwt. per acre, and is convinced that he has more than doubled his crop.

In favourable years Nature is such an ample provider of grass of sorts—and carries on so unaided in its production—that stock raisers are apt to regard grass with indifference, probably for the reason that it is the only crop that gives something for nothing. The something, however, is often of low feeding value; this is particularly noticeable at the present time, with the result that many landowners are now purchasing considerable quantities of super., finely-ground Nauru phosphate, and bonemeal for the top-dressing of large areas, and present indications point to a large and increasing demand in Queensland for fertilisers suitable for the purpose referred to.

The Fertilisers Acts.

Under the present regulations every producer of fertilisers, that is, every licensed dealer, who, whether as manufacturer, importer, or wholesale dealer, is primarily responsible for putting any fertiliser on the Queensland market, is now required, in addition to the certificate of registration, to forward a schedule setting out the following particulars:—

1. The brand under which the fertiliser is known;
2. The price per ton of the fertiliser free on rail at Queensland works or at Brisbane;
3. The name and address of the manufacturer or importer of the fertiliser;
4. The place of manufacture; and
5. The raw materials from which the fertiliser is manufactured or prepared; and if the fertiliser contains mineral rock phosphate, Nauru phosphate, or any organic material such as leather, hoof, horn, hair, wool waste, peat, garbage, tankage, or similar material, the percentage by weight thereof, and a statement as to the treatment or process (if any) to which the organic material has been subjected.

Producers of fertilisers are also required, within seven days of registration, to forward a specimen of the printed label for each of the fertilisers registered. Up to the present 160 returns by producers have been made.

In some cases the labels submitted were not found to give the analysis in the manner required by the Act. In all such instances the necessary amending label has been insisted on.

During the year under review, 203 official samples of fertilisers were taken by officers of this branch from the Stanthorpe, Warwick, Toowoomba, Brisbane, Nambour, Gympie, Kingaroy, Townsville, and Cairns districts, and 67 samples were received for analysis from wholesale dealers in different parts of the State. No samples were received by this branch from farmers or other users.

For the information of large buyers a formula table was issued with last year's Annual Report; as inquiries are from time to time received for such a table, reprints were made and are now available for distribution. From Table IX., setting out the different fertilisers registered by the principal producers, it will be noted that the raw materials available are as follows:—

- Containing nitrogen only—
 - Sulphate of ammonia,
 - Nitrate of soda,
 - Dried blood.
- Containing both nitrogen and phosphoric acid—
 - Bone meal or dust,
 - Bone, flesh, and offal fertilisers.
- Containing phosphoric acid only—
 - Nauru or Ocean Island phosphate, superphosphate, basic super, basic slag.
- Containing potash only—
 - Sulphate of potash,
 - Muriate of potash.

Table IX. gives the name and full address of each of the principal producers or wholesale dealers in fertilisers, the name under which the fertiliser is sold, and the dealer's guarantee, set out in such a manner as indicates the percentages of, and forms in which, the various constituents—nitrogen, phosphoric acid, and potash—occur, also the percentage of fine and coarse material in meatworks' products, bonedust, &c.

Table X. sets out full particulars of the principal official samples analysed by the Agricultural Chemist during 1925-26. For convenience of reference, the percentage found is under the dealer's guarantee. After a careful perusal of these findings it will be observed that the dealers' guarantees have been substantially met.

PEST DESTROYERS.

It is frequently overlooked that the Pest Destroyers Act applies to such articles as—

- Arsenate of lead,
- Arsenic,
- Calcium cyanide,
- Cattle dips,
- Copper soda,
- Copper carbonate,
- Copper sulphate,
- Cyanide of sodium,
- Cyanide of potassium,
- Formalin or formol,
- Iron sulphate,
- Lime sulphur,
- Nicotine,
- Nicotine compounds,
- Phenolic insecticides,
- Germicides and disinfectants,
- Phosphorous pest destroyers,
- Pyrethrum (or insect powder),
- Prickly-pear poisons,
- Arsenical weed destroyers,
- Insecticides,
- Red oil preparations,
- Sheep dips,
- Strychnine,
- Sulphur,
- Tobacco dust,
- Tobacco powder;

Also, any insecticide,
Fungicide,
Vermin destroyer,
or weed destroyer not elsewhere included.

For the protection of the user, every dealer is required to label each package of pest destroyer in such a manner as to give the following particulars:—

1. The distinctive name of the pest destroyer.
2. The net weight contained in the package or, in the case of liquids, the true volume content expressed in imperial gallons or fractional parts thereof.
3. The names of the active constituents, and, when so required by the prescribed standards, the percentage of such active constituents and/or the impurities contained therein.
4. All directions for use of the pest destroyer.
5. The name and address of the Queensland wholesale dealer.

On the purchase of any pest destroyer of a greater value than 5s. the buyer should receive from the dealer a signed invoice setting out—

1. The name of the pest destroyer;
2. The net weight or imperial measure;
3. A warranty to the following effect:—

Notwithstanding any agreement to the contrary, this invoice shall be deemed to be and shall have effect as a warranty by me, the seller, that the constituents of the pest destroyer sold, and the percentage in which each constituent is contained therein and the percentage of each constituent contained in that part thereof which is soluble in cold water, accurately correspond with the constituents and percentages respectively stated in the statutory declaration furnished to the Under Secretary, Department of Agriculture and Stock, Brisbane, as prescribed with respect to the pest destroyer of the same name by "The Pest Destroyers Act of 1923."

For the information of dealers and in consequence of complaints received from users, an article on the requirements of the Pest Destroyers Act appeared in the December and January numbers of the "Queensland Storekeeper," also in such other trade papers as are understood to reach the sellers of these articles.

During the year ended 30th June, 1926, 264 samples of pest destroyers were obtained from the following sources:—

(a) Samples forwarded for registration under Section 3 of the Pest Destroyers Act, accompanied by statutory declarations, labels, and invoices	220
(b) Official samples taken by officers of this branch from dealers, for purposes of the Pest Destroyers Act	23
(c) Samples received from wholesale dealers for analysis	19
(d) Samples received from inspectors under the Diseases in Plants Acts	2
	264

In addition to the samples, statutory declarations, and forms sent in by wholesale dealers, 209 returns were received from retail dealers of pest destroyers.

Table XI. sets out the principal pest destroyers now on the market. For convenience of reference, the kind of pest destroyer, the name and address of the Queensland wholesale dealer, and full trade name under which the article is sold, are given, together with the active constituents appearing on the label.

On reference to the table it will be observed that a number of phenolic sheep dips were registered. Some of these, it appears, are purchased by the public as disinfectants. If the public insists on buying disinfectants with a low phenolic content under the name of sheep dip, no action can be taken, as standards for phenolic sheep dips have not been prescribed.

The regulations prescribe standards for arsenical sheep dips which are defined as any preparation in liquid, paste, or powder form containing a soluble arsenious compound, and represented as useful for making fluids used for dipping and/or jetting of sheep. Sheep dip, when diluted with water, in accordance with the instructions on the label for the purpose of dipping sheep, must not contain less than two-tenths of 1 per cent. and not more than one-quarter of 1 per cent. of arsenious trioxide (As_2O_3); and, when diluted with water in

accordance with the instructions on the label for the purpose of jetting sheep, must not contain less than seven-tenths of 1 per cent. and not more than three-quarters of 1 per cent. of arsenic trioxide (As_2O_3). A liquid sheep dip must be of such consistency that it will not separate into layers on standing, but must remain a homogeneous mixture. Sheep dips must not contain free caustic soda.

Although the table is substantially complete for the year ending December, 1926, it is to be noted that the actual work under this Act cannot be fully shown, as the Pest Destroyer year is from January to December, and this report written before some of the analyses have been made, the results of which will determine future action. It is, however, known that the principal brands of arsenical cattle and sheep dips are in accordance with the prescribed standards. There is also more uniformity in the preparations represented by the various dealers as useful for particular purposes, and it is reasonable to assume that the work put in during the last three years will lead to a general improvement in the articles coming under the Act.

FRED. F. COLEMAN,
Officer in Charge.

Table A.

WEED SEEDS, WEEDS, AND POISONOUS PLANTS FOUND IN COMMERCIAL SAMPLES OF SEEDS
AND STOCK FOODS EXAMINED DURING 1925-1926.

Scientific Name.	Common Name.	Remarks.
<i>Amarantus sp.</i>	Amaranth	..
<i>Andropogon spp.</i>	Satin Top, Blue Grass	..
<i>Apium sp.</i>	Wild Celery	..
<i>Argemone mexicana</i>	Prickly Poppy	Imparts a bad flavour to butter.
<i>Aristida spp.</i>	Spear Grass	Poisonous.
<i>Asclepias curassavica</i>	Redhead Milky Cotton Bush	Seeds may cause mechanical injury.
<i>Atriplex Muelleri</i>	A Salt Bush	Poisonous.
<i>Avena fatua</i>	Wild Oats	..
<i>Boerhaavia diffusa</i>	Hog-weed	..
<i>Brassica sinapistrum</i>	Charlock	..
<i>Bromus maximus</i>	Giant Brome	Imparts a bad flavour to butter.
<i>Bromus mollis</i>	Soft Brome Grass	..
<i>Cenchrus australis</i>	Burr Grass	..
<i>Centaurea melilensis</i>	Star Thistle, Maltese Cockspur	..
<i>Chenopodium album</i>	Goosefoot, Fat Hen, Lamb's Quarters	..
<i>Chenopodium ambrosioides</i>	Stinking Goosefoot	Imparts a bad flavour to butter.
<i>Chloris divaricata</i>	Star Grass	..
<i>Chloris truncata</i>	..	..
<i>Cnicus lanceolatus</i>	Spear Thistle	..
<i>Convolvulus arvensis</i>	Field Bindweed	..
<i>Crotalaria spp.</i>	Rattlepod	Poisonous.
<i>Cuscuta spp.</i>	Dodder	Deleterious to plant and animal life.
<i>Cynoglossum suaveolens</i>	Hound's Tongue	..
<i>Cyperus sp.</i>	Sedge	..
<i>Datura sp.</i>	Thorn Apple	Poisonous.
<i>Daucus brachiatus</i>	Wild Carrot	Imparts a bad flavour to butter.
<i>Eleusine indica</i>	Wire Grass, Crow's Foot	..
<i>Eragrostis sp.</i>	..	..
<i>Erigeron sp.</i>	..	..
<i>Eriochloa punctata</i>	Early Spring Grass	..
<i>Euphorbia spp.</i>	..	Poisonous.
<i>Festuca Myurus</i>	Rat's-tail Fescue	..
<i>Hibiscus trionum</i>	Bladder Ketmia	..
<i>Hypochaeris sp.</i>	Cat's Ear	..
<i>Indigofera hirsuta</i>	Indigo	Imparts a bad flavour to butter.
<i>Ipomœa sp.</i>	Morning Glory	Suspected poisonous.
<i>Kyllinga sp.</i>	..	..
<i>Lepidium campestre</i>	Pepper Grass	..
<i>Lepidium ruderales</i>	Wasteplaces Cress	Imparts a bad flavour to butter.
<i>Lithospermum arvense</i>	Corn Gromwell, Stone Seed	..
<i>Lolium temulentum</i>	Darnel, Drake	..
<i>Malva parviflora</i>	Small-flowered Mallow	Suspected poisonous.
<i>Malvastrum spicatum</i>	False Mallow	..
<i>Malvastrum tricuspdatum</i>	..	..
<i>Marrubium vulgare</i>	Horehound	..
<i>Medicago denticulata</i>	Medick Burr	..
<i>Melilotus parviflora</i>	Hexham Scent	..
<i>Moluccella laevis</i>	..	Imparts a bad flavour to butter and flour.
<i>Opuntia spp.</i>	Prickly Pear	..
<i>Panicum decompositum</i>	Barley Grass	..
<i>Panicum sanguinale</i>	Summer Grass	..
<i>Papaver hybridum</i>	Rough Poppy	Poisonous.
<i>Plantago lanceolata</i>	Rib Grass	..
<i>Polygonum aviculare</i>	Wireweed	..
<i>Polygonum convolvulus</i>	Black Bindweed	..
<i>Portulaca oleracea</i>	Pigweed, Purslane	..
<i>Raphanus Raphanistrum</i>	Wild Radish	Imparts a bad flavour to butter.
<i>Rhagodia nutans</i>	..	..
<i>Rumex spp.</i>	Dock	..
<i>Ricinus communis</i>	Castor Oil Plant	Poisonous.
<i>Salsola Kali</i>	Russian Thistle	..
<i>Salvia verbenaca</i>	Wild Sage	..
<i>Setaria glauca</i>	Pigeon Grass	..
<i>Sida rhombifolia</i>	Sida Weed, Sida Retusa	..
<i>Siegesbeckia orientalis</i>	..	..
<i>Silene gallica</i>	French Catchfly	..
<i>Silybum Marianum</i>	Virgin Mary's Thistle, Variegated Thistle	..
<i>Sisymbrium orientale</i>	Oriental Rocket	Imparts a bad flavour to butter.
<i>Solanum sp.</i>	..	..
<i>Sonchus sp.</i>	Sow Thistle	..
<i>Spergula arvensis</i>	Corn Spurry	..
<i>Sporobolus sp.</i>	..	..
<i>Stachys arvensis</i>	Stagger Weed	Suspected poisonous.
<i>Stipa spp.</i>	Spear Grass	..
<i>Tagetes glandulifera</i>	Stinking Rodger	Seeds may cause mechanical injury.
<i>Tetragonia expansa</i>	New Zealand Spinach	Imparts a bad flavour to butter.
<i>Tragus racemosus</i>	Small Burr Grass	..
<i>Tribulus terrestris</i>	Bull's Head	..
<i>Tricholena Teneriffæ</i>	Red Natal Grass	..
<i>Triumfetta rhomboidea</i>	Chinese Burr	..
<i>Verbena sp.</i>	Purple Top	..
<i>Vicia sp.</i>	Wild Tares	..
<i>Xanthium spinosum</i>	Bathurst Burr	..
<i>Xanthium strumarium</i>	Noogoora Burr	..

Table I. ANALYTICAL PURITY OF THE PRINCIPAL AGRICULTURAL SEEDS EXAMINED DURING 1925-26 FOR PURPOSES OF THE PURE SEEDS ACTS.

Kind of Seed.	PRESCRIBED STANDARD.		SAMPLES THAT COMPLIED WITH STANDARD CONTAINED.		SAMPLES THAT DID NOT COMPLY WITH STANDARD CONTAINED.		Number of Samples that Complied with Standard.	Number of Samples that contained a larger portion of Inert Matter and/or Weed Seeds than is allowed.	Number of Samples that contained Prohibited Weed Seeds.	Total Number of Samples Examined.	Weed Seeds in Order of Frequency of Occurrence, Prohibited Weed Seeds in Heavy Type.
	Inert Matter.	Maximum Amount allowed by Regulations.	Seeds of weeds or seeds of any kind other than that to which the sample purports to belong.	Seeds of <i>Cuscuta</i> sp. (Dodder), <i>Datura</i> sp. (Thorn apple), <i>Ricinus communis</i> (Castor oil plant), and diseased or insect-infested seeds.	Average Amount of Inert Matter.	Average Amount of Weed Seeds.					
Cowpeas	2	1	1	Nil	0.9	0.3	21	4	12	37	<i>Ipomoea</i> sp.
Grasses—											
Canary	2	1	1	Nil	1.0	0.3	4	6	1	11	<i>Chenopodium</i> sp., <i>Hibiscus trionum</i> , <i>Lithospermum arvense</i> , <i>Polygonum convolvulus</i> , <i>Avena fatua</i> , <i>Cnicus lanceolatus</i> , <i>Rumex</i> sp., <i>Datura</i> sp., <i>Polygonum aviculare</i> , <i>Verbena</i> sp., <i>Centaurea melitensis</i> , <i>Malva parviflora</i> , <i>Sonchus</i> sp., <i>Tragus racemosus</i> .
Paspalum	4	1	1	Nil	1.1	0.2	26	..	..	26	<i>Panicum sanguinale</i> , <i>Verbena</i> sp., <i>Panicum</i> sp., <i>Eleusine indica</i> , <i>Eriochloa punctata</i> , <i>Tricholena Teneriffæ</i> , <i>Amarantus</i> sp., <i>Chloris divaricata</i> , <i>Andropogon</i> sp., <i>Sida rhombifolia</i> .
Prairie	5	1	1	Nil	1.4	0.4	12	5	1	18	<i>Panicum</i> sp., <i>Sonchus</i> sp., <i>Avena fatua</i> , <i>Lepidium</i> sp., <i>Malva parviflora</i> , <i>Daucus</i> sp., <i>Apium</i> sp., <i>Medicago denticulata</i> , <i>Marrubium vulgare</i> , <i>Verbena</i> sp., <i>Datura</i> sp., <i>Rumex</i> sp., <i>Melilotus parviflora</i> .
Rhodes	6	1	1	Nil	3.4	0.1	48	13	..	61	<i>Chloris divaricata</i> , <i>Eriogon</i> sp., <i>Eragrostis</i> sp., <i>Rhagodia nutans</i> , <i>Panicum sanguinale</i> , <i>Chloris truncata</i> , <i>Verbena</i> sp., <i>Panicum</i> sp., <i>Stipa</i> sp., <i>Eriochloa punctata</i> , <i>Setaria</i> sp., <i>Lepidium</i> sp., <i>Andropogon</i> sp., <i>Siegesbeckia orientalis</i> , <i>Chenopodium</i> sp., <i>Aristida</i> sp., <i>Tricholena Teneriffæ</i> , <i>Amarantus</i> sp., <i>Salsola Kali</i> , <i>Eleusine indica</i> .
Millet—											
<i>Setaria italica</i> (Foxtail Millet)	2	1	1	Nil	0.6	0.1	24	5	3	32	<i>Amarantus</i> sp., <i>Eriochloa punctata</i> , <i>Panicum sanguinale</i> , <i>Portulaca oleracea</i> , <i>Hibiscus trionum</i> , <i>Panicum</i> sp., <i>Datura</i> sp., <i>Stachys arvensis</i> , <i>Solanum</i> sp., <i>Chenopodium</i> sp., <i>Eragrostis</i> sp., <i>Verbena</i> sp., <i>Tribulus terrestris</i> , <i>Medicago</i> sp., <i>Amarantus</i> sp., <i>Portulaca oleracea</i> , <i>Panicum sanguinale</i> , <i>Hibiscus trionum</i> , <i>Stachys arvensis</i> , <i>Verbena</i> sp., <i>Datura</i> sp., <i>Chenopodium</i> sp., <i>Polygonum convolvulus</i> , <i>Tribulus terrestris</i> , <i>Tragus racemosus</i> , <i>Eragrostis</i> sp., <i>Siegesbeckia orientalis</i> , <i>Avena fatua</i> , <i>Lepidium</i> sp.
<i>Panicum crus-galli</i> (Japanese Millet)	2	1	1	Nil	0.6	0.1	35	14	4	53	<i>Panicum sanguinale</i> , <i>Chenopodium</i> sp., <i>Amarantus</i> sp., <i>Eriochloa punctata</i> , <i>Panicum</i> sp., <i>Solanum</i> sp., <i>Verbena</i> sp., <i>Sida rhombifolia</i> , <i>Malva parviflora</i> , <i>Eleusine indica</i> , <i>Indigofera hirsuta</i> .
<i>Panicum frumentaceum</i> (White Panicum)	2	1	1	Nil	1.1	0.1	28	4	..	32	<i>Chenopodium</i> sp., <i>Panicum</i> sp., <i>Rumex</i> sp., <i>Rhagodia nutans</i> , <i>Amarantus</i> sp., <i>Marrubium vulgare</i> , <i>Verbena</i> sp., <i>Melilotus parviflora</i> , <i>Lepidium</i> sp., <i>Eragrostis</i> sp., <i>Boerhaavia diffusa</i> , <i>Cnicus lanceolatus</i> , <i>Apium</i> sp., <i>Cuscuta</i> sp., <i>Sida rhombifolia</i> , <i>Sisymbrium orientale</i> , <i>Hibiscus trionum</i> , <i>Panicum sanguinale</i> , <i>Datura</i> sp.
Lucerne	2	1	1	Nil	0.9	0.2	57	23	5	85	<i>Panicum</i> sp., <i>Siegesbeckia orientalis</i> , <i>Ipomoea</i> sp., <i>Solanum</i> sp., <i>Verbena</i> sp., <i>Sida rhombifolia</i> , <i>Malva parviflora</i> , <i>Eleusine indica</i> , <i>Indigofera hirsuta</i> .
Sorghum	2	1	1	Nil	0.5	0.2	42	14	5	61	<i>Inert matter</i> only.
Sudan (<i>Sorghum Sudanense</i>)	2	1	1	Nil	1.5	0.2	45	40	14	99	<i>Amarantus</i> sp., <i>Panicum</i> sp., <i>Panicum sanguinale</i> , <i>Hibiscus trionum</i> , <i>Xanthium spinosum</i> , <i>Chenopodium</i> sp., <i>Datura</i> sp., <i>Eriochloa punctata</i> , <i>Tragus racemosus</i> , <i>Eragrostis</i> sp., <i>Centaurea melitensis</i> , <i>Siegesbeckia orientalis</i> , <i>Polygonum convolvulus</i> , <i>Polygonum aviculare</i> , <i>Rumex</i> sp., <i>Melilotus parviflora</i> , <i>Portulaca oleracea</i> .

PRESCRIBED STANDARD FOR BARLEY AND OATS. MAXIMUM AMOUNT ALLOWED BY REGULATIONS:—

Inert Matter	2 per cent.
Weed seeds that will not pass a 2 mm. sieve	1 per cent.
Weed seeds that will pass a 2 mm. sieve, and seeds of <i>Datura</i> (Thorn Apple) insect-infested seeds, or diseased seeds	None
Seeds of Barley and Wheat in Oats or Oats and Wheat in Barley	2 per cent.

	Samples that complied with Standard contained.			Samples that did not comply with Standard contained.			Number of Samples that complied with standard.	Number of Samples that contained a larger proportion of inert matter and/or weed seeds than is allowed.	Number of Samples that contained weed seeds that will pass a 2 m.m. sieve, prohibited weed seeds, or diseased or insect-infested seeds.	Total number of Samples examined.	Weed Seeds in Order of Frequency of Occurrence. Prohibited Weed Seeds in Heavy Type.
	Average amount of Inert Matter.	Average amount of weed seeds that will not pass a 2 m.m. sieve.	Average amount of barley and wheat in oats or barley and wheat in barley.	Average amount of Inert Matter.	Average amount of weed seeds that will not pass a 2 m.m. sieve.	Average amount of barley and wheat in oats or barley and wheat in barley.					
Barley, Cape and Malting	% 0.6	% 0.1	% 0.1	% ..	% ..	% ..	26	..	3	29	<i>Avena fatua</i> , <i>Lithospermum arvense</i> , <i>Lolium temulentum</i> , <i>Hibiscus trionum</i> , <i>Rumex</i> sp., <i>Datura</i> sp., <i>Bromus maximus</i> , <i>Melilotus parviflora</i> , <i>Chenopodium</i> sp., <i>Silybum Marianum</i> .
Barley, Skinless	% 0.4	% 0.1	% 0.6	% 0.3	% 0.9	% 5.3	25	3	3	31	<i>Avena fatua</i> , <i>Polygonum convolvulus</i> , <i>Lithospermum arvense</i> , <i>Melilotus parviflora</i> , <i>Centaurea melitensis</i> , <i>Rumex</i> sp., <i>Datura</i> sp., <i>Sonchus</i> sp., <i>Chenopodium</i> sp., <i>Cnicus lanceolatus</i> , <i>Hibiscus trionum</i> .
Oats	% 0.5	% 0.2	% 0.2	% 1.1	% 3.6	% 1.7	59	8	9	76	<i>Avena fatua</i> , <i>Lolium temulentum</i> , <i>Rumex</i> sp., <i>Festuca</i> sp., <i>Sisymbrium orientale</i> , <i>*Papaver</i> sp., <i>Centaurea melitensis</i> , <i>Polygonum convolvulus</i> , <i>Lithospermum arvense</i> , <i>Bromus mollis</i> , <i>Silene gallica</i> , <i>Lepidium campestre</i> , <i>Chenopodium</i> sp., <i>Hypochaeris</i> sp., <i>Melilotus parviflora</i> .

* Prohibited under Stock Foods Act.

Table IV.

STOCK FOODS, 1926.

SAMPLES OF BRAN AND POLLARD SENT IN BY WHOLESALE SELLERS UNDER SECTION 3 OF "THE STOCK FOODS ACT OF 1919."

Queensland Wholesale Seller.	Manufactured in—	Guaranteed by Seller to contain—		
		Minimum Crude Protein.	Minimum Crude Fat.	Maximum Crude Fibre.
<i>Bran, a By-product of Milling Wheat.</i>				
		%	%	%
Barnes and Co., Ltd., Warwick	Queensland	13.5	2.3	12.0
Barnes and Co., Ltd., South Brisbane	ditto	*14.5	3.0	10.0
The Defiance Milling Co., Ltd., Toowoomba	ditto	*16.2	2.5	10.8
The Dominion Milling Co., Ltd., South Brisbane	ditto	14.7	2.7	11.0
The Brisbane Milling Co., Ltd., South Brisbane	ditto	14.7	2.6	11.0
Dalby Milling Co., Ltd., Dalby	ditto	*15.6	1.9	10.2
J. G. Jamieson, Brisbane	Southern States	15.0	2.5	10.0
New Zealand Loan and Mercantile Agency Co., Ltd., Eagle Street, Brisbane	ditto	14.5	2.5	10.0
Warrys, Ltd., Maryborough	ditto	14.5	2.5	10.0
Cummins and Campbell, Townsville	ditto	14.5	2.5	10.0
Bartlams Ltd., Townsville	ditto	14.5	2.5	10.0
Marsh and Websters, Ltd., Mackay	ditto	14.5	2.5	10.0
Samuel Allen and Sons, Ltd., Townsville	ditto	14.5	2.5	10.0
Daniel Shepherd and Sons, Ltd., Mackay	ditto	14.5	2.5	10.0
F. Black Ltd., Mackay	ditto	14.5	2.5	10.0
Armstrong, Ledlie, and Stillman, Ltd., Cairns	ditto	14.5	2.5	10.0
Bolands Ltd., Cairns	ditto	14.5	2.5	10.0
Joseph Pease Ltd., Townsville	ditto	14.5	2.5	10.0
J. Michelmore and Co., Mackay	ditto	13.0	2.0	13.0
Burns, Philp, and Co., Ltd., Cairns	ditto	14.5	2.5	10.0
Jas. F. McKenzie and Co., Ann Street, Brisbane	ditto	15.0	2.5	10.0
Henry Dean and Sons, Ltd., Roma Street, Brisbane	ditto	15.5	2.0	11.0
<i>Pollard, a By-product of Milling Wheat.</i>				
Barnes and Co., Ltd., Warwick	Queensland	14.0	3.2	4.5
Barnes and Co., Ltd., South Brisbane	ditto	*16.0	3.0	6.0
The Defiance Milling Co., Ltd., Toowoomba	ditto	*15.9	3.7	5.2
The Dominion Milling Co., Ltd., South Brisbane	ditto	15.0	3.7	8.0
The Brisbane Milling Co., Ltd., South Brisbane	ditto	15.0	3.3	8.0
Dalby Milling Co., Ltd., Dalby	ditto	*15.6	3.4	2.5
J. G. Jamieson, Brisbane	Southern States	14.5	2.8	8.0
New Zealand Loan and Mercantile Agency Co., Ltd., Eagle Street, Brisbane	ditto	14.3	3.0	8.0
Warrys Ltd., Maryborough	ditto	14.3	3.0	8.0
Cummins and Campbell, Townsville	ditto	14.3	3.0	8.0
Bartlams Ltd., Townsville	ditto	14.3	3.0	8.0
Marsh and Webster, Ltd., Mackay	ditto	14.3	3.0	8.0
Samuel Allen and Sons, Ltd., Townsville	ditto	14.3	3.0	8.0
Daniel Shepherd and Sons, Ltd., Mackay	ditto	14.3	3.0	8.0
F. Black Ltd., Mackay	ditto	14.3	3.0	8.0
Armstrong, Ledlie, and Stillman, Ltd., Cairns	ditto	14.3	3.0	8.0
Bolands Ltd., Cairns	ditto	14.3	3.0	8.0
Joseph Pease Ltd., Townsville	ditto	14.3	3.0	8.0
J. Michelmore and Co., Mackay	ditto	13.0	2.5	10.0
Burns, Philp, and Co., Ltd., Cairns	ditto	14.3	3.0	8.0
Henry Dean and Sons, Ltd., Roma Street, Brisbane	ditto	14.3	2.7	8.0
Jas. F. McKenzie and Co., Ann Street, Brisbane	ditto	14.5	2.8	8.0

* Amended guarantee.

Table V.
STOCK FOODS, 1926.—SAMPLES OF MISCELLANEOUS STOCK FOODS, SENT IN BY WHOLESALE SELLERS UNDER SECTION 3 OF "THE STOCK FOODS ACT OF 1919."

Kind of Stock Food	Queensland Wholesale Seller.	Manufactured in	Sold under the Name of	Composed of or Manufactured from	GUARANTEED BY SELLER TO CONTAIN			
					Minimum Crude Protein.	Minimum Crude Fat.	Maximum Crude Fibre.	Salt.
					%	%	%	%
Barley Branning	Robert Harper and Co., Ltd., Brisbane	Queensland	Harper's Barley Branning	Barley	*11.0	3.5	10.0	..
Ditto	R. W. Thurlow and Co., Ltd., Brisbane	ditto	Barley Branning	ditto	12.0	4.0	13.0	..
Barley Meal	W. Siemon and Sons, Ltd., Brisbane	ditto	Barley Meal	ditto	10.0	1.0	8.0	..
Ditto	Henry Dean and Sons, Ltd., Brisbane	ditto	ditto	ditto	11.0	1.0	6.0	..
Blood Meal	Swift Australian Co., Ltd., Brisbane	ditto	Dried Blood	Blood	75.0	0.3	..	2.0
Ditto	Charles Taylor and Co., Brisbane	ditto	Taylor's Champion Dried Blood	ditto	76.0	..	..	..
Bone Meal	Len Lose, Brisbane	ditto	Dried Blood	ditto	75.0	..	..	..
Ditto	Swift Australian Co., Ltd., Brisbane	ditto	Bone Meal	Bone	21.5	1.5	..	1.2
Ditto	Charles Taylor and Co., Brisbane	ditto	Taylor's Champion Green Bone	ditto	20.0	..	..	..
Ditto	Crouch and Connah, Ltd., Brisbane	New South Wales	M.I.B. Bone Meal	ditto	25.0	0.5	..	..
Ditto	Borthwick and Sons (Australasia), Ltd., Brisbane	Queensland	Borthwick Moreton Bone Meal	ditto	24.0	2.0	..	..
Cotton Seed Meal	British Australian Cotton Association, Ltd., Whinstones, Brisbane	ditto	"Bacal" Undecorticated Cotton Seed Meal	Undecorticated Cotton Seed Meal	24.0	4.0	30.0	..
Ditto	ditto	ditto	"Bacal" Decorticated Cotton Seed Meal	Decorticated Cotton Seed Meal	40.0	6.0	15.0	..
Ditto	ditto	ditto	"Bacal" Cotton Seed Meal	Cotton Seed	25.0	5.0	25.0	..
Cotton Seed Cubes	ditto	ditto	"Bacal" Treacle Cubes	Cotton Seed Meal and Molasses	26.0	4.0	30.0	..
Linseed (Crushed)	W. Siemon and Sons, Ltd., Brisbane	ditto	Linseed Meal	Whole Linseed	18.0	32.0	14.0	..
Ditto	R. W. Thurlow and Co., Ltd., Brisbane	ditto	ditto	ditto	19.0	36.0	11.5	..
Linseed Oil Meal	Corser and Co., Ltd., Maryborough	New South Wales	Meggritt Linseed Oil Meal	By-product of Linseed	*25.0	6.0	13.0	..
Ditto	Denhams Ltd., Brisbane	ditto	ditto	ditto	27.0	9.0	13.0	..
Linseed Oil Meal (new process)	F. W. Sabine, Brisbane	ditto	Halmeg Meal (Linseed)	By-product of Linseed (new process)	25.0	0.6	14.0	..
Lucerne Meal	E. C. Chambers and Co., Brisbane	ditto	Thorpes' Lucerne Meal	Lucerne Hay	12.0	2.0	30.0	..
Maize Meal	W. Siemon and Sons, Ltd., Brisbane	Queensland	Maize Meal	Maize	9.5	4.0	3.0	..
Ditto	Henry Dean and Sons, Ltd., Brisbane	ditto	ditto	ditto	9.5	3.8	3.0	..
Meat and Bone Meal	Borthwick and Sons (Australasia), Ltd., Brisbane	ditto	Borthwick Moreton Bone Meal	Bone and Meat	38.0	7.0	..	..
Ditto	ditto	ditto	Borthwick Moreton Protein Meal	Meat and Bone	52.0	10.0	..	..
Ditto	ditto	ditto	Borthwick Moreton Mebo Meal	ditto	52.0	1.0	..	..
Ditto	ditto	ditto	Borthwick Moreton Bomo Meal	ditto	35.0	5.0	..	..
Ditto	Crouch and Connah, Ltd., Brisbane	New South Wales	M.I.B. Compo. Meat Meal	Bone, Blood, and Meat	*5.30	5.0	6.0	..
Ditto	ditto	ditto	M.I.B. Ox-a-Vita	Meat and Bone	52.0	10.0	..	..

Table V.—continued.
 STOCK FOODS, 1926.—SAMPLES OF MISCELLANEOUS STOCK FOODS, SENT IN BY WHOLESALE SELLERS UNDER SECTION 3 OF "THE STOCK FOODS ACT OF 1919."

Kind of Stock Food.	Queensland Wholesale Seller.	Manufactured in	Sold under the Name of	Composed of or Manufactured from	GUARANTEED BY SELLER TO CONTAIN			
					Minimum Crude Protein.	Minimum Crude Fat.	Maximum Crude Fibre.	Salt.
Meat Meal	Crouch and Connah, Ltd., Brisbane	New South Wales	M.I.B. Protein Meal	Extract and Residue of Meat	%	%	%	%
Ditto	ditto	ditto	M.I.B. Bovaline	Extract of Meat	72.0	1.0	..	..
Ditto	ditto	ditto	Globe Brand Meat Meal	Meat	*66.0	1.0	..	..
Oil Cake	J. Kitchen and Sons Pty., Ltd., Brisbane	ditto	Velvet Oil Cake	Copra	*43.0	13.0	5.2	..
Ditto	Lever Bros., Ltd., Brisbane	ditto	Sunlight Oil Cake	ditto	17.0	6.5	10.0	..
Rice Meal	Robt. Harper and Co., Ltd., Brisbane	Queensland	Harpers' Star Rice Meal	By-product of Rice	18.0	5.6	13.5	..
Calf Food	W. Siemon and Sons, Ltd., Brisbane	ditto	Nooma Calf Food	Linseed, Wheat, Maize, Coconut Oil Cake, Pollard, Whiting, Salt, Cinnamon, Aniseed	*11.0	11.0	6.0	..
Ditto	The Queensland Farmers' Co-operative Co., Ltd., Booval	ditto	Farmers' Calf Food	Dried Butter Milk, Pollard, Linseed Meal, Aniseed, Whiting	13.4	5.4	3.8	..
Ditto	Parsons Bros. and Co. Pty., Ltd., Brisbane	ditto	Parsons' Calf Food	Rice, Oat, and Barley Pollard, Corn Gluten and Germ Meal, Wheat Meal, Crushed Linseed	*22.6	5.2	3.0	..
Ditto	Denhams Ltd., Brisbane	New South Wales	Meggitt Calf Food	Linseed Meal, Lucerne Meal, Wheat Meal, Pollard, Bone Meal	11.0	9.0	3.0	..
Ditto	Robt. Harper and Co., Ltd., Brisbane	Queensland	Star Brand Calf Food	Oats, Rice, Linseed, Maize, Barley Meals, Condiments	18.0	5.0	9.0	..
Ditto	Waugh and Josephson, Ltd., Brisbane	New South Wales	Skinnners' (Cod-oil) Calf Meal	Products of Milled Wheat, Linseed, Cod-oil, Lime, Charcoal, Salt.	12.5	10.0	7.5	..
Dairy Cattle Food	Denhams Ltd., Brisbane	ditto	Meggitt Dairy Cattle Food	Linseed Meal, Lucerne Meal, Barley, Bran, Pollard.	17.0	6.5	6.0	1.0
Ditto	E. C. Chambers and Co., Brisbane	ditto	Thorpes' Standard Dairy Feed	Wheat, Maize, Linseed, Barley, and Rice	22.0	5.0	9.0	..
Sheep Food (Cubes)	E. C. Chambers and Co., Brisbane	ditto	Thorpes' Kubettes	By-products, Molasses, Arrowroot-bagasse, Blood and Bone Meals, Salt, Lime, Sulphur	14.0	2.0	9.0	1.0
Chick Food	W. Siemon and Sons, Ltd., Brisbane	Queensland	Week Old Chick Food	Wheat, Maize, Linseed, Barley, and Rice	..	..	..	..
Ditto	ditto	ditto	Special Chick Food	Products, Molasses, Arrowroot-bagasse, Blood and Bone Meals, Salt, Lime, Sulphur	..	..	..	..
Ditto	The Spice Mill, Brisbane	ditto	The Spice Mill Chicken Mixture	Wheat, Peas, Sorghum, Maize, Linseed, Millet, Oats	..	..	..	..
Ditto	Charles Taylor and Co., Brisbane	ditto	Taylor's Champion Chicken Mixture	Wheat, Maize, Oats, Linseed, Hemp, Millet, Peas	..	..	..	..
Ditto	Parsons Bros. and Co., Pty., Ltd., Brisbane	ditto	Parsons' Coarse Chicken Food	Maize, Wheat, Setaria, Linseed, Millet, Hemp, Polly Meal	..	..	..	..
Ditto	E. C. Chambers and Co., Brisbane	New South Wales	Thorpes' Week Old Chick Food	Maize Meal, Oat Meal, Wheat Meal, Pea Meal, Millet Seed	..	..	..	..
				Wheat, Peas, Rolled Oats, Maize Gluten Feed, Biscuit Grit	*11.0	1.9	4.5	..

Chick Food	..	E. C. Chambers and Co., Brisbane	..	New South Wales	Thorpes' Extra Special Chick Food	Wheat, Maize, Peas, Maize Gluten Meal, Rolled Oats, Biscuit Grit	*11-0	2-0	5-0	..
Ditto	..	Denhams Ltd., Brisbane	..	ditto	Meggitt Chick Mixture	Linseed, Wheat, Maize, Peas, Bone	*11-8	1-5	9-0	..
Grain Mixture for Poultry	..	Charles Taylor and Co., Brisbane	..	Queensland	Taylor's Champion Grain Mixture	Maize, Wheat, Barley, Oats, Rye, Sorghum	..	..	..	..
Ditto	..	E. C. Chambers and Co., Brisbane	..	New South Wales	Thorpes' Scratch Grain Feed	Wheat, Cracked Maize, Barley, Oats	..	..	..	..
Laying and Mash	Growing	ditto	..	ditto	Thorpes' Egglo	Meat, Linseed, Blood, Bone, and Peanut Meals, Animal Charcoal, Sulphur, Salt	40-0	7-5	5-0	5-0
Ditto	..	W. Siemon and Sons, Ltd., Brisbane	..	Queensland	Laying Mash	Bran, Pollard, Maize, Wheat, Linseed Meal, Meat Meal, Sulphur, Salt	16-0	4-0	7-5	1-5
Ditto	..	ditto	..	ditto	Growing Mash	Wheat, Maize, Oilcake, Bran, Pollard, Meat Meal, Sulphur, Salt	15-0	4-5	5-0	0-5
Ditto	..	Charles Taylor and Co., Brisbane	..	ditto	Taylor's Champion Laying Mash Mixture	Bran, Pollard, Green Bone, Dried Blood, Linseed, Maize Meals, Pea Meal, Rice Meal	21-0	3-0	6-0	..
Ditto	..	Denham's Ltd., Brisbane	..	New South Wales	Meggitt Laying Mash	Linseed Meal, Barley Meal, Lucerne Meal, Bran, Pollard	*17-6	1-9	9-0	..
Ditto	..	E. C. Chambers and Co., Brisbane	..	ditto	Thorpes' Laying Mash	Pollard, Bran, Rice Meal, Wheat Meal, Maize Meal, Barley Meal, Linseed Oil Meal, Peanut Meal, Lucerne Meal, Blood, Meat and Bone Meals, Sulphur, Salt, Animal Charcoal	16-0	4-0	9-0	1-0
Ditto	..	ditto	..	ditto	Thorpes' Growing Mash	Pollard, Bran, Rice Meal, Wheat Meal, Maize Meal, Barley Meal, Linseed Oil Meal, Peanut Meal, Lucerne Meal, Blood, Meat, and Bone Meals, Sulphur, Salt, Animal Charcoal	*15-0	4-0	9-0	1-0
Bird Seed, Mixed	..	Jas. F. McKenzie and Co. Pty., Ltd., Brisbane	..	Queensland	Mixed Bird Seed	Canary, Millet, Hemp, Linseed, Foxtail Millet, Rape	..	..	..	..
Ditto	..	Queensland Manufacturers' Ltd., Brisbane	..	ditto	Royal Blue Mixed Bird Seed	Canary, Foxtail Millet, Hemp, Rape, Linseed	..	..	..	..
Ditto	..	Thos. Heaslop and Co., Ltd., Brisbane	..	ditto	Leader Brand Canary Seed	Canary, Foxtail Millet, Hemp, Rape, Linseed, Millet Seed	..	..	..	..
Ditto	..	Parsons Bros. and Co. Pty., Ltd., Brisbane	..	ditto	Parsons' Bird Seed	Canary, Hemp, Rape, Setaria, French Millet, Chillies	..	..	..	..
Ditto	..	ditto	..	ditto	Parsons' Parrot Food	Maize, Oats, Barley, Hemp, Wheat, Sunflower, Sorghum, Chillies	..	..	..	..
Ditto	..	R. W. Thurlow and Co., Ltd., Brisbane	..	ditto	Crescent Trade Mark Bird Seed	Canary, Millet, Hemp, Rape, Linseed, Shell Grit	..	..	..	..
Ditto	..	Robt. Harper and Co., Ltd., Brisbane	..	ditto	Star Brand Bird Seed	Canary, Foxtail Millet, French Millet, Hemp, Rape, Linseed, Chillies	..	..	..	..
Ditto	..	Simpson Bros., Ltd., Brisbane	..	ditto	Simpsons' Canary Food	Canary, Foxtail Millet, French Millet, Hemp, Rape, Linseed, Chillies	..	..	..	..
Ditto	..	ditto	..	ditto	Simpsons' Parrot Seed	Maize, Wheat, Oats, Sunflower, Millets, Hemp, Peanuts, Chillies, Linseed	..	..	..	..

* Amended guarantee.

Table VI.
 SAMPLES ANALYSED DURING 1925-1926.
 BRAN, A BY-PRODUCT OF MILLING WHEAT.

Manufactured in—	FOUND ON ANALYSIS BY THE AGRICULTURAL CHEMIST.					DEALER'S GUARANTEE.		
	Average Moisture.	Average Crude Protein.	Average Crude Fat.	Average Crude Fibre.	Average Ash.	Minimum Crude Protein.	Minimum Crude Fat.	Maximum Crude Fibre.
	%	%	%	%	%	%	%	%
Queensland	11.2	16.2	2.5	9.8	4.9	16.2	2.5	10.8
Queensland	11.2	15.3	2.8	10.6	5.0	13.5	2.3	12.0
Queensland	11.1	16.3	2.8	10.1	5.1	14.7	2.7	11.0
Queensland	11.9	15.1	2.1	11.2	5.3	14.7	2.6	11.0
Queensland	11.9	15.6	2.8	10.1	5.9	17.7	1.9	10.2
Queensland	11.8	15.3	2.8	10.2	5.4	14.5	3.0	10.0
Southern States	11.6	15.0	1.6	10.6	3.7	15.0	2.5	10.0
Southern States	11.6	15.8	2.1	10.6	4.5	14.5	2.5	10.0
Southern States	10.6	15.1	2.3	8.5	4.3	13.0	2.0	13.0
Southern States	12.7	15.4	1.3	8.8	3.9	15.5	2.0	11.0

Foreign Ingredients.

Twenty-eight samples of Bran were examined. With few exceptions they contained a trace of Barley and Oats. None were entirely free from bits of chaff or other extraneous matter. The principal weed seeds found were:—

Avena fatua, Wild Oats.

Bromus sp., Brome Grass.

Centaurea melitensis, Star Thistle.

Chenopodium, Fat Hen.

Phalaris sp., Canary Grass.

Polygonum convolvulus, Bindweed.

Rumex sp., Dock.

Sisymbrium orientale, Oriental Rocket.

Sonchus oleraceus, Sow Thistle.

Verbena sp., Purple Top.

Eight samples contained from 0.1 to 0.4 per cent. of whole or partly crushed wheat, and two a trace of *Tilletia tritici* (Bunt.).

SUMMARY OF ANALYSES FROM 1923 TO 1926.

Year.	Number of Analyses.	Average Moisture.	Average Crude Protein.	Average Crude Fat.	Average Crude Fibre	Average Ash.
	%	%	%	%	%	%
1923	49	9.9	15.9	2.6	10.0	4.8
1924	61	10.0	15.6	2.8	10.0	4.3
1925	25	11.8	15.8	2.4	9.5	5.7
1926	28	11.5	15.5	2.3	10.0	4.8

Table VII.
 SAMPLES ANALYSED DURING 1925-1926.
 POLLARD, A BY-PRODUCT OF MILLING WHEAT.

Manufactured in—	FOUND ON ANALYSIS BY THE AGRICULTURAL CHEMIST.					DEALER'S GUARANTEE.		
	Average Moisture.	Average Crude Protein.	Average Crude Fat.	Average Crude Fibre.	Average Ash.	Minimum Crude Protein.	Minimum Crude Fat.	Maximum Crude Fibre.
	%	%	%	%	%	%	%	%
Queensland	10.6	15.9	3.7	5.7	3.7	15.9	3.7	5.2
Queensland	11.3	15.2	2.5	3.6	2.6	14.0	3.2	4.5
Queensland	11.6	16.8	3.6	4.2	3.1	15.0	3.7	8.0
Queensland	11.3	15.9	3.2	5.1	2.9	15.0	3.3	8.0
Queensland	11.9	16.6	3.7	4.3	3.6	15.6	3.4	2.5
Queensland	11.2	16.3	3.1	5.2	3.7	16.0	3.0	6.0
Southern States	11.2	15.0	3.8	7.0	2.3	14.5	2.8	8.0
Southern States	11.4	15.6	3.6	6.1	3.0	14.3	3.0	8.0
Southern States	10.7	14.6	3.0	6.8	2.8	13.0	2.5	10.0
Southern States	8.9	15.4	3.2	6.6	2.9	14.3	2.7	8.0

Foreign Ingredients.

Twenty-six samples of Pollard were examined. With few exceptions they contained a trace of extraneous matter as well as Barley and Oats. The principal weed seeds found were:—

Avena fatua, Wild Oats.

Sonchus oleraceus, Sow Thistle.

Sisymbrium orientale, Oriental Rocket.

Fourteen samples contained over 1 per cent. of wheat by-products that would not pass through a sieve perforated with round holes $1\frac{1}{2}$ mm. in diameter. The actual amounts ranged from 0.1 to 3.1 per cent. over the percentage allowed.

Nine samples contained a trace of *Tilletia tritici* (Bunt). In each instance the amount present was well under one-tenth of 1 per cent., the maximum prescribed by the Regulations. The actual amounts found varied from 0.005 to 0.07 $\frac{1}{2}$ per cent.

SUMMARY OF ANALYSES FROM 1923 TO 1926.

Year.	No. of Analyses.	Average Moisture.	Average Crude Protein.	Average Crude Fat.	Average Crude Fibre.	Average Ash.
	%	%	%	%	%	%
1923	51	9.8	15.5	3.8	6.6	2.9
1924	69	9.9	15.4	3.5	5.8	2.8
1925	21	11.4	16.3	3.4	4.9	3.5
1926	26	11.0	15.7	3.3	5.4	3.0

Table VIII.—MISCELLANEOUS STOCK FOODS ANALYSED DURING 1925-1926.

Kind of Stock Food.	Sold under the Name of—	FOUND ON ANALYSIS BY AGRICULTURAL CHEMIST.						DEALER'S GUARANTEE.			
		Average Moisture.	Average Crude Protein.	Average Crude Fat.	Average Crude Fibre.	Average Ash.	Average Salt.	Minimum Crude Protein.	Minimum Crude Fat.	Maximum Crude Fibre.	Salt.
		%	%	%	%	%	%	%	%	%	%
Barley Branning	Harpers' Barley Branning..	10.4	11.1	3.6	15.5	4.6	..	*11.0	3.5	10.0	..
Ditto	Barley Branning ..	10.1	15.4	3.8	10.1	3.0	..	12.0	4.0	13.0	..
Barley Meal	Barley Meal ..	11.8	13.5	1.6	4.8	2.6	..	10.0	1.0	8.0	..
Ditto	ditto ..	11.3	12.1	1.0	5.5	2.7	..	11.0	1.0	6.0	..
Ditto	(Average of many samples)	11.5	12.0	1.4	5.5	2.5	..	..	..	..	..
Blood Meal	Dried Blood ..	9.7	78.4	0.4	..	5.3	..	75.0	0.3	..	2.0
Ditto	Taylor's' Champion Dried Blood ..	11.4	73.6	..	..	6.9	..	76.0	..	..	..
Ditto	Dried Blood ..	8.0	77.0	..	..	4.9	..	75.0	..	..	..
Bone Meal	Bone Meal ..	8.2	25.5	0.8	..	63.3	..	21.5	1.5	..	1.2
Ditto	Taylor's' Champion Green Bone ..	7.1	22.2	..	..	68.0	..	20.0	..	..	..
Ditto	M.I.B. Bone Meal ..	7.1	25.9	1.8	..	60.9	..	25.0	0.5	..	..
Ditto	Borthwick Moreton Bone Meal ..	7.0	25.7	1.6	..	58.4	..	24.0	2.0	..	..
Cotton Seed Meal (undecorticated)	"Bacal" Undecorticated Cotton Seed Meal	9.4	28.6	4.8	22.3	4.8	..	24.0	4.0	30.0	..
Ditto (decorticated)	"Bacal" Decorticated Cotton Seed Meal	9.3	41.0	6.8	7.7	6.4	..	40.0	6.0	15.0	..
Ditto	"Bacal" Cotton Seed Meal ..	7.2	31.9	6.4	15.5	5.6	..	25.0	5.0	25.0	..
Cotton Seed Cubes	"Bacal" Treacle Cubes ..	9.9	27.1	4.0	15.3	5.0	..	26.0	4.0	30.0	..
Linseed (Crushed)	Linseed Meal ..	7.2	19.4	33.6	19.1	6.0	..	18.0	32.0	14.0	..
Ditto	ditto ..	7.9	18.2	38.6	12.1	3.2	..	19.0	36.0	11.5	..
Linseed Oil Meal	Meggitt Linseed Oil Meal ..	10.7	27.1	6.3	10.9	5.9	..	*25.0	6.0	13.0	..
Ditto	ditto ..	8.2	26.4	8.9	11.9	6.3	..	27.0	9.0	13.0	..
Linseed Oil Meal (new process)	Halmeg Meal (Linseed) ..	11.2	27.2	0.8	13.9	6.2	..	25.0	0.6	14.0	..
Calf Food	Nooma Calf Food ..	11.0	14.0	6.4	3.6	3.8	..	13.4	5.4	3.8	0.5
Ditto	Farmers' Calf Food ..	11.2	22.6	5.2	3.2	6.2	..	*22.6	5.2	3.0	..
Ditto	Parsons' Calf Food ..	10.3	12.4	9.8	2.9	3.1	..	11.0	9.0	3.0	..
Ditto	Meggitt Calf Food ..	11.4	19.5	3.9	8.6	4.9	..	18.0	5.0	9.0	..
Ditto	Star Brand Calf Food ..	9.3	12.4	10.9	4.5	5.0	..	12.5	10.0	7.5	..
Ditto	Skinners' (Cod-oil) Calf Meal ..	12.5	19.0	6.8	7.0	5.0	..	17.0	6.5	6.0	1.0
Dairy Cattle Food	Meggitt Dairy Cattle Food ..	9.1	22.7	4.5	10.5	5.5	..	22.0	5.0	9.0	..
Ditto	Thorpes' Standard Dairy Feed ..	10.2	15.7	3.0	9.9	5.0	..	14.0	2.0	9.0	1.0
Sheep Food (Cubes)	Thorpes' Kubettes ..	10.0	13.8	3.1	8.3	5.3	..	14.0	2.0	9.0	1.0
Lucerne Meal	Thorpes' Lucerne Meal ..	9.9	13.5	0.8	27.8	12.0	..	12.0	2.0	30.0	..
Lucerne Chaff, Prime	Lucerne Chaff ..	11.8	20.7	1.0	19.6	8.9	..	..	..	..	..
Lucerne Chaff, Ordinary	ditto ..	10.5	16.6	0.9	25.2	7.5	..	..	..	..	..
Wheaten Hay, Chaff	Wheaten Hay, Chaff ..	10.5	6.2	1.3	23.7	7.9	..	..	..	..	..
Wheat Straw	Wheat Straw ..	8.3	2.9	1.2	39.0	6.0	..	..	..	..	..
Barley Straw	Barley Straw ..	8.5	3.5	2.0	41.0	6.6	..	..	..	..	..
Oat Straw	Oat Straw ..	9.2	4.0	2.3	37.0	5.1	..	..	..	..	..
Maize Meal	Maize Meal ..	10.7	10.2	3.2	3.7	1.6	..	9.5	4.0	3.0	..
Ditto	ditto ..	10.7	11.3	4.1	2.6	1.8	..	9.5	3.8	3.0	..
Ditto	From Imported Maize ..	10.1	9.1	3.4	2.5	1.7	..	..	..	..	..

Table IX.
FERTILISERS REGISTERED JANUARY TO JUNE, 1926.

Producer.	Name of Fertiliser.	DEALER'S GUARANTEE.										Fineness.		
		Nitrogen as		Phosphoric Acid.				Potash as		Fine Material.	Coarse Material.	Unspecified Material.		
		Sodium Nitrate.	Ammonium Sulphate.	Blood, Bone, Flesh, and Offal.	Water Soluble.	Citrate Soluble.	Citrate Insoluble.	From Bone.	Potassium Sulphate.	Potassium Chloride.	%	%	%	
Australian Co-operative Fertilisers, Ltd., Roma Street, Brisbane	A.C.F. No. 1	..	2.0	3.0	..	..	..	13.0	8.0	..	..	60.0	40.0	..
	A.C.F. No. 2	..	3.0	..	11.0	..	..	..	10.0	..	..	60.0	40.0	..
	A.C.F. No. 3	..	2.5	2.5	..	..	14.0	..	..	6.0	..	60.0	40.0	..
	A.C.F. No. 5	..	1.5	2.5	..	..	14.0	..	..	9.0	..	60.0	40.0	..
	A.C.F. No. 6	..	5.0	..	10.0	..	..	..	8.0	..	..	60.0	40.0	..
	A.C.F. No. 8	..	..	2.0	5.0	..	..	12.0	9.0	..	..	60.0	40.0	..
	A.C.F. No. 10	..	1.0	2.5	7.0	..	..	13.0	..	8.0	..	60.0	40.0	..
	Three Sevens	..	..	2.5	7.0	..	..	..	7.0	..	..	60.0	40.0	..
	Threight's 8 8 8	..	..	5.5	8.0	..	..	8.0	8.0	..	..	60.0	40.0	..
	Three Eights	..	..	8.0	..	..	..	..	8.0	..	..	60.0	40.0	..
	Trinine 9 9 9	..	..	7.6	1.4	2.5	..	9.0	9.0	..	..	60.0	40.0	..
	B. 3	..	..	4.5	2.5	2.5	..	10.0	10.0	..	10.0	60.0	40.0	..
	B. 3 Extra	..	..	4.5	2.5	2.5	..	10.0	10.0	..	..	60.0	40.0	..
	Easterby's Mixture	..	..	7.7	..	7.0	..	..	7.7	..	..	60.0	40.0	..
	Howe's Mixture	..	..	6.5	2.5	1.7	..	7.0	11.0	..	..	60.0	40.0	..
	Bone and Super	..	..	..	..	..	..	..	..	..	..	60.0	40.0	..
	Nitrate of Soda	..	15.6	..	..	..	..	..	..	..	..	60.0	40.0	..
	Ground Nauru Phosphate Rock	..	..	..	..	..	..	..	..	..	..	60.0	40.0	..
	Super and Nauru	..	..	..	9.0	..	..	..	..	..	..	92.0	8.0	..
	High Grade Superphosphate	..	..	..	21.0	..	..	..	..	..	..	92.0	8.0	..
	Sulphate of Ammonia	..	20.0	..	..	0.5	1.0	..	..	..	..	..	..	..
	Basic Slag Phosphate	..	..	..	..	17.0	..	..	..	..	..	97.0	3.0	..
	Runcorn Bone Dust	..	..	3.6	..	..	..	23.0	..	..	..	50.0	50.0	..
	Basic Superphosphate	..	..	..	..	17.0	..	..	..	..	..	..	..	..
	Sulphide Superphosphate	..	..	..	17.0	0.5	0.5	..	..	..	..	..	..	..
7. 7. 7.	..	..	4.6	2.4	..	7.0	..	..	..	7.0	60.0	40.0	..	
A.C.F. Kwikgro	..	..	2.5	1.5	..	..	..	..	7.0	..	90.0	10.0	..	
Fertiliser Flour	..	..	1.0	2.5	..	..	14.0	..	4.0	..	95.0	5.0	..	
Sulphate of Potash	..	..	..	..	..	..	..	..	48.0	..	..	..	..
Muriate of Potash	..	..	..	..	..	..	..	..	..	50.0	..	..	..
Trinine 9 9 9	..	7.4	1.6	..	..	..	9.0	9.0	..	..	65.0	35.0	..	
Trinine 9 9 9	..	7.4	1.6	..	..	..	9.0	9.0	..	..	65.0	35.0	..	
Threight's 8 8 8	..	6.6	1.4	..	..	..	8.0	8.0	..	..	65.0	35.0	..	
7 7 7	..	5.6	1.4	..	..	..	7.0	7.0	..	..	65.0	35.0	..	
B. 3	..	4.0	3.0	..	..	10.0	10.0	10.0	..	10.0	65.0	35.0	..	

Australian Co-operative Fertilisers, Ltd., Bridge Street, Townsville

Australian Co-operative Fertilisers, Ltd., Bridge street, Townsville	B. 3 Extra	10.0	3.0	4.0	3.0	..	..	..	10.0	65.0	35.0	..
	Howe's Mixture	7.0	2.5	6.5	2.5	..	..	..	11.0	65.0	35.0	..
	Sulphate of Ammonia	..	..	..	..	..	..	..	..	..	..	..
	Sulphate of Potash	..	..	..	..	..	..	..	..	..	..	..
Borthwick and Sons (Australasia), Ltd., Wharf Street, Brisbane	Moreton Dried Blood	..	11.8	..	..	..	..	..	48.0	..	..	..
	Moreton Fertiliser No. 1	..	4.6	..	..	..	..	..	9.6	72.0	24.0	..
	Moreton Fertiliser No. 2	..	5.3	..	..	..	..	..	4.8	81.0	15.0	..
	Moreton Fertiliser No. 3	..	3.4	..	..	..	..	..	7.6	80.0	17.0	..
	Moreton Fertiliser No. 4	..	3.5	..	3.3	..	..	..	12.0	88.0	11.0	..
	Moreton Fertiliser No. 5	..	7.0	..	..	..	..	..	7.2	71.0	22.0	..
	Moreton Fertiliser No. 6	..	4.3	..	..	..	..	..	7.2	87.0	11.0	..
	Moreton Fertiliser No. 7	..	7.6	..	..	..	..	..	16.8	76.0	21.0	..
	Moreton Fertiliser No. 8	..	5.9	..	..	..	..	..	14.4	79.0	19.0	..
	Moreton Fertiliser No. 9	..	7.9	..	..	..	..	..	..	69.0	28.0	..
	Moreton Fertiliser No. 10	..	5.9	..	..	..	..	..	..	78.0	20.0	..
	Moreton Fertiliser No. 11	..	2.3	..	..	..	..	..	5.2	80.0	11.0	..
Baynes, Ltd., South Brisbane	Baynes' Fertiliser	..	4.6	..	..	..	..	..	..	65.7	24.0	..
Biboohra Meat Export Co., Ltd., Biboohra, North Queensland	Biboohra Meatworks Fertiliser	..	6.3	..	..	..	..	..	..	67.0	25.0	8.0
Burdekin River Meat Preserving Co., Ltd., Sellheim	Burdekin Dried Blood	..	11.2	..	..	..	..	..	..	74.0	24.0	2.0
Bergl Australia, Ltd., Merinda, North Queensland	Dried Blood	..	11.5	..	..	..	..	..	..	..	..	..
	Hashmagandy	..	5.0	..	..	..	..	..	..	..	..	..
	Hashmagandy	..	3.2	..	..	..	..	..	..	14.0	22.0	51.0
	Dried Blood	..	12.8	..	..	..	..	..	..	..	..	73.0
Central Queensland Meat Export Co., Ltd., Lakes Creek, Rockhampton	Fitzroy Fertiliser	..	6.0	..	..	..	..	..	..	..	..	..
	Fitzroy Fertiliser with Potash	..	5.0	..	..	..	..	..	9.0	80.0	15.0	5.0
Dalgaty and Co., Ltd., Elizabeth Street, Brisbane	Muriate of Potash	..	..	..	..	..	..	..	..	..	..	..
	Sulphate of Potash	..	..	..	..	..	..	..	..	..	..	..
Darling Downs Co-operative Bacon Co., Ltd., Willowburn	Blood and Bone Offal	..	2.5	..	..	..	..	..	..	..	..	..
Foggitt, Jones, Ltd., Turbot Street, Brisbane	Oxley Fertiliser	..	5.5	..	..	..	..	..	..	..	..	..
Gibbs, Bright, and Co., Wharf Street, Brisbane	Howe's Mixture	..	3.0	6.0	3.0	..	..	..	11.0	60.0	40.0	..
	Nitro Superphosphate	..	0.6	1.0	0.6	..	..	..	..	..	..	..
	Special Orchard Manure	..	..	2.8	..	0.4	..	..	7.2	..	..	..
	Banana Manure	..	..	5.0	..	0.5	..	..	8.0	..	..	..
	Leguminous Manure	..	..	..	..	0.5	..	..	2.4	..	..	..
	Potato Manure	..	..	1.2	..	0.7	..	..	3.5	..	..	..
	K.O. Mixture	..	2.7	5.0	..	..	..	..	11.2	60.0	40.0	..
	Special A1 Cane Fertiliser	..	..	7.0	..	6.5	..	..	7.0	..	..	..
	Special A2 Cane Fertiliser	..	3.5	3.5	..	..	..	..	7.0	60.0	40.0	..
	Special A3 Cane Fertiliser	..	3.5	6.5	..	..	..	..	7.0	60.0	40.0	..
	Easterby's Mixture	..	..	7.7	..	7.0	..	..	7.7	..	..	..
	Sulphide Basic Super	..	..	..	..	15.0	..	..	..	..	..	..
	Sulphide Superphosphate	..	..	..	..	0.5	..	..	..	..	..	..
	High Grade Super	..	..	..	..	0.5	..	..	..	..	..	..
	Sulphate of Potash	..	..	..	..	..	..	..	48.6	..	..	..
	Sulphate of Ammonia	..	..	20.0	..	..	..	..	..	..	..	..
	Nitrate of Soda	..	..	..	..	..	..	..	..	..	..	..
		..	..	15.6	..	..	..	..	..	..	..	..

Phosphoric acid marked * is derived from Nauru and Ocean Island phosphate.

Table IXb.

Producer.	Name of Fertiliser.	DEALER'S GUARANTEE.		
		Calcium Carbonate.	Fine Material.	Coarse Material.
H. G. Ambrose, Ambrose, North Coast Line	Pulverised Limestone ..	% 95.0	% 50.0	% 50.0
Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	Pulverised Limestone ..	95.0	50.0	50.0
Caves Calcium Company, Rockhampton	Agricultural Powdered Lime ..	86.4	70.0	9.0
Ryan Lime Co., Ltd., Townsville ..	Earthy Lime ..	85.0	..	..
Webb and Wordsworth, Reid River, <i>via</i> Townsville	Lime Carbonate ..	90.0	60.0	40.0

Table X.
SAMPLES OF THE PRINCIPAL FERTILISERS ANALYSED DURING 1925-26.
INORGANIC NITROGEN.

Producer.	Name of Fertiliser.	Sample taken at	Official No.	Guaranteed by Producer or found on Analysis by Agricultural Chemist.	NITROGEN AS	
					Sodium Nitrate.	Ammonium Sulphate
Gibbs, Bright, and Co., Wharf Street, Brisbane ..	Nitrate of Soda ..	..	..	..	%	..
	ditto ..	Cairns ..	50575	Guarantee Found	15.5	..
Shirley's Fertilizers Pty., Ltd., Little Roma Street, Brisbane ..	ditto ..	..	..	..	15.6	..
	ditto ..	Stanthorpe ..	50607	Guarantee Found	15.5	..
Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane ..	Sulphate of Ammonia ..	..	..	..	..	20.0
	ditto ..	Stanthorpe ..	50602	Guarantee Found	..	20.6
	ditto ..	Brisbane ..	50638	Guarantee Found	..	20.7
Gibbs, Bright, and Co., Wharf Street, Brisbane ..	ditto ..	..	..	..	..	20.0
	ditto ..	Cairns ..	50574	Guarantee Found	..	20.5
	ditto ..	Murarie ..	50590	Guarantee Found	..	20.7
Shirley's Fertilizers Pty., Ltd., Little Roma Street, Brisbane ..	ditto ..	..	..	..	..	20.0
	ditto ..	Aspley ..	50578	Guarantee Found	..	20.4
	ditto ..	..	..	Guarantee..	..	20.5
	ditto ..	Aspley ..	50668	Found	..	20.5

Table Xb.
BLOOD, BONE, FLESH, AND OFFAL FERTILISERS.

Produce.	Name of Fertiliser.	Sample taken at—	Official No.	Guaranteed by Producer or found on Analysis by Agricultural Chemist.	NITROGEN AS— Blood, Bone, Flesh and Offal.	PHOS- PHORIC ACID.	FINENESS.		
							Fine Material.	Coarse Material.	Unspecifed Material.
Bergl, Australia, Ltd., Merinda, North Queensland	Dried Blood	Townsville	50597	Guarantee Found	13.0	..	..	..	..
Borthwick and Sons (Australasia), Ltd., Wharf Street, Brisbane	ditto	..	..	..	11.6	..	..	..	..
Burdekin River Meat Preserving Co., Sellheim, North Queensland	ditto	Murarrrie	50592	Guarantee Found	11.8	..	..	24.0	13.0
Burdekin River Meat Preserving Co., Sellheim, North Queensland	Burdekin Dried Blood	..	..	..	11.9	..	..	63.0	..
Queensland Meat Export Co., Ltd., 185 Mary Street, Brisbane	ditto	Cairns	50576	Guarantee Found	10.4	..	..	31.5	2.1
Queensland Meat Export Co., Ltd., 185 Mary Street, Brisbane	ditto	..	..	..	10.8	..	..	44.0	12.0
Swift Australian Co., Ltd., 181 Eagle Street, Brisbane	Q.M.E. Dried Blood (Ross River)	..	..	..	12.5	..	..	..	..
Swift Australian Co., Ltd., 181 Eagle Street, Brisbane	ditto	Townsville	50596	Guarantee Found	12.1	..	..	..	..
Swift Australian Co., Ltd., 181 Eagle Street, Brisbane	Dried Blood	..	..	..	12.0	..	..	..	..
Swift Australian Co., Ltd., 181 Eagle Street, Brisbane	ditto	Aspley	50579	Guarantee Found	12.6	..	..	78.0	..
Swift Australian Co., Ltd., 181 Eagle Street, Brisbane	ditto	Brisbane	50669	ditto	12.6	..	..	74.0	2.0
Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	Runcorn Bone Dust	Brisbane	50643	Guarantee Found	3.6	23.0	50.0	50.0	..
Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	ditto	..	..	..	3.5	24.3	71.8	28.2	..
Jordan, E. A., Aspley	Normanby Bone Dust	..	..	..	3.5	23.0	50.0	50.0	..
Jordan, E. A., Aspley	ditto	Chermside	50583	Guarantee Found	3.7	24.1	51.0	48.0	1.0
Jordan, E. A., Aspley	ditto	Aspley	50671	ditto	3.8	24.7	53.0	43.0	4.0
Baynes, Ltd., Stanley Street, South Brisbane	Baynes' Fertiliser	..	..	..	4.6	19.6	65.7	24.0	..
Baynes, Ltd., Stanley Street, South Brisbane	ditto	Stanthorpe	50615	Guarantee Found	5.0	19.5	58.0	29.0	13.0
Borthwick and Sons (Australasia), Ltd., Wharf Street, Brisbane	Moreton Fertiliser	..	..	..	5.4	18.7	67.1	29.2	..
Borthwick and Sons (Australasia), Ltd., Wharf Street, Brisbane	ditto	Murarrrie	50588	Guarantee Found	5.9	18.0	78.0	20.0	2.0
Burdekin River Meat Preserving Co., Sellheim, North Queensland	Burdekin Meatworks Fertiliser	..	..	..	5.2	16.1	69.0	29.5	1.5
Burdekin River Meat Preserving Co., Sellheim, North Queensland	ditto	..	..	..	5.4	15.0	70.0	28.0	2.0
Queensland Meat Export Co., Ltd., 185 Mary Street, Brisbane	Q.M.E. Meatworks Fertiliser	Cairns	50577	Guarantee Found	6.5	14.8	50.5	36.5	13.0
Queensland Meat Export Co., Ltd., 185 Mary Street, Brisbane	ditto	..	..	..	6.7	13.2	57.0	36.0	7.0
Darling Downs Co-operative Bacon Co., Willowburn	Blood and Bone Offal	Chermside	50582	Guarantee Found	2.5	16.8	62.0	31.0	7.0
Darling Downs Co-operative Bacon Co., Willowburn	ditto	Willowburn	50679	Guarantee Found	3.5	16.8	45.0	36.0	19.0
Foggitt, Jones, Ltd., Turbot Street, Brisbane	Oxley Fertiliser	..	..	..	5.5	14.6	81.0	17.0	..
Foggitt, Jones, Ltd., Turbot Street, Brisbane	ditto	Warwick	50616	Guarantee Found	4.9	17.2	84.0	15.0	1.0
Foggitt, Jones, Ltd., Turbot Street, Brisbane	ditto	Nambour	50678	ditto	4.7	18.1	79.0	16.0	5.0
Foggitt, Jones, Ltd., Turbot Street, Brisbane	ditto	Warwick	50705	ditto	5.4	16.0	82.0	14.0	4.0
Queensland Co-operative Bacon Association, Ltd., Murarrrie	Atlas Fertiliser	..	..	..	6.7	12.5	53.0	32.0	15.0
Queensland Co-operative Bacon Association, Ltd., Murarrrie	ditto	Murarrrie	50663	Guarantee Found	6.7	12.5	53.0	32.0	15.0

Table Xc.
SUPERPHOSPHATE, BASIC SUPER, BASIC SLAG, NAURU, AND OCEAN ISLAND PHOSPHATE.

Producer.	Name of Fertiliser.	Sample taken at	Official No.	Guaranteed by Producer or Found on Analysis by Agricultural Chemist.	PHOSPHORIC ACID.				FINENESS.	
					Water Soluble.	Citrate Soluble.	Citrate Insoluble.	From Nauru and Ocean Island Phosphate.	Fine Material.	Coarse Material.
Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	A.C.F. High Grade Superphosphate	..	..	Guarantee ..	% 21.0	% 0.5	% 1.0	% ..	% ..	% ..
	ditto	Stanthorpe ..	50614	Found ..	21.8	0.6	..	..	..	..
	ditto	Brisbane ..	50641	ditto ..	21.3	..	..	..	..	..
	Sulphide Super	Aspley ..	50580	Guarantee ..	17.0	0.5	0.5	..	..	..
Gibbs, Bright, and Co., Wharf Street, Brisbane	ditto	ditto ..	50675	Found ..	19.5	..	..	..	..	..
	ditto	ditto ..	..	ditto ..	17.3	..	..	..	..	..
Shirley's Fertilizers Pty., Ltd., Little Roma Street, Brisbane	Shirley's Superphosphate 18 per cent.	..	..	Guarantee ..	17.0	0.5	0.5	..	..	..
	ditto	Stanthorpe ..	50609	Found ..	18.2	..	..	..	..	..
	ditto	Gympie ..	50659	ditto ..	19.1	..	..	..	..	..
	ditto	Chermside ..	50584	ditto ..	16.9	..	..	..	..	..
	ditto	Warwick ..	50619	ditto ..	19.5	..	..	..	..	..
	ditto	Toowoomba ..	50632	ditto ..	20.3	..	..	..	..	..
	ditto	Warwick ..	50707	ditto ..	18.1	..	..	..	..	..
Ditto	Shirley's Superphosphate 22 per cent.	..	..	Guarantee ..	20.5	0.5	1.0	..	..	..
	ditto	Warwick ..	50620	Found ..	22.7	..	..	..	..	..
	ditto	Gympie ..	50658	ditto ..	24.5	..	..	..	..	..
	ditto	Warwick ..	50660	ditto ..	23.1	..	..	..	..	..
Ditto	Shirley's Basic Super	..	..	Guarantee ..	17.0	17.0	..	..	..	..
	ditto	Stanthorpe ..	50610	Found ..	0.5	19.3	..	..	..	..
	ditto	Warwick ..	50618	ditto ..	0.6	18.6	..	..	..	..
	ditto	Warwick ..	50657	ditto ..	0.5	18.1	..	..	..	..
Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	Basig Slag	..	..	Guarantee ..	..	17.0	..	..	..	3.0
	ditto	Brisbane ..	50637	Found ..	..	14.5	2.8	..	97.0	1.0
Ditto	Nauru Phosphate	..	..	Guarantee ..	..	..	..	..	99.0	..
	ditto	Brisbane ..	50642	Found ..	..	..	..	..	92.0	8.0
Gibbs, Bright, and Co., Wharf Street, Brisbane	Ground Rock Phosphate	..	..	Guarantee ..	..	..	..	..	98.6	1.4
	ditto	Murarie ..	50591	Found ..	..	..	..	..	100.0	..

Table Xd.
POTASH FERTILISERS.

Producer.	Name of Fertiliser.	Sample taken at—	Official No.	Guaranteed by Producer or Found on Analysis by Agricultural Chemist.	POTASH AS—	
					Potassium Sulphate. %	Potassium Chloride. %
Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	Sulphate of Potash	..	..	Guarantee	..	..
	ditto ..	Stanthorpe ..	50603	Found	..	48.0
	ditto ..	Brisbane ..	50639	ditto	..	47.5
Dalgety and Co., Ltd., Elizabeth Street, Brisbane	ditto ..	ditto ..	50670	ditto	..	49.1
	ditto ..	..	..	..	..	48.3
	ditto ..	Murarie ..	50589	Guarantee	..	..
Shirley's Fertilizers Pty., Ltd., Little Roma Street, Brisbane	ditto ..	..	..	Found	..	48.6
	ditto ..	..	..	..	..	48.3
	ditto ..	Stanthorpe ..	50608	Guarantee	..	..
Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	Muriate of Potash	..	..	Found	..	..
	ditto ..	..	..	..	..	50.0
	ditto ..	Brisbane ..	50640	Guarantee	..	..
				Found	..	49.7

Table Xe.

MIXED FERTILISERS.

Producer.	Name of Fertiliser.	Sample taken at	Official No.	Guaranteed by Producer or Found on Analysis by Agricultural Chemist.	NITROGEN AS		PHOSPHORIC ACID.			POTASH AS		FINENESS.			
					Ammonium Sulphate.	Blood, Bone, Flesh and Offal.	Water Soluble.	Citrate Soluble.	From Bone.	Potassium Sulphate	Potassium Chloride.	Fine Material.	Coarse Material.	Unspecified Material.	
					%	%	%	%	%	%	%	%	%	%	%
Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	A.C.F. No. 3	..	..	Guaranteee	2.5	2.5	..	..	14.0	..	..	6.0	60.0	40.0	..
	ditto ..	Stanthorpe	50604	Found	2.4	4.2	..	..	11.8	..	..	7.0	80.0	20.0	..
	ditto ..	Toowoomba	50633	ditto ..	2.5	3.2	..	..	14.3	..	..	7.5	67.0	28.0	5.0
	ditto ..	Brisbane ..	50665	ditto ..	3.0	3.1	..	..	15.3	..	..	4.8	76.0	21.0	3.0
	A.C.F. No. 5	..	..	Guaranteee	1.5	2.5	..	..	14.0	..	..	9.0	60.0	40.0	..
	ditto ..	Stanthorpe	50605	Found	1.1	3.9	..	..	12.7	..	..	10.6	62.0	32.0	6.0
	ditto ..	Toowoomba	50634	ditto ..	1.3	3.8	..	..	12.5	..	..	11.8	66.0	31.0	3.0
	A.C.F. No. 8	..	..	Guaranteee	..	2.0	5.0	..	12.0	..	..	..	60.0	40.0	..
	ditto ..	Stanthorpe	50606	Found	..	2.4	3.5	..	14.1	..	..	..	70.0	30.0	..
	A.C.F. B. 3 Extra	..	..	Guaranteee	5.7	1.2	..	..	10.0	..	..	..	65.0	35.0	..
	ditto ..	Townsville	50568	Found	3.7	3.5	..	..	11.2	..	..	..	89.0	11.0	..
	A.C.F. Kwikgro	..	..	Guaranteee	2.5	1.5	..	..	14.0	..	..	..	90.0	10.0	..
	ditto ..	Brisbane ..	50628	Found	2.6	1.7	..	..	15.0	..	..	..	97.0	3.0	..
	Borthwick and Sons (Australasia), Ltd., Wharf Street, Brisbane	Moreton Fertilizer No. 1	Guaranteee	..	4.6	14.4	72.0	24.0
ditto ..		Chermside	50687	Found	..	4.0	..	..	13.4	..	..	..	81.0	16.0	3.0
Moreton Fertilizer No. 3		..	..	Guaranteee	2.0	3.4	3.3	..	10.6	..	..	..	80.0	17.0	..
ditto ..		Chermside	50688	Found	2.7	2.6	2.8	..	10.7	..	..	..	79.0	17.0	4.0
Moreton Fertilizer No. 10		..	..	Guaranteee	..	5.9	..	..	18.0	..	..	..	78.0	20.0	..
Gibbs, Bright, and Co., Wharf Street, Brisbane	Special A2 Cane Fertilizer	..	..	Guaranteee	3.5	3.5	..	6.5	..	..	7.0	60.0	40.0	..	
	ditto ..	Nambour ..	50676	Found	3.6	5.0	..	5.7	..	..	6.9	73.0	25.0	2.0	
Hutton Pty., Ltd., Roma Street, Brisbane	Hutton's Special Fertiliser	..	..	Guaranteee	..	4.7	3.5	..	11.9	..	..	..	70.0	22.0	..
	ditto ..	Nambour ..	50677	Found	..	5.6	3.5	..	12.9	..	..	..	66.0	23.0	11.0
Jordan, E. A., Aspley	Jordan's No. 1	..	..	Guaranteee	..	3.5	..	..	15.0	..	..	..	50.0	45.0	5.0
	ditto ..	Aspley ..	50581	Found	..	3.5	..	..	17.3	..	..	..	65.0	33.0	2.0
	Jordan's No. 2	..	..	Guaranteee	1.0	4.3	..	..	12.0	..	..	..	50.0	45.0	5.0
	ditto ..	Aspley ..	50672	Found	1.0	4.8	..	..	13.2	..	..	..	59.0	39.0	2.0
Jordan's No. 3	..	..	..	Guaranteee	3.0	..	10.0	..	..	..	..	..	..	..	..
	ditto ..	Aspley ..	50673	Found	3.1	2.8	9.5	..	..	..	7.0	..	..	..	..
Jordan's No. 4	..	..	Guaranteee	..	3.0	..	..	16.0	..	..	..	50.0	45.0	5.0	
ditto ..	Aspley ..	50674	Found	..	3.0	..	..	18.8	..	..	9.9	60.0	38.0	2.0	

Table Xe—continued.
MIXED FERTILISERS—continued.

Producer.	Name of Fertiliser.	Sample taken at	Official No.	Guaranteed by Producer or Found on Analysis by Agricultural Chemist.	NITROGEN AS		PHOSPHORIC ACID.			POTASH AS		FINENESS.				
					Ammonium Sulphate.	Blood, Bone, and Offal.	Water Soluble.	Citrate Soluble.	From Bone.	Potassium Sulphate.	Potassium Chloride.	Fine Material.	Coarse Material.	Unspecified Material.		
					%	%	%	%	%	%	%	%	%	%	%	
Mount Etna Fertilisers, Ltd., Commerce House, Adelaide Street, Brisbane	Mount Etna No. 4	..	..	Guarantee	1.0	3.0	..	..	19.0	..	3.0	60.0	40.0	..	2.0
	ditto	Brisbane ..	50664	Found ..	1.3	2.3	..	..	19.2	..	3.4	71.0	27.0	..	..
	Mount Etna No. 7	..	..	Guarantee	5.0	2.0	..	..	12.0	..	7.0	40.0	60.0	..	2.0
	ditto	Cairns ..	50572	Found ..	4.5	1.7	..	..	12.2	..	7.0	66.0	32.0	..	..
	Mount Etna No. 11	..	..	Guarantee	7.0	2.0	..	..	8.0	..	11.0	40.0	60.0	..	3.0
	ditto	Cairns ..	50573	Found ..	6.7	2.2	..	..	8.4	..	9.0	70.0	27.0	..	..
	Mount Etna Fish Mixture	..	..	Guarantee	1.0	3.0	..	..	17.0	..	3.0	60.0	40.0	..	2.0
	ditto	Chermside ..	50586	Found ..	1.0	3.1	..	..	16.8	..	3.0	60.0	38.0	..	..
	Shirley's Fertilizers Pty., Ltd., Little Roma Street, Brisbane	Shirley's No. 2	Guarantee	2.0	..	10.0	1.0
		ditto	Gympie ..	50655	Found ..	1.8	..	10.6	1.0
ditto		Kingaroy ..	50682	ditto ..	1.9	..	9.3	..	..	1.0	..	..	..	..	..
ditto		..	..	Guarantee	2.0	..	10.0	..	..	..	1.0	..	..	..	..
ditto		Warwick ..	50621	Found ..	2.0	..	10.4	..	..	..	1.0	..	..	..	..
Shirley's No. 4		..	..	Guarantee	4.0	..	8.0	..	..	..	2.0	..	..	..	..
ditto		Kingaroy ..	50683	Found ..	3.6	..	8.0	..	..	..	1.9	..	..	..	..
ditto		..	..	Guarantee	4.0	..	8.0	..	..	..	2.0	..	..	..	..
ditto		Stanthorpe ..	50612	Found ..	3.6	..	8.0	..	..	..	1.9	..	..	..	..
ditto		Gympie ..	50656	ditto ..	3.9	..	7.1	..	..	..	2.6	..	..	..	..
ditto		Brisbane ..	50667	ditto ..	3.7	..	7.5	..	..	..	2.1	..	..	..	..
ditto		Warwick ..	50709	ditto ..	4.2	..	8.1	..	..	..	2.6	..	..	..	..
Shirley's No. 5		..	..	Guarantee	3.0	..	10.0	..	..	..	7.0	..	..	..	..
ditto		Chermside ..	50585	Found ..	2.9	..	10.3	..	..	..	6.7	..	..	..	..
ditto		Warwick ..	50622	ditto ..	3.0	..	11.0	..	..	..	7.0	..	..	..	..
ditto		Toowoomba ..	50680	ditto ..	3.1	..	10.1	..	..	..	7.0	..	..	..	..
ditto		Chermside ..	50689	ditto ..	3.1	..	9.2	..	..	..	7.5	..	..	..	..
ditto		Warwick ..	50710	ditto ..	3.3	..	9.8	..	..	..	8.1	..	..	..	..
Shirley's No. 6		..	..	Guarantee	3.0	..	10.0	..	..	..	4.0	..	..	..	..
ditto		Stanthorpe ..	50613	Found ..	2.9	..	10.7	..	..	..	3.8	..	..	..	..
ditto	Warwick ..	50711	ditto ..	2.8	..	9.9	..	..	..	3.7	..	..	..	..
Shirley's No. 8	..	..	Guarantee	4.0	..	11.0	..	..	..	..	..	..	..	..
ditto	Kingaroy ..	50684	Found ..	3.8	..	11.4	..	..	..	..	..	..	..	..
Shirley's Howe's	..	..	Guarantee	9.0	..	6.0	..	..	..	..	..	..	..	..
ditto	Ayr ..	50567	Found ..	8.8	..	0.9	..	..	..	10.9	..	..	..	..
Shirley's Bana	..	..	Guarantee	4.0	..	5.0	..	..	..	10.4	..	..	..	..
ditto	Gympie ..	50661	Found ..	3.9	..	5.9	..	..	..	10.0	..	..	..	..
Shirley's Legume	..	..	Guarantee	..	..	6.0	..	..	..	4.0	..	..	..	..
ditto	Stanthorpe ..	50611	Found ..	..	..	8.0	..	..	..	4.2	..	..	..	..
ditto	Warwick ..	50617	ditto ..	..	..	6.6	..	..	..	4.0	..	..	..	..
ditto	Gympie ..	50662	ditto ..	..	..	4.8	..	..	..	4.3	..	..	..	..

Table XI.
PEST DESTROYERS, 1926.
SAMPLES RECEIVED FROM WHOLESALE DEALERS UNDER SECTION 3 OF THE PEST DESTROYERS ACT.

Kind of Pest Destroyer.	Queensland Wholesale Dealer.	Sold under the Name of	Active Constituents as declared on Label.
Arsenate of Lead	A. Victor Leggo and Co., Market Street, Brisbane	"Vallo" Brand Arsenate of Lead Paste	Arsenic Oxide (As ₂ O ₅) 32 per cent., Lead Oxide PbO 64 per cent.
	ditto	"Vallo" Brand Arsenate of Lead Powder	Arsenic Oxide (As ₂ O ₅) 32 per cent., Lead Oxide PbO 64 per cent.
	Buzacotts (Q'land), Ltd., Adelaide Street, Petrie Bight, Brisbane	"Orchard" Arsenate of Lead (powdered)	Arsenic Pentoxide (As ₂ O ₅) 30 per cent.
	Neptune Oil Co., Ltd., Edmonstone Road, Newstead, Brisbane	Berger's "Mercury" Brand Arsenate of Lead Powder	Arsenic Pentoxide (As ₂ O ₅) 30 per cent.
	ditto	Berger's "Mercury" Brand Arsenate of Lead Paste	Arsenic Pentoxide (As ₂ O ₅) 30 per cent.
	A. M. Bickford and Sons, Ltd., Tank Street, Brisbane	"Aero" Brand Arsenate of Lead	Arsenic Oxide, 31.5 per cent.; Lead Oxide, 60 per cent.
Arsenic, Pure	Wm. Street and Son, 173.5 Ann Street, Brisbane	Street's Pure Arsenic	Pure Arsenic
	O. C. Roberts, Ltd., Queen Street, Brisbane	White Arsenic	White Arsenic
	C. H. Slade and Co., Mary Street, Brisbane	Arsenic Trioxide	Arsenic Trioxide
	Taylors and Elliotts, Ltd., 154 Charlotte Street, Brisbane	Arsenic	Arsenious Oxide 98 per cent.
	A. Victor Leggo and Co., Market Street, Brisbane	"Vallo" Brand White Arsenic	Arsenic (As ₂ O ₃) 99 per cent.
	A. M. Bickford and Sons, Ltd., Tank Street, Brisbane	Arsenic	Arsenic Trioxide 98 per cent.
Arsenic, Commercial	Prickly-pear Land Commission, George Street, Brisbane	Arsenic Pentoxide	Arsenic Pentoxide 83 per cent.
	Taylors and Elliotts, Ltd., 154 Charlotte Street, Brisbane	Arsenic, Grey	Arsenious Oxide, 95 per cent.
Bordeaux Mixture	A. Victor Leggo and Co., Market Street, Brisbane	"Vallo" Brand Dry Bordeaux	Copper Sulphate (CuSo ₄ 5H ₂ O) 60 per cent.
	Taylors and Elliotts, 154 Charlotte Street, Brisbane	Bordeaux Mixture Powder	Copper Sulphate 50 per cent.
	Neptune Oil Co., Ltd., Edmonstone Road, Newstead, Brisbane	Blair Borderine Powder	Basic Copper Sulphate 80 per cent.
Cattle Dips	Surgical Supplies, Ltd., Queen Street, Brisbane	"Kilic" Cattle Dip (bar form)	Arsenic Trioxide
	Australian Machinery Co., Ltd., 371-373 Adelaide Street, Brisbane	"Royal" Cattle Dip (No. 2 Homogeneous)	Arsenic and Cresols
	ditto	Queensland Cattle Dip (Homogeneous)	Arsenic and Cresols
	A. Victor Leggo and Co., Market Street, Brisbane	"Vallo" Brand Powder Cattle Dip	Arsenic (As ₂ O ₃)
	New Zealand Loan and Mercantile Agency Co., Ltd., Eagle Street, Brisbane	Cooper's Improved Cattle Dip	Arsenic

Cattle Dip—continued.	James Campbell and Sons, Ltd., Creek Street, Brisbane	Thomas' Carbolicised Cattle Wash	Arsenic (As ₂ O ₃)
	Australian Chemical Co., Grey Street, South Brisbane	"Non-Ox" Liquid Cattle Dip	Arsenic and Cresols
	Australian Disinfectant Co., 341-343 Queen Street, Brisbane	Australian Liquid Dip	Arsenic and Cresols
	Surgical Supplies, Ltd., Queen Street, Brisbane	"Kiltic" Liquid Cattle Dip	Arsenic
Copper Sulphate	R. W. Thurlow and Co., Ltd., Wharf Street, Brisbane	Sulphate of Copper	Sulphate of Copper
	Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	Bluestone	Copper Sulphate 98 per cent.
	C. H. Slade and Co., Mary Street, Brisbane	Bluestone	Sulphate of Copper 98 per cent.
	A. Victor Leggo and Co., Market Street, Brisbane	Copper Sulphate	Copper Sulphate
	Neptune Oil Co., Ltd., Edmonstone Road, Newstead, Brisbane	Macclesfield's Bluestone	Copper Sulphate
	ditto	Australian Bluestone	Copper Sulphate
	Shirley's Fertilizers Pty., Ltd., Little Roma Street, Brisbane	E.S.A. Sulphate of Copper	Copper Sulphate
Cyanide	Noyes Bros. (Sydney), Ltd., Elizabeth Street, Brisbane	Cyanide	Cyanide
	Taylor and Elliotts, Ltd., 154 Charlotte Street, Brisbane	Cyanide of Potash	Cyanide of Potash 95 per cent.
Formalin or Formol	C. H. Slade and Co., Mary Street, Brisbane	Formalin	Formalin
	A. M. Bickford and Sons, Ltd., Tank Street, Brisbane	Formalin	Formalin
Lime, Burnt	Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	Burnt Lime	Calcium Oxide 85 per cent.
Lime-Sulphur	Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	Lime-Sulphur Solution	Sulphur 25 per cent.
	Buzacotts (Q'land), Ltd., Adelaide Street, Petrie Bight, Brisbane	"Harola" Lime Sulphur Spraying Solution	Sulphur 25 per cent.
	A. Victor Leggo and Co., Market Street, Brisbane	"Vallo" Lime Sulphur Wash	Sulphur 25 per cent.
	Neptune Oil Co., Ltd., Edmonstone Road, Newstead, Brisbane	"Neptune" Lime Sulphur Spraying Solution	Sulphur 25 per cent.
Nicotine or Nicotine Compounds	Buzacotts (Q'land), Ltd., Adelaide Street, Petrie Bight, Brisbane	N.P.C. Nicotine Sulphate	Nicotine 40 per cent.
	A. Victor Leggo and Co., Market Street, Brisbane	"Vallo" Brand Nicotine Sulphate	Nicotine 40 per cent.
	Neptune Oil Co., Ltd., Edmonstone Road, Newstead, Brisbane	Blackleaf 40	Nicotine 40 per cent.
Phenolic Insecticides, Germicides, and Disinfectants	A. G. Bignold and Co., Elizabeth Street, Brisbane	Microl	Phenols 3 per cent.
	ditto	Albarol	Phenols 4 per cent.
	ditto	Ivorol	Phenols 2 per cent.
	ditto	Microlene	Phenols 1 per cent.
	ditto	Lansol	Cresylic Acid 50 per cent
	Wm. Street and Son, 173-5 Ann Street, Brisbane	Street's Cure for Fleas	Tar Acid 10 per cent.
	S. Tremaine and Co., Charlotte Street, Brisbane	Phenyle	Phenols 2 per cent.
	ditto	Lysol	Cresols 50 per cent.

Table XI.—continued.
 PEST DESTROYERS, 1926.—continued.
 SAMPLES RECEIVED FROM WHOLESALE DEALERS UNDER SECTION 3 OF THE PEST DESTROYERS ACT—continued.

Kind of Pest Destroyer.	Queensland Wholesale Dealer.	Sold under the Name of	Active Constituents as declared on Label.
Phenolic Insecticides, Germicides, and Disinfectants—continued.	L. A. Drewe, 49 Victory Chambers, Queen Street, Brisbane	Lotol	Phenolic Compounds 2.75 per cent.
	Surgical Supplies, Ltd., Queen Street, Brisbane	Sapocarb	Cresylic Acid 50 per cent.
	John Irving and Sons, London Works, Mayne, Brisbane	Irving's Effective Vermin Spray	Phenols 2 per cent., Naphthalene 5 per cent.
	ditto	Irving's Soluble Phenyle	Phenols 2 per cent.
	ditto	Irving's Soluble Phenyle	Phenols 5 per cent.
	ditto	Irving's Lysol	Phenols 50 per cent.
	ditto	The "Irving" Carbolic Disinfecting Powder	Carbolic Acid 15 per cent.
	Tar Distillers, Ltd., Montague Road, South Brisbane	"Cobra" Brand Disinfectant	Phenolic Compounds 15 per cent.
	ditto	"Cobra" Brand Phenyle	Phenolic Compounds 2 per cent.
	ditto	Surgical Lysol	Cresylic Acid 50 per cent.
	ditto	"Cobra" Brand Liquid Carbolic Soap	Phenolic Compounds 2 per cent.
	ditto	Cresylic Powder	Cresols 15 per cent.
	ditto	Carbolic Acid	Tar Acids 95 per cent.
	ditto	Cresylic Acid	Tar Acids 95 per cent.
	ditto	Creosote	Phenolic Compounds 30 per cent.
	ditto	White Ant Exterminator	Phenolic Compounds 30 per cent.
	ditto	"Ce Be" Phenyle	Phenols 2 per cent.
	Campbell Bros., Ltd., Bowen Bridge, Brisbane	"Ce Be" Phenyle	Phenols 12 per cent.
	W. Arnold, St. George Street, South Brisbane	"Arnoloid" Phenyle	Tar Acid 2 per cent.
	ditto	"Arnoloid" Lysol	Cresylic Acid 50 per cent.
	A. M. Hertzberg and Co., Charlotte Street, Brisbane	"Columbia" Brand Phenyle	Tar Acid 2 per cent.
	ditto	"Columbia" Brand Lysol	Cresylic Acid 50 per cent.
	Dalgety and Co., Ltd., Elizabeth Street, Brisbane	"Kerol" Disinfectant	Tar Acids 31 per cent.
	Sumatra Fly Oil Co., Ltd., 330 Wickham Street, Brisbane	Pesticide	Tar Acids 13 per cent., Cresylic Acid 3 per cent.
	H. Deakin, Charlotte Street, Brisbane	Morrison's Soluble Phenol	Tar Acid 15 per cent.
	ditto	Morrison's Phenolic Liquid Disinfectant	Tar Acid 15 per cent.
	Norris Agencies, Ltd., 639 Ann Street, Brisbane	C.N. Coro-noleum	Phenols 2 per cent.
	ditto	"Bestyette" Disinfectant	Phenols 12 per cent.
	ditto	"Bestyette" Phenyle Disinfectant	Phenols 2 per cent.
	ditto	"Sidolia"	Cresols 15 per cent.
	ditto	C.N. Coro-noleum	Phenols 25 per cent.
	Bartlams, Ltd., Flinders Street, Townsville	Lysol	Cresylic Acid 50 per cent.
E. F. Broad (Queensland), Ltd., 41-43 Edward Street, Brisbane	Karbo	Carbolic Acid and Cresols 21 per cent.	
Taylor and Elliotts, Ltd., 154 Charlotte Street, Brisbane	"Taycol" Disinfectant	Carbolic Acid 15 per cent.	
ditto	Soluble Phenyle	Carbolic Acid 1.5 per cent.	
ditto	Brand's Lysol	Cresylic Acid 50 per cent.	
ditto	Cylol	Cresylic Acid 50 per cent.	
ditto	Arnoldine Carbolic Powder	Carbolic 15 per cent.	
ditto	Vetade Disinfectant	Phenoloids 20 per cent.	

henolic Insecticides, Germicides, and Disinfectants— <i>continued</i> .	R. Lewis, Elizabeth Street, Brisbane	Phenyle	..	..	..	Carbolic and Cresylic Acids 2.7 per cent.
	ditto	Morbofuge	..	..	..	Carbolic and Cresylic Acids 2.7 per cent.
	ditto	Carbolic Powder	..	..	..	Carbolic and Cresylic Acids 3 per cent.
	Neptune Oil Co., Ltd., Edmonstone Road, New- stead, Brisbane	"Neptune" Phenyle	..	..	..	Carbolic Acid or its Homologues 2.5 per cent.
	Australian Chemical Co., Grey Street, South Brisbane	Kreola 1	..	..	..	Tar Acids 20 per cent.
	ditto	Kreola 2	..	..	..	Tar Acid 2.5 per cent.
	ditto	Klensit	..	..	..	Tar Acids 2 per cent.
	ditto	Savol	..	..	..	Phenols 10 per cent.
	ditto	Creosote	..	..	..	Cresylic Acid 20 per cent.
	ditto	Phenyle	..	..	..	Tar Acids 2 per cent.
	ditto	Phenyle	..	..	..	Tar Acids 15 per cent.
	ditto	Phenyle	..	..	..	Tar Acids 20 per cent.
	ditto	Safonia	..	..	..	Cresylic Acid 2.7 per cent.
	Australian Disinfectant Co., 341-343 Queen Street, Brisbane	Pyro	..	..	..	Phenolic Compound 2 per cent.
	ditto	Crown	..	..	..	Coal Tar Phenols 27 per cent.
	ditto	Vaceyle No. 2	..	..	..	Phenoloid Compounds 2.5 per cent.
	Vacuum Oil Co., Pty., Ltd., Eagle Street, Brisbane	Vaceyle No. A.	..	..	..	Phenoloid Compounds 2.5 per cent.
	ditto	Bickford's Lysol	..	..	..	Cresylic Acid 50 per cent.
	A. M. Bickford and Co., Ltd., Tank Street, Brisbane	Carbolic Acid Powder	..	..	..	Carbolic and Cresylic Acids 15 per cent.
	ditto	Soluble Phenyle	..	..	..	Phenols 2 per cent.
	ditto		..	..	..
Phosphorus Pest Destroyers	Wm. Street and Son, 173-5 Ann Street, Brisbane	Rat Poison	..	..	..	Phosphorus
	New Zealand Loan and Mercantile Agency Co., Ltd., Eagle Street, Brisbane	S.A.P.	..	..	..	Phosphorus
	Taylor and Elliotts Ltd., 154 Charlotte Street, Brisbane	Rat Doom	..	..	..	Phosphorus
Prickly-pear Poisons, Arsenical Weed Destroyers	Wm. Street and Son, 173-5 Ann Street, Brisbane	Street's Cure for Weeds, Prickly-pear, Trees, &c.	..	..	..	Arsenic (As ₂ O ₃) 10 per cent.
	Noxpear Pty., Ltd., Edward Street, Brisbane	"Noxpear" Prickly-pear Destroyer	..	..	..	Arsenic Pentoxide 83 per cent.
	Campbell Bros., Ltd., Bowen Bridge, Brisbane	Peel's Pear Poison	..	..	..	Arsenious Acid 16 per cent.
	Buzacotts (Q'land), Ltd., Adelaide Street, Petrie Bight, Brisbane	"Orchard" Brand Weed Killer	..	..	..	(As ₂ O ₃) 18 per cent.
	A. Victor Leggo and Co., Market Street, Brisbane	"Vallo" Brand Weed Killer	..	..	..	Arsenic (As ₂ O ₃) 80 per cent.
	New Zealand Loan and Mercantile Agency Co., Ltd., Eagle Street, Brisbane	Cooper's Weedicide	..	..	..	Arsenic (As ₂ O ₃) 36 per cent.
	Taylor and Elliotts Ltd., 154 Charlotte Street, Brisbane	Taylor's Concentrated Weed Destroyer	..	..	..	Arsenious Acid 18 per cent.
	Prickly-pear Land Commission, George Street, Brisbane	Robert's Improved Pear Poison	..	..	..	Arsenic Pentoxide 20 per cent.
Insecticides, Pyrethrum	T. Kashiwagi, 62 Wickham Street, Valley, Brisbane	Cocksec Powder	..	..	..	Pyrethrum flowers
	R. M. Gow and Co., Ltd., Turbot Street, Brisbane	Flxo Pest	..	..	..	Boron and Pyrethrum roseum
	A. G. Bignold and Co., Elizabeth Street, Brisbane	Mortsin	..	..	..	Pyrethrum cinerariæfolium
	S. Hoffnung and Co., Ltd., Charlotte Street, Brisbane	"Mustdie" Insect Destroyer	..	..	..	Pyrethrum cinerariæfolium
	ditto	Peacock Anmin Insect Powder	..	..	..	Pyrethrum Flowers

Table XI.—continued.

PEST DESTROYERS, 1926.—continued.

SAMPLES RECEIVED FROM WHOLESALE DEALERS UNDER SECTION 3 OF THE PEST DESTROYERS ACT.

Kind of Pest Destroyer.	Queensland Wholesale Dealer.	Sold under the Name of	Active Constituents as declared on Label.
Insecticides, Pyrethrum — continued.	Noble's Ltd., Eagle Street, Brisbane	insectibane	Pyrethrum Cinerariæfolium
	Harrisons, Ramsay Pty., Ltd., Adelaide Street, Brisbane	Cocksec Powder	Pyrethrum Flowers 100 per cent.
Insecticides, Boron Compounds	A. M. Hertzberg and Co., Charlotte Street, Brisbane	Cocksec Powder	Pyrethrum flowers
	Taylor and Elliots, Ltd., 154 Charlotte Street, Brisbane	Queen Insect Powder	Pyrethrum 50 per cent. and Boron Compounds
	George Gough and Son, Ltd., Albert Street, Brisbane	Dedcert	Boron Compounds
	Wm. Street and Son, 173-5 Ann Street, Brisbane	Street's Non-poisonous Cockroach Cure	Boron Compounds
	L. M. Winship, Coorparoo, Brisbane	Bombay Cockroach Exterminator	Boron Compound
	H. Havell, Burke Street, Coorparoo, Brisbane	H. Havell's Famous Cockroach Destroyer	Boron Compound
	Pearson and Greer, Greer Street, Upper Paddington, Brisbane	Sure Cockroach Extirpator	Boron Composition 40 per cent.
	McLuckie, Harrison, Ltd., Elizabeth Street, Brisbane	Blattacide	Boron Comp.
	Taylor and Elliots, Ltd., 154 Charlotte Street, Brisbane	Queen Cockroach Powder	Boron Compounds 60 per cent.
	Red Oil Preparations	Vacuum Oil Co. Pty., Ltd., Eagle Street, Brisbane	Gargoyle Spraying Oil .. .. .	Red Oil 85 per cent.
Buzacottis (Q'land), Ltd., Adelaide St., Petrie Bight, Brisbane		"Harbas"	Red Spraying Oil
Sheep Dips, Arsenical	Neptune Oil Co., Ltd., Edmonstone Road, Newstead, Brisbane	"Neptune" Prepared Spraying Oil "A"	Heavy Mineral Oil 87 per cent.
	Gibbs, Bright, and Co., Wharf Street, Brisbane	"Cubba" Sheep Dip	Arsenic
	Surgical Supplies, Ltd., Queen Street, Brisbane	"Kiltic" Sheep Dip	Arsenic Trioxide
	New Zealand Loan and Mercantile Agency Co., Ltd., Eagle Street, Brisbane	Cooper's Sheep Dipping Powder	Arsenic and Sulphur Compounds
	A. Victor Leggo and Co., Market Street, Brisbane	"Vallo" Powder Sheep Dip	Arsenic and Sulphur Compounds
	Dalgety and Co., Ltd., Elizabeth Street, Brisbane	Quibell's Powder Sheep Dip	Arsenious Trioxide (As ₂ O ₃)
Sheep Dips, Phenolic	Hayne and Carson, Queen Street, Brisbane	Little's Powder Dip	Arsenic (As ₂ O ₃) 21 per cent., Sulphur 60 per cent.
	W. M. Hayne, Queen Street, Brisbane	Little's Improved Fluid Dip	Tar Acids 17.5 per cent.
	Campbell Bros., Ltd., Bowen Bridge, Brisbane	"Ce Be" Liquid Sheep Dip	Phenols 2 per cent.
	Dalgety and Co., Ltd., Elizabeth Street, Brisbane	Quibell's Liquid Sheep Dip	Tar Acids 18 per cent.
	H. Deakin, Charlotte Street, Brisbane	Morrison's Phenolic Sheep Dip	Tar Acid 15 per cent.
	Norris Agencies, Ltd., 639 Ann Street, Valley, Brisbane	C.N. Coro-natholeum Sheep Dip	Phenols 10 per cent.
Goldsbrough, Mort, and Co., Ltd., Quay Street, Rockhampton	Little's Improved Fluid Dip	Tar Acids 17.5 per cent.	

Sheep Dips, Phenolic—continued.	New Zealand Loan and Mercantile Agency Co., Ltd., Eagle Street, Brisbane	Cooper's Milk Oil Fluid	..	Phenols and Cresols 18-20 per cent.
	Neptune Oil Co., Ltd., Edmonstone Road, Newstead, Brisbane	"Neptune" Phenolic Sheep Dip	..	Carbolic Acid or its Homologues 2.5 per cent.
Strychnine	Thomas Brown and Sons, Ltd., Eagle Street, Brisbane	Pure Strychnine	..	Strychnine
	New Zealand Loan and Mercantile Agency Co., Ltd., Eagle Street, Brisbane	Pure Strychnine	..	Strychnine
	A. Victor Leggo and Co., Market Street, Brisbane	Pure Strychnine	..	Strychnine
	Taylors and Elliotts, Ltd., 154 Charlotte Street, Brisbane	Pure Strychnine	..	Strychnine
Sulphur	Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	Sulphur	..	Sulphur 98 per cent.
	C. H. Slade and Co., Mary Street, Brisbane	Powdered Sulphur	..	Sulphur
	A. Victor Leggo and Co., Market Street, Brisbane	Powdered Sulphur	..	Sulphur
	Neptune Oil Co., Ltd., Edmonstone Road, Newstead, Brisbane	Sicilian Sulphur	..	Sulphur
	ditto	Sublimed Sulphur	..	Sulphur
	ditto	Australian Sulphur	..	Sulphur
Tobacco Dust, Tobacco Powder	Charles Taylor and Co., Roma Street, Brisbane	Tobacco Dust	..	Nicotine 0.8 per cent.
Miscellaneous	Moreheads, Ltd., Mary Street, Brisbane	"Knoblo" Brand Blowfly Oil	..	1/2 lb. Arsenic (As ₂ O ₃) per gallon, Phenol, and Copper Mineral Oil 47 per cent., Eucalypti-oleum 4 per cent.
	Taubmans (Q'ld), Ltd., 95 Edward Street, Brisbane	Kleinflox	..	Phenolic Compounds 7 per cent.
	Dalgety and Co., Ltd., Elizabeth Street, Brisbane	Flynnox	..	Tar Acids 13 per cent., Cresylic Acid 3 per cent.
	Sumatra Fly Oil Co., Ltd., 330 Wickham Street, Brisbane	Sumatra Fly Oil	..	Tar Acid 5 per cent.
	H. Deakin, Charlotte Street, Brisbane	Morrison's Fly-blown Sheep Oil	..	Phenols 8 per cent.
	H. R. Eastman, Cunnamulla	"Policeman" Fly Oil	..	Eucalyptus Oil 10 per cent., Eucalyptus Residual Oil 40 per cent., Mineral Oil 50 per cent.
	R. B. Lawson and Co., Stanthorpe	Eucacene Fly Oil	..	Perchloride Mercury .01 per cent., Tar Acids 3 per cent.
	E. J. Deignan, Stafford Road, Kedron, Brisbane	Deignan's Blowfly Destroyer	..	Arsenious Acid 29 per cent.
	H. R. Eastman, Cunnamulla	"Policeman" Fly Sheep Spraying Soap	..	Arsenic 30 per cent., Stockholm Tar 7.2 per cent., Tar Oils 2.9 per cent.
	Australian Machinery Co., Ltd., 371-373 Adelaide Street, Brisbane	Royal No. 1 Arsenical Fluid	..	Mineral Oil 50 per cent.
	John Fell and Co., Ltd., 113 Margaret Street, Brisbane	Sprayol	..	Kerosene 62 per cent.
	John Irving and Sons, London Works, Mayne, Brisbane	Irving's Prepared Soluble Red Spraying Oil	..	Mineral Oil 60.9 per cent., Carbolic Acid 8.6 per cent.
	Neptune Oil Co., Ltd., Edmonstone Road, Newstead, Brisbane	"Neptune" Prepared Spraying Oil "C"	..	Benzol 30 per cent.
	A. Victor Leggo and Co., Market Street, Brisbane	"Vallo" Brand Benzole Emulsion	..	Extract of Derris 1 per cent., Potash 7 per cent.
	E. F. Broad (Q'land), Ltd., 41-43 Edward Street, Brisbane	McDougall's No. 2 Fruit Tree Wash	..	Derris 33 per cent.
	ditto	Katakilla Powder	..	Derris Extract 11 per cent., Sulphur Solution 3 per cent., Potash 7.5 per cent.
	Buzacotts (Q'land), Ltd., Adelaide Street, Petrie	Katakiller	..	
	ditto	McDougall's No. 2 Fruit Tree Wash	..	

Table XI.—continued.
 PEST DESTROYERS, 1926—continued.
 SAMPLES RECEIVED FROM WHOLESALE DEALERS UNDER SECTION 3 OF THE PEST DESTROYERS ACT—continued.

Kind of Pest Destroyer.	Queensland Wholesale Dealer.	Sold under the Name of.	Active Constituents as declared on Label.
Miscellaneous—continued.	Buzacotts (Q'land), Ltd., Adelaide Street, Petrie Bight, Brisbane.	Solomia	Fatty Anhydride 16.21 per cent, Combined Alkali 3.16 per cent., Free Alkali .17 per cent., Free Fat .11 per cent., Phenols .27 per cent., Chlorine .13 per cent., Glycerine 1.42 per cent.
	ditto	"Orchard" Brand Substitute for Lime and Sulphur	Barium Oxide 39 per cent., Sulphur 44 per cent.
	Campbell Bros., Ltd., Bowen Bridge, Brisbane	"Ce Be" Liquid Weed Killer	Phenols
	Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	Sulphate of Iron	Sulphate of Iron
	Buzacotts (Q'land), Ltd., Adelaide Street, Petrie Bight, Brisbane	Paradichlorobenzene	Paradichlorobenzene
	A. Victor Leggo and Co., Market Street, Brisbane	Paradichlorobenzene	Paradichlorobenzene
	Buzacotts (Q'land), Ltd., Adelaide Street, Petrie Bight, Brisbane	"Fumo" Brand Calcium Cyanide	Calcium Cyanide 40 per cent.
	A. Victor Leggo and Co., Market Street, Brisbane	Bowker's Calcium Arsenate	Arsenic Oxide 40 per cent.
	New Zealand Loan and Mercantile Agency Co., Ltd., Eagle Street, Brisbane	"Vallo" Brand Arsenate of Soda	(As ₂ O ₃) 63 per cent.
	Taylor and Elliotts, Charlotte Street, Brisbane	Cooper's Improved Worm Tablets	Soluble Arsenic 0.4 grains, Soluble Copper 1.8 grains per tablet
	ditto	Sodium Arsenite	Arsenic Trioxide
	A. Victor Leggo and Co., Market Street, Brisbane	Paris Green	Copper Carbonate
	Shirley's Fertilizers Pty., Ltd., Little Roma Street, Brisbane	"Vallo" Antibunt	Carbonate of Copper 70 per cent.
	ditto	Bunticide	
	ditto	Chlorocide A	Chlorocide
	ditto	Chlorocide B	Chlorocide
	Neptune Oil Co., Ltd., Edmonstone Road, Newstead, Brisbane	Atomic Sulphur	Sulphur 45 per cent.
	Australian Co-operative Fertilisers, Ltd., Little Roma Street, Brisbane	Cul-cal	Copper Sulphate 20 per cent.
	Buzacotts (Q'land), Ltd., Adelaide Street, Petrie Bight, Brisbane	Cu-cal Copper Lime Dust	Copper Sulphate 20 per cent.
	Webster and Co., Ltd., Mary Street, Brisbane	Vaporite	
	A. Victor Leggo and Co., Market Street, Brisbane	"Vallo" Brand Spray Spreader	
	Wm. Street and Son, 173-5 Ann Street, Brisbane	Street's Cure for Ants, Bugs, Borers, &c.	Arsenic (As ₂ O ₃) 5.5 per cent.
	ditto	Street's White Ant Cure	Arsenic (As ₂ O ₃) 60 per cent.
	Pearson and Greer, Greer Street, Upper Paddington, Brisbane	Pearsons and Greers' White Ant Exterminator	Arsenic (As ₂ O ₃) 6 per cent.
	A. M. Bickford and Co., Ltd., Tank Street, Brisbane	Bickford's Ant and Vermin Destroyer	Arsenious Oxide 35 per cent.
	George Gough and Son, Ltd., Albert Street, Brisbane	B. Flat	Vegetable and Mineral Oil
	Wm. Street and Son, 173-5 Ann Street, Brisbane	Street's Cockroach Cure	Arsenic (As ₂ O ₃) 25 per cent and Boron Compound Phenol 3 per cent., Myrbane 3 per cent.
	Gibbs, Bright, and Co., Wharf Street, Brisbane	Bono	Ether Soluble Resin of Pyrethri Flores 0.12 per cent.
	Frazer and Best, Limited, Queen Street, Brisbane	"Fly-Tox"	Sodium fluoride 83 per cent.
	Norris Agencies, Ltd., 639 Ann Street, Valley, Brisbane	Cidol	
	Potter and Birks, Ltd., Elizabeth Street, Brisbane	Flit	Petroleum Soluble Resin of Pyrethri Florum 0.33 per cent.

REPORT OF THE CHIEF ENTOMOLOGIST.

STAFF AND ACCOMMODATION.

The year ended 30th June, 1926, witnessed considerable changes in the organisation of the Division of Entomology and Plant Pathology. Certain additions were made to the staff, and as a result of these additions there was a re-allocation of the duties assigned to most of the officers. At the present moment, the staff consists of seven officers engaged on entomological work, three on pathological duties, one illustrator, and one clerical assistant; while one officer, the Chief Entomologist, is associated with both the entomological and pathological activities of the division. In addition to these purely departmental officers, Professor Goddard and Mr. Herbert of the University of Queensland, acted as Consulting Plant Pathologists to the Department throughout the whole of the period under review.

Mr. Henry Tryon retired from the permanent staff on 31st December after a long period of service on entomological and pathological problems; his services were, however, retained for special pathological investigations. Mr. J. H. Simmonds and Mr. R. B. Morwood assumed duties as Plant Pathologist and Assistant to Plant Pathologist respectively on 1st January, while Mr. J. H. Smith entered the service as Assistant to Entomologist in February. The writer entered on his duties as Chief Entomologist in July.

The growth in the number of scientific workers attached to the division has naturally led to an increase in the volume of clerical work, and a clerical assistant was allotted to the division in April, the position at first being occupied by Mr. S. Green and latterly by Mr. A. R. Brinblecombe.

An exchange in accommodation was effected with another branch of the Department, and it is believed that this action has been mutually beneficial in its results. The exchange in question has made possible the more adequate housing of a portion of the entomological staff, but, in the older rooms still occupied, there is considerable congestion owing to the steady growth of the staff, collections, and library. An office and laboratory has been fitted up for the use of the pathological section of the division, and equipment appropriate to the dimensions of the present pathological staff has either been installed or ordered.

BANANA INSECT PESTS.

As in previous years, the pest of outstanding importance in banana plantations has been the banana weevil borer (*Cosmopolites sordida* Chev.). This extremely destructive insect has recently been reported from districts previously believed to be uninfested, and it would seem that few banana-growing areas can now be regarded as being quite free from infestation. Mr. J. L. Froggatt, the officer in charge of banana insect pest investigations, has continued his work on the life history and control of this insect, and the whole position, as it now exists, is exhaustively dealt with in Bulletin No. 4, published in January, 1926. The recommendations contained therein are worthy of the serious attention of every banana grower, and it is confidently believed that the position can be materially

improved by a general adoption of these recommendations.

A thorough search was made for evidence of the establishment of *Plaesius javanus* Er., the Histerid predator introduced from Java in 1921 and 1924 and liberated in the Redland Bay district, but the search failed to yield any trace of this useful insect. An additional colony received from Java in April, 1926, was liberated in the Yandina district, and a further colony was similarly dealt with in June of this year. It is hoped that it will be possible to test this line of attack against the banana weevil borer on a considerably larger scale in the near future.

Some growers evidently still hope for the eradication of the banana weevil borer, and it is therefore necessary to emphasise the fact that the complete eradication of this pest from the banana-growing districts of Queensland is not practicable. The owner of a banana plantation must, therefore, face the fact that the fighting of this pest should be just as essential a feature of his plantation routine as is spraying for scale and other pests in a citrus or deciduous fruit orchard.

The banana thrips (*Anaphothrips signipennis* Bagnall) has again been the cause of very considerable injury to the fruit of bananas in many districts in Queensland, but more particularly in the far northern areas, where an unusually severe outbreak occurred in the Innisfail district. Considerable field experimental work has been conducted during the past year with a view to further improving or adding to the control measures at present available against this serious pest. As a result of that field work there are now grounds for hoping that still more effective control can be obtained; it will, however, be necessary to conduct further field tests before a general recommendation can be made. These tests are now under way, and it is hoped that confirmation of the promising results of the earlier experiments will be obtained.

Northern Queensland has also recently been supplying quite a large number of records of fruit fly damage to bananas, and it would, unfortunately, appear probable that, unless adequate precautions are taken, fruit fly losses may be a material factor in determining the degree of prosperity to be attained by this somewhat rapidly expanding branch of agriculture in the far north. To a lesser degree fruit fly losses are also experienced in Southern Queensland.

Much detailed information regarding fruit fly habits and control is fortunately, however, available as a result of the extensive investigations carried out in Queensland, particularly in earlier years in the Toowoomba district and more recently in the Stanthorpe deciduous fruit-growing areas. Certain of the fruit fly records obtained from cultivated bananas during the last twelve months have referred to the Queensland fruit fly, *Chaetodacus tryoni* Froggatt, but in recent months quite a number of cases of fruit fly infestation in the far north have been due to the attacks of a different species of fly. This species is now engaging the attention of Mr. Froggatt, and that officer is steadily accumulating valuable data bearing on this important subject.

The banana fruit spotting bug (*Dasynus lutescens* Distant) has been responsible for extensive damage to fruit in the Byfield district, near Rockhampton, and a certain amount of field control experimental work has been carried out with somewhat promising results, but, as in the case of the banana thrips, the trials will have to be repeated for confirmation of the earlier promising results.

Fruit-eating caterpillars are widely distributed throughout the whole of the banana-growing districts of the State, but the total loss sustained from the attacks of this type of pest is not comparable to that inflicted by any one of the pests already discussed, with the single exception of the fruit spotting bug, which, although locally of very considerable importance, is, so far as is known at present, confined, as an important banana pest, to the Byfield district. The species of fruit-eating caterpillars from which the moths have been bred out are *Tirocala plagiata* Walker (Noctuidæ), *Plusia* sp. (Noctuidæ), and an unidentified species of Pyraustidæ; at least two other species of caterpillars have been found attacking fruit, but their moths have not yet been bred out. *Plusia* sp., in addition to being a fruit-eater, also attacks the foliage of the banana.

Nematodes, as in past years, have been decidedly abundant, particularly in light loamy soils, but, as is the case elsewhere, these still present an extremely difficult problem.

A certain amount of defoliation, due to the feeding of a species of *Cyrtacanthaeris* (Acridiidae) was recently observed in a northern area, but this grasshopper is only a very minor pest. An unidentified species of Locustidæ was also observed damaging fruit in the Cairns district, but here again the presence of the pest was a matter of scientific interest rather than of practical importance.

The foliage was also damaged by the larvæ of *Prodenia litura* Fabricius (Noctuidæ) and by the beetles of a species of Chrysomelidæ, while a scale insect, *Aspidiotus* sp. (Coccidæ) was also present on the leaves, pseudo stems, and bunch stalks in the Cairns district; all three pests, however, are of minor importance.

Mr. J. H. Weddell adequately assisted Mr. Froggatt in his investigations.

DECIDUOUS FRUIT INSECT PESTS.

The investigation of the insect pests of deciduous fruits was continued by Mr. Hubert Jarvis, with headquarters at Stanthorpe, the only commercial deciduous fruit-growing district in Queensland. A large proportion of that officer's time was devoted to the investigation of the life history and control of the Queensland fruit fly (*Chaetodacus tryoni* Froggatt), which, as in earlier years, was responsible for serious losses throughout the State, although the Stanthorpe area itself escaped with a comparatively light infestation. Further interesting and valuable details were obtained regarding its life history, the most important point determined during the year being the fact that this species can overwinter in the Stanthorpe district, although it is believed that such an occurrence is rare. A force of special inspectors was temporarily employed during the fruit season to assist with the thorough maintenance of orchard hygiene, with, it is believed, distinctly beneficial results. Lures

were used to a considerable extent, and the most effective means at present available for controlling this pest seems to be a combination of strict orchard hygiene and luring.

The *Aphelinus mali* Hald. parasite of the woolly aphis (*Eriosoma lanigerum* Hausm.) has been thoroughly distributed throughout the district, and there can be but few of the infested orchards which do not contain colonies of this valuable parasite. Mr. H. Jarvis speaks enthusiastically of the benefits derived from this introduction, which is believed to be resulting in a marked reduction in woolly aphis infestation. Its establishment has therefore been responsible for a great saving in the labour involved in spraying at a time when it can be ill afforded by the orchardist.

A special joint expedition, attended by representatives of New South Wales and Queensland, was made to the Taloom scrub in October, but it cannot be said that the expedition was productive of an important contribution to the present fund of knowledge on the interesting relationship existing between *Chaetodacus tryoni* and other fruit flies and the native scrubs of Southern Queensland; nevertheless, some information of value was obtained.

In addition to performing his duties as a research officer in the Stanthorpe district, Mr. Jarvis also acted as an advisory officer on general entomological matters. He was thus able to tender much useful information in answer to a considerable volume of inquiries regarding the insect pests of a variety of crops other than deciduous fruits. Mr. S. M. Watson also rendered satisfactory service as Mr. Jarvis's assistant.

CITRUS INSECT PESTS.

The spiny orange bug (*Biprorulus bibax* Breddin) has been the subject of investigation in several districts in the State, and some additional information regarding its life history and habits has been obtained. At Roma Mr. Girault found two egg parasites, one a Proctotrypid and the other a Chalcidid. A particularly severe outbreak of this pest was reported from the Rockhampton district, and Mr. J. H. Smith of this division conducted a series of investigations in conjunction with Mr. Prest of the fruit branch; these two officers also carried out a series of experiments with the object of improving the control measures applicable to this pest. Although the losses in the Rockhampton outbreak were almost entirely due to the presence of the spiny orange bug, frequent records were obtained of slight injury to citrus by a species of *Vitellus*; these two Pentatomid bugs were often confused by citrus growers, and in several instances reports of the occurrence of the spiny orange bug were found on investigation to refer to the presence of the less destructive *Vitellus* species.

Joint investigations with the fruit branch have also been carried out in connection with the control of scale insects attacking citrus, and some decidedly promising results have been obtained, but here again public recommendations cannot yet be made.

There have been few inquiries regarding the attacks on citrus of the bronzy orange bug (*Oncoscelis sulciventris* Stal.), and there is reason to believe that the adoption of the system

of banging in early spring has had decidedly beneficial results in the extensive citrus districts on the Blackall Range.

Numerous complaints have been received regarding the damage due to the activities of the citrus root borer (*Decilaus citriperda* H.T.), and this pest appears to be worthy of some further experimental work, particularly with a view to determining the degree to which effective control can be obtained by the use of certain soil fumigants; a preliminary experiment along these lines gave inconclusive results.

As in former years the usual scale insects were more or less abundant, among the most destructive of these being the red scale (*Aspidiotus aurantii* Maskell), the white louse (*Chionaspis citri* Comstock), and the pink wax scale (*Ceroplastes rubens* Maskell).

The banana fruit spotting bug (*Dasynus lutescens* Distant) was recorded as attacking citrus in the Rockhampton district, but its numbers in the orchards were too small to warrant its being considered as responsible for appreciable injury.

A number of other pests of citrus were recorded, but no opportunity arose for making detailed studies of these pests, and indeed in certain cases their economic status did not warrant any such work on them, certainly not at the present juncture.

INSECTS AND OTHER PESTS OF GENERAL AGRICULTURE.

During the year numerous complaints were received regarding the losses due to the attacks of the potato tuber moth (*Phthorimaea operculella* Zeller). The bean fly (*Agromyza phaseoli* Coquillett) was also the cause of serious losses in the warmer weather; this is a pest that is undoubtedly worthy of further investigation if and when circumstances permit.

Nematode attack was also recorded on a wide range of plants, and, as in the case of the bean fly, another important and interesting problem is available for further investigation.

Losses were recorded as a result of the attacks of army worms and cutworms, but no large-scale outbreaks of army worms or grasshoppers came under the notice of the division.

Heliothis obsoleta F. was again a pest of importance, and *Dichocrocis punctiferalis* Guérin also formed the subject of numerous inquiries. The pumpkin beetle (*Aulacophora olivieri* Guérin) was also responsible for considerable losses.

Many other insect pests were dealt with in the course of routine inquiries for advice, but frequently circumstances did not permit of the detailed study that many of the problems appeared to warrant; it is hoped, however, that more detailed investigations will be possible in the future.

SYSTEMATIC ENTOMOLOGY.

During the year Mr. Girault devoted a very considerable amount of time to systematic work, and in fact during the second half of the year he was almost exclusively associated with this type of research, particularly on the groups of parasitic Hymenoptera that are of material value in economic entomology.

L

PATHOLOGICAL INVESTIGATIONS.

One of the outstanding features of the year in plant pathological work has undoubtedly been the publication of the results obtained by the Bunchy-top Investigation Committee. The findings of the committee and the recommendations based thereon are such that the campaign against bunchy-top now assumes a much more hopeful aspect.

Arising out of inquiries received from the Atherton district, Mr. Tryon wrote a memoir dealing with the "Ear Rot of Maize"; this was published in December, 1925, as Bulletin No. 3 (new series) of the Division of Entomology and Plant Pathology.

Since entering on pathological duties on 1st January of this year, Mr. Simmonds has handled a considerable volume of inquiries regarding fungous and bacterial diseases, but so far it has not been possible for either Mr. Simmonds or his assistant, Mr. Morwood, to settle down to a detailed investigation of any particular disease; nevertheless, on the diseases of certain plants—e.g., passion fruit—much useful information has been accumulated by these officers, and it will, doubtless, form the foundation for future work. As mentioned in an earlier paragraph, a new office and a new laboratory were fitted up for the officers engaged on pathological investigations, and naturally the reorganisation involved in fitting up and transferring to these new premises entailed so much work that detailed investigations could not possibly be started by either Mr. Simmonds or Mr. Morwood.

The importation of large consignments of cassava cuttings from Java also threw additional burdens on the staff, because much time had of necessity to be devoted to the inspection and treatment of the cuttings prior to planting.

ILLUSTRATIONS AND EXHIBITION CASES.

Mr. I. W. Helmsing prepared seven coloured plates, twenty-seven black and white plates, and three new exhibition cases, in addition to a number of smaller drawings and sketches; as it was frequently necessary to dissect or otherwise prepare the material from which the plates were prepared, Mr. Helmsing's time was very fully occupied. The plates materially enhanced the value of the publications illustrated by them, and the new exhibition cases constitute a desirable addition to the entomological museum.

EXHIBITS AT SHOWS.

As usual the division was represented at the National Exhibition in August, and an entomological exhibit was also displayed at the Stanthorpe and Beenleigh shows; this is an educational line worthy of some considerable development as opportunity offers, for it is believed that the exhibits were much appreciated. Arrangements are being made for representation at a larger number of shows during the ensuing twelve months.

COLLECTIONS.

The collections have been maintained in order during the last twelve months, and a certain number of accessions have been received, almost entirely as a result of the efforts of the staff while engaged on field investigations and advisory work; a number of specimens were

obtained through inquiries received from correspondents, and some were presented to the Department.

A new insect cabinet and two dozen store-boxes were purchased to provide accommodation for the accessions to what is undoubtedly a valuable and extensive entomological reference collection. The care of the collection was in the hands of Mr. W. A. T. Summerville, and the duties entailed in that work were adequately discharged. The collection is, however, sufficiently extensive to warrant one officer devoting the whole of his time to it, and that Mr. Summerville cannot do owing to the pressure of other duties.

The pathological collection also received some interesting accessions.

VISITS TO COUNTRY DISTRICTS.

In connection with the advisory and research work a considerable number of visits were paid to important country centres; these visits totalled fifty-seven, and were of a duration varying from a day to a month.

LIBRARY.

During the past twelve months a considerable number of bulletins, leaflets, and other publications of an entomological and pathological nature have been received as exchanges from practically all over the world. A few important volumes have been purchased, and a number of authors' reprints have been kindly donated to the library by Messrs. Ballard and Girault. Two important serial publications constantly referred to by the staff have been bound, in order to facilitate rapid reference and to prevent the deterioration inevitably associated with the constant handling of unbound volumes.

A card catalogue of the economic entomological literature published in Australia is under preparation, and has been practically completed in so far as the "Queensland Agricultural Journal," the "Agricultural Gazette of New South Wales," and the "Journal of the Department of Agriculture of Victoria" are concerned; other Australian serial publications will be similarly dealt with as opportunity offers, because what has already been done has proved of great assistance in facilitating the work of the staff.

It is also hoped that it will, at a later date, be possible to similarly deal with the very large number of bulletins and leaflets filed in the entomological section of the library; if that is done, any officer engaged on a particular problem will be able to definitely ascertain in a few minutes just what work has already been done on his problem in Australia, provided, of course, success is achieved in the attempt being made to complete the files of Australian publications. The card catalogue will also furnish him with all the references to his subject contained in overseas bulletins and leaflets filed in the library.

A somewhat similar catalogue for the pathological literature is also well under way, and, as in the case of the entomological literature, it should prove of material advantage to the departmental officers; the cataloguing of the three journals already referred to has been practically completed, and considerable progress has already been made in dealing with the leaflets and bulletins.

The pathological section of the library is adequately housed for the time being, but the entomological and general zoological literature and the various scientific journals that are filed cannot all be accommodated in the available bookcases.

The catalogue of the entomological literature was commenced by Mr. A. A. Girault and has been carried on by Mr. J. H. Smith, while the cataloguing of the pathological literature has been in the hands of Mr. R. B. Morwood. Much labour has been involved in this project, but it is felt that with an expanding staff and library such a catalogue is essential.

PUBLICATIONS

The following were published during the year:—

1. Ear Rot of Maize, by Henry Tryon, Bulletin No. 3 (new series) of the Division of Entomology and Plant Pathology.
2. The Banana Weevil Borer, by J. L. Froggatt, Bulletin No. 4 (new series) of the Division of Entomology and Plant Pathology.
3. The Fruit Fly. Report on Measures of Possible Control 1924-25, by H. Jarvis.
4. Fruit Fly Investigation. Entomologist's Report, by H. Jarvis.
5. Notes on Oviposition of the Bean Fly, by F. J. Holdaway.
6. Gumming of Drupaceous Fruit Trees, by Henry Tryon.
7. Banana—Internal Fruit Discoloration, by Henry Tryon.
8. Bean Anthracnose, by Henry Tryon.
9. Fruit Fly Investigations. Entomologist's Report, by H. Jarvis.
10. Tomato Blight Disease, by Henry Tryon.
11. The Bean Fly, by Henry Tryon.
12. A Systematic Note on an Imported Lucerne Pest, with Description of two new Allied Species, by A. A. Girault.
13. Historical Note on the Chalcid Lucerne Seed Fly, by Henry Tryon.
14. Records and Descriptions of Australian Ophioniae, by A. A. Girault.
15. Fruit Fly and other Orchard Pests in the Stanthorpe District, by H. Jarvis.
16. Fruit Fly in the Stanthorpe District, by H. Jarvis.
17. Some Hints regarding Entomological Inquiries, by Robert Veitch.
18. Some Notes on Western Queensland Fruit Insects, by A. A. Girault.
19. Poultry—Manson's Eye Worm, by Henry Tryon.
20. Woolly Aphis at Stanthorpe.

All the above items appeared in the "Queensland Agricultural Journal," and Nos. 1 and 2 were also printed as bulletins in the bulletin series, while No. 17 inaugurated a new leaflet series, four additional numbers of which were in course of preparation at the end of the year. Certain other items were published in the "Queensland Agricultural Journal" under the heading of "Answers to Correspondents."

The division, through its Consulting Plant Pathologist, Professor Goddard, was also associated with the following articles appearing in the "Queensland Agricultural Journal":—

1. Bunchy-top in Bananas, by the Bunchy-top Investigation Committee.
2. Bunchy-top in Bananas, Final Report of the Investigation Committee.
3. Bunchy-top—What it is, how to detect it, what to do, by the Bunchy-top Investigation Committee.

ROBERT VEITCH,
Chief Entomologist.

REPORT OF THE REGISTRAR OF CO-OPERATIVE ASSOCIATIONS.

“The Primary Producers’ Co-operative Associations Act of 1923.”

As required by Rule 52 of Part II. of the Schedule to the abovementioned Act, I have the honour to submit, for transmission to the Governor in Council, my report for the year ended 30th June, 1926.

Since my last report, twenty-six additional associations have been registered, making a total of ninety-eight associations registered from the time the Act came into force.

The twenty-six associations registered for the year under review are comprised as follows:—

Having a capital divided into shares and with limited liability—	
Dairy, butter, and cheese associations ..	13
Producers’ association	1
Packing association	1
Sugar association	1
Publication association	1
Without any share capital, and with liability limited to the assets of the association—	
Fruitgrowers’ associations	8
Dairy, butter, and cheese association ..	1
	26
	—

The total registrations under the Act to 30th June, 1926, are as enumerated below:—

Having a capital divided into shares, and with limited liability—	
Dairy, butter, and cheese associations ..	38
Bacon association	1
Producers’ associations	2
Packing associations	2
Canning, jam, and preserving association ..	1
Fruitgrowers’ associations	3
Sugar association	1
Publication association	1
Without any share capital and with liability limited to the assets of the association—	
Fruitgrowers’ associations	47
Fat pigs selling association	1
Dairy, butter, and cheese association ..	1
Without any share capital and with unlimited liability—	
Associations	Nil
	98
	—

As stated in my last report, there are a number of companies which for various reasons have not yet been registered, but negotiations are being conducted with a view of overcoming the existing difficulties or the granting of exemptions in accordance with the requirements of the Act.

Thirteen exemptions (including co-operative dipping companies) have been granted, and forty-eight auditors have been licensed under the Act.

JAMES P. ORR, Registrar.

REPORT OF THE REGISTRAR-GENERAL ON AGRICULTURAL PRODUCTION FOR THE YEAR 1925.

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DAIRYING.

Table No. I.

RETURN SHOWING THE PROGRESS OF THE DAIRYING INDUSTRY SINCE THE YEAR 1909.

Year.	Dairying Establishments, Exclusive of Factories.	DAIRY COWS.			Production of Butter.	Production of Cheese.	
		In Milk.	Dry.	Total.			
					Lb.	Lb.	
					1890	*2,000,000	*170,240
					1895	3,719,523	1,841,799
					1900	8,680,389	1,984,705
1909	15,279	228,497	105,342	333,839	1905	20,319,976	2,682,089
1910	16,079	262,788	102,656	365,444	1910	31,258,333	4,146,661
1911	16,225	237,997	119,098	357,095	1911	27,858,535	3,718,257
1912	16,579	267,847	107,813	375,660	1912	30,307,339	3,947,615
1913	17,866	285,403	106,036	391,439	1913	35,199,387	5,395,050
1914	18,029	288,334	98,977	387,311	1914	37,230,240	7,931,869
1915	17,876	218,511	116,732	335,243	1915	25,456,714	4,383,410
1916	18,410	247,855	95,456	343,311	1916	28,967,279	8,495,825
1917	19,404	303,133	96,375	399,508	1917	38,930,690	11,142,114
1918	19,313	255,039	126,466	381,505	1918	32,371,575	8,636,700
1919	18,952	211,331	161,815	373,146	1919	26,213,514	8,296,318
1920	20,457	335,026	113,608	448,634	1920	40,751,373	11,512,262
1921	21,695	423,251	130,957	554,208	1921	60,923,194	15,200,527
1922	21,931	418,351	145,332	563,683	1922	53,785,599	10,560,316
1923	22,019	357,203	155,326	512,529	1923	40,659,634	7,221,355
1924	22,599	432,531	151,355	584,886	1924	58,187,954	11,093,886
1925	22,581	463,436	147,990	611,426	1925	67,731,435	13,980,538

* Estimated.

Table No. II.

RETURN SHOWING DETAILS OF THE PRINCIPAL DAIRYING DIVISIONS FOR THE YEAR 1925.

District.	Total Milk Obtained.	HOW UTILISED.						
		For Butter on Farms.	For Cheese on Farms.	For Domestic Purposes by Producer.	Separated for Sale.	Sold for Consumption as Milk.	Sold to Condensed Milk Factories.	Sold to Cheese Factories.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
Moreton	64,513,263	1,890,075	13,370	2,045,425	55,025,302	4,169,985	1,274,828	124,278
Wide Bay	43,447,952	1,575,789	3,000	1,337,897	39,444,352	500,181	...	586,733
Port Curtis	7,172,503	489,355	...	342,438	5,939,335	401,375	...	...
Rockingham	5,005,951	129,825	...	294,621	4,264,752	139,327	...	177,426
Maranoa	1,296,138	127,028	...	117,381	1,019,104	32,625	...	...
Downs	42,841,608	1,194,181	...	1,377,978	26,086,357	432,723	1,162,272	12,588,097
Other Districts	1,378,973	382,190	...	482,480	135,970	372,193	...	6,140
Total, 1925	^a 165,656,338	5,758,443	16,370	5,998,220	131,915,172	6,048,409	2,437,100	13,482,674
Total, 1924	^b 143,947,412	5,893,231	5,157	6,009,269	112,404,066	5,855,353	2,956,702	10,818,674
Increase, 1925	21,708,926	...	11,213	...	19,511,146	193,056	...	2,664,000
Decrease, 1925	...	139,788	...	11,049	...	...	519,602	...

District.	ESTABLISHMENTS.			DAIRY CATTLE.		BUTTER MADE.			CHEESE MADE.		
	Dairying.	Butter Factories.	Cheese Factories.	In Milk.	Dry.	At Factories.	By Farmers.	Total.	At Factories.	By Farmers.	Total.
	No.	No.	No.	No.	No.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
Moreton	7,708	16	3	176,909	43,195	24,210,748	895,312	25,106,060	115,046	12,370	127,416
Wide Bay	5,380	12	6	133,578	49,190	19,418,354	696,211	20,114,565	600,773	3,000	603,773
Port Curtis	1,337	4	...	29,250	14,021	3,627,259	180,638	3,807,897	...	...	...
Rockingham	1,007	4	3	13,800	6,012	2,567,662	50,647	2,618,309	173,554	...	173,554
Maranoa	396	1	...	6,766	3,163	753,357	48,213	801,570	...	...	...
Downs	5,213	12	61	95,431	25,717	14,584,612	524,577	15,109,489	13,075,795	...	13,075,795
Other Districts	1,540	1	...	7,702	6,692	60,135	113,410	173,545	...	...	...
Total, 1925	22,581	50	73	463,436	147,990	65,222,127	2,509,308	67,731,435	13,965,168	15,370	13,980,538
Total, 1924	22,599	50	71	433,531	151,355	55,697,300	2,490,654	58,187,954	11,088,723	5,163	11,093,886
Increase, 1925	...	...	2	29,905	...	9,524,827	18,654	9,543,481	2,876,445	10,207	2,886,652
Decrease, 1925	18	...	...	...	3,365	...	...	...	...	...	...

^a 2,668,524 gallons of this were sent from the Moreton Division to New South Wales.
^b 1,771,265 gallons of this were sent from the Moreton Division to New South Wales.

Table No. III.

BUTTER, CHEESE, AND CONDENSED MILK.

RETURN SHOWING QUANTITY EXPORTED OVERSEA FOR FIVE YEARS (AUSTRALIAN PRODUCE ONLY).

Year.	BUTTER.			CHEESE.			CONDENSED MILK.		
	Quantity Exported Oversea.	Value.	Value per lb.	Quantity Exported Oversea.	Value.	Value per lb.	Quantity Exported Oversea.	Value.	Value per lb.
	lbs.	£	s. d.	lbs.	£	s. d.	lbs.	£	s. d.
1920-21	26,067,478	2,964,204	2 3½	7,936,289	427,725	1 1	7,709,256	401,159	1 0½
1921-22	40,723,861	2,382,125	1 2	10,782,950	370,878	0 8½	7,926,297	417,455	1 0½
1922-23	21,060,593	1,588,123	1 6	4,387,192	187,045	0 10½	2,161,099	109,660	1 0½
1923-24	16,657,633	1,131,481	1 4½	2,735,376	96,595	0 8½	2,673,364	13,287	1 0
1924-25	44,127,410	2,808,598	1 3½	7,803,009	273,494	0 8½	1,096,802	52,920	0 11½

Table No. IV.

CONDENSED MILK MANUFACTURED—RETURN FOR FIVE YEARS

									Lb.
1921	...	...	...	...	...	...	...	...	15,168,652
1922	...	...	...	...	...	...	...	...	9,601,914
1923	...	...	...	...	...	...	...	...	8,131,648
1924	...	...	...	...	...	...	...	...	11,549,064
1925	...	...	...	...	...	...	...	...	9,744,973

POULTRY.

Table No. V.

RETURN SHOWING THE NUMBERS OF POULTRY ON FARMS AND EGGS PRODUCED IN THE PRINCIPAL DISTRICTS OF THE STATE FOR THE YEAR 1925.

Petty Sessions District.	Fowls.	Ducks.	Geese.	Turkeys.	Other.	Eggs.	Total Poultry Sold or Killed for Food.		Value of Eggs Sold or Used.
	Number.	Number.	Number.	Number.	Number.	Dozen.	Number.	£	£
Allora	11,186	23	9	33	...	39,000	787	108	1,798
Atherton	20,527	435	34	178	9	64,051	4,761	571	3,376
Ayr	12,609	916	62	482	30	58,240	2,856	751	4,210
Beaudesert	16,048	906	152	705	7	77,662	5,661	626	2,804
Brisbane (A)	71,500	2,009	30	48	25	470,142	18,838	2,218	30,982
Brisbane (B)	39,408	642	4	7	...	289,356	14,970	1,832	18,945
Bundaberg	17,046	145	54	94	...	85,423	3,537	379	3,217
Caboolture	10,385	197	2	1	2	52,609	7,590	632	3,792
Cairns	17,233	507	10	29	2	57,464	5,027	876	5,048
Clifton	17,908	394	13	501	...	47,131	5,939	643	2,101
Crow's Nest	11,866	188	36	14	...	81,407	2,654	167	3,932
Dalby	25,139	792	136	1,101	26	82,262	5,232	512	4,125
Dugandan	27,227	1,527	376	252	51	131,284	5,543	581	5,207
Esk	13,532	1,058	218	616	86	50,944	5,812	689	2,221
Gatton	24,047	5,541	495	234	55	105,308	5,404	438	4,542
Gayndah	13,058	131	66	231	10	48,337	5,026	621	2,244
Gladstone	11,093	291	30	363	13	46,590	2,657	376	2,237
Gympie	23,730	1,485	104	419	1,420	124,653	9,638	1,102	6,288
Harrisville	21,460	527	108	155	9	125,912	4,544	416	6,235
Ingham	14,219	490	23	7	3	33,390	4,526	549	2,435
Innisfail	16,273	718	34	41	...	28,172	4,549	781	2,474
Laidley	15,809	1,615	546	52	50	86,344	6,068	1,180	3,451
Logan	15,427	905	138	36	...	60,635	4,177	353	3,165
Lowood	14,991	1,726	580	277	11	69,689	4,787	436	3,316
Mackay	33,565	770	72	156	90	137,991	5,184	580	10,574
Marburg	10,467	1,461	166	63	...	50,294	3,470	315	1,951
Maroochy	32,690	792	5	142	2	152,116	8,193	719	8,546
Maryborough	10,075	442	18	133	4	41,450	2,498	322	2,325
Nanango	29,560	1,103	203	581	66	100,832	9,439	918	4,128
Nerang	10,474	707	198	77	...	43,019	2,007	271	1,957
Oakey	24,913	253	206	601	116	112,296	6,523	668	5,413
Pittsworth	19,033	83	35	260	51	111,910	4,582	665	3,678
Redcliffe	10,640	384	15	10	...	44,272	2,422	263	2,162
Rockhampton	30,726	1,053	69	714	38	139,994	11,797	1,472	7,474
Rosewood	15,095	1,038	132	104	27	90,633	3,673	445	3,143
Tiaro	10,439	262	119	237	9	48,247	1,259	91	2,421
Toowoomba	17,867	206	16	125	99	73,031	4,130	479	3,946
Warwick	25,652	503	83	1,292	2	108,690	6,688	692	4,718
Wienholt	31,275	1,535	229	508	308	134,603	9,394	857	6,170
Wynnum	19,371	507	...	4	...	140,056	10,607	1,012	15,040
All other Districts	165,548	4,505	984	4,847	644	676,732	42,838	5,624	36,241
Totals, 1925	979,116	38,775	5,810	15,730	3,265	4,522,171	275,287	32,230	248,032
Totals, 1924	852,094	30,812	5,681	16,262	2,862	3,658,169	201,449	...	...
Increase, 1925	127,022	7,963	129	...	403	864,002	73,838	...	...
Decrease, 1925	...	...	...	532	...	...	...	...	...

NOTE.—Total value poultry and eggs—1924, £530,782; 1925, £621,876.

N.B.—Brisbane (B) refers to South Brisbane.

APIARIES.

Table No. VI.

RETURN SHOWING THE PARTICULARS OF THE BEE INDUSTRY FOR THE YEAR 1925.

Petty Sessions District.	Number of Hives.		Honey.	Average per Productive Hive.	Wax.	Petty Sessions District.	Number of Hives.		Honey.	Average per Productive Hive.	Wax.
	Productive.	Non-Productive.					Productive.	Non-Productive.			
Brisbane (A) ...	472	170	Lb. 24,260	Lb. 51	Lb. 359	Maryborough ...	589	139	Lb. 35,783	Lb. 61	Lb. 963
Caboolture ...	974	262	42,103	43	952	Pittsworth ...	325	61	33,924	104	452
Cleveland ...	273	59	16,198	59	42	Redcliffe ...	203	63	10,033	49	135
Cook ...	320	3	9,802	31	386	Rockhampton ...	1,282	281	105,308	82	997
Dalby ...	709	482	42,096	59	614	Rosewood ...	184	110	16,737	91	20
Dugandan ...	358	146	9,312	26	16	Southport ...	622	20	30,350	49	130
Esk ...	178	53	9,062	51	132	Warwick ...	892	102	60,630	68	947
Gatton ...	406	35	23,879	59	220	All other Districts	3,347	1,276	145,655	44	1,801
Gladstone ...	255	39	11,780	46	263						
Gympie ...	768	207	18,270	24	792	Totals, 1925 ...	14,626	4,190	801,587	55	11,888
Highfields ...	309	79	35,600	115	530	Totals, 1924 ...	11,588	3,595	691,136	60	9,883
Inglewood ...	85	4	16,443	193	158						
Killarney ...	754	68	37,060	49	618	Increase, 1925	3,038	595	110,451	...	2,005
Logan ...	956	303	40,936	43	1,022	Decrease, 1925	...	...	...	5	...
Maroochy ...	365	228	26,361	72	339						

NOTE.—Total value honey and wax—1924, £12,954; 1925, £14,998.

Table No. VII.

RETURN SHOWING PROGRESS OF HOLDINGS AND AREA CULTIVATED.—RETURN FOR 10 YEARS.

Year.	Number of Holdings Returned.	Increase per cent. on Previous Year.	Increase per cent. on Figures of 1904.	Area under Cultivation.	Increase per cent. on Previous Year.	Increase per cent. on Figures for 1904.
1904 ...	17,854	...	...	577,896	...	...
1916 ...	25,713	3.56	44.02	1,077,342	1.69	86.42
1917 ...	25,872	0.62	44.91	998,036	-7.36	72.70
1918 ...	26,041	0.65	45.86	982,066	-1.60	69.94
1919 ...	26,713	2.58	49.62	988,541	0.66	71.06
1920 ...	26,921	0.78	50.78	1,018,444	3.02	76.23
1921 ...	28,122	4.46	57.51	1,045,342	2.64	80.89
1922 ...	29,390	4.51	64.61	1,090,816	4.35	88.76
1923 ...	31,464	7.06	76.23	1,198,166	9.84	107.33
1924 ...	32,359	2.84	81.24	1,275,039	6.42	120.63
1925 ...	33,533	3.63	87.82	1,241,118	-2.66	114.76

The minus sign (—) implies a decrease.

Table No. VIII.

RETURN SHOWING LABOUR EMPLOYED, INCLUDING OWNERS OR OCCUPIERS WORKING ON HOLDINGS,
AND THE CAPITAL INVESTED IN FARMING MACHINERY, ETC., 1925.

PETTY SESSIONS DISTRICT.	LABOUR.				VALUE OF MACHINERY AND IMPLEMENTS.				
	Farming.		Dairying.		Farming.	Dairying.	Irrigation.	Travelling Machinery.	Total.
	Males.	Females.	Males.	Females.	£	£	£	£	£
Allora	401	18	227	213	105,864	8,716	...	2,175	116,755
Atherton	591	8	598	332	36,451	27,128	200	...	63,779
Ayr	1,610	7	5	5	186,338	271	364,560	24,510	575,679
Beaudesert	518	2	532	452	43,562	27,982	1,610	650	73,804
Biggenden	559	276	547	355	17,187	33,402	640	1,070	52,299
Bowen	331	13	12	10	16,643	1,432	20,289	...	38,364
Brisbane (A)	887	47	555	240	28,248	8,594	3,125	1,755	41,722
Bundaberg	1,735	2	192	165	124,016	6,272	13,000	23,610	166,898
Cairns	1,755	2	30	11	173,310	666	...	11,783	185,759
Childers	728	7	13	12	63,557	1,295	...	10,000	74,852
Clifton	709	1	177	266	169,907	11,540	...	1,200	182,647
Crow's Nest	374	...	178	307	23,892	20,262	...	460	44,614
Dalby	840	49	1,205	501	55,044	44,203	762	1,837	101,846
Douglas	305	1	16	11	30,850	1,195	...	...	32,045
Dugandan	902	6	467	432	60,322	14,172	2,263	10,008	86,765
Esk	468	37	427	326	42,999	19,292	700	230	63,221
Gatton	923	10	674	518	74,287	11,121	2,400	100	87,908
Gayndah	471	7	597	520	31,904	32,067	...	...	63,971
Gin Gin	485	2	37	69	30,411	3,694	...	1,594	35,699
Gladstone	626	28	550	388	29,889	30,540	585	5,053	66,067
Gympie	1,299	5	1,589	1,031	32,761	74,724	100	...	107,585
Harrisville	627	6	596	264	49,212	10,893	600	397	61,102
Ingham	1,218	...	6	...	130,552	10	...	30,880	161,442
Innisfail	1,760	6	12	14	150,032	227	...	150	150,409
Killarney	301	3	108	62	70,068	8,526	928	3,600	83,122
Laidley	663	48	320	379	47,458	7,786	180	...	55,424
Logan	646	46	441	413	25,946	8,052	110	1,711	35,819
Lowool	473	74	303	398	32,234	9,421	130	...	41,785
Mackay	3,079	5	29	19	284,343	4,045	...	3,895	292,283
Maroochy	1,637	60	681	340	41,194	25,084	250	7,010	73,538
Maryborough	679	17	222	155	32,035	5,497	110	2,330	39,972
Mount Morgan	437	15	47	70	16,233	3,175	16,446	228	36,082
Nanango	1,058	7	1,229	639	99,451	67,401	300	550	167,702
Nerang	208	3	526	363	7,969	19,289	424	625	28,307
Oakey	844	14	725	584	94,559	38,061	60	570	133,250
Pittsworth	828	5	708	495	140,689	33,029	80	1,820	175,618
Proserpine	547	...	11	10	68,316	578	...	...	68,894
Rockhampton	1,188	56	454	330	55,686	23,780	16,809	2,795	99,070
Roma	433	4	353	176	42,011	9,959	20	110	52,100
Rosewood	319	14	329	295	25,872	8,892	...	...	34,764
Stanthorpe	645	77	30	7	32,296	155	780	...	33,231
Tiaro	427	4	310	235	21,186	13,788	40	260	35,274
Toowoomba	572	133	300	262	50,704	15,050	7,603	7,738	81,095
Warwick	1,036	10	526	287	149,757	18,301	792	6,545	175,395
Wienholt	1,500	6	1,420	577	129,456	64,134	502	1,120	186,212
All other Districts	4,932	160	3,269	2,478	248,304	123,533	37,802	11,133	420,772
Total, 1925	42,574	1,301	21,583	15,016	3,414,005	897,234	494,200	179,502	4,984,941
Total, 1924	42,237	1,542	19,424	14,321	3,248,219	810,939	457,211	156,755	4,673,124
Increase, 1925	337	...	2,159	695	165,786	86,295	36,989	22,747	311,817
Decrease, 1925 ... ..	...	241	...	...	...	...	...	...	...

Table No. IX.

RETURN SHOWING LAND TREATED FOR CULTIVATION, ETC., FOR THE YEAR 1925.

	1924.		1925.	
	Acres.		Acres.	
Under crop	1,069,837	1,033,765		
In fallow	92,112	74,416		
New ground broken up	10,545	10,382		
Previously cropped, but not during 1924 and 1925 respectively	102,545	122,555		
Under cultivation	1,275,039*	1,241,118*		
Under permanent artificially sown grasses	538,165	532,052		
Grand total	1,813,204	1,773,170		

* See Table No. XI. for details of areas and owners.

Table No. X.

RETURN SHOWING THE VALUE OF AGRICULTURAL CROPS FOR THE YEAR 1925.

	1924.		1925.		Increase or - Decrease, 1925.
	£		£		
Grain crops	2,298,073	1,233,394	-	1,064,679	
Green forage	804,654	1,484,892	-	680,238	
Hay and straw	872,857	660,636	-	212,221	
Root crops	241,038	300,135	-	59,097	
Sugar-cane	7,207,409	6,354,625	-	852,784	
Fruit	1,524,873	1,526,768	-	1,895	
All other	1,043,480	966,159	-	77,321	
Total	13,992,384	12,526,609	-	1,465,775	

The minus sign (-) indicates a decrease.

Table No. XI.

RETURN SHOWING AREA UNDER CULTIVATION AND SIZES OF FARMS FOR THE YEAR 1925.

Petty Sessions District.	Under 5 Acres.		5 and under 20 Acres.		20 and under 50 Acres.		50 Acres and Over.		Totals.	
	Owners.	Acres.	Owners.	Acres.	Owners.	Acres.	Owners.	Acres.	Owners.	Acres.
Allora	1	3	1	10	17	639	300	46,201	319	46,853
Atherton	100	178	132	1,397	143	4,641	142	10,536	517	16,752
Ayr	7	16	46	584	161	5,535	380	33,776	594	39,911
Beaudesert	30	79	215	2,637	181	5,402	36	2,817	462	10,935
Biggenden	67	170	157	1,732	83	2,320	9	567	316	4,789
Bowen	19	52	125	1,430	50	1,482	9	599	203	3,563
Brisbane (A)	154	397	437	4,488	69	1,959	9	531	669	7,375
Bundaberg	87	204	297	3,445	322	10,304	123	15,011	829	28,964
Cairns	45	93	120	1,346	202	6,921	261	25,936	628	34,296
Cardwell	8	17	9	88	220	4,923	2	130	239	5,158
Childers	31	78	54	615	83	2,805	120	12,231	288	15,729
Clifton	3	9	4	34	18	663	475	89,858	500	90,564
Condamine	43	92	86	952	49	1,441	34	3,968	212	6,453
Crow's Nest	11	44	92	1,161	170	5,560	81	6,040	354	12,805
Dalby	83	161	192	2,090	228	7,029	249	26,613	752	35,893
Douglas	16	40	34	431	58	1,845	46	4,541	154	6,857
Dugandan	18	30	97	1,275	376	12,251	132	8,815	623	22,371
Eidsvold	48	109	94	1,031	75	2,262	11	984	228	4,386
Esk	36	81	112	1,270	182	5,890	81	6,846	411	14,087
Gatton	17	37	77	956	295	9,802	222	16,124	611	26,919
Gaydah	149	378	303	3,367	145	4,276	41	3,149	638	11,170
Gin Gin	33	79	80	828	132	4,405	48	3,505	293	8,817
Gladstone	195	507	357	3,689	103	2,980	23	1,800	678	8,976
Goombungee	...	...	6	78	34	1,264	107	10,901	147	12,243
Goondiwindi	13	40	18	200	25	727	40	5,184	96	6,151
Gympie	311	822	612	5,922	110	3,049	14	974	1,047	10,767
Harrisville	11	30	67	876	206	7,239	93	6,496	377	14,641
Helidon	15	34	50	606	107	3,555	52	3,769	224	7,964
Highfields	2	4	34	424	101	3,281	113	9,928	250	13,637
Ingham	11	30	84	943	121	4,180	278	24,926	494	30,079
Inglewood	7	16	16	222	27	847	53	6,696	103	7,781
Innisfail	19	44	72	928	257	8,703	287	22,426	635	32,101
Ipswich	10	27	75	923	72	2,244	14	881	171	4,075
Jondaryan	...	...	3	50	10	290	33	4,138	46	4,478
Killarney	7	15	15	179	23	690	182	28,100	227	28,994
Laidley	22	56	90	1,221	213	7,393	133	9,682	458	18,352
Logan	63	164	316	3,691	84	2,248	3	268	466	6,371
Lowood	16	41	39	568	160	5,412	109	7,538	324	13,559
Mackay	76	196	279	3,310	506	17,335	624	54,727	1,485	75,568
Marburg	17	46	46	618	122	3,893	29	1,849	214	6,406
Maroochy	360	956	848	8,498	152	4,406	15	854	1,375	14,714
Maryborough	116	298	322	3,602	116	3,139	14	819	568	7,858
Mitchell	14	18	12	139	16	531	17	2,507	59	3,195
Mount Morgan	131	262	232	2,258	122	3,650	36	2,381	521	8,551
Nanango	49	119	158	1,895	332	10,956	361	31,708	900	44,678
Oakey	15	30	40	506	161	5,552	406	52,419	622	58,507
Pittsworth	6	12	21	256	73	2,567	496	73,606	596	76,441
Proserpine	12	32	111	1,447	127	4,006	69	5,602	319	11,087
Redcliffe	37	98	187	2,035	57	1,605	3	218	284	3,956
Rockhampton	348	774	492	5,196	203	5,768	66	6,703	1,109	18,441
Roma	35	65	74	733	66	2,244	189	26,616	364	29,658
Rosewood	19	44	77	1,014	191	6,045	44	2,928	331	10,031
Stanthorpe	25	92	459	5,764	170	4,564	5	286	659	10,706
Tiaro	75	178	183	2,031	100	2,930	17	1,213	375	6,352
Toowoomba	63	185	155	1,595	100	3,170	193	29,820	511	34,770
Warwick	12	40	111	1,230	125	4,062	469	59,508	717	64,840
Wienholt	69	154	157	1,885	347	11,519	430	35,925	1,003	49,483
All other Districts	642	1,613	1,031	10,361	348	10,325	91	8,761	2,112	31,060
Total, 1925	3,829	9,389	9,613	106,060	8,346	264,724	7,919	860,945	29,707	1,241,118
Total, 1924	4,039	9,785	9,447	103,498	8,088	258,920	8,145	902,836	29,719	1,275,039
Increase, 1925	...	...	166	2,562	258	5,804	...	...	...	...
Decrease, 1925	210	396	...	...	...	...	226	41,891	12	33,921

See Table No. IX.

Table No. XII.

IRRIGATION.—RETURN FOR 10 YEARS.

Year.	Acres Irrigated.	Year.	Acres Irrigated.
1916	10,886	1921	11,264
1917	4,467	1922	14,314
1918	6,947	1923	18,417
1919	9,267	1924	18,235
1920	9,803	1925	21,669

Table No. XIII.
RETURN SHOWING THE AREA IRRIGATED AND THE PRINCIPAL CROPS TREATED FOR THE YEAR 1925.

Petty Sessions District.	Number of Irrigators.	Acres Irrigated.	*Cost of Power, Water, &c., Used.	Original Source of Water Supply.	Means Employed for Procurement and Utilisation.	Principal Crops Treated.
Ayr	454	18,433	77,083	Wells, spears, river, and lagoons	Electricity, oil, gas, steam, gravitation, drains, pipes, flume, motors, and tractors	Sugar-cane and vegetables
Brisbane (A)	25	113	120	Creeks, wells, and springs	Oil and windmill pumps, gravitation, piping, and spray	Market gardens and vegetables
Brisbane (B)	23	107	234	Springs and bores	Oil, petrol, windmill, pipes, and sprays	Market gardens and vegetables
Bowen	85	652	1,380	Wells, river, and creeks	Kerosene, oil, windmill, gravitation, and drains	Vegetables, cane, and fruit trees
Cape River	7	45	67	River, wells, and creek	Oil, horse, and windmill pumps, pipes, and trenches	Fruit and vegetables
Charters Towers	29	87	27	Wells and creek	Oil and petrol engines, windmill, pipes, and drains	Fruit trees, vegetables, market gardens, and citrus fruit
Cleveland	41	95	389	Wells	Oil engines and sprinklers	Market crops
Cloncurry	12	54	50	Creek, river, and wells	Steam, horse, and oil engines, pumps, trenches, and pipes	Vegetables and fruit, market gardens
Cunnamulla	9	250	199	Bores and rivers	Petrol and steam pumps, gravitation, bore drains, and pipes	Fruit and vegetables, grasses
Dugandan	18	66	88	Creeks and wells	Oil and steam engines, hoses, piping, and windmills	Potatoes and lucerne
Emerald	6	20	2	Wells	Horse, petrol engines, pipes, and hose	Fruit and vegetables
Gatton	8	120	477	Creeks	Oil and gas engines, petrol engines, electric tractor, sprays, and flooding	Lucerne and vegetables
Gladstone	3	27	6	Well and river	Oil engines, pipes, spray, and flooding	Vegetables and lucerne
Helidon	7	62	150	Creeks	Oil engines, sprays, and flooding	Lucerne
Hughenden	2	45	...	Wells and river	Horse, pump, oil engine, and drains	Market gardens and orchards
Killarney	11	38	15	River and creeks	Oil engines, drains, pipes, and flooding	Market gardens and vegetables
Laidley	2	28	...	Bore and creek	Oil engines and sprays	Lucerne and vegetables
Longreach	5	22	476	River	Oil engines and windmill, drains and piping	Fruit and vegetables
Mount Morgan	14	39	7	Creek and wells	Oil engines, windmills, pipes, flooding, drains, and sprays	Vegetables, lucerne, market gardens, and fruit
Rockhampton	24	505	1,982	Wells, creeks, river, lagoons, and bore	Horse, pump, gas, steam, and oil engines, windmills, spray, and pipes	Lucerne, vegetables, fruit, and market gardens
St. George	5	32	131	River	Steam, oil, hot air pumps, flooding, drains, and pipes	Fruit and vegetables
St. Lawrence	1	30	10	Creek	Steam engine and spray	Lucerne
Toowoomba	61	98	9	Bores and wells	Windmills, oil engines, sprays, and pipes	Fruit, vegetables, and lucerne
Townsville	28	242	1,768	Wells and open water river	Horse and oil engine pumps, windmills, gravitation, and pipes	Sugar-cane, market gardens fruit, and cattle feed
Warwick	5	66	92	River	Oil engine, electric engine, drains, and gravitation	Lucerne, barley, and vegetables
52 Other Districts	121	393	1,343	Various	Various	Market gardens
Total, 1925	1,076	21,669	86,105			

N.B.—Brisbane (B) refers to south Brisbane.

* Exclusive of value of machinery shown in Table VIII.

Table No. XIV.
WHEAT (GRAIN).
RETURN FOR TEN YEARS SHOWING THE AREA AND PRODUCE OF WHEAT FOR GRAIN.

Year.	Area.	Produce.	Average per Acre.	INCREASE OR — DECREASE ON THE PREVIOUS YEAR.		
				Area.	Produce.	Average per Acre.
				Acres.	Bushels.	Bushels.
1916	227,778	2,463,141	10·81	134,075	2,048,703	6·39
1917	127,815	1,035,268	8·10	-99,963	-1,427,873	-2·71
1918	21,637	104,509	4·83	-106,178	-930,759	-3·27
1919	46,478	311,638	6·71	24,841	207,129	1·88
1920	177,320	3,707,357	20·91	130,842	3,395,719	14·20
1921	164,670	3,025,786	18·37	-12,650	-681,571	-2·54
1922	145,492	1,877,836	12·91	-19,178	-1,147,950	-5·46
1923	51,149	243,713	4·76	-94,345	-1,634,123	-8·15
1924	189,145	2,779,829	14·70	137,996	2,536,116	9·94
1925	165,999	1,973,477	11·89	-23,146	-806,352	-2·81
Average of Ten Years	131,748	1,752,255	13·30	...	...	...

Table No. XV.
WHEAT.
RETURN FOR TEN YEARS SHOWING AVERAGE YIELD PER ACRE IN EACH STATE.

States.	Average Produce per Acre—Bushels.										
	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.	Mean for 10 Years ending 1925.
Queensland	10·81	8·10	4·83	6·71	20·91	18·37	12·91	4·76	14·70	11·89	13·30
New South Wales	9·61	11·33	7·60	2·96	17·79	13·39	9·74	11·26	16·83	11·55	11·21
Victoria	16·37	14·03	11·40	7·75	17·19	16·80	13·50	15·40	17·51	11·64	14·16
South Australia	16·46	12·18	10·49	7·77	15·80	10·46	11·73	14·29	12·21	11·51	12·29
Western Australia	10·28	7·44	7·72	10·77	9·60	10·41	8·92	11·42	12·79	9·69	9·90
Tasmania	12·53	11·57	15·66	18·58	20·01	20·62	22·56	21·07	17·86	20·00	18·05

Table No. XVI.

RETURN FOR TWO YEARS SHOWING THE AREA AND PRODUCE OF WHEAT FOR GRAIN IN THE SEVERAL PETTY SESSIONS DISTRICTS OF THE STATE.

Divisions and Petty Sessions Districts.	1924.			1925.			INCREASE OR — DECREASE.		
	Area.	Produce.	Average per Acre.	Area.	Produce.	Average per Acre.	Area.	Produce.	Average per Acre.
MORETON.									
Crow's Nest	197	3,010	15.28	462	6,560	14.20	265	3,550	13.08
Dugandan	7	75	10.71	3	45	15.00	— 4	30	4.29
Gatton	25	465	18.60	21	686	32.67	— 4	221	14.07
Helidon	33	350	10.61	5	21	4.25	— 28	329	6.36
Laidley	11	108	9.82	88	939	10.67	77	831	9.85
Total, Moreton	273	4,008	14.68	579	8,251	14.25	306	4,243	7.34
WIDE BAY.									
Nanango	533	6,920	12.98	412	3,471	8.42	— 121	3,449	8.37
Wienholt	215	1,600	7.44	915	12,231	13.37	700	10,631	11.81
Total, Wide Bay	748	8,520	11.39	1,327	15,702	11.83	579	7,182	5.44
PORT CURTIS.									
Mt. Morgan	63	390	6.19	84	1,081	12.87	21	691	8.22
Rockhampton	3	28	9.33	1	15	15.00	— 2	13	13.00
Total, Port Curtis	66	418	6.33	85	1,096	12.89	19	678	7.56
ROCKINGHAM.									
Herberton	10	260	26.00	...	...	...	— 10	260	26.00
CENTRAL.									
Ciermont	4	20	5.00	...	...	...	— 4	20	5.00
Emerald	5	30	6.00	...	...	...	— 5	30	6.00
Taroom	2	60	30.00	2	60	30.00	...	...	...
Total, Central	11	110	10.00	2	60	30.00	— 9	50	20.00
MARANO.									
Mitchell	1,516	19,977	13.18	693	4,211	6.08	— 823	15,766	23.56
Roma	13,495	143,834	10.66	6,890	43,604	6.33	— 6,605	100,230	14.61
Yeulba	49	482	9.84	56	565	10.09	7	83	1.48
Total, Maranoa	15,060	164,293	10.91	7,639	48,380	6.33	— 7,421	115,913	15.24
DOWNS.									
Allora	20,240	374,210	18.49	23,894	365,205	15.28	3,654	9,005	3.76
Clifton	39,324	670,972	17.06	37,051	405,007	10.93	— 2,273	265,965	7.19
Condamine	703	5,603	7.97	128	537	4.20	— 575	5,066	3.97
Dalby	8,924	99,243	11.12	6,648	62,054	9.33	— 2,276	37,189	5.58
Goombungee	1,469	17,152	11.68	981	10,109	10.30	— 488	7,043	7.17
Goondiwindi	2,755	34,099	12.38	547	4,208	7.69	— 2,208	29,891	54.00
Highfields	882	9,817	11.13	947	11,023	11.64	65	1,206	1.26
Inglewood	3,614	48,974	13.55	1,426	9,695	6.80	— 2,188	39,279	10.70
Jondaryan	1,887	19,278	10.22	239	1,722	7.21	— 1,648	17,556	9.19
Killarney	10,295	183,595	17.83	12,411	186,746	15.05	2,116	3,151	2.57
Oakey	15,762	182,773	11.60	10,348	98,072	9.48	— 5,414	84,701	8.19
Pittsworth	38,793	489,074	12.61	29,145	352,738	12.10	— 9,648	136,336	4.69
Texas	144	1,848	12.83	18	72	4.00	— 126	1,776	9.83
Toowoomba	7,645	113,267	14.82	8,273	83,006	10.03	628	30,261	3.67
Warwick	20,540	352,315	17.15	24,311	309,794	12.74	3,771	42,521	1.75
Total, Downs	172,977	2,602,220	15.04	156,367	1,899,988	12.15	— 16,610	702,232	4.49
Total State	189,145	2,779,829	14.70	165,999	1,973,477	11.89	— 23,146	806,352	4.88

Table No. XVII.

RETURN SHOWING THE QUANTITY OF WHEAT TREATED IN QUEENSLAND DURING THE YEAR 1924-5.

District.	Number of Establishments.	Number of Hands Employed.	Pairs of Stones.	Sets of Rollers.	Wheat Treated.	FLOUR MADE.		MEAL MADE.		BRAN AND POLLARD.	
						Tons.	Value.	Tons.	Value.	Bushels.	Value.
Metropolitan	3 } 1924-5 {	311	Pairs.	Sets.	Bushels.	52,592	835,823	598	9,105	2,096,314	154,048
Elsewhere			7	117	2,230,708						
Total, 1923	12	288	7	127	2,557,219	54,244	699,063	339	4,246	2,301,587	226,889

Table No. XVIII.

BARLEY.

RETURN FOR TWO YEARS SHOWING THE RESULT OF THE CROP.

Barley.						1924.	1925.
						Acres.	Acres.
Reaped for grain	...	...	...	...	...	8,798	7,001
Mown for hay	...	...	...	...	...	158	137
Used for green food	...	...	...	...	...	6,267	14,032
Totals	...	...	...	...	...	15,223	21,170

Table No. XIX.

BARLEY.

RETURN FOR TWO YEARS SHOWING RESULT OF GRAIN CROP.

Year.								Area for Grain.		Produce.		Average Produce per Acre	
								Acres.		Bushels.		Bushels.	
1924	...	...	...	...	...	...	...	8,798		171,124		19.45	
1925	...	...	...	...	...	...	...	7,001		92,441		13.20	
Decrease, 1925								1,797		78,683		6.25	

Table No. XX.

BARLEY.

RETURN SHOWING RESULT OF CROP, DISTINGUISHING BETWEEN MALTING AND OTHER VARIETIES, FOR THE YEAR 1925.

Petty Sessions District.	Malting Grain.			Other Varieties Grain.		
	Acres.	Bushels.	Average per Acre, Bushels.	Acres.	Bushels.	Average per Acre, Bushels.
Allora	549	8,970	16.34	160	1,873	11.71
Clifton	2,078	31,058	14.95	326	2,115	6.49
Crow's Nest	15	120	8.00	...	...	...
Dalby	30	580	19.33	18	210	11.67
Gatton	5	100	20.00	15	304	20.27
Goombungee	9	180	20.00	42	635	15.12
Highfields	58	693	11.95	12	199	16.58
Inglewood	43	231	5.37	...	...	...
Killarney	25	456	18.24	324	4,718	14.56
Nanango	13	126	9.69	39	209	5.36
Oakey	187	1,998	10.68	67	426	6.36
Pittsworth	923	9,364	10.15	6	76	12.67
Toowoomba	1,032	13,088	12.68	112	1,029	9.19
Warwick	514	7,414	14.42	351	5,412	15.42
All other Districts	15	197	13.13	33	660	20.00
Total, 1925	5,496	74,575	13.57	1,505	17,866	11.87

Table No. XXI.

MALT.

RETURN FOR TEN YEARS SHOWING QUANTITY OF MALT MADE AND HOW DEALT WITH.

Year.	Made from Imported Barley.	Made from Queensland Barley.	Total Malt Made.	Beer (including Waste).	Malt used in Breweries as returned to Excise.
	Bushels.	Bushels.	Bushels.	Gallons.	Bushels.
1915	...	34,204	34,204	5,821,397	177,323
1916	47,730	...	47,730	5,586,940	161,764
1917	...	70,117	70,117	6,167,638	181,067
1918	...	58,139	58,139	6,889,707	206,992
1919	66,119	1,270	67,389	8,466,242	256,658
1920	43,400	24,898	68,298	9,063,791	261,992
1921	...	64,000	64,000	7,476,595	225,749
1922	...	58,958	58,958	6,887,772	201,436
1923	...	42,974	42,974	6,813,125	211,136
1924-5	...	58,333	38,333	6,488,405	209,995

Table No. XXII.

MAIZE.

RETURN FOR FIVE YEARS SHOWING THE AREA AND PRODUCE OF MAIZE.

Year.	Grain.		Average per Acre.
	Acres.	Bushels.	Bushels.
1921	135,034	2,907,754	21.53
1922	149,048	3,217,848	21.59
1923	120,092	2,024,902	16.86
1924	229,160	7,330,821	31.99
1925	154,252	3,384,172	21.94

Table No. XXIII.
MAIZE (GRAIN).

RETURN SHOWING THE AREA AND PRODUCTION IN EACH DIVISION OF THE STATE FOR THE YEAR 1925.

Division or Group.	Acres.	Produce.	Average.	Proportion of Divisional Area to Total Area of Maize for Grain.
Moreton	56,094	1,234,910	22·02	36·36
Wide Bay	37,179	872,069	23·46	24·10
Port Curtis	1,141	21,664	18·99	0·74
Edgecumbe	56	1,359	24·27	0·04
Rockingham	15,290	421,179	27·55	9·91
York Peninsula	70	1,979	28·27	0·05
Carpentaria	47	790	16·81	0·03
Central Western ... ..	...	...	...	...
South Western ... ..	...	...	...	...
Central	87	2,049	23·55	0·06
Maranoa	313	4,299	13·73	0·20
Downs	43,975	823,874	18·74	28·51
Total	154,252	3,384,172	21·94	100·00

Table No. XXIV.
MAIZE.

RETURN FOR TWO YEARS SHOWING THE AREA AND PRODUCE IN EACH PRINCIPAL DISTRICT OF THE STATE.

Petty Sessions District.	Area for Grain.			Produce.			Average per Acre.		
	1924.	1925.	Increase or Decrease	1924.	1925.	Increase or Decrease	1924.	1925.	Increase or Decrease
	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Allora	11,165	2,832	— 8,333	431,132	59,034	— 372,098	38·61	20·85	— 17·76
Atherton	13,544	15,160	1,616	511,663	417,054	— 94,609	37·78	27·51	— 10·27
Beaudesert	2,924	3,008	84	80,110	89,934	9,824	27·40	29·90	2·50
Clifton	16,475	6,215	— 10,260	649,786	105,567	— 544,219	39·44	16·99	— 22·45
Cooyar	1,692	844	— 848	48,524	18,171	— 30,353	28·68	21·53	— 7·15
Crow's Nest	7,815	5,979	— 1,836	278,377	144,261	— 134,116	35·62	24·13	— 11·49
Dalby	2,873	1,091	— 1,782	45,580	22,269	— 23,311	15·86	20·41	4·55
Dugandan	11,256	10,646	— 610	343,260	260,919	— 82,341	30·50	24·51	— 5·99
Esk	3,399	3,345	— 54	70,948	72,526	1,578	20·87	21·68	0·81
Gatton	7,554	6,171	— 1,383	227,087	115,845	— 111,242	30·06	18·77	— 11·29
Gayndah	2,222	885	— 1,337	52,964	19,220	— 33,744	23·84	21·72	— 2·12
Gladstone	662	608	— 54	17,050	13,363	— 3,687	25·76	21·98	— 3·78
Goombungee	4,313	3,161	— 1,152	113,088	62,812	— 50,276	26·22	19·87	— 6·35
Gympie	1,653	1,078	— 575	74,269	43,380	— 30,889	44·93	40·24	— 4·69
Harrisville	4,126	4,114	— 12	119,286	80,361	— 38,925	28·91	19·53	— 9·38
Helidon	1,964	1,282	— 682	52,180	18,708	— 33,472	26·57	14·59	— 11·98
Highfields	3,576	3,393	— 183	112,014	83,068	— 28,946	31·32	24·48	— 6·84
Ipswich	642	685	43	10,759	14,800	4,041	16·76	21·61	4·85
Kilcoy	832	725	— 107	25,796	21,747	— 4,149	31·00	29·86	— 1·14
Killarney	11,699	4,352	— 7,347	471,101	78,831	— 392,270	40·27	18·11	— 22·16
Laidley	7,658	7,221	— 437	204,127	143,833	— 60,294	26·66	19·92	— 6·74
Logan	696	526	— 170	15,027	12,148	— 2,879	21·59	23·10	1·51
Lowood	5,282	5,792	510	93,604	124,553	30,949	17·72	21·50	3·78
Marburg	1,530	1,961	431	17,905	30,879	12,974	11·70	15·75	4·05
Nunango	23,720	17,386	— 6,334	843,148	395,830	— 447,318	35·55	22·77	— 12·78
Nerang	446	387	— 59	12,798	10,063	— 2,735	28·70	26·00	— 2·70
Oakey	11,443	8,438	— 3,005	304,459	148,193	— 156,266	26·61	17·56	— 9·05
Pittsworth	7,722	1,944	— 5,778	212,013	38,178	— 173,835	27·46	19·64	— 7·82
Rosewood	2,687	2,168	— 519	58,517	39,723	— 18,794	21·78	18·32	— 3·46
Tiaro	475	292	— 183	14,086	10,068	— 4,018	29·65	34·48	4·83
Toowoomba	6,220	3,871	— 2,349	200,082	73,533	— 126,549	32·17	19·00	— 13·17
Woodford	326	330	4	10,660	10,850	190	32·70	32·88	0·18
Warwick	21,329	7,919	— 13,410	829,044	143,575	— 685,469	38·87	18·13	— 20·74
Wienholt	20,090	16,057	— 4,033	598,771	366,832	— 231,939	29·80	22·85	— 6·95
All other Districts	9,150	4,386	— 4,764	181,606	94,144	— 87,462	19·85	21·46	1·61
Total State	229,160	154,252	— 74,908	7,330,821	3,384,172	— 3,946,649	31·99	21·94	10·05

Table No. XXV.
OATS.

RETURN FOR FIVE YEARS SHOWING THE AREA UNDER CROP.

Oats.	1921.	1922.	1923.	1924.	1925.
	Acres.	Acres.	Acres.	Acres.	Acres.
Reaped for grain	2,274	1,216	216	4,010	1,293
Mown for hay	12,480	4,542	1,344	8,304	2,214
Cut for green fodder	49,793	36,200	46,083	29,519	46,160
Totals	64,547	41,958	47,643	41,833	49,667

Table No. XXVI.

OATS.

RETURN FOR TWO YEARS SHOWING THE RESULT OF THE GRAIN CROP.

Year.							Area for Grain.	Produce.	Average per Acre.
							Acres.	Bushels.	Bushels.
1924	...	...	...	...	...	4,010	63,912	15.94	
1925	...	...	...	...	...	1,293	14,546	11.25	
Decrease, 1925							2,717	49,366	4.69

Table No. XXVII.

RYE.

RETURN FOR FIVE YEARS SHOWING THE AREA AND PRODUCE OF THE GRAIN CROP.

Year.							Area.	Produce.	Average per Acre.
							Acres.	Bushels.	Bushels.
1921	...	...	...	...	...	5	60	12.00
1922	...	...	...	...	...	4	39	9.75
1923	...	...	...	...	...	9	64	7.11
1924	...	...	...	...	...	65	2,379	36.60
1925	...	...	...	...	...	26	615	23.65

Table No. XXVIII.

POTATOES.

RETURN FOR FIVE YEARS SHOWING THE AREA, PRODUCTION, AND VALUE OF THE ENGLISH POTATO CROP.

	Acres.	Tons.	Value.
1921	9,553	16,794	£119,237
1922	7,649	10,517	£77,826
1923	6,127	8,878	£131,505
1924	9,493	20,314	£179,440
1925	10,478	15,386	£220,597

Table No. XXIX.

COTTON.

RETURN FOR TWO YEARS SHOWING THE AREA AND PRODUCE OF COTTON.

Petty Sessions District.	AREA.		Increase or Decrease— 1925.	Bearing, 1925.	Not Bearing, 1925.	PRODUCE (UNGINNED).	
	1924.	1925.				1924.	1925.
	Acres.	Acres.	Acres.	Acres.	Acres.	Lbs.	Lbs.
Biggenden ...	1,868	1,424	— 444	902	522	868,440	504,743
Charters Towers ...	73	77	4	77	...	5,732	53,372
Condamine ...	2,845	1,635	— 1,210	1,278	357	353,563	347,629
Dalby ...	4,732	1,924	— 2,808	1,712	212	688,282	545,368
Dugandan ...	1,077	779	— 298	441	338	226,797	370,636
Eidsvold ...	674	2,737	2,063	1,832	905	139,962	1,082,038
Emerald ...	529	458	— 71	429	29	145,210	161,925
Es-k ...	521	557	36	407	150	138,254	242,676
Gatton ...	4,055	2,806	— 1,249	1,806	1,000	974,438	1,099,517
Gayndah ...	7,061	4,947	— 2,114	3,261	1,686	1,546,990	1,696,636
Gin Gin ...	408	269	— 139	189	80	106,900	101,144
Gladstone ...	5,424	4,231	— 1,193	3,112	1,119	1,328,100	1,348,517
Harrisville ...	791	537	— 254	311	226	141,586	265,724
Helidon ...	667	362	— 305	339	23	181,192	160,085
Kilkivan ...	233	226	— 7	126	100	128,910	77,920
Laidley ...	2,030	1,365	— 665	922	443	526,356	679,455
Lowood ...	1,043	1,081	38	716	365	143,755	613,230
Marburg ...	420	326	— 94	296	30	78,779	245,771
Mount Morgan ...	13,388	7,716	— 5,672	6,990	726	2,245,122	3,976,551
Mount Perry ...	412	333	— 79	172	161	63,903	94,690
Nanango ...	2,069	743	— 1,321	609	139	413,039	145,162
Pit'sworth ...	658	183	— 475	180	3	85,522	69,392
Rockhampton ...	12,813	10,410	— 2,403	7,297	3,113	2,566,263	3,014,780
Roma ...	2,383	1,174	— 1,209	900	274	323,499	330,852
Rosewood ...	783	523	— 260	461	62	200,505	277,458
Springsure ...	352	394	42	252	142	12,834	169,042
Taroom ...	888	700	— 188	398	302	152,278	232,070
Wienholt ...	10,845	3,868	— 6,977	3,372	496	1,790,778	1,169,109
All other Districts ...	3,132	1,573	— 1,559	1,275	298	839,181	461,782
Total State ...	82,174	53,363	— 28,811	*40,062	13,301	16,416,170	19,537,274

* Of this area 2,455 acres was returned as ratooned for 1926.

Table No. XXX.
SUGAR.

RETURN SHOWING THE NUMBER OF PLANTATIONS, AREA OF AND AVERAGE AREA FOR THE YEAR 1925.

	Number of Plantations under 5 acres.	Number of Plantations. 5 acres and over.	Area under Cane.	Average to each Planter.
			Acres.	Acres.
No. 1 District	49	1,976*	97,074	48
No. 2 District	147	2,299	104,576	43
No. 3 District	393	1,861	59,358	26
No. 4 District	320	594	8,501	9
Total	909	6,730	269,509	35

Table No. XXXI.

RETURN FOR FIVE YEARS SHOWING THE NUMBER OF PLANTATIONS, AREA AND PRODUCE OF SUGAR-CANE.

Year.	Number of Plantations under 5 acres.	Number of Plantations 5 acres and over.	Average to each Planter	Acres Cultivated.	Acres Crushed.	PRODUCE.	
						Tons Cane.	Tons Sugar, at 94 per cent. Net Titre.
1921		4,465	41	184,513	122,956	2,287,416	282,198
1922		4,971	41	202,303	140,850	2,167,990	287,785
1923	746	5,487	35	219,965	138,742	2,015,808	269,175
1924	849	6,213	36	253,519	167,649	3,171,341	409,136
1925	909	6,730	35	269,509	*189,466	3,668,252	485,585

*Not including 209 acres cut, but cane destroyed, 4,007 tons.

Table No. XXXII.

RETURN FOR FIVE YEARS SHOWING PERCENTAGES OF YIELDS.

Year.	TO EACH ACRE CRUSHED.		Tons of Cane to One Ton of Sugar.
	Tons of Cane.	Tons of Sugar.	
1921	18.60	2.30	8.11
1922	15.39	2.04	7.53
1923	14.75	1.94	7.60
1924	18.92	2.44	7.75
1925	19.36	2.56	7.55

Table No. XXXIII.

RETURN SHOWING AREA, PRODUCE, &C., IN EACH DIVISION OF THE STATE FOR THE YEAR 1925.

Division and District.	Area for Plants.	Area Stand-over or Unproductive.	Area Crushed for Sugar.	Total Area for Sugar.	Weight of Cane.	Sugar, 94 N.T.	Molasses Returned.
	Acres.	Acres.	Acres.	Acres.	Tons.	Tons.	Gallons.
<i>Rockingham and York Peninsula—</i>							
Cairns and Douglas	658	4,891	31,441	36,990	608,626	84,330	3,201,830
Ingham and Innisfail, &c.	1,034	13,275	45,775	60,084	1,915,664	132,425	5,451,215
Total	1,692	18,166	77,216	97,074	1,624,290	216,755	8,653,045
<i>Edgcumbe—</i>							
Ayr and Townsville	773	14,344	19,107	34,224	470,726	68,299	2,102,293
Proserpine and Bowen	114	3,036	6,518	9,668	101,578	13,400	462,800
Mackay	1,441	19,459	39,575	60,475	653,166	89,812	2,962,366
Total	2,328	36,839	65,200	104,367	1,225,470	171,511	5,527,459
<i>Wide Bay—</i>							
Bundaberg, Gin Gin, &c.	348	7,934	24,095	32,377	392,624	57,309	2,245,471
Biggenden, Childers, Mary- borough, Tiaro, &c.	224	8,184	15,279	23,687	266,681	28,051	1,228,341
Gympie*	2	267	450	719	10,362	...	...
Total	574	16,385	39,824	56,783	669,667	85,360	3,473,812
<i>Port Curtis—</i>							
Gladstone§	1	48	127	176	2,062	...	...
St. Lawrence†	37	654	1,708	2,399	39,068	...	...
Total	38	702	1,835	2,575	41,130	...	...
<i>Moreton—</i>							
Logan and Nerang|| ... ..	18	668	1,024	1,710	23,117	2,347	75,100
Maroochy, &c.	36	2,388	4,367	6,791	84,578	9,612	435,000
Total	54	3,056	5,391	8,501	107,695	11,959	510,100
TOTAL OF STATE	4,686	75,148	††189,466	α††269,300	3,668,252	485,585	18,164,416

* Crushed in Maroochy and Tiaro. † Crushed in Mackay. α Area exclusive of 2,399 acres cut for fodder. †† Exclusive of 209 acres, yielding 4,007 tons of cane, which was cut in Mackay, but destroyed. § Crushed in Bundaberg. || Part crushed in Maroochy.

N.B.—According to the "Imperial Food Journal," it is proposed to form a Sugar Federation of the British Empire, and steps in that direction are being considered by a committee representing all the sugar-producing and many of the sugar-using interests of the Dominions. At present most of the Empire cane sugar comes from Mauritius, West Indies, British Guiana, Australia, and India, but the total is only about 16 per cent. of the aggregate import of sugar into the United Kingdom. Now that an Empire preference is operative, the time is ripe for an organised effort to encourage the Empire to grow most, if not all, of the sugar refined in Great Britain.

Table No. XXXIV.

RETURN SHOWING THE SUGAR AVERAGES IN EACH DIVISION OF THE STATE FOR THE YEAR 1925.

Divisions or Groups and Districts.	Tons of Cane per Acre Crushed.	Tons of Sugar per Acre Crushed.	Tons of Cane per Ton of Sugar.
<i>Rockingham and York Peninsula—</i>			
Cairns and Douglas, &c.	19·36	2·68	7·22
Ingham and Innisfail	22·19	2·89	7·67
Total	21·04	2·81	7·49
<i>Edgumbe—</i>			
Ayr and Townsville	24·64	3·57	6·89
Bowen and Proserpine	15·58	2·06	7·58
Mackay	16·50	2·18	7·71
Total	18·80	2·56	7·37
<i>Wide Bay—</i>			
Bundaberg, Gin Gin, &c.	16·29	2·37	6·89
Biggenden, Childers, Maryborough, Tiaro, &c.	17·45	1·77	9·94
Gympie*	23·03	...	...
Total	16·82	2·13	7·91
<i>Port Curtis—</i>			
Gladstone §	16·24	...	...
St. Lawrence †	22·87	...	...
Total	22·41	...	...
<i>Moreton—</i>			
Logan and Nerang ‡	22·58	2·33	9·71
Maroochy, &c.	19·37	* 2·24	8·66
Total	19·98	2·26	8·89
TOTAL STATE	19·36	2·56	7·55

* Crushed in Maroochy and Tiaro. † Crushed in Mackay. ‡ Part crushed in Maroochy. § Crushed in Bundaberg.

Table No. XXXV.

RETURN FOR TWO YEARS SHOWING THE AREA AND PRODUCE IN EACH DIVISION OF THE STATE.

Division.	AREA UNDER CULTIVATION.			PRODUCTION.					
	1924.	1925.	Increase or —Decrease	1924		1925.		Increase or —Decrease in 1925.	
				Area Crushed.	Sugar.	Area Crushed.	Sugar.	Area Crushed.	Sugar.
	Acres.	Acres.	Acres.	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Rockingham and York Peninsula	93,347	97,074	3,727	69,869	189,947	77,216	216,755	7,347	26,808
Edgumbe	92,488	†104,367	11,879	53,115	124,932	†65,200	171,511	12,085	46,579
Port Curtis*	2,358	2,575	217	1,397	...	1,835	...	438	...
Wide Bay †	56,461	56,783	322	38,239	81,080	39,824	85,360	1,585	4,280
Moreton	8,865	8,501	— 364	5,029	13,177	5,391	11,959	362	— 1,218
Total	253,519	†269,300	15,781	167,649	409,136	†189,466	485,585	21,817	76,449

* Crushed in Edgumbe and Wide Bay. † Part of the cane grown in Gympie was crushed in the Moreton Division.
‡ Exclusive of 209 acres yielding 4,007 tons of cane which was cut and destroyed.

Table No. XXXVI.

RETURN FOR TWO YEARS SHOWING PERCENTAGES IN EACH DIVISION OF THE STATE.

Division.	TO EACH ACRE CRUSHED.				TONS CANE TO EACH TON SUGAR.	
	Tons of Cane.		Tons of Sugar.		1924.	1925.
	1924.	1925.	1924.	1925.		
Rockingham and York Peninsula	21·60	21·04	2·75	2·81	7·84	7·49
Edgumbe	16·25	18·80	2·27	2·56	7·23	7·37
Port Curtis	18·25	16·82	*	*	*	*
Wide Bay	17·19	22·41	2·10	2·13	8·20	7·91
Moreton	23·12	19·98	2·58	2·26	8·58	8·89
Total	18·92	19·36	2·44	2·56	7·75	7·55

* Included in Edgumbe and Wide Bay.

Table No. XXXVII.

RETURN SHOWING THE AREA AND PRODUCTION OF SUGAR-CANE AND SUGAR BEET IN AUSTRALIA FOR THE YEAR 1925.

	Area under Cultivation.	Area Cut or Dug for Manufacture.	Yield of Cane, &c.	Sugar Obtained.
	Acres.	Acres.	Tons.	Tons.
Queensland	269,509	*189,466	3,668,252	485,585
New South Wales	20,121	7,761	228,978	26,682
Victoria (beet)	1,880	1,880	21,194	2,315

* Exclusive of 209 acres cut but cane destroyed.

Table No. XXXVIII.

RETURN SHOWING NUMBER OF SUGAR MILLS IN QUEENSLAND DURING THE YEAR 1924-25.

Manufactories.	Works.	Hands Employed.	VALUE.		
			Machinery.	Land and Premises.	Output.
			£	£	£
Refineries } Sugar Mills }	In operation, 1924-5 { ...	No. 2	4,694,828	895,968	12,579,211
	... {	No. 331			
		No. 6,250			
Total	...	39			
		6,581			

Table No. XXXIX.

SUGAR MILLS.

RETURN SHOWING THE FINANCIAL ASSISTANCE RENDERED TO SUGAR MILLS, &C., AND THEIR PRESENT INDEBTEDNESS AT 31ST DECEMBER, 1925.

Number of Sugar Mill Companies to which advances have been made under—

1.	The Sugar Works Guarantee Acts	.. .. .	13
2.	"The Sugar Works Act of 1911" (Babinda and South Johnstone)	.. .. .	2
	"The Sugar Works Act of 1922" (Tully River Mill)	.. .. .	1
	From Consolidated Revenue (North Eton and Racecourse)	.. .. .	2
	From General Loan Fund	.. .. .	7

Number of Tramway Companies to which advances have been made under—

3.	The Sugar Works Guarantee Acts (Double Peak)	.. .. .	1
4.	Under other conditions	.. .. .	None.

5. Total amount of advances made to 31st December, 1925, under the Sugar Works Guarantee Acts—

	£	s.	d.	£	s.	d.
Marian Mill	39,000	0	0			
Mount Bauple Mill	32,480	16	1			
Pleystowe Mill	35,472	1	3			
Nerang River Mill	19,998	18	10			
Gin Gin Mill	50,000	0	0			
Plane Creek Mill	65,000	0	0			
North Eton Mill	18,200	0	0			
Proserpine Mill	54,000	0	0			
Moreton Mill	32,864	15	0			
Mulgrave Mill	46,000	0	0			
Isis Mill	38,636	0	0			
Mossman Mill	66,300	0	0			
Johnstone Mill	847	17	8			
				498,800	8	10
6. Under "The Sugar Works Act of 1911"—						
Babinda Mill	405,429	18	8			
South Johnstone Mill	600,997	18	10			
				1,006,427	17	6
Under "The Sugar Works Act of 1922"—						
Tully River Mill				676,218	4	8
From Consolidated Revenue—						
North Eton Mill	26,000	0	0			
Racecourse Mill	21,000	0	0			
				47,000	0	0
From General Loan Fund—						
North Eton Mill	62,965	18	4			
Mount Bauple Mill	8,500	0	0			
Gin Gin Mill	2,000	0	0			
Proserpine Mill	17,765	9	4			
Moreton Mill	14,350	0	0			
Mossman Mill	14,071	14	0			
				119,653	1	8
7. Indebtedness at 31st December, 1925, under the Sugar Works Guarantee Acts—						
Mount Bauple Mill	12,070	7	9			
North Eton Mill	6,018	2	6			
				18,088	10	3
8. Under "The Sugar Works Act of 1911"—						
Babinda Mill	220,489	1	6			
South Johnstone Mill	485,710	12	6			
				706,199	14	0
Under "The Sugar Works Act of 1922"—						
Tully River Mill				676,218	4	8
Under Consolidated Revenue—						
North Eton Mill				4,562	2	5
Under General Loan Fund—						
North Eton Mill	43,661	19	7			
Mount Bauple Mill	8,500	0	0			
				52,161	19	7

Table No. XL.

ARROWROOT.

RETURN FOR TWO YEARS SHOWING AREA AND PRODUCE, &C., OF ARROWROOT TUBERS IN PETTY SESSIONS DISTRICTS.

Petty Sessions District.	1924.		1925.		Increase or Decrease — 1925.	
	Area.	Produce.	Area.	Produce.	Area.	Produce.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Atherton ... ..	...	...	1	5	1	5
Beaudesert ... ..	...	...	2	5	2	5
Cleveland ... ..	...	...	11	141	11	141
Esk	2	7	4	10	2	3
Gladstone	4	26	6	57	2	31
Gympie	3	13	12	137	9	124
Kilcoy	5	72	2	57	— 3	— 15
Logan	190	2,093	281	3,482	91	1,389
Marburg	1	3	2	5	1	2
Maroochy	4	55	4	65	...	10
Nanango ... ..	...	...	3	25	3	25
Nerang	215	2,649	233	3,831	18	1,182
Redcliffe ... ..	...	...	1	12	1	12
Rosewood	3	10	...	...	— 3	— 10
Tiaro	2	5	3	7	1	2
Wienholt ... ..	...	...	2	1	2	1
Woodford	2	6	1	2	— 1	— 4
Total State	431	4,939	568	7,842	137	2,903

Table No. XLI.

RETURN SHOWING ARROWROOT MANUFACTURED DURING THE YEAR 1924-25.

Petty Sessions District.	Hands Employed.	Tuber.	Arrowroot.
	Number.	Tons.	Lb.
Beaudesert	} 74	5,241	1,104,655
Cleveland			
Logan			
Nerang			

Table No. XLII.

TOBACCO.

RETURN FOR TWO YEARS SHOWING AREA AND PRODUCTION OF TOBACCO.

Division and Petty Sessions District.	1924.		1925.		Increase or Decrease — 1925.	
	Area.	Produce Dried Leaf.	Area.	Produce Dried Leaf.	Area.	Produce.
	Acres.	Lb.	Acres.	Lb.	Acres.	Lb.
<i>Moreton—</i> Lowood	3	2,454	6	6,508	3	4,054
<i>Port Curtis—</i> Gladstone	1	1,800	...	...	— 1	— 1,800
<i>Edgumbe—</i> Bowen	11	7,574	21	13,562	10	5,988
Proserpine	3	2,400	1	448	— 2	— 1,952
Townsville	8	6,513	2	1,777	— 6	— 4,736
<i>Downs—</i> Inglewood	21	14,695	11	8,813	— 10	— 5,882
Texas	118	100,181	55	72,415	— 63	— 27,766
Toowoomba	1	150	...	...	— 1	— 150
Total State	166	135,767	96	103,523	— 70	— 32,244

Table No. XLIII.

COFFEE.

RETURN FOR TWO YEARS SHOWING AREA AND PRODUCTION OF COFFEE.

DIVISION AND PETTY SESSIONS DISTRICT.	Not Bearing.		Bearing.				Average per Acre (Bearing).		1925. Increase or Decrease—Bearing Area.	1925. Increase or Decrease—in Produce.
	1924.	1925.	1924.		1925.		1924.	1925.		
	Acres.	Acres.	Acres.	Lb. (Parchment.)	Acres.	Lb. (Parchment.)	Lb.	Lb.	Acres.	Lb.
<i>Moreton—</i> Maroochy	3	2	12	5,790	9	4,992	483	555	— 3	— 798
<i>Wide Bay—</i> Maryborough ... ..	...	...	1	270	1	200	270	200	...	— 70
<i>Edgecumbe—</i> Proserpine ... ..	...	...	1	100	...	...	100	...	— 1	— 100
Totals	3	2	14	6,160	10	5,192	440	519	— 4	— 968

Table No. XLIV.

VINES.

RETURN FOR TWO YEARS SHOWING AREA AND PRODUCTION OF VINES.

Year.	VINEYARD.			Grapes Gathered.	Average per Acre (Bearing).
	Acres Bearing.	Acres not Bearing.	Total.		
1924	1,137	442	1,579	Lb. 2,664,089	Lb. 2,343
1925	1,166	490	1,656	2,898,546	2,486

Table No. XLV.

RETURN FOR TWO YEARS SHOWING AREA UNDER VINES AND PRODUCTION OF GRAPES IN THE PRINCIPAL DISTRICTS OF THE STATE.

Petty Sessions District.	AREA UNDER VINES.								
	1924.			1925.			Increase or Decrease—	1924.	1925.
	Bearing.	Not Bearing.	Total Area.	Bearing.	Not Bearing.	Total Area.		Grapes Gathered.	Grapes Gathered.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Lb.	Lb.
Brisbane (A)	341	54	395	385	71	456	61	882,705	744,846
Charters Towers	15	2	17	12	3	15	— 2	41,372	32,596
Dalby	3	1	4	4	...	4	...	19,345	23,019
Lowood	25	8	33	28	...	28	— 5	46,262	76,270
Maryborough	15	4	19	17	2	19	...	32,220	29,543
Nanango	4	...	4	6	...	6	2	16,735	17,819
Oakey	4	...	4	5	1	6	2	8,542	15,516
Rockhampton	21	1	22	20	5	25	3	47,618	63,459
Roma	248	108	356	280	73	353	— 3	482,602	529,172
Stanthorpe	278	234	512	280	314	594	82	774,549	1,034,835
Toowoomba	18	1	19	16	1	17	— 2	29,555	26,372
Warwick	61	12	73	37	1	38	— 35	71,186	116,027
Wynnum	10	...	10	7	...	7	— 3	39,115	36,240
All other Districts	94	17	111	69	19	88	— 23	172,283	152,832
Totals	1,137	442	1,579	1,166	490	1,656	77	2,664,089	2,898,546

Table No. XLVI.

RETURN FOR FIVE YEARS SHOWING THE AVERAGE PRODUCTION OF GRAPES IN CERTAIN PETTY SESSIONS DISTRICTS OF THE STATE.

Petty Sessions District.	1921. Average per Acre.	1922 Average per Acre.	1923. Average per Acre.	1924. Average per Acre.	1925. Average per Acre.
Brisbane (A)	Lb. 1,427	Lb 1,397	Lb. 1,958	Lb. 2,589	Lb. 1,935
Roma	2,833	3,075	2,277	1,946	1,890
Stanthorpe	3,833	3,585	7,913	2,786	3,696
Toowoomba	1,392	1,425	1,329	1,642	1,648
Warwick	2,276	1,447	2,892	1,167	3,136
State	2,245	2,188	3,108	2,343	2,486

Table No. XLVII.

WINE.

RETURN FOR FIVE YEARS SHOWING NUMBER OF MAKERS, WINE MADE, AND WINE SPIRIT DISTILLED.

Year.	Number of Makers.	Quantity of Wine Made.	Quantity of Wine Spirit Distilled. 1925-26.
1921	58	Gallons. 57,793	Gallons. 642
1922	65	53,171	905
1923	57	37,242	640
1924	58	33,119	234
1925	48	39,375	281

Table No. XLVIII.

RETURN SHOWING THE PRINCIPAL DISTRICTS IN WHICH WINE WAS MADE DURING THE YEAR 1925.

Petty Sessions District.	Number of Makers.	Quantity of Wine Made.	Quantity of Wine Spirit Distilled. 1925-26.
Brisbane (A)	4	Gallons. 1,820	Gallons. ...
Maryborough	6	1,760	...
Toowoomba	12	1,445	...
Lowood	1	} 32,100	}
Roma	2		
Warwick	1		
All other Districts	22	2,250	...
Totals	48	39,375	281

Table No. XLIX.

BANANAS.

RETURN FOR TWO YEARS SHOWING THE AREA AND PRODUCTION OF BANANAS IN THE PRINCIPAL DISTRICTS OF THE STATE.

Petty Sessions District.	Area.				Produce.		Increase or Decrease—1925.	
	1921.	Bearing, 1925.	Not yet Bearing, 1925.	1925.	1924.	1925.	Area.	Produce.
	Acres.	Acres.	Acres.	Total Acres	Bunches.	Bunches.	Acres.	Bunches.
Brisbane (A) ...	1,061	1,134	304	1,438	224,304	283,552	377	59,248
Bundaberg ...	11	69	14	83	4,100	29,429	72	25,329
Caboolture ...	350	180	95	275	95,864	46,959	— 75	— 48,905
Cairns ...	143	119	40	159	25,093	27,247	16	2,154
Cleveland ...	96	95	33	128	11,613	21,896	32	10,283
Gladstone ...	186	164	15	179	24,952	24,105	— 7	— 847
Gympie ...	4,788	3,856	2,119	5,975	931,356	953,825	1,187	22,469
Kilcoy ...	202	159	158	317	22,504	40,472	115	17,968
Logan ...	517	408	129	537	84,626	118,490	20	33,864
Maroochy ...	2,990	2,074	487	2,561	517,080	530,644	— 429	13,564
Maryborough ...	333	235	29	264	70,732	48,684	— 69	— 22,048
Nerang ...	830	451	96	547	136,276	105,477	— 283	— 30,799
Redcliffe ...	746	548	239	787	149,500	154,635	41	5,135
Rockhampton ...	451	398	58	456	61,416	84,977	5	23,561
Tiaro ...	214	162	46	208	41,070	37,851	— 36	— 3,219
All other Districts	543	501	351	852	63,297	74,541	309	11,244
Totals ...	13,491	10,553	4,213	14,766	2,463,783	2,582,784	1,275	119,001

Table No. L.

RETURN SHOWING THE AVERAGE YIELD OF BANANAS IN THE PRINCIPAL DISTRICTS OF THE STATE DURING THE YEAR 1925.

	Average per Acre— Bunches.	Average per Acre— Bunches.
Brisbane (A) ...	250	290
Bundaberg ...	427	256
Caboolture ...	261	207
Cairns ...	229	234
Cleveland ...	230	282
Gladstone ...	147	214
Gympie ...	247	234
Kilcoy ...	255	
Logan ...		290
Maroochy ...		256
Maryborough ...		207
Nerang ...		234
Redcliffe ...		282
Rockhampton ...		214
Tiaro ...		234

Table No. LI.

PINEAPPLES.

RETURN FOR TWO YEARS SHOWING THE AREA AND PRODUCTION OF PINEAPPLES IN THE STATE.

Petty Sessions District.	1924.		1925.				Increase or Decrease—1925.	
	Area.	Produce.	Bearing.	Not yet Bearing.	Total Area.	Produce.	Area.	Produce.
	Acres.	Dozen.	Acres.	Acres.	Acres.	Dozen.	Acres.	Dozen.
Bowen ...	65	9,819	76	4	80	11,049	15	1,230
Brisbane (A) ...	336	94,396	294	28	322	92,127	— 14	— 2,269
Brisbane (B) ...	128	32,148	102	29	131	23,706	3	— 8,442
Caboolture ...	336	91,557	525	8	533	111,658	197	20,101
Cleveland ...	829	263,269	499	66	565	153,790	— 264	— 109,479
Gympie ...	42	9,598	59	24	83	12,655	41	3,057
Logan ...	128	53,304	193	77	270	28,621	142	— 24,683
Maroochy ...	1,189	318,443	1,020	241	1,261	310,117	72	— 8,326
Maryborough ...	102	21,444	77	23	100	18,311	— 2	— 3,133
Redcliffe ...	22	5,132	19	...	19	13,380	— 3	8 248
Rockhampton ...	182	21,323	173	13	186	30,421	4	9,098
Tiaro ...	28	2,168	38	7	45	34,391	17	32,223
Wynnum ...	100	21,435	70	21	91	25,163	— 9	3,728
All other Districts	222	29,421	223	86	309	37,217	87	7,826
Total ...	3,709	973,457	3,368	627	3,995	902,636	286	— 70,821

N.B.—Brisbane (B) refers to South Brisbane.

Table No. LII.

ORANGES.

RETURN FOR TWO YEARS SHOWING THE AREA AND PRODUCTION OF ORANGES IN THE PRINCIPAL DISTRICTS OF THE STATE.

Petty Sessions District.	Area.		Bearing, 1925.	Not yet Bearing, 1925.	Produce.		Increase or Decrease - 1925.	
	1924.	1925.			1924.	1925.	Area.	Produce.
	Acres.	Acres.	Acres.	Acres.	Bushels.	Bushels.	Acres.	Bushels.
Bowen	139	114	86	28	6,515	5,523	- 25	- 992
Bundaberg	7	20	18	2	780	4,485	13	3,705
Caboolture	56	118	66	52	2,714	3,767	62	1,053
Cairns	44	37	33	4	12,330	4,381	- 7	- 7,949
Cardwell	77	74	62	12	7,664	10,874	- 3	3,210
Charters Towers	60	43	30	13	4,709	4,875	- 17	166
Childers	58	55	31	24	2,078	3,260	- 3	1,182
Cleveland	34	55	23	32	1,414	3,365	21	1,951
Cook	69	62	55	7	2,829	4,096	- 7	1,267
Esk	61	70	46	24	1,101	5,613	9	4,512
Gatton	57	43	39	4	3,682	4,477	- 14	795
Gayndah	61	79	43	36	4,396	5,755	18	1,359
Gladstone	24	32	12	20	2,935	2,025	8	- 910
Gympie	35	38	23	15	2,768	2,779	3	11
Helidon	15	17	13	4	381	2,860	2	2,479
Ingham	29	22	14	8	2,925	3,898	- 7	973
Logan	97	100	68	32	8,978	11,889	3	2,911
Mackay	50	58	42	16	5,460	3,199	8	- 2,261
Maroochy	1,380	1,220	815	405	111,042	96,408	- 160	- 14,634
Maryborough	485	515	415	100	25,876	32,877	30	7,001
Nerang	87	96	66	30	3,626	3,952	9	326
Redcliffe	17	27	18	9	894	3,138	10	2,244
Rockhampton	368	292	162	130	14,954	20,414	- 76	5,460
Tiaro	73	78	65	13	5,309	4,248	5	- 1,061
Woodford	17	17	14	3	2,392	2,578	...	186
All other Districts	471	474	326	148	25,039	31,126	3	6,087
Total	3,871	3,756	2,585	1,171	262,791	281,862	- 115	19,071

Table No. LIII.

MANGOES.

RETURN FOR TWO YEARS SHOWING THE AREA AND PRODUCTION OF MANGOES IN THE PRINCIPAL DISTRICTS OF THE STATE.

Petty Sessions District.	Area.		Bearing, 1925.	Not yet Bearing, 1925.	Produce.		Increase or Decrease - 1925.	
	1924.	1925.			1924.	1925.	Area.	Produce.
	Acres.	Acres.	Acres.	Acres.	Bushels.	Bushels.	Acres.	Bushels.
Atherton	7	7	6	1	486	557	...	71
Bowen	28	47	42	5	5,872	4,351	19	- 1,521
Brisbane (A)	6	4	4	...	1,721	964	2	- 757
Cairns	5	5	5	...	612	1,080	...	468
Cook	11	7	7	...	6,760	2,225	4	- 4,535
Douglas	6	6	6	...	532	1,336	...	804
Gatton ... ..	...	12	10	2	...	785	12	785
Gin Gin	2	1	1	...	1,190	720	1	- 470
Gladstone	7	5	4	1	724	603	2	- 121
Ingham	21	13	8	5	3,482	3,229	8	- 253
Logan	6	8	7	1	870	612	2	- 258
Mackay	43	47	45	2	8,834	8,944	4	110
Maryborough	4	9	8	1	1,221	1,670	5	449
Mt. Morgan	4	5	5	...	410	611	1	201
Proserpine	13	13	12	1	5,278	2,472	...	- 2,806
Redcliffe	7	6	5	1	1,379	1,238	1	- 141
Rockhampton	45	46	41	5	5,878	2,628	1	- 3,250
Townsville	11	11	10	1	3,294	1,823	...	- 1,471
Woodford	1	1	1	...	551	576	...	25
All other Districts	52	43	33	10	7,510	3,212	9	- 4,298
Totals	279	296	260	36	56,604	39,636	17	- 16,968

Table No. LIV.
STRAWBERRIES.

RETURN FOR TWO YEARS SHOWING THE AREA AND PRODUCTION OF STRAWBERRIES IN THE PRINCIPAL DISTRICTS OF THE STATE.

Petty Sessions District.	Area.		Produce.		Increase or Decrease —	
	1924.	1925.	1924.	1925.	1925.	1925.
	Acres.	Acres.	Quarts.	Quarts.	Acres.	Quarts.
Beaudesert ... ..	...	1	...	535	1	535
Bowen ... ..	...	1	...	280	1	280
Brisbane (A)	19	14	20,432	13,795	— 5	— 6,637
Brisbane (B)	2	2	1,657	216	...	— 1,441
Cleveland	81	50	124,962	77,008	— 31	— 47,954
Gladstone	1	1	260	700	...	440
Gympie ... ..	...	2	...	2,362	2	2,362
Logan	1	1	210	1,344	...	1,134
Maroochy	25	24	25,456	14,525	— 1	— 10,931
Rockhampton	3	3	4,120	5,116	...	996
Wynnum	16	12	39,453	13,731	— 4	— 25,722
All other Districts	2	...	1,200	...	— 2	— 1,200
Totals	150	111	217,750	129,612	— 39	— 88,138

N.B.—Brisbane (B) refers to South Brisbane.

Table No. LV.

APPLES.

RETURN FOR TWO YEARS SHOWING THE AREA AND PRODUCTION OF APPLES IN THE PRINCIPAL DISTRICTS OF THE STATE.

Petty Sessions District.	Area.		Increase or Decrease — 1925.	Bearing, 1925.	Not Bearing, 1925.	Produce.		Increase or Decrease — 1925.
	1924.	1925.				1924.	1925.	
	Acres.	Acres.	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.
Herberton	13	4	— 9	3	1	24	69	45
Nanango	2	6	4	5	1	58	166	108
Stanthorpe	4,013	4,082	69	2,367	1,715	96,372	125,907	29,535
Toowoomba	6	5	— 1	5	...	145	204	59
Warwick	315	257	— 58	134	123	1,910	3,891	1,981
All other Districts	10	6	— 4	6	..	135	132	— 3
Totals	4,359	4,360	1	2,520	1,840	98,644	130,369	31,725

Table No. LVI.

OTHER FRUITS.

RETURN SHOWING THE AREA AND PRODUCTION OF OTHER FRUITS DURING THE YEAR 1925.

	Bearing.	Not Bearing.	Yield.
	Acres.	Acres.	
Apricots	67	40	2,771 bushels
Cape gooseberries	8	...	4,760 quarts
Cherries	6	...	126 bushels
Custard apples	215	72	19,819 "
Figs	13	...	1,795 "
Lemons	184	26	21,568 "
Limes	1	...	50 "
Nectarines	126	...	5,777 "
Passion fruit	63	...	3,167 "
Papaws	243	71	55,127 dozens
Peaches	1,488	399	97,908 bushels
Pears	175	85	11,313 "
Persimmons	8	...	945 "
Plums	872	401	45,394 "
Quinces	29	...	562 "
Rosellas	1	...	655 "

Table No. LVII.

OTHER VEGETABLES.

RETURN FOR TWO YEARS SHOWING AREA AND PRODUCTION OF OTHER VEGETABLES.

Other Vegetables.	1924.		1925.	
	Acres.	Produce.	Acres.	Produce.
Pulse { Beans	6	591 bushels	9	602 bushels
Peas	137	2,659 bushels	14	181 bushels
Green { Beans	556	49,151 bushels	639	51,421 bushels
Peas	359	22,250 bushels	471	32,547 bushels
Beetroot	1	10 tons	2	2,200 dozen
Cabbages and Cauliflowers ...	929	210,696 dozen	1,229	251,101 dozen
Chocos	1	950 dozen	1	1,380 dozen
Cucumbers	328	145,126 dozen	256	134,303 dozen
Marrows	11	38 tons	10	41 tons
Onions	194	16,317 cwt.	456	24,881 cwt.
Tomatoes	2,583	297,080 bushels	2,417	236,701 bushels
Turnips	83	426 tons	49	307 tons

Table No. LVIII.

PRINCIPAL OTHER CROPS.

RETURN FOR TWO YEARS SHOWING THE AREA AND PRODUCTION OF OTHER CROPS.

	1924.		1925.	
	Acres.	Produce.	Acres.	Produce.
Broom millet	554	233,944 lb. straw	237	89,095 lb. straw
Canary seed	3,991	1,658,960 lb.	3,291	518,390 lb.
Cassava ... ..	...	...	12	Nil
Cocoanuts	821	38,110 dozen	698	23,400 dozen
Grass seed	1,043	28,297 bushels	584	5,304 bushels
Indiarubber	3	Nil	3	Nil
Lucerne seed	45	3,200 lb.	127	8,928 lb.
Mangold wurzel	98	838 tons	89	596 tons
Millet seed	713	19,636 bushels	15	544 bushels
Peanuts	691	1,005,393 lb.	815	411,164 lb.

Table No. LIX.

PASTURAGE.

RETURN FOR FIVE YEARS SHOWING THE AREA UNDER PASTURAGE.

	1921. Acres.	1922. Acres.	1923. Acres.	1924. Acres.	1925. Acres.
Hay	98,155	78,050	46,909	95,007	66,828
Green forage	147,135	188,636	306,693	134,109	247,482
Artificially sown pasture	459,914	475,226	498,552	538,165	532,052
Total	705,204	741,912	852,154	767,281	846,362

Table No. LX.

HAY.

RETURN FOR TWO YEARS SHOWING THE AREA AND PRODUCTION OF HAY CROPS.

Hay Crops.	Area.		Increase or Decrease— 1925.	Produce.		Increase or Decrease— 1925.
	1924.	1925.		1924.	1925.	
	Acres.	Acres.	Acres.	Tons.	Tons.	Tons.
Wheat	9,457	10,514	1,057	9,851	9,040	— 811
Oats	8,304	2,214	— 6,090	10,457	2,398	— 8,059
Lucerne	61,089	50,526	— 10,563	94,275	82,861	— 11,414
Other	16,157	3,574	— 12,583	22,221	5,443	— 16,778
Totals	95,007	66,828	— 28,179	136,804	99,742	— 37,062

Table No. LXI.

ARTIFICIALLY SOWN PASTURE.

RETURN FOR TWO YEARS SHOWING THE AREA UNDER ARTIFICIALLY SOWN PASTURES.

Petty Sessions District.	1924.		1925.		Increase, 1925.	Decrease, 1925.
	Acres.	Acres.	Acres.	Acres.		
Atherton	43,859	45,516	1,657	...	...	...
Beaudesert	9,543	6,622	...	...	2,921	...
Biggenden	19,634	18,911	...	...	723	...
Dalby	22,368	24,092	1,724	...	...	...
Dugandan	5,575	5,506	...	...	69	...
Gayndah	18,051	17,008	...	...	1,043	...
Gladstone	19,671	21,322	1,651	...	...	...
Gympie	98,989	93,942	...	...	5,047	...
Maroochy	55,074	42,017	...	...	13,057	...
Mount Morgan	14,665	8,997	...	...	5,668	...
Nanango	45,245	45,375	130	...	...	...
Nerang	26,408	29,771	3,363	...	...	...
Pittsworth	5,702	8,537	2,835	...	...	...
Redcliffe	130	11,900	11,830	...	...	...
Rockhampton	22,068	15,942	...	...	6,126	...
Wienholt	74,417	77,485	3,068	...	...	...
Woodford	12,087	11,801	...	...	286	...
All other Districts	44,679	47,248	2,569	...	...	...
Totals	538,165	532,052	...	...	6,113	...

Table No. LXII.

ENSILAGE.

RETURN FOR TWO YEARS SHOWING NUMBER OF MAKERS AND ENSILAGE MADE IN THE SEVERAL PETTY SESSIONS DISTRICTS OF THE STATE.

Petty Sessions District.	1924.		1925.		Increase, 1925.	Decrease, 1925.
	No. of Makers.	Tons.	No. of Makers.	Tons.		
Atherton	8	595	3	180	...	415
Beaudesert ... ..	...	...	2	80	80	...
Biggenden	1	60	1	4	...	56
Brisbane (A)	4	400	6	320	...	80
Brisbane (B)	4	830	11	1,415	615	...
Cairns	1	90	1	40	...	50
Condamine	1	25	...	...	...	25
Dalby	1	40	1	50	10	...
Dugandan	1	60	1	45	...	15
Eidsvold	2	22	2	45	23	...
Esk	30	2,393	7	448	...	1,945
Gatton	1	600	2	170	...	430
Gympie	6	419	1	60	...	359
Harrisville	5	145	1	10	...	135
Helidon	1	30	...	...	...	30
Herberton	1	45	1	100	55	...
Ipswich ... ..	...	...	1	20	20	...
Kilcoy	2	95	...	...	...	95
Killarney	4	180	...	...	...	180
Logan ... ..	...	...	1	20	20	...
Marburg ... ..	...	...	1	1	1	...
Maroochy	1	25	1	70	45	...
Nanango	1	60	9	630	570	...
Nerang	3	220	2	150	...	70
Oakey	5	231	...	...	...	231
Pittsworth ... ..	...	...	1	20	20	...
Redcliffe	5	130	2	36	...	94
Rockhampton	3	31	1	20	...	11
Rosewood	3	176	2	140	...	36
Springsure ... ..	...	...	1	200	200	...
Stanthorpe	1	70	1	100	30	...
Texas	1	3	...	...	...	3
Toowoomba	4	210	1	26	...	184
Townsville	1	10	...	...	...	10
Warwick	2	900	...	...	...	900
Woodford	1	100	2	204	104	...
Wynnum ... ..	...	...	1	20	20	...
Totals	104	8,195	67	4,654	...	3,541

Value of Ensilage made 1924, £13,484; 1925, £4,810.

N.B.—Brisbane (B) refers to South Brisbane.

Table No. LXIII.
RETURN SHOWING THE RESULTS OF THE DAIRYING INDUSTRY IN THE PRINCIPAL PETTY SESSIONS DISTRICTS OF THE STATE DURING THE YEAR 1925.

District.	Total Milk Obtained.	HOW UTILISED.					ESTABLISHMENTS.				DAIRY CATTLE.		BUTTER MADE.			CHEESE MADE.					
		Gallons.	For Butter on Farms.	For Cheese on Farms.	For Domestic Purposes by Producer.	Separated for Sale.	Sold for Consumption as Milk.	Sold to Condensed Milk Factories.	Sold to Cheese Factories.	Dairying.	Butter Factories.	Cheese Factories.	In Milk.	Dry.	Average per Cow.	At Factories.	By Farmers.	Total.	At Factories.	By Farmers.	Total.
Moreton																					
Erisbane (A)	2,327,620	120,981	...	212,419	680,966	1,313,254	...	...	...	588	...	7,229	2,421	241	...	44,419	44,419	...	...	...	...
Erisbane (B)	825,935	10,194	...	44,108	50,144	721,489	...	...	...	136	...	2,412	888	241	...	4,022	4,022	...	...	...	...
Beaudesert	7,386,709	154,097	...	150,612	7,034,672	47,328	...	...	...	475	...	16,057	5,873	337	...	2,422,435	2,422,435	...	...	...	...
Caboollure	437,982	9,869	...	14,820	413,293	47,328	...	...	...	68	...	1,759	541	190	...	1,143,175	1,143,175	...	...	...	...
Cleveland	88,894	800	...	73,759	1,446	12,889	...	...	...	103	...	310	191	177	...	...	...	...	...	...	...
Cooyar	913,622	35,838	...	22,019	815,887	...	...	...	...	90	...	3,020	544	256	...	14,792	14,792	...	...	...	...
Crow's Nest	3,744,221	101,082	...	69,263	3,568,961	4,915	...	...	...	314	...	8,099	1,628	385	...	44,330	44,330	...	...	...	...
Dugandan	4,119,219	133,396	...	123,451	3,849,657	12,715	...	...	...	585	...	11,233	1,860	315	...	3,033,739	3,033,739	...	...	...	...
Esk	3,908,850	82,425	...	127,902	2,413,855	9,840	...	...	...	388	...	13,427	4,155	222	...	1,104,958	1,104,958	...	...	...	...
Gatton	4,225,432	138,685	...	131,345	3,946,368	7,834	...	...	...	572	...	8,767	2,084	389	...	1,912,851	1,912,851	...	...	...	...
Goodna	1,355,359	...	...	30,000	77,314	28,045	...	...	...	21	...	388	145	254	...	...	...	...	...	...	...
Harrisville	2,894,955	104,162	...	74,110	2,815,433	1,250	...	...	...	375	...	8,290	1,653	301	...	46,784	46,784	...	...	...	...
Helidon	1,525,376	65,900	...	40,316	1,416,873	2,287	...	...	...	215	...	4,579	800	284	...	25,513	25,513	...	...	...	...
Ipswich	1,372,633	43,528	...	49,826	1,058,841	220,438	...	...	...	202	...	1,073	234	234	...	4,042,356	4,042,356	...	...	...	...
Kilcoy	1,465,646	44,159	...	52,876	1,364,961	3,650	...	...	...	134	...	5,437	1,204	221	...	20,975	20,975	...	...	...	...
Laidley	2,583,111	83,391	...	106,834	2,389,356	3,530	...	...	...	425	...	7,312	493	331	...	1,627,714	1,627,714	...	...	...	...
Logan	2,505,216	167,646	...	196,841	1,943,654	287,075	...	...	...	439	...	6,884	1,720	291	...	4,435,368	4,435,368	...	...	...	...
Lowood	2,203,342	54,318	...	54,806	2,092,235	983	...	...	...	202	...	4,248	432	399	...	27,051	27,051	...	...	...	...
Marburg	1,865,063	47,680	...	50,833	1,761,751	4,799	...	...	...	914	...	15,797	3,802	279	...	23,664	23,664	...	...	...	...
Maroochy	5,459,788	166,236	...	185,410	5,070,271	27,871	...	...	...	202	...	4,248	432	399	...	1,690,829	1,690,829	...	...	...	...
Nerang	6,750,693	115,906	...	126,479	6,305,846	113,292	...	...	...	321	...	14,997	3,802	279	...	75,286	75,286	...	...	...	...
Redcliffe	2,743,045	47,019	...	57,227	1,739,187	886,612	...	...	...	275	...	9,080	2,692	233	...	831,954	831,954	...	...	...	...
Rosewood	2,413,156	70,650	...	57,210	1,978,412	252,484	...	...	...	311	...	7,795	1,222	268	...	35,203	35,203	...	...	...	...
Southport	311,442	3,584	...	5,511	250,647	51,700	...	...	...	26	...	916	391	238	...	1,328	1,328	...	...	...	...
Woodford	2,004,683	45,114	...	46,487	1,912,882	200	...	...	...	170	...	7,026	1,460	236	...	808,880	808,880	...	...	...	...
Wynnum	201,271	12,415	...	20,961	12,390	155,505	...	...	...	55	...	521	186	285	...	4,294	4,294	...	...	...	...
Total Moreton	64,513,263	1,860,075	13,370	2,045,425	55,025,302	4,169,985	1,274,828	124,278	7,708	16	3	176,909	43,195	293	24,210,748	895,312	25,106,060	115,046	12,370	127,416	127,416
Wide Bay																					
Biggenden	2,522,323	117,135	...	65,891	2,094,042	200	...	...	...	301	...	11,055	2,791	182	...	1,042,244	1,042,244	...	...	...	...
Bundaberg	1,063,494	155,864	...	156,378	606,354	144,898	...	...	...	485	...	4,473	1,970	165	...	546,119	546,119	...	...	...	...
Childers	165,312	33,624	...	63,061	41,602	27,025	...	...	...	203	...	897	603	110	...	...	...	...	...	...	...
Eidsvold	451,273	21,691	...	16,589	412,015	978	...	...	...	71	...	1,348	750	215	...	...	...	...	...	...	...
Gayndah	3,415,398	146,266	...	108,007	2,962,193	55,233	...	...	...	537	...	13,746	6,271	171	...	1,969,388	1,969,388	...	...	...	...
Gin Gin	453,483	81,073	...	47,026	321,854	3,480	...	...	...	237	...	2,014	1,384	133	...	...	...	...	...	...	...
Gympie	14,170,300	289,710	...	261,375	13,552,000	67,215	...	...	...	1,008	...	36,934	11,748	291	...	6,305,253	6,305,253	...	...	...	...
Kilkivan	1,342,818	36,846	...	35,429	1,270,543	...	...	...	...	114	...	3,231	1,325	145	...	...	...	...	...	...	...
Maryborough	1,035,382	108,906	...	59,990	709,689	156,797	...	...	...	314	...	4,640	2,492	145	...	808,999	808,999	...	...	...	...
Mount Perry	90,549	12,117	...	11,110	67,322	...	...	...	...	41	...	347	639	92	...	...	...	...	...	...	...
Nanango	7,778,555	236,467	...	206,333	7,129,701	27,200	...	...	...	882	...	23,331	7,882	241	...	5,175,791	5,175,791	...	...	...	...
Tiaro	1,991,322	83,677	...	51,898	1,852,747	...	...	...	...	251	...	8,017	2,764	185	...	...	...	...	...	...	...
Wienholt	8,967,793	252,413	...	254,810	8,424,290	17,155	...	...	...	936	...	23,545	8,571	279	...	3,570,560	3,570,560	...	...	...	...
Total Wide Bay	43,447,952	1,575,789	3,000	1,337,897	39,444,352	500,181	...	586,733	5,380	12	6	133,578	49,190	238	19,418,354	696,211	20,114,565	600,773	3,000	603,773	603,773
Port Curtis																					
Bahana	3,334,607	172,689	...	100,226	3,040,850	20,842	...	...	...	452	...	13,536	5,526	175	...	2,235,022	2,235,022	...	...	...	...
Gladstone	790,676	57,175	...	45,089	651,292	37,120	...	...	...	160	...	2,450	1,237	214	...	520,953	520,953	...	...	...	...
Mount Morgan	3,006,170	245,101	...	171,923	2,246,433	342,713	...	...	...	683	...	13,073	7,153	149	...	871,284	871,284	...	...	...	...
Rockhampton	41,050	14,390	...	25,200	760	700	...	...	...	42	...	191	105	139	...	...	...	...	...	...	...
St. Lawrence	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Port Curtis	7,172,503	489,355	...	342,438	5,939,355	401,375	...	...	1,337	4	...	29,250	14,021	166	3,627,259	180,638	3,807,897	...	...	...	...

N.B.—Brisbane (B) refers to South Brisbane.

a 2,668,524 gallons of this were sent from the Moreton Division to New South Wales.

Table No. LXIII.—continued.
RETURN SHOWING THE RESULTS OF THE DAIRYING INDUSTRY IN THE PRINCIPAL PETTY SESSIONS DISTRICTS OF THE STATE DURING THE YEAR 1925—continued.

District.	Total Milk Obtained.	HOW UTILISED.							ESTABLISHMENTS.				DAIRY CATTLE.		BUTTER MADE.			CHEESE MADE.			
		For Butter on Farms.	For Cheese on Farms.	For Domestic Purposes by Producer.	Separated for Sale.	Sold for Consumption as Milk.	Sold to Condensed Milk Factories.	Sold to Cheese Factories.	Dairying.	Butter Factories.	Cheese Factories.	In Milk.	Dry.	Average per Cow.	At Factories.	By Farmers.	Total.	At Factories.	By Farmers.	Total.	
		Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	No.	No.	No.	No.	No.	Gallons	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	
Rockingham—																					
Atherton	4,556,681	91,138	115,798	4,150,280	22,029	177,426	432	4	3	11,760	4,648	278	2,567,662	36,330	2,603,992	173,554	173,554	...	...	...
Cairns	132,232	9,362	57,467	...	65,403	...	195	...	...	676	391	124	...	3,903	3,903	...	...	...	...	...
Cardwell	19,710	...	5,710	...	14,000	...	21	...	...	60	138	100	...	...	...	...	...	...	...	...
Chillagoe	300	...	300	...	...	...	1	...	...	1	19	150	...	...	...	...	...	...	...	...
Herberton	149,001	12,930	18,929	113,942	3,200	...	48	...	...	577	334	164	...	5,298	5,298	...	...	...	...	...
Ingham	66,299	...	49,904	...	6,380	...	141	...	...	344	179	127	...	2,530	2,530	...	...	...	...	...
Innisfail	81,728	6,380	46,513	520	28,315	...	169	...	...	382	303	119	...	2,586	2,586	...	...	...	...	...
Total Rockingham	5,005,951	129,825	294,621	4,264,752	139,327	177,426	1,007	4	3	13,800	6,012	253	2,567,662	50,647	2,618,309	173,554	173,554	...	...	...
Maranoa—																					
Mitchell	85,032	10,461	14,030	55,756	4,785	...	50	...	...	428	289	119	...	4,068	4,068	...	...	...	...	...
Roma	1,138,935	108,402	98,355	906,208	25,970	...	329	...	...	6,103	2,797	128	753,357	40,654	794,011	...	...	...	...	...
Surat
Yeulba	72,171	8,165	4,996	57,140	1,870	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Maranoa	1,296,138	127,028	117,381	1,019,104	32,625	...	396	1	...	6,766	3,163	131	753,357	48,213	801,570	...	...	...	...	...
Downs—																					
Allora	2,280,414	13,970	74,376	1,785,524	1,274	405,270	279	1	...	4,518	1,121	400	1,836,296	6,890	1,843,186	1,104,138	1,104,138	...	...	...
Clifton	2,572,635	114,539	128,442	1,691,442	3,985	634,227	426	1	...	5,732	1,182	372	573,433	51,858	625,291	...	...	...	...	...
Condamine	1,557,285	42,805	47,146	1,464,314	3,020	...	194	1	...	4,786	1,960	231	722,275	20,475	742,750	...	...	...	...	...
Dalby	8,563,955	229,615	216,222	6,924,370	37,732	1,156,016	774	2	...	19,876	8,372	296	3,058,541	98,039	3,156,580	1,215,092	1,215,092	...	...	...
Goombungee	1,457,353	26,870	16,195	975,848	730	455,710	141	1	...	3,341	667	364	1,072,532	13,450	1,086,012	267,808	267,808	...	...	...
Goondiwindi	562,791	19,586	23,810	311,507	7,888	200,000	83	1	...	1,315	438	321	200,983	9,900	210,883	215,189	215,189	...	...	...
Highfields	1,921,407	59,305	61,303	1,432,010	7,888	368,789	238	...	...	2,464	785	354	...	29,414	29,414	255,300	255,300	...	...	...
Inglewood	618,300	22,941	25,842	521,565	3,285	44,667	96	...	...	2,023	683	228	...	11,240	11,240	301,535	301,535	...	...	...
Jondaryan	704,524	10,796	19,497	319,853	...	354,378	57	...	...	1,434	231	424	...	5,398	5,398	856,361	856,361	...	...	...
Killarney	1,428,286	102,500	60,895	1,247,541	2,895	14,515	217	...	...	3,127	739	308	862,558	38,645	901,203	...	...	...	...	...
Oakey	7,240,310	129,533	124,859	4,238,525	14,505	2,610,695	595	1	...	15,689	2,909	389	2,250,246	55,382	2,305,628	2,812,899	2,812,899	...	...	...
Pittsworth	5,849,471	67,478	180,049	1,310,000	13,570	3,926,218	550	...	...	12,112	2,404	403	...	27,952	27,952	3,794,895	3,794,895	...	...	...
Stanthorpe	175,730	82,266	69,304	15,730	8,430	...	422	...	...	698	298	183	...	35,450	35,450	...	...	...	...	...
Texas	411,307	14,247	12,892	384,168	215,070	1,601,938	55	...	...	1,210	552	233	...	268,410	272,381	...	...	...	...	...
Toowoomba	3,553,253	70,716	147,739	830,510	687,282	816,276	463	...	...	6,129	1,330	476	2,934,798	29,938	2,964,736	1,411,680	1,411,680	...	...	...
Warwick	3,944,585	187,044	169,476	2,651,450	120,339	...	623	...	...	8,796	2,086	362	804,540	86,845	891,385	840,898	840,898	...	...	...
Total Downs	42,841,608	1,194,181	1,377,978	26,086,357	432,723	12,588,097	5,213	12	61	95,431	25,717	354	14,584,612	524,877	15,109,489	13,075,795	13,075,795	...	...	...
Other Districts	1,378,973	382,190	482,481	135,970	372,193	6,140	1,540	1	...	7,702	6,692	96	60,135	113,410	173,545	...	...	...	...	...
Grand Total, 1925	61,656,888	5,758,443	5,998,220	131,915,172	6,048,409	13,482,674	22,581	50	73	463,436	147,990	271	65,222,127	2,509,308	67,731,435	13,965,168	13,965,168	15,370	15,370	13,980,538	
"	143,947,412	5,893,231	6,009,269	112,404,026	5,855,333	10,818,674	22,599	50	71	433,531	151,355	246	55,697,300	2,490,654	58,187,954	11,088,723	11,088,723	5,163	5,163	11,093,886	
Increase, 1925	21,708,976	139,788	11,049	19,511,146	193,056	2,664,000	...	...	2	29,905	...	25	9,524,327	18,654	9,543,481	2,876,445	2,876,445	10,207	10,207	2,886,652
Decrease, 1925	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

(a) 2,668,524 gallons of this were sent from the Moreton Division to New South Wales. (b) 1,771,265 gallons of this were sent from the Moreton Division to New South Wales.

Table No. LXX.

RETURN SHOWING THE TOTAL EXTENT OF LAND CULTIVATED FOR HAY, TOGETHER WITH THE YIELD OF HAY, IN EACH OF THE SEVERAL PETTY SESSIONS DISTRICTS OF THE STATE AND THE AVERAGE YIELD PER ACRE DURING THE YEAR 1925.

PETTY SESSIONS DISTRICTS.	HAY.										
	Wheat.		Oats.		Lucerne.		Other.		Total.		
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.	
Allora	421	344	...	...	2,385	2,433	17	25	2,823	2,802
Beaudesert	1	1	40	83	1,255	5,087	71	165	1,367	5,336	
Clifton	1,714	923	28	16	3,388	2,493	197	94	5,327	3,526	
Crow's Nest	5	7	27	33	880	1,658	36	68	948	1,766	
Dalby	880	867	177	173	81	93	259	506	1,397	1,639	
Dugandan	50	87	80	74	3,111	8,379	179	275	3,420	8,815	
Esk	...	...	88	168	1,823	4,360	106	179	2,017	4,707
Gatton	1,027	1,321	145	145	3,732	5,822	189	321	5,093	7,609	
Harrisville	234	363	248	258	3,147	5,928	523	777	4,152	7,326	
Killarney	338	370	31	23	2,343	3,963	28	26	2,740	4,382	
Laidley	539	656	32	45	3,545	5,593	171	222	4,287	6,516	
Nanango	36	28	124	91	2,656	4,345	44	76	2,860	4,540	
Oakey	530	368	51	34	2,071	1,591	191	221	2,843	2,214	
Pittsworth	1,332	1,029	22	24	1,510	1,167	236	260	3,100	2,480	
Rosewood	13	20	52	104	863	1,782	159	258	1,087	2,164	
Toowoomba	604	420	331	290	3,275	3,298	76	142	4,286	4,150	
Warwick	1,179	764	170	141	6,433	7,704	84	49	7,866	8,658	
Wienholt	39	46	105	96	2,188	5,637	28	52	2,360	5,831	
All other Districts	1,572	1,426	463	600	5,840	11,528	980	1,727	8,855	15,281	
Grand Total	{ 1925	10,514	9,040	2,214	2,398	50,526	82,861	3,574	5,443	66,828	99,742
	{ 1924	9,457	9,851	8,304	10,457	61,089	94,275	16,157	22,221	95,007	136,804
Increase, 1925	...	1,057
Decrease, 1925	811	6,090	8,059	10,563	11,414	12,583	16,778	28,179	37,062
Average Yield per Acre	...	0.86	...	1.08	...	1.64	...	1.52	...	1.49	...

Table No. LXXI.

RETURN SHOWING THE TOTAL EXTENT OF LAND CULTIVATED FOR GREEN CROPS IN EACH OF THE SEVERAL PETTY SESSIONS DISTRICTS OF THE STATE DURING THE YEAR 1925.

PETTY SESSIONS DISTRICTS.	GREEN CROPS.					
	Wheat.	Oats.	Lucerne.	Other.	Total of all Kinds.	
	Acres.	Acres.	Acres.	Acres.	Acres.	
Allora	5,097	665	4,070	2,874	12,706	
Beaudesert	168	1,102	1,230	935	3,435	
Brisbane (A)	145	166	148	1,487	1,946	
Clifton	15,146	1,314	6,764	4,636	27,860	
Crow's Nest	201	2,238	51	891	3,381	
Dalby	6,446	1,012	84	2,305	9,847	
Dugandan	77	1,461	336	1,524	3,398	
Esk	141	1,339	469	2,276	4,225	
Gatton	1,068	913	398	3,477	5,856	
Gayndah	125	602	25	2,144	2,896	
Goombungee	1,800	1,478	487	1,934	5,699	
Goondiwindi	2,258	46	...	43	2,347	
Gympie	128	622	79	886	1,715	
Harrisville	127	1,549	180	936	2,792	
Helidon	297	451	103	1,474	2,325	
Highfields	501	1,878	1,200	1,727	5,306	
Inglewood	1,913	175	427	583	3,058	
Jondaryan	1,430	371	24	1,097	2,922	
Killarney	1,034	377	931	1,543	3,885	
Laidley	630	197	124	1,570	2,521	
Lowood	143	449	271	1,554	2,417	
Marburg	113	527	379	2,598	3,617	
Nanango	931	6,703	731	4,266	12,631	
Oakey	9,571	6,376	1,596	7,617	25,160	
Pittsworth	15,289	3,086	5,036	7,271	30,682	
Redcliffe	107	107	101	1,250	1,565	
Roma	6,978	38	37	42	7,095	
Rosewood	191	966	1,152	1,842	4,151	
Toowoomba	3,683	2,711	3,157	2,091	11,642	
Warwick	4,991	1,047	2,755	4,055	12,848	
Wienholt	641	3,697	980	5,387	10,705	
All other Districts	2,252	2,497	1,566	10,494	16,809	
Grand Total	{ 1925	83,622	46,160	34,891	82,809	247,482
	{ 1924	16,711	29,519	25,316	62,563	134,109
Increase, 1925	...	66,911	16,641	9,575	20,246	113,373
Decrease, 1925

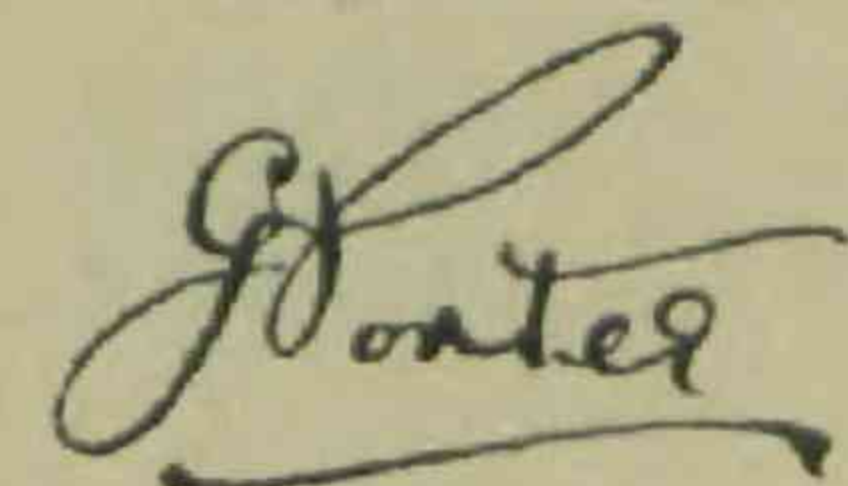
Table No. LXXII.
RETURN SHOWING AVERAGE YIELD PER ACRE OF CROPS IN EACH DIVISION OF THE STATE FOR THE YEAR 1925

DIVISION.	GRAIN CROPS.										POTATOES.		Sugar-cane (to Acres Crushed)	Cotton.	Arrow-root (Tuber).	Tobacco (Dried Leaf).	Coffee.	Pumpkins and Melons.	Hay of all Kinds.	Grapes.	Bananas.	Pine-apples.	Oranges.
	Wheat.	Oats.	Barley, Maltng.	Barley, Other.	Maize.	Eye.	Rice.	English.	Sweet.	Tons.	Tons.	Tons.												Lb.	Tons.	Lb.	Bunches.	Dozen.	Bushels.
Moreton	14.25	19.78	11.30	21.05	22.02	20.00	...	1.34	4.33	19.98	6.53	14.07	1.085	555	2.82	1.98	2,063	257	278	117	...		
Wide Bay	11.83	14.04	11.82	8.29	23.46	...	...	1.52	6.74	16.82	4.64	8.50	...	200	2.50	2.10	2,036	247	373	90	...
Port Curtis	12.89	...	...	...	18.99	...	...	2.37	2.96	22.41	4.79	9.50	...	...	2.33	1.88	2,983	189	166	126	...
Edgecumbe	...	...	...	...	24.27	...	...	2.05	3.20	18.80	5.30	...	658	...	1.63	2.74	2,911	145	123	84	...
Rockingham	...	...	...	...	27.55	...	...	1.78	3.03	...	3.23	5.00	...	...	4.02	1.80	2,686	189	131	178	...
York Peninsula	...	...	...	...	28.27	...	...	1.00	2.08	21.04	1.80	...	...	...	5.68	...	...	89	141	83	...
Carpentaria	...	...	...	...	16.81	...	...	...	...	...	3.27	...	...	...	3.89	...	...	...	...	155	...
Central-western	
South-western	
Central	30.00	...	...	...	23.55	...	...	...	2.00	...	3.62	...	...	...	1.50	0.76	3,157	...	...	102	...
Maranoa	6.33	4.25	...	...	13.73	...	...	2.71	...	...	5.07	...	...	...	1.77	1.25	1,381	...	...	92	...
Downs	12.15	11.04	13.59	11.86	18.74	24.13	...	0.42	...	...	3.67	...	...	...	7.25	0.77	1,889	...	...	51	...
TOTAL AVERAGE YIELD, 1925	11.89	11.25	13.57	11.87	21.94	23.65	11.67	1.47	4.31	19.36	4.88	13.81	1.078	519	2.80	1.49	2,486	245	268	109	...		
" " 1924	14.70	15.94	20.36	17.19	31.99	36.60	...	2.14	4.14	18.92	3.27	11.46	818	440	3.75	1.44	2,343	183	262	101	...		
INCREASE, 1925	...	...	...	...	...	...	...	...	0.17	0.44	1.61	2.35	261	79	...	0.05	143	62	4	8	...
DECREASE, 1925	2.81	4.69	6.79	5.32	10.05	12.95	...	0.67	...	...	...	...	...	...	0.85	...	...	...	...	...	...

Table No. LXXIII.

RETURN SHOWING THE AREA, YIELD, AND VALUE OF CROPS FOR THE YEAR 1925.

Description of Crop.		Area.	Yield.	Value.	
		Acres.		£	
Cereals	Barley { Malting	5,496	74,575 bushels	15,536	
	Barley { Other	1,505	17,866 "	3,573	
	Maize	154,252	3,384,172 "	676,834	
	Oats	1,293	14,546 "	2,727	
	Rye	26	615 "	231	
	Wheat	165,999	1,973,477 "	534,483	
Grass Seed	Other Cereals—Rice	3	35 "	10	
Green Forage (all kinds)		584	5,304 "	2,564	
Hay	Lucerne	247,482		1,484,892	
	Oaten	50,526	82,861 tons	559,312	
	Wheaten	2,214	2,398 "	17,815	
	Other	10,514	9,040 "	48,288	
Straw	Other	3,574	5,443 "	27,215	
	Oaten		91 "	413	
	Wheaten		1,592 "	7,217	
Pulse	Other		83 "	376	
	Beans	9	602 bushels	677	
Root Crops	Peas	14	181 "	136	
	Cassava	12			
	Arrowroot (Tubers)	568	7,842 tons	23,526	
	Garlic	1	960 lb.	28	
	Mangolds	89	596 tons	1,788	
	Onions	456	24,881 cwt.	22,362	
	Potatoes	10,478	15,386 tons	220,597	
	" Sweet	1,564	6,742 "	29,665	
	Turnips (including Swede Turnips)	49	307 "	1,443	
	Beetroot	2	2,200 dozen	183	
Grapes, Productive	Carrots	3	11 tons	543	
	For table use	1,166	2,231,729 lb.	72,464	
	For wine		666,817 "		
" Unproductive					
Sugar-cane, Productive	For drying purposes	490			
" Unproductive		189,675	3,668,252 tons	6,354,625	
Tobacco		79,834			
Market Gardens		96	103,523 lb.	8,736	
Orchards and Fruit Gardens		1,017		41,212	
	Apples	2,520	130,369 bushels	70,888	
	Apricots	67	2,771 "	1,362	
	Bananas	10,553	2,582,734 bunches	753,312	
	Cherries	6	126 bushels	126	
	Custard Apples	215	19,819 "	11,644	
	Figs	13	1,795 "	987	
	Gooseberries (Cape)	8	4,760 quarts	188	
	Lemons	184	21,568 bushels	4,853	
	Limes	1	50 "	10	
	Mangoes	260	39,636 "	20,148	
	Nectarines	126	5,777 "	2,889	
	Oranges	2,585	281,862 "	116,268	
	Passion Fruit	63	3,167 "	3,510	
	Pawpaws	243	55,127 dozen	13,322	
	Peaches	1,488	97,908 bushels	58,745	
	Pears	175	11,313 "	9,428	
	Persimmons	8	945 "	366	
	Pineapples	3,368	902,636 dozen	300,879	
	Plums	872	45,394 bushels	36,315	
	Quinces	29	562 "	295	
	Rosellas	1	655 "	161	
	Strawberries	111	129,612 quarts	23,402	
	Other (Gardens and Orchards)	945		25,206	
	Other Crops	Unproductive	8,981		
		Broom Millet	237	89,095 lb. straw	1,599
		Cabbages and Cauliflowers	1,229	251,101 dozen	120,319
Canary Seed		3,291	518,390 lb.	9,390	
Cocoanuts		698	23,400 dozen	4,095	
Coffee		10	5,192 lb.	195	
" Unproductive		2			
Cotton, Unginned		40,062	19,537,274 "	379,331	
" Unproductive		13,301			
Cowpea		133	1,310 bushels	819	
Cucumbers		256	134,303 dozen	12,870	
Green Beans		639	51,421 bushels	24,639	
Green Peas		471	32,547 "	19,189	
India Rubber		3			
Lucerne Seed		127	8,928 lb.	781	
Millet Seed		15	544 bushels	437	
Peanuts		815	411,164 lb.	8,566	
Pumpkins and Melons		8,232	23,030 tons	189,038	
Chillies		1	59 bushels	9	
Tomatoes		2,417	236,701 "	141,034	
Marrows	10	41 tons	419		
Chocos	1	1,380 dozen	98		
Linseed	2	360 lb.	6		
Total under Crop		1,033,765		12,526,609	
Land in fallow		74,416			
Area under permanent artificially sown grasses		532,052			
New ground broken up during season		10,382			
Previously cropped land lying idle during season		122,555			
Total area of arable land		1,773,170			



Registrar-General.

REPORT OF THE REGISTRAR-GENERAL ON LIVE STOCK FOR THE YEAR 1925.

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Disposal of—		
The Cattle Depastured on 31st December, 1925, were		6,436,645
Add those dealt with as per Table XIII., page 8		1,178,449
		7,615,094
On 31st December, 1924, the Cattle Depastured were		6,454,653
A difference (over 17.98 per cent increase) of		1,160,441
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REPORT OF THE REGISTRAR-GENERAL ON LIVE STOCK FOR THE YEAR 1925.

Table No. I.

RETURN SHOWING THE NUMBER OF LIVE STOCK IN THE STATE FOR TWO YEARS, AND THE INCREASE OR DECREASE FOR THE YEAR 1925.

Year.	Horses.	Cattle.	Sheep.	Swine.
1924	660,093	6,454,653	19,028,252	156,163
1925	638,372	6,436,645	20,663,323	199,598
Numerical Increase in 1925 ... ..	...	...	1,635,071	43,435
Numerical Decrease in 1925	21,721	18,008	...	...
Centesimal Increase in 1925 ... ..	...	...	8.59	27.81
Centesimal Decrease in 1925	3.29	0.28	...	...

Table No. II.

RETURN FOR TEN YEARS SHOWING THE NUMBER OF HORSES, CATTLE, SHEEP, AND SWINE IN THE STATE.

Year.	Horses.	Cattle.	Sheep.	Swine.
1916	697,517	4,765,657	15,524,293	129,733
1917	733,014	5,316,558	17,204,268	172,699
1918	759,726	5,786,744	18,220,985	140,966
1919	731,705	5,940,433	17,379,332	99,593
1920	742,217	6,455,067	17,404,840	104,370
1921	747,543	7,047,370	18,402,309	145,083
1922	714,055	6,955,463	17,641,071	160,617
1923	661,593	6,396,514	16,756,101	132,243
1924	660,093	6,454,653	19,028,252	156,163
1925	638,372	6,436,645	20,663,323	199,598

Table No. III.

RETURN FOR TEN YEARS SHOWING THE CENTESIMAL INCREASE OR DECREASE IN LIVE STOCK.

Year.	Horses.	Cattle.	Sheep.	Swine.
1916	— 1.55	— 0.32	— 2.67	10.14
1917	5.09	11.56	10.82	33.12
1918	3.64	8.84	5.91	— 18.37
1919	— 3.69	2.66	— 4.62	— 29.35
1920	1.44	8.66	0.15	4.80
1921	0.72	9.18	— 5.73	39.01
1922	— 4.48	— 1.30	— 4.14	10.71
1923	— 7.35	— 8.04	— 5.02	— 17.67
1924	— 0.23	0.91	13.56	18.09
1925	— 3.29	— 0.28	8.59	27.81

— Decrease.

Table No. IV.

RETURN SHOWING THE DENSITY AND THE PROPORTION OF THE VARIOUS KINDS OF LIVE STOCK IN THE SEVERAL PASTORAL DISTRICTS AND THE NUMBER PER CAPITA IN THE STATE FOR THE YEAR 1925.

In Converting Horses and Cattle to Terms of Sheep, Ten Head of Sheep are Taken as Equal to One Horse or Head of Cattle.

Pastoral District.	Area in Acres.	Centesimal Ratio of Area of District to Area State.	HORSES.			CATTLE.			SHEEP.			ALL KINDS IN TERMS OF SHEEP.		
			Acres per Head.	Number per Square Mile.	Percentage to Total in State.	Acres per Head.	Number per Square Mile.	Percentage to Total in State.	Acres per Head.	Number per Square Mile.	Percentage to Total in State.	Acres per Head.	Number per Square Mile.	Percentage to Total in State.
Burke ...	65,383,040	15.24	1,218	0.53	8.41	79	8.08	12.83	22	28.67	14.17	5.58	114.76	12.83
Barnett ...	7,972,480	1.86	203	3.15	6.15	17	37.49	7.25	1,515	0.42	0.03	1.57	406.88	5.55
Cook ...	63,601,920	14.82	1,296	0.49	7.69	121	5.31	8.20	235,563	0.063	0.001	11.03	58.03	6.31
Darling Downs ...	16,249,600	3.79	224	2.86	11.37	35	18.45	7.28	9	73.34	9.01	2.23	286.40	7.95
Groory North ...	54,266,240	12.64	2,196	0.29	3.87	183	3.51	4.62	28	23.16	9.50	10.47	61.14	5.67
Groory South ...	31,617,920	7.37	3,095	0.21	1.60	179	3.57	2.74	110	5.79	1.39	14.70	43.54	2.35
Leichhardt ...	30,946,560	7.21	644	0.99	7.53	41	15.75	11.83	32	20.25	4.74	3.41	187.71	9.93
Manaroa ...	25,110,400	5.85	858	0.75	4.58	92	6.96	4.24	9	70.99	13.48	4.32	148.08	6.36
Mitchell ...	35,431,680	8.26	859	0.75	6.46	181	3.54	3.05	5	120.96	32.41	3.91	163.83	9.92
Moneton ...	5,649,920	1.32	8	7.42	10.26	11	56.94	7.81	224	2.86	0.12	0.99	646.40	6.24
North Kennedy ...	21,832,960	5.09	310	2.07	11.04	43	14.75	7.82	4,822	0.13	0.02	3.80	168.32	6.28
Port Curtis ...	8,994,560	2.09	230	2.78	6.12	20	31.96	6.98	328	1.95	0.13	1.83	349.40	5.37
South Kennedy ...	19,523,960	4.55	514	1.24	5.95	45	14.17	6.72	126	5.07	0.75	4.02	159.19	5.31
Warrego ...	37,333,760	8.70	1,539	0.42	3.80	158	4.06	3.67	13	50.37	14.219	6.73	95.09	6.07
Wide Bay ...	5,200,000	1.21	158	4.06	5.17	16	39.27	4.96	903	0.71	0.03	1.47	434.09	3.86
STATE ...	429,120,000	100.00	672	0.95	100.00	67	9.60	100.00	21	30.82	100.00	4.69	136.34	100.00
Number per Capita Population ...			0.74			7.47			23.99			106.15		

Table No. V.

The following table shows, from the latest information available, the live stock density in various countries:—

	Live Stock in Terms of Sheep per Square Mile.
Queensland ...	136
New South Wales ...	244
Victoria ...	381
Argentina ...	420
Germany ...	1,192
Union of South Africa ...	309
United Kingdom ...	940
United States of America ...	303

Table No. VI.

RETURN SHOWING NUMBER AND PROPORTION OF HORSES, CATTLE, SHEEP, AND SWINE IN THE SOUTHERN, CENTRAL, AND NORTHERN DIVISIONS OF THE STATE FOR THE YEAR 1925.

Division.	Horses.		Cattle.		Sheep.		Swine.	
	No.	%	No.	%	No.	%	No.	%
Southern Division ...	281,29	44.06	2,580,216	40.09	7,930,357	38.38	173,948	87.15
Central Division ...	153,725	24.08	1,777,503	27.61	9,757,837	47.22	10,651	5.34
Northern Division ...	203,357	31.86	2,078,926	32.30	2,975,129	14.40	14,999	7.51
Total State ...	638,372	100.00	6,436,645	100.00	20,663,323	100.00	199,598	100.00

Table No. VII.

RETURN SHOWING NUMBER OF HORSES, CATTLE, AND SHEEP PER SQUARE MILE AND PER CAPITA OF POPULATION IN THE SOUTHERN, CENTRAL, AND NORTHERN DIVISIONS OF THE STATE FOR THE YEAR 1925.

Division.	Area in sq. miles.	Population.	HORSES.		CATTLE.		SHEEP.		ALL KINDS IN TERMS OF SHEEP.	
			Per Sq. Mile.	Per Capita of Population.	Per Sq. Mile.	Per Capita of Population.	Per Sq. Mile.	Per Capita of Population.	Per Sq. Mile.	Per Capita of Population.
Southern Division ...	209,980	612,565	1.34	0.46	12.29	4.21	37.77	12.95	174.04	59.66
Central Division ...	209,340	101,111	0.73	1.52	8.49	17.58	46.61	96.51	138.87	287.51
Northern Division ...	251,180	147,509	0.81	1.38	8.28	14.09	11.84	20.17	102.71	174.89

* Estimated 31st December, 1925.

Table No. VIII.

RETURN SHOWING THE NUMBER OF HORSES IMPORTED AND EXPORTED INTO AND FROM THE STATE FOR THE YEAR 1925.

HORSES IMPORTED DURING 1925.					HORSES EXPORTED DURING 1925.				
Country.	Number.		Value.		Country.	Number.		Value.	
<i>Oversea—</i>			£	£	<i>Oversea—</i>			£	£
United Kingdom ...	1	...	275	275	British Malaya ...	20	...	341	
		1			British Solomon Is.	3	...	40	
					India ...	3,318	...	46,880	
					Papua ...	6	...	78	
					Netherlands, East Indies ...	60	...	900	
						3,407		48,239	
<i>Interstate (by land)—</i>					<i>Interstate (by land)—</i>				
New South Wales...	24,993	...	127,848		New South Wales ...	17,430	...	84,870	
South Australia ...	382	...	1,360		South Australia ...	602	...	2,358	
		25,375		129,203		18,032		87,228	
Totals ...		25,376		129,483	Totals ...		21,439		135,467

Table No. IX.

RETURN FOR TEN YEARS SHOWING THE NUMBER OF ENTIRE AND OTHER HORSES.

Year.	Entire Horses.	Other Horses.	Total.
1916 ...	7,861	689,656	697,517
1917 ...	7,762	725,252	733,014
1918 ...	7,664	752,062	759,726
1919 ...	6,616	725,089	731,705
1920 ...	6,402	735,815	742,217
1921 ...	6,164	741,379	747,543
1922 ...	4,930	709,125	714,055
1923 ...	4,728	656,865	661,593
1924 ...	3,717	656,376	660,093
1925 ...	2,827	635,545	638,372

Table No. X.

RETURN FOR TEN YEARS SHOWING THE NUMBER OF OWNERS AND THE SIZES OF HERDS UNDER VARIOUS GROUPINGS, ALSO THE INCREASE OR DECREASE FOR THE YEAR 1925.

For Details of Sizes of Herds of Cattle in Pastoral Districts, for the Year 1925, see Table No. XXXIII.

Year.	1 to 100.		101 to 300.		301 to 500.		501 to 1,000.	
	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.
1916 ..	35,333	823,380	2,682	453,737	1,010	551,215	*	*
1917 ..	35,374	912,023	3,346	560,165	1,145	609,884	*	*
1918 ..	36,724	987,136	3,836	642,188	1,356	736,084	*	*
1919 ..	37,276	1,018,273	4,039	682,548	1,411	762,010	*	*
1920 ..	39,203	1,107,774	4,431	741,056	1,682	888,702	*	*
1921 ..	41,009	1,178,980	4,846	817,130	1,859	976,696	*	*
1922 ..	41,040	1,177,859	4,663	786,218	1,010	395,291	777	552,765
1923 ..	40,616	1,085,453	3,887	653,056	907	355,714	695	491,764
1924 ..	39,921	1,093,972	3,902	653,778	897	348,761	742	526,408
1925 ..	39,341	1,096,618	4,151	694,989	916	355,795	715	506,630

Year.	1,001 to 5,000.		5,001 to 10,000.		10,001 and Upwards.		Totals.		Average Size of Herds.
	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.	
1916 ..	702	2,937,325	†	†	†	†	39,727	4,765,657	120
1917 ..	799	3,234,486	†	†	†	†	40,664	5,316,558	131
1918 ..	819	3,421,336	†	†	†	†	42,735	5,786,744	135
1919 ..	850	3,477,602	†	†	†	†	43,576	5,910,433	136
1920 ..	916	3,717,535	†	†	†	†	46,232	6,455,067	140
1921 ..	1,005	4,074,564	†	†	†	†	48,719	7,047,370	145
1922 ..	814	1,731,341	118	817,350	90	1,494,639	48,512	6,955,463	143
1923 ..	743	1,581,675	120	846,622	80	1,382,230	47,048	6,396,514	136
1924 ..	747	1,588,186	131	898,451	76	1,345,097	46,416	6,454,663	139
1925 ..	751	1,563,877	136	921,985	73	1,296,751	46,083	6,436,645	140

Increase or Decrease —

— 0.72 — 0.28 0.72

* Included in group 301 to 500.

† Included in group 1,001 to 5,000.

Table No. XI.

RETURN FOR TEN YEARS SHOWING THE NUMBER OF OWNERS AND THE SIZES OF FLOCKS UNDER VARIOUS GROUPINGS; ALSO THE INCREASE OR DECREASE FOR THE YEAR 1925.

For Details of Sizes of Flocks of Sheep in Pastoral Districts for the Year 1925 see Table No. XXXV.

Year.	1 to 500.		501 to 1,000.		1,001 to 2,000.		2,001 to 5,000.		5,001 to 10,000.	
	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.
1916 ..	2,029	202,338	401	301,962	400	604,779	488	1,652,135	301	2,131,248
1917 ..	2,027	195,715	366	276,307	421	641,865	477	1,602,552	317	2,333,037
1918 ..	1,966	196,634	354	274,564	419	646,788	519	1,761,902	327	2,385,750
1919 ..	2,047	204,255	361	279,882	395	608,537	570	1,912,488	341	2,435,229
1920 ..	1,934	199,542	371	251,689	390	574,129	571	1,825,882	358	2,554,884
1921 ..	1,965	179,974	305	232,192	408	612,923	558	1,861,362	426	3,036,394
1922 ..	1,800	180,315	290	219,303	402	606,742	606	2,047,236	445	3,168,890
1923 ..	1,675	174,917	311	236,598	426	644,570	686	2,321,322	432	3,033,207
1924 ..	1,614	186,342	345	261,812	464	685,075	716	2,434,612	481	3,385,487
1925 ..	1,760	225,800	382	290,070	521	788,722	805	2,701,654	525	3,686,331

Year.	10,001 to 20,000.		20,001 to 50,000.		50,001 to 100,000.		100,001 and Upwards.		Totals.		Average Size of Flocks.
	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	
1916 ..	183	2,631,461	134	3,985,965	43	2,942,167	9	1,072,238	3,986	15,524,293	3,895
1917 ..	199	2,903,333	139	4,350,015	50	3,405,007	12	1,496,437	4,008	17,204,268	4,292
1918 ..	237	3,402,384	148	4,689,314	49	3,440,722	11	1,422,927	4,030	18,220,985	4,521
1919 ..	224	3,207,602	139	4,493,626	43	3,004,086	10	1,233,627	4,130	17,379,332	4,208
1920 ..	198	2,841,774	159	4,884,224	46	3,215,847	9	1,056,869	4,036	17,404,840	4,312
1921 ..	211	2,984,081	157	4,770,684	47	3,192,221	13	1,532,568	4,090	18,402,399	4,499
1922 ..	210	2,968,342	149	4,414,776	41	2,826,021	10	1,209,446	3,953	17,641,071	4,463
1923 ..	228	3,166,296	117	3,617,743	43	2,974,156	5	587,292	3,923	16,756,101	4,271
1924 ..	227	3,145,912	162	4,995,505	42	2,943,945	8	989,562	4,059	19,028,252	4,688
1925 ..	286	3,931,942	151	4,707,128	48	3,304,523	9	1,027,153	4,487	20,663,323	4,605

Increase or Decrease —	10.54	8.59	- 1.77
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Table No. XII.

RETURN FOR TEN YEARS SHOWING THE RESULTS OF LAMBING, LOSSES, ETC., IN THE STATE.

For Details for the Year 1925 see Table No. XLII.

	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.
Total Sheep as per Stock Returns on 1st January	15,950,154	15,524,293	17,204,268	18,220,985	17,379,332	17,404,840	18,402,399	17,641,071	16,756,101	19,028,252
Ewes mated with Rams	6,817,835	6,545,209	7,587,417	7,056,171	7,405,279	7,762,276	7,574,309	7,225,507	8,481,332	8,772,276
Lambs Marked	3,021,730	4,067,937	4,638,680	2,564,548	3,729,026	4,711,185	3,420,400	3,052,893	4,833,145	4,638,376
Percentage of Lambing	44.32	62.15	53.23	36.34	50.35	60.69	45.16	42.25	58.99	52.83
Purchases	4,097,536	2,577,416	3,086,904	3,557,278	3,826,035	3,283,849	3,115,912	3,904,803	5,143,617	4,173,815
Sales	4,894,003	3,586,183	3,584,631	4,274,969	5,321,673	5,325,881	4,521,108	5,053,173	5,646,885	4,793,725
Total Losses	2,403,983	1,185,042	2,280,379	2,421,744	1,932,332	1,436,443	2,543,675	2,577,987	1,877,428	2,167,262
Killed for Food on Holding	247,141	191,203	243,857	266,826	245,518	235,151	232,866	211,506	180,208	186,133
Total Sheep as per Stock Returns on 31st December	15,524,293	17,204,268	18,220,985	17,579,332	17,404,840	18,402,399	17,641,071	16,756,101	19,028,252	20,663,323
Skins obtained during the Year	277,206	192,323	243,053	277,690	262,231	232,935	216,969	214,389	*182,755	†180,852

* Estimated, † Year ended 30th June.

Table No. XIII.

RETURN FOR TWO YEARS SHOWING THE NUMBER OF CATTLE, ETC., EXPORTED AND KILLED.

	CATTLE AND CALVES.		SHEEP AND LAMBS.	
	1924.	1925.	1924.	1925.
Exported, less number imported alive Oversea	483	49	25	13
" " " " Overland	128,262	219,969	419,566	322,442
Preserved, frozen, and boiled down	388,950	575,645	34,672	62,033
Number killed for food for home consumption	*324,846	382,786	*445,717	600,535
Totals	842,541	1,178,449	899,980	985,023

N.B.—This Table does not include Interstate Traffic by sea in live animals; this is unascertainable, but insignificant in number.

* Estimated.

Table No. XIV.

RETURN FOR TEN YEARS SHOWING THE NUMBER OF CATTLE AND SHEEP IMPORTED INTO AND EXPORTED FROM THE STATE OVERLAND AND OVERSEA.

* Year.	CATTLE.		SHEEP.		
	Inwards.	Outwards.	Inwards.	Outwards.	
	Number.	Number.	Number.	Number.	
1916	{ Overland, Calendar year ...	47,765	69,096	172,955	420,791
	{ Oversea, Financial year ...	13	3	...	447
1917	{ Overland, Calendar year ...	36,729	97,552	73,185	476,778
	{ Overland, Financial year ...	40,651	83,867	68,445	589,185
	{ Oversea, Financial year ...	12	38	6	202
1918	{ Overland, Calendar year ...	55,048	101,995	205,763	476,255
	{ Overland, Financial year ...	21,862	112,358	134,341	405,263
	{ Oversea, Financial year ...	...	66	9	32
1919	{ Overland, Calendar year ...	58,618	91,874	396,731	409,982
	{ Overland, Financial year ...	83,146	63,518	437,932	382,717
	{ Oversea, Financial year ...	...	10	...	9
1920	{ Overland, Calendar year ...	51,202	351,475	280,406	1,493,206
	{ Overland, Financial year ...	38,694	152,469	328,604	684,723
	{ Oversea, Financial year ...	1	37	11	4
1921	{ Overland, Calendar year ...	57,111	300,862	74,459	1,566,245
	{ Overland, Financial year ...	50,761	429,507	96,079	1,927,428
	{ Oversea, Financial year ...	2	436	...	1,074
1922	{ Overland, Calendar year ...	30,939	158,966	273,518	922,246
	{ Overland, Financial year ...	67,497	230,409	196,234	1,325,195
	{ Oversea, Financial year ...	...	169	...	74
1923	{ Overland, Calendar year ...	31,090	215,790	332,480	725,144
	{ Overland, Financial year ...	26,042	133,134	339,532	565,756
	{ Oversea, Financial year ...	...	1,131	...	62
1924	{ Overland, Calendar year ...	67,681	195,943	222,489	642,055
	{ Overland, Financial year ...	61,747	256,093	231,325	912,849
	{ Oversea, Financial year ...	...	483	...	25
1925	{ Overland, Calendar year ...	23,353	243,322	283,795	606,237
	{ Overland, Financial year ...	29,431	194,608	242,674	461,161
	{ Oversea, Calendar year ...	4	53	...	13
	{ Oversea, Financial year ...	4	63	...	16

* Interstate Coastwise Traffic no longer available.

Table No. XV.

RETURN SHOWING THE NUMBER, &C., OF BACON-CURING AND MEAT-PRESERVING WORKS FOR THE YEAR ENDED 30TH JUNE, 1925, AND INCREASE OR DECREASE ON YEAR ENDED 31ST DECEMBER, 1923.

Kind of Establishment.	Number.	Number of Hands Employed.	Value of Machinery and Plant.	Value of Land and Premises.	Value of Output.
Bacon Curing	6	485	£ 76,623	£ 127,235	£ 1,092,502
Meat Preserving	13	3,886	896,935	1,510,966	5,472,268
Totals, 1924-25	19	4,371	973,558	1,638,201	6,564,770
Totals, 1923	17	3,007	828,008	1,530,485	3,349,700
Increase, 1924-25	2	1,364	145,550	107,716	3,215,070
Decrease, 1923 ... ..	...	...	...	...	...

N.B.—Prior to 1st July, 1924, particulars were collected for the calendar year.

Table No. XVI.

RETURN SHOWING NUMBER OF SWINE SLAUGHTERED AND THE PRODUCTS THEREOF IN THE SEVERAL PETTY SESSIONS DISTRICTS OF THE STATE FOR THE YEAR 1925.

Petty Sessions District.	Swine Slaughtered.	Fresh Pork.	Salt and Preserved Pork.	Bacon and Hams.
	Number.	Lb.	Lb.	Lb.
Atherton	5,249	138,396	1,835	276,533
Bowen	75	4,010	620	...
Brisbane*	152,974	566,586	555,745	7,929,053
Bundaberg	96	160	1,075	9,766
Clifton	130	410	10,116	6,908
Crow's Nest	134	70	650	19,070
Dalby	164	1,486	2,239	16,461
Gatton	178	2,880	19,769	5,043
Gayndah	119	3,271	9,600	450
Gladstone	127	2,564	3,190	10,126
Gympie	75	1,803	2,520	2,844
Harrisville	116	5,620	2,230	7,233
Ipswich	37	2,120	834	730
Killarney	96	1,510	1,400	8,285
Laidley	93	3,390	11,654	595
Logan	300	9,385	19,906	18,199
Lowood	152	19,209	2,755	7,730
Mackay	59	2,098	2,395	780
Marburg	83	3,690	200	11,053
Maryborough	6,354	757	2,722	437,690
Nanango	288	3,325	2,855	30,960
Oakey	213	15,021	14,902	1,515
Pittsworth	158	1,489	1,308	16,447
Rockhampton	180	7,193	3,396	5,994
Roma	83	2,490	190	4,940
Stanthorpe	91	1,849	3,445	5,100
Toowoomba	48,823	35,828	2,501	3,879,565
Warwick	4,639	25,139	6,275	343,590
Wienholt	244	2,742	19,654	8,734
All other Districts	2,857	113,757	51,661	86,469
Totals, 1925	224,187	978,248	757,592	13,151,863

N.B.—Returns received from Inspectors of Slaughter-houses for 1925 account for 59,505 swine killed, producing 4,908,074 lb. of fresh pork in addition to the above. In a few instances, it is possible that some of these have been also included in the returns from which this table is compiled, but to what extent it is impossible to determine.

* Including South Brisbane.

Table No. XVII.

WOOL.

RETURN FOR TEN YEARS SHOWING THE NUMBER OF SHEEP SHORN AND THE WOOL PRODUCED.

For details for the year ended 30th June, 1925, see Table No. XLI.

Production of Wool.	1915.	1916.	1917.	1918.	1919.
Number of sheep shorn	19,558,810	13,798,462	11,920,074	17,290,116	17,210,372
Result off Shears only, lb. net—					
Greasy wool	89,231,347	67,114,101	67,772,382	83,997,850	88,450,759
Scoured wool	17,671,445	14,717,559	7,310,368	12,475,776	12,476,486
Above expressed as "Greasy"	124,574,237	96,549,219	82,393,118	108,949,402	113,403,731
Average weight, lb.—					
Per Greasy bale	357	365	365	353	356
Per Scoured bale	219	238	239	235	226
Per Fleece in the Grease	6.37	7.00	6.91	6.30	6.59
Total wool production (Greasy), including quantity fell-mongered, exported on skins, and utilised, lb.	130,783,277	102,220,125	87,425,558	113,777,272	118,035,461
† Estimated value of production	£6,266,699	£6,601,716	£6,283,712	£8,296,259	£8,606,752

Production of Wool.	1920.	1921.	1922.	1923.	1924-5.
Number of sheep shorn	15,709,426	16,832,655	18,465,471	17,754,989	18,518,682
Result off Shears only, lb. net—					
Greasy wool	89,215,429	109,440,938	106,989,147	100,964,197	123,078,294
Scoured wool	10,648,967	9,031,961	11,030,559	8,112,704	7,099,421
Above expressed as "Greasy"	110,513,363	127,504,860	129,050,265	117,189,605	137,277,136
Average weight, lb.—					
Per Greasy bale	368	361	344	348	346
Per Scoured bale	235	243	229	228	238
Per Fleece in the Grease	7.03	7.57	6.99	6.60	7.41
Total wool production (Greasy), including quantity fell-mongered, exported on skins, and utilised, lb.	114,809,963	132,579,733	134,971,150	121,913,075	140,862,541
† Estimated value of production	£7,175,623	£7,733,818	£10,825,811	£12,191,308	£15,553,572

NOTE—In addition to the above, returns amounting to 36,523,190 lb. of greasy wool shorn were received for the first six months of 1924.

† Based on Oversea Export value (Financial Year).

Table No. XVIII.

RETURN FOR TEN YEARS SHOWING THE AVERAGE EXPORT PRICE OF WOOL. (OVERSEA ONLY).

Year ended 30th June.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.	1926.
Greasy wool ...	Per lb. 15½d.	Per lb. 17¼d.	Per lb. 17½d.	Per lb. 17½d.	Per lb. 15d.	Per lb. 14d.	Per lb. 19¼d.	Per lb. 24d.	Per lb. 26½d.	Per lb. 18d.
Scoured wool ...	28½d.	27d.	28d.	29¼d.	28¼d.	24¼d.	32½d.	42d.	46d.	30¾d.

Table No. XIX.

RETURN FOR TEN YEARS SHOWING THE QUANTITY AND VALUE OF WOOL EXPORTED Oversea.

Exports of Wool, Oversea Only.	GREASY.		SCOURED.	
	Quantity.	Value.	Quantity.	Value.
Year.	Lb. gross.	£	Lb. gross.	£
1916-1917	51,906,001	3,382,793	16,901,805	2,019,060
1917-1918	35,272,597	2,529,684	8,972,507	1,011,748
1918-1919	56,666,969	4,114,183	22,780,888	2,651,034
1919-1920	92,835,718	6,730,813	20,019,683	2,435,603
1920-1921	71,532,151	4,467,815	14,821,191	1,749,033
1921-1922	140,302,968	8,284,688	25,427,103	2,576,715
1922-1923	103,982,252	8,360,164	15,333,125	2,068,548
1923-1924	82,555,619	8,266,711	10,847,962	1,892,303
1924-1925	89,761,910	9,902,962	10,888,055	2,089,990
1925-1926	155,529,490	11,636,937	10,166,018	1,307,051

Table No. XX.

RETURN FOR TEN YEARS SHOWING THE AMOUNT OF SCOURED WOOL USED IN MANUFACTURE.

Quantity of Scoured Wool used in manufacture ...	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924-25.	1925-26.
	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
	241,600	223,695	262,393	122,814	268,787	875,610	659,133	629,784	544,269	454,075

Table No. XXI.

RETURN FOR TWO YEARS SHOWING THE EXPORT Oversea OF HOME PRODUCE.

Value of—	1923-24.		1924-25.	
	HOME PRODUCE ONLY.		HOME PRODUCE ONLY.	
	Total Exports.	Percentage to Total Exports.	Total Exports.	Percentage to Total Exports.
	Overseas £	Only.	Overseas £	Only.
Agricultural Products ...	1,761,280	12·10	6,396,149	26·23
*Pastoral „	12,160,384	83·53	17,608,533	72·21
Mineral „	345,688	2·37	190,651	0·79
Other „	291,047	2·00	188,398	0·77
Totals	£14,558,399	100·00	£24,383,731	100·00

* Exclusive of Furred Skins:—1923-24, £153,643; 1924-25, £12,754.

Table No. XXII.

RETURN FOR TWO YEARS SHOWING THE DETAILS OF PASTORAL PRODUCTS EXPORTED Oversea.

Value of—	1923-24.		1924-25.		Increase or —Decrease, 1924-25.
	HOME PRODUCE ONLY.		HOME PRODUCE ONLY.		
	Exports Oversea.	Exports Oversea.	Exports Oversea.	Exports Oversea.	
	£	£	£	£	
Pastoral Products—					
Wool	10,159,014	11,992,952	1,833,938		
Live stock	16,350	44,729	28,379		
*Meat (all kinds, including Extract)	1,267,709	4,118,708	2,850,999		
Tallow	229,001	598,048	369,047		
Hides and skins	418,091	660,148	242,057		
All other	70,219	193,948	123,729		
Totals	12,160,384	17,608,533	5,448,149		

* Exclusive of Bacon, Poultry, &c., these being treated as products of Agriculture.

Table No. XXIII.

RETURN FOR TEN YEARS SHOWING THE NUMBER OF COMMON GOATS IN THE STATE AND THE NUMBER KILLED FOR FOOD, &c.

	Number Depastured.	Number Killed.	Weight: Lb.	Average Weight: Lb.	Number of Skins Obtained.
1916	119,645	28,992	791,321	27·29	*
1917	129,173	27,700	731,591	26·41	*
1918	124,964	26,375	719,033	27·26	13,851
1919	122,088	26,903	698,874	25·98	16,133
1920	122,993	30,863	801,474	25·97	18,994
1921	134,177	25,080	689,587	27·49	11,630
1922	127,784	24,468	638,323	26·09	9,759
1923	119,832	23,134	596,621	25·79	10,200
1924	131,148	21,204	571,619	26·96	8,256
1925	126,752	25,141	717,087	28·52	11,305

* Not available.

Table No. XXIV.

RETURN FOR TEN YEARS SHOWING THE NUMBER OF ANGORA GOATS IN THE STATE AND THE NUMBER KILLED FOR FOOD, MOHAIR OBTAINED, &C.

Year.	Number of Animals.	Mohair Obtained.	Number Killed for Meat.	Average Weight: Lb.	Skins Obtained.
		Lb.			
1916	4,462	4,012	577	*	587
1917	3,774	3,144	526	*	441
1918	3,569	2,188	501	*	411
1919	3,682	2,181	528	*	477
1920	3,210	1,858	406	*	314
1921	4,248	2,895	625	*	517
1922	3,503	1,596	565	*	617
1923	3,931	2,204	860	31.49	625
1924	3,511	1,782	729	28.97	519
1925	3,923	1,604	554	28.52	520

* Not available.

Table No. XXV.

RETURN FOR TEN YEARS SHOWING THE NUMBER OF CAMELS, OSTRICHES, AND MULES IN THE STATE, TOGETHER WITH THE INCREASE AND DECREASE.

Year.	Number of Camels.	Increase or Decrease.	Number of Ostriches.	Increase or Decrease.	Number of Mules.	Increase or Decrease.
1916	829	— 3.04	18	— 25.00	1,009	15.58
1917	874	— 5.43	15	— 16.67	1,037	2.78
1918	660	— 24.49	3	— 80.00	1,094	5.50
1919	379	— 42.58	5	— 66.67	1,379	26.05
1920	740	— 95.25	2	— 60.00	1,175	— 14.79
1921	936	— 26.49	...	— 100.00	1,257	6.98
1922	463	— 50.53	...	...	985	— 21.64
1923	399	— 13.82	...	..	1,142	15.94
1924	362	— 9.27	...	...	1,031	— 9.72
1925	480	— 32.60	...	...	936	— 9.21

— Decrease.

Table No. XXVI.

RETURN FOR EIGHT YEARS SHOWING THE NUMBER OF CALVES RETURNED AS BRANDED AND THE INCREASE AND DECREASE. For details of 1925 see Table XXVIII.

Year.	Male.	Increase or Decrease.	Female.	Increase or Decrease.	Total.	Increase or Decrease.
1918	*592,720	...	*605,403	...	*1,198,123	...
1919	588,008	— 0.79	598,524	— 1.14	1,186,532	— 0.97
1920	674,523	14.71	690,876	15.43	1,365,399	15.07
1921	742,811	10.12	777,013	12.47	1,519,824	11.31
1922	586,171	— 21.09	631,170	— 18.77	1,217,341	— 19.90
1923	497,112	— 15.19	539,883	— 14.46	1,036,995	— 14.81
1924	508,342	2.26	554,145	2.64	1,062,487	2.46
1925	612,606	20.51	660,784	19.24	1,273,390	19.85

— Decrease.

* First Year collected.

Table No. XXVII.

RETURN OF THE NUMBER OF HORSES, CATTLE, SHEEP, AND SWINE IN THE VARIOUS PETTY SESSIONS DISTRICTS OF THE STATE, TOGETHER WITH THE INCREASE AND DECREASE OF CATTLE AND SHEEP ON THE 31ST DECEMBER, 1925.

Petty Sessions District.	HORSES. 1925.	CATTLE.				SHEEP.				SWINE. 1925.
		1924.	1925.	1925.		1924	1925	1925.		
				Increase.	Decrease.			Increase.	Decrease.	
Adavale	1,868	17,084	18,296	1,212	...	299,143	285,367	...	13,776	1
Allora	3,894	9,782	10,108	326	...	7,014	10,166	3,152	...	2,609
Alpha	5,514	102,833	94,784	...	8,049	61,396	100,230	38,834	...	72
Aramac	2,613	8,484	9,983	1,499	...	236,477	238,231	1,754	...	31
Atherton	6,929	41,442	42,150	708	...	122	114	...	8	6,619
Augathella	3,218	29,899	30,541	642	...	338,385	384,626	46,241	...	50
Ayr	9,491	33,471	33,729	258	...	49	123	74	...	843
Banana	2,841	64,810	70,986	6,176	...	110	108	...	2	78
Barcaldine	3,556	8,584	7,048	...	1,536	783,054	802,288	19,234	...	146
Beaudesert	4,336	59,796	64,249	4,453	...	9,439	7,253	...	2,186	8,695
Biggenden	3,553	43,686	41,878	...	1,808	683	616	...	67	2,665
Blackall	5,284	15,959	14,057	...	1,902	955,063	1,021,615	66,552	...	108
Bollon	3,668	63,754	44,641	...	19,113	476,648	560,666	84,018	...	12
Boulia	7,069	110,269	89,787	...	20,482	326,658	356,248	29,590	...	6
Bowen	6,058	26,084	26,599	515	...	...	...	...	...	411
Brisbane	7,135	18,610	18,832	222	...	1,292	2,045	753	...	2,759
Bundaberg	6,010	29,480	27,561	...	1,919	433	159	...	274	1,146
Burke	5,452	141,877	149,716	7,839	...	14,022	24,180	10,158	...	73
Caboorture	1,105	8,437	8,244	...	193	203	311	108	...	1,220
Cairns	4,713	6,434	6,354	...	80	26	28	2	...	153
Camooweal	4,417	91,367	90,634	...	733	...	...	...	...	20
Cape River	7,677	98,676	96,024	...	2,652	801	948	147	...	316
Cardwell	1,347	10,680	6,812	...	3,868	...	...	...	...	85
Charleville	6,775	66,711	60,176	...	6,535	704,900	807,745	102,845	...	248
Charters Towers	16,937	167,164	180,011	12,847	...	1,223	1,167	...	56	978
Childers	2,651	15,019	13,168	...	1,851	10	...	...	10	335
Chillagoe	6,286	41,116	42,311	1,195	...	...	...	...	...	150
Clermont	12,381	191,763	196,527	4,764	...	537,684	557,543	19,859	...	398
Cleveland	710	1,111	1,214	103	...	...	29	29	...	161
Clifton	6,604	13,606	13,606	...	...	20,369	24,928	4,559	...	3,438
Cloncurry	22,387	241,971	235,542	...	6,429	1,037,803	1,123,929	86,126	...	179
Coen	3,830	38,351	41,075	2,724	...	...	...	...	...	...
Collinsville	6,113	147,974	143,496	...	4,478	...	...	...	...	127
Condamine	3,259	39,332	42,880	3,548	...	7,142	7,267	125	...	1,207
Cook	3,308	35,214	35,810	596	...	...	...	...	...	283
Cooyar	1,496	11,009	12,261	1,252	...	299	4,117	3,818	...	1,703
Crow's Nest	2,842	19,176	21,538	2,362	...	78	101	23	...	5,621
Croydon	2,527	27,575	30,486	2,911	...	...	...	...	...	87
Cunnamulla	3,681	27,149	21,444	...	5,705	747,016	724,161	...	22,855	181
Dalby	13,285	117,588	130,249	12,661	...	300,776	398,824	98,048	...	6,390
Diamantina	2,896	70,354	71,952	1,598	...	...	...	...	...	...
Douglas	1,493	1,576	2,203	627	...	...	...	...	...	20
Dugandan	4,858	29,981	35,105	5,124	...	191	996	805	...	8,579
Eidsvold	5,924	77,295	77,256	...	39	470	316	...	154	807
Emerald	4,098	48,045	43,344	...	4,701	162,334	164,513	2,179	...	95
Esk	4,992	64,644	66,050	1,406	...	749	3,539	2,790	...	4,235
Etheridge	12,147	171,237	181,121	9,884	...	...	...	...	...	87
Eulo	1,320	18,453	20,139	1,686	...	55,033	66,489	11,456	...	3
Gatton	4,210	19,217	21,913	2,696	...	1,053	1,042	...	11	4,522
Gayndah	8,225	123,828	118,320	...	5,508	1,341	1,487	146	...	4,106
Gin Gin	4,542	55,056	56,445	389	...	3,462	2,092	...	1,370	483
Gladstone	15,228	208,077	213,639	5,562	...	3,415	4,604	1,189	...	3,238
Goodna	491	1,945	2,115	170	...	20	10	...	10	221
Goombungee	1,344	6,211	6,654	443	...	3,105	265	...	2,840	2,330
Goondiwindi	4,745	46,876	51,502	4,626	...	338,861	415,397	76,536	...	633
Gympie	7,076	103,886	101,645	...	2,241	1,226	1,260	34	...	12,099
Harrisville	2,987	16,199	18,944	2,745	...	318	1,093	775	...	4,141
Helidon	2,144	10,118	11,806	1,688	...	49	26	...	23	2,517
Herberton	7,116	53,104	53,846	742	...	450	519	69	...	320
Highfields	1,305	6,775	8,005	1,230	...	32	78	46	...	2,048
Hughenden	9,018	95,201	94,546	...	655	563,868	721,299	157,431	...	93
Hungerford	761	8,427	11,139	2,712	...	50,669	64,814	14,145	...	...
Ingham	9,128	31,240	29,940	...	1,300	272	274	2	...	928
Inglewood	2,858	19,079	20,109	1,030	...	183,076	217,121	34,045	...	705
*Innisfail	3,907	3,303	4,039	736	...	96	128	32	...	324
Ipswich	2,209	11,609	13,322	1,713	...	154	119	...	35	1,425
Isisford	4,696	11,903	10,540	...	1,363	890,873	882,988	...	7,885	15
Jondaryan	1,046	8,710	7,901	...	809	74,942	105,821	30,879	...	847
Jundah	2,318	29,229	18,724	...	10,505	151,918	115,062	...	36,856	...
Kilcoy	1,526	18,118	17,345	...	773	278	294	16	...	2,408
Kilkivan	1,674	19,226	19,375	149	...	469	500	31	...	1,122
Killarney	2,635	7,936	9,623	1,687	...	1,788	3,514	1,726	...	1,092
Laidley	3,537	15,212	16,305	1,093	...	92	139	47	...	3,688
Logan	2,393	13,351	14,734	1,383	...	309	273	...	36	1,442
Longreach	9,699	32,146	38,639	6,493	...	1,748,143	1,729,630	...	18,513	158
Lowood	2,114	14,739	16,210	1,471	...	220	115	...	105	3,452
Mackay	28,270	131,919	135,388	3,469	...	2,255	2,797	542	...	1,182
Marburg	1,622	7,197	8,254	1,057	...	15	44	29	...	3,210
Maroochy	3,779	35,706	34,510	...	1,196	471	466	...	5	4,779
Maryborough	5,044	24,357	23,904	...	453	546	572	26	...	921
Mitchell	8,168	104,146	99,293	...	4,853	345,366	394,245	48,879	...	354
Mount Isa	149	14	2	...	12	...	...	...	...	30
Mount Morgan	6,117	41,136	41,789	653	...	176	206	30	...	1,079
Mount Perry	2,274	35,477	36,309	832	...	6	9	3	...	107

* Formerly Mourilyan.

Table No. XXVII.—continued.

RETURN OF THE NUMBER OF HORSES, CATTLE, SHEEP, AND SWINE IN THE VARIOUS PETTY SESSIONS DISTRICTS OF THE STATE, TOGETHER WITH THE INCREASE AND DECREASE OF CATTLE AND SHEEP ON THE 31ST DECEMBER, 1925.

Petty Sessions District.	HORSES. 1925.	CATTLE.				SHEEP.				SWINE. 1925.
		1924.	1925.	1925.		1924.	1925.	1925.		
				Increase.	Decrease.			Increase.	Decrease.	
Muttaburra	6,136	28,944	31,354	2,410	...	1,184,006	1,368,232	184,226	...	11
Nanango	12,684	104,128	108,537	4,409	...	1,054	1,246	192	...	13,160
Nerang	2,467	29,186	29,469	283	...	305	310	5	...	4,151
Norman	11,797	370,771	360,297	...	10,474	1	4,200	4,199	...	26
Oakey	6,407	31,390	35,528	4,138	...	14,496	21,603	7,107	...	8,363
Palmer	2,228	55,247	52,215	...	3,032	...	...	...	...	...
Pittsworth	6,748	29,693	32,855	3,162	...	133,650	200,997	67,317	...	5,233
Proserpine	5,061	14,128	15,577	1,449	...	1,425	700	...	725	335
Quilpie	1,848	20,854	14,076	...	6,778	196,817	210,006	13,189	...	66
Ravenswood	3,146	20,132	20,572	440	...	...	89	89	...	230
Redcliffe	2,004	17,048	16,878	...	170	141	166	25	...	2,165
Richmond	9,491	84,728	80,785	...	3,943	1,333,764	1,424,010	90,246	...	43
Rockhampton	21,639	337,247	340,060	2,813	...	21,237	23,510	2,273	...	4,717
Roma	10,032	95,068	95,114	46	...	298,628	338,375	39,747	...	1,332
Rosewood	2,840	21,150	22,949	1,799	...	2,183	2,404	221	...	3,578
St. George	6,114	43,223	37,185	...	6,038	930,346	1,067,583	137,237	...	92
St. Lawrence	6,590	131,329	132,771	1,442	...	1,575	1,440	...	135	105
Somerset	395	556	625	69	...	...	...	...	...	...
Southport	180	1,600	1,737	137	...	40	14	...	26	144
Spingsure	9,467	126,664	124,016	...	2,648	355,780	368,089	12,309	...	178
Stanthorpe	1,899	15,644	14,487	...	1,157	195,670	201,775	6,105	...	260
Surat	2,906	32,185	26,016	...	6,169	370,901	431,733	60,832	...	61
Tambo	3,810	29,863	29,058	...	805	547,073	594,158	47,085	...	15
Taroom	4,821	94,915	98,872	3,957	...	12,469	14,001	1,532	...	84
Texas	1,657	11,289	11,999	710	...	46,092	60,974	14,882	...	128
Thargomindah	7,723	140,774	133,636	...	7,138	176,028	167,555	...	8,473	51
Tiaro	4,138	53,991	52,553	...	1,438	777	751	...	26	1,726
Toowoomba	4,776	14,645	15,944	1,299	...	10,851	14,265	3,414	...	2,472
Townsville	6,225	27,884	29,530	1,646	...	646	1,148	502	...	1,237
Warwick	9,733	45,863	50,509	4,646	...	140,198	179,072	38,874	...	4,400
Wienholt	9,776	113,961	116,257	2,296	...	1,906	1,946	40	...	13,388
Windsor	5,054	90,751	85,061	...	5,690	90,913	94,518	3,605	...	1
Winton	10,308	85,811	74,290	...	11,521	1,501,670	1,517,807	16,137	...	21
Woodford	1,687	19,991	20,212	221	...	199	286	87	...	2,141
Wynnum	521	1,479	1,398	...	81	112	131	19	...	217
Yeulba	1,160	15,936	15,472	...	464	840	940	100	...	108
Total in State, 1925 ..	638,372	...	6,436,645	...	...	...	20,663,323	...	...	199,598
Total in State, 1924 ...	660,093	6,454,653	...	...	...	19,028,252	...	...	...	156,163
Increase in 1925 ... ..	...	...	...	...	...	...	...	1,635,071	...	43,435
Decrease in 1925	21,721	...	...	18,008	...	...	...	...	...	...
Centesimal Increase in 1925 ...	...	...	...	...	...	...	...	8.59	...	27.81
Centesimal Decrease in 1925 ..	3.29	...	...	0.28	...	...	...	...	...	...

Table No. XXVIII.

RETURN SHOWING NUMBER OF CALVES RETURNED AS BRANDED IN THE SEVERAL PETTY SESSIONS DISTRICTS OF THE STATE DURING THE YEARS 1924 AND 1925, TOGETHER WITH THE INCREASE OR DECREASE IN THE LATTER YEAR.

Petty Sessions District.	Male.			Female.		
	1924.	1925.	Per cent.	1924.	1925.	Per cent.
Adavale	1,633	1,730	5.94	1,616	1,746	8.04
Allora	418	769	83.97	606	935	54.29
Alpha	7,134	8,168	14.49	7,264	8,332	14.70
Aramac	507	1,116	120.12	511	1,164	127.79
Atherton	795	868	9.18	2,574	2,768	7.54
Augathella	3,013	3,805	26.29	3,070	3,904	27.17
Ayr	3,148	3,479	10.51	3,001	3,406	13.50
Banana	6,417	7,205	12.28	6,388	7,396	15.78
Barcaldine	575	635	10.43	623	612	— 1.77
Beaudesert	1,448	3,168	118.78	3,024	4,942	63.43
Biggenden	2,108	2,145	1.76	4,029	3,779	— 6.21
Blackall	1,319	1,643	24.56	1,327	1,633	23.06
Bollon	2,800	2,768	— 1.14	2,920	2,724	— 6.71
Boulia	10,647	10,060	— 5.51	11,121	8,858	— 20.35
Bowen	2,246	2,449	9.04	2,291	2,365	3.23
Brisbane	66	114	72.73	899	1,074	19.47
Bundaberg	1,139	1,028	— 9.75	1,628	1,625	— 0.18
Burke	19,006	20,463	7.67	18,994	20,280	6.77
Caboolture	115	175	52.17	569	653	14.76
Cairns	272	312	14.71	337	378	12.17
Camooeal	10,785	12,223	13.33	10,844	12,356	13.94
Cape River	8,403	11,451	36.27	8,313	11,458	37.83
Cardwell	730	474	— 35.07	722	478	— 33.80
Charleville	3,811	5,046	32.41	3,930	5,100	29.77
Charters Towers	12,276	20,627	68.03	12,544	20,573	64.01
Childers	790	899	13.80	977	964	— 1.33
Chillagoe	3,280	3,649	11.25	3,299	3,606	9.31
Clermont	19,284	20,370	5.63	20,625	20,411	— 1.04
Cleveland	8	8	..	40	64	60.00
Clifton	342	798	133.33	736	1,295	75.95
Cloncurry	30,467	30,711	0.80	30,537	31,023	1.59
Coen	3,939	3,888	— 1.29	3,877	3,979	2.63
Collinsville	16,376	16,714	2.06	16,049	16,293	1.52
Condamine	2,272	5,085	123.81	2,425	5,146	112.21
Cook	3,420	4,024	17.66	3,177	3,732	17.47
Cooyar	417	939	125.18	599	1,115	86.14
Crow's Nest	692	1,236	78.61	1,141	1,938	69.85
Croydon	2,577	3,514	36.36	2,640	3,434	30.08
Cunnamulla	2,656	2,070	— 22.06	3,025	2,237	— 26.05
Dalby	5,300	12,500	135.85	6,768	14,398	112.74
Diamantina	9,737	8,604	— 11.64	9,846	8,614	— 12.51
Douglas	38	107	181.58	70	125	78.57
Dugandan	526	1,737	230.23	1,079	2,483	130.12
Eidsvold	6,803	7,414	8.98	7,086	7,561	6.70
Emerald	4,735	4,614	— 2.56	4,610	4,650	0.87
Esk	2,055	3,133	52.46	2,995	4,223	41.00
Etheridge	14,028	20,131	43.51	14,437	19,897	37.82
Eulo	1,583	1,492	— 5.75	1,432	1,481	3.42
Gatton	572	1,324	131.47	966	1,859	92.44
Gayndah	7,698	9,542	23.95	10,154	11,251	10.80
Gin Gin	4,218	4,335	2.77	4,412	4,446	0.77
Gladstone	12,072	13,299	10.16	14,125	15,509	9.80
Goodna	61	119	95.08	95	198	108.42
Goombungee	165	280	69.70	442	659	49.10
Goondiwindi	2,659	5,810	118.50	2,740	5,841	113.18
Gympie	1,874	2,157	15.10	5,844	6,982	19.47
Harrisville	491	1,239	152.34	973	2,011	106.68
Helidon	148	729	392.57	487	1,129	131.83
Herberton	3,627	6,179	70.36	3,834	6,240	62.75
Highfields	96	416	333.33	335	917	173.73
Hughenden	4,788	9,651	101.57	4,964	9,626	93.92
Hungerford	819	965	17.83	844	1,025	21.45
Ingham	2,979	2,900	— 2.65	2,923	2,861	— 2.12
Inglewood	1,049	2,515	139.75	1,155	2,444	111.60
*Innisfail	226	277	22.57	185	240	29.73
Ipswich	290	455	56.90	605	1,031	70.41
Isisford	1,091	1,040	— 4.67	1,009	1,029	1.98
Jondaryan	118	662	461.02	192	762	296.87
Jundah	2,502	2,992	19.58	2,595	3,012	16.07
Kilcoy	549	584	6.38	1,047	1,149	9.74
Kilkivan	885	1,116	26.10	1,272	1,517	19.26
Killarney	339	742	118.88	556	1,016	82.73
Laidley	251	767	205.58	501	1,184	136.33
Logan	35	144	311.43	491	978	99.19
Longreach	3,047	3,129	2.69	3,248	3,111	— 4.22
Lowood	527	804	52.56	794	1,051	32.37
Mackay	9,913	11,808	19.12	9,614	11,741	22.12
Marburg	33	115	248.48	118	311	163.56
Maroochy	403	507	25.81	2,153	2,104	— 2.28
Maryborough	739	858	16.10	1,573	1,683	6.99

— Decrease.

* Formerly Mourilyan.

Table No. XXVIII.—continued.

RETURN SHOWING NUMBER OF CALVES RETURNED AS BRANDED IN THE SEVERAL PETTY SESSIONS DISTRICTS OF THE STATE DURING THE YEARS 1924 AND 1925, TOGETHER WITH THE INCREASE OR DECREASE IN THE LATTER YEAR.

Petty Sessions District.	Male.			Female.		
	1924.	1925.	Per cent.	1924.	1925.	Per cent.
Mitchell	9,395	11,347	20·78	9,500	11,539	21·46
Mount Isa .. .. .	..	..	..	..	..	..
Mount Morgan	2,084	2,534	21·59	2,636	3,091	17·26
Mount Perry	2,610	3,130	19·92	2,552	2,998	17·48
Muttaburra	1,774	3,147	77·40	1,764	3,269	85·32
Nanango	3,482	6,571	88·71	6,073	10,116	66·57
Nerang	193	569	194·82	1,349	2,032	50·63
Norman	36,784	40,373	9·76	36,860	41,350	12·18
Oakey	710	1,380	94·37	1,704	2,981	74·94
Palmer	4,980	4,434	— 10·96	4,981	4,471	— 10·24
Pittsworth	1,408	2,314	64·35	2,116	3,118	47·35
Proserpine	1,271	1,715	34·93	1,295	1,852	43·01
Quilpie	1,799	1,384	— 23·07	1,870	1,409	— 24·65
Ravenswood	2,614	2,670	2·14	2,510	2,614	4·14
Redcliffe	112	127	13·39	731	831	13·68
Richmond	5,756	9,294	61·47	6,011	9,366	55·81
Rockhampton	30,503	35,040	14·87	32,221	37,138	15·26
Roma	8,191	10,999	34·28	8,422	11,093	31·71
Rosewood	342	817	138·89	893	1,637	83·31
St. George	2,906	3,371	16·00	2,794	3,326	19·04
St. Lawrence	12,101	15,581	28·76	12,263	15,588	27·11
Somerset	41	79	92·68	44	90	104·55
Southport	3	1	— 66·66	33	103	212·12
Springsure	12,881	13,481	4·66	12,904	13,249	2·67
Stanthorpe	673	1,128	67·61	692	1,180	70·52
Surat	2,976	3,220	8·20	2,890	3,213	11·18
Tambo	2,201	3,662	66·38	2,082	3,692	77·33
Taroom	10,023	13,180	31·50	10,036	12,991	29·44
Texas	307	1,307	325·73	325	1,315	304·62
Thargomindah	16,383	16,177	— 1·26	16,390	15,923	— 2·85
Tiaro	3,453	3,386	— 1·94	4,623	4,436	— 4·04
Toowoomba	328	610	85·98	899	1,562	73·75
Townsville	2,638	2,909	10·27	2,525	2,780	10·10
Warwick	2,642	5,175	95·87	3,034	5,457	79·86
Wienholt	4,509	6,517	44·53	7,354	9,933	35·07
Windorah	10,097	10,156	0·58	9,979	10,393	4·15
Winton	11,717	9,404	— 19·74	11,477	9,222	— 19·65
Woodford	370	599	61·89	1,171	1,347	15·03
Wynnum .. .. .	..	1	..	55	122	121·82
Yeulba	1,685	1,799	6·77	2,226	1,832	— 17·70
Totals	508,342	612,606	20·51	554,145	660,784	19·24

— Decrease.

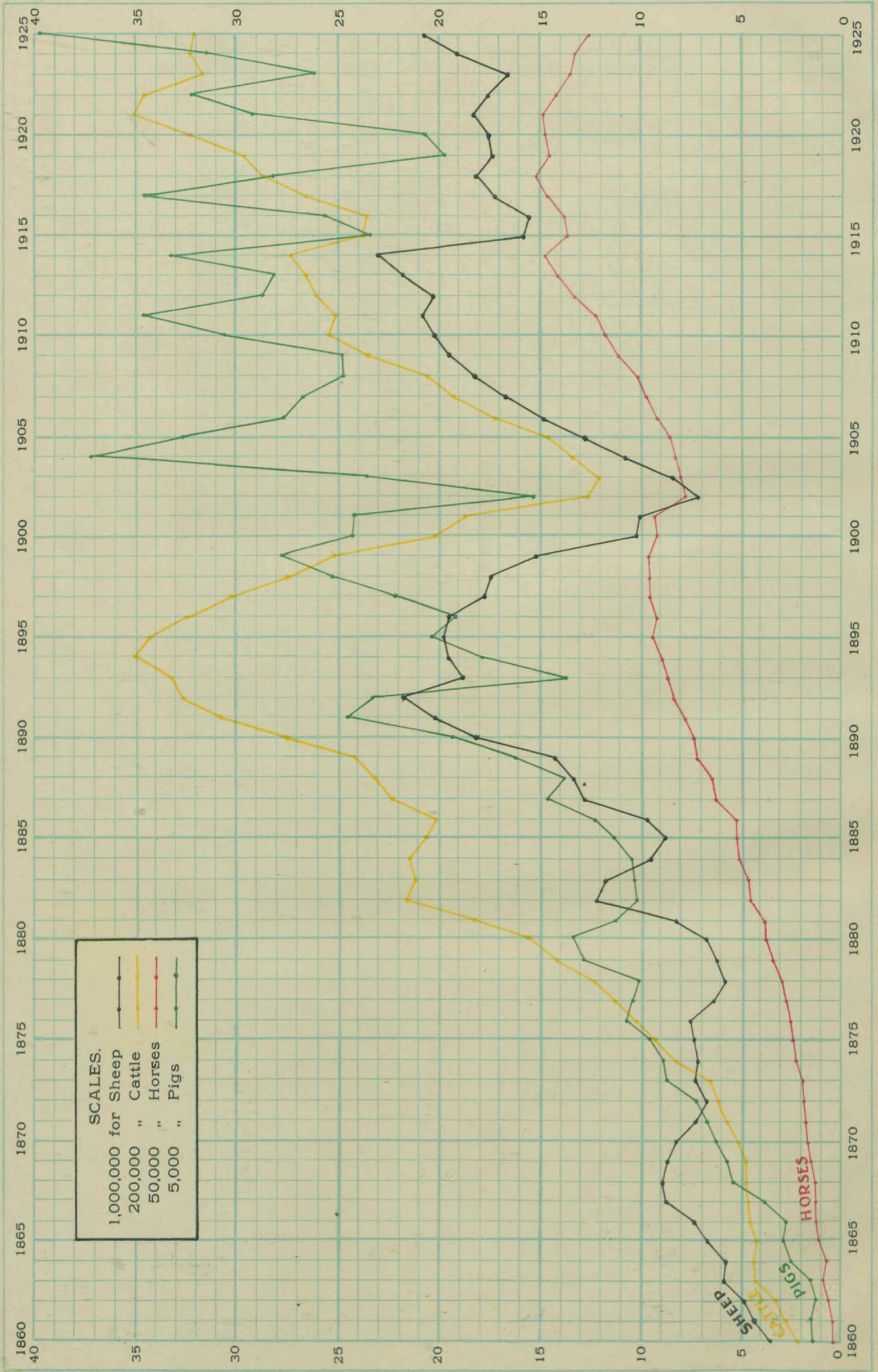
Table No. XXIX.
RETURN FOR EIGHT YEARS SHOWING THE NUMBER OF CALVES RETURNED AS BRANDED IN THE SEVERAL PASTORAL DISTRICTS OF THE STATE.

Year.	BURKE.		BURNETT.		COOK.		DARLING DOWNS.		GREGORY NORTH.		GREGORY SOUTH.		LEICHHARDT.		MARANOA.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
1918	100,491	96,274	32,451	39,885	48,031	46,891	40,959	45,693	34,828	31,950	20,456	19,109	81,747	78,049	27,300	25,932
1919	99,692	95,180	32,193	39,432	47,708	46,358	40,633	45,174	34,552	31,587	20,293	18,892	81,097	77,162	27,083	25,637
1920	114,359	109,866	36,930	45,517	54,728	53,511	46,612	52,144	39,635	36,461	23,279	21,807	93,029	89,068	31,068	29,593
1921	125,937	123,564	40,669	51,191	60,268	60,182	51,330	58,645	43,648	41,007	25,636	24,526	102,448	100,173	34,213	33,283
1922	93,380	100,372	32,093	41,583	47,559	48,886	40,506	47,638	34,444	33,310	20,230	19,922	80,844	81,371	26,998	27,035
1923	84,281	85,855	27,217	35,569	40,333	41,816	34,352	40,748	29,211	28,492	17,156	17,041	68,561	69,602	22,897	23,125
1924	86,185	88,123	27,832	36,508	41,245	42,920	35,128	41,824	29,870	29,245	17,544	17,491	70,110	71,441	23,414	23,736
1925	103,862	105,081	33,540	43,534	49,704	51,180	42,333	49,873	35,997	34,873	21,142	20,857	84,490	85,189	28,216	28,304
Year.	MITCHELL.		MORETON.		NORTH KENNEDY.		PORT CURTIS.		SOUTH KENNEDY.		WARREGO.		WIDE BAY.		TOTAL.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
1918	19,522	18,507	19,713	32,858	54,202	50,970	32,705	34,922	43,545	40,933	22,589	21,934	14,121	21,496	592,720	605,403
1919	19,367	18,297	19,556	32,485	53,771	50,391	32,446	34,526	43,199	40,468	22,409	21,684	14,009	21,251	588,008	598,524
1920	22,216	21,120	22,433	37,487	61,682	58,107	37,220	39,853	49,555	46,712	25,707	25,030	16,070	24,530	674,323	690,876
1921	24,465	23,753	24,704	42,172	67,927	65,419	40,988	44,822	54,572	52,536	28,309	28,151	17,697	27,589	742,811	777,013
1922	19,306	19,295	19,465	34,257	53,603	53,140	32,340	36,409	43,004	42,675	22,340	22,807	13,965	22,410	586,171	631,170
1923	16,373	16,504	16,533	29,302	45,459	45,454	27,430	31,143	36,321	36,503	18,545	19,560	11,843	19,169	497,112	539,883
1924	16,743	16,940	16,906	31,076	46,485	46,655	28,050	31,346	37,346	37,467	19,373	20,077	12,111	19,676	508,342	554,145
1925	20,177	20,200	20,374	35,864	56,020	55,633	33,803	38,117	45,006	44,677	23,347	23,940	14,595	23,462	612,606	660,784

TABLE No. XXX.
RETURN FOR TEN YEARS SHOWING THE NUMBER OF CATTLE AND SHEEP IN THE VARIOUS PASTORAL DISTRICTS OF THE STATE.

Year.	BURKE.		BURNETT.		COOK.		DARLING DOWNS.		GREGORY NORTH.		GREGORY SOUTH.		LEICHHARDT.		MARANOA.	
	Cattle.	Sheep.	Cattle.	Sheep.	Cattle.	Sheep.	Cattle.	Sheep.	Cattle.	Sheep.	Cattle.	Sheep.	Cattle.	Sheep.	Cattle.	Sheep.
1916	771,701	2,016,516	379,541	10,641	428,413	322,090	1,436,245	242,449	1,845,851	97,615	244,368	443,680	538,106	173,042	1,423,702	
1917	778,515	2,139,014	402,081	9,496	431,844	339,242	1,881,198	253,619	1,839,242	135,815	334,488	511,538	719,774	218,544	1,688,908	
1918	808,748	2,029,690	427,688	8,799	446,939	465,461	1,236,064	293,123	1,816,328	143,612	395,915	554,300	853,725	270,214	2,033,422	
1919	815,621	1,886,578	432,514	6,166	424,497	501,450	1,120,888	323,019	1,602,069	146,113	341,919	563,080	835,817	308,207	2,210,000	
1920	830,771	2,226,075	484,293	5,784	431,926	550,372	1,134,721	350,132	1,818,733	158,616	345,454	661,124	880,171	339,378	2,957,000	
1921	883,705	2,479,894	523,058	5,223	465,654	597,643	1,117,956	382,828	2,061,699	168,565	319,702	759,999	917,444	373,699	2,023,562	
1922	894,325	2,606,955	508,140	10,774	507,010	571,610	1,229,783	343,719	1,776,378	167,395	386,419	730,726	843,496	374,653	2,075,934	
1923	811,024	2,385,859	469,649	4,219	518,655	421,869	1,066,076	322,762	1,659,221	188,440	258,166	783,237	1,117,746	300,785	2,075,053	
1924	844,987	2,654,350	467,061	5,296	502,716	480,626	1,478,163	330,000	1,885,035	201,684	292,280	761,349	947,043	311,141	2,416,934	
1925	825,822	2,928,780	467,036	5,263	527,624	468,389	1,862,217	297,335	1,964,021	176,275	286,159	761,676	979,070	273,224	2,785,128	
Year.	MITCHELL.		MORETON.		NORTH KENNEDY.		PORT CURTIS.		SOUTH KENNEDY.		WARREGO.		WIDE BAY.		TOTAL.	
	Cattle.	Sheep.	Cattle.	Sheep.	Cattle.	Sheep.	Cattle.	Sheep.	Cattle.	Sheep.	Cattle.	Sheep.	Cattle.	Sheep.	Cattle.	Sheep.
1916	89,722	6,034,597	438,016	18,372	417,790	350,056	21,271	192,698	192,698	121,891	1,727,627	262,296	5,116	4,765,657	15,524,293	
1917	121,572	6,642,483	490,330	13,397	440,101	396,043	12,870	205,616	205,616	157,407	2,207,173	285,821	4,742	5,316,558	17,204,268	
1918	130,154	6,874,100	513,925	10,917	463,256	408,572	14,520	221,368	221,368	211,814	2,712,126	295,783	4,033	5,786,744	18,220,985	
1919	195,366	6,774,454	513,821	11,484	437,946	434,420	19,885	341,038	216,648	210,080	2,345,236	293,261	3,566	5,940,433	17,379,332	
1920	218,761	6,425,183	564,219	12,749	477,557	453,797	20,792	398,189	194,292	209,736	2,372,391	326,196	4,642	6,455,067	17,404,840	
1921	251,918	6,854,732	587,182	12,083	520,917	485,307	25,861	440,171	162,146	259,443	2,412,383	345,281	4,287	7,047,370	18,402,399	
1922	257,517	6,427,205	548,337	10,736	534,914	473,963	24,132	470,575	163,250	217,629	2,176,291	348,138	5,176	6,955,463	17,641,071	
1923	220,175	5,514,654	460,539	10,849	487,222	448,096	23,788	447,363	199,051	230,701	2,401,746	330,967	8,464	6,396,514	16,756,101	
1924	202,130	6,384,802	473,197	18,047	491,309	439,046	24,671	435,105	143,657	237,541	2,763,960	326,761	7,250	6,454,653	19,028,252	
1925	196,115	6,696,458	502,658	25,257	503,266	449,203	27,462	432,297	154,642	236,587	2,938,281	319,108	5,757	6,326,645	20,663,233	

GRAPH SHOWING LIVE STOCK IN QUEENSLAND from 1860 to 1925.



EXPLANATION OF GRAPH.—The base of each small square represents an interval of one year, and the vertical height of each square denotes in the case of sheep, 1,000,000; in the case of cattle, 200,000; in the case of horses, 50,000; and in the case of pigs, 5,000.

Table No. XXXI.

RETURN OF THE NUMBER OF HORSES, CATTLE, SHEEP, AND SWINE IN THE VARIOUS PASTORAL DISTRICTS OF THE STATE FOR THE YEARS 1924 AND 1925, TOGETHER WITH THE NUMERICAL AND CENTESIMAL INCREASE OR DECREASE IN THE LATTER YEAR.

Pastoral District.	Year.	Horses.	Cattle.	Sheep.	Swine.	Numerical Increase or Decrease —				Centesimal Increase or Decrease —			
						Horses.	Cattle.	Sheep.	Swine.	Horses.	Cattle.	Sheep.	Swine.
Burke ...	1924	54,562	844,987	2,654,350	432	...	...	...	...	...	...	...	...
	1925	53,690	825,822	2,928,780	516	- 872	- 19,165	274,430	84	- 1'60	- 2'27	10'34	19'44
Burnett ...	1924	39,952	467,061	5,296	23,167	...	...	...	...	...	...	...	...
	1925	39,283	467,036	5,263	32,933	- 669	- 25	33	9,766	- 1'67	- 0'005	- 0'62	42'15
Cook ...	1924	49,815	502,716	695	6,448	...	...	...	...	...	...	...	...
	1925	49,072	527,624	270	7,673	- 743	24,908	- 425	1,225	- 1'49	4'95	- 61'15	18'99
Darling Downs	1924	69,736	430,626	1,478,163	31,961	...	...	...	...	...	...	...	...
	1925	72,569	468,389	1,862,217	42,180	2,833	37,763	384,054	10,219	4'06	8'77	55'98	31'97
Gregory North	1924	29,157	330,000	1,885,035	62	...	...	...	...	...	...	...	...
	1925	24,711	297,335	1,964,021	36	- 4,446	- 32,665	78,986	- 26	- 15'25	- 9'90	4'19	- 41'94
Gregory South	1924	11,173	201,684	292,280	24	...	...	...	...	...	...	...	...
	1925	10,215	176,275	286,189	1	- 958	- 25,409	- 6,091	- 23	- 8'57	- 12'60	- 2'08	- 95'83
Leichhardt ...	1924	50,693	761,349	947,043	1,663	...	...	...	...	...	...	...	...
	1925	48,058	761,676	979,070	1,915	- 2,635	327	32,027	252	- 5'20	0'04	3'38	15'15
Maranoa ...	1924	29,654	311,141	2,416,934	1,547	...	...	...	...	...	...	...	...
	1925	29,254	273,224	2,785,128	1,553	- 400	- 37,917	368,194	6	- 1'35	- 12'19	15'23	0'39
Mitchell ...	1924	44,283	202,130	6,384,802	491	...	...	...	...	...	...	...	...
	1925	41,258	196,115	6,696,458	498	- 3,025	- 6,015	311,656	7	- 6'83	- 2'98	4'88	1'43
Moreton ...	1924	65,832	473,197	18,047	60,434	...	...	...	...	...	...	...	...
	1925	65,461	502,658	25,257	75,731	- 371	29,461	7,210	15,297	- 0'56	6'23	39'95	25'31
North Kennedy	1924	77,309	491,309	4,069	4,751	...	...	...	...	...	...	...	...
	1925	70,456	503,296	4,528	5,673	- 6,853	11,987	459	922	- 8'86	2'44	11'28	19'41
Port Curtis ...	1924	40,907	439,046	24,671	6,488	...	...	...	...	...	...	...	...
	1925	39,093	449,203	27,462	8,523	- 1,814	10,157	2,791	2,035	- 4'43	2'31	11'31	31'37
South Kennedy	1924	38,072	435,105	143,657	1,088	...	...	...	...	...	...	...	...
	1925	37,985	432,297	154,642	1,281	- 87	- 2,808	10,985	193	- 0'23	- 0'65	7'65	17'74
Warrego ...	1924	24,312	237,541	2,765,960	516	...	...	...	...	...	...	...	...
	1925	24,255	236,587	2,938,281	600	- 57	- 954	172,321	84	- 0'23	- 0'40	6'23	16'28
Wide Bay ...	1924	34,636	326,761	7,250	17,091	...	...	...	...	...	...	...	...
	1925	33,012	319,108	5,757	20,485	- 1,624	- 7,653	- 1,493	3,294	- 4'69	- 2'34	- 20'59	19'86

Pastoral and Petty Sessions Districts.

Pastoral District.	Petty Sessions District.	Pastoral District.	Petty Sessions District.	Pastoral District.	Petty Sessions District.	Pastoral District.	Petty Sessions District.
Burke ...	Burke	Darling Downs	Stanthorpe	Mitchell	Longreach	North Kennedy	Charters Towers
	Camooweal		Texas		Alpha, part of		Ingham
Burnett	Mt. Isa	Gregory North	Warwick	Moreton	Hughenden, part of	Port Curtis	Proserpine
	Richmond		Crow's Nest, part of		Isisford, part of		Ravenswood
Cook	Cloncurry, part of	Gregory South	Highfields, part of	North Kennedy	Jundah, part of	South Kennedy	Townsville
	Croydon, part of		Toowoomba, part of		Muttaborra, part of		Bowen, part of
Darling Downs	Hughenden, part of	Leichhardt	Yeulba, part of	North Kennedy	Tambo, part of	Wide Bay	Cape River, part of
	Norman, part of		Boulia		Beaudesert		Collinsville, part of
Darling Downs	Eidsvold	Maranoa	Winton	North Kennedy	Brisbane	Wide Bay	Herberton, part of
	Gayndah		Cloncurry, part of		Caboolture		Gladstone
Darling Downs	Mount Perry	Mitchell	Diamantina, part of	North Kennedy	Cleveland	Wide Bay	Mount Morgan, part of
	Wienholt		Windorah, part of		Cooyar		Rockhampton, part of
Darling Downs	Biggenden, part of	Mitchell	Adavale, part of	North Kennedy	Dugandan	Wide Bay	St. Lawrence, part of
	Gin Gin, part of		Diamantina, part of		Esk		Alpha, part of
Darling Downs	Nanango, part of	Mitchell	Isisford, part of	North Kennedy	Gatton	Wide Bay	Cape River, part of
	Atherton		Jundah, part of		Goodna		Clermont, part of
Darling Downs	Cairns	Mitchell	Quilpie, part of	North Kennedy	Harrisville	Wide Bay	Collinsville, part of
	Chillagoe		Thargomindah, part of		Helidon		Mackay, part of
Darling Downs	Coen	Mitchell	Windorah, part of	North Kennedy	Ipswich	Wide Bay	Muttaborra, part of
	Cook		Banana		Kilcoy		Augathella
Darling Downs	Douglas	Mitchell	Emerald	North Kennedy	Laidley	Wide Bay	Charleville
	Etheridge		Springsure		Logan		Cunnamulla
Darling Downs	Innisfail	Mitchell	Taroom	North Kennedy	Lowood	Wide Bay	Eulo
	Palmer		Clermont, part of		Marburg		Hungerford
Darling Downs	Somerset	Mitchell	Mackay, part of	North Kennedy	Nerang	Wide Bay	Adavale, part of
	Croydon, part of		Mount Morgan, part of		Redcliffe		Quilpie, part of
Darling Downs	Herberton, part of	Mitchell	Rockhampton, part of	North Kennedy	Rosewood	Wide Bay	Tambo, part of
	Norman, part of		Roma, part of		Southport		Thargomindah, part of
Darling Downs	Allora	Mitchell	St. Lawrence, part of	North Kennedy	Wynnum	Wide Bay	Bundaberg
	Clifton		Bollon		Crow's Nest, part of		Childers
Darling Downs	Condamine	Mitchell	Mitchell	North Kennedy	Highfields, part of	Wide Bay	Gympie
	Dalby		St. George		Maroochy, part of		Kilkivan
Darling Downs	Goombungee	Mitchell	Surat	North Kennedy	Nanango, part of	Wide Bay	Maryborough
	Goondiwindi		Roma, part of		Toowoomba, part of		Tiaro
Darling Downs	Inglewood	Mitchell	Yeulba, part of	North Kennedy	Woodford, part of	Wide Bay	Biggenden, part of
	Jondaryan		Aramac		Ayr		Gin Gin, part of
Darling Downs	Killarney	Mitchell	Barcaldine	North Kennedy	Bowen	Wide Bay	Maroochy, part of
	Oakey		Blackall		Cardwell		Woodford, part of
Darling Downs	Pittsworth	Mitchell		North Kennedy		Wide Bay	

Table No. XXXII.

RETURN FOR TEN YEARS SHOWING THE DENSITY OF LIVE STOCK IN THE STATE.
(In Converting Horses and Cattle to terms of Sheep, Ten Head of Sheep are taken as Equal to One Horse or Head of Cattle.)

Year.	HORSES.			CATTLE.			SHEEP.			ALL KINDS IN TERMS OF SHEEP.		
	Acres per Head.	Number per Square Mile.	Number per Capita Population.	Acres per Head.	Number per Square Mile.	Number per Capita Population.	Acres per Head.	Number per Square Mile.	Number per Capita Population.	Acres per Head.	Number per Square Mile.	Number per Capita Population.
1916 ..	615	1.04	1.04	90	7.11	7.12	28	23.15	23.19	6.12	104.63	104.78
1917...	585	1.09	1.06	81	7.92	7.72	25	25.66	24.99	5.52	115.88	112.85
1918...	565	1.13	1.09	74	8.63	8.33	24	27.17	26.24	5.13	124.81	120.51
1919...	586	1.09	1.01	72	8.86	8.20	25	25.92	23.96	5.10	125.43	115.97
1920...	578	1.11	1.01	66	9.63	8.74	25	25.96	23.57	4.80	133.30	121.04
1921...	574	1.11	0.97	61	10.51	9.15	23	27.45	23.90	4.45	143.70	125.13
1922 ..	601	1.06	0.90	62	10.37	8.80	24	26.31	22.32	4.55	140.70	119.38
1923...	649	0.99	0.82	67	9.54	7.89	26	24.99	20.66	4.91	130.26	107.67
1924...	650	0.98	0.79	66	9.63	7.73	23	28.38	22.79	4.76	134.49	108.01
1925...	672	0.95	0.74	67	9.60	7.47	21	30.82	23.99	4.69	136.34	106.15

Table No. XXXIII.

RETURN SHOWING THE NUMBER OF OWNERS AND THE SIZES OF HERDS OF CATTLE UNDER VARIOUS GROUPINGS IN THE SEVERAL PASTORAL DISTRICTS OF THE STATE DURING THE YEAR 1925.

Pastoral Districts.	1 to 100.		101 to 300.		301 to 500.		501 to 1,000.	
	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.
Burke	387	10,631	100	19,139	55	22,210	42	30,294
Burnett	4,011	143,905	560	90,261	104	40,499	71	50,523
Cook	1,759	43,107	129	22,057	19	7,270	21	14,993
Darling Downs	7,464	215,259	627	101,299	103	39,408	56	39,209
Gregory North	168	3,821	29	5,132	22	9,441	11	8,729
Gregory South	55	2,307	24	5,403	14	5,312	14	10,385
Leichhardt	1,305	37,327	358	64,494	102	39,581	134	93,646
Maranoa	1,323	38,033	242	43,777	71	28,147	36	24,474
Mitchell	648	17,063	91	17,739	39	15,681	37	25,901
Moreton	10,313	288,881	749	118,674	82	31,675	48	33,636
North Kennedy	2,196	43,038	172	29,093	69	26,650	51	35,140
Port Curtis	2,714	76,335	377	63,879	86	32,132	74	53,516
South Kennedy	1,410	27,009	117	20,233	40	15,580	53	37,930
Warrego	506	14,197	95	18,049	41	16,223	31	23,106
Wide Bay	5,082	135,705	481	75,760	69	25,986	36	25,149
Totals	39,341	1,096,618	4,151	694,989	916	355,795	715	506,630

Pastoral Districts.	1,001 to 5,000.		5,001 to 10,000.		10,001 and upwards.		Totals.	
	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.
Burke	68	148,178	20	151,825	24	443,545	696	825,822
Burnett	55	108,804	3	22,831	1	10,214	4,805	467,036
Cook	37	87,434	8	55,247	13	297,516	1,986	527,624
Darling Downs	37	59,359	2	13,855	..	..	8,289	468,389
Gregory North	29	67,985	13	88,457	7	113,770	279	297,335
Gregory South	22	57,457	4	33,271	4	62,140	137	176,275
Leichhardt	127	277,904	26	174,618	6	74,106	2,058	761,676
Maranoa	46	91,196	8	47,597	..	..	1,726	273,224
Mitchell	40	77,156	3	20,412	2	22,163	860	196,115
Moreton	21	29,792	..	..	..	..	11,213	502,658
North Kennedy	66	141,270	19	121,125	5	106,980	2,578	503,296
Port Curtis	76	143,078	11	67,812	1	12,451	3,339	449,203
South Kennedy	57	138,046	11	73,612	8	119,887	1,696	432,297
Warrego	40	79,710	8	51,323	2	33,979	723	236,587
Wide Bay	30	56,508	..	..	..	..	5,698	319,108
Totals	751	1,563,877	136	921,985	73	1,296,751	46,083	6,436,645

Table No. XXXIV.

RETURN SHOWING THE NUMBER OF OWNERS AND THE SIZES OF HERDS OF CATTLE UNDER VARIOUS GROUPINGS IN THE SOUTHERN, CENTRAL, AND NORTHERN DIVISIONS OF THE STATE FOR THE YEAR, 1925.

Division.	1-100.		101-300.		301-500.		501-1,000.		1,001-5,000.		5,001-10,000.		10,001 and Upwards.		Totals.	
	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.	Owners.	Cattle.
Southern Division	29,084	850,129	2,901	474,723	515	192,265	312	221,126	272	526,870	28	191,699	8	116,404	33,120	2,580,216
Central Division	4,627	125,844	774	136,886	239	92,929	269	190,707	281	591,831	56	367,301	19	272,005	6,265	1,777,503
Northern Division	5,630	120,645	476	83,380	162	63,601	134	94,797	198	445,176	52	362,985	46	908,342	6,698	2,078,926
Total	39,341	1,096,618	4,151	694,989	916	355,795	715	506,630	751	1,563,877	136	921,985	73	1,296,751	46,083	6,436,645

Table No. XXXV.

RETURN SHOWING THE NUMBER OF OWNERS AND THE SIZES OF FLOCKS OF SHEEP UNDER VARIOUS GROUPINGS IN THE SEVERAL PASTORAL DISTRICTS OF THE STATE FOR THE YEAR 1925.

Pastoral District.	1 to 500.		501 to 1,000.		1,001 to 2,000.		2,001 to 5,000.		5,001 to 10,000.		10,001 to 20,000.		20,001 to 50,000.		50,001 to 100,000.		100,001 and Upwards.		Totals.	
	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.
Burke	27	3,726	3	1,956	15	26,891	80	285,325	107	747,981	44	614,615	26	772,849	7	475,427	...	...	309	2,928,780
Burnett	80	3,123	1	800	1	1,340	...	...	...	...	...	...	...	...	82	5,263	...	...	...	5,263
Cook	7	270	...	...	...	...	...	...	...	...	...	...	...	...	7	270	...	...	...	270
Darling Downs	700	124,475	183	138,186	134	298,685	123	403,762	43	336,797	22	300,928	8	285,384	...	...	...	...	1,273	1,862,217
Gregory North	15	1,930	7	5,703	7	10,467	40	150,825	39	276,083	21	298,529	14	447,111	...	...	...	...	154	1,904,021
Gregory South	8	777	2	1,657	7	17,792	10	33,254	3	21,859	5	64,316	3	87,928	...	...	...	...	39	286,189
Leichhardt	130	20,219	45	33,732	59	84,540	55	170,297	18	117,201	11	154,713	11	398,368	...	...	...	...	329	979,070
Maranoa	176	33,697	89	66,774	139	213,740	183	594,489	73	518,662	39	531,048	20	577,070	...	...	...	...	722	2,785,128
Mitchell	49	6,183	20	16,496	52	80,513	144	515,313	160	1,113,796	100	1,386,841	50	1,558,559	...	...	...	...	600	6,696,458
Moreton	263	10,570	5	3,104	1	1,208	4	10,375	...	...	...	...	...	...	...	...	...	...	273	25,257
North Kennedy	40	3,928	1	600	...	...	...	...	...	...	...	...	...	...	...	...	...	...	41	4,528
Port Curtis	89	6,257	...	...	4	6,156	2	6,049	...	9,000	...	...	...	...	...	...	...	...	96	27,462
South Kennedy	19	2,761	7	5,591	7	9,805	5	16,627	3	21,642	2	26,672	...	...	...	...	...	44	154,642	
Warrego	34	3,827	19	15,461	44	70,885	154	512,358	73	523,310	42	554,280	19	578,829	...	...	...	...	394	2,938,281
Wide Bay	123	4,057	...	...	1	1,700	...	...	...	...	...	...	...	...	...	...	...	...	124	5,757
Totals	1,760	225,800	382	290,070	521	788,722	805	2,701,654	525	3,686,331	286	3,931,942	151	4,707,128	48	3,304,523	9	1,027,153	4,487	20,663,323

Table No. XXXVI.
RETURN SHOWING THE NUMBER OF OWNERS AND THE SIZES OF FLOCKS OF SHEEP UNDER VARIOUS GROUPINGS IN THE SOUTHERN, CENTRAL, AND NORTHERN DIVISIONS OF THE STATE FOR THE YEAR 1925.

Division.	1-500.		501-1,000.		1,001-2,000.		2,001-5,000.		5,001-10,000.		10,001-20,000.		20,001-50,000.		50,001-100,000.		100,001 and upwards.		TOTALS.	
	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.	Owners.	Sheep.
Southern	1,427	186,951	306	231,351	380	574,300	482	1,563,739	197	1,400,628	108	1,450,572	50	1,530,211	11	762,985	2	229,620	2,963	7,930,357
Central	250	29,625	72	56,153	123	182,666	239	838,646	220	1,531,745	133	1,851,290	75	2,404,068	30	2,066,111	7	797,533	1,149	9,757,837
Northern	83	9,224	4	2,566	18	31,756	84	299,269	108	753,958	45	630,080	26	772,849	7	475,427	..	..	375	2,975,129
Total	1,760	225,800	382	290,070	521	788,722	805	2,701,654	525	3,686,331	286	3,931,942	151	4,707,128	48	3,304,523	9	1,027,153	4,487	20,663,323

Table No. XXXVII.
RETURN FOR TEN YEARS SHOWING THE ESTIMATED NUMBER OF CATTLE, SHEEP, ETC., SLAUGHTERED FOR CONSUMPTION AS FOOD IN THE STATE, TOGETHER WITH THE AVERAGE DEAD WEIGHT OF EACH ANIMAL AND THE ESTIMATED QUANTITY CONSUMED PER CAPITA (EXCLUSIVE OF MEATWORKS ENGAGED IN SLAUGHTERING FOR PRESERVATION).

Years.	Mean Population for the Year.	NUMBER SLAUGHTERED.						AVERAGE DRESSED WEIGHT.						CONSUMPTION PER CAPITA.					
		Cattle.	Sheep.	Calves.	Lambs.	Swine.	Cattle.	Sheep.	Calves.	Lambs.	Swine.	Beef.	Mutton.	Veal.	Lamb.	Pork.	Total.		
1916	677,630	178,375	459,716	11,570	20,135	27,405	lb.	43	67	36	88	lb.	29.50	1.15	1.06	lb.	3.54	185.26	
1917	680,313	153,206	412,669	8,467	15,400	29,035	591	43	50	32	86	133.00	25.97	0.62	0.73	3.66	163.98		
1918	688,547	159,066	359,688	5,659	13,665	39,588	576	43	47	29	81	133.00	22.61	0.38	0.57	4.65	161.21		
1919	719,928	204,977	431,508	10,773	16,219	33,986	586	39	50	30	86	166.80	23.41	0.75	0.68	4.08	195.72		
1920	734,379	229,839	417,423	18,144	22,184	25,635	471	43	56	34	91	147.56	24.49	1.39	1.03	3.19	177.66		
1921	764,665	214,547	624,758	33,342	23,948	27,273	583	41	49	30	86	163.64	33.79	2.12	0.93	3.06	203.54		
1922	782,890	251,562	668,673	36,404	25,471	54,620	567	41	51	30	86	182.21	34.93	2.38	0.97	6.00	226.49		
1923	802,748	281,760	538,770	38,916	24,298	63,019	525	40	77	30	85	184.13	26.89	3.73	0.91	6.66	222.32		
1924	825,151	282,516	421,874	42,330	23,843	57,402	547	43	51	30	88	187.19	22.18	2.62	0.87	6.10	218.96		
1925*	851,419	333,095	580,566	49,691	19,969	66,398	543	42	50	30	82	212.28	28.98	2.90	0.71	6.43	251.30		

* Figures based on actual collection.
NOTE.- Total value of By-Products as returned by Slaughter-houses is £710,032.

Table No. XXXVIII.
RETURN FOR TEN YEARS OF LIVE STOCK SLAUGHTERED FOR PRESERVATION AS FOOD, OR FREEZING, OR FOR TALLOW, IN THE STATE, WITH THE QUANTITY AND VALUE OF MEAT, TALLOW, LARD, ETC., PRODUCED.

Year.	MEAT PRESERVED OR FROZEN.										Quantity of Tallow Produced.	Quantity of Lard Produced.	Total Value of all Products shown here.								
	NUMBER SLAUGHTERED.					MEAT PRESERVED OR FROZEN.															
	Cattle.		Sheep.		Lambs.	Beef.		Mutton.		Lamb.				Pork, Salt and Fresh.	Bacon and Hams.	Extract and Essence of Meat Produced.					
1915	...	378,381	59,104	4,432	401,818	259,640	8,638	25,714	174,980	191,459,501	24,500,368	925,778	15,310,521				4,093,104	791,969	12,363,939	884,736	359,544	10,374	698,905	5,295,688
1916	...	358,536	27,470	2,251	395,986	29,875	540	3,363	174,919	191,735,238	23,005,878	386,614	17,070,957	1,362,126	89,322	10,427,619	737,606	189,993	8,394	622,369	5,062,479
1917	...	350,558	28,282	2,441	383,019	25,811	477	2,529	170,490	215,966,464	24,701,915	284,495	8,995,989	1,023,815	95,200	14,791,540	808,518	998,123	9,069	761,060	6,740,976
1918	...	290,342	41,119	2,551	74,640	94,338	46	102	208,498	176,849,345	31,703,394	217,308	3,162,016	3,833	3,833	16,476,490	890,252	277,333	7,889	854,161	5,830,105
1919	...	197,632	45,033	2,782	215,419	48,022	1,168	4,860	166,575	120,675,330	26,603,970	12,632	8,226,181	1,410,136	141,641	12,155,489	721,072	289,656	6,115	659,547	4,503,866
1920	...	186,655	13,109	1,356	18,848	2,631	...	363	132,049	137,343,094	7,341,758	2,433,083	811,616	115,704	11,979	11,337,050	668,445	61,540	4,197	474,326	3,646,033
1921	...	243,059	8,010	1,034	89,287	13,633	13	17,721	160,205	147,710,372	6,829,273	2,193,258	4,062,835	701,774	536,665	12,386,417	1,506,982	25,496	5,981	800,280	3,721,211
1922	...	169,067	14,527	2,234	60,588	3,927	13	7,468	181,108	115,382,280	12,077,237	2,376	2,755,296	14,514	268,342	15,130,545	901,894	107,817	6,020	781,650	2,190,512
1923	...	225,297	16,807	3,672	54,002	476	263	318	200,234	126,584,907	10,721,227	7,410	1,992,022	18,846	11,130	16,219,969	541,923	107,921	4,825	833,159	2,494,136
1924-25	...	539,135	25,144	4,044	452	78	...	...	206,454	235,291,239	23,042,674	77,660	17,082	7,877	...	15,334,549	963,553	182,503	10,931	766,360	4,921,665

N.B.—6,374 swine killed by farmers and 731,211 lb. of pork and bacon made therefrom during 1924 are not included in this table.
* In addition meat valued at £506,874 (approximately) was supplied to the State Butchers' Shops.
† In addition meat valued at £405,358 was supplied to the State Butchers' Shops.
‡ In addition, meat valued at £80,212 was supplied to the State Butchers' Shops.
§ Not including farmers' bacon and pork.

Table No. XXXIX.
RETURN FOR TEN YEARS SHOWING THE QUANTITY AND VALUE OF OTHER PRODUCTS OF MEAT PRESERVING, ETC., ESTABLISHMENTS IN THE STATE.

Year.	No.	Hides.		Skins.		Edible Fats.		Bones.		Hoofs and Horns.		Hair.		Oils, &c.		Manure.		All Other Products.		Total Value
		Number.	£	Number.	£	Lb.	£	Tons.	£	£	Gallons.	Tons.	£	£	Tons.	£	£	£		
1915	...	449,925	704,202	718,737	125,176	4,455,300	122,714	849	8,335	7,611	108,284	4,080	32,244	4,265	9,016	43,131	214,560	1,239,074		
1916	...	396,292	695,004	460,990	129,143	6,185,530	150,639	585	6,456	6,882	103,257	2,750	27,733	5,451	7,238	47,296	192,555	1,233,176		
1917	...	426,610	948,747	290,170	93,547	9,132,507	337,043	648	11,431	8,805	118,839	3,302	23,669	4,439	6,602	50,136	284,259	1,746,709		
1918	...	340,155	740,036	186,569	62,116	8,875,269	242,602	578	10,885	7,978	109,102	2,992	22,961	5,609	5,404	47,379	373,180	1,492,777		
1919	...	291,384	802,167	184,353	57,698	8,295,790	253,336	541	7,979	8,729	118,200	3,469	33,433	9,406	4,710	48,355	467,444	1,658,583		
1920	...	247,210	575,999	23,213	7,777	5,005,730	220,412	439	4,867	8,328	98,384	2,950	20,880	7,759	3,613	43,225	369,979	1,238,326		
1921	...	263,196	276,405	72,232	5,548	7,684,850	168,014	471	5,526	7,961	120,214	3,849	19,278	5,539	3,885	45,126	390,661	803,657		
1922	...	215,397	280,921	68,398	16,603	5,451,586	84,076	288	3,630	7,945	156,889	3,009	12,590	3,163	4,071	44,610	314,576	758,833		
1923	...	245,843	313,978	55,059	27,291	5,379,914	137,750	385	7,692	11,861	169,874	10,098	17,864	4,933	4,718	50,657	340,600	904,860		
1924-25	...	568,134	678,377	559	337	14,465,098	525	845	12,501	27,956	188,801	16,452	45,700	10,363	9,191	80,224	1,86,070	1,643,105		

Table No. XL.

RETURN SHOWING THE NUMBER OF CATTLE AND SHEEP KILLED FOR FARM OR STATION USE IN THE VARIOUS PETTY SESSIONS DISTRICTS OF THE STATE DURING THE YEAR 1925.

Petty Sessions District.	Cattle.	Sheep.	Petty Sessions District.	Cattle.	Sheep.
Adavale	237	2,290	Jondaryan	138	172
Allora	116	108	Jundah	335	1,755
Alpha	697	855			
Aramac	120	2,876	Kilcoy	162	33
Atherton	79	6	Kilkivan	75	38
Augathella	502	2,828	Kiularney	50	72
Ayr.. .. .	108	..			
Banana	413	..	Laidley	42	..
Barcaldine	251	6,840	Logan	39	..
Beaudesert	148	242	Longreach	781	17,833
Biggenden	116	..	Lowood	63	..
Blackall	348	12,747			
Bollon	742	5,569	Mackay	596	45
Boulia	1,150	1,954	Marburg	5	..
Bowen	140	..	Maroochy	43	..
Brisbane	15	1	Maryborough	67	..
Bundaberg	46	..	Mitchell	863	2,194
Burke	705	193	Mount Isa .. .. .	..	..
			Mount Morgan	224	..
Caboolture	16	1	Mount Perry	100	..
Cairns	54	..	Muttaborra	528	11,905
Camooweal	683	..			
Cape River	542	9	Nanango	511	13
Cardwell	44	..	Nerang	44	37
Charleville	911	6,709	Norman	1,657	..
Charters Towers	894	18			
Childers	12	..	Oakey	111	229
Chillagoe	120	..			
Clermont	1,243	5,048	Palmer	306	..
Cleveland .. .. .	..	..	Pittsworth	186	1,735
Clifton	119	538	Proserpine	60	..
Cloncurry	2,162	8,814			
Coen	250	..	Quilpie	310	2,182
Collinsville	513	..			
Condamine	488	93	Ravenswood	68	..
Cook	202	..	Redcliffe	47	..
Cooyar	124	23	Richmond	940	10,969
Crow's Nest	82	9	Rockhampton	1,657	417
Croydon	195	..	Roma	994	2,123
Cunnamulla	626	9,004	Rosewood	14	28
Dalby	1,139	2,666	St. George	902	11,592
Diamantina	424	..	St. Lawrence	479	37
Douglas	2	..	Somerset	19	..
Dugandan	107	13	Southport .. .. .	..	..
			Springsure	1,286	1,690
Eidsvold	344	31	Stanthorpe	200	1,690
Emerald	222	645	Surat	465	3,762
Esk	330	125			
Etheridge	863	..	Tambo	518	6,056
Eulo	293	293	Taroom	846	159
			Texas	101	378
Gatton	56	131	Thargomindah	1,134	1,690
Gayndah	475	25	Tiaro	206	..
Gin Gin	262	40	Toowoomba	30	468
Gladstone	947	61	Townsville	135	..
Goodna	10	..			
Goombungee	19	52	Warwick	425	1,237
Goondiwindi	523	4,178	Wienholt	673	61
Gympie	178	22	Windorah	999	246
			Winton	1,140	12,756
Harrisville	42	1	Woodford	96	7
Helidon	25	..	Wynnum .. .. .	..	..
Herberton	230	19			
Highfields	9	..	Yeulba	179	18
Hughenden	850	4,224			
Hungerford	288	577	Total Killed in State	44,721	186,133
Ingham	198	..			
Inglewood	349	1,809			
Innisfail	13	4			
Ipswich	1	3			
Isisford	460	10,812			

Table No. XLII.

RETURN SHOWING THE RESULTS OF LAMBING, LOSSES, SHEEP KILLED FOR FOOD ON HOLDINGS, &C., IN THE SEVERAL PASTORAL DISTRICTS OF THE STATE FOR THE YEAR 1925.

Pastoral District.	Total Sheep as per Stock Returns on 1st Jan., 1925.	Ewes Mated with Rams.	Lambs Marked.	Percentage of Lambing	Purchases.	Sales.	LOSSES AND THE CAUSES AS RETURNED BY OWNERS, AND THE PERCENTAGE TO TOTAL LOSSES FROM EACH CAUSE.					
							Drought.		Flood.		Fly.	
							No.	%	No.	%	No.	%
Burke	2,654,350	1,227,727	555,120	45.22	606,197	476,464	257,503	66.23	1,997	0.51	11,424	2.94
Burnett	5,296	2,252	969	43.03	2,189	1,906	173	14.98	..	..	156	13.51
Cook	695	95	118	80.51	49	556	..	..	..	..	..	..
Darling Downs ..	1,478,163	478,246	323,644	67.67	775,171	590,878	20,177	18.60	453	0.42	22,044	20.32
Gregory North ..	1,885,035	941,350	392,311	41.68	338,189	333,649	201,028	66.48	1,131	0.37	5,492	1.82
Gregory South ..	292,280	146,352	69,883	47.75	31,887	55,487	39,778	79.49	..	..	1,065	2.13
Leichhardt	947,043	275,103	133,344	48.47	170,646	131,821	29,347	22.03	20	0.02	37,189	27.92
Maranoa	2,416,934	1,089,797	690,275	63.34	836,290	908,529	69,558	30.97	687	0.31	35,814	15.94
Mitchell	6,384,802	3,238,832	1,695,939	52.36	828,324	1,485,326	371,829	56.49	3,327	0.50	40,287	6.12
Moreton	18,047	3,665	2,516	68.65	19,637	12,769	63	4.14	..	..	40	2.63
North Kennedy ..	4,069	1,371	641	46.75	2,780	2,306	162	26.47	..	..	10	1.63
Port Curtis	24,671	8,563	5,017	58.59	32,960	32,019	572	21.22	3	0.11	114	4.23
South Kennedy ..	143,657	60,279	32,161	53.35	21,688	18,847	4,277	18.48	170	0.74	8,642	37.35
Warrego	2,765,960	1,297,870	735,908	56.70	505,234	740,195	142,351	47.32	3,160	1.05	22,399	7.45
Wide Bay	7,250	774	530	68.48	2,574	2,973	922	60.50	8	0.52	158	10.37
Totals	19,028,252	8,772,276	4,638,376	52.88	4,173,815	4,793,725	1,137,740	51.78	10,956	0.50	184,834	8.41

Pastoral District.	LOSSES AND THE CAUSES AS RETURNED BY OWNERS, AND THE PERCENTAGE TO TOTAL LOSSES FROM EACH CAUSE.								Killed for Food on Holding.	Total Sheep as per Stock Returns on 31st Dec., 1925.	Skins Obtained during Year. †
	Dingoes.		Old Age and Lambing.		Other.*		Total Losses and Percentage to Total Sheep.				
	No.	%	No.	%	No.	%	No.	%			
Burke	8,095	2.08	81,570	20.98	a 28,205	7.26	388,794	13.27	21,629	2,928,780	20,100
Burnett	309	26.75	40	3.46	b 477	41.30	1,155	21.95	130	5,263	204
Cook	6	23.08	10	38.46	c 10	38.46	26	9.63	10	270	..
Darling Downs ..	9,117	8.41	34,701	32.00	d 21,964	20.25	108,456	5.82	15,427	1,862,217	16,170
Gregory North ..	7,883	2.61	74,305	24.57	e 12,538	4.15	302,377	15.40	15,488	1,964,021	15,931
Gregory South ..	3,298	6.59	5,555	11.10	f 348	0.69	50,044	17.49	2,330	286,189	5,151
Leichhardt	26,331	19.76	31,540	23.67	g 8,794	6.60	133,221	13.61	6,921	979,070	6,552
Maranoa	25,829	11.50	69,077	30.75	h 23,654	10.53	224,619	8.06	25,223	2,785,128	27,167
Mitchell	56,135	8.53	152,317	23.14	j 34,371	5.22	658,266	9.83	69,015	6,696,458	64,072
Moreton	491	32.30	355	23.36	k 571	37.57	1,520	6.02	654	25,257	352
North Kennedy ..	176	28.76	178	29.09	l 86	14.05	612	13.52	44	4,528	67
Port Curtis	468	17.37	829	30.76	m 709	26.31	2,695	9.81	472	27,462	368
South Kennedy ..	3,389	14.65	6,473	27.97	n 188	0.81	23,139	14.96	878	154,642	590
Warrego	37,251	12.38	81,958	27.25	o 13,695	4.55	300,814	10.24	27,812	2,938,281	23,091
Wide Bay	201	13.19	177	11.61	p 58	3.81	1,524	26.47	100	5,757	1,037
Totals	178,979	8.15	539,085	24.53	145,668	6.63	2,197,262	10.63	186,133	20,663,323	180,852

* Causes included in "Other"— † Year ended 30th June, 1925.

a Blindness, bogging, cancer, droving, eaglehawks, fire, killed for bait, killed for skins, lightning, marking, missing, natural, poison-weed shearing, travelling, unknown, worms.

b Crows, domestic dogs, eagles, grass-seed, poison-weed, worms.

c Ticks.

d Ants, blight, blindness, bloat, bogging, burst on lucerne, bot-fly, cancer, cold after shearing, crows, dipping, domestic dogs, droving, eagle-hawks, fires, foxes, grass-seed, heatwave, hoven, killed for skins, lightning, marking, missing, natural, pink eye, poison-weed, pneumonia, prickly-pear, rain after shearing, snakebite, tetanus, unknown, wild pigs, worms.

e Bogging, cancer, droving, eaglehawks, fire, foxes, grass-seed, killed for bait, killed for skins, marking, poison-weed, shearing.

f Poison-weed.

g Bogging, cold, crows, eaglehawks, goannas, grass-seed, hail, marking, missing, natural, poisoned, rain after shearing, shearing, staggers, worms.

h Blown on clover, bogging, cancer, cold, crows, domestic dogs, droving, foxes, hail, heatwave, marking, missing, poison-weed, prickly-pear, rain after shearing, unknown, worms.

i Bogging, cancer, cold, crows, droving, fire, foxes, grass-seed, hawks, heatwave, killed for skins, lightning, marking, missing, natural, poison-weed, senile necrosis, worms.

k Cold, domestic dogs, footrot, foxes, poison-weed, snakebite, trucking, worms.

l Domestic dogs, hawks.

m Cold, eaglehawks, grass-seed, killed for skins, marking, travelling, worms.

n Crows, eaglehawks, spear grass, worms.

o Bad water, bogging, cancer, cold, crows, fire, foxes, lightning natural, poisoned, prickly-pear, shearing, worms.

p Domestic dogs, worms.

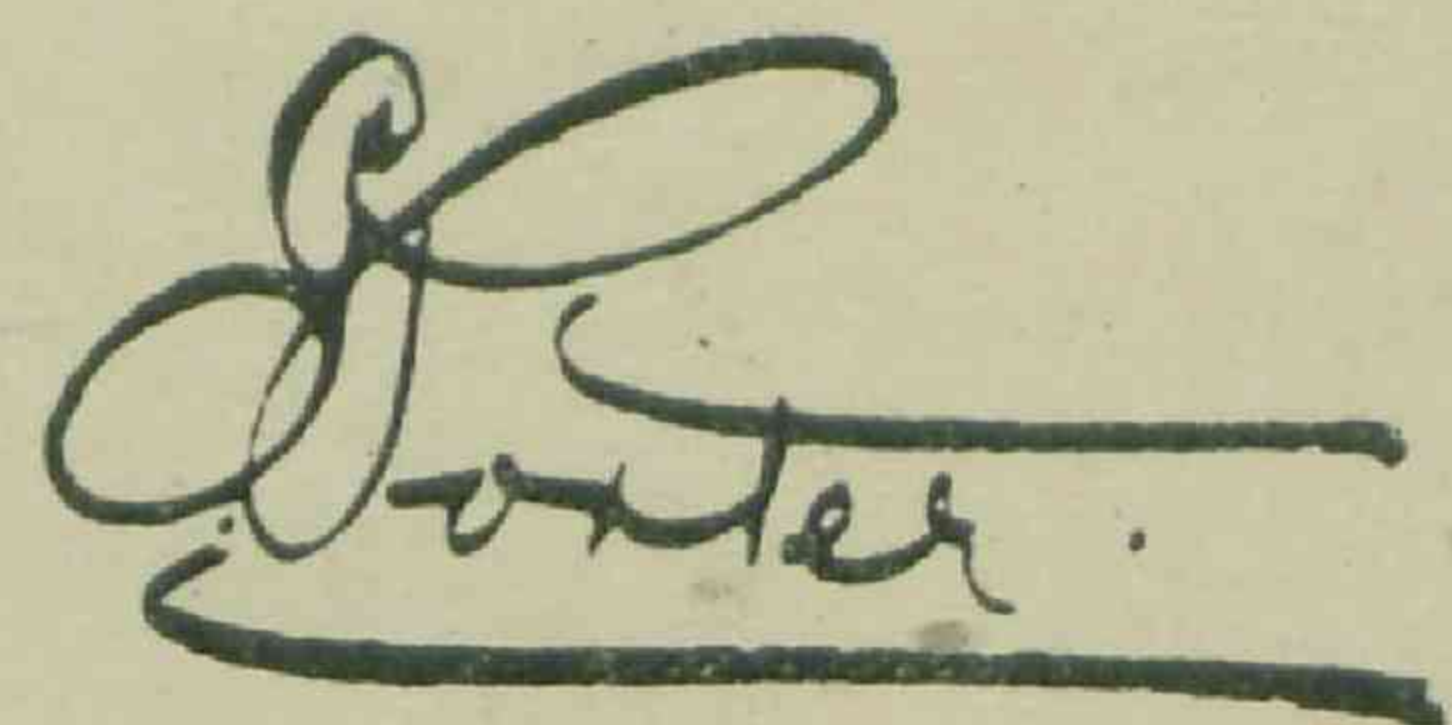
Table No. XLIII.
BREEDS OF SHEEP IN QUEENSLAND AS ON 1ST JANUARY, 1925.

District.	Merino.	OTHER PURE BREEDS.						Merino Come- backs.	All Other.	GRAND TOTAL
		Border Leicester	Corriedale.	Dorset Horn.	Lincoln.	Leicester	Romney Marsh.				Total Other Pure Breeds.
Burke	2,654,057	..	..	..	..	..	..	293	..	2,654,350
Burnett	4,147	..	2	..	..	..	10	12	1,037	5,296
Cook	695	..	..	..	..	..	..	..	..	695
Darling Downs	1,334,917	1	2,295	8	181	99	17	2,601	94,124	1,478,163
Gregory North	1,884,840	..	..	..	..	..	..	195	..	1,885,035
Gregory South	291,956	..	..	..	..	..	..	324	..	292,280
Leichhardt	937,169	..	4	..	54	..	..	58	8,014	947,043
Maranoa	2,397,538	..	259	..	..	..	..	259	16,017	2,416,934
Mitchell	6,343,497	..	..	..	..	..	..	5,002	36,303	6,384,802
Moreton	13,827	*(1) (42)	275	17	..	3	19	357	804	18,047
North Kennedy	1,083	..	..	..	..	..	100	100	1,776	4,069
Port Curtis	12,059	..	8,255	..	..	..	..	8,255	2,598	24,671
South Kennedy	141,958	..	..	..	..	..	..	12	1,687	143,657
Warrego	2,760,615	..	..	..	1,425	..	..	1,425	3,450	2,765,960
Wide Bay	6,654	62	..	..	..	..	60	122	58	7,250
TOTALS	18,785,012	106	11,090	25	1,660	102	206	13,189	132,767	19,028,252
PER CENT.	98.72	..	..	..	..	..	..	0.07	0.70	100.00

* Shropshire.

NOTE.—The above information is the best available, but this being the first year of collection it is reasonable to suppose that the details are not absolutely accurate.

Registrar-General's Office,
Brisbane, 6th October, 1926.



Registrar-General.

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