

QUEENSLAND. DEPARTMENT
OF AGRICULTURE & STOCK

ANNUAL REPORT
1942-43

Q.P.I.D.



1943.
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QUEENSLAND.



ANNUAL REPORT

OF THE

DEPARTMENT OF AGRICULTURE
AND STOCK

FOR

THE YEAR 1942-43.

PRESENTED TO PARLIAMENT BY COMMAND.

BRISBANE:
BY AUTHORITY: A. H. TUCKER, GOVERNMENT PRINTER.

A. 25—1943.

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REPORT OF THE DEPARTMENT OF AGRICULTURE AND STOCK FOR THE YEAR 1942-43.

TO THE HONOURABLE THE SECRETARY FOR AGRICULTURE AND STOCK.

SIR,—I have the honour to present herewith the Annual Report of the Department for the year ended 30th June, 1943.

SEASONAL CONDITIONS.

The year opened with a satisfactory seasonal outlook as a result of frequent light rainfalls during an exceptionally mild winter. Useful rains had improved crop prospects in all sugar districts. Cotton yields exceeded expectations. Wheat crops intended for grain made rapid progress. Dairying prospects were bright, with ample natural pastures supplemented by a flush growth of winter fodders, especially on the Darling Downs. Useful pastoral rains freshened the growth of herbage induced by earlier falls. Most stock routes were open. August was a very dry month but after a very easy winter, free from heavy frosts and cold winds, seasonal prospects continued good. September also was very dry, but timely soaking rains in October established excellent conditions practically throughout the farming districts; and for the time of the year the pastoral outlook was also generally satisfactory. November rainfall was under average. December was a month of phenomenal rainfall, and the whole State was drenched. Registrations ranged from 3½ inches in the Far West to 16 inches on the Far North Coast. In the general farming districts, including Moreton (12.54 inches), Darling Downs (7.91 inches), Port Curtis (8.58 inches), Central Coast (12.32 inches), Central Highlands (8.67 inches) it was probably the wettest December on record. In the pastoral districts, remarkable December rainfalls were: Maranoa, 6.48 inches; Warrego, 7.32 inches; Central-West, 6.11 inches; Carpentaria, 9.97 inches; and Far South-West, 6.24 inches. In January, the seasonal outlook was uniformly excellent and remained practically unaltered until the end of February. March was a very dry month and the seasonal situation then deteriorated. April and May were deficient in rainfall, and June brought no change except in the cumulative effects of dry, cold winds and very severe frosts. After six successive months of dry weather, the seasonal outlook was serious and early soaking rains were an urgent need.

THE PASTORAL INDUSTRY.

The following preliminary figures, compiled by the Government Statistician, indicate the statistical position as on 1st January, 1943:—

Livestock.	Estimate, 1st January, 1943.	Actual Numbers, 1st January, 1942.
Sheep	25,150,000	25,500,000
Cattle	6,400,000	6,400,000
Horses	450,000	460,000
Pigs	315,000	380,000

Pastures, having benefited by general rains in December, were abundant though dry, and this condition reduced the incidence of insect pest attack.

Although wool and fat sheep values were satisfactory, there was little demand for store sheep. Weekly sale yardings of fat sheep were sufficient to meet requirements and quittances were satisfactory to the producers.

There was an increase in fat lamb deliveries, most of which showed evidence of type and quality and correct marketing age, and, therefore, indicated that producers are breeding and fattening on proper lines. Fat lamb raising is now an expanding practice in districts other than the Darling Downs and the production prospects of this important branch of the pastoral industry have improved commensurately.

Merino breeders are continuing to improve flock standards. Merino stud establishments also are increasing in number and should have a gradually extending influence on the maintenance of the reputation of the State for the production of high quality Merino wool. The health and condition of flocks are good.

The increase in the price of wool has added to the stability of the industry and strengthened confidence in its future.

VETERINARY SERVICES.

Investigations into animal diseases and diagnostic work were somewhat limited as the result of calls made on the veterinary staff for war duty. Prevention rather than cure has always been the aim, and this is all the more essential because of present national food requirements.

AGRICULTURE.

Seasonal conditions from October until January were very favourable for the establishment and rapid development of a wide range of summer crops.

Sugar.—Production of raw sugar for the 1942 season was only 605,615 tons, the lowest since 1932, and 92,000 tons less than the 1941 output. Cane harvested totalled 4,350,487 tons, thus 7.18 tons of cane were required to produce 1 ton of sugar—a value exceeded only once in the last fourteen years.

The average price of sugar was £18 13s. 11d. per ton, compared with £17 18s. 4d. for the previous season's output, and the value of the crop was, therefore, approximately £11½ million.

The lower production of 1942 was attributed to unfavourable seasonal conditions in some districts, restricted plantings, and shortage of labour and fertiliser.

The Commonwealth Government has set an objective of 600,000 tons of sugar for the 1943 season, but the preliminary estimate falls short of this target.

Cotton.—Cotton acreage was reduced because of adverse climatic conditions at the normal planting period. This reduction in area and the irregular growing season will, of course, result in decreased production as compared with that of the previous season.

Harvesting was done by detachments of the Women's Land Army in several cotton districts to the satisfaction of all concerned.

The importance of increased cotton production and cotton seed oil and meal has induced farmers with suitable conditions to include cotton growing in their cropping plans.

Wheat.—Wheat grain prospects were very promising early in the season, but the dry period which followed retarded crop development. Because of further set-backs from rust infestation and hail and frost damage, the yield for the year did not exceed 4½ million bushels.

Maize and Sorghums.—Maize crops yielded well and the grain generally was of high quality. The cultivation of grain sorghums is expanding rapidly, especially in districts where the occurrence of rain at the right time for maize is uncertain.

Root and Fodder Crops.—High yields of summer grain and root crops were obtained.

To meet a rapidly increasing demand greater attention has been given to the production of potatoes and other vegetable crops, particularly in the Northern districts. An interesting development was the successful winter production of potatoes in the Ayr and Mackay divisions, which relieved heavily-taxed transport from the South.

Summer sorghum crop reservations provided good grazing of particular value in supplementing the pastures for both sheep and cattle. Other summer fodder crops, including lucerne, were in abundance, but because of the general shortage of farm labour, conservation was not practised as extensively as in former years.

Tobacco.—Tobacco production was below the average of recent years, chiefly because of lack of labour for planting and harvesting.

FRUIT AND VEGETABLE PRODUCTION.

Every effort was made to supply an extraordinarily increased demand for fruit and vegetables. Harvesting difficulties were overcome largely by calling on the Women's Land Army for valuable field assistance.

The production of vegetables as near as practicable to centres of consumption has resulted in large scale production in North Queensland, both on the coast and tablelands.

Arrangements have been completed for irrigation on many farms and for the establishment of a central Women's Land Army camp to provide harvesting assistance.

In other parts of the State vegetable production also has greatly increased. The output of the Granite Belt region is particularly important, since the crops mature in mid-summer, when production from coastal farms is limited. Plans are being made for a further increase in acreage for the coming season.

Pineapple and citrus growers also are contributing greatly to the national war effort by increased production and extension of processing facilities.

PLANT INDUSTRY RESEARCH.

As in the previous year, officers of the Division of Plant Industry (Research) carried out an extensive programme of investigational work in crops of wartime importance and, of these, vegetables continued to receive particular attention. As a consequence, much information of immediate value regarding the nutritional requirements of vegetables was made available to the growers of these crops. Problems in stored products such as flour and peanuts were again the subject of investigation and, in view of the demands of the armed forces for canned pineapples and pineapple juice, work on cultural problems in pineapples was resumed.

The plant-breeding programme in wheat was characterised by encouraging progress in the evolution of rust-resistant varieties and sorghum breeding was maintained on as extensive a scale as present circumstances warrant in the case of this increasingly popular crop, while cotton again received a due measure of attention.

The investigation of the control of plant pests and diseases was, as always, a major responsibility of this Division and here again reasonable progress was made in these problems.

THE DAIRY INDUSTRY.

Dairy production for the year was the highest for any year since the war began, and a large quantity of milk was diverted to fulfil Army contracts.

Increases in the retail prices of butter and cheese, together with the grant of a Commonwealth subsidy, have led to the economic stabilization of the dairy industry.

Cheese production has expanded in a period of two years to about two and a-half times the pre-war output, constituting a record for Queensland, now the highest cheese-producing State in the Commonwealth.

Seasonal conditions were satisfactory until autumn, but since then, because of dry weather, production has declined.

The war-time contract entered into by Britain with Australia for the purchase of all Australia's exportable surplus dairy produce was renewed.

PIG RAISING.

Consumer demand for pig meats continues constant. The demand for better quality breeding stock also has increased. Although present circumstances have placed a great strain on the industry, pig raisers continue to co-operate wholeheartedly with the Department in the maintenance of production in respect of both volume and quality.

POULTRY RAISING.

Production in the poultry industry has been maintained at a pre-war level during the past twelve months. The present market values of poultry products should stimulate greater production. It has been estimated conservatively that hatcheries this year will produce half a million chickens more than in any previous year.

WILD LIFE PRESERVATION.

The preservation of fauna and flora, especially of birds and animals of economic value, as enjoined by the *Native Fauna Protection Act* and the *Native Plants Protection Act*, continues as an important activity of the Department. New sanctuaries have been proclaimed and these and other reserves are patrolled by staff and honorary rangers when and where practicable in present circumstances.

CHEMISTRY SERVICES.

War conditions have intensified the demand on the Chemistry Services of the Department.

The interests of primary producers as purchasers of seeds for sowing, fertilizers, veterinary medicines, pest destroyers and stock foods continue to be served by the Department, which is ever vigilant in its administration of the legislative powers bestowed by the relevant Acts of Parliament.

DEPARTMENTAL PUBLICATIONS.

By the departmental bulletin, pamphlet and advisory leaflet services, as well as by regular Press contributions, radio broadcasting and lectures, an extensive informational service was maintained throughout the year. The popular

demand for the *Queensland Agricultural and Pastoral Handbook* series has been extraordinary. One volume is already out of print and the position in respect of the whole series will soon warrant consideration of the preparation of second, and revised, editions.

It has been decided to resume publication of the *Queensland Agricultural Journal*, which was suspended in December, 1941, because of the precarious war situation. At the time of its suspension, the *Journal* had attained an annual distribution of 113,000 copies. Concurrently with the reissue of the *Journal* the *Weekly News Bulletin* will, because of the general newsprint position, cease publication.

The Photographic Section and the Central Library Service also had a very busy year.

MARKETING.

The soundness of the farsighted departmental policy directed to the development of an efficient system of marketing primary products on a commodity basis has been demonstrated in a remarkable way under wartime conditions. In co-operation with the Commonwealth authorities, State marketing boards, constituted under the *Primary Producers' Co-operative Organisation Act*, have taken an effective part in the administration of measures of commodity control applied under the *National Security Act*. The existence of a marketing system so readily adaptable to war emergency has proved of immense benefit, not only to primary producers but to the people generally. One new commodity board to control the marketing of ginger has been established.

WAR AGRICULTURAL COMMITTEE ORGANISATION.

The War Organisation Committee organisation, which was established in the course of the year as part of a Commonwealth-wide scheme, is performing a valuable national service in its attention to the many problems and difficulties affecting primary production as a consequence of war conditions. The Director of Marketing is the executive officer for the State and the organisation and functions of district war agricultural committees, which now number thirty-nine, and of many local sub-committees, are outlined in another section of this report.

EMERGENCY FOOD SUPPLY.

Success has attended the administration of the emergency food supply scheme, set up in accordance with the *National Security (Emergency Supplies) Rules* operating under the direction of the Secretary for Agriculture and Stock, and large reserves of essential foodstuffs have been maintained at appropriate centres. The success of the scheme is due in appreciable measure to the willing and practical co-operation of merchants and retailers, who have thus rendered good service to the State.

WAR SERVICE.

Very many officers of the Department are on war service at home and abroad with the Navy, the Army, and the Air Force and Women's Auxiliaries, while many other officers have been seconded for duty with Commonwealth Departments associated with wartime national service. The grand total for all services is now 172. The deaths while on operational flights with the Royal Australian Air Force of Sergeant-Pilot R. Walsh, Sergeant-Observer H. Grimes (death presumed), and Pilot Officer H. Gaultier, D.F.M. (believed killed), and of Private R. S. Daly, A.I.F., Infantry, and Private E. R. Boyd, A.I.F., Machine Gun Battalion, both killed in action, are recorded with deep regret.

Two officers of the Department have been decorated for distinguished service in the field.

ANNEXURES.

Detailed accounts of the work of the Department during the year are contained in the report of the Director of Plant Industry (Research), the Director of Agriculture, the Director of Cotton Culture, the Director of Fruit Culture, the Director of Dairying, the Senior Instructor in Sheep and Wool, the Poultry Expert, the Registrar of Brands and of the Veterinary Surgeons Board, the Agricultural Chemist, the Officer in Charge of Seeds, Fertilisers, Veterinary Medicines, Pest Destroyers, and Stock Foods Investigation Branch, the Director of Marketing and State Executive Officer of District War Agricultural Committees, the Registrar of Co-operative Associations, the Secretary of the Emergency Food Supplies Organisation, and the Editor of Publications—all of which are incorporated herein.

I am, Sir,

Yours faithfully,



Under Secretary.

REPORT OF THE DIRECTOR OF PLANT INDUSTRY (RESEARCH).

The staff of the Division of Plant Industry (Research) continued to devote the major part of its energies, during the 1942-43 departmental year, to the investigation of the group of problems selected earlier as being of outstanding and immediate importance under the prevailing wartime emergency conditions. Vegetable problems were again featured in the Division's programme, cotton continued to receive a considerable measure of attention, stored products problems in flour, peanuts, and other foodstuffs were under detailed investigation, citrus projects absorbed a reasonable share of the available facilities for investigational work, and pineapples once more came into the general picture because of the greatly increased demand for canned pineapples and pineapple juice for consumption by the armed forces. These and other projects, which ranged over a wide field, embracing plant breeding, plant physiology, entomology, plant pathology, botany, soils and soil moisture requirements, are discussed in the following paragraphs. As has been the case in the past, the Division's officers, in addition to handling the investigational programme which is their main responsibility, dealt with a large volume of inquiries, particularly in those subjects in which some laboratory examination is a necessary preliminary to the making of appropriate recommendations.

COTTON PLANT-BREEDING.

Unsatisfactory conditions once more exercised a prejudicial effect on the cotton-breeding programme, and, indeed, 1942-43 was a definitely less satisfactory year than 1941-42 in this respect. Nevertheless a considerable measure of progress can be recorded although, in some important sections of this project, the adverse conditions were sufficiently serious to eliminate any possibility of achieving success.

The work in the Triumph variety suffered seriously, important breeding plots being destroyed in both the South and Central Burnett. Fortunately the main Triumph breeding area in the Lockyer district yielded some promising material in spite of the fact that it was affected by excessive rain in mid-summer and then by exceptionally dry weather later in the season. Several progeny increases from the OS.39-1 strain of Triumph, which appear to be superior to the present strain, were retained for further work. As the OS.39-1 strain has already demonstrated its superiority over the bulk stock of Triumph in strain trials at Biloela and in the Lockyer, this apparent further progress in the improvement of a variety which is of very considerable importance to the Lockyer, Brisbane Valley, and Fassifern districts is gratifying. A large number of promising selections were made in the OG.39-7 strain of Triumph in the Central Burnett; this strain is one of the most promising cottons evolved for the fertile, alluvial loams of the Burnett Valley and work with it will be continued in order to develop a strain which may be suitable for growing under irrigation in the district.

Satisfactory progress was achieved in the multiplication of the seed stocks of the superior strain of Lone Star, which was referred to in last year's annual report. This strain yielded well and produced a very satisfactory fibre under conditions which were only moderately favourable. Several of the newer Lone Star progenies yielded very promising results in the first extensive field trial in which they were tested. If similar results are obtainable in further field tests of these progenies then there is reason to expect that Lone Star can produce good yields of fibre well suited for much of the Australian spinners' requirements.

New Mexico Acala was another cotton variety which engaged the attention of the plant breeders and the work in this case was continued in the Callide Valley and in the South Burnett. Selection work was also carried out in the Upper Burnett, where commercial plantings of this variety have proved very promising on the alluvial soils in the southern portion of the district. Several very promising progeny increases were retained from the material handled in the South Burnett and these, along with thirty new progenies and selections, will be tested again in this district.

Adverse conditions seriously affected much of the improvement work planned for the Miller variety in the Callide and Burnett Valleys. Consequently no marked progress can be recorded in that portion of the programme which was intended to improve the commercial stocks of seed of this variety. However, a small quantity of mass-selected seed of the leading commercial strain of Miller was obtained and this will enable a replacement stock to be built up for the purpose of maintaining the present reasonably satisfactory standard in this strain.

Once again a great deal of attention was devoted to the production of jassid-resistant strains of Miller both by mass and individual plant selection and by crossing Miller with jassid-resistant varieties which produce cotton inferior in type to that obtained from Miller. Fortunately this section of the work encountered more favourable seasonal conditions than other portions of the cotton-breeding programme. An area of one hundred acres of mass-selected strain 41J, which shows considerable jassid resistance, produced a good stock of seed

and this will be distributed on a commercial scale to the worst jassid-infested areas in which Miller is the variety generally grown; such a distribution will afford partial relief until such time as thoroughly jassid-resistant strains are available for large scale planting.

A high degree of jassid resistance continued to be shown by the Miller strain 111.26-0, which was selected in 1939 out of mass-selected Miller and, as its yielding capacity is high, the seed supply of this strain will be increased as rapidly as possible in order to replace commercial plantings of 41J. This latter strain, as indicated above, has some measure of jassid resistance, but the 111.26-0 strain of Miller is much superior in this respect. Satisfactory progress was also made with the testing of Miller re-selections from earlier strains.

The Miller x U.4 hybridization work has been productive of a wide range of promising material, and some of that which is now available has exhibited a high degree of resistance and a satisfactory yield of fibre of good quality in small commercial sowings in two successive seasons on various types of soil. The behaviour of this material during heavy attacks of jassids has been sufficiently satisfactory to warrant its being tested more extensively. Some very promising newer Miller x U.4 strains were obtained during the season under review, and these had better lint percentages than most Miller strains. As they were considerably more jassid-resistant than twelve commercial varieties with which they were tested, they should yield useful breeding material for further study. Altogether there will be 88 re-selections from hybrid plots and 90 new selections from the hybrid breeding plot at Biloela which can be tested during the 1943-44 season.

The work of producing a suitable jassid-resistant strain possessing predominantly Miller characteristics has progressed sufficiently far to warrant an attempt being made to impart the desired resistance to jassid attacks to some other important commercial varieties. Hence, Ferguson, which is a non-commercial variety possessing a high degree of resistance to jassid and which was obtained from Trinidad, has now been crossed with Triumph. The objective in this case is to evolve an early maturing, jassid-resistant variety which will be suitable for fertile alluvial soils; on such soils the Miller jassid-resistant cottons which the Department has evolved would grow too rapidly in seasons of heavy rainfall.

Qualla is a variety which has produced satisfactory results during recent seasons on certain types of infertile soil on which a vigorous-growing, drought-resistant cotton is required. Unfortunately the growth habit of Qualla restricts its use, under good growing conditions, to infertile soils; however, as it produces very large bolls of superior quality one-inch fibre, an endeavour is being made to increase its range of usefulness by selection work. The objective of this work is to produce a more open type of plant, while retaining the present desirable characters of the variety. Some very satisfactory progeny increases and re-selections have now been obtained as a result of this work which commenced in the 1939-40 season.

CEREAL PLANT-BREEDING.

The wheat-breeding programme again included breeding and observation plots at Kincora and Westbrook on the Darling Downs and observation plots at Yaralla, Wallumbilla, Moggill, and Biloela. At Kincora and in the Callide Valley at Biloela, rust was present throughout the breeding areas and a good test of rust resistance was therefore provided. The severity of the disease at the former centre resulted in the production of severely-pinched grain in the varieties which are in general cultivation in Queensland, whereas quite a number of new varieties and hybrids produced a nice plump grain. Sufficient seed was obtained from one of the most promising of the newer hybrids to plant a seed multiplication plot this season.

Very encouraging results were obtained in a series of tests of the newer hybrids, and a progeny of a Kubanka K.6041 cross yielded approximately one hundred selections of the most promising, all-round material that has been obtained for quite a few seasons.

Nine trials to determine the effect, if any, of the revitalisation of a variety of wheat were conducted, but no appreciable difference in yield was obtained.

Some forty-three named varieties of oats and a quantity of recently bred material were sown at Moggill in the vicinity of Brisbane. These sowings indicated that some of the named varieties are resistant to crown rust, but that is unfortunately not the case with stem rust. A comprehensive rust-resistance trial was conducted at Biloela and, in it, two Victoria x Richland crosses showed up to best advantage in the hay class, while Klein was the best in the grazing class. Most of the recognised grain varieties suffered moderately or severely from rust infection. A barley observation plot was sown at Moggill, but the depredations of birds prevented any seed being obtained from this sowing.

The maize-breeding programme on the Atherton Tableland is still suspended and the only work undertaken on sweet corn during 1942-43 was with the variety mentioned in last year's report. This variety, U.S.D.A. 34, which has provisionally been named Callide, has been tested again with satisfactory results and, in spite of the dry season which was experienced, some 200 lb. of seed was obtained.

SORGHUM PLANT-BREEDING.

The maintenance of supplies of self-fertilized seed of the wide range of sorghum varieties handled at Biloela in recent years was satisfactorily accomplished in spite of the unfavourable seasonal conditions and the prevalence of sorghum midge and corn-ear worm. An interesting feature of the pedigree selection work carried out at that centre has been the isolation of distinct and uniform strains of Kalo, Wheatland, and a number of dwarf grain sorghums. Two strains of Kalo are shorter and earlier than the normal type and may offer a solution to the problem of the lodging of crops on the scrub soils. One strain of Wheatland possesses a very open head and may therefore be of value in coastal areas, because, in such areas, corn-ear worm and yellow peach moth are serious pests of grain sorghums. Improvement has also been effected in some of the saccharine sorghums by the isolation of the better types or the elimination of the weaker ones. The cross-pollinated material mentioned in the 1941-42 report was sown and three new crosses of likely combinations were also made. The anthesis of the pollen grains of some of the commoner grain sorghums was the subject of investigation.

Grain sorghum trials, planted on the Research Station at Biloela and on three farms in the district, yielded interesting information on the effect of soil and moisture on the varieties tested. On the heavier forest soils of the valley floor, moisture deficiency was a limiting factor from January onwards and, on such soils, the early-maturing varieties such as Day Milo and, to a lesser extent, Wheatland outyielded the later-maturing Kalo, Hegari, and Ajax. The dry conditions also accentuated the lateness of the later-maturing varieties and rendered them more susceptible to midge attack than is ordinarily the case with these varieties. In the trials and in commercial sowings on the looser scrub soils, growth was more favourable throughout the season and lodging was the limiting factor for the production of good yields. From 60 per cent. to 90 per cent. of the plants in the taller-growing varieties in one of the trials lodged badly, whereas the short-growing Ajax and Wheatland remained erect.

HORTICULTURAL PLANT-BREEDING.

The pineapple section of the plant-breeding programme has received somewhat more attention than was the case during 1941-42, and in view of the demands being made by the services for pineapple products, it is hoped that it will be practicable to still further restore this normally-important divisional activity, particularly in the direction of mass selection of planting material. The fruit from the papaw breeding plots at West Woombye and Nambour was harvested and appropriate details therefrom were recorded. Present circumstances preclude any considerable amount of attention being given to a crop such as the papaw, but it was thought desirable to record the details of the harvested fruit; data are thus being accumulated on which to base further breeding and selection work when conditions are again normal. The American strawberry varieties, which were imported two or three years ago, are being maintained at Nambour, and a few promising tomato crosses were made at Cleveland in the project for evolving disease-resistant varieties. Cowpea observation plots were established at Westbrook and Chinchilla and some small-scale hybridization work was undertaken at Roma. Promising material and useful data were obtained by the plant breeder at all three centres.

PASTURE INVESTIGATIONS.

As was mentioned in last year's report, the pasture investigation programme was virtually suspended in December, 1941. Hence the only agrostological activities that call for comment this year are the Rhodes grass strip cultivation experiment and the grazing trial of the four strains of Rhodes grass supplied by the Council for Scientific and Industrial Research; the work in each case was carried out at Biloela.

The very dry seasonal conditions that prevailed from the beginning of 1943 seriously retarded the growth in all the treatments in the cultivation experiment and, as a consequence, no significant differences in yield were obtained. There was, however, a tendency for the cultivated strips of grass to again outyield the broadcasted areas. Analyses failed to disclose any appreciable differences between the crude protein, P_2O_5 and CaO contents of the water-free material obtained from the various treatments.

All four Rhodes grass strains made such rank growth in December and January that both horses and cows had to be used to graze off the resultant pasturage. Growth was rather uneven in some of the strains, as a result of the varying density of the stands which have now been established for

several years. Accordingly no yield figures were recorded, but the number of animal grazing hours obtained on each strain suggested that the slow-maturing Kenya strain again outyielded the other three.

FRUIT INVESTIGATIONS.

The emphasis which is now being placed on vegetable investigational work in the Stanthorpe district has necessarily precluded any appreciable amount of time being devoted to the apple experimental programme, especially during the summer months. Work thereon has been confined to the maintenance of the two most important experiments in such a manner as to prevent the loss of the considerable amount of time and money already spent on them. These experiments are the ones dealing with the nutritional requirements of young trees and the soil fertility project. Apart from the application of fertilizers, as and when provided for in the original experimental plan, all that has been done in the past 12 months in these two experiments has been to make the necessary growth measurements and to record data for examination at some future date. The large citrus nutritional experiment in the Gayndah district has been treated in a somewhat similar manner; no quantitative effects can, as yet, be recorded in this experiment although the effects of nitrogen deficiency are evident in those trees to which sulphate of ammonia has not been applied.

The hen and chicken condition in Waltham Cross grapes was again the subject of small-scale experiments in the Stanthorpe district and once more the beneficial effects of borax applications were apparent. The method of application and the duration of the efficiency of each individual application are still under investigation; the results obtained to date in these experiments, which have been carried out in co-operation with the Fruit Branch, suggest, however, that soil applications will prove to be more lastingly beneficial than the spraying of the vines with borax.

The effect of fertilizer applications on the incidence of certain papaw diseases has received a slight measure of attention, and evidence, admittedly somewhat inconclusive as yet, has been obtained which suggests that the nutritional condition of the plant has an influence on the susceptibility of the papaw to at least one type of dieback. It will, however, be difficult to reach any finality in this matter until such time as the planting of reasonably-sized experimental areas is once more practicable.

ESSENTIAL DRUG PLANTS.

Investigational work has been continued on the native tree, *Duboisia myoporoides*, and a field experiment has been laid out at West Woombye with the objective of testing both the quality and the quantity of the yields obtained from a number of strains of this important source of hyoscyne. Another species, *Duboisia leichardtii*, is also under investigation, and the work on the other drug plants mentioned in last year's annual report has continued. This essential drug plant investigation is a co-operative project between the Council for Scientific and Industrial Research and the Department.

COVER CROPS AND GREEN MANURES.

During the period under review, work with cover crops and green manures was largely confined to the vegetable-growing districts in the vicinity of Brisbane. The species and varieties tested in summer were maize, giant setaria, Japanese millet, Poona cowpea, Iron cowpea, peanut, two species of *Crotalaria*, two of *Dolichos*, and one species each of *Phaseolus*, *Glycine*, and *Stizolobium*. Under the adverse conditions which prevailed the best results were obtained from the maize, giant setaria, and Poona cowpea plots. Algerian oats, Dun field pea, purple vetch, New Zealand blue lupin, and tick bean were the varieties tested in winter; unfortunately, as was the case with the summer experiment, adverse climatic conditions were encountered. The New Zealand blue lupin and a mixed planting of Algerian oats and Dun field pea gave the heaviest yields in this case.

VEGETABLE NUTRITIONAL INVESTIGATIONS.

As was the case last year, a great deal of time has been devoted to vegetable nutritional problems, work on both major and minor elements being featured prominently in the programme. Quite a number of these problems with which Queensland is faced have been created by the prevailing shortage of fertilizers; others have arisen from the necessity for reducing work by both men and machines to an absolute minimum; still others have their origin in the production of vegetables in localities and by farmers not previously concerned, apart altogether from problems created directly or indirectly by the war, there is a large and important field for investigational work in vegetable production and there is therefore ample justification for the amount of time that has been devoted to vegetables during the past twelve months. The extent of that work is evidenced by the fact that field experimental plots were established at Redland Bay, Cleveland, Sunnybank, Aspley, Nudgee, Nambour, Woombye, Buderim, Cooroy, Mundubbera, Gayndah, and Stanthorpe.

The three fertilizers most commonly used, under normal circumstances, in vegetable production are sulphate of ammonia, superphosphate, and sulphate of potash, and, as each of these is at present in short supply, the nature of the work to be undertaken on major elements was somewhat clearly indicated. The field experiments demonstrated that dried blood is a good substitute for sulphate of ammonia as a source of nitrogen, and it is therefore worthy of further investigation. On the other hand, nitrate of soda gave results which were far from promising and apparently it cannot be used, except under certain conditions, as a source of nitrogen to replace either sulphate of ammonia or dried blood. Hence as an application of nitrate of soda may be either useless or even harmful it will be necessary, by further experimental work, to determine just what are the conditions under which this fertilizer may be safely and effectively used in vegetable production. Even in the case of dried blood, applications have been known to be followed by ill effects, and on some soils, but more particularly in the Cleveland district, it is necessary to ensure that the roots of young plants do not come into contact with freshly-applied dried blood. Applications of dried blood made just prior to planting, or even somewhat earlier when dry conditions prevailed, have been followed by a yellowing and retarding of growth on quite a number of vegetable-growing properties in this district. It would thus appear that although dried blood is, and nitrate of soda may be, a useful alternative to sulphate of ammonia as a source of nitrogen, the last-mentioned fertilizer is nevertheless still the most important nitrogenous fertilizer ingredient for the majority of vegetable crops and for most soils.

The importance of phosphoric acid has been amply demonstrated in every nutritional experiment on vegetables, and it would appear that, in general, vegetable fertilizer formulæ will have to be built round the basic phosphoric acid requirements.

In so far as potash is concerned, the evidence obtained to date suggests that this fertilizer has generally been used in excess of requirements. Furthermore, although a certain minimum amount of potash is required for normal plant growth, the effect of potash applications on normally fertile soil seems to be manifested in the quality of the product rather than in its quantity. This latter point is sufficiently important to warrant further investigation in order to obtain confirmation of the view now tentatively expressed.

The work on bean fertilizers, to which reference was made in last year's report, was advanced a stage further by experiments at Buderim, Cooroy, Nambour, and Stanthorpe, and, at the conclusion of these experiments, a fertilizer formula, suitable for use in each of the main bean-growing areas, was devised. This formula has been adopted and mixtures complying with it are now being marketed.

As was the case last year, a very considerable amount of time was devoted to the study of minor element requirements in vegetables. The investigation of these minor elements problems, however, is beset with a number of somewhat unusual difficulties. One of the most serious of these is the variable behaviour of plants under different seasonal conditions—e.g., a crop in a particular field may be affected by a very serious physiological disorder, probably as a consequence of a deficiency of some minor element, one season and yet, in the following season, the same crop planted again in the same field may be virtually free from the trouble. Naturally this variable behaviour leads to a number of experiments failing to produce any conclusive results. Laboratory work has accordingly been given an increased amount of attention in the minor elements programme and artificially-induced symptoms due to deficiencies of boron, manganese, copper, and iron have been studied in detail; zinc, cobalt, and molybdenum deficiencies have also been under laboratory investigation.

It would appear that growers have been troubled mostly by boron deficiency, but fortunately the position with respect to this minor element has been reasonably well clarified, although some further work remains to be done. For the most part boron deficiency may be overcome by applying borax dissolved in water to the soil, while the plants are still young, at rates of up to 20 lb. of borax per acre.

SOIL MOISTURE AND IRRIGATION INVESTIGATIONS.

The investigation of the efficient utilisation of water supplies, particularly when used in irrigation, has progressed in a satisfactory manner. A survey of the position has shown that many vegetable-growers habitually waste considerable quantities of water, a wastage which is probably largely due to adherence to the safety-first principle. Such wastage is unfortunate where water is in limited supply, as is the case in many of the market-gardening districts near Brisbane, and calls for some modification in irrigation practices. Water appears to be wasted both because excessive quantities are used at each watering and waterings are made at too frequent intervals. Thus, at times, growers have kept the soil at maximum field capacity throughout the life of the crop, whereas the soil could have been left to dry to 8 per cent. below that figure—e.g., from 22 per cent. to 14 per cent.—without any consequential ill effects. Furthermore, root distribution studies have shown that, in some cases, all the water

available to the plants could have been supplied by a watering representing 80 to 100 points of rain, whereas the growers applied up to the equivalent of 150 points.

The claim that intensive cultivation conserves soil moisture has been the subject of further investigation. In the one case in which the results obtained showed some justification for this contention it was found that five cultivations had to be given to save one irrigation. This particular case occurred on a sandy soil in the Gayndah district.

The question of what planting distances give the optimum utilisation of soil moisture is, of course, an important item in the irrigation investigations. Little progress as yet can be reported in furnishing a reply to this question, but a rather comprehensive series of experiments dealing with the problem has been designed and the work is under way. Such experiments call for much detailed preliminary work on root growth and distribution but, as indicated, sufficient information has been obtained from these preliminary studies to permit of work being initiated on the problem.

The survey of irrigation waters, mentioned in the 1941-42 report, has continued in a satisfactory manner, and advice based thereon doubtless proved very helpful to many vegetable-growers during the prolonged dry spell through which they have recently passed. This survey and the vegetable nutritional work were carried out in large measure as a co-operative project in which officers of the Division and the Agricultural Chemist's Branch are participating.

ENTOMOLOGICAL INVESTIGATIONS.

The protection of stored tubers against potato-tuber moth infestation was again under investigation and some very useful information was obtained in this project. Last year mention was made of the fact that, in departmental experiments, derris dust and arsenate of lead had given adequate protection against this pest for at least two months; unfortunately derris dust is now temporarily unprocurable and the arsenical dust obviously could be used only in the case of seed potatoes. Further experimental work, in which twelve dusts and dips were tested, was accordingly undertaken. When the experimental material was examined at the end of three months it was found that adequate control had been obtained in the tubers treated with derris dust, magnesite, and pyridine, which was used at the rate of one part of pyridine to nineteen parts of kaolin. Keiselguhr and kaolin were almost as efficient, whereas sulphur, silica, and dolomite gave indifferent results, and the dips were definitely disappointing. Magnesite and derris dust leave less objectionable dust residues than the pyridine dust and keiselguhr; all four, however, have commercial possibilities, but more particularly so in the case of the first two. Arrangements have accordingly been made to further test magnesite and derris dust on a large scale in the 1943 spring crop at Gatton.

The potato flea beetle has not been recorded as a serious pest since 1916. Normally it is present every year to a slight extent, the beetle eating small, irregularly-shaped holes in the foliage of its host plant. Unfortunately, in occasional seasons, larval infestation of the stalks becomes very serious and the autumn plantings of 1943 suffered in this respect to such an extent that 60 per cent. of the crop in the Lockyer district, which is one of the most important potato-producing areas in Queensland, was a failure. Arrangements have therefore been made for control experiments in the crop which is now being planted in the Gatton district.

There has been no material alteration in the position with respect to the control of cabbage pests since last year, when the possible alternatives to derris products were discussed. Further experimental work is now under way, but it is obviously going to be a difficult matter to improve on the suggestions already made. Field experiments in pumpkin beetle control were laid down, but unfortunately the beetle population was so low in the experimental area that no worthwhile deductions could be made in this particular project.

Investigational work on insect infestation in peanut kernels was continued at Kingaroy, where seven bins in the silos were made available by the Queensland Peanut Board to test the effect of a paraffin-pyrethrum spray and the use of hessian bin covers on kernel wastage. This wastage problem in stored peanuts is due mainly to fig moth and cadelle attacks on both sound and damaged nuts and to rust-red flour beetle and dried fruit beetle attacks on damaged nuts. It was found that kernel wastage in bins the tops of which were covered with hessian was appreciably reduced, the reduction in all probability being due to the exclusion of kernel-infesting insects. It was also found that sprays, applied at fortnightly and monthly intervals to the upper surface of the bins, produced less satisfactory results than were obtained simply by covering the open tops of the bins. A combination of covers and sprays, however, gave the best results and produced a quite appreciable improvement in the position. It would therefore appear that kernel wastage in peanuts can be materially reduced by the provision of permanent covers on the open-topped bins in order to exclude kernel-infesting insects and by the use of paraffin-pyrethrum sprays above the

bins during the summer months. Other necessary precautions, of course, include the reduction of bin transfers to a minimum, because such transfers tend to increase shell breakages and to distribute infestation throughout the core of the bins. The removal and destruction of bin residues in which insects may continue to breed and from which they may initiate infestation in the new season's crop is a further point in silo hygiene which also calls for the destruction of waste from the sheller; such waste may tend to spread infestation throughout the premises, and its elimination, together with other precautions, are matters to which the Board is naturally giving attention.

The investigation of flour pests was continued both at the mills in the southern portion of the State and at flour-storage centres in the far north. A large amount of very useful information has been collected on the habits and distribution of these insects and, although the work was undertaken because of emergency conditions, the information obtained will be of permanent value in dealing with this group of stored products pests. So far, the central flour depots in North Queensland have been maintained in a very satisfactory condition in so far as insect infestation is concerned, and the precautions adopted in handling the stocks at these centres evidently have been effective.

As in previous years, much time has been devoted to the cotton pest position, corn-ear worm being the main subject of investigation in the Callide Valley, while jassid was the chief preoccupation in the Central Burnett.

Outbreaks of corn-ear worm occurred on most of the farms which had been selected for observational work, and the incidence of the pest on the Research Station at Biloela was satisfactory from the point of view of experimental requirements. Spraying and dusting experiments were conducted on irrigated and rain-grown cotton at Biloela but, under the seasonal conditions which prevailed, no benefit was obtained from the spraying of irrigated cotton. On the other hand, both spraying and dusting of rain-grown cotton with eight applications at weekly intervals from the commencement of flowering appreciably increased the yields of cotton; four spray applications at weekly intervals, beginning four weeks after the commencement of flowering, gave increased pickings, whereas a similar schedule, commencing immediately after flowering started, gave no satisfactory response. A time of planting experiment showed that early planting gave the best yield and an age of land and susceptibility to corn-ear worm attack experiment gave inconclusive results. The dusting of late planted cotton at weekly intervals from the commencement of flowering doubled the yield, which, however, was low in both the treated and untreated plots. It is evident that still further work must be carried out on the somewhat complex problem of insecticidal control of corn-ear worm on cotton, and arrangements are accordingly being made to repeat this year's programme, subject to certain modifications dictated by the season's work at Biloela, during 1943-44.

Good progress was made with the cotton jassid investigation in the Central Burnett, where varietal and strain tests established at Gayndah produced differences in jassid activity early in the growth of the observational plots. Jassid populations, egg-scar lesions, leaf-hair characters, and the symptoms produced by varying degrees of infestation were studied; the information obtained under these headings will be examined in association with the yield figures and the quality of the fibre produced. This work, of course, is not expected to result in the formulation of direct measures for the control of the cotton jassid. It will be remembered that it was actually undertaken in order to shed light on the habits of the jassid and the factors, more particularly in respect to plant characters, which influence the abundance of the pest and the severity of the effect produced by its presence. A clear understanding of these habits and factors should be of material assistance to the plant breeder in achieving his objective—i.e., the production of varieties and strains of cotton which will give a satisfactory yield of good quality fibre in those areas in which jassid is frequently the cause of a serious reduction in the amount of cotton produced. From the 1942-43 season's results it would appear that the required assistance to the plant breeder will be forthcoming.

Red scale in Queensland citrus orchards is attacked by quite a number of natural enemies, including several species of small wasps. The latter may occasionally become sufficiently numerous in the late summer months to quickly reduce a severe infestation to very small proportions, but, even so, red scale can be a very serious pest in the drier orcharding districts if fumigation or spraying is not adhered to as a routine practice. Colonies of a new strain of a red scale parasite, which was introduced from China to California and thence to Australia, were accordingly obtained from the Council for Scientific and Industrial Research and liberated in several Gayndah orchards. It is, as yet, too early to express any opinion as to the fate of these colonies and the part which this wasp, if it ultimately becomes established, will play in red scale control.

The cabbage white butterfly, which is one of the most cosmopolitan of cabbage pests, became established in Aus-

tralia a few years ago and it has now reached Queensland, having been found breeding on cabbages in the Toowoomba district. The measures which normally have to be adopted for dealing with other cabbage pests should exercise some considerable measure of control over this new arrival.

The State's reforestation programme includes the establishment of a number of hoop pine plantations, and losses which have recently occurred therein have naturally caused considerable concern. Small groups of trees have been dying out in these potentially valuable young plantations, groups of dead and dying trees occurring here and there throughout the stand. The chief symptom in this trouble is a terminal dieback which affects either the leader or the branches, although sometimes both are involved; affected trees subsequently succumb and, in some cases, these have been 30 feet in height when they died. Several species of insects have been associated with the affected trees and it was at first thought that they were responsible for the losses. Further investigation, however, suggests that they may not be the cause of the initial unhealthy condition; hence it may be that a combination of two such adverse factors leads to the death of the affected trees. As a weakly parasitic fungus may play an important part in this problem, it has been decided that the project is one for joint investigation by the pathological and entomological staffs, the objective in this case being to decide whether only the insect infestation or the fungus requires to be controlled in order that the young hoop pine plantations may be maintained in good health. In the meantime, immediate steps are being taken to eliminate affected material so as to reduce the rate of spread of the trouble.

The present demand for timber for case making and for building construction is so great that species of trees previously rejected or but little used because of their susceptibility to powder post beetle infestation are now being seriously considered for such purposes. Where the life of the case in which these susceptible species may be used is expected to be in the vicinity of a year or more, and where these species are to be used in building construction, then consideration may have to be given to the treating of the timber with boric acid; action is now being planned for the treatment of susceptible sawn timber by the methods which have already been successfully adopted in the case of plywood veneer.

A total of more than 100 colonies of the lantana leaf bug have by now been liberated at selected centres in lantana-infested territory south of Townsville; these liberation centres extend from the Burdekin delta to the New South Wales border and to the range below Toowoomba. Although, as has been indicated in recent annual reports, the results obtained in these liberations have, on the whole, produced disappointing results, there was a marked improvement in the outlook for a number of the colonies during the past twelve months. Favourable reports have been received regarding the Eungella Range and Mount Bauple liberations, and departmental inspections showed that a colony below the range at Toowoomba was, at the beginning of winter, in quite a promising condition. A very marked improvement can be recorded in the Rockhampton district, where the first colony was liberated at Fairy Bower in 1937. This liberation proved very disappointing for a number of years, but the bug has now spread rather extensively from this and other centres in the vicinity of Rockhampton. A recent survey between Rockhampton and Mount Larcom revealed its presence or traces of its work wherever the lantana was inspected on this 50-mile stretch of highway. It could also be readily located within a radius of roughly 20 miles to the north-west and south-west of Rockhampton.

Doubtless the very mild and somewhat wet winter of 1942 assisted materially in bringing about the improvement in the lantana leaf bug position at the abovementioned centres. Hence it will be most important to ascertain, during the early summer months of this year, just what effect has been produced by the precise opposite in climatic conditions—namely, abnormally cold weather and low rainfall during the winter months of 1943. Should the insect have succeeded in maintaining itself at a reasonably high population level throughout 1943, at the central and southern centres at which it was rather abundant in the late autumn months, then it may eventually develop into quite an important factor in lantana control, even south of Townsville. It must be remembered, however, that even north thereof the bug has, as yet, been unable to eradicate lantana, although it has inflicted severe injury on its host plant.

PLANT PATHOLOGICAL INVESTIGATIONS.

The final picking figures in the 1941-42 cotton seed treatment experiment were not available when last year's report was submitted, and accordingly the results of this experiment could not be discussed then. When they were received it was evident that a reasonably high yield had been obtained for a late-planted crop in the Lockyer; unfortunately, however, although varietal differences in yield were significant, the results obtained in the seed treatment were inconsistent. Circumstances precluded a repetition of this work during the 1942-43 season.

More useful information was obtained from the apple powdery mildew experiment in the Stanthorpe district. When infected tips were counted in the experimental plots it was found that there had been a decided reduction in infection on sprayed trees, but more particularly on the plots in which spraying had been accompanied by heavy pruning. The general appearance of the foliage on sprayed trees late in the season confirmed this observed improvement in so far as disease infection is concerned. Fertilizer applications seemingly exercised no influence on the degree of infection, and when growth measurements were made later in the season the figures obtained, which, however, have not yet been statistically analysed, were somewhat disappointing. The yield figures from individual trees gave no evidence that they had been improved by spraying, pruning, or fertilizing. Work on this project will be continued during 1943-44.

The growing importance of the navy bean crop on the Darling Downs and in the South Burnett has naturally resulted in increased attention being given to the pathological problems arising in this relatively new crop. It was freer from fungous disease incidence than was the case in the 1941-42 crop, the improvement in the position being probably attributable to the drier conditions which prevailed this year while the crop was maturing. Anthracnose, which had been very prevalent in the 1941-42 crop in the Killarney district, was not observed during the year under review. On the other hand, mosaic, which is a virus disease, has been of fairly wide occurrence, although it occasioned serious loss in only one crop; this crop was grown at Maryvale, and the evidence obtained in this case, as well as elsewhere, suggests that this disease is seed borne. Navy beans sown in the black soil plain country on the Darling Downs were, in most cases, severely affected with what is apparently a bacterial infection and several crops in which the trouble occurred were complete failures. Affected crops develop dark-brown lesions on the stem and the plant subsequently yellows and withers; a bacterium is associated with the stem lesions, but the relative importance of this organism and the soil and other conditions which prevailed where these crops were grown has still to be determined. The survey of the disease position in this crop will be continued in order to determine the manner in which disease losses can best be guarded against.

Last year mention was made of the fact that Bathurst burr had been attacked by anthracnose in several districts, but it was felt that conditions then might have been somewhat unduly favourable to the disease. However, it was quite prevalent during 1942-43 and seemed to be generally distributed in the Killarney-Emu Vale area and was also recorded from Maryvale, Brookstead, and Dalby as killing infected plants.

The pathological programme naturally included a number of projects dealing with vegetable diseases, the crops handled including tomato, bean, cauliflower, lettuce, carrot, and pumpkin. In the case of the tomato project the work was confined to a small-scale exploratory experiment to test the suitability of copper oxychloride dust as an alternative to copper carbonate, which may be in short supply. The fillers used with copper oxychloride were kaolin or hydrated lime and, when this dust, combined with lead arsenate and/or sulphur, was applied to tomato crops, no unfavourable effects were produced on the treated plants. Copper oxychloride dust will also be tested for the control of powdery mildew and downy mildew of cucumbers and rockmelons during the course of the next few months. It is hoped that these exploratory experiments will be followed by full-scale tests of this dust on tomatoes later in the new departmental year.

A stem rot of cauliflower with which a species of *Phytophthora* was associated appeared in the Brookfield district, near Brisbane, late last winter and was responsible for considerable losses on one property. The roots of affected plants were not invaded, but red cabbages, which were growing on an adjacent area, suffered severely from a root rot caused by a fungus similar to, if not identical with, that responsible for the losses in the cauliflower crop. Although the affected area was again planted with cauliflowers in the winter of 1943 the trouble has not reappeared, and it may be that the outbreak in the previous year resulted from the very wet soil conditions which prevailed during the whole of the growing period of the crop.

The control of *Macrosporium* leaf spot on carrots was investigated in a field experiment at Wellington Point, and a winter trouble in lettuce received some attention at Aspley, involving the application of soil dressings of lime; it has now been decided, however, that the latter trouble was a physiological reaction to low temperatures. A pathological condition in Epicure beans, which was somewhat akin to halo blight, was also under observation. Inoculation with a suspension of bacteria from Canadian Wonder beans, which were infected with halo blight, reproduced the trouble in the Epicure beans. Attempts to reisolate the organism, however, were unsuccessful. A field experiment on the control of *Fusarium* stem rot of pumpkins by applications of lime was laid down in the Kallangur district, but, although the disease had been present on the experimental area in the previous year, it practically failed to reappear. The area has again been replanted to

pumpkins, and observational work in this project is being continued because it is thought that the disease may once more show up, at least to an extent sufficient to enable some deductions to be made regarding the various treatments.

A root rot which killed out trees on a citrus orchard in the Gayndah district was investigated and the causal organism isolated, thus enabling the orchardist to take appropriate steps for dealing with the trouble. A *Fusarium* wilt disease, which has caused considerable losses in passion fruit in the Mount Cotton district, was found to be most prevalent on acid soils. An experiment in which varying amounts of lime have been applied to the soil prior to planting has accordingly been initiated in the hope that the correction of soil acidity will produce conditions unfavourable to the development of the disease.

The ginger industry at Buderim and Eumundi has recently been expanded in an endeavour to meet the Australian demand for this commodity, and the appearance of a disease affecting both the shoots and the rhizomes has naturally caused some concern among growers. Attacked plants are stunted and yellow and eventually the above-ground shoots die, the earliest-formed shoot being the first to succumb. Decay in the rhizomes may be restricted to a faint, water-soaked discolouration or it may manifest itself in a wet slimy rot; this rhizomal decay may culminate in the reduction of the rhizome to a shell containing the remains of the vascular tissue. The incidence of the disease is not high at present, and departmental officers are accordingly now co-operating with the growers in a seed selection scheme which it is hoped will result in the attainment of a reasonably sound position.

Many late plantings of maize in the Brisbane district were severely affected by wallaby ear and a mosaic-like disease which produced a chlorotic condition of the leaves and a stunting of the plant. Insect transmission of the latter disease was successfully investigated.

LEGUME SEED INOCULATION.

Legume seed inoculum was again popular with growers and a large number of cultures were despatched from Toowoomba to various parts of the State. Lucerne, cowpea, and lupin strains were those most in demand, there being a noteworthy increase in the use of inoculum on lupin in the Stanthorpe district, which indicates the growing popularity of this legume for soil improvement in that area.

The lucerne demonstration plots established at Oakey last year clearly manifested the value of seed inoculation on the type of soil selected for the demonstration. On the other hand, similar plots on first-class lucerne soil at Helidon give no evidence of benefits accruing from seed inoculation.

BOTANICAL INVESTIGATIONS.

There is not much to be said regarding the botanical work within the Division other than to record the fact that the large volume of identification and advisory work normally handled by the Government Botanist and his staff continued to be discharged in a satisfactory manner. One noteworthy feature of the year's work was the amount of attention devoted to a survey of potential rubber-producing plants; this project, of course, is an essential feature of any investigation of the possibilities of producing natural rubber in Australia. A very considerable amount of information has been obtained in the course of this survey.

Investigational work on the flora of Queensland has continued, thus adding to the volume of material available for the publication of additional instalments of "Contributions to the Queensland Flora." This work is an important feature of the botanical programme and is being prosecuted as actively as is practicable under conditions of considerable staff depletion.

APIARY WORK.

Advisory work in beekeeping received appropriate attention, but field inspectional work during the year under review again continued on a greatly reduced scale, largely because of the enlistment of those officers who were responsible for the inspections under "The Apiaries Act of 1938."

PUBLICATIONS.

Officers of the Division contributed a number of articles to *The Weekly News Bulletin* and contributions were also prepared towards the end of the departmental year for publication in *The Queensland Agricultural Journal*, the resumption of which has now been arranged.

ROBERT VEITCH,
Director of Plant Industry (Research).

REPORT OF THE DIRECTOR OF AGRICULTURE.

Because of a greatly increased demand for all kinds of agricultural produce, experimental work had to be suspended to enable field officers to devote their full time to the drive for increased production.

Particular attention was paid to navy bean production and the response of growers was very satisfactory. The estimated total area sown was 2,000 acres, mostly in the South Burnett and Darling Downs districts; although dry autumn conditions reduced yields considerably, quality was high. Yields of up to 14 bushels per acre were obtained. Further expansion of the industry is anticipated, particularly as it is expected that labour-saving harvesting and cleaning machinery will be available.

Some farmers again undertook to produce blue peas under contract, but dry weather and heavy frosts reduced yields. Production of dried peas has been prompted more by the desire of farmers to assist the war effort than by prospects of a handsome profit.

Farmers in the northern agricultural districts again responded splendidly to the appeal to increase potato production for local and army requirements when there is an acute shortage elsewhere.

Despite the fact that seasonal conditions were abnormal, with the potato moth more prevalent than usual, and seed deliveries delayed, excellent yields were obtained. Substantial areas have again been planted for the next crop.

The tobacco yield was one of the lowest for many years, due very largely to labour shortage in the northern districts. In the southern districts the labour position was not nearly so acute, and the chief reason for reduced output was late planting, due to blue mould attack in the seedbeds necessitating re-sowing.

Investigational work on nematode infestation, conducted in collaboration with the Director of Plant Industry (Research), was continued.

The wheat crop, despite hail and rust damage, which caused a substantial reduction in yield, was above average. Co-operation amongst growers overcame a labour shortage during the harvest.

The area sown to maize was approximately the same as that for several years past, and the yield of approximately 3,800,000 bushels was slightly above the average. The quality of the grain was excellent.

Because of the dry autumn, the peanut yield was considerably below earlier estimates although heavier than for the three preceding seasons.

Grain sorghums again showed an increase in production, the yield being approximately 800,000 bushels. The whole crop was bought practically as soon as harvesting was completed, and the demand for this grain for poultry and stock feeding is now such that a further considerable expansion of acreage is warranted.

The amount of ensilage conserved during the year showed a decrease over previous years because of labour shortage.

Because of shortage of staff it was again necessary to discontinue the distribution of selected maize and sorghum seed to farmers. The production and distribution of pure tobacco seed of the most popular varieties, however, was continued as formerly.

Throughout the year, prices for practically all forms of farm produce were high and sometimes realised record prices.

SOUTHERN DIVISION.

DARLING DOWNS.

The July to December, 1942, period was favourable for all classes of agriculture. Good rains were recorded in January, but as the February-March period was unusually dry the dairying outlook deteriorated greatly because of the shortage of green feed.

Light rains during May and June were sufficient to allow for the general sowing of wheat and oats. The failure of winter (1943) crops and the general inadequate storage or absence of conserved fodder, through lack of suitable farm labour, compelled the purchase of feed and, in some instances, the transfer of stock.

Wheat.—Grain made excellent progress up to the flowering stage, when heavy frosts caused considerable damage. With the hail and rust damage which followed, this was estimated to have reduced the crop yield by over 2,000,000 bushels. Harvesting was greatly assisted by willing co-operation amongst growers.

Maize.—Satisfactory yields of good quality grain were harvested.

Navy Beans.—There was a big increase in acreage, particularly around Emu Vale, Wanderoo, and Tannymorel, where about 400 acres were planted; the returns averaged 10 bushels per acre.

Tobacco.—In the South-west, early tobacco seedbeds were

destroyed by blue mould, necessitating replanting, which caused considerable delay in planting out. Growth was uneven and the crop did not show the robust development usually associated with crops in this district. The most outstanding variety was Mammoth Gold. The yield from 661 acres harvested is estimated at 282½ tons (565,000 lb.) produced by 141 growers.

WESTERN DOWNS.

The winter was mild and relatively wet. Spring rains were good and summer conditions until February were excellent for all plant growth. These favourable conditions continued until February, but subsequently they were particularly adverse.

The wheat crop made satisfactory growth, but the grain yield was reduced by rust. Summer crops—including sorghums, maize, cotton, and grasses—made excellent growth throughout spring and summer.

Dairy production reached a record peak for the district and beef cattle were in prime condition months ahead of the usual period for marketing.

Production declined after the hot and dry conditions in February, and at the close of the year winter crops wilted badly. Surface water is scarce and rain is urgently needed.

SOUTH BURNETT.

Seasonal conditions did not favour crop production. The peanut crop suffered extensively from the dry March and April. Early crops matured satisfactorily, but because of the absence of November planting rains large acreages were sown during December. This late crop probably did not average 5 cwt. per acre. The total yield was reduced from a potential 12,000 tons to approximately 7,500 tons.

Maize crops suffered similarly, although the yield per acre from late crops was fairly satisfactory. High prices for white maize will probably result in increased planting of white varieties next season.

Approximately 1,000 acres of canning beans were planted, but seasonal conditions reduced yields to an average of from 1½ to 2 bags per acre, with the best yields around 5 bags.

UPPER BURNETT.

Rainfall at Monto totalled 2,536 points. Last winter was very favourable for general agriculture, while conditions during the remainder of the 1942-43 season were also good, except during March and June.

Hot, dry weather in March damaged maize and grain sorghums; June weather was remarkable for heavy frosts, causing a general setback.

Oats and barley provided ample grazing for dairy stock. Klein, Victoria cross Fulghum, Sunrise, and Victoria cross Richland oats did exceptionally well. Some "Warput" wheat grain harvested for pig feed returned 42 bushels per acre.

Maize and grain sorghum generally returned good yields.

Some excellent quality sweet potatoes have been grown along the Burnett River.

Pumpkins, cabbage, cucumbers, beetroot, carrots, and turnips were also amongst heavy market deliveries.

BUNDABERG.

The season was remarkable for heavy flood rains from December to February, a dry autumn, and heavy winter frosts.

The persistent rain (January-February, over 22 inches) spoilt what promised to be one of the best growing seasons experienced in this part of the State, as all crops—including cotton, tobacco, maize, sorghum, and sweet potatoes—were adversely affected.

Approximately 59 acres of tobacco yielded 30,000 lb. of cured leaf in the Miriam Vale district, while at Bundaberg 1,100 lb. of leaf was obtained from 8 acres.

About 500 small growers planted an aggregate cotton area of 2,500 acres, approximately 2,000 acres of which reached maturity and returned a yield of approximately one bale per acre. Two irrigation plants have been installed under the cotton stimulation scheme. Maize yields were poor but prices high. Pumpkins were in abundant supply. Grain sorghum crops suffered from recurrent midge attack. A good crop of sweet potatoes was available. A normal potato acreage was planted, but June frosts spoilt some of the late crops.

There was a large increase in vegetable plantings, including tomatoes and cabbage. Tomatoes, beans, cucumbers, and other crops susceptible to frost damage were killed by the June frosts.

CENTRAL DIVISION.

ROCKHAMPTON.

The season was favourable for both agricultural and pastoral activities, apart from a dry period between March and May. June rains were sufficient to give 1943 winter crops a good start.

About 3,000 acres were planted to grain sorghums, and some heavy yields were obtained in the Dawson Valley, but production was not heavy enough to meet the demand.

Sweet sorghums continue to be the most popular green fodder crop. November-planted maize produced heavy yields.

Peanuts are being delivered to the marketing board at Rockhampton and it is expected that the total yield will amount to from 80 to 100 tons.

Early planted pumpkins yielded well, providing a heavy supply which glutted the market. Late planted pumpkins and maize mainly failed because of the dry autumn.

A smaller acreage of wheat was planted in the Dawson Valley but yields were mostly above the average.

Stimulated by the high prices paid last season for sweet potatoes, the acreage planted was larger than usual. Digging is now proceeding and the yield and quality is excellent, but the demand is not strong.

MACKAY.

Weather conditions were generally favourable to agricultural production, particularly during the spring.

Approximately 2,700 bags of seed potatoes were distributed, from which about 7,000 bags were harvested during late winter and spring.

Sufficient seed cotton was distributed to plant 700 acres, but the abnormal wet season extending from December to February caused serious damage to forward crops.

Considerable quantities of vegetables were produced for both contract and open markets.

Tobacco production declined considerably, chiefly because of blue mould, which destroyed all late crops. Spring planting assisted by irrigation gives the best results.

NORTHERN DIVISION.

AYR.

Expansion of potato and vegetable production on the Burdekin Delta, Woodstock, and Charters Towers districts was among the chief activities of the year. Difficulties were encountered during the winter of 1942, because of the mild weather and unseasonable rains, as it is found that crops make the best growth when controlled by irrigation, particularly in regard to freedom from pests and disease. After the heavy December-February rains, conditions became very favourable for an increase in vegetable and potato production.

A total of 6,475 bags of seed potatoes were distributed in the Ayr, Home Hill, Ingham, Woodstock, and Townsville districts, resulting in the planting of 750 acres. Although seasonal conditions proved adverse, this scheme enabled growers to supply over 1,500 tons of potatoes in the North. Similar areas have been planted in 1943, and good returns are anticipated.

A substantial increase in vegetable production is now in progress, the chief crops grown being pumpkins, cabbages, tomatoes, cucumbers, and marrows. Sweet corn has returned yields of 2 to 3 tons per acre.

HOME HILL.

The year has been a dry one, commencing with an early "wet" in late December and early January, a wet February, and very little rain since. Pastures are showing the effect of dry weather.

About 230 acres have been planted to potatoes in the Home Hill section, 20 acres at Bowen, and 30 acres at Proserpine, giving a total of 280 acres which is expected to produce 1,200 tons. The fields look well and should yield up to expectations.

Approximately 800 acres has been planted to cotton, which is now in varying stages of maturity.

Vegetable crops extensively planted include tomatoes, pumpkins, carrots, and cabbages.

MAREEBA-DIMBULAH.

The difficulties of the 1942-43 season were increased by labour shortage, and by the scarcity of materials necessary for maintenance.

Dry conditions continued until November, and were followed by stormy weather from December to February and the typical monsoonal rains of late February and March. The wet season was much lighter than usual, but the April-June (1943) period was dull and cloudy, with occasional falls of rain.

Tobacco-growers in the irrigation areas planted up to the limit of their estimates, and because of the favourable conditions for dry area plantings in January and February, a total acreage of 2,300 was finally established, comprising 600 acres irrigated, and 1,700 acres under natural rainfall. Gold Dollar was the most popular variety planted. Seedling production received careful attention, and there was no shortage of good healthy seedlings.

From planting-out onwards, crops made good growth, and the monsoonal rains were light enough not to adversely affect development, although in a few instances there were serious outbreaks of blue mould in the field. The benzol treatment of seedbeds, using galvanised iron covers, and treating every third or fourth night, was widely adopted.

In the irrigated areas, appreciable quantities of otherwise good leaf were damaged by insect attack, as labour was not available for effective control. However, the crops were finally harvested, and returned a good yield of high-quality leaf. Co-operative effort, with the assistance of a small band of week-end workers prevented, to a large extent, serious loss of leaf. The labour shortage was acute in the dry-farmed areas and many farmers were compelled to sacrifice valuable leaf through inability to cope with it as it ripened. Neighbourly co-operation was exploited to the full, but even this was insufficient to harvest such a large area, as compared with the irrigated area.

Total production for the season is estimated at 550 to 600 short tons of cured leaf.

Vegetable production is increasing in the Bibohra, Bilwon, and Koah areas, the chief crops being cabbage, tomatoes, cucumbers, beetroot, carrots, and pumpkins.

REPORT OF THE DIRECTOR, BUREAU OF TROPICAL AGRICULTURE.

The work at the Bureau of Tropical Agriculture at South Johnstone has necessarily been curtailed very considerably by the reduction of staff, but investigations on pasture improvement with legumes and grasses have been continued on a modified scale.

Large-scale investigations have been conducted on the production of rubber from a number of different species of rubber-bearing plants.

A small area has been planted to *Urena lobata* with a view to carrying out experiments in fibre production.

Small additional propagation areas have been planted with coffee and tea.

To provide a nucleus for further plantings, the area under the two strains of derris has been extended.

Sweet potatoes of the best known varieties already grown in Queensland were tried out at the Station, and the Porto Rico variety proved outstanding in both the yield and palatability. Several varieties which were received from the Hawaiian University Department of Commerce and Agriculture are now under trial.

CONCLUSION.

Both field and administrative staffs, in addition to carrying on their normal duties, devoted themselves to many unusual projects associated with wartime agricultural problems. With a cheerful acceptance and efficient performance of many new and onerous duties, and of much extra work because of staff depletion, these officers have rendered valuable additional services to the State.

CHAS. J. McKEON, Director of Agriculture.

REPORT OF THE DIRECTOR OF COTTON CULTURE.

The 1942-43 cotton crop was affected by irregular climatic conditions, which were particularly severe in some sections of the main cotton-growing districts. This especially applied to the Western and Southern districts and the Callide Valley, where very dry conditions ruled from February onwards. One good soaking rain occurring at mid-February over these districts would have greatly increased cotton yields on many farms, which would have appreciably augmented the total production for the State.

The carrying out in the main cotton-growing districts of the programme planned to test the merits of growing cotton with the assistance of supplementary irrigation supplied from individually owned irrigation plants installed on streams and in wells was handicapped by both seasonal conditions and labour shortage. In many instances, shortage of labour prevented irrigationists from efficiently controlling excessive weed growth which developed during a prolonged showery period in December; and, as a result, previously promising crops

failed to produce satisfactorily. In other instances, very promising crops of the irrigation demonstrations as well as nearby rain-grown crops, developed a most unusual unexplained malformation of the flower buds in late mid-season, which severely reduced yields. Where it was possible to maintain a favourable state of cultivation and no malformation of flower buds was experienced, sufficient yields were obtained to indicate once more the value of supplementary irrigation to ensure of timely planting and to assist crop development during mid-season dry periods.

Acreage and Yields.—Details of the acreage under cotton and the yield obtained are included in the report of the Director of Marketing. Once again growers who planted on early-ploughed newly-broken-up grassland, and had sufficient rains for satisfactory plant growth, obtained far better yields than neighbours who planted on late ploughings of either old or new cultivations. In several districts, even under the adverse conditions experienced, yields from 800 to 1,000 lb. seed cotton per acre were obtained by farmers who planted on the early-ploughed newly-broken-up grasslands. These growers also found that row cultivation costs were greatly reduced on such areas, as compared with those incurred on seed beds of other types of preparation. Growers have been advised to increasingly practise this method of cotton-growing, which undoubtedly improves the chances of obtaining profitable yields of cotton under a wide range of soil and climatic conditions.

Harvesting.—Over 300 members of the Women's Land Army were employed during the cotton harvest. Most of them were housed as units of 15 to 50 members in camps or suitable halls, centrally located to sufficient acreage of cotton to keep them steadily employed from mostly mid-April until August. Some 70 of the women came from New South Wales at the peak of the harvesting period, while many of the Queenslanders were sent to the cotton districts after the completion of their work in fruit and vegetable crops at Stanthorpe. The harvesting of summer-grown fruit and vegetables, cotton, and then winter- and spring-grown vegetables fit into a timetable which provides employment for the Women's Land Army over most of the year.

Grades.—The grades of many of the cotton crops have been lower than in most seasons, because of long exposure of the cotton to the weather. Hot dry conditions during February and March forced the crops in the Central district to mature earlier than normally. The scarcity of the regular male labour usually available in this district to pick the early-opened crops, combined with the earlier than normal opening of the main crop, thus presented a serious harvesting problem in this main cotton-growing district which could not be timely solved with the number of pickers of both sexes available. In the other districts, the tendency for the farmer and his family to pick the crop, prolonged harvesting so that grades were also affected in many crops grown in these areas.

Biloela Research Station.—Climatic conditions experienced during most of the season, with the exception of December, were mostly unfavourable for obtaining good yields of any of the crops grown at the Research Station. Winter and spring rainfall was well below normal, and as only light planting rains were experienced in both October and November the cotton crops were dependent on good timely rainfall during the fruiting period of their development. Unfortunately, the rainfall for January and March was well below normal, so the growth stimulated by the showery conditions in December reacted severely to any hot periods experienced in these months, except on the most permeable soils where efficient penetration of the main December storms was obtained. Once again the value of ploughing in the first three seasons following the breaking-up of Rhodes grass was demonstrated. On a very fertile heavy clay loam soil, yields of 546, 636, and 495 lb. seed cotton per acre were respectively obtained on the first, second, and third year

of cultivation after three years' growth of Rhodes grass, as compared with only 328 lb. seed cotton per acre on the companionate-aged cultivations. These gains were superior to those obtained following annually grown summer fodder crops. Other plantings in October on less fertile soil in the first year following Rhodes grass of longer establishment, produced from 800 to 900 lb. seed cotton per acre compared with under 300 lb. on old cultivations.

The value of irrigation for cotton-growing was again demonstrated in the investigations conducted at the Research Station, although the gains realized with irrigation were not as substantial as in previous seasons. Irrigation allowed of an early October planting being obtained which, although mutilated by an extraordinarily severe attack by tip-destroying insects, yielded at the rate of 1,137 lb. seed cotton per acre, as compared with 489 lb. obtained on the companionate-rain grown plots which could not be planted until a month later than the irrigated area, because of the lack of a planting rain. Contrary to previous seasons, a pre-planting irrigation by the furrowing method outyielded where the spraying method was used. As the later irrigation was done by furrowing, it would appear that a greater penetration of the pre-planting watering was obtained with the furrowing method, which provided more subsoil moisture to assist the plants during the dry January—a yield of 1,360 lb. seed cotton per acre being obtained as compared with 1,214 lb. Undoubtedly where irrigation is available on land suitable for cotton-growing, consideration should be given to growing this crop by watering at critical stages of its growth.

Pure Seed.—The work of developing improved strains of the main commercial varieties was retarded by adverse seasonal conditions. In some important varieties, satisfactory progress can be reported, however, details of which are described under the plant-breeding operations of the Division of Plant Industry (Research).

Instructional.—The field staff had a difficult season in which to perform their usual duties. With the wet conditions in December and the shortage of labour on many farms, many decisions had to be made regarding the advisability of trying to save weed-infested areas and the best cultural methods to use where any attempt was made. In several districts, the supervising of the establishment of the camps for the Women's Land Army and the allocation of the units for harvesting operations was the responsibility of the district officers of the Cotton Section. Undoubtedly, without their very valuable and extensive assistance the programme could not have been carried out so successfully.

Insect Pests.—The outstanding entomological experiences of the season were the high incidence of tip-destroying insects in early planted cotton on fertile alluvial soils, and the considerable crop loss due to corn-ear worm in all districts other than the Darling Downs. The malformation of the flower buds which so seriously affected many crops in the Upper, Central, and Coastal Burnett districts and, to a lesser extent, in the South Burnett, was frequently, but not always, associated with corn-ear worm outbreaks. A physiological upset was probably a contributory cause to the phenomenon, characteristic features of which were sterility of the flower buds, persistent involucre even in insect-damaged squares, and abnormal large malformed growth in the calyx. The phenomenon has been recorded in the Central Burnett previously.

Jassids, though numerous late in the season, were probably not important in suppressing yields which were then determined by the considerable moisture shortage in the soil.

W. G. WELLS,
Director of Cotton Culture and
Senior Research Officer.

REPORT OF THE DIRECTOR OF FRUIT CULTURE.

Satisfactory weather conditions in the coastal districts during spring and summer conduced to the production of good quality crops. A dry autumn and severe frosts in June, however, caused considerable loss, offsetting to some extent the beneficial effect of the conditions previously prevailing.

Market prices for all classes of fruit and vegetables remained high. Some districts had record seasonal returns, and, in consequence, many growers have been able to liquidate old liabilities and make provision for improvements and replacements of old and worn machinery. In some areas the use of horse-drawn implements has brought bigger areas into vegetable production, which was impracticable previously, because of difficulties in the continued operation of power-driven machinery.

In respect of some crops—e.g., pineapples and bananas—higher income is not all additional wealth, as these crops require the planting of new areas each year to replace old areas going out of production. Because of labour shortage, also, these replacement areas are not on the normal scale.

Consequently some of the additional income now being received by growers may only be regarded as a return of capital already invested; to that extent, therefore, their new prosperity may not have a sound economic basis.

Administrative work has increased very considerably because of the development of war-time activities.

Vegetable Production.—Close attention has been given during the year to the necessity for increasing the production of vegetables. Additional land and new growers have been brought into the industry, but, because of the scarcity of necessary materials and implements, shortage of labour in recognised good vegetable-growing districts and other factors, it is doubtful whether, in the aggregate, production has increased appreciably.

A system under which farmers were invited to make contracts for Service requirements of vegetables with the Commonwealth at fixed prices, operated throughout the year. Several hundred contracts were handled through this office, and

contracts were signed for the whole of Service monthly requirements for an extended period. It was noticeable, however, that few experienced growers with properly equipped vegetable farms were attracted. Most applicants for contracts were "dry" farmers with only limited experience of commercial vegetable-growing. The result was that, except where very favourable conditions were experienced, most growers could not fulfil their contracts. Actually, for the six months, July to December, only 18 per cent. of the total contracts made for that period were effective. The Stanthorpe district was an exception, and growers there delivered about 80 per cent. of the vegetables contracted for from that district up to the end of April, 1943.

Under the contract system, growers were guaranteed supplies of seed, which were reserved for them, and their fertilizer, wire, cases, and other requirements were given priority. One difficulty of this system was that the experienced grower who did not contract was, because of the general shortage of supplies, often deprived of his requirements and, at times, even had to purchase small packets of seeds of uncertain origin and quality from retail shops. In consequence, production which normally should have been heavy from irrigated farms was seriously reduced. After some delay, Queensland was given a measure of priority in the allotment of the available seed. The production position has since improved considerably.

The past year's experience has shown the need for better organisation of vegetable production. A system of registration of growers in the various districts is necessary in order to be able to properly record potential production and its expansion where it is most needed.

There is a serious shortage of spraying and dusting apparatus to control vegetable diseases and pests. Spare parts for machines already on farms also are urgently required.

Shortage of seed throughout Australia is being offset, to some extent, by local production, in which this State is assisting. Production of such seeds as carrot, beetroot, cabbage, lettuce, and other vegetable seeds is a new venture in Queensland, and, in the course of the year, quantities of lettuce and carrot seed of good quality were produced under Departmental supervision. Contracts have also been arranged for selected growers to produce carrots for seed, to be harvested about the end of 1943. Under this arrangement, growers are paid 8s. 6d. per lb. for farm-dressed seed of good quality, and are guaranteed £100 per acre minimum return.

It is pleasing to record the splendid work being performed by the Women's Land Army on fruit and vegetable farms. Almost without exception growers report that they have been more than satisfied with the service they have received, and there is an ever-growing demand for more women to assist with production and harvesting.

Temperate Fruits.—The apple crop at Stanthorpe was not heavy, but the fruit sized up well, and a better out-turn resulted than was at first estimated. Packing houses, working under difficulties, because of labour shortage, proved a valuable asset to the district, as many orchardists would not have been able to market all their fruit without the service they provided. Both stone fruit and grape growers had a good year, seasonally and financially. The coming season's fruit crop promises to be heavy. An extension of the area under vegetables is planned.

Tropical Fruits.—The report of the Banana Industry Protection Board shows that the area under bananas has declined further by 868 acres. A total of 1,122 acres of new land was planted during the season, but 1,990 acres of unprofitable plantations were eradicated. According to the annual returns of the agents of the Board, there are now 9,693 acres of bananas in the State, 8,470 of which are in bearing. The number of growers was also reduced by 100. Farmers owning plantations now number 2,031.

Bunchy top was again troublesome in the southern part of the State during the warmer months although it was not so severe as in some previous years. The agents of the Board concentrated attention chiefly on areas known to be most seriously affected.

There has been a very considerable increase in the area planted with Lady Finger bananas, particularly in the South Coast district, because of the very high prices being realised for fruit of this variety.

Spring weather conditions favoured the production of a heavy summer crop of pineapples, but severe frosts in early winter damaged several hundred thousand cases of the winter crop. The frosts will also have the effect of limiting production of next summer crop. The shortage of labour and chemical fertilizers is resulting in an appreciable reduction of the area under pineapples, and it is anticipated there will be a serious falling-off in production during the next two years. The position is more serious than appears at first sight, for the reason that the Forces require substantial quantities of canned pineapple and pineapple juice. During the past year 50 per cent. of the total crop was diverted to canneries for the troops.

Shortage of labour and materials has also caused a setback to citrus-growers, the real effect of which will not be apparent for two or three years. Good medium crops were produced in most districts and high market prices ruled.

Other fruitgrowers—e.g., papaw, passion fruit, avocado, and strawberry growers are also being forced to reduce their areas because of the difficulties attendant on production. Lessened production and a greatly increased demand are tending to force market prices higher.

General.—In the Central coastal district, fruit production was well maintained. Vegetable production increased considerably, the quality of the produce being generally high. Some crop failures were recorded where new growers did not follow advice given on the control of diseases and pests.

North Queensland has shown probably the most spectacular increase in production of vegetables. Concentrated drives were made on the Atherton Tableland and in the Ingham and Burdekin districts, where an additional 800 acres of new land was cultivated for vegetables. Arrangements also were made for the expansion of areas on individual farms up to the extent of another 200 acres. More production, however, is still necessary and the drive is continuing. The recent provision of a number of new irrigation plants on northern farms will do much to increase production. Garden tractors obtained from the United States of America under lend-lease terms are being rented to vegetable-growers at an agreed rate. The machines are each capable of cultivating up to 6 acres a day and their use obviously is saving considerable field labour.

Good crops of all fruits, with the exception of mangoes, were also grown in North Queensland, but the demand exceeded the supply, and importations from the South were consequently heavy.

Production of fruit trees from Queensland nurseries has declined greatly because of labour difficulties. There was a shortage of trees last planting season, with the probability that the position may worsen as the war continues. The gross supply of A grade citrus trees from Queensland nurseries during the year aggregated 57,831 trees, but 24,442 of these were sold outside the State. Nearly 58,000 citrus buds were specially selected from approved trees. This is the second highest total since the inauguration of the budwood selection scheme and indicates the soundness of the policy of concentration on only the best citrus varieties.

Experimental work has, of necessity, been greatly reduced. In the North, the orchard of young mango trees budded with selected varieties at Kamerunga is being preserved. The grape variety trial at Charters Towers is also being cared for and is making satisfactory progress.

In the Central districts, trial plots of deciduous, citrus, and avocado trees are being grown at Blair Athol and Targinnie. At Barcaldine the date and citrus experimental plots have commenced to bear fruit.

The date experimental plot in the Condamine district, planted several years ago with seedlings raised from seed of selected American varieties, is thriving and bore fruit for the first time last season. The dates are of excellent quality and the palms will be well advanced when normal conditions again permit of detailed observations being made.

Importations under *The Quarantine Act* amounted to 60,779 parcels, but inspections under *The Commerce Act* were limited to 650 parcels.

H. BARNES,
Director of Fruit Culture.

REPORT OF THE DIRECTOR OF DAIRYING.

The year opened with good seasonal conditions which continued until autumn; since then unusually dry weather has prevailed.

Butter production was 111,511,198 lb. valued at £8,306,330, as against 95,674,500 lb. valued at £6,113,295 for 1941-1942.

Cheese production was 28,514,876 lb. valued at £1,207,212, as against 16,333,932 lb. valued at £602,539 for the previous year.

The substantial increase in cheese production resulted from all new cheese factories having been in full operation

in the period under review. For the first time, the output of the cheese industry exceeded £1,000,000 in value, and Queensland regained the position of the largest cheese-producing State in the Commonwealth.

The proportion of choice butter for export and otherwise was the largest since 1937-1938. Of all cheese graded, 73.16 per cent. was classed as of choice and first quality, compared with 73.17 per cent. last year. The output of some factories, which is consistently satisfactory in quality, was supplied direct to the Services.

The increased subsidy paid to the dairy industry is expected to stimulate production and improve dairy husbandry.

High prices for cows suitable for canning led to extensive culling of dairy herds.

Many stud breeders continue to submit their stock for entry into the advanced register of the respective breeds, and are thus ensuring the maintenance of herd standards.

Details of animals entered for advanced registers:—

Breed.	Passed.	Failed.	Total.
Australian Illawarra Shorthorn	110	16	126
Jersey	116	19	135
Ayrshire	20	24	44
Friesian	3	1	4
Total	249	60	309

Labour and other difficulties have affected the continuance of many herds in the grade herd testing scheme. Only 48 herds, representing 1,796 cows, were tested; the number of butterfat tests was 4,664.

Mechanical milking has become more general since the outbreak of the war, and would still further increase but for the unavailability of small internal combustion engines.

Candidates for certificates of competency in dairy manufactures numbered 112 and included—For milk and cream testing, 44; milk and cream grading, 40; butter-making, 12; cheese-making, 16.

Co-operation between the authorities concerned ensured the continuance of efficient cream delivery services. Approximately 280 gas producer units have been fitted to cream carrying vehicles, but results have not always been satisfactory. Nevertheless, their use, combined with the provision of roadside pickup of cream and the elimination of overlapping in cream pickup by carriers, has resulted in a considerable conservation of liquid fuel.

DAIRY RESEARCH.

The three laboratories at Brisbane, Hamilton, and Toowoomba have again done useful work for the dairy industry. An officer has been appointed to investigate dairy chemical engineering problems. This is the fulfilment of a long felt want, and will undoubtedly result in great benefits to the industry.

BUTTER.

The butter improvement service has now completed three years of valuable work for the industry. This year bacteriological surveys have been made at 20 factories. From 45 factories 3,056 samples of butter were examined, necessitating 18,400 laboratory tests. The hygienic quality of butter has been maintained (see table below), although factories and farms have experienced many difficulties.

HYGIENIC QUALITY BUTTER.

(Figures represent bacteriological quality index.)

Period.	1940-1.	1941-2.	1942-3.
July-September	222	298	299
October-December	177	224	241
January-March	171	246	248
April-June	257	272	243

The composition of the butter has also been maintained at a satisfactory standard.

Year.	Average Moisture.	Average Salt.
	Per cent.	Per cent.
1940-1	15.33	1.24
1941-2	15.42	1.33
1942-3	15.46	1.31

WATER.

Water tests, mostly from butter factories, numbered 119.

MILK.

10,200 samples were examined for the Brisbane Milk Board, viz.:—

Raw milks	8,770
Pasteurised milk	1,138
Pasteurised milk	41
Pasteurised cream	234
Miscellaneous	27
Total	10,200

In addition, a large number of samples were examined for the Services.

Visits were made to farms, factories, and depots in the Metropolitan, Merrimac, Southport, Booval, Darling Downs, South Burnett, Mackay, Ingham, Townsville, and Atherton

Tableland Milk Areas, for the purpose of examination of supplies, surveys of factories and depots, and instruction of suppliers.

The testing of bulk raw milk for the presence of T.B. has been started in co-operation with the veterinary officer associated with milk investigations.

CHEESE.

Starter cultures, numbering 724, were distributed to cheese factories. These cultures have given excellent results in cheese manufacture.

Some factories have had trouble with bacteriophage, now regarded as a serious problem. Laboratory work has shown that all six regular starter cultures have been affected with phage in factories. Fortunately, the phages have been found to be specific, and assistance has been given to factories by forwarding cultures unaffected by the phage causing trouble. Plans have been prepared for a starter building, prints of which are available for factories. It has been found that the most satisfactory method of phage control is the use of a building isolated from the factory, together with strict asepsis.

Experiments on cheese flavour have been conducted with special cultures of lactobacilli. Small-scale laboratory experiments which gave promising results were followed by large-scale factory experiments.

Experiments have been carried out in regard to control of mites in cheese storage rooms. So far, it has been shown that fumigation as ordinarily carried out is not effective, and determination of the most efficient dosages is a subject of further investigation.

Investigations were made on cheese suspected of contamination with anaerobic bacteria. Studies have also been made on anaerobic bacteria in relation to milk and breakdown of milk products.

The first report on investigations on the waxing of cheese has been submitted. Apart from indicating the economic advantages which accrue from waxing, the results show that quality is maintained. Studies are continuing.

Investigations on producing a type of cheese capable of being transported in an unrefrigerated condition were successfully conducted. This product is likely to be of especial value for use in tropical theatres of war and in other circumstances.

On the Darling Downs, factory visits numbered 120, involving 20,000 individual milk tests and numerous farm instructional calls.

PIG SECTION.

The number of pigs in the State at 1st January, 1943, was approximately 315,000 (preliminary estimate as at 1st January), a decline of approximately 37,000, or 15 per cent.

SLAUGHTERING.

	Year 1941-42.	Year 1942-43.
Bacon factories and meatworks	558,681	491,785
Excess export of live pigs over imports	18,948	41,000 (Estimated)
Total	577,629	532,785

The total for this year represents a decrease of 44,844, or approximately 8 per cent. In addition, approximately 70,000 pigs are killed at slaughter houses, and about 4,000 pigs on farm holdings, each year.

BACON.

With the falling off in supplies of live pigs and the fact that service contracts absorb a large proportion of the output of some factories, bacon for civilian consumption is in short supply.

PRICES.

While pig prices have been stabilised to an extent hitherto thought impracticable, the relationship of these prices and the cost of all the foods used in pig feeding, which has risen considerably (and some of which are in short supply), is regarded by some growers as incomplete.

STUD PIG BREEDING.

At no previous stage in the history of the industry has there been such a persistent and payable demand for pedigreed stock for breeding purposes.

NEW MARKETING PLAN.

The *Pig Meats Acquisition Plan* of the Department of Commerce became fully operative during the last month of the year, and with it came the new grading regulations, stabilization of prices, and other matters associated with marketing of pigs and pig meats under war conditions. The new marketing plan opens up great possibilities for the industry.

E. B. RICE,
Director of Dairying.

REPORT OF THE DIRECTOR OF VETERINARY SERVICES

There has been little change in the animal health situation. The cattle tick has appeared in areas not recognised as permanently infested, thereby showing an extension. Buffalo fly has also extended considerably, and is now well established on the north coast of Queensland.

Both animal health stations—Yeerongpilly and Oonoonba—have been concerned mainly with diagnostic work and the vaccination of cattle for tick fever. The last-mentioned activity, mainly because of the higher price now paid for beef cattle, has been increased considerably; 176 stud cattle have passed through Yeerongpilly. No losses occurred among these during vaccination for tick fever.

DISEASE CONTROL.

Cattle Tick.—This parasite has appeared in several places on the Darling Downs during the last year; that is to say, outside the areas recognised as permanently infested. This is by no means a new occurrence, but the outbreaks this year have been more numerous than usual. One of the explanations is probably found in the increased traffic in cattle across certain parts of the Downs; a second explanation is, possibly, an increased resistance of the tick to arsenical dipping fluids, the circumstances of which are at present receiving some consideration.

Tick Fever.—Vaccine was supplied for the inoculation of more than 6,000 head of cattle. This does not represent the total number inoculated, for very many owners vaccinate their own animals, and of the number done in this way there is no official record. Losses from the disease are heavy at times. Forty-six steers were prepared at Yeerongpilly and sold to farmers for use as reservoirs for tick fever vaccine.

Buffalo Fly.—The fly has spread considerably during the last year, and is now found everywhere north of Townsville where climatic conditions are suitable for its propagation. As anticipated, the coastal climatic conditions of North Queensland have been found quite suitable for the propagation of the fly, which is now giving much trouble, particularly in dairy herds in areas where the rainfall is high.

At present cattle movements southwards along the coast from Bowen are not permitted, and no fat stock are arriving at any of the meatworks south of Bowen via the coastal route. Some stock are now being permitted to travel via the Hughenden-Winton railway to the southern meatworks, and the owners of these cattle have to comply with both tick and fly regulations.

The only methods of control available are represented by the use of sprays, but these methods cannot be completely effective. Nevertheless, they have helped to prevent the spread of the fly and have kept much of the coastal area of North Queensland free from the fly for some years.

Investigational work on the use of sprays is being undertaken by an officer of the Commonwealth Bureau of Scientific and Industrial Research, who is at present making a preliminary survey.

Pleuro Pneumonia Contagiosa.—Many outbreaks of the disease continue to occur. It is enzootic in a large area of what is mainly breeding country in North Queensland. This area is a reservoir for store cattle which move out to the fattening areas in many thousands each year. Large numbers of these cattle are vaccinated before removal, but largely because the disease runs an insidious and mild course in many animals, there is no doubt that many "carriers" are to be found among these stores, which are responsible for the setting up of fresh outbreaks. There were 40 officially recorded outbreaks of the disease. One hundred and ninety-two doses of vaccine were distributed from Yeerongpilly and Oonoonba.

Tuberculosis.—The work of tuberculin testing has not extended in the way which was anticipated, largely because of staff shortage. Many herds are on the waiting list. The incidence of the disease is high in many herds in this State. Notwithstanding this, it has been possible to eradicate the disease in some of the herds, provided the tests are repeated at sufficiently short intervals.

In some districts, there is a demand for milk from tuberculin-tested cows, and since a better price is paid for such a product, farmers naturally ask for their herds to be tested.

Details of Animals Tested During the Year.

	No. Tested.	No. Positive.
Tubercle-free herd scheme	3,729	198
Other cattle tested	30,425	947

Brucellosis of Cattle.—The disease is very common in the State, and causes considerable economic loss. It is one of the major problems of the dairy industry. Control is difficult. As is well known, testing by means of the agglutination test will lead to a reduced incidence of the disease in a herd, and if proper control is maintained eventually eradicate it. The average owner will not ask for the test to be applied until

heavy losses in calves by abortion forces him to take some action. In such cases, the incidence of the disease is then found to be very high, and the financial loss involved in removing reactors becomes a very serious one.

Several of the better class stud herds in this State are under the abortion-free herd scheme.

Over 5,000 agglutination tests were made in the course of the year.

McKenzie River Disease.—This disease occurs in the area drained by the McKenzie River in Central Queensland—hence the name—and has been reported on previously. The main symptoms are incontinence of urine, photophobia, followed maybe by partial blindness and rapid emaciation. It causes heavy losses at times. It is mentioned again to record a recent severe outbreak in the Clermont district in April-May of this year. A botanical survey showed the absence of white fuchsia, one of the plants suspected of being a possible cause of the disease. This disease is confined to the yellowwood-brigalow scrub country. Outside these scrub areas the disease is unknown and is said never to occur.

Losses from Ingestion of Poison Plants.—These are always heavy in Queensland, where several well-known poisonous plants have a wide distribution. Some of the more important are:—

- (1) *Trema aspera* (poison peach).—Losses occurred in the Rockhampton district following ingestion of this plant by cattle.
- (2) *Myoporum desertii* (Ellangowan Poison Bush).—Mortalities are recorded from the Clermont district in travelling bullocks.
- (3) *Salvia reflexa* (Mint Weed).—Losses were recorded in travelling cattle on the Darling Downs early in 1943.
- (4) *Nicotiana glauca* (Native Tobacco).—Deaths occurred in travelling cattle in both Central and Southern parts of the State.

SWINE.

No serious outbreak of disease in swine is recorded, but in the aggregate the losses of swine each year from disease and nutritional disturbances in Queensland are very high. The more important diseases are:—

Tuberculosis.—In practically every case where pigs have been found affected with tuberculosis in the abattoir and a tuberculin test applied to the dairy cattle on the form of origin, cases of the disease have been found in the dairy stock. Since most of the pigs which reach the abattoirs in Queensland are bred on dairy farms, tuberculosis in these animals can be traced to milk from tuberculous cows.

Swine Paratyphoid, necrotic enteritis and swine pneumonia are diseases which are very widespread and cause heavy losses each year on many farms.

Swine Erysipelas.—This disease has been recorded for the first time in the State. It has been impracticable with the staff shortage to carry out anything like a proper survey. It is more than probable that the disease is fairly widespread.

Brucellosis of Swine.—This disease has been noted in some herds. As a result of its presence, several of the best herds of stud animals are now under the brucella-free herd scheme.

More than 400 agglutination tests were completed during the year.

SHEEP.

Blowfly Infestation.—Reports indicate that during the last summer there were on more than one occasion swarm waves of flies which caused serious damage.

The educational work commenced by the blowfly schools held last year has been continued by individual officers, and many owners have received instruction in regard to the Mules operation, jetting and general supervision of sheep in order to reduce as much as possible the incidence of fly strike.

Sheep Parasites.—One school largely attended was held in the Clermont district.

Two parasite surveys are now in hand, one on the Darling Downs and the other in the Clermont district.

Tetanus.—An outbreak of tetanus is recorded in the Central district. Infection probably took place through the wounds caused by spear grass.

Labial dermatitis.—This condition is very common, and causes considerable inconvenience, especially at shearing time among the younger sheep. It is often associated with some loss of condition, particularly in severe cases.

Poison Plants.—Losses from the following have been recorded:—

- (a) *Threlkeldia proceriflora* (Soda Bush)—caused losses in the Central districts. It is a plant with a very

wide distribution but is only eaten as a rule by hungry sheep—i.e., such as those untrucked after a long train journey.

- (b) *Malvastrum spicatum* (Marsh Mallow)—causes losses in sheep only when driven. Hence, when the plant is showing its maximum growth—i.e., after the wet season—mustering should be avoided.
- (c) *Verbesina encelioides* (Wild Sunflower).—Reports from one western district were received indicating that this plant was the cause of considerable mortality.

POULTRY.

Stickfast Flea (*Echnidophaga gallinacæ*).—This parasite is confined to a relatively small area in Southern Queensland. Measures to reduce its incidence have been in operation on individual farms for some time. It is difficult, however, to make some owners realise the seriousness of the pest and so get their co-operation.

Leucosis is very widespread in poultry. It is now one of the major problems of the poultry industry, particularly around the city of Brisbane, which is the main centre of the industry.

Coccidiosis is common and occasionally losses are heavy.

Pullorum disease is now not nearly as common, in the Brisbane district in particular, as it was a few years ago. This is undoubtedly due to the application of the coloured antigen test which has been in use for some years.

The number of birds tested has declined. Two reasons are the cause of this; one is the shortage of officers, the other the disinclination of some owners to test because of the now apparently freedom of their flocks from the disease, a result brought about by the testing of previous years.

JOHN LEGG,

Director of Veterinary Services.

REPORT OF THE CHIEF INSPECTOR OF STOCK.

Rainfall in the pastoral districts was irregular. The northern monsoonal rains were again disappointing and, generally, water supplies in the pastoral areas need replenishing, while grass and herbage are also becoming scarce.

Stock maintained fair condition throughout the year, without any severe losses from disease. Forty holdings have been quarantined because of pleuro-pneumonia, as compared with 44 in the previous year.

Preliminary figures of live stock in the State as estimated on the 1st January, 1943, are:—Horses, 450,000; cattle, 6,400,000; sheep, 25,150,000; pigs, 315,000. The number of sheep is about the same as for 1942. Cattle figures remain high and were still increasing at the beginning of this year. The number of horses has risen, while pigs are the only class of stock showing a marked decline in numbers.

The value of store cattle improved and fats have also been in demand at good prices. Southern buyers operated freely throughout the season; interstate movements have increased accordingly. Sheep values have slightly improved during the last six months.

Draught horses of quality have sold freely at good prices. Light and inferior types were difficult to sell.

Additional patrol and inspection work has again been necessitated by the spread of the buffalo fly across the Atherton Tableland.

Twenty-six prosecutions were instituted under the *Diseases in Stock Acts* and convictions were obtained in each case.

TICK CLEANSING.

There have been no extensions of cleansing areas.

The season was favourable for tick propagation, attributable largely to the mild winter following the rains early in 1942. As a result, some of the holdings previously freed from ticks in the cleansing areas became reinfested. All properties so affected have been subjected to rigid control and inspection with regular dipping and spraying.

In present circumstances, the fact that the boundaries have been held practically intact may be viewed with satisfaction.

Good progress is being made in the cleaning up of the infestation in the Injune district. Another dip has been put into commission in this area and several more are in the course of construction.

SLAUGHTERING LEGISLATION.

Field officers have maintained a satisfactory supervision of the requirements of the *Slaughtering Act and Regulations*. Slaughtering premises and shops are being kept in a satisfactory condition and strict observance of sanitation and hygiene has had constant attention. Shortage of labour continues to present some difficulties in those centres where killings have considerably increased.

While necessary repairs to existing slaughter-houses and butcher shops have been made, there has been no new construction of buildings of either type because of wartime restrictions.

There were eight prosecutions under the *Slaughtering Act and Regulations*, convictions being obtained in each case.

Regular inspections of butcher shops and delivery vehicles in the Brisbane abattoir area have been made, and the standard of cleanliness continues to be maintained. Continued enforcement of restrictions on meat delivery has been the means of still further reducing the number of registered vehicles in the area.

Appropriate action has followed the discovery of isolated cases of illegal slaughtering.

Overloading of meat delivery vehicles has been checked to prevent exposure of meat to contamination.

BACON FACTORIES.

Pigs treated at bacon factories totalled 370,516, as compared with 406,051 in 1941-42 and 457,012 in 1940-41. It will be seen, therefore, that each year has shown a marked decrease in pig production. Labour shortage and higher costs have been contributory factors. While 39,882 pigs were slaughtered for export in 1941-42, only 487 were delivered at factories for this purpose in the last twelve months.

In addition, at bacon factories the record number of 48,443 cattle, 16,581 calves, and 7,451 sheep were treated. A large proportion of the cattle slaughtered was diverted to canneries.

Condemnations of swine for tuberculosis numbered 2,023 carcasses and 13,297 heads, as compared with 3,193 carcasses and 14,749 heads for the corresponding period in 1941-42.

A limited amount of field work in tracing the incidence of tuberculosis in pigs following condemnations at bacon factories is still being undertaken. Apart from its being a breach of the Regulations, many farmers fail to realise the danger from infection by allowing pigs to run unrestricted in dairy pastures.

SUMMARY OF STOCK SLAUGHTERED.

The summary of all stock slaughtered throughout the State for home consumption is as follows. It is exclusive of stock killed for export and on farms and stations for private use:—

Inspection.	Bullocks.	Cows.	Calves.	Sheep.	Swine.
Bacon Factories	5,143	33,300	16,581	7,541	370,516
Brisbane Abattoir	67,853	89,148	101,553	692,939	58,653
Department Inspectors	52,518	89,438	31,584	372,094	43,941
Police Acting Inspectors	27,485	42,295	7,295	111,249	16,067
Totals	152,999	254,181	157,013	1,183,923	489,177

L. D. CAREY,
Chief Inspector of Stock.

REPORT OF THE SENIOR INSTRUCTOR IN SHEEP AND WOOL.

Average seasonal conditions up to September were experienced in the sheep pastoral areas. This was followed by heavy summer rains. Feed was plentiful and stock routes open. Late summer was dry, but in most districts there was an abundance of dry feed. Winter has been severe and frosts after showers have markedly deteriorated the pastures. In some districts, there is now a shortage of feed, and rain is badly wanted.

Sheep numbers have continued to increase and it is estimated that there are now 25,500,000 sheep in Queensland. This is a record total for all time.

Health of the flocks has, in the main, been good. Blowfly attacks were prevalent from January until end of March. The early approach of winter checked infestation. Internal parasites in sheep have not been so widely prevalent as in the previous year. Lice and ked have been kept in check by dipping.

Registered sheep studs are making satisfactory progress, both in the quality of the animals produced and numbers available to purchasers.

Fat sheep have maintained values, averaging over the year 3.38d. per lb., plus skin values.

Fat lambs have continued at values payable to the grower, although somewhat restricted by a ceiling price. Over the year true sucker lambs have averaged in the vicinity of 7d. per lb., plus skin values. The quality of fat lambs is improving.

The market for store sheep has, with the exception of young wethers, been sluggish.

Old sheep are not wanted, and when sales have been made prices have been extremely low.

The establishment of dehydration works in regions where surplus old sheep are depastured would greatly relieve the position in respect of what has become a recurring economic loss.

The farmers' wool scheme conducted by the Department in the interests of the smaller growers continues to give excel-

lent practical service to its clients. Prices received have been generally satisfactory. Bales of wool marketed for the season totalled 742.

Field work has continued to cover all phases of sheep work with special attention to the culling of the ewe flocks, and the economy of better rams. This work is gradually showing results in flock improvement. The State average fleece cut compared favourably with that of other States.

During 1942-43 season, wool marketed in Brisbane exceeded the aggregate of the previous year by 2,233 bales, the total being 630,000 bales of the realised value of £12,000,000. This is the highest aggregate yet received under the appraisal scheme operating under the British purchase arrangement.

During the four-year period in which the British Government has been the purchaser, £46,000,000 has been received in the State for wool.

In August, 40,000 bales of new season's wool will be offered. Appraisements have continued uninterruptedly. Storage of wool remains a problem.

JAS. CAREW,
Senior Instructor in Sheep and Wool.

REPORT OF THE POULTRY EXPERT.

Production.—The Queensland Egg Board received from producers the greatest number of eggs received in any one year by that organisation—viz., 7,604,682 dozen. This figure exceeds the previous record by nearly 50,000 dozen. Ordinary household production is not included in this total.

Export.—Increased demand largely obviated export, but for a short period there was an actual surplus, and this surplus had to be sent interstate for drying purposes. The previous year's surplus was over 2½ million dozen, but in the year ended June, 1943, only 536,880 eggs were sent to dehydration plants.

Egg Pulp.—There was an increased but unsatisfied demand for egg pulp. Pulping for local trade had to be discontinued when the supply of eggs was less than the demand for eggs in shell. Quantities pulped for the years ending June, 1942 and 1943, respectively, were 399,975 and 626,280 dozen.

Egg Quality and Values.—Complaints in respect of quality were few because of the inherent good-quality egg marketed by the Board and of quick sale—a factor of considerable importance in the satisfactory marketing of a perishable product. Values have been uniformly high.

Fodder.—Maize and choice lucerne have been scarce and costly, otherwise fodder values have not been excessive. The most disturbing experience was the shortage of poultry foodstuffs. The position was at one time precarious, but the timely arrival of a shipment of barley from the South prevented a

collapse. For the first time the poultry-raiser had been forced to use barley as a grain to any extent. Some 400,000 bushels were handled by distributors in Brisbane. The importation of such a large quantity of barley indicates the need for expanding grain sorghum production.

Registered Hatcheries.—Voluntary registration of hatcheries and blood testing of poultry flocks have been continued.

Table Poultry.—Prices for table poultry have been exceptionally high, making poultry meat a luxury. Many hens have been sold for slaughter before the limit of their profitable life as egg producers because of the high values ruling. This has reduced to some extent egg production estimates, but because of the precarious position of poultry foodstuffs no restraining action could be taken. High values for poultry meat will stimulate the rearing of roosters and so impose a heavy drain on available poultry foods.

Prospects.—Record bookings for the supply of day-old chickens from all hatcheries is the general report, and it is anticipated that at least half a million more chicks will be hatched during the present hatching season. It is expected, too, that relatively high values will rule for both egg and poultry for slaughter. The problem of the poultry-raiser will be to house increased numbers and to obtain a sufficiency of suitable foodstuffs.

P. RUMBALL, Poultry Expert.

REPORT OF THE REGISTRAR OF BRANDS.

DETAILS OF REGISTRATIONS, TRANSFERS, &C., FOR YEAR 1942-43.

—	Number.	Fees Received.		Number since Inception of Legislation.
		£	s. d.	
Three-piece brands registered ..	724	724	0 0	90,343
Cancelled brands reallocated ..	240	720	0 0	7,557
Symbol brands registered ..	65	478	10 0	1,816
Cattle earmarks registered ..	584	584	0 0	29,955
Brands transferred ..	1,315	657	10 0	61,635
Sheep brands and earmarks registered ..	107	70	5 0	13,263
Sheep brands and earmarks transferred ..	82	20	10 0	7,007
Distinctive brands registered ..	11	No fee	..	..
Alteration of address of brands ..	2,667	No fee	..	..
Brands cancelled ..	8	No fee	..	..
Earmarks cancelled ..	98	No fee	..	..
Total .. ..	..	£3,254	15 0	..

There has been a decided increase in the number of registrations and transfers of brands and earmarks for large stock, last year's figures being exceeded by 521, while the total fees collected—namely, £3,254 15s.—is £1,044 15s. more than for the previous year. There are increases both in the registrations of symbol brands, fee £7 10s. (40 extra), cancelled brands reissued, fee £3 (150 extra), and ordinary three-piece brands, fee £1 (133 extra).

Registrations and transfers of sheep earmarks and brands show a slight falling-off, compared with the figures for 1941-42.

There was one prosecution under the *Brands Acts* for illegally earmarking sheep, and a number of warnings were issued to offenders in connection with minor breaches, mainly in respect of careless earmarking and branding.

H. S. ILIFF,
Registrar of Brands.

REPORT OF THE VETERINARY SURGEONS' BOARD.

Since the Act came into force in 1937, 126 registrations have been effected. Five names have been removed from the Register—three for failing to pay the annual roll fee, one because of removal from the State, and one because of death. One new registration was effected.

The total enrolment is now 113; 25 registered veterinary surgeons are serving with either the Army or the Air Force.

H. S. ILIFF, Registrar.

REPORT OF THE AGRICULTURAL CHEMIST.

The laboratory of the Agricultural Chemist, in common with all institutions engaged in scientific work, has been depleted of trained personnel.

Peace-time investigations, whether routine or research, have in large measure given way to problems more directly associated with war-time needs. Although little more than one-third of the former staff remains, many useful contributions have been made to urgent local problems. A small but enthusiastic team of soil workers, drawn from this laboratory and Plant Industry (Research) has been actively engaged in certain phases of vegetable production. On some farms in the most important vegetable producing area of the State they have been able to maintain or increase yields, in spite of reductions in available fertilizer. The information they have gained should not be ignored when post-war land settlement is under review. Hand in hand with their soil studies have gone series of irrigation researches—more particularly with regard to the cumulative effect of dissolved solids on soil conditions and plant growth.

A conjoint investigation with C.S.I.R. into some aspects of the cattle tick problem has been initiated. Much ground work has been necessary and various flaws in long accepted knowledge of such a common poison as sodium arsenite have been revealed.

Analytical data have been accumulated in connection with rubber producing plants.

Examination of various human foodstuffs has been continued and expanded to cover new preparations.

An increased number of specimens connected with accidental poisoning of livestock calls for comment, and warnings against the careless use of arsenic have been issued.

Enlistments in the Services have compelled the suspension of all biochemical research. It has been possible to assemble various results from work on detoxication of essential oils by ruminants and these have been published in their incomplete form by J. M. Harvey.

Other papers are being prepared. In such fields as oxalic acid poisoning, calculi formation and fluorosis, interesting results have been obtained, but are too incomplete for publication.

Co-operation with all branches of the Department has been harmonious and productive of considerable mutual benefit. A communal view point on various problems long awaiting attack has been fostered, and there is every evidence of concerted energies being directed to these as soon as peace returns.

MONTGOMERY WHITE,
Agricultural Chemist.

REPORT OF SEEDS, FERTILIZERS, VETERINARY MEDICINES, PEST DESTROYERS, AND STOCK FOODS INVESTIGATION BRANCH.

The following table sets out a summary and comparison of the year's work of this Branch with the work of the preceding two years:—

	1941.	1942.	1943.
Samples received from—			
Inspectors of this Branch	2,488	1,452	1,018
Chief Quarantine Officer (Plants)	36	5	1
Dealers	2,108	2,063	1,465
Buyers	41	57	19
Government Departments	245	280	236
Referee, Repeat and Experimental Tests	2,532	334	528
Total samples dealt with	7,450	4,191	3,267
Licenses issued	670	628	566
Registrations effected	1,042	811	942
Registrations refused .. .. .	..	17	17
Board Meetings	35	16	7
Number of inspectional visits made to localities other than Brisbane	60	9	11
Analysis carried out for this Branch by the Agricultural Chemists	422	161	43
Prosecutions	1	..	1

Seeds for Sowing.—2,982 samples were examined in the Seed Testing Station, 1,004 being taken by inspectors of the Branch, one received from the Chief Quarantine Officer (Plants), 1,201 from seed dealers, 232 from Governmental sources, with 528 samples representing experimental work.

A considerable number of analyses have been carried out on blue peas and navy beans for the Commonwealth Government.

The germination of many seed samples of—

Cryptostegia grandiflora (rubber vine);

Manihot Glaziovii; and

Kok-saghyz seed (Russian dandelion);

has been determined.

As information relative to the technique involved was not available, a considerable amount of experimental work was necessary.

Notwithstanding a lowering of the germination standard, faulty germination was the cause of 3,592 lb. vegetable seeds being destroyed. Because of the presence of *Datura* 17 bags of farm seeds had to be cleaned under supervision of an inspector; while 476 bags of oats had to be sold as feed, as they could not be economically brought up to the prescribed standard.

The prohibited seeds of *Datura* sp. were found in cowpeas, Japanese millet, white panicum, lucerne, sorghum, sudan and *Urochloa* sp. seeds.

Dodder is still found in lucerne seed while Johnson grass seed (*Sorghum halepense*) was found in sudan, *Urochloa* sp., and Japanese millet seed.

Fertilizers.—Registration of fertilizers numbered 157, and licenses issued totalled 194, and 5 samples were analysed by the Agricultural Chemist. One of these was a sample of material which was reported to be sold by an unlicensed itinerant hawker as a fertilizer. On analysis, it was found to consist entirely of tan bark and to be practically useless as a fertilizer. Sufficient evidence to support a prosecution could not be obtained, but the public were warned of the existence

of a fertilizer racket, and advised to make sure that any fertilizer bought bore a label setting out the percentage of nitrogen and/or phosphoric acid and/or potash present.

Shortage of fertilizer has resulted in a considerable reduction in the number of standard mixtures; cane-growers cannot obtain any pre-war mixtures.

The granulated nitrate of soda now available is a vast improvement on the old style of crystalline material. Nevertheless, because of its hygroscopic nature, it is a very unsatisfactory material under conditions of high humidity. Chemical analysis revealed that it contained 16.3 per cent. nitrogen, which can be considered as very satisfactory.

Fertilizer Rationing.—One of the major activities of the Branch has been rationing fertilizer. Available supplies have been distributed on a priority basis, vegetable, potato, pineapple, tobacco, and fruit cultivation having preference of supplies and transport.

Transport.—The acute position for railway transport of fertilizers for all crops must be emphasised. Except for use in the Granite Belt, all fertilizer consigned by rail from New South Wales to Queensland is via Kyogle. Through consignments to Queensland stations other than to South Brisbane are not available. Therefore, it has to be hauled by road from South Brisbane to the works at Pinkenba (11 miles), Murarrie (7 miles), and Bundamba (21 miles), two of which have railway sidings into the works and the other a siding some 1,000 yards away.

Alternatively, the fertilizer may be transported by motor truck from South Brisbane to Roma street (2 miles), or Newstead (4 miles), and then consigned to consumers' stations. It sometimes happens that railway wagons are not available for transport to consumers' station; then the fertilizer has to be moved by road to Pinkenba, Murarrie, or Bundamba, and, at a later date, carted to Roma street or Newstead. Only a very limited number of wagons are made available at fertilizer companies' sidings. This has necessitated double and treble handling and often establishes a bottle neck, thus retarding the movement of fertilizer and resulting in increased cost. The tonnage carted by motor lorries from South Brisbane to fertilizer companies' works and from those works to wharf or railway siding at Newstead is over 6,000 tons in the five-months period February to June. In normal times, this would have been moved by rail. The extra cost involved ranged from 7s. 6d. to 16s. 8d. per ton. The magnitude of transport undertaken by the Queensland railways under the most difficult conditions must be seen to be realised. This should be remembered by those who are inclined to be restive because of the delays that will inevitably occur while the present conditions prevail. After arrival in Queensland 65 per cent. of the fertilizer has to be moved over 1,000 miles by sea, rail, and road before reaching the consumer.

Sugar Fertilizers.—Taking the year 1940 as the base year, it is obvious that sugar-cane growers have to endure a very serious shortage of fertilizer. In order to consider this matter, it is necessary to establish a true basis of comparison, when it is known that fertilizers only provide the plant foods, nitrogen, phosphoric acid, and potash, the quantity of which varies in different fertilizers; for example, the nitrogen content of sulphate of ammonia is 20.5 per cent. against 16 per cent. in nitrate of soda. There are two grades of superphosphate on the market, one containing 22 per cent. phosphoric

acid and the other 18 per cent.; and muriate of potash may contain 50 per cent. or 60 per cent. of potash. In the course of the year 1940 sugar-growers used 12,638 tons of nitrogen, phosphoric acid, and potash, while in 1942 the supplies to canegrowers amounted to 3,559 tons or 28.16 per cent. of normal usage.

During the first five months of the present rationing period, 1,151 tons of the plant foods—nitrogen, phosphoric acid, and potash—have been delivered.

All fertilizer for north of and including Mackay has to be transported by sea, and where rail transport is required this must be in a southerly direction from the ports.

The supplies available are such that it is hoped a considerably increased amount will be delivered before the end of the current year.

The reduction in supplies can be accounted for by transport difficulties—problems being encountered in shipping, railage, and motor haulage—and shortage of fertilizer.

Suggestions with respect to the rationing of fertilizer for use on cane were made to the Royal Commission on the Sugar Industry, and have since been put into operation with greatly improved results.

Closer supervision will soon be possible, thereby enabling any transgression to be dealt with more quickly. Because of irregular deliveries to different districts, it has been necessary to establish a system of priorities of delivery enabling every grower to receive some fertilizer; this has had to be varied to meet the conditions prevailing in different districts. Those districts which have received least being given first priority on available transport. It so happens, however, that 53 per cent. of the fertilizer is required where greatest transport congestion occurs—i.e., north of Townsville.

A slight delay in issuing authorities to purchase has occurred in some cases, but the system is justified by eliminat-

ing those persons who ask for more than a fair proportion of fertilizer; this it is felt is appreciated by the very large number of growers who have applied for reasonable quantities of fertilizer and so have been able to draw their rations in full.

Veterinary Medicines.—Registrations amounted to 482, all of which were reviewed by the Veterinary Medicines Board before registration. Seventeen preparations were refused registration. The number of licenses issued was 372.

Pest Destroyers.—The second three-yearly registration period for pest destroyers began on 1st January, 1943. To date, 121 pest destroyers have been reviewed and subsequently registered. Eighty-nine samples were received and 20 analyses made.

It was found necessary to control the sale of nicotine sulphate, and its use was restricted to vegetable crops and in combination with copper sulphate as a worm drench for sheep. Special provision has been made for supplies for use by poultry-keepers as a drench against worms. This should direct the available supplies to where the need is greatest.

Stock Foods.—Registrations totalled 182, as against 305 in the previous year. This considerable decrease was due to the prohibition of the manufacture under *The National Security (General Regulations) Control of Stock Foods and Remedies Order* of stock licks containing more than 30 per cent. by weight of mineral substances. The number of samples received totalled 184, while 11 samples were analysed by the Agricultural Chemist.

Because of prevailing conditions there was a reduction in the number of samples examined. Efforts are being made to, so far as possible, ensure that all labels conform to the requirements of the various Acts, and all aid is given to manufacturers to enable them to reduce the size of labels.

F. B. COLEMAN, Officer in Charge.

REPORT OF THE EDITOR OF PUBLICATIONS.

Throughout the year an extensive informational service was maintained by the use of the recognised media, including departmental publications, regular Press contributions, radio broadcasting, and lectures.

The services of the Branch also were made available to newspaper contributors and writers requiring authentic information on the development and progress of rural industry in Queensland. Other information on the contemporary agricultural situation was prepared, as required, and circulated through appropriate channels.

In co-operation with the Army Education Service, lectures and demonstrations by officers of the Department were arranged for troops in military encampments.

The bulletin, pamphlet, and advisory leaflet service of the Department supplies a constant demand for information on the land industries. Many important additions have been made to the technical literature available for general distribution.

Changing circumstances have now made it practicable to resume the publication of the *Queensland Agricultural Journal*, which was suspended in December, 1941, because of the war situation at the time, as from July this year. To conform with present-day needs of rural industry in Queensland, the *Journal* has been redesigned to extend its practical value to primary producers generally. It is intended that the *Journal* shall be definitely a farmers' journal, to which officers of each Branch of the Department shall contribute short, practical, and topical articles from month to month. Although smaller in volume because of the wartime necessity for conserving paper, popular features of pre-war issues, by which the *Journal* became known as a periodical of informational value and handy reference, will be continued.

The country is confronted with a food and raw material problem greater than at any other period in its history, while

the difficulties of production and distribution are without precedent. Cessation of imports, restriction of transport, and abnormal increases of population in certain zones have made it necessary to grow crops new to Queensland or crops new to particular regions. Consequently, many farmers are faced with the necessity of producing and harvesting crops with which they are unfamiliar. In such circumstances, there is a definite necessity of extending the advisory and informational services of the Department.

An inevitable result of wartime conditions is that greater quantities of primary products have to be produced by fewer men. Increased output is imperative, and this, in large measure, can only be attained by more efficient production. For that reason particularly, the reappearance of the *Queensland Agricultural Journal*, as a medium for the dissemination of information and technical advice to farmers, will be welcomed by all concerned.

Concurrently with the reappearance of the *Journal*, the *Weekly News Bulletin*, which was established to supply seasonal farm notes to the public Press, will cease publication because of difficulties arising out of the present newsprint situation.

The Photographic Section extended its services, as required, to other State Departments. The demand for prints, process blocks, and lantern slides for public lectures remains constant.

Many important additions have been made to the Central Library, largely through the exchange service built up in past years with other countries. Through the circulation of monthly accession lists, all concerned are kept informed of the availability of the most recent literature relating to the land and its industries. Sectional libraries within the Department have been well maintained.

JOHN REID, Editor of Publications.

REPORT OF THE DIRECTOR OF MARKETING.

In accordance with the provisions of *The Primary Producers' Organisation and Marketing Acts, 1926 to 1941*, I have the honour to submit herewith my annual report for the year ended 30th June, 1943.

Queensland-grown malting barley reverted to control as a Queensland pool, consequent on the decision of the Commonwealth Government to acquire only malting barley grown in Victoria and South Australia. Commonwealth acquisition of apples and pears also was discontinued in Queensland, New South Wales, Victoria, and South Australia.

The Canary Seed Board, by effluxion of time, has ceased to exist. This is the first of the marketing boards to go out of existence. A new scheme was inaugurated covering the marketing of ginger. The operations of the Egg Board under *The Primary Producers' Organisation and Marketing Acts*

are to be superseded, as from the 5th July, 1943, by a system of control by the Commonwealth Government under *The National Security Act*.

The marketing boards, the activities of which are hereinafter reviewed and which are producer-controlled, with the Director of Marketing as a member ex officio, operate, unless otherwise indicated, under *The Primary Producers' Organisation and Marketing Acts, 1926 to 1941*.

ARROWROOT BOARD.

The Board has an indefinite term and functions in respect of both arrowroot bulbs and arrowroot flour.

1942 Crop.—The Board's intake of 1,088 tons of flour was disposed of in accordance with an arrangement previously made whereby 50 per cent. of the arrowroot flour production

was to be made available for the manufacture of dextrans, adhesives, and for other purposes associated with wartime requirements. A production objective of 2,000 tons of flour was set by the Commonwealth Government, all of which was allocated to Queensland. As the remaining 50 per cent. of production was insufficient to meet the needs of the market, buyers were rationed by the Board and received approximately 25 per cent. of their orders. The maximum selling price for arrowroot flour for ordinary purposes was fixed by the Commissioner of Prices at £38 per ton, and an arrangement was made with the assistance of the Prices Commissioner for the price of flour sold for dextrine or adhesive manufacturing purposes to be £35 per ton. This determination strengthened the authority of the Board and thus facilitated the appointment of the less remunerative industrial market equitably among all arrowroot mills. The average selling price for flour was £36 10s. per ton.

Advances and final payment to growers on bulbs delivered to the Board totalled £2 5s. 9.65d. per ton; and the total payment to millers in respect of flour manufacturing costs amounted to £11 13s. 0.574d. per ton of flour.

1943 Crop.—Through labour shortage during the planting season and lack of rain during the period of crop growth, desired doubling of production to meet wartime needs proved impracticable. It is estimated that the 1943 crop will not exceed 800 tons.

General.—To enable growers and millers to meet production and manufacturing costs, the Commissioner of Prices approved an increase of selling prices. A further increase is considered necessary because of increasing costs, and representations to the Commissioner of Prices are being made accordingly.

The term of office of the chairman and members of the Board has been extended for a period of twelve months ending 14th April, 1944.

ATHERTON TABLELAND MAIZE BOARD.

The Board is empowered to function to 30th June, 1955.

1941-42 Season.—Two further advances of 18s. and 4s. 6d. per ton, respectively, were paid to growers, making the total payments for the season £6 2s. 6d. per ton of maize containing 3 per cent. of dead grain, with relative premiums and dockages according to quality. Total payments for the previous season amounted to £6 9s. 6d. per ton.

1942-43 Season.

	Tons.	Tons.	Tons.
Maize delivered—		11,465	
Gross delivered by growers		11,465	
Less returned to growers	183		
Less moisture over 14 per cent.	379		
		562	10,903
<i>ADD STOCK ON HAND BY 41-42 POOL</i>			11,668
			11,668
Maize despatched—			
Net sales including offal	11,507		
Stock on hand	47		
			11,554
Net under-run			114

The 114 tons under-run is equivalent to .98 per cent. of the total delivery, compared with .66 per cent. in the previous year.

Marketing.—Excluding maize resold to growers amounting to £1,444 18s. in value, the season's sales totalled £132,014 3s. 4d. This total does not include sales of pig, poultry, and cattle foods, but includes the value of the maize used in those preparations.

Growers were paid a first advance of £4 per ton on maize delivered to the board containing 3 per cent. dead grain, with premiums and dockages according to quality.

Four further payments have been made to growers, comprising the second advance of £1 10s. per ton, and three payments at the rate of £1 per ton in each instance, making the total of advances for this season to 30th June, £8 10s. per ton.

By virtue of a Government guarantee, the Board arranged for financial accommodation to the extent of £5,000, for the purpose of (a) providing assistance to necessitous growers to enable them to plough and plant their land; and (b) enabling the Board to plough the land and plant and cultivate the crops of growers absent from their farms on garrison duty or other war work. Because of extreme shortage of farm labour, the amount applied for, and advanced by the bank, did not exceed £434 10s., the whole of which has been liquidated.

In respect of the two Government loans, amounting to £56,701 5s. 4d. and £15,041 15s. 3d., to the Board some years ago for the erection of silos, the Government granted suspension of the redemption on the loans for the half-year ended 30th June, 1942, and the year ended 30th June, 1943. In addition, the terms of the loans were extended by seven and ten years, respectively, as from 1st July, 1942, to 30th June, 1962.

BARLEY BOARD.

The Board is empowered to function to 23rd April, 1948.

The acquisition by the Commonwealth Government of malting barley grown in Australia ceased to apply to barley

grown in Queensland as from November, 1942, when the acquisition order of November, 1939, was revoked, and the 1942-43 Queensland crops automatically came under the control of the Queensland Barley Board, which has continued to function under the *Primary Producers' Organisation and Marketing Acts*. Commonwealth acquisition of malting barley grown in the States of Victoria and South Australia was continued.

Towards the end of May, 1943, the Minister for Commerce and Agriculture announced that the 1943-44 barley crop would not be acquired. Large export surpluses in South Australia early in the war had been the cause of the introduction of the acquisition scheme, but the position had altered and shortages of manpower and fertilizer had caused an adjustment of production to the demands of the market.

Early in 1943 at the request of the Commonwealth Government a special effort was made to stimulate barley production in Queensland, with the object of producing sufficient for domestic malting needs. However, mainly because of manpower difficulties, the Board's malthouse at Toowoomba was not reopened.

1941-42 Season.—Payment of a third advance by the Australian Barley Board was made in February, 1943, at the rate of 4d. per bushel for No. 1 and No. 2 Chevalier and Cape malting barley, and 1d. for feed quality of both varieties. A fourth advance at the rate of 3d. per bushel for all grades of both varieties was distributed in April, thus bringing the total of advances to date for No. 1 Chevalier to 2s. 9d. per bushel, less freight from growers' station to receiving depot. A substantial quantity of the Australian crop is yet to be sold.

1942-43 Season.—The Queensland crop for this season has been subject to the control of the Queensland Barley Board, as a State Pool.

As in the previous year, the intake was small and amounted to only 25,260 bushels, classified as follows:—

	Bushels.
No. 1 Chevalier	8,834
No. 2 Chevalier	10,883
Feed Chevalier	3,570
Cape Malting	1,246
Feed Cape	727

A first advance was made by the Board at the end of March, 1943, at rates varying from 3s. for No. 1 malting barley to 2s. for feed quality according to the range of prices at which sales were made by the Board.

Since the close of the year, a further distribution has been made at the rate of 6d. per bushel for all grades.

BROOM MILLET BOARD.

The Board is empowered to function to 31st October, 1943.

1941-42 Season.—Receipts from growers amounted to 39 tons 1 cwt. 3 qr. 15 lb. of broom millet, which realised £2,229 13s. 11d., or an average of £57 3s. 5d. per ton.

The maximum price was £75 per ton, and the minimum £35 per ton. As has been the case for several seasons, the volume of production was insufficient to meet domestic needs, consequently broom manufacturers had to procure the balance of their requirements from interstate sources of supply.

1942-43 Season.—As growers' returns disclosed that the crop would be small, the Board did not exercise full control. To date, 40 tons 18 cwt. 0 qr. 21 lb. of broom millet have been sold, realising £2,868 5s., or an average of £70 2s. 6d. per ton—the maximum and minimum selling prices being £81 4s. and £41 5s. per ton respectively.

According to information received, practically the whole of the 1942-43 crop has been harvested and delivered to the Board's selling agents, which has caused local broom manufacturers some concern in view of the crop being below requirements and the manufacturers' inability to obtain the balance of their needs, as in previous years, from the Southern States, where broom millet is in short supply. The position in Queensland has been accentuated by the fact that supplies ex the 1943-44 crop will not be available until December next.

BUTTER BOARD.

The Board is empowered to function to 31st December, 1944.

Production.—Butter production in Queensland during the year ended 30th June, 1943, amounted to 1,992,074 boxes, compared with 1,708,311 boxes in the previous year. In respect of the 1942-43 Australian butter production objective, the quota allotted to the Queensland dairying industry by the Commonwealth Government for Queensland was 57,000 tons, equivalent to 2,280,000 boxes.

Sales.—Sales of Queensland butter in 1942-43, including the carry-over from the previous year, totalled 2,025,325 boxes, of which 772,932 boxes were sold in Queensland, 437,823 boxes to other States, 756,141 boxes exported to Great Britain, and 58,429 boxes sold as ships' stores or exported to countries other than Great Britain.

Consumption.—Consumption of butter in Queensland during the year showed a marked increase because of the influx in population as a result of war conditions. Inclusive of border imports, the total consumption amounted to 782,932 boxes, compared with 570,812 boxes in 1941-42.

Values Returned to Manufacturers.—The total net value of the 2,025,325 boxes sold during the year was £7,717,544 7s. 2d. The net prices returned to factories on the basis of equalisation figures show a net value of £3.81052145 per box or 1s. 4.33d. per lb., compared with 1s. 3.72d. per lb. for the previous year.

The 1942-43 figures quoted above are interim only and subject to equalisation adjustment. The values represent net returns at agent's floors, Queensland port of shipment, or other recognised centres of distribution, and local charges only require to be deducted to establish net returns to manufacturers.

It is estimated that the average value for the year is approximately 14s. per cwt. above parity, as measured by the price being paid by Great Britain for our choice surplus butter. This increased return is made possible by the Commonwealth Dairy Produce Equalisation Committee.

Dairy Industry Subsidy.—The value of the 1942-43 sales does not include the subsidy paid by the Commonwealth Government in respect of butter produced during the year. This amounted to £588,785 15s. 6d. and increased the total value to £8,306,330 2s. 8d. After a special inquiry into the dairy industry, the Commonwealth Government in October, 1942, passed the *Dairy Industry Assistance Act, 1942*, which provided for a subsidy of £1,500,000, for the year ending 30th June, 1943, to suppliers of milk and cream to cheese and butter factories, which are contributors to the Commonwealth Dairy Produce Equalisation Scheme. In consequence of an increase in the subsidy as from the 1st April, 1943, after the passing of the legislation referred to, the subsidy under the 1942 Act was applied to the nine months' production ended 31st March, 1943, at rates determined by applying the full production of the year 1942-43 to the subsidy of £1,500,000. These rates worked out at 8s. 1d. per cwt. butter and 4s. 10d. per cwt. cheese.

To give the dairy farmer a total return equivalent to 1s. 6d. per lb. of commercial butter, the Commonwealth Government appropriated approximately £6,500,000, under the *Dairy Assistance Act, 1943*, for payment by way of subsidy for the twelve months commencing 1st April, 1943. The subsidy under the 1943 measure is payable only to those dairy farmers who produce milk, or any produce derived from milk, for processing into butter, cheese, dried milk (other than skimmed milk powder), condensed milk, or concentrated milk at any factory contributing to the Commonwealth Dairy Produce Equalisation Scheme. The subsidy to the dairy industry is associated with an award of the Commonwealth Arbitration Court, based on a wage for adult farm workers of £4 16s. per week.

Marketing Control in Brisbane.—The continuance of the Board's policy of control over the marketing of butter in the Brisbane area resulted in a saving to Queensland dairy farmers of £61,948 5s.

Butter Improvement Service.—This free service to the factories was continued. The Board reports that the hygienic quality of butter has been maintained, despite many difficulties experienced on farms and in factories.

Dehydration of Butter.—The processing, when considered necessary, of inferior quality butter at the Board's dehydration plant at Hamilton has not only ensured a ready market for butter coming within this category but has enabled the Board to dispose of it at rates in keeping with those which would have prevailed if the British Government had not placed a ban on the purchase of second grade and pastry butter.

Because of, no doubt, the possibilities revealed by dehydration, Great Britain elected to take all second-grade butter offering and indicated later that until otherwise advised Australian pastry butter could be shipped in its ordinary form.

Butter for the Services and Tropical Butter-fat Spread.—Large quantities of butter were again packed by the Board throughout the year for the Services within and based upon Australia.

In conjunction with the Council for Scientific and Industrial Research the Board, during the year, also succeeded in developing the production in considerable quantities of tropical butter-fat spread for use by troops in tropical areas. The demand for this product has become so great that action is now being taken, at the request of the Commonwealth Government, to double the existing plant production capacity.

Dairy Products Control.—The Commonwealth Government, as part of the food plan, instituted a control of dairy products and Mr. C. Sheehy, the secretary of the Butter Board since its inception, and who is also the general manager of the Commonwealth Dairy Produce Equalisation Committee Limited, was appointed Controller of Dairy Products. Not only has Mr. Sheehy taken a prominent part in the organisation of the dairy industry throughout Australia, but he has been a pioneer administrator and designer of primary producer's organisation and marketing schemes in Queensland since 1920.

CANARY SEED BOARD.

By effluxion of time, the Board ceased its existence on 30th June, 1943, the relevant Acts no longer applying to the marketing of canary seed. The weakening effect of section

92 of the Commonwealth Constitution on organised marketing is clearly illustrated by the fate of the Canary Seed Board. Canary seed is a commodity which is marketed in its original form and there is no necessity to assemble it for processing. Approximately 80 per cent. of Australia's needs are grown in Queensland, and the greater demand is beyond the borders of this State. Since interstate transactions are not subject to State or Commonwealth marketing laws the Board set up under *The Primary Producers' Organisation and Marketing Acts* to market canary seed was in fact only of the status of a voluntary co-operative marketing organisation, except for the small quantity of canary seed sold in Queensland. Voluntary co-operatives for the marketing of agricultural produce are notoriously weak, because they can be wrecked if only a small percentage of the total harvest is sold outside of the control scheme at prices which undersell the co-operative. The advantages of outside selling, which are obtained only at the expense of fellow-growers, remain advantages to opportunist growers and non-co-operators only, so long as others see to the orderly feeding of the market and bear the consequential expenses. It is for this reason that the "outside operator" almost invariably votes in favour of the continuance of orderly marketing schemes which he himself does not support.

No canary seed of the 1941-42 season was delivered to the Board. Plantings had been light and because of drought conditions many crops failed or were fed off. Those who harvested seed and normally were loyal supporters of the Board were forced in their own interests also to sell direct.

It was evident that the scheme of orderly marketing for canary seed was a thing of the past, until such time as all growers could be compelled to act in accordance with the wishes of the majority. At the request of the Board the Government by Order in Council exempted the 1942-43 crop from the operations of the Acts and the Board proceeded to wind up the three pools in hand. The final results were as follows:—1938-39, 1939-40, and 1940-41 seasons:—

Pool.	Quantity Delivered.	Pool Expenses, per Ton.	Final Payment, Net per Ton.	Total Net Payment to Growers.
	Tons.	£ s. d.	£ s. d.	£ s. d.
1938-39	1,396	5 11 4.53	2 10 9	12 10 9
1939-40	1,783	5 9 4.57	3 7 10	19 7 10
1940-41	27	6 16 3.51	16 10 0	24 10 0

At the request of the Board, the operations of the relevant Acts were not extended to canary seed for a further term. The Canary Seed Board was first constituted in January, 1925. It is the first of the Queensland collective marketing organisations to go out of existence.

CHEESE BOARD.

The Board is empowered to function to 31st December, 1944.

Production.—As a result of a major change-over from butter to cheese production, and favourable seasonal conditions during the early portion of the year, cheese production in Queensland in 1942-43 exceeded all previous records for the State, the quantity manufactured amounting to 28,501,265 lb. (12,724 tons), compared with 7,299 tons in the previous year. The Queensland quota of the 1942-43 Australian cheese production objective of the Commonwealth Government was 13,300 tons. As in the past, the bulk of the cheese produced during 1942-43 was of the cheddar variety, the remainder comprising 47,167 lb. of Gruyere and 487,180 lb. of other varieties. The value of Queensland's 1942-43 production, including the Commonwealth Government subsidy in respect of cheese produced, which amounted to £79,360 12s. 8d. and is dealt with in the Butter Board section of my Report, was £1,207,212.

Disposals and Values.—Cheese sales totalled 28,072,510 lb., disposed of to the following markets:—Local—6,258,385 lb.; Interstate—3,441,735 lb.; to processors for Australian market—2,586,350 lb.; to processors for Forces overseas—12,685,441 lb.; United Kingdom—3,065,935 lb.; exported to other countries—34,644 lb.

The net average equalisation price for all States operating under the equalisation plan for the year was 9.893d. per lb. This figure, which does not include the Commonwealth Government subsidy, is an interim one only, and subject to some slight adjustment when equalisation have been completed.

Prices.—The wholesale prices ruling at 30th June, 1942, for local sales and sales to processors for the Australian market—namely, 1s. and 10½d. per lb., respectively—continued to operate during 1942-43 in accordance with the Commonwealth policy of price fixation and subsidies.

Administrative Levy.—Collections for administrative purposes were levied during the year at the rate of 2½d. per cwt. of cheese manufactured.

Local Marketing.—Under arrangements made with the Commonwealth Government, the Board, since 1st October, 1942,

has been supplying cheese to military camps in and around Brisbane as direct selling agent for factories. The rate of selling commission charged by the Board for this service, 3 per cent., is 2 per cent. below the rate of commission which would otherwise be payable by supplying factories. For the nine months ended 30th June, 1943, the profits made by the Board as a result of its engaging in this trading activity have amounted to £824 18s. 11d., which sum has been distributed to all factories according to the quantity of cheese manufactured by each during that period.

Marketing under War Contracts.—Under the 1942-43 contract between the Australian Government and the British Ministry of Food, the quantity of cheese required by the United Kingdom was set down at 10,000 tons. The quantity exported to that market, as shown, did not reach that figure because of the demands of the Armed Services in other overseas countries and in Australia. The British Ministry of Food contract prices for cheese were increased by 3s. 9d. a cwt., the new price for this year expressed in f.o.b. values per cwt., Australian currency, being as follows:—Choicest and first grade, 87s. 6d.; second grade, 85s.; third grade, 82s. 6d.

COTTON BOARD.

The Board is empowered to function to 31st December, 1946.

1941-42 Season.—The quantity of seed cotton delivered to the Board was 14,057,690 lb., from which 4,924,816 lb. (9,962 bales) of raw cotton lint were produced. The whole of the crop was sold to Australian spinners and manufacturers.

Payments to growers totalled £309,184 12s. 3d., averaging 15.067d. per lb. of raw cotton lint produced, equivalent to 5.278d. per lb. of seed cotton. This amount included a sum of £15,609 15s. 2d., representing payment to growers at the rate of £4 per ton for the 8,741,466 lb. of cotton seed contained in their seed cotton, and payments to growers out of profits derived from crushing peanuts at the Board's oil mill, and the proceeds of sale and estimated seed content of the low-grade cotton lint produced from the crop. The total payments also included Commonwealth bounty at the rate of 4.536d. per lb. of raw cotton lint, which amounted to £93,075 3s. 5d.

Revolving Fund.—In April, 1943, a sum of £4,083 18s. 6d., representing a deduction of .19902d. per lb. of raw cotton lint, was deducted from 1941-42 season's growers and placed to their credit in the Working Account Reserve Revolving Fund, thereby increasing the credit balance of the fund to £40,104 4s. 11d. As the Board's Order in Council does not permit the distribution of any moneys from the fund if the amount standing to the credit of the latter is less than £40,000, there were no refunds to growers during the year, other than a sum of £100 0s. 10d. which was paid to estates of deceased growers.

Commonwealth Bounty.—The Commonwealth Government, early in 1941, amended *The Raw Cotton Bounty Act* to ensure an average net return to producers in respect of the 1941 and 1942 crops of 12½d. per lb. of raw cotton, equivalent to 4.3d. per lb. of seed cotton. The Act was further amended during 1941, under which the Commonwealth Government guaranteed an average net return to growers of 15d. per lb. of raw cotton (equal to 5½d. per lb. of seed cotton delivered at growers' railway stations) for the duration of the war and one year thereafter. This increased return applied to the 1941 and 1942 crops.

In relation to the 1943 crop, the Board arranged for the disposal of the whole of the production on a raw cotton price basis of 18d. per lb. Australian currency, c.i.f., Australian main ports. This higher selling price will result in a greater return to growers than the guaranteed price, and render it unnecessary for any Commonwealth bounty to be paid in respect of the crop in question. It is anticipated that the average return to growers will be in the vicinity of 16d. per lb. of raw cotton, or, in terms of seed cotton, 5½d. per lb.

1942-43 Season.—A production objective of 25,000 bales of raw cotton was set the industry for 1942-43 season by the Commonwealth Government, the whole of which was allocated to Queensland.

Although extensive publicity was again given by the Department and the Cotton Board during the autumn and winter of 1942 to the need to increase cotton production, only sufficient seed to plant approximately 55,000 acres was purchased by growers for planting during the 1942-43 season in the main cotton-growing areas, compared with 70,000 acres in respect of the 1941-42 season. The main cause of the reduction in the area planted was the manpower shortage. As a result of adverse seasonal conditions, it is estimated that the total area planted and harvested in the main cotton belt will not exceed 35,000 acres.

It is estimated that the 1942-43 Queensland yield will only be about 7,000 bales of raw cotton lint. To 30th June, 1943, 5,882,943 lb. of seed cotton have been received by the Board, from which 1,964,904 lb. (3,975 bales) of raw cotton have been produced.

In addition to the abovementioned plantings in the main cotton areas, it is estimated that 1,500 acres have been or will be planted in North Queensland, principally in the Lower Burdekin Valley.

EGG BOARD.

The Board is empowered to function to 31st December, 1944.

Supplies.—Egg receipts by the Board and its agents during the 53 weeks ended July 3rd, 1943, were as follows (the figures for the 52 weeks ended 27th June, 1942, being shown in parentheses):—Board, including country agents, 5,676,382 dozen (5,376,189 dozen); Brisbane agents, 1,547,293 dozen (1,667,861 dozen); total, 7,223,675 dozen (7,044,050 dozen). Particulars of the receipts during the week ended 3rd July, 1943, have been included in the above 1942-43 figures, in view of the assumption of control of egg supplies by the Commonwealth Government as from Monday, 5th July, 1943.

The 1942-43 production objective set by the Commonwealth Government for the area covered by the Queensland Egg Board's boundaries was 6,500,000 dozen.

Sales.—Sales during 1942-43 (53 weeks) are summarised hereunder, figures for the 1941-42 period (52 weeks) being in parentheses:—Eggs-in-shell—Local, 6,598,025 dozen (4,141,432 eggs-in-shell (nil) (2,377,350 dozen); exported as pulp nil (128,488 dozen); exported to New South Wales for drying, 537,750 dozen (nil); pulp, 825,680 lb. (405,480 lb.)

Selling Prices.—As from 3rd August, 1942, the prices of eggs-in-shell were brought within the control of the Commonwealth Prices Commissioner. Increased local demands, and the increase in the price paid for eggs-in-shell for drying, resulted in prices showing an advance over those of the previous year, while the higher price level was maintained for a longer period. Wholesale prices ranged from 1s. 6d. to 2s. for first quality hen eggs.

Uniform prices throughout the Commonwealth for egg pulp (liquid frozen whole egg) were again agreed on by the Australian Pulp Stabilisation Committee, which comprises the manufacturers of pulp in the various States. Basic prices for 1942-43 were 1s. 1d. per lb. for sales under contract, and 1s. 2d. to 1s. 3d. for other sales.

Return to Producers.—In respect to the year 1941-42 a pro rata payment of .61d. per dozen was made from surplus funds, thus increasing to 13.03d. the average net return per dozen eggs, including all grades, paid to producers for that year. For eggs supplied during 1942-43, producers have received an average return of 17.45d. per dozen. This will be increased, however, by a distribution of surplus funds, although the rate per dozen has yet to be determined.

Deductions by the Board.—The working charges of the Board remained at 7 per cent. on net proceeds, after deduction of general reserve levy and equalisation charge. General reserve levy was ½d. per dozen eggs. An equalisation charge of 1d. per dozen eggs was imposed from 27th July to 14th December, 1942.

Disposal of Surplus Production.—The export to the United Kingdom of eggs-in-shell and egg pulp having been, of necessity, suspended, surplus production in the various States was taken care of, to a large extent, by the Commonwealth Government agreeing to purchase for drying a limited quantity of eggs-in-shell at the following prices:—

- (a) Eggs suitable for export in shell, including eggs with rough and misshapen shells, but otherwise of first quality; (i.) eggs graded up to the 30th November, 1942, 10½d. per lb.; (ii.) eggs graded from the 1st December, 1942, onwards, 1s. per lb.
- (b) Eggs not included in (a) but of export pulp quality: (i.) eggs graded up to the 30th November, 1942, 9d. per lb.; (ii.) eggs graded from the 1st December, 1942, onwards, 10½d. per lb.

Queensland's quota was 25,000 cases (750,000 dozen), and as drying facilities were unavailable in this State, the eggs were sent to the Riverstone Meat Company Pty. Ltd., Riverstone, New South Wales, for drying on behalf of the Commonwealth Government. The quantity thus disposed of was 17,925 cases (537,750 dozen) and the price received 10½d. per lb. (at Board's warehouse).

Interstate Sales.—Prior to the completion of arrangements by the Commonwealth Government for the acceptance of eggs for drying, the Board sent 2,930 cases (87,900 dozen) surplus eggs on consignment to Sydney, and which were sold at a loss of £3,065 18s. 11d., as compared with Brisbane price levels. The loss was intensified by a fall in prices in New South Wales.

Rationing of Supplies.—Because of the heavy demands of the Services, a shortage of eggs for civilian consumption was experienced over a considerable period of the year. The Board, in order to arrange—as far as was practicable within the limits of its authority—an equitable distribution of the supplies available for civilians, instituted a quota system by which all buyers were enabled to obtain a fixed proportion, as determined from time to time, of their normal requirements. The

Board also curtailed the issue of "Producer-Agents Permits" in order to place all retailers in the metropolitan area on an equitable basis. The shortage of eggs became most acute during May and June, 1943, when production, as is normal, reached its lowest ebb, and eggs were obtained from New South Wales to augment local supplies.

Egg-drying Plant.—No further progress has been made with the installation of the drying plant allocated to Queensland by the Commonwealth Government. Work on the building has been at a standstill during the whole of the year, although the drying plant has been stored in Brisbane awaiting installation. The Commonwealth Government is of the opinion that because of heavy demands of the Services for eggs-in-shell, there is no immediate necessity for the installation of a drying plant in this State.

Commonwealth Control.—As from 5th July, 1943, the Commonwealth Government, by virtue of an order issued under the *National Security (Egg Industry) Regulations*, is assuming control of egg supplies produced in certain parts of this State. The Board will function as the receiving and selling agent for Queensland of the Commonwealth Controller of Egg Supplies. The area in Queensland to be immediately brought within control includes the whole of the territory previously under the jurisdiction of the Board, together with the remainder of the Shires of Gooburrum, Kolan, Perry, Gayndah, Wondai, Kingaroy, Wambo, Tara, and Waggamba, and the whole of the Shires of Murilla, Chinchilla, Mundubbera, Eidsvold, and Monto.

The new control will apply to owners of 20 or more adult female fowls and/or ducks. The superseded Queensland scheme did not apply to persons keeping less than 50 fowls, irrespective of age or sex.

THE FRUIT INDUSTRY.

THE COMMITTEE OF DIRECTION OF FRUIT MARKETING.

The Committee of Direction of Fruit Marketing is empowered to function until 31st December, 1944.

PINEAPPLE SECTION.

The winter crop of 1942 was exceptionally light, but the 1943 summer crop was heavy. Despite expectations of a substantial decline, production amounted to 1,331,409 (1½ bushel) cases, compared with 1,383,495 cases the previous year. There was an abnormally strong fresh fruit demand, and, with large Service requirements of canned products, the Department of Supply and Shipping found it necessary to divert portion of the crop to canneries. In the winter crop of 1942, 25 per cent. of the crop was directed to factories, but with the clearance of the main crop growers were permitted to send all their fruit to the markets. With such a light winter crop, there was an accumulation of Service orders for packing from the 1943 summer crop, and the Supply and Shipping Department decided to direct 50 per cent. of the fruit continuously to factory.

Because of staffing difficulties, it was necessary as the crop advanced to limit loadings to canners, which in turn threw heavy quantities on the fresh fruit markets. When the peak was over the diversion scheme recommenced and continued to the end of the year. Except for a quantity made available for emergency supplies, there was no civilian release. There were no exports.

The 1943 production objective set by the Commonwealth Government was 325,000 cases canned pineapples.

Price.—The Fruit Industry Sugar Concession Committee determines each season the minimum price of factory pineapples. The Prices Commissioner now has an observer on that Committee, and accepts the F.I.S.C.C. declared minimum prices as maximum prices. A claim by the Pineapple Sectional Group Committee for an increase of £1 per ton on the 1943 summer price, which was £10 11s 8d per ton f.o.r. growers' stations, was examined in Queensland by officers of the F.I.S.C.C. and the Prices Commissioner's Office. The application was granted, but unsatisfactorily, as it was based on anticipated future increases in costs of production.

A final export rebate of 3s. 9d. per ton was paid to growers for 1941, making a total payment from the Fruit Industry Sugar Concession Committee grant for that year of 6s. 9d. per ton. This Committee's grant to subsidise export losses for 1941 was made on a different basis from previous years, as its grant of a maximum of £5,000 carried the condition that export losses be shared by the Committee and the C.O.D. on a £ for £ basis.

Queensland Canneries.—Queensland Canneries Pty. Ltd. showed a loss for 1941-42 of £3,061 12s. Sales for the year fell short of the previous year's figures by £31,940 3s. 8d., and the quantity of fruit processed was less by approximately 1,607 tons.

BANANA SECTION.

Production.—A total number of 420,363 (1½ bushel) cases of bananas was produced in 1942-43, as compared with 453,000 cases for the previous year. This reduction of 7.76 per cent. is undoubtedly partly due to the lack of available manpower in banana production areas.

The figures set out below reveal a substantial increase in both the number of cases and bunches handled on the C.O.D. wholesale auction floors in Brisbane. Increased gross turnover for the year indicates the higher market realisations in comparison with 1941-42:—

	1941-42.	1942-43.	Increase. Per Cent.
Cases handled	94,306	108,152	14.68
Value	£64,844	£123,615	90.63
Bunches handled	105,632	113,934	7.86
Value	£14,950	£27,705	85.32

The gross top price realised was 46s. per case, an increase of 12s. 3d. on the gross top price of 33s. 9d. for the previous year. Average net return to growers was 22s. 10d. per case (1942-43) as compared with 14s. per case (1941-42).

In October, 1942, an amount of £833 9s. 2d. was rebated to growers. This represented 15 per cent. of the total commission charged on the banana auction floors during the year.

C.O.D. Ripe Banana Department.

	1941-42.	1942-43.	Increase. Per Cent.
Cases handled	26,198	43,702	66.81
Value	£20,947	£57,529	174.64

The banana ripening plant worked to capacity during the greater portion of the period under review. The provision of additional ripening space during 1941-42 has thus been fully justified. The number of cases passing through the plant showed an increase of 34.9 per cent. compared with the previous year.

	1941-42.	1942-43.
Cases ripened	76,575	103,301

CITRUS SECTION.

The most important development of the year was the extension to the Queensland crop of 1943 of the compulsory diversion to cannery scheme initiated by the Department of Supply and Shipping with the 1942 Valencia crop of New South Wales. An industry conference was called in Canberra early this year, and agreement reached on the following:—

Market Ceilings—	Per Bushel Case.	
	s. d.	
Oranges	21 0	April 1st to October 31st.
	26 0	November 1st to March 31st.
Lemons	20 0	May 1st to October, 31st.
	25 0	November 1st to April 30th.

Factory Prices (Delivered Cannery)—

	Per Ton.	
	£ s. d.	
Oranges	26 5 0	Minimum diameter 2½ inches.
Lemons	21 5 0	Minimum diameter 2 inches.
Grapefruit	28 15 0	
Sevilles and Poorman's		
Oranges	21 5 0	

Percentages Diverted to Cannery—

	Per Cent.	
Oranges	25	
Lemons	40	(50 per cent. in other States)
Grapefruit	100	
Sevilles	100	
Poorman's Oranges	100	

The juice is required for processing for the Services. In Queensland the diversion scheme does not operate in the central and northern sections of the State.

BEAN SECTION.

The Bean Sub-Committee was increased to six, including a representative of the Pineapple Sectional Group, which owns a half interest in the cannery which operated on beans. Late in the 1942 season a compulsory diversion scheme of 10 per cent. of pickings was introduced by the Department of Supply and Shipping. Many of the beans proved unsatisfactory for canning, and it was finally concluded that Queensland conditions were unsuited to canning bean production. It is unlikely that further attempts will be made to can beans in this State, particularly as production now falls far short of market and Army demand.

At the end of June, 1943, the industry received a serious setback from frost.

DECIDUOUS SECTION.

An excellent season was experienced, particularly by apple-growers, who were exempted from acquisition following a High Court decision. The crop was light, but prices high. Tomato and grape crops were satisfactory.

Consignments to various markets as compared with the previous year were:—

	1941-42.	1942-43.
	Tons.	Tons.
Brisbane (including factory)	13,178	15,873
New South Wales	1,666	1,278
North Queensland	775	1,319
	15,619	18,470

The Committee of Direction undertook the management of the Brisbane selling floor of the Australian Apple and Pear Board for 1943. Shipping difficulties resulted in short deliveries.

WHOLESALE FLOORS.

Sydney.—Figures again improved for the year both in the number of packages sold and turnover. Progressive figures are tabled hereunder:—

	Consignment Turnover.	Packages.
	£	
1937	62,629	132,294
1938	82,959	185,325
1939	105,943	243,576
1940	110,152	241,125
1941	123,082	292,162
1942	190,816	345,296
1943	318,680	386,983

Turnover in 1933 was only £27,256.

To cope with increased turnover additional space was obtained during the year. Pineapple sales established a record, increasing from 100,721 cases in 1942 to 135,258 cases in 1943, or slightly over 10 per cent. of Queensland's production for the year. Decreasing production, factory diversion, and frost losses will seriously reduce Southern consignments of pineapples and must affect the Sydney Branch, which again handled most of the Queensland consignments of pawpaws and custard apples, besides substantial percentages of the citrus, tomatoes, beans, and strawberries.

Brisbane.—Additional market space had to be obtained. The C.O.D. has now five sections in the Roma Street Markets and three in the Turbot Street Markets. Heavier deliveries and higher prices contributed to a big increase in turnover. Progress consignment turnover figures are:—

	£		£
1937	48,600	1940.. .. .	84,900
1938	63,700	1941.. .. .	96,200
1939	70,900	1942.. .. .	147,000
1943	£307,200		

Rockhampton.—Consignment turnover increased from £28,071 in 1942 to £92,316 in 1943.

Bowen.—Large quantities of tomatoes and cucumbers were delivered direct to Northern supply depots.

Townsville.—Consignment sales increased from £37,408 in 1942 to £115,148 in 1943.

Cairns.—Consignment turnover in seven months of operations amounted to £33,981.

Atherton.—Opened at Atherton in May, 1943, this Branch is handling locally-produced vegetables and is also a large distributing agency for Southern consignments.

CONSIGNMENT TURNOVER.

The establishment of the Cairns Branch completed a chain of grower-controlled wholesale selling floors—Sydney, Brisbane, Rockhampton, Townsville, and Cairns. No compulsory powers are used. Consignment turnover for 1943 exceeded £1,000,000.

	£
Sydney	318,700
Brisbane	307,200
Case bananas (Brisbane)	123,600
Bunch bananas (Brisbane)	27,700
Townsville	115,100
Rockhampton	92,300
Cairns	34,000
	£1,018,600

Bonus Distribution.—Increased turnover and satisfactory trading for 1941-42 enabled the bonus on fruit section trading to be increased from 10 per cent. to 25 per cent. of commissions. In Sydney the bonus was paid on the receiving and delivery charge of 1d. per case. The bonus distributed in November, 1942, amounted to £6,278.

Merchandise Department.—Serious trading difficulties were encountered. Turnover was £88,830, compared with £71,264 in the previous year. A bonus of 3 per cent. amounting to £1,555 was paid to growers on their previous year's purchases.

ARMY SUPPLY.

Army supply has expanded to enormous proportions. Vegetables grown under contract in Queensland are the first source of the supply to the Forces, and they are supplemented with large quantities grown under contract in other States. Where vegetables are produced adjacent to country supply depots direct deliveries at ruling market rates are arranged whenever possible.

The main source of supply continues to be the Brisbane markets. In Brisbane, one of the two C.O.D. ripening plants is worked practically to capacity throughout the year ripening tomatoes, both contract-grown and market-purchased, for the Services. Before delivery these tomatoes are colour graded.

REFUNDS MADE TO GROWERS UNDER VARIOUS SYSTEMS OF FINANCE DURING THE TWELVE MONTHS ENDED 30TH JUNE, 1943.

PINEAPPLE FUNDS.

(a) *Interstate Freight Rebate.*—A rebate of 1d. per case was made on all interstate consignments for the year ended 30th June, 1942. This was distributed in December, 1942, and absorbed £1,866.

(b) *Stabilisation Fund.*—A further refund of 3s. 9d. per ton on supplies to factories for the year ended 31st December, 1941, was made in January, 1943, and amounted to £3,044. Contributions at the rate of 5s. per ton on all factory supplies for the six months ended 30th June, 1942, were refunded in August, 1942, and totalled £1,879.

Summary of refunds to pineapple growers during the year:—

	£
Interstate freight rebate	1,866
Stabilisation fund	4,923
	£6,789

FREIGHT REBATES OTHER THAN PINEAPPLES.

(i.) *Citrus.*—£231 was rebated on interstate consignments for the year ended 30th June, 1942, at the rate of 1½d. per case.

(ii.) *Deciduous.*—A rebate of 10s. per ton was distributed to growers consigning interstate and to C.O.D. Branches in Townsville and Rockhampton; £991 was thus rebated.

STANTHORPE CO-OPERATIVE HAIL INSURANCE FUND.

A final payment of 1.87d. per bushel on losses for the 1941-42 season was made in September, 1942, and amounted to £505.

SUMMARY OF MONEYS RETURNED TO GROWERS DURING 1942-43.

	£	£
Pineapple Stabilisation Fund		4,923
Freights—		
Pineapple	1,866	
Citrus	231	
Deciduous	991	
		3,088
Fruit section		7,111
Merchandise		1,555
Hail payments		505
		£17,182

FACTORY ACTIVITIES FOR TWELVE MONTHS ENDED 30TH JUNE, 1943.

The following quantities of the various fruits have been handled for factory:—Stanthorpe fruits, 374 tons; citrus fruits, 365 tons; figs, 110½ tons; pawpaws, 171½ tons; passion fruit, 5 tons; metropolitan tomatoes, 10 tons; strawberries, 62½ tons; and pineapples—

	Tons.
Winter crop, 1942	2,586½
Summer crop, 1943	9,256

making a grand total of all factory fruits, 12,941¾ tons.

INTERSTATE TRANSPORT.

Comparison of interstate loadings for the last two years is shown as follows:—

	1941-42.	1942-43.
	Packages.	Packages.
To—		
Victoria	328,780	301,943
New South Wales	1,074,383	1,075,838
	1,403,163	1,377,781

Strawberry consignments interstate by passenger train during 1942-43 were:—

	Pint Boxes.
To—	
Victoria	1,200
New South Wales	260,978
	262,178

2. APPLE AND PEAR MARKETING BOARD.

Following a decision by the Commonwealth Government in November last to suspend the operations of the Australian Apple and Pear Marketing Board in all States, except Tasmania and West Australia, the right to dispose of their crops on the open market, as from the 1943 season, has reverted to Queensland apple and pear growers.

Apple and pear sales in Queensland under the acquisition scheme during the 1942 season were as follows:—

Origin of Fruit.	Apples.	Pears.
	Cases.	Cases.
Queensland	98,580	8,664
New South Wales	12,219	14,394
Victoria	227,695	115,075
Tasmania	383,860	9,023
Western Australia	25,851	..
	748,205	147,156

3. SECOND-HAND FRUIT CASES ACT.

The Second-Hand Fruit Cases Committee has given special attention to the recovery of cases in which fruit and vegetables have been sold other than through the normal market channels, and to the prevention of the conversion of used cases to other industries.

Case transactions during 1942-43 increased by almost 50 per cent., as compared with the previous year. Sales of cases of all kinds aggregated 1,007,373 cases, all of which were sold to growers. No permits were granted for the release of cases to other industries. The levy on sales payable by dealers was maintained at 3d. per dozen or part thereof, and levies received amounted to £938 9s.

GINGER BOARD.

The Board was constituted on the 16th July, 1942, and is empowered to function until the 15th July, 1945.

Before the war, almost the whole of the ginger consumed in Australia was imported from China, with the exception of a very small quantity of green ginger produced by a few growers at Buderim. In 1937-38 importations totalled approximately 1,440 tons as against approximately 20 tons produced locally. It will be seen, therefore, that the Australian consumption of ginger is in the vicinity of 1,500 tons per annum.

Soon after the outbreak of war shipping restrictions caused a considerable reduction in imports from China and Buderim growers saw an opportunity for expanding their industry. Because of the limited nature of the green ginger market, it was realised that no great expansion could take place unless arrangements could be made to process a considerable proportion of the crop.

In September, 1941, the Buderim Ginger Growers' Co-operative Association, Limited, was registered under *The Primary Producers' Co-operative Associations Acts*. A pre-treatment factory was erected by the Association and in the 1941 season a small quantity was pre-treated at Buderim and crystallised in Sydney. The association arranged for the processing of ginger with a Sydney firm.

At its first meeting, the Ginger Board appointed the Buderim Ginger Growers' Co-operative Association, Limited, as its agent to receive, treat, and market ginger on the Board's behalf and to distribute the net proceeds of sales direct to growers.

An *Order in Council* was gazetted on the 28th January, 1943, divesting the ownership of the commodity from the growers and vesting it in the Board. Subsequent to this alteration in the Board's constitution, the Board took over the handling of all financial transactions in connection with the sale of ginger and payments to growers. The association continues to act as the Board's agent in the handling and pre-treatment of the ginger at Buderim and the Board has undertaken to pay to the association such amounts as may be mutually agreed upon.

The 1942 crop amounted to approximately 77 tons, exclusive of root retained by growers for seed for the following planting. The 1943 crop year is not yet complete, but it is expected that the total quantity handled by the Board will approximate 150 tons.

The net return to the growers for the 1942 crop amounted to 4½d. for each pound of green ginger root delivered to the Board.

HONEY BOARD.

The Board is empowered to function to 8th March, 1944.

Seasonal conditions were again the cause of the smallness of honey deliveries to the selling agents of the Board. Sales by agents totalled 8,190 tins (each 60 lb.) of honey, and 13,415 lb. of beeswax, compared with 7,600 tins of honey and 19,337½ lb. of beeswax in the previous year.

Selling prices were maintained throughout the year for both commodities, ranging from 3d. to 7d. per lb. for honey and 2s. to 2s. 6d. per lb. for beeswax.

NORTHERN PIG BOARD.

The Board is empowered to function until 31st December, 1946.

The dressed weight of the 14,789 pigs handled by the Board during 1942-43 was 1,682,150 lb., of which 14,229 pigs (1,663,837 lb.) were disposed of to the North Queensland Co-operative Bacon Association Ltd., and 520 stores and weaners of an estimated weight of 11,800 lb. to local butchers. The remainder, 40 pigs (6,513 lb.), were lost in transit.

In conformity with a policy of diverting all available pig meat to meet the demands of the Services for bacon and ham, no porker pigs were sold to the retail trade for con-

version to pork. To foster production of baconers, a system of payment based on differential payments according to weight range, and which provided for a higher rate of payment for pigs within the range varying from 105 to 120 lb. to 100 to 130 lb., was introduced. Although pigs sold to the North Queensland Co-operative Bacon Association numbered only 507 more than in the previous year, the aggregate weight exceeded that of the 1941-42 period by 185,679 lb., and there was an increase of over 9 lb. in the average weight per pig.

The total value of sales amounted to £50,842 19s. 6d., compared with £34,372 10s. 3d. for the year 1941-42, the increase being due mainly to the higher prices operating, and, to a lesser extent, the increase in weight and numbers of pigs delivered. The average price paid to growers for first-grade pigs was 7.7d. per lb. In addition, deferred pay amounting to £7,204 11s. 6d. was distributed to growers at the rate of 1d. per lb. on pigs delivered to the Board during the year ended 31st December, 1942.

Equalisation charges paid at the rate of ½d. per lb. dressed weight by "butcher-growers" purchasing pigs direct from producers under permit from the Board were collected to an amount of £773 14s.

A noticeable occurrence in the first half of 1942-43 was the considerable expansion in pig production in the Board's territory. This was offset by a decline in production during the six months ended 30th June, 1943, following the change over from the supply of cream to the Atherton Tableland butter factories to milk. This decline was most marked during June, 1943, deliveries to the Board in that month totalling 891 pigs, compared with 1,383 during June, 1942.

The introduction of the Pig Meat Acquisition Plan as from 14th June, 1943, has brought the operations of the Board within the control measures provided for under the *National Security (Meat Industry Control) Regulations*. Prices payable to producers for baconer pigs have been made uniform throughout the Commonwealth on an export port basis and according to compensation values at which pig meats are to be acquired by the Commonwealth, and are to be stabilised over a period of two years, during which guaranteed prices are to be paid for all pig meats acquired. The price payable to producers as from 14th June for first quality pigs within the 100 to 180 lb. range was fixed at 8d. per lb. at export port.

PEANUT BOARD.

The Board is empowered to function to 27th August, 1947.

1942 Season.—Deliveries to the Board were:—

	No. 1 Pool	No. 2 Pool.
	Tons.	Tons.
Virginia bunch	3,327	121
Spanish and Valroy	1,723	50
	5,050	171

Shortage of labour for grading necessitated an alteration in methods of grading; consequently, the standards of grade in shell were re-defined, thus enabling a greater output, although the standard of quality was reduced somewhat. Labour shortage at Kingaroy also caused the Board to rail peanuts to its Rockhampton depot for grading.

All stocks have been sold, excepting a very small quantity of No. 2 pool peanuts. Finalisation of the No. 1 pool accounts has been delayed because of shortage of experienced staff, which has been fully occupied in making first payments on the 1943 crops. It is anticipated that the final payment to growers on the No. 1 pool will be made about the end of September, and the final advance on No. 2 pool during October.

1943 Season.—Although the early-planted crop was very good in yield and quality, lack of rain when the late-planted (and main) crop was at the "nutting" stage reduced the yield to about 5,000 tons below the estimate. The estimated Australian requirements for edible and planting purposes were 13,000 tons, which coincided with the 1942-43 production objective set by the Commonwealth Government which was entirely allocated to this State. No. 1 pool quotes allotted by the Board to growers comprised 9,004 tons of Virginia Bunch and 4,013 tons of Spanish and other varieties. Although plantings were sufficient to obtain a crop of 12,000 to 13,000 tons in a normal year, the crop this season is not expected to aggregate 8,000 tons.

Deliveries to 30th June amounted to 3,709 tons, comprising 2,739 tons of Virginia Bunch and 970 tons of Spanish and other varieties.

A first advance at the following rates per £ has been paid to growers to 30th June, 1943:—

	No. 1 Pool.
	d.
Virginia	2-125
Spanish and other varieties	1-750

The 1943 crop will be subject to a measure of Commonwealth control as to its disposal. Peanuts are required for the Services principally, but a proportion of the Board's intake is being made available to the civilian population in the form of peanut butter.

PLYWOOD AND VENEER BOARDS (NORTHERN AND SOUTHERN).

Both Boards are empowered to function until 2nd May, 1947.

Deliveries for the year on the basis of 3/16 inch totalled 65,682,949 square feet, valued at £541,884, of which 47,571,965 square feet, valued at £392,468, was delivered to the Southern Board, and 18,110,984 square feet, valued at £149,416, to the Northern Board. These figures indicate a reduction in output, as compared with the previous year, of approximately 6,000,000 square feet, due mainly to a falling off in log supplies, because of unfavourable weather, manpower, and rail transport difficulties.

Distribution of sales:—

	Southern Board.	Northern Board.
Queensland	17,048,380	8,932,701
Interstate	30,229,028	9,030,374
Overseas	294,557	147,909
	47,571,965	18,110,984

Sales to Queensland buyers, as compared with the previous year, increased by 16,110,896 square feet, while sales interstate and overseas decreased to the extent of 18,095,993 square feet and 3,940,314 square feet respectively. Export overseas, because of heavy war demands, has been prohibited by the Timber Controller.

The administrative levy was continued at the rate of 1d. per 100 square feet, calculated on the equivalent of 3/16 inch thickness. As from 26th April, 1943, the levy has been applied on all deliveries of rotary plywood, excepting hot press plywood and plywood used for joinery purposes in manufacturers' own factories. Cost of administration averaged .823d., and quantity discount to Queensland distributors .094d., making a total of .917d. per 100 square feet.

The orderly marketing system established voluntarily throughout the Commonwealth by co-operation with plywood manufacturers in other States has been maintained.

WHEAT INDUSTRY.

Control of the marketing of the Australian wheat crop was again exercised by the Australian Wheat Board in terms of the *Wheat Acquisition Regulations* under *The National Security Act* and the State Wheat Board, a marketing organisation established under the *Queensland Wheat Pool Acts, 1920 to 1930*, continued to act on a commission basis as sole licensed receiver and agent in Queensland for the Australian Board. The Queensland system of wheat classification was not disturbed and the usual premiums over the basic price for the higher grades of wheat were collected by the Queensland Board and returned to growers. The co-operative hail insurance scheme also continued in operation, and growers' contributions were deducted from amounts payable to growers by the State Board.

With the reconstruction of the Australian Wheat Board in October, 1942, Queensland wheat growers were given direct representation by the appointment of the chairman of the Queensland Wheat Board, Mr. W. A. Dean. The manager of the Queensland Wheat Board, Mr. C. C. McKeon, succeeded Mr. Dean as State superintendent of the Australian Wheat Board. The reconstructed board was appointed for a twelve-months period, at the expiration of which it is intended by the Commonwealth Government that growers' representatives shall be chosen by ballot of the growers in each State.

The usual method of paying growers for wheat delivered by way of initial payment on delivery and interim advances based on realisations has been varied as a result of the introduction by the Commonwealth Government of a quota plan whereby each grower has been paid the guaranteed price for wheat delivered within the grower's quota allocation up to a maximum of 3,000 bushels, at the rate of 4s. per bushel at growers' sidings. A first advance of 2s. per bushel has been paid for wheat in excess of the grower's quota allocation delivered from licensed areas. Further payments on excess deliveries will, as in previous years, be dependent on realisations on the whole of the wheat in the pool.

1939-40 Season (No. 2 Pool).—A fifth and final advance was distributed in October, 1942, at the rate of 1½d. per bushel, bringing the total of Australian Board payments to 3s. 7½d. per bushel for bagged wheat, less rail freight. Payments to Queensland growers, including the Queensland quality premium, amounted in all to 3s. 5½d. per bushel for wheat of Q1 quality.

1940-41 Season (No. 4 Pool).—Distribution of a fifth advance of 1½d. per bushel was made in November, 1942, and increased the amount of advances by the Australian Board to 3s. 11½d. per bushel for bagged wheat of milling quality, less rail freight.

1941-42 Season (No. 5 Pool).—Total receipts by the Australian Board amounted to 153,967,140 bushels, of which Queensland deliveries comprised 2,679,897 bushels. Australian Board advances for bagged wheat amount to 3s. 3d. per bushel, less rail freight, representing a net payment to Queensland

growers of 2s. 10d. per bushel for first quality milling wheat. The Queensland Board has also made a distribution to growers of quality premiums and profits at the rates of 3½d. per bushel for Q1, 2½d. for Q2, and 2d. for Q2A and feed wheat, less ½d. per bushel retained as hail insurance levy. Classification of Queensland deliveries and payments is—

Classification.	Deliveries.	Percentage.	Payments.
	Bushels.		
Milling—			
Q. 1	2,149,425	80.21	3s. 1½d.
Q. 2	373,988	13.95	3s. 0½d.
Q. 2A	147,315	5.50	3s. 0d.
Feed	9,169	.34	3s. 0d.
	2,679,897	100.00	

Compensation was paid to growers from the hail insurance fund to an amount of £937 15s. 8d.

1942-43 Season (No. 6 Pool).—Late frosts and rust in some localities affected both yields and quality. Deliveries to the Queensland Board as at 30th June totalled 4,394,352 bushels, of which approximately 62 per cent. was classified as Q1 quality. Receipts by the Australian Board amounted to 142,685,857 bushels.

Distribution of payments has been made in terms of the quota plan already referred to, on the basis of 4s. per bushel, on rails country sidings for the first 3,000 bushels delivered by each grower and a first advance of 2s. per bushel for wheat in excess of quotas.

Importation of Wheat.—Reference was made in my last report to the necessity of importing large quantities of wheat from New South Wales to meet the requirements of Queensland millers and for stock-feeding purposes. To supplement the 1941-42 Queensland crop, wheat was imported to the extent of 2,937,018 bushels. Notwithstanding the increased yield of nearly 1,750,000 bushels in the 1942-43 season, it is anticipated that it will be necessary to import a quantity approaching 4,000,000 bushels for the season, of which deliveries to 30th June, 1943, amounted to some 2,000,000 bushels. An arrangement was made towards the end of December, 1942, for wheat to be brought by rail from New South Wales, via Wallangarra, at the rate of 250 tons per day. When it became clear that the State's requirements were rapidly increasing, the rate was increased at the beginning of 1943 to an average of 300 tons per day, and again in the middle of February to 400 tons per day, since when it has been necessary to import wheat at this rate 6 days each week, involving the continuous employment solely for carrying wheat of between 25 and 30 New South Wales railway trucks, which have consequently been unavailable for the carriage of other essential commodities to this State.

The State Wheat Board has assisted the railway authorities by maintaining a gang at the border to help the railway gang trans-load the wheat from New South Wales to Queensland railway gauge trucks.

It has again been possible, with the assistance of the Minister, to arrange for the additional requirements of the milling and the produce trade after absorbing the Queensland crop, to be imported through the Queensland Board as agents for the Australian Board at a satisfactory price. The arrangement provided for a special over-all price for Queensland and New South Wales wheat of 4s. 5d. per bushel at Brisbane, which concedes portion of the disadvantage which users in this State would otherwise experience because of the freight cost of imported wheat involved.

Emergency Wheat Supplies.—Action was taken by the Queensland Government under the authority of the *National Security (Emergency Supplies) Regulations* to extend the activities of the Queensland Emergency Supplies Committee, by the promulgation of *National Security (Emergency Wheat Supply) Rules*, to include provision for the establishment of reserve stocks of wheat at flour mills and for the produce trade. The rules are administered by a sub-committee of the Emergency Supplies Committee. At the outset, an emergency wheat reserve, equivalent to three months normal requirements, was aimed at, but this was reduced later to eight weeks; and, in fact, the transport difficulty involved in the importation of wheat has resulted in supplies being only enough to meet current requirements.

Concession Priced Wheat for Stock Feeding.—The scheme whereby wheat is purchased by the Commonwealth Government to be made available to bona fide feeders of stock at a price of 6d. below the normal market price has been continued.

Flour Tax.—The flour tax has remained unaltered at a rate of £2 8s. 10d. per ton. Increases in the price of flour were granted by the Prices Commissioner of 4s. per ton as from 7th December, 1942, and 5s. per ton as from 4th March, 1943, making the f.o.r. price at Brisbane £13 1s. 6d. per ton.

Seed Wheat.—The Necessitous Growers' Seed Wheat Scheme has been continued, as in previous years, and has been the subject of a guarantee by the Queensland Government to the extent of an amount not exceeding £5,000.

Wheat Sacks.—Provision has been made through the Australian Wheat Board for an adequate supply.

Wheat Industry Stabilization.—As originally framed, the *Wheat Industry Stabilization Scheme* arbitrarily restricted wheatgrowing to the basic area on each registered farm equivalent to the average area planted during the four-year period prior to the introduction of the scheme. An amendment of the *National Security (Wheat Industry Stabilization) Regulations* in February, 1943, designed to meet Queensland's unfavourable position, permitted the registration and licensing of "temporary" wheat farms, and it was subsequently agreed that Queensland's wheat acreage might be increased to 500,000 acres.

For the 1941-42 season, licences were issued for a total area of 460,692 acres. The area licensed for 1942-43 was 447,210 acres.

To facilitate the administration of the scheme and to hear appeals under the quota plan, which supplemented the acreage limitation as a stabilization measure, a State Wheat Committee, comprising the Director of Marketing and ^{two} wheat-growers, was appointed by the Minister for Commerce in December, 1942. Administration of the scheme has been continued by the State Wheat Board, under the supervision of the Chairman of the State Wheat Committee.

GENERAL.

Following on a conference of representatives of State Departments of Agriculture and of the Directorate of Manpower held in September, 1942, and subsequent meetings of the Standing Committee on Agriculture and the Australian Agricultural Council, the staff of the Marketing Branch has been engaged, part time, in setting up and administering the War Agricultural Organisation, of which the Director is the State Executive Officer, also (until a special staff could be assembled) of the scheme covered by *The National Security (Agricultural Machinery Control) Regulations*.

The Branch has continued its association with various activities under the *National Security Act*, as previously reported, including the *Emergency Supplies of Essential Commodities Scheme*. During the year the Director was appointed by the Federal Minister for Labour and National Service as chairman of the Local Wheat Harvest Employment Committee for the State of Queensland which was set up under the *National Security (Wheat Harvest Employment) Regulations*.

H. S. HUNTER, Director of Marketing.

REPORT OF THE REGISTRAR OF CO-OPERATIVE ASSOCIATIONS.

There has been no change in the number of registrations under *The Primary Producers' Co-operative Associations Acts, 1923 to 1934*—212 associations and 2 federations.

As the registry of 20 associations has been cancelled during the period the Acts have been in force, 192 associations and 2 federations remain on the register.

The number of licensed auditors has increased to 239.

Early in May, 1942, the Council of Public Safety issued an order, in terms of *Regulation 24* under the *Public Safety Act*, authorising and directing that all directors of co-operative associations and officers holding office by election shall con-

tinue to hold office for a period of twelve months from the 30th April, 1942, without the necessity of any fresh election or nomination.

In April of this year a further direction was issued by the Council of Public Safety which will continue in office until the usual election date during 1943 those directors who were affected by *Regulation 24* under the *Public Safety Act*.

In the case of associations whose Rules provide for the rotation of directors, those directors who would normally retire in 1942 will now retire in 1943, and those normally due to retire in 1943 will retire in 1944.

A. J. EVERIST, Registrar.

WAR AGRICULTURAL COMMITTEE ORGANISATION.

Faced with the need to produce more foodstuffs under wartime disabilities—such as the drain on rural labour, shortage of mechanical equipment, replacement and repair services—the Commonwealth and State Governments found it necessary, early in the departmental year, to provide machinery through which primary producers might overcome their difficulties. Accordingly, in September, 1942, the Australian Agricultural Council considered proposals for the setting up of an organisation somewhat similar to the county wartime agricultural executive committees of Great Britain. These proposals emanated from a conference of Commonwealth and State officers, at which specific recommendations were put forward for a modification of the British system to suit Australian conditions. These recommendations were based on the operations of a war agricultural organisation in New South Wales set up at the request of the Directorate of Manpower and which had then been in operation for some months. The Australian Agricultural Council agreed to the operations of the present scheme throughout the Commonwealth.

STRUCTURE.

The principal feature of the structure of the Australian organisation is the functioning of district war agricultural committees under the control of the Department of Agriculture in each State. The Australian Agricultural Council and the Commonwealth authorities laid down no hard and fast principles as to the constitution of these committees, except to the extent that rural and urban interests should be represented and that the chairman should be an officer of a State Department of Agriculture or some other Government official. It was stressed that the urban and rural members should be selected for their capacity and suitability for the work to be undertaken, and not merely because of their affiliation with any particular organisation. Selection by popular election or by the nomination of producers' organisations was excluded because the war agricultural committees are administrative rather than advisory. District committees are authorised to set up subsidiary or local committees to assist in their respective district.

Organisation in each State is centred in the Department of Agriculture and linked on policy matters through that Department with Commonwealth Standing Advisory Committees associated with the Australian Agricultural Council. On administrative matters each State Department of Agriculture provides a channel of communication with the Federal Department of Commerce and Agriculture. The State Departments also maintain necessary contacts in their respective States with other Commonwealth Departments.

THE QUEENSLAND ORGANISATION.

Queensland has been divided into forty districts, each comprising one or more local authority areas. The division of the State in this way has the advantage that official statistics of agricultural production are available on a war agricultural committee district basis, for in Queensland statistical districts consist of groups of local authority areas.

The three members of each district war agricultural committee—viz., a field officer of the Department as chairman, a person selected from the urban community and a primary producer, are appointed by the Minister for Agriculture and Stock. In addition, district National Service officers or their representatives are associated with district war agricultural committees in an advisory capacity. Each district committee has appointed local sub-committees according to the needs of the district and membership of these sub-committees does not usually exceed three in number. Local sub-committees may be constituted either on a local geographical basis or on a commodity basis to ensure the assistance of commodity marketing boards and primary producers' co-operative associations, in addition to the assistance of selected primary producers or business men in defined local areas.

The Central Executive, under the chairmanship of the Minister, and including the Under Secretary and heads of the various Branches, operates within the Department of Agriculture and Stock. The Directorate of Manpower and the Queensland Council of Agriculture are also represented on the Central Executive. Assisted by an administrative staff of specialist officers and the part-time services of Marketing Branch officers, the State Executive Officer is responsible for the administrative direction of the organisation.

FUNCTIONS AND ACTIVITIES.

Broadly, the purpose of the War Agricultural Committee Organisation is to assist in decentralising wartime administration of agricultural interests. The district war agricultural committee are chiefly concerned with the attainment of production objectives fixed by the Food Production Executive of the Federal Cabinet and to this end with the organisation of the most efficient use of the labour resources of their districts, the pooling of and co-operative use of agricultural machinery and transport facilities, and the general sponsoring of co-operative efforts to offset labour and other wartime disabilities. It is their function to organise the means of production, as distinct from the planning of production.

The district war agricultural committees are an integral part of the organisation set up to administer the *National Security (Agricultural Machinery) Regulations*. A machinery control officer is attached to the administrative staff of the War Agricultural Committee Central Executive.

District war agricultural committees also act in an advisory capacity through the Central Executive in such matters as the labour requirements of their district from outside sources, the needs of individual producers in respect of replacement parts for agricultural machinery, cars and trucks, liquid fuel, general farm equipment, and materials, as well as the release by the Materials Supply Directorate of fencing wire and wire netting.

An important function of district committees is to keep in touch with production trends and to report on any circumstance or condition militating against the attainment of production objectives.

In the employment of members of the Australian Women's Land Army, activities of district war agricultural committees include organisation of accommodation and transport and the placing of labour.

The machinery of the War Agricultural Committee Organisation has provided a means of regulating the distribution of materials and farm equipment in short supply, and its assistance has been invoked by the Commonwealth authorities concerned with administration of control schemes of various kinds, e.g., pneumatic tyres for tractors, garden hose for growers of fruit and vegetables, and electricity supplies in rural areas.

H. S. HUNTER,

State Executive Officer.

REPORT OF THE QUEENSLAND EMERGENCY SUPPLIES COMMITTEE.

By the *National Security (Emergency Supplies) Regulations*, the Commonwealth in 1941 delegated to the States power to make rules for an emergency supplies scheme.

Costs of the scheme are shared by the Commonwealth and State in agreed proportions. The sums paid by the State in the course of the year aggregated £21,040 on State account and £28,881 on Commonwealth account. In addition, the Commonwealth paid considerable sums on its own account.

The Treasurer of Queensland has given guarantees to the Commonwealth Bank and to the Sugar Industry for the purpose of providing reserve stocks of emergency commodities and also makes payments within the State on behalf of the State Government and the Commonwealth Treasurer, the Commonwealth Government having arranged to refund payments made on its behalf. The Treasurer has power to make payments and give guarantees, as far as Queensland's liability and expenditure are concerned, by the Emergency Supplies Act of 1941.

The Queensland Emergency Supplies Scheme is broadly divided into four parts:—

- (1) Storage in traders' premises;
- (2) Certain stocks dispersed from traders' premises in coastal areas and stored inland in special storages as a safety measure;
- (3) Special flour depots;
- (4) Special depots containing Government-owned goods.

The scheme is designed with a view to having reserves in all parts of the State to provide against any emergency, particularly dislocations of transport and temporary interruptions to production. Reserves are stored primarily in wholesale premises, and in order to obtain greater dispersals or more comprehensive reserves, certain large retailers have also been called upon to hold reserve stocks.

In other parts of the State, reserves are stored in retail premises, bakers being classed as retailers in order to provide for the storage of flour.

Financial assistance is given only to suppliers and takes the form of interest-free overdrafts guaranteed by the Commonwealth and State. Many wholesale suppliers have provided their own reserve stocks and also the reserves in their retail customers' premises without financial assistance, while a large number of retailers also are financing the scheme from their own resources. There are 344 registered wholesale suppliers and 2,452 registered retail stores. Of the retail stores, approximately 800 are operating on the voluntary basis, either on their own finance or because suppliers have made sufficient goods available on credit.

The Queensland sugar industry has assisted the Emergency Supplies Scheme right throughout Australia by making reserve stocks of sugar available on credit. This credit will not be redeemed until the end of the scheme or until the reserve stocks are utilised. The period for the storage of reserve

stocks of sugar in Queensland was increased in those districts where reserves were previously required to be held, and retailers and suppliers in certain coastal centres formerly exempt were also called upon to install reserves because of added transport difficulties. Since the end of the year, reserves have also been required to be established in certain additional districts formerly exempt.

Commonwealth Regulations prescribe all commodities essential to the life and health of the community, so that the storage and distribution of all necessary items can be controlled, if necessary. The Queensland *Rules* at 30th June, 1943, prescribed the items for storage, and specify periods ranging from two weeks to six months, according to the keeping quality of the commodity and the location.

The value of reserve stocks owned by suppliers and retailers is estimated to be £775,000.

The reserves built up have already proved their usefulness in many parts of the State, particularly in North Queensland. Reserves have been frequently released to meet temporary shortages caused by transport delays, thus enabling civilians to be supplied with foodstuffs that would otherwise have been unobtainable.

Traders generally have co-operated wholeheartedly in the scheme and the prescribed reserves are being maintained, except when temporary withdrawals from reserves are permitted from time to time because of transport interruptions. Reserves are replaced as soon as new supplies arrive.

The policing of reserve stocks is done by local supply officers, without extra remuneration. Field officers of the Department of Agriculture and Stock, State school teachers, officers of the Department of Justice, and other Governmental officers are selected for appointment as local supply officers.

In addition to retailers and suppliers, the insurance companies, the State Government Insurance Office, Commonwealth Bank and the trading banks have rendered valuable assistance.

The storage of commodities in Queensland presents problems far greater than those encountered in other States, because of climatic conditions and the prevalence of pests. Nevertheless, loss of goods by deterioration has been very slight, and the amount of compensation payable by the Governments concerned amounted to only £321 in the course of the year.

In Queensland, the Commonwealth pays two-thirds of the interest on overdrafts, half of the losses by deterioration, bad debts and other causes, and half of any special storage costs. The cost of storage has been negligible, as traders have provided their own storage throughout the State without governmental assistance.

Schemes to ensure a supply of perishable as well as non-perishable commodities have been devised, and plans to cope with any emergency have been made.

W. C. OGILVIE, Secretary.

Price : 1s.]

By Authority : A. H. TUCKER, Government Printer, Brisbane.





