## QUEENSLAND FOREST SERVICE



## REPORT

FORESTRY BOARD

BOR THE

YEAR ENDED 30th JUNE, 1932.

PRESENTED TO PARLIAMENT BY COMMAND.

BRISBANE :
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TO THE H0N. P. PEASE, M.L.A., MINISTER FOR J.ANDS, BRISBANE.

Sub-Department of Forestry, Department of Public Lands, Brisbane, 7th October, 1932.

Sir,-I have the honour to transmit herewith Report on the operations of the Provisional Forestry Board and the Forestry Board during the year ended 30th June, 1932.

The Provisional Forestry Board, consisting of Messrs. E. H. F. Swain (Chairman), V. Grenning and N. E. Hancock (Members), administered the Forest Service until 4th April, 1932, when the Forestry Board was appointed.

The Forestry Board comprised Messrs. E. H. F. Swain (Chairman), V. Grenning and G. A. Duffiy (Members), and N. E. Hancock (Deputy Member).

I am, \&c.,
V. GRENNING,

Acting Director of Forests.
For the Forestry Board.

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# Report of the Forestry Board for the Year ended 30th June, 1932. 

## INTRODUCTION.

Reference to the following pages of this Report will show that at the end of the financial year 1931-32 there had been established in Queensland 8,194 acres of plantations of forest trees; that in addition 84,200 acres of the natural forest had been treated for the purpose of obtaining natural reproduction and of improving the growth of Cypress Pine and our more valuable hardwoods; and that a record year's planting . operation of 1,985 acres had been accomplished.

Whilst it is pleasing to be able to report this progress, which indicates that greater attention is now being paid to forestry, it must not be forgotten that the figures are far below the calculated annual area required for the provision of the future timber requirements of the State. This has been pointed out many times in previous Annual Reports-but the fact must again be stressed that at the present time Queensland should be planting annually a minimum area of 5,000 acres with softwood species, in addition to improvement operations on some tens of thousands of acres of forest.

Two thungs are needed to attain this objective. Firstly, the necessary financial provision must be made, and it is very pleasing to be able to record that the Government has shown increasing sympathy in this direction despite the very difficult financial circumstances. In 1931-32 $£ 42,346$ was expended in reforestation works, $£ 20,000$ from Loan Fund and the balance under Unemployment Relief Votes. For the current financial year $£ 50,000$ has been provided under the Loan Vote, and, in addition, a considerable amount of wdrk has been effected by unemployment relief labour.

The second need is the provision of an adequate area of land suitable to the production of our timber needs. This is not such an easy task for Government as may appear at first glance. Requests are continuously being made for the opening to selection of the present inadequate area of reservation, and were all such requests to be granted then the area of reservation of real forestry value left would be but small indeed.

For satisfactory management forest areas should be extensive and. compact. Consequently it is inescapable that some such areas must include certain portions which are suitable for settlement.

Whilst the forester's endeavour is to demonstrate a fundamental in national economics, namely, that the classification of forest lands should be based on the reservation of a sufficient area to produce the State's requirements most economically, at the same time reserving the minimum area of land well suited to settlement, it is often contended, however, that all forest areas which could be used for settlement should be alienated.

It is obvious that a classification carried out on the basis of the latter contention, without regard to the State's timber needs, would render forest management in this State impossible.

It is the duty of every Forestry Department to produce the timber needs as cheaply as possible, and a study of economics of timber-growing is important. The Forestry Department is not justified in recommending to the Government the planting of poor forest soils remote from market, rather than of more accessible and better forest soils, since in the former câse-
(a) The wood increment per acre per annum is much lower;
(b) The forest takes much longer to reach maturity;
(c) A large proportion of the timber produced could not be. marketed.

Hence, when the effect of compound interest is taken into consideration, it must be apparent that timber can be grown more cheaply on good forest soils than on poor forest soils. Further, the effect of distance from market is most important. As the cost of transporting logs to the main markets is invariably much greater than the cost of growing, it can be seen how important a factor proximity to market is. Finally, if the distance from market is such that only a portion of the growth is economically marketable, then the cost of growing marketable logs is further increased, and timber supplies are reduced.

The existing State Forests of Queensland do not yet total $2,000,000$ äcres. This is less than one-half of 1 per cent. of the total area of Queensland. Much of this area, owing to configuration, location, unsuitability of soil, and other factors is not land suitable for planting, nor can it be treated for regeneration. In fact, large areas have never cairried marketable timber, nor are they ever likely to. In some of the older State Forests the land seems to have been reserved as such because it was unsuitable for any other purpose; the fact that it was equally unsuitable for forestry purposes bèing overlooked.

The land provision for forestry in Queensland is far from satisfactory. Premiers' Conferences and Conferences of Foresters from all States and all parts of the Empire have laid. it down that there should be 6,$000 ; 000$ acres of prime forest land permanently reserved for forestry in Queensland.

There is quite a definite need for the provision of adequate areas of land for forestry purposes, and it is imperative also that what land is so provided should be safeguarded against possibility of alienations, to enable management plans to be carried out.

The forester must plan ahead, and his plans obviously must be formulated in respect of definite areas of land and for considerable time .periods. If he has no assurance that such areas will be retained, he cannot draw up definite plans. Nothing is so disturbing to sound forest management as recurring final reclassifications of permanently reserved forests. Already there has been experience in Queensland of definite working plans for forest management being drawn up in respect of areas of permanent State Forest only to be nullified, with consequent loss of considerable Loan expenditure, by heed being given to local agitations for alienation.

In order to put forestry on a satisfactory basis as regards land provision, the following steps should be taken :-

1. The quota of land required for forestry purposes should be arrived at on the basis of the future needs of the community in timber. It should indicate-
(i) Land required for plantation of native species;
(ii.) Land required for regeneration of native species;
(iii.) Land required for plantation of exotic softwoods;
(iv.) Areas for reservation for fuel and similar supplies;
(v.) Protection forests.
2. Examination should be made of existing forest reservations to see how far they satisfy such requirements, having regard to the economical production of timber.
3. Following such examination the necessary areas of reservation should be permanently dedicated for forestry purposes.

There is very definite need for action on the lines indicated above, and the passing of a Forestry Act containing these provisions is urgently required.

## THE REFORESTATION OPERATIONS,

GENERAL RESUME OF YEAR'S WORK.
The carrying out of the year's reforestation programme involved the expenditure of funds amounting to $£ 42,346$. Of this total $£ 20,000$ was met from the appropriation of Loan money, the balance being secured from Unemployment Relief Funds.

## Summary of Year's Operations-

The net results of the year's work are set out in the following summary :-
(i.) Plantation Areas
(1) Acreage of new plantations established (establishment includes felling of jungle, burning-off, planting, cartage of plants, and tending) .. .. .. 1,985
(2) Acreage felled for planting next season.. .. .. 590
(3) Acreage of previously established plantations tended.. 3,300
(4) Acreage sown with maize .. .. .. .. .. 236
(5) Acreage maize crops harvested .. .. .. .. 418
(6) Acreage of previously established plantations refilled.. 712
(7) Number of trees used in planting and refilling .. 1,280,000
(8) Length of firelines constructed .. .. 25 miles 40 chains
(9) Length of firelines maintained .. .. .. .. 61 miles
(10) Length of fences constructed (for plantation protection only) .. .. .. .. .. 15 miles 56 chains
(11) Number of seedlings handled in the nurseries .. 4,200,000
(ii.) Natural Regeneration Areas-
(1) Acreage of natural forests regenerated and improved 10,070
(2) Length of firelines constructed .. .. 70 miles 24 chains
(3) Length of firelines maintained .. .. 104 miles 64 chains

Considerable work has also been done on construction, \&c., projects, details of which are shown in the respective district summaries.

The figure of 1,985 acres, representing the area of new plantations added during the year is 694 acres above the record planting operations of last year.

Full details of the areas planted are in Appendix L.

Climatic Conditions-
The Hoop Pine and Silky Oak planting this year was considerably hampered by the unusual weather conditions that prevailed during January, February, and March-the normal planting season for the indigenous species.

The rains of November and early December gave promise of an excellent season and planting was commenced in most cases shortly after the burn-offs under geod planting conditions.

Rain ceased abruptly in the middle of December and except for an isolated storm yielding but little rain, drought conditions existed until the beginning of April.

In the Mary Valley district the rainfall in January was the second lowest recorded for that month over sixty-two years, while March rainfall constituted a record minimum. During the whole of this rainless period excessively hot conditions prevailed, temperatures of 106 degrees being not uncommon.


Reforestation Operations at Beerwah-Loblolly Pine (Pinus taeda)-age, 4 years.

Similar conditions held throughout all planting districts.
So serious became the position that firebreaks had to be again tended in February to remove the weed growth that followed as a result of the November rains, and which by February had become so parched as to be a dangerous fire menace.

## Planting and Results-

Planting was continued until mid January in expectancy of the normal summer rains but by then the soil had so dried out that further planting had to be postponed until rain fell.

In spite of these adverse conditions the losses among the Hoop Pine and Silky Oak have been low and in no case has more than a 15 per cent. refilling been called for.

This season has demonstrated the particularly drought withstanding ability of Hoop Pine and the value of the planting tube. Results have indicated clearly that given a normal season, planting can be carried out successfully immediately after the jungle is burnt off without necessarily awaiting the rains.

The districts in which exotic species solely are being handled enjoyed better conditions during the planting season of May, June, and July. At Pechey and at Passchendaele the Pinus patula and Pinus radiata plantings have established well.

Extensive planting of Slash Pine (Pinus caribcea) was carried out at Beerwah and the results have been highly satisfactory. Planting in this area was commenced earlier than usual and was carried out from March until the beginning of July. The early plantings have given great success.

The planting of Slash and Loblolly Pines in the Mary Valley and Brisbane Valley districts in May and June have not been attended by such success, particularly in the former district. These two months were particularly dry in these districts, and the continuance of this dry spell has been responsible for a number of losses.

Some $1,300,000$ plants were used in this year's plantings, Hoop Pine and Slash Pines (both 32 per cent.), Loblolly Pine (ll per cent.), Silky Oak ( 8 per cent.), and Pinus patula ( 7 per cent.), representing the chief species employed. (Full details are contained in Appendix O.) In the Brisbane Valley district an area of eighty-one acres was this year successfully planted with Tallowwood and Ironbark, while over fifty acres of Maple were set out in North Queensland.

## Maize Cover Crops-

Though some maize cover crops were sown in the Brisbane Valley forests this year, the early rains called for the abandonment of these sowings in favour of planting. Results have indicated that provided early planting with good stock is practised, the maize crops might be dispensed with on most areas. The maize harvest of last year's sowings has yielded some 11,000 bushels of grain.

## Tending-

Tending still continues to be a matter requiring careful investigation. Experiments in the Mary Valley district have demonstrated the superiority of keeping the planted areas continually free of weed growth as against other methods. The chipping of weed growth after germination of the weed seed appears complete gives good results in some cases, but in others at least two chippings, and sometimes three, are required before the winter months. A single brushing would not appear to be of great value.

Lantana is giving considerable trouble on the Mary Valley areas, but more progress has been made this year with its eradication than in previous years.

## Constructional Work-

Considerable extension work was carried out on the nurseries at Imbil, Amamoor, Benarkin, and Yarraman during the year, while preparation for a nursery on S.F.R. 257 (near Blackbutt) was. commenced by the sinking of a well.
$\therefore$ At Kalpowar, on the Many Peaks-Monto Line, preliminary operations for the opening up of a planting programme on S.F.R. 95, parish of New Cánnindah, were undertaken, and included the establishment of a nursery. and water supply, together with quarters for the nurseryman and a residence for the District Officer.

Seed Collection-
A medium fall of Hoop Pine seed was again experienced in the Brisbane Valley last December, and over 10 tons of seed were collected, while the first seed of Southern Kauri Pine that has been available for seyeral years was collected and sown early, yielding over 20,000 seedlings.

Large stocks of Hoop Pine trees are held, and the sowings of Slash Pine at Beerwah in July should bring the total stock available for 1932-33 plantings up to sufficient for 2,700 acres.

## Hardwood and Cypress Pine Areas-

As a result of the largely increased planting programme, the operations on the hardwood and the Cypress Pine forests were somewhat. curtailed.

Firebreak work was maintained at last year's level but the area of natural forests subjected to natural regeneration treatment was only 10,070 acres, compared with last year's figure of 27,000 acres. (Details of the year's work are in Appendix M.)

Results of the treatment of the Cypress Pine have been as good as reported last year. Germination has been prolific: and survival high. Again this year no seed fall of Spotted Gum or Narrow Leafed Ironbark occurred, but the prospects for a good fall next season are bright.

## Fires-

No fires causing any appreciable damage to treated areas were reported during last fire season. During burning-off operations at Passchendaele this year the fire became uncontrollable and swept across 200 acres of planted country. What loss has been sustained is not yet clear, as many trees might recover.

## Labour-

The large programme this year has been made possible only by the employment of unemployment relief men.. The scheme has operated very satisfactorily. Most men are keen on their work and conscientious. The number of slackers is few, and the fact that results have been so good in face of the adverse conditions is ample proof of the good work put in by these men

## Appreciation-

The Forestry Board would like to express its appreciation of the sympathetic treatment that has been accorded its requests on all occasions by all branches of the Department of Labour and Industry

## DETAILS OF DISTRICT OPERATIONS.

The following summaries contain the details of the major operations in each of the forestry districts.

## Mary Valley Working Plan Area-

The rainfall at Imbil for the year was 3,420 points, which is slightly over seventeen inches short of the average for the past four years.

The best falls were 626 points in November and 703 points in April, the intervening period and most important, the planting season, being remarkably dry, with temperatures frequently up to 106 degrees. The rainfall for the year is not a record minimum, but the fall of 58 points in January is the second lowest precipitation on record. The 80 points in March is the lowest on record for that month, and this is corroborated by Gympie records extending over sixty-two years.

Rapid weed growth followed the November rains and this had become so parched and dry by March that it was necessary to tend firelines again against danger from fires.

During the latter end of June an exceptionally heavy frost occurred, resulting in the browning of species that previously had never been known to be frosted.

Planting operations were still further extended this year, and by the close of the year a further 603 acres had been established- 422 acres on S.F.R. 135 and 181 acres on S.F.R. 435.

Hoop. Pine this year represented 90 per cent. of the trees put out, the balance being chiefly Silky Oak, P. teeda, and P. caribcea.

Taking into consideration the continued hot dry spell in the planting season, the planting on S.F.R. 135 can be considered very satisfactory in the case of the indigenous species. As is to be expected, plants have done best on the newly burnt over pure jungle land, far exceeding those planted on the jungle forests carrying a strong mixture of Eucalypts.

[^0]During the latter end of May and June, Pinus caribea and Pinus teeda plants from Beerwah were planted on both of these reserves. The soil at planting was very dry and has continued to be so. Results have not been particularly pleasing on this account and if rain does not fall shortly losses will be high.

Tending continues to be a problem. Digging out of the weed growth at a time when it is thought that weed seed germination is complete has been unsatisfactory in most cases, and two tendings by digging out of the weeds is necessary before winter. The tending by digging appears to be more satisfactory on S.F.R. 435.

Lantana is the chief source of trouble, but during this year considerable progress was made in its eradication on planted areas; this has been considerably assisted by the better type of workmen available.

Some losses were experienced during tending operations in the dry period and tending was largely delayed till rain fell.

Further attention than in previous years was paid to fireline work this year. On S.F.R. 435, 150 chains of one-half chain firelines were maintained by clearing and 87 chains were constructed of widths varying from one chain to three and a-half chains, while on S.F.R. 135, the figures are 537 chains and 267 chains, respectively. Ploughing of breaks was carried out wherever possible this year.

In preparation for an increased planting programme next year the nursery at Imbil was extended by the addition of fourteen tube beds, while sixty-six more are in the process of construction at present. At the Amamoor nursery, a further twenty-eight tube beds were added. No planting was carried out on S.F.R. 256 this year, and operations were confined to tending, with a little refilling.

On S.F.R. 124, Glastonbury, at Shack's Creek, an area of 60 acres of jungle was felled ready for planting, but, at the instruction of the Government, planting was not proceeded with. This felled area has been kept clean of weeds and lantana. Work on the completion of the nursery was also held up.

The work of research in the district was further pushed ahead, and forty-nine major experiments are in progress, covering the more important points of the research working plan.

Several outstanding points were yielded, by these experiments in the past year, chief of which are-
(1) Retarded growth resulting from transplanting of Hoop Pine gives a definite decision against this procedure.
(2) Tending experiments give emphatic weight to the clearing of the planted areas of all weeds during the first twelve months and indicated that little or no advantage results from merely brushing the weeds.
(3) Experiments give emphatic denial to the practicability of underplanting the jungle.
(4) Amelina arborea, Pinus caribrea, and C. lusitanica show great promise in the arboreta plots.

## North Coast Working Plan Area-

This district rose to second place in order of magnitude of operations this year.
Planting operations on R. 561 at Beerwah covered an area of 425 acres. Planting land available was almost entirely suitable for Pinus caribcaa and operations were practically confined to this species, though small areas of Pinus teeda and Cupressus lusitanica were also established.

Planting was commenced earlier this year than usual in this district and covered the period from February to June, though the bulk of the work was carried out in May and June. Establishment has been very satisfactory on all areas.

The plantings of 1928 on portion 366 referred to in last year's Report continue to make great progress, and are rapidly closing up.

The output of nursery stock from this reserve for the year was $510,000-200,000$ of these being despatched for planting in other districts. The available bed space in the nursery now totals $76,000 \mathrm{sq}$. ft.

Fireline work was pushed ahead considerably this year and 475 chains of external breaks, together with 197 chains of internal breaks, were felled and cleared ready for ploughing. Fireline maintenance was confined to 60 chains. Falling operations for next year's planting were in hand at the end of June, when 320 acres had been felled.

Natural regeneration operations on the hardwood forests were continued on S.F.R.'s 318, 60, and 445, and at the end of June 606 acres, 289 acres, and 770 acres, respectively, had been treated for the twelve months, of which 295 acres, 289 acres, and 140 acres received their first treatment.

Thinning experiments were commenced on the fine young dense regeneration of Blackbutt on S.F.R. 445, several series of spacing plots being laid down and the thinning carried out. Much of this Reserve carries very dense Blackbutt regeneration which requires thinning, and the effects of the thinning are being carefully watched.


## Brisbane Valley and Nanango Working Plan Areas-

Climatically, the year has been most disappointing. - The winter months of 1931 were relatively mild, though a heavy frost in October caused trouble. September, October, and November experienced mild conditions and good rains, burning-off operations in November being attended with some difficulty. However, from the middle of December until early April, apart from very scattered storms, no rain was received. Temperatures during this period were also abnormally high. April brought good rains and this was followed by mild weather. With June, however, came a sudden change, with severe frosts causing losses in several places. Total rainfalls for the year were, however, not much below average, except on S.F.R. 299, where in the last six months of $1930-31$, eight inches more rain fell than during the whole twelve months of 1931-32.

A start on planting was made following the November and early December rains and continued until the end of January, when the dry weather and excessively high temperatures demanded cessation. This was resumed again in early April, and completed except for the exotic planting by the end of the month. The planting of $P$. cariboa was carried out in May and June.

The total area planted in this district for the year was 492 acres, made up as follows:-


The Eucalypt planting was made up by Eucalyptus paniculata (Grey Tronbark) and Eucalyptus microcorys (Tallowwood). In spite of the very adverse conditions, the amount of refilling necessary was relatively small, never exceeding 15 per cent. More than 50 per cent. of these losses were due to cockchafer larvæ.

Early planting was this year given a thorough testing, and the successful results indicate that planting can be commenced as soon after the burn-off as possible.

The Eucalypts have shown good success and growth, while the planting of P. cariboca and P. patula has been attended by much greater success than last year.

No planting was carried out on Reserves 151 and 379, on which the work was limited to tending and fire protection.

Maize cover crops were not sown on all areas this year. Late burns and the early rains in December caused these sowings to be abandoned in favour of planting. Crops were sown on S.F.R. 283-98 acres, S.F.R. 257-46 acres, S.F.R. 289-60 acres, and S.F.R. 29930 acres. The crops on the last two reserves failed, but on the other areas fair to medium crops are anticipated. Indications are that a maize shelter crop is not essential provided plants of suitable type are used.

Fire damage is being well provided against by the system of surveyed scrub breaks mentioned in last year's Report. As a further provision a system of telephone lines has been installed, connecting various points on S.F.R.'s 283 and 257 to the office at Benarkin, and in addition fire huts and caches of firefighting tools have also been completed. Successful early burning of grass lands adjoining the plantations was carried out in September and October, and all breaks were in good condition at this date. Following the rains in November and December and the subsequent hot dry spell, it became necessary to carry out a second ploughing, harrowing, and chipping of all internal and external breaks. Fire damage this year was nil.

Firebreak work carried out was as follows :-


Wallabies are still a source of trouble in some of the older plantations, and some of the recently planted exotic species have also suffered. Protective netting fences erected during the year totalled 598 chains, made up of 160 chains on S.F.R. 283, 170 chains on S.F:R. 257, 180 chains on S.F.R. 289, and 88 chains on S.F.R. 299.

The nurseries at S.F.R. 289 and at S.F.R. $283 \cdot$ were extended during the year. At the former six bays have been added or extended, bringing the capacity up to 500 acres per annum of Hoop Pine, either two or three year old stock. The latter was extended by the addition of an area 137 ft . by 223 ft : under high shades and the water supply system was redesigned. This nursery now has a capacity of 250 acres per annum of three or four year old Hoop. Pine stock.

On S.F.R. 257, the timber for a nursery of 150 acres per annum output has been obtained. The site for it will be determined on the completion of the well, which has now been sunk to a depth of 148 ft. .; with prospects of obtaining water very bright.

Some prickiy-peàr and lantana patches were eradicated during the year, together with burr growing along the creeks.

The research working plan for the investigation of Hoop Pine and Silky Oak problems was further proceeded with; experimental work being confined mainly to Hoop Pine.

Particular attention is being paid to the wallaby depredations and the value of the maize cover crops.

## Atherton Working Plan Area-

The dry season that was experienced in other planting districts was also felt in this area, though somewhat later. Very heavy rains occurred in December and January, but Febriary experienced a very severe dry spell.

Frosts this year in June were most severe and their equal had not been experienced during the previous twenty-two years. Jungle trees in places were "burnt" to a height of 70 ft . from the ground and lantana was killed outright. Rainfalls at Gadgarra and Wongabel for the year were 86 inches and 59 inches, respectively.

On S.F.R. 191, Wongabel, an area of 96 acres was planted, being composed of 41 acres of Grey Ironbark, 43 acres of Hoop Pine, 8 acres of Maple, and the balance of miscellaneous species. The areas established well but were somewhat affected by the June frosts. Tendings were somewhat heavy this year, but they have revealed good success everywhere.

Wallabies continue to cause trouble on this reserve, but trapping has resulted in good catches, and it is hoped that the area will be fully cleared of these pests in a few years.

Fencing, as protection against wallabies, involved the erection of 241 chains of netting fence.

The fire danger on this reserve is not great, but some 118 chains of firelines were kept in good order.

Accommodation was provided for relief men by the erection of barracks and the nursery was extended by the addition of a further ten beds.

Planting on S.F.R. 310, Gadgarra, amounted to 76 acres, made up of 44 acres of Maple, 15 acres of Hoop Pine, 9 acres of Eucalyptus spp., and the balance of miscellaneous species.

A few losses resulted in the Maple, due to the dry spell, but the plantings are generally very satisfactory.

Weed crops on some areas were very heavy, but in several cases, owing to the rapid growth of the trees, no further work of this nature will be required.

Fire protection work or protection from wallabies did not entail much work. This reserve is particularly fortunate in these respects.

A new hydraulic ram was installed for the nursery water supply and has proved a great improvement.

Accommodation for relief workers in lieu of tents was provided also on this reserve.
Tending was carried out on the planted areas of S.F.R. 194. The planting on one compartment of this reserve is the most impressive plantation in North Queensland.

Plantings in this working plan area have been largely experimental, but large planting programmes have not been possible, chiefly due to the lack of fully logged plantable areas.

The work, however, has now progressed to such a stage that species for extensive plantings have been laid down. Those recommended, in order of merit, are Kauri Pine, Hoop Pine, Maple, Cupressus lusitanica, Grey Ironbark, Pinus caribaa, Tallowwood. The proportion of planting of the species has been determined at softwoods 75 per cent., cabinetwoods 22 per cent., other 3 per cent.

Given suitable planting areas, the planting programme can now advance along extensive lines beyond the experimental stage.

## Gilkivan Working Plan Area-

The weather conditions that obtained in other districts held in this district also. The summer months were extremely hot and dry, the winter severely cold.

On T.R. 220 an area of 42 acres was planted entirely with Hoop Pine. Results have been satisfactory and no refilling has been required to date. Only little refilling was essential on the other established areas. The Silky Oak seed spotting carried out last year and the year before has been unsatisfactory and planting will have to be resorted to.

This year's planted area is protected by a jungle break and fire protection work was limited to the maintenance of 60 chains of break.

Protection from wallaby damage called for the erection of 90 chains of netting fence.
A new engine was added to the nursery water supply unit.
Thirty-two acres were felled for planting on T.R. 355, but owing to the unsatisfactory planting season that prevailed, no planting was carried out on this area, and the plants were used for refilling purposes.

Losses on established areas during the summer were high this year and in cases amounted to 40 per cent. Recent investigation on this reserve indicates that probably a large number of the losses is due to a pathological agency, which it would appear has been carried from the nursery to the field. Further investigation is proceeding.

No further regeneration work was carried out on the Spotted Gum stands of the Charlestown Reserves during the year, and operations were confined to some early burning for fire protection purposes.

Work on the Corella Reserve was considerably below last year's programme. Some 272 acres of ringbarking and 390 acres of coppicing of the Spotted Gum forests were carried out. The coppicing has been attended by good results and many shoots over 2 ft . high are in evidence.

Fireline maintenance included the cleaning up of 280 chains of break. No serious damage from fire has been reported this year.

## Many Peaks Working Plan Area-

Operations preliminary to the opening up of a planting programme on S.F.R. 95, parish of New Cannindah, were commenced towards the end of the financial year. This reserve carries a good stand of Hoop Pine and adjoins the Gladstone-Monto Line. It will be an important factor in the production of Central Queensland's future softwood requirements.

A satisfactory site for a nursery could not be obtained on the reserve itself, and a small area was reserved adjoining permanent water and close to the Kalpowar Railway Station. The construction of a nursery on this site was commenced in April, and by the end of June the area had been enclosed by a fence, a tool and tube shed had been erected, posts and bearers for the high shades were in position, the beds had been pegged out, and a start made to dig and kerb them.

On this area, also, quarters for the nurseryman have been almost completed.
Arrangements have been made with the Railway Department whereby the necessary water for nursery use is being obtained from the locomotive water supply tank at the Kalpowar Station, and all necessary piping, \&c., for the reticulation is on hand.

The residence for the Forest Factor has been erected on a high site selected near the railway station, from which an excellent view of the whole reserve can be obtained.

## Stanthorpe Working Plan Area-

Stocks of Pinus patula were not available for this year's planting and Pinus radiata was used largely. This is the last planting of this species proposed on this reserve.

An area of 110 acres was planted during the year, chiefly with this species, but Pinus caribcea was also used fairly extensively on some soil types. Pinus toeda and Pinus patula played minor parts on this area. Planting was somewhat delayed owing to the autumn rains not setting in until May. Since planting, good soaking rains have fallen and a high percentage establishment is assured.

It is gratifying to note that rabbits have caused very little damage this year. Refilling on other areas was almost negligible. Fireline work received careful attention during the year and authority has been received to fall up to four chains of forest on adjoining selections. Timber on firelines is now being cut, stacked, and burned. The result is satisfactory. Some 142 chains of one-chain wide firelines were constructed and over 900 chains of firelines were maintained by brushing and grubbing and burning-off. The summer was the driest period experienced during the past fifty-three years, but in spite of this all plantings have made good progress, remarkably even growth resulting.

An unfortunate happening was the loss of 200 acres of the original plantings of Pinus radiata by fire which, during burning-off operations on an adjoining compartment, the fire, assisted by a sudden change in wind direction, swept across two planted compartments in spite of the fact that the firebreak adjoining the area being burnt off was in good condition. Total loss of trees did not result, but heavy refilling will be necessary.

In the arboretum Pinus toeda is up to 9 ft , while Pinus cariboea up to 5 ft . shows good promise.

## Mackay Working Plan Area-

Planting operations were recommenced during the year and an area of ten acres was clear felled ready for planting. It was proposed to plant this with Kauri Pine and Hoop Pine, but owing to the losses in the nursery with the former species only sufficient stock of it was available to plant half-an-acre. Four and a-half acres of Hoop Pine stock was available and this was set out. In order to fully plant the felled area-sufficient stock of Pinus toeda was despatched in May from Beerwah for the remaining five acres. The Hóop and Kauri Pines have established well, but owing to the very dry conditions in May and the following months, the success of the Pinus toeda has not been as high as anticipated.

The other established areas have been opened up and are revealing good growth in the case of Hoop Pine.

The nursery is now in good working condition and stock for six acres is on hand.

## Rockhampton Working Plan Area-

Operations on R. 20, Maryvale, during this year, as was the case last year, were limited to the tending and fire protection of the established plantations and experimental plots. Indications from the growth on the latter plots substantiate last year's remarks.

Both of the Callitris species, Columellaris and Cupressiformis, continue to do well. Hoop and Kauri Pines promise well on those plots where the better soil conditions obtain, while Pinus carbbea and Pinus teeda are both looking remarkably well on most areas. No Pinus palustris has yet been established on these plots due to lack of stock, but during the next season it is proposed to add this species, which should give good results on several of the plots.

## Brisbane Working Plan Area-

Owing to the fact that all of the planting in this district is carried out in the winter months, the particularly hot and dry summer experienced generally throughout the State was not felt to such a marked degree as elsewhere. No fires of any consequence occurred in the district, and rains necessary for the planting set in at the required time.

Planting was commenced on S.F.R. 509, near Crow's Nest, towards the end of June and was completed early in July, an area of 130 acres having been established. Pinus patula comprised 87 per cent. of the total planting, the balance being made up of Cupressus lusitanica, Pinus palustris, and Pinus cariboaa.

- In addition, an area of 60 acres has been felled for next planting season. Over 240 acres have been tended and everywhere areas show high stocking and rapid regular growth.

The fireline system on this reserve has been receiving close attention during the past few years. External breaks are either a-half chain or one chain wide, grubbed throughout with 6 ft . lines ploughed each side. Internal breaks are a-quarter chain, ploughed 12 ft . wide. Over 390 chains were constructed this year; 20 chains were maintained by reploughing.

Natural regeneration operations of ringbarking and coppicing were continued on the hardwood forests of Reserves 63 and 215, 260 acres being treated on the former and 560 acres on the latter.

Fireline work on R. 63 and the adjoining R. 69 comprised the construction of 200 chains of firelines on the former and the maintenance of 630 chains on the latter. On S.F.R. 215 , some 470 chains of break were constructed.

## Inglewood Working Plan Area-

Owing to the considerably increased programmes in the planting districts the amount of funds available to be spent on the State Forests in this district was limited this year. Fireline operations were, however, maintained at last year's level at the expense of regeneration work, which saw only i,500 acres treated, as opposed to last year's figure of 8,500 acres.

On S.F.R. 79 only 363 acres of Cypress Pine and Narrow Leaf Ironbark forests were treated by thinning and by the destruction of undesired species.

Considerable attention was paid to firelines, and the amount of work carried out under this heading was:-

Firelines-


It is usual practice now to fall, stack, and burn all timber on the breaks and follow this up later by ploughing. Very little growth of Wattle, \&c., follows the burn-off and many of the lines ploughed this year will not require further ploughing for several years.

The firebreak design allows for external breaks 60 ft . wide with 20 ft . wide lines around each compartment of $300-400$ acres. Ready access by car to all parts of the reserves will shortly be available.

Operations on S.F.R. 122 were of like nature but of greater magnitude. Some 1,112 acres of similar forest to that on S.F.R. 79 were subjected to regeneration treatment, while the fireline work consisted of-


Results from regeneration work were not as good as the previous year's, though on the thinned-out and fire-protected areas young Cypress Pine seedlings 3 inches- 6 inches high are numerous in patches. On the southern parts of S.F.R. 79 results are very satisfactory. Hardly any regeneration of Ironbark has appeared. The excessive heat wave in January and February is chiefly responsible for the general absence of regeneration in the open patches.

It is most satisfactory to note that damage from fire this year was practically nil.
No funds were expended on prickly-pear destruction this year on these reserves. All of S.F.R. 101 and all that part of S.F.R. 79 north of the railway line is free of pear, and the cactoblastis is doing great work on the balance of the areas.

## Dalby Working Plan Area-

As was the case in the Inglewood W.P.A., operations on the State Forests of this district during the past year were somewhat curtailed and for the same reason.

Natural regeneration operations covered a total acreage of 4,636, made up as follows :-


First treatment of the Cypress Pine areas has been a thinning of over dense stands and a ringbarking of useless trees; second treatment consists of an extra ringbarking and a brushing to liberate seedlings. On the hardwood areas these treatments have been ringbarking and brushing in the first place, followed by suckering and coppicing.

Excellent results have been obtained from ${ }^{\mid}$these operations this year in the case of the Cypress Pine. Prolific germination is reported from all the pine forests and to date no factors detrimental to their best growth have been recorded, and given a normal spring period high establishment will result.

The seed fall of Narrow Leaf Ironbark and Spotted Gum for the past three years has been markedly sparse and regeneration is consequently scattered. Severe frosts killed a small percentage of the Spotted Gum seedlings. A good flowering of the two species is reported this year and a better seed fall is anticipated during the coming twelve months.

Fires were prevalent during the summer, but no serious outbreaks occurred. At present it does not look as if fires will be dangerous next season.

Considerable attention has been paid to firebreak work during the year, as will be gathered from the following summary :-


Fireline construction has been as on the Inglewood reserves. All trees are felled, stacked, 'and burnt, leaving means of ready access. Maintenance work has been chiefly poisoning of sucker growth; no ploughing has been carried out.

Prickly-pear has not occasioned any large expenditure this year and eradication was confined to scattered clumps on S.F.R. 150.

Mistletoe attack of Cypress Pine became very heavy on an area of about 100 acres of S.F.R. 93, but the position has been considerably improved by the destruction of all infested trees.

## Eundaberg Working Plan Area-

An area of 753 acres of the almost pure Hoop Pine forest of the Goodnight State Forest was subjected to treatment during the year by vine cutting, by brushing of undergrowth, and by the ringbarking of undesired trees. The value of this work is becoming more apparent each year as more increment figures are recorded. Girth increments of one and a-half inches and over per annum are now becoming common as the trees respond to the liberation treatment.

Fireline maintenance called for the clearing of over 12 miles of breaks during the year.

Pear clearing has not necessitated any further expenditure. Cactoblastis is distributed practically over the whole reserve and is doing good work.

## Fraser Island Working Plan Area-

Silvicultural operations on the Island this year were confined almost entirely to research work.

Some tending of the established plantations was carried out but the expenditure was small.

Some 60 acres .of Blackbutt ( $E$. pilularis) forest were subjected to regeneration treatment of brushing, burning, and ringbarking in March, and in spite of the drought conditions that existed until the middle of April, the regeneration secured was fairly general and was improving.

Intensive study of the problem of securing Blackbutt regeneration has been initiated by the careful observation of flowering and fruiting, the germination, and mortality causes. Several five-acre plots have been laid out and treated, but the drought of the summer months has precluded much valuable information being obtained.

Similar work, but not as intensive, is being carried out on the Red Satinay (S. Hillii) stands.

Following the adoption of a type plan for the Island a number of plots on the poorer sites have been prepared for planting with Slash Pine (Pinus caribcea), Loblolly Pine (Pinus toeda), and Longleaf Pine (Pinus palustris), during next season.

## Taungya Leases--

The Taungya System of leasing areas on Reserves for banana growing in conjunction with reforestation was extended and during the year nineteen new blocks were taken up.

A total of 102 leases is in occupation under this system at the present time.

The banana industry, in common with all other industries, had to contend against a fall in prices during the review period and this, coupled with the spread of disease in some districts, was responsible for a number of lessees surrendering their leases.

These latter areas are being planted up with Hoop Pine, Pinus todda and Pinus caribcea.

## HARVESTING AND MARKETING OPERATIONS.

The outstanding feature of the year from the standpoint of the timber trade was the increase in the volume of log sales which marked the second as compared with the first half of the year.

This increase was very evident in the figures for sales of Crown pine. - For the half-year. ended 31st December, 1931, 10,812,887 superficial feet were sold, whilst during the succeeding six months the sales amounted to $15,238,381$ superficial feet, an increase of $4,425,494$ superficial feet, or 41 per cent. As compared with the corresponding half-year ended 30th June, 1931, the figures showed an increase of $7,682,324$ superficial feet, or 100 per cent.

This revival in trade was very encouraging and showed signs of continuing in the new financial year.

Particulars of the collections for the year are given in Appendices C. and D. hereto.

## The Log Market-

Particulars of Crown Sales of timber during the year are given in Appendix A, but a brief comparison of the more important items is of interest, vide the following table:-



Turpentine Piles-72 and 75 feet-Supplied from Fraser Island for Falmouth Docks, England.

The improvement in the Hoop and Bunya Pine log sales during the latter half of the year is without doubt largely due to increased building activity. Figures taken from the Economic News, published by the Bureau of Economics and Statistics, show that the index figure for value of building permits in Brisbane made its first appreciable rise in January, 1932, and during the first four months of 1932 a steady improvement was maintained. In December, 1931, the index figure was 23.5 and in April $35 \cdot 2$. For the three months ended July it is shown as $40 \cdot 1$.

Another factor which helped in the recovery was the increased output of butter during the year, particularly the increased export figures, which showed roughly $5,000,000 \mathrm{lb}$. more than the preceding year. Kauri Pine also assumed some prominence for use in butter boxes, and this fact is partly responsible for the increased cut of this timber.

The demand in America for Queensland Walnut Bean was responsible for the good improvement in removals of this timber. This demand was helped by representatives of the trade operating in America (practically the whole of the quantity sold being exported). Considerable local interest. has now been awakened in the possibilities of this timber, and action was taken at a sale of $1,000,000$ superficial feet held in March, 1932, to provide that 50 per cent. (or 500,000 superficial feet) was to be manufactured in Australia.

Maple sales during the year were very disappointing, a reduction of 500,000 superficial feet being noted. The use of inferior imported timbers and New South Wales Coachwood, brought about by the increasing demand for cheap furniture, no doubt, was a big contributing factor, particularly as the usual markets for this timber are in the Southern States.

- Timbers comprised in other species are Red Cedar, Silky Oak, Yellowwood, secondary scrubwoods, for case manufacture, \&c. The Red Cedar and Silky Oak markets were very quiet and as no definite demand exists for the other species very little comment on the decrease can be made.

Figures given by the Registrar-General of total mill log cut during 1930-31 (latest available) showed that $103,530,857$ superficial feet of logs were received by mills and sawn output was $58,814,439$ superficial feet of sawn timber and $12,942,476$ square feet of plywood. The main classes represented and a comparison of years 1930-31 and 1929-30 are given in the following table:-

STATE TOTAL.


The Crown timber cut under similar heads during the above periods and relation to the total cost are given as follows:-


Timber Industry Advisory Committee-
As a result of a conference of all timber interests, which was held on 27th and 28th May, 1931, a Timber Industry Advisory Committee was appointed to confer with the Board and to enquire generally into all aspects of the timber trade, including prices, freights, organisation, publicity, inspections, and grading rules. The Committee consisted of twenty-two members representative of Metropolitan, North and South Queensland, and Maryborough sawmillers, private timber interests, plywood and joinery manufacturers, builders; cabinet makers, architects, and of the Institute of Engineers and Standards Association. Several meetings, extending over a period of two months, were held, and on the 14th August, 1931, the report was submitted to the Honourable the Minister. Among the more important recommendations were:-
(1) A reduction in Key Market and stumpage rates.
(2) The establishment of a compulsory organisation of sawmillers and manufacturers.
(3). The introduction of the licensing of mills system.
(4) A publicity campaign.
(5) Establishment of a bureau of inspection.
(6) The adoption of general grading rules for sawn timber and plywood for export.
(7) The utilisation of logs in Queensland.

After full consideration of this report the Government approved of a reduction in prices, as shown on Appendix E. Owing to the diversity of opinion amongst the sawmillers themselves no, action could be taken to put into effect the majority of the other recommendations.

## Butter Box Timbers-

The activity in the case and butter-box trade continued throughout the year and increased supplies of pine logs and tops under 60 inches centre girth were necessary to meet, the demand. The prolonged dry weather, however, presented so serious a difficulty because of the lack of feed for teams that it was found necessary to encourage the use of
mechanical haulage to keep up supplies. A feature of this trade was the advent of the veneer butter-box which, besides assisting in the disposal of Hoop and Bunya ply logs, gave a considerable impetus to the supply of Kauri Pine logs for metropolitan plymills.

## New Classification of Ply Logs-

The reduction of the minimum girth of logs classified for ply purposes from 60 to 54 inches centre girth proved of assistance to the plywood millers, although comparatively small quantities were thus made available. Owing to representations from sawmillers, however, the new classification was abandoned.

A demand arose for Silky Oak and Maple ply logs during the year, and to meet this a specification was adopted.

## Railway and Constructional Timber Sales-

The Railway Department's operations for Maintenance Timbers were in the main confined to direct operations by that Department on private lands. Opportunity was taken, however, wherever possible, to secure orders from the Railway Department to utilise timber remaining on State Forest areas required for early silvicultural treatment. In other cases orders were secured on leasehold lands to provide employment for cutters unable to obtain private supplies and at Barakula and Birimgan on the State Forest and Timber Reserve.

During the year sales to the Railway Department of timber supplied by Forestry contractors amounted to $£ 10,743.8 \mathrm{~s} .2 \mathrm{~d}$.

The Forest Service undertook other contracts to supply constructional timbers, both for export and for Australian use. Some of the more important were :-
(1) Bridge timbers (girders, sills, and decking) on behalf of the Main Roads Commission, for Cobblegun Creek and Beatrice River Bridges.
(2) Wharf piles for the Commonwealth Railways, Darwin Jetty, and Townsville Harbour Board.
(3) Crossing timbers for the Australian Sugar Company, Limited, Mourilyan.
(4) 850 Turpentine piles ( 72 to 75 feet) and 105,000 super. feet of Brush Box decking for the Falmouth Docks and Engineering Company, Limited, England. The Company was particularly pleased with the quality of the timber supplied and same is being used in their new docks (Empire Wharf), at Falmouth.

The total quantity of constructional timbers of all kinds sold either at stump or at market during the year is detailed in Appendix A.

## Markets Overseas-

Samples of telegraph poles were despatched to Canada with a view to their trial in lieu of the softwood poles now in use in that country. Enquiry was also made into the hewn sleeper market of the United Kingdom, but as. Russian softwood sleepers are purchasable at the extraordinarily low price of 2 s . 7 d . per sleeper c.i.f., British ports, no business was possible. Efforts to place sleepers in France seemed likely of success, but tariffs imposed nullified them. The Chinese market was also sounded, but hostilities in that country prevented business.

## Haulages-

Prices tendered by teamsters continued to fall during the year, but in some cases insufficiently to allow of profitable haulage of the lower priced $\log$ s and tops at the reduced upset prices. Millers assisted by taking lots of such timbers at a small margin over costs, thus materially assisting complete utilisation of timbers available. Hardwood haulage operations on the Fraser Island tramline were resumed during the year after having been suspended for some time.

Forestry roadwork was continued on the State Forests where haulages are in force and particulars are given in Appendix V. In addition, assistance in roadwork was given to local authorities to the extent of £1,220.

## Sandalwood-

The cut of Sandalwood during the year was 453 tons, as compared with 442 for the preceding year, and an average of 263 tons for the five years ending 31st December, 1929. The operations of the Syndicate which purchased the rights to the marketing of this timber from the Government on 22nd May, 1930, therefore, did not result in reduction of output. Western Australia is a much heavier producer of this wood than is Queensland, and representations from that State and from South Australia have been made to the Government as to the necessity of controlling export and stabilising prices. The contract between the Government and the Syndicate was extended for two years from 14th June, 1932, with a limitation of 500 tons per annum.

## SAWMILLING OPERATIONS.

The results of the year's operations showed a loss of $£ 6,877$. This figure is $£ 3,743$ below the result for $1930-31$, when the loss was $£ 3,132$, and is significant of the acute depression experienced by the timber industry.

Figures of Brisbane building permits taken from the Economic News, published by the Bureau of Economics and Statistics, show that the pit of the depression was reached in the four months September to December, 1931, when the index figures were $21 \cdot 7,22 \cdot 2,22 \cdot 6$, and $23 \cdot 5$. An improvement was indicated towards the end of the year, the April figures showing an index of $35 \cdot 2$, but this figure is considerably below ${ }^{\text {is }}$ that of the calendar year 1930, when the index was 48.4 .

Sales of sawn timber averaged £2,750 per month. For the last three months an improvement was shown, the average figure being slightly over $£ 3,000$, and the improvement is being maintained in the current financial year.

The following table shows the results achieved each year since the inception of the Sawmills :-


The net profits of $£ 21,6634 \mathrm{~s}$. 3d. have been disposed of as follows:-
£ s. $d$.
Depreciation Written off Assets .. .. .. 5,750 0
Transferred to Depreciation Reserve . . .. .. $4,200 \quad 0 \quad 0$
Transferred to Stock Valuation Adjustment Reserve $\begin{array}{llll}3,400 & 0 & 0\end{array}$
Repaid to Railway Department-Profit on Birimgan Sleeper Mill Operations . . . . . . . . 2,913 4 1
Sundry Adjustments .. .. .. .. .. 894 1
Loss on Realisation of Injune, Birimgan, and Silk-
wood Mills Written off . . .. .. .. 1,921 1711
Balance held in Appropriation Account . . . 2,584112
$\begin{array}{lll}£ 21,663 \quad 4 & 3\end{array}$
Stocks of sawn timber at the beginning of the year totalled $£ 31,715$ in value. During the year they were reduced to the extent of about $£ 4,000$, leaving $£ 27,701$ of timber in stock at the end of the year.

Interest paid to the Treasury amounted to $£ 2,316$, and Bad Debts charged against the year's trading amounted to $£ 386$.

The restricted trade and keen competition during the year were responsible for increasing discounts in the trade generally to an unprofitable degree. Action was taken, however, in conjunction with the timber merchants, some of whom frankly admitted that they were trading at a loss and were working on reserves, to reduce discounts from list May. With increased building operations it is hoped that prices will be generally stabilised.

Stocks held on hand are high, partly because of the policy of supplying well seasoned timber, and of stocking unusual sizes required by joiners, Government, and other orders.

The case trade has been seriously affected by reduction in business and the introduction of the veneer box.

Yarraman Mill was the only mill in operation during the year. Here, $1,898,000$ super. ft. of logs were put over the saws for an output. of $1,638,400$ super. ft.

Owing to the depressed state of the market it was not possible to work the plant full time.

Taromeo and Imbil plants were not worked. Associated with the latter plant were six cottages, all of which have now been sold.

## UNAUTHORISED TIMBER OPERATIONS.

During the year 112 cases of unauthorised timber operations on Crown areas came under the Board's notice for investigation.

In twenty-six cases proceedings were instituted for breaches of the Land Act and the State Forests and National Parks Act. The prosecutions were successful in each instance and fines amounting to $£ 128$ 10s. were imposed.

In two cases prosecution acting is pending. In a number of the above mentioned cases the timber was seized and confiscated and arrangements made to dispose of same at the best price obtainable.

Unauthorised operators in ten instances could not be traced. In two of these cases a quantity of timber was confiscated to the Crown and realised upon.

The Local Authority in three districts trespassed on Crown areas without regard to the procedure laid down, and on one of these cases royalty was charged.

A lessee of a perpetual lease selection who removed timber without authority was prosecuted and fined and, the lease changing hands, recovery of the royalty due was secured from the value of the improvements paid by the incoming tenant.

Warnings were issued to fifty-three offenders and payment of royalty secured on the timber involved.

Four offenders were concerned in unauthorised fuel operations. They were cautioned, but; on giving an undertaking that fuel licenses would be taken out, no further action was taken.

Purchasers of timber in four cases unwittingly crossed the boundary of the sale area and the cases were met by charging royalty.

Nine cases are still the subject of investigation.
As a result of action taken in all cases an amount of approximately $\mathfrak{£ 6 0 0}$ has been recovered to the Crown.

## FOREST SURVEYS.

Four fully equipped survey camps were in operation during the financial year, whilst two small camps were engaged mainly in compartment and Taungya Lease surveys.

The total expenditure for survey work amounted to $£ 4,7649 \mathrm{~s} .3 \mathrm{~d}$., of which $£ 4,441 \mathrm{l3s}$. 8d. was charged to the Harvesting and Marketing Vote, £286 8s. 2d. charged to the Loan Reforestation Vote, and £36 7s. 5d. charged to Unemployment Relief Fund.

As a result, 141,060 acres were inspected, 203,935 acres were assessed, 38,034 acres subjected to intensive contour and assessment survey, 19,787 acres were divided into compartments, and 462 acres were surveyed for the purposes of Taungya and special leasing. For particulars, see Appendix B.B.

Summary of mileage completed by the camps is given hereunder:-


## Atherton Working Plan Area-

Class 3 Survey of State Forest 310, Gadgarra, was continued until the 20th December, camp closing down. Field work was resumed on the 29 th March, the camp operating on the Gadgarra Forest until the beginning of June, when party shifted to the Palmerstone area for assessment surveys. Owing to the urgency of this project, two gangs are now operating, and at the end ${ }^{3}$ of the report period about 3,000 acres had been stripped.

About 10,000 acres of the Gadgarra Forest were completed, approximately 2,400 acres being surveyed into compartments.

During October and November an inspection and assessment survey of the Culpa lands (parish of Ramleh) were effected by members of the district staff. The field work occupied a month and was hampered by its remoteness. Eighteen miles of strips were run and approximately 62,000 acres dealt with. Details of mileage are set out hereunder :-


For the education of estimators, survey camp employees, cadets, and forest assistants, an Estimating School was organised at Reserve 310, Gadgarra, prior to the opening of forest survey camps early this year. Mr. W. D. Francis, Assistant Government Botanist, ${ }^{\prime}$ was present, and gave considerable assistance by identification of species and lectures on botany as related to trees. Lectures were also given by Forest Assistants and District Staff members. Work chiefly centred on the duties of estimators and practical illustrations were provided by actual estimating practice in the field. Identification of species was also given considerable attention, and there is no doubt that practical benefits have accrued to members who attended.

## Cardwell District-

Class 3 survey of State Forest 344, Kirrama, was continued until the 18th December, on which date camp was closed 'down for the Christmas vacation and wet season. During this period eight logging areas were demarcated, having a total area of 10,674 acres, together with a new Kauri Pine area of 1,942 acres. In addition, Windy Logging Area was contoured and stripped.

Four 2-chain by 2 -chain plots were clear-felled for ground marks for a seaplane reconnaissance undertaken in conjunction with H.M.S. "Albatross." Unfortunately, owing to heavy cloud conditions, the experiment could not be regarded as a success. Camp was reopened on the 31st March, the first work to be undertaken being the strip survey of Sullivan Logging Area. Further areas are now being laid out to the north, and at the end of the report period approximately 1,930 acres had been dealt with. Details of mileage are given hereunder :-


## Cooktown Working Plan Area-

On 4th July, camp transferred to Mungumby Creek in order to continue the Class 2 survey of the Cooktown vacant Crown lands, but owing to the continuous heavy rains experienced, it was found impossible to continue with the work, consequently camp was closed on the 15th July and a further resumption made on the 31st July.

Class 2 survey of these areas was completed by the 9 th September, and on the following day camp left for the McIvor District.

Class 1 and 2 surveys of vacant Crown lands and reserves from the Starcke River south to Cooktown were commenced on 5th September and completed on the 8th October. Camp was then closed until the 28th October, on which date a shift was made per motor launch to Bailey Creek, at which place the work of relocating and cleaning old survey boundaries was completed.

Owing to an accident to the overseer at this stage, the officer-in-charge was compelled to close the camp somewhat earlier than usual.

Camp was reopened on the 28th March, commencing operations on the Fritz Creek area in the Bloomfield, where it remained until 3rd May. During that time as much of the 20,500 acres of the Fritz Creek area as was accessible was stripped and old portion boundaries located.

On 3rd May the camp was shifted to China camp, between the Bloomfield and the Daintree, where it has since remained. Work was considerably hampered by continuous and heavy rains. Details of mileages are set out hereunder :-

| Cooktown JunglesCompass and chain |  | $\cdots$ | . |  | . |  | Miles. Chains. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | . | 7 | 43 |
| Strip survey |  | $\cdots$ |  |  | . | . | 39 | 26 |
| Tracks |  |  |  |  | . | . | 2 | 00 |
| McIvor District- |  |  |  |  |  |  |  |  |
| Strip surveys |  | . |  |  | . |  | 12 | 40 |
| Old boundaries | $\cdots$ | $\cdots$ |  | . | . | . | 10 | 55 |
| Inspections .: |  | . |  |  | . | . | 115 | 00 |
| Bailey Creek- |  |  |  |  |  |  |  |  |
| Old boundaries | .. | . | $\cdots$ | $\cdots$ | . | . | ${ }^{7}$ | 72 |
| Inspections . . |  | . | . | . | . | . | 21 |  |
| Bloomfield Jungles- |  |  |  |  |  |  |  |  |
| Compass and chain | $\cdots$ | $\cdots$ |  |  | . |  | 38 |  |
| Strip survey |  | $\cdots$ |  |  | $\cdots$ | . | 38 | 65 |
| Old boundaries |  |  |  |  | $\cdots$ |  | 4 | 00 |
| Pack tracks.. |  |  |  |  | . | . | 3 | 20 |
| Inspections.. |  | . | . | $\ldots$ | $\cdots$ | . | 26 | 00 |
| Inspections- |  |  |  |  |  |  |  |  |
| Tobacco lands |  | . | $\cdots$ | $\cdots$ | . | $\cdots$ | 353 | 00 |
| Agricultural Bank | . | . | . | $\cdots$ | . |  | 54 | 00 |

## Townsville Working Plan Area-

Class 3 survey of Timber Reserves ' 28 and 268; parishes of Hinchinbrook, Waterview, Blackfriars, and Holbourn, was continued until the 18th December, at which date the camp was closed down until after the Easter holidays.

Camp reopened on the 28th March and at the end of the report period, approximately 10,000 acres had been divided into nine logging areas.

Considerable loss of time was occasioned by the difficulty of transport, packing being resorted to throughout the year, distances of ten to fifteen miles having to be covered.

Twenty-nine wet days were actually lost by camp staff. Details of mileage are given hereunder:-

|  |  |  |  |  |  | Miles. Chains. |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| Compass and chain | .. | .. | .. | .. | .. | .. | 56 | 17 |
| Strip survey | . | . | . | .. | .. | .. | .. | 45 |
| Exploratory investigation | .. | .. | .. | .. | .. | 81 | 00 |  |

## Dalby Working Plan Area-

Class 2 survey of Western Creek Pastoral Holding was continued until 23rd September, a total of 74,640 acres being completed.

An inspection and strip survey of adjoining areas was then undertaken, the following lands being dealt with :-


This work was completed by 22nd October, after which a compartment survey of State Forest 150, parish of Dunmore, was initiated. Camp was closed down from 19th December until 28th January, and compartment survey was completed by 11th February, a total area of 17,400 acres being dealt with. Camp then transferred to Timber Reserve 42, parish of Bollon, area 12,913 acres, completing an estimate on 16th February, on which date camp closed down. Details of mileage are as follows:-

|  |  |  |  |  |  | Miles. Chains. |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- | ---: | :---: |
| Compass and chain traverse | .. | .. | .. | .. | . | 76 | 43 |  |
| Strip survey | . | . | . | . | . | . | . | 563 |
| Old bundaries | .. | .. | .. | . | . | . | 39 | 70 |
| Exploratory investigation | .. | .. | .. | .. | .. | 132 | 00 |  |

## Brisbane Valley Working Plan Area-

Operations on the southern section of State Forest 283, parish of Colinton, were continued by the small camp of two men under a forest overseer. After completion, numerous strip, firebreak, and miscellaneous surveys were effected, particulars of which are given hereunder :-

Scrub Firebreak Surveys.

| Reserve and Parish. |  |  |  | Logging Area. |  |  |  |  | Compartments. | Mis. | Chs. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 120, Neumgna <br> 289, Cooyar Ditto <br> 299, Avoca <br> 283, Colinton <br> Ditto <br> Ditto <br> 257, Emu Creek | - |  | . | Meandu |  |  |  |  | 1 to 15 |  |  |
|  | . | $\cdots$ | . | Cooyar | $\ldots$ | $\ldots$ |  | . | 13 to 18 |  |  |
|  | . |  | . | Yarraman | . | . |  | . | 10 and 2 |  |  |
|  |  |  |  | Paradise |  | . |  | - | Portion 7 |  | 76 |
|  | -• |  | . | Benarkin | . . |  |  | $\cdots$ | 11 to 33 |  |  |
|  |  |  | . | ditto |  | . |  |  | 3 to 7 |  |  |
|  |  |  | . | Sandy |  | . |  | $\cdots$ | 12 |  |  |
|  | - | $\cdots$ | . | Googa |  | . | . | $\cdots$ | Not complete |  |  |
|  |  |  |  |  | Total | $\cdots$ | - | $\cdots$ | -. | 29 | 71 |

Compartment Surveys.
S.F. 283, Colinton, Benarkin Log Area, Compartments 11 to $33,2,387$ acres, 15 Miles 70 Chains.

Strip Survey.


## North Coast Working Plan Area-

Class 3 survey of Timber Reserve 242, parish of Widgee, was continued and finalised on the 10th March, when camp was transferred to the adjoining area, Timber Reserve 126, Parish of Widgee, where Class 3 survey was still proceeding at the end of the report period. Twenty-five wet days were experienced. Immediately after the Christmas closing this camp carried out surveys of Taungya leases and additional areas on State Forests 835, Woondum, and 628 , Goomboorian, particulars being given hereunder :-

|  | Reserve. | Parish. |  | Blociks. | Acreage. | Mls. Chs. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 835 \\ & 628 \end{aligned}$ |  | Woondum <br> Goomboorian <br> Totals |  | a-h, j-r | 116 | $\begin{array}{ll}9 & 67\end{array}$ |
|  |  |  |  | 147 to 153 | 336 | 611 |
|  |  |  |  | 24 | 452 | 1578 |

Details of mileage are as follows:-


Timber Reserve 126, Widgee (proceeding)-
Compass and chain $\quad . \quad$.. $\quad . \quad$.. $\quad . . \quad . . \quad 3 \quad 02$
Strip survey
42

In addition, an estimate was made of four proposed Miner's Homestead Leases (5,540 to 5,543 ) on Timber Reserve 700, Gympie and Curra, by the resident overseer. About 720 acres were dealt with, involving 25 miles 56 chains of stripping.

## Mary Valley Working Plan Area-

Numerous sub-compartment surveys were carried out by the resident staff during the financial year, details of which have been set out hereunder :-


## FOREST PRODUCTS INVESTIGATION.

The functions of these branches of the Queensland Forest Service are to assist in the marketing of timber and forest products by all possible means, to increase utilisation and prevent waste, and to discover ways and means by which they can be used with the best results in timber-using industries.

A great deal of useful trade information is already available to the timber industry. This has been obtained by the following means :-
(1) The collection of all written data regarding the properties, treatment, and uses of timber and forest products.
(2) Co-operation with research institutions, both in Australia and Overseas.
(3) New information secured by research work carried out within the Branch.

By timber displays of made-up articles in the Forest Products Showroom, exhibitions in our own and Southern States, distribution of samples with complete data as to their suitability for certain classes of work to architects, manufacturers, \&c., new- timbers are introduced to the trade.

To assist in this endeavour and to encourage manufacturers by assuring them that supplies are always available, stocks of each species, having immediate commercial possibilities, are held and disposed of by the Fancywood Section.

The work of the Technical Branches may be recorded under the following headings:-
(1) Seasoning.
(2) Timber Physics.
(3) Timber Preservation.
(4) Wood Technology and Botany.
(5) Entomology and Marine Zoology.
(6) Wood Chemistry.
(7) Industrial Timber Investigations.
(8) Plywoods and Veneers.
(9) Minor Forest Products.

The work is by no means confined to investigations of secondary timbers, a great deal of time being spent in attending to enquiries concerning those species already well established.
(1.) SEASONTNG.

The Queensland Forest Service has set itself the task of catering to the more critical of our architects. We feel that when modern seasoning practices are accepted the field open to neglected Secondaries will be extended, so that their acceptance by users will come as a matter of course.

In the past we have been limited to-air seasoning, but during the year the construction of an experimental internal fan reversible circulation kiln was completed. Work for the future is planned along the following lines:-
(a) Development of schedules for different species. With this investigation will be included observations of shrinkage, degrade, \&c.
(b) Commercial drying to assist manufacturers and builders.

Eventually it is hoped to impress upon timber merchants and manufacturers the advantages to be derived from modern seasoning practice. At the present time, there is little sympathy with kiln seasoning. This condition is due to the fact that the trade has been able to carry on more or less satisfactorily with older methods and, where kilns have been installed they were not properly designed and/or operated. Such methods can and do meet present day requirements in many cases, but it is felt that the use of timber as a general building material is being restricted on account of this usage. In times of depression, large stocks of standard sizes are accumulated and these serve to fill orders for such sizes. But frequently orders are received for sizes not in stock, and in such cases the builder has no option but to accept timber in a half seasoned condition. Such practice has been in vogue in Australia from the very beginning, and it is indeed such practice which has prevented our hardwoods from attaining that universal popularity which, when they are compared with timbers from other lands, is undoubtedly. their due,

Moisture Content Tests and Distribution of Data regarding Seasoning.-Interest in correct seasoning methods and the desire to use seasoned timber are increasing. In addition to 433 tests made in connection with timber seasoned under the control of the Forest Service, thirty-five were made for persons outside the Department desirous of ascertaining if their timber is fit for service. This represents a 34 , per cent. increase in this work. In some cases the tests indicated that the timber was inadequately seasoned for the purposes for which it was required.

Moisture Equilibrium Survey.-Experiments made at Atherton and Brisbane on thoroughly seasoned one-inch thick timber showed that the average moisture contents of air seasoned wood are approximately 18 per cent. and 12 per cent., respectively, in these localities, and comparison between other centres indicates even greater ${ }^{-}$discrepancy.

Thus it is not always possible to air season timber at one place to suit the requirements of another. This Department is now co-operating with the Division of Forest Products, Council for Scientific and Industrial Research, in a larger series of tests embracing all the Capitals, so that the seasoning requirements of each may be determined. Tests are being made in Brisbane and some interesting data are being secured. The average variation in moisture content in all the pieces from 1st October, 1931, to 1st July, 1932, is approximately 2 per cent., and the maximum in any one piece 3.8 per cent. The lowest moisture content recorded was $11 \cdot 1$ per cent. in both situations, and the highest, 14 per cent. indoors, and 16.2 per cent. in the yard.

## (2.) TIMBER PHYSICS.

Maple Silkwood (Flindersia brayleyana), and Rose Silkwood (Flindersia pimenteliana.-During the year detailed mechanical tests were made on both of the above timbers, by the Technological Museum, Sydney, and the details have kindly been made available by that Department for use pending the publication of the full results. The test pieces were supplied by this Department.

Blush Coondoo (Sideroxylon richardii) and Spotted Gum Eucalyptus maculata).-Arrangements have been made to make a series of tests on these timbers to determine suitability as Hickory substitutes and the best method of sawing axe-handle blanks to secure the greatest efficiency.

Reference File of Mechanical Tests.-In order to make a direct comparison of the mechanical properties of Queensland woods and the principal imported timbers, the results of all the authentic tests made in Australia are being tabulated by species in a special reference file.

## (3.) TIMBER PRESERVATION.

The supply of durable hardwoods is ample to meet present demands, but this condition will not always hold. Apart from the consideration of a shortage and consequent high prices of durable timbers, the fact that there is a far greater supply of to-day useless non-durable timber, which would be rendered the equivalent of our less plentiful durable species by suitable treatment, suggests an immediate investigation of the possible benefits to be derived from preservative treatment of less durable species.

The work to date has been purely investigatory, the information sought being the determination of a schedule which would give satisfactory penetration and absorption. Blackbutt (Euc. pilularis), Rose Gum (Euc. saligna), Brush Box (Tristania conferta), and Monterey Pine (Pinus radiata), and six other Eucalypts not found in Queensland, were treated in pressure cylinders by the Division of Forest Products, Council for Scientific and Industrial Research, at the laboratory in Melbourne. The results were not conclusive and further work will be required before a schedule can be recommended for the treatment of piles, posts, sleepers, \&c., for service tests.

## (4.) WOOD TECHNOLOGY AND BOTANY.

Timber Specimens received for Identification and Utility Reports.This work is the means of bringing the Forest Service into close touch with timber suppliers, and often results in better utilisation. It also serves to add to our knowledge of timber distribution so that supplies can be located when a demand arises. In āditon to this, valuable utilisation records are often secured by the collector.

During the year 452 wood samples were identified and reported upon as required. These represented sixty-eight species and were collected by representatives of all trades and Government Departments interested in timber.

Samples supplied by Inspectors of the State Advances Corporation and persons building enabled this Department to detect the substitution of other timbers. This practice is unfair, and the Department is doing all in its power to prevent it. Inspectors and architects are invited to submit samples if in doubt at any time as to identity of timbers.

In view of the data secured by the Department, and the friendly co-operation which this work engendered in timber trade circles having a direct bearing on increased sales of secondary woods, it was decided to continue this work as a free function of the Forest Service, unless the work involved either leaving the office or was for purely trade purposes with no bearing on timber utilisation.

Timber Technology.-Under the supervision of Dr. H. P. Brown, Ph.D., of the above Institution, photomicrographs are being made of one hundred of the principal commercial Queensland timbers.

The samples, supported as to identity by botanical material checked by the Government Botanist, are being collected, and a considerable number have already been despatc̣hed to Dr. Brown.

Botanical Study of Queensland Trees.-The Forest Service is again much indebted to the Government Botanist for his assistance to field officers in the identification of botanical specimens collected. These numbered over two hundred for the year, and were collected chiefly in North Queensland, and in the Inglewood, Goondiwindi and Yeulba Diṣtricts.

At the request of the Curator (Dr. Hill) arrangements were made to forward flowering and fruiting specimens from Queensland trees to the Royal Botanical Gardens at Kew. These are being forwarded as material becomes available.

## (5.) ENTOMOLOGY AND MARINE ZOOLOGY.

Control of Timber Borers.-A serious problem in the utilisation of timber throughout Queensland is the combating of log borers.

Very little work of an exhaustive nature has been done, and some confusion exists concerning the relative capacity for damage of the various boring species met either in the log or the sawn product. A complete study is not possible at present so that projects have been limited to those designed to have a direct practical significance.

Pine Log Borers.-Two projects were launched during the year. The first at Yarraman included treatments of logs with six solutions sprayed on logs. The chemicals used were :-
(1) Sodium silicate 1.07 S.G.
(2) Arsenious oxide ( 2 per cent.) in a 1.07 solution of sodium silicate.
(3) Arsenious oxide ( 2 per cent.) in a 3 per cent. solution of sodium fluoride.
(4) Creosote (approved specification).
(5) Creosote (l part) and kerosene (8 parts).
(6) Arsenious oxide ( 5 per cent.) in petroleum jelly.

Results have not been summarised, but it was readily apparent that the only treatment at all effective was the last-i.e., arsenious oxide in petroleum jelly.

The experiment should be continued along similar lines at Imbil. This area is much more prone to blue stain and borers, and would test the treatment much more severely than the Yarraman area.

Borers-Walnut Bean.--Through the courtesy and co-operation of the Chief Entomologist, Department of Agriculture and Stock, valuable information has been collected concerning the activities of borers in North Queensland, with particular reference to Walnut Bean.

The work was directed by the Northern Entomologist, Mr. J. Harold Smith, the actual collection and observation being undertaken by Forest Service Officers at Gadgarra.

The identification of all borers collected in this study is not yet complete. Collections will be made for several years, in order that an exhaustive survey may be assured. It is intended to pursue this investigation to this end in the coming months.

The results of this work have been published through the Department of Agriculture and Stock-Pamphlet No. 2, "Pinhole Borers of the Walnut Bean."

Timber and Furniture Borers.-On account of the pressure of other work, investigations of methods of combating borers in sawn timber have been neglected over the last twelve months.

Very little has been done with regard to the use of chemicals for the prevention of Lyctus (Powder Post Beetle) attack, but the following recommendations are made as a means of preventing damage by these insects :-
(a) Entire elimination of sapwood of susceptible hardwoods.
(b) Heat sterilisation treatment for the destruction of the insects in infested timbers.
(c). Any treatment that would close the pores on the surfacevarnish, lacquer, or wax-would prevent reinfestation.

During the year tests were made on four timbers. Each sample was sprayed on all sides with a 5 per cent. solution of paradichlorbenzene. Samples were heavily infested before spraying, the purpose of the test being to find a cure rather than a preventative.

Results were disappointing, for, three months after treatment, borers were again found to be very active.

Marine Borer Research-Brisbane Waters.-This interesting work was continued during the year, and the data now available are sufficient to permit of definite statements being made. The work, which has now been in progress for three and a-half years, has furnished the following results for Brisbane waters:-
(1.) Relative Importance of Controlling Factors.-In selecting timber for piles, and estimating their probable life, a knowledge of the species of borers attacking is of more importance than the species of timber used. Water salinity appears to be the greatest factor in controlling the distribution of the various species.
(2.) Borers Working.-The destructive marine borers in this port are :-
(a) Teredinidae (Shipworms or Cobra)-
(i.) Nausitoria spp.
(ii.) Bankia spp.
(iii.) Teredo spp.
(b) Crustacea-
(i.) Sphaeroma spp. (Pill Bugs), Sphaeroma terebrans.
(ii.) Exosphaeroma alata.
(iii.) Limnoria.
(3.) Relative Resistance of Timbers to Marine Borer Attacks.-No timber has yet been observed which is proof against the attacks of all species of marine borers. Turpentine, Swamp Mahogany, and Yellow Penda are highly resistant, even to Nausitoria attack, but their resistance is not sufficient to prevent complete destruction of piles in a short time.

Satinay, Brush Box, and Red Irongum, although less resistant than the above woods to Nausitoria, are, however, highly resistant to the Bankia and Teredo spp. of the higher salinities. Oregon and Grey Ironbark appear to have no resistance whatsoever to Teredinidee and are always the first to fail in any salinity.

The woods of Turpentine, Swamp Mahogany, and Yellow Penda are now being carefully analysed by the Division of Forest Products, Council for Scientific and Industrial Research, with a view to discovering what properties they contain which are toxic to Teredinidce.

In order of resistance to Nausitoria, the most destructive of all the Teredo-like borers, the eight timbers tested may be placed as follows:-
(1) Turpentine (Syncarpia laurifolia).
(2) Swamp Mahogany (Tristania suaveolens).
(3) Yellow Penda (Xanthostemon pachyspermus).
(4) Satinay (Syncarpia hillii).
(5) Brush Box (Tristania conferta).
(6) Red Irongum (Blue Gum) (Eucalyptus tereticornis).
(7) Grey Ironbark (Eucalyptus paniculata).
(8) Douglas Fir (Pseudotsuga taxifolia).

Numbers (1) and (5) may be classed as highly resistant woods with regard to other Teredinidxe, but (6) and (7) have no resistance of any practical value.

Attacks on a number of other species have been noted in various parts of Moreton Bay and the Brisbane River, and the relative resistance of these in all situations compared with the light woods tested is now recorded.

## (6.) WOOD CHEMISTRY.

Chemistry and Identification.-In an effort to discover an infallible chemical method of dividing the various species of Queensland Pines-Hoop, Bunya, and Kauri-considerable work is being carried out by the Division of Forest Products, Council for Scientific and Industrial Research, Melbourne.

Chemistry of Woods Toxic to Marine Borers.-Similar methods are being employed on short logs of Turpentine (Syncarpia laurifolia), Swamp Mahogany (Tristania suaveolens), and Yellow Penda (Xanthostemon pachyspermus), 12 inch diàmeter by 4 feet, to enable the substances toxic to marine borers to be isolated.

## (7.) INDUSTRIAL TIMBER INVESTIGATIONS.

Mill Study-Yarraman.-In order to determine the relative marketing and milling values of logs of various grades and sizes, a study was initiated at the Forest Service Sawmill, at Yarraman, in July last.

The study embraced measurements of two hundred pine logs and tallying off of quantity and grade of sawn timber cut from each log, the value of the latter being determined.

These figures were taken as a basis in the Board's consideration of alterations in log price lists which took place during the year.

## GENERAL UTILISATION.

Tmbers for House Stumps and Fence Posts.-Records of Durability Tests: of North Queensland Timbers were augmented by data regarding the durability of house blocks of various species placed in the ground at Gadgarra. Species under observation included .Blush Butternut or Sarsparilla (Alphitonia petriei), North Queensland Grey Teak or White Beech (Gmelina fasciculiflora), Brown Plum (Erythroxylon ecarinatum), Range Cypress (Callitris macleayana).

These blocks were installed untreated twenty years ago and some had already been removed. It was decided to make a further test with the blocks used for renewal. These were treated and numbered for reference. Timbers used were Range Cypress (18), Grey Teak (38), Brown Plum (4).

Preservative Treatment.-Post holes primed with Grey Arsenic and posts bored and treated twice with strong arsenical solutions and then plugged: After two years the treated house blocks were entirely immune to attack. A further inspection and report will be made in June, 1933.

A second test fence was erected during 1929-31 at Gadgarra, posts being numbered for observation. The condition of the posts will be recorded annually.

## BUILDING TTMBERS

Offichal List by Department of Public Works.-The Chief Inspector of the Public Works Department (Mr. E. H. Alder), in collaboration with this Branch, in March last, completed a full list of all Queensland timbers suitable for various uses in the construction of schools and other public buildings. The purposes for which each species will be allowed to be used are set out in the list, together with a complete list of vernacular and official names.

Crrcular on Building Timbers.-For the information of the trade and to stimulate the use of new woods in house construction a circular entitled "Building and Timber in Queensland" was prepared. This traced the use of timbers in home construction from the
early settler's slab hut to modern designs with polished Satinay floors and panelled walls. A summary of all common building sizes was also included. One hundred copies were mimeographed for distribution at the showrooms to those interested.

Unsuitable Stumps Used.-Samples of stump timbers received prove that the standard of durability in these is being rapidly lowered in recent years. Not only is the use of inferior timbers becoming more prevalent, but good types are also failing, due to the use of immature wood.

The need is greatly increasing for some cheap and efficient method of creosoting stumps at the lower end to increase durability and ensure that a satisfactory life will be obtained.

## COOPERAGE TIMBERS.

Butter Factory Churns:-As the result of enquiries received at the showroom for timbers suitable for butter factory churn making to replace New Zealand Kauri Pine, five timbers were recommended by this Branch for testing. From these, Yellowwood Ash and Silver Ash were selected by the Department of Agriculture as suitable woods, but the latter was considered the best because of its better colour, better grain, and lightness in weight. Four Companies were written to, and all immediately showed a lively interest. Samples of Silver Ash were supplied, followed by small orders, and, as the quality of the wood became apparent, larger shipments to Melbourne were made.

Further large orders are now pending execution, all stocks on hand being accepted.

## TALLOW CASKS.

Much progress has been made in the increased utilisation of Queensland woods for this work. Until two years ago, one of the principal Brisbane manufacturers used Oregon exclusively for staves on account of its low price.

At the present time, both Blush Cudgerie (Euroschinus falcatus) and Blush Coondoo (Sideroxylon richardii) are being extensively used for staves, the latter wood being used in alternate staves on account of its greater weight.

## BEER CASKS.

Heading.-In March, 1927, a Brisbane cooperage was visited in connection with timbers used in this industry. Rose Mahogany (Dysoxylum fraseranum) and Miva Mahogany (Dysoxylum muelleri) had been found suitable for cask heads, but supplies were erratic. Information supplied regarding the places of origin of these woods enabled regular supplies to be secured since.

Satinay was suggested as a possible heading wood, being close grained, strong, and durable. "A test was made and it was found to be gas tight under pressure. Normal timber was found to be too difficult to bend into staves, owing to its great strength.

To further test its value, a full size beer cask was made and Satinay heads were fitted. This was put into service, and from time to time the Department was advised that the cask had not yet returned for repairs and was still giving service.

In July last the cask had been returned for repairs to the English Oak staves; but the Satinay heads were still in excellent order after over five years' service. The cooperage concerned promptly ordered 700 super. feet of Satinay for heading, which has been supplied.

## HEAT INSULATING WOODS.

Arrangements have been made with the Division of Forest Products, Council for Scientific and Industrial Research to have a series of tests made on Candlenut Siris (Aleurites moluccana) and Fibrewood (Laportea gigas) to ascertain their value for heat insulation in refrigerating works. The possibility of using the softer Kurrajong (Brachychiton spp.) is also being considered.

## MODEL AIRCRAFT.

Owing to the high price of Balsa Wood, there is a strong demand both in Brisbane and Sydney for substitutes for this species. Grey Corkwood (Erythrina vespertilio) and Fibrewood (Laportea gigas) are now being sold by the Fancywoods Section for this work, the former wood being most preferred. Grey Corkwood weighs only 13 to 15 lb . per cubic foot, as against 10 to 12 lb . for Balsa, the price of which is prohibitive.

## TIMBERS FOR RAILWAY USES.

Carriage Construction.-An enquiry for timber for this work to repiace Indian Teak was received from the New South Wales Forestry Commission.

The Chief Mechanical Engineer of the Ipswich Railway Workshops recommended Yellowwood Ash (Flindersia oxleyana) and Hickory Ash (Flindersia ifflaiana). He advised that the former had given excellent service in lieu of Teak in car framing for exposed pillars, doorstand pillars, window sills, and belt rails, and in refrigerating cars for body framing. These details were forwarded to New South Wales.

## SPORTING GOODS.

The heavy tariffs on imported sporting material has given a great stimulus to the search by sporting bodies for local timbers possessing qualities fitting them for making up into these articles.

The outstanding qualities of strength, lightness and toughness possessed, by Silver Ash (Flindersia pubescens) have made. it the most popular wood for sporting goods, and several new industries have been founded upon it. Supplies of timber are not now coming forward sufficiently fast to meet the demands for it and orders have had to be increased greatly.

Boating.-Here, Silver Ash is much favoured for the ribs, framing keels, and spars of racing skiffs and for the carved sculls used in the "fours" and "eights."

A new local industry is represented in the manufacture of boat oars from 6 ft . to 9 ft . in length in wholesale quantities from Silver Ash. These are light, strong, and very durable. They keep their shape better and are stronger and more durable than the Ash (Fraxinus spp.) oars so long imported for this purpose. Orders of these new oars made from selected straight grained stocks have now been supplied to boatmen as far apart as Thursday Island and Sydney.

Golf Shafts.-Brown Tulip Oak (Tarrietia argyrodendron) has proved a success for this. A driver of this wood is still giving excellent results after eight years' service.

A study of the weights of heads and shaft dimensions in this wood is being made to obtain the correct degree of flexibility.

Lacrosse.--Silver Ash bends cfor lacrosse racquets have been made, but while not fractured, the bends are not entirely satisfactory. White Handlewood (Pseudomorus brunoniana) is being secured for further trials.

Skis.-A Victorian ski manufàcturer wrote for supplies of Yellowwood Ash (Flindersia oxleyana) for this work. The order was supplied and samples of Silver Ash (Flindersia pubescens) were also supplied. Subsequently, an order for 500 super. feet of Silver Ash was placed by this firm.

Tennis Racquets.-The bending of timber for tennis racquets is a very severe test and few woods are strong and plastic enough to be so bent.

Silver Ash has again proved itself for this work and several Brisbane manufacturers are producing very fine tennis racquets for sale. These have been tested on the courts by experienced tennis players and found to be highly satisfactory.

Tobacco Pipes.-Considerable progress was made during the year in the search for suitable timbers for pipes. A number of woods have been thoroughly tested in actual use and several timbers may now be confidently recommended for this purpose.

Perhaps the most outstanding fact learnt in this investigation is that it is not absolutely necessary, as was formerly believed, to have root wood only to make a good pipe which will smoke well and give long service.

The following timbers have been thoroughly tested with results as stated:-Tulip Plum (Pleiogynium solandri), Tulip Lancewood (Harpullia pendula), Satinay (Syncarpia hillii), Myall (Acacia pendula), Brigalow Spearwood (Acacia harpophylla), Ringed Gidgee (Acacia cambagei), Ringed Red Bloodwood (Eucalyptus corymbosa), Ringed Grey Ironbox (Eucalyptus hemiphloia), Flame She Oak (Casuarina inophloia), Rose She Oak (Casuarina torulosa), Brown She Oak (Casuarina cunninghamiana), Yellow Hollywood (Vitex lignum-vitoe).

Other timbers are being tested and root wood for a number has been secured to further test this. From the experiments made and reports received a specification for the manufacture of pipe timbers in suitable woods is being prepared. Designs of popular shapes are being made.

## TOOL HANDLES

Axe Handles.-As a result of price cutting between manufacturers of axe handles from local timbers; the quality of the handles had suffered to such an extent that we were informed by certain authorities that they would in future order only Hickory for their work. It was contended that the waste of time and danger to workmen caused by the continual breaking of short grained, unseasoned local handles was so great that they were costly at any price when compared to the reliability of Hickory.

The Forest Service was asked to examine the position and prevent, if possible, the total loss of the market for local handles except for "back yard" work.

Tentative specifications for $A, B$, and $C$ grade axe handles were then prepared, and the State Stores Board has already accepted several deliveries of handles under this specification.

Other Tool Handles.-Specifications with blue prints have also been prepared on the same lines for pick and grubber handles and hammer handles of all types, and those for hoe and shovel handles are being prepared.

## NEW TTMBERS USED.

Blush Coondoc (Sideroxylon richardii).-This has been tentatively accepted for tool handles under the official specification. For axe handles and hammer handles it has, so far, given satisfaction if made the full size specified. It makes a good resilient handle, but is softer than Hickory and will not stand abuse by inexperienced axemen. For pick handles, its strength appears to be insufficient for the heaviest work. This wood is being sold extensively as Australian ${ }^{*}$ Hickory.

Mechanical tests on Spotted Gum and Blush Coondoo are to be made by the Technological Museum, Sydney, and Division of Forest Products, Council for Scientific and Industrial Research, Melbourne. 'These will compare the physical properties of these woods with those of Hickory, and at the same time determine the best method of sawing to obtain the maximum strength.

Wharf Timbers.-The sale of 550 Turpentine (Syncarpia laurifolia) piles, ranging from seventy-two to seventy-five feet in length, to the Falmouth Docks and Engineering Company, England, has provided a valuable advertisement for this splendid marine borer resistent timber.

It is understood that this order was placed by the above firm after comparative tests with South American Greenheart (Nectandra rodioei) had been made over an eight year period, after which Greenheart was found to be attacked by submarine boring pests while Turpentine was unaffected.

The virtues of Turpentine for piling work is further demonstrated by a publication recently issued by the Sydney Harbour Trust, which body owns shipping facilities valued at some millions of pounds, supported on untreated piles of this timber in borer infected waters.

## ELECTRICAL EQUIPMENT-BATTERY SEPARATORS.

Demand for Substitutes for Port Orford Cedar.-Owing to the very high cost of imported separators, a good deal of attention has been given to the problem of finding an Australian substitute.

The Wood Technology Branch has kept in close touch with the makers and users of battery separators in Brisbane and Sydney, and also with the Government Analyst, Brisbane, the Technological Museum, Sydney, and the Division of Forests Products, Council for Scientific and Industrial Research, Melbourne.

Samples of veneer from Brisbane Plywood manufacturers and board samples have been secured for test by the Queensland Government Analyst and the Technological Museum.

Considerable information has been secured from the abovenamed laboratories in the three capital cities, and this has been passed on to battery manufacturers so that their product could be improved.

A Sydney manufacturer, who has been testing Hoop Pine for some time for car batteries, recently advised that he had just completed a test in a service car over a period of eight months.

So far the results have been quite satisfactory. There was carbonisation in both fluid and separator, but not to any great extent. The battery has been functioning quite satisfactorily, and has been put back for further observation.

A large number of ear batteries equipped with Hoop Pine separators have been put into service under supervision, and it is expected that definite conclusions as to their value will be available in about twelve months' time.

## (8.) PLYWOODS AND VENEERS.

New Veneer Woods.-Considerable progress has been made during the year in increasing the utilisation of timbers other than Pine for plywoods and veneers.

In the early days of ply manufacture 100 per cent. of Pine Veneer was used. This has now been reduced by 20 per cent. Hoop Pine (Araucaria cunninghamii) is still the most favoured "core" timber, but many other woods of varying colours and figuring have been adopted for face veneers and backs.

Rotary veneer is now being made in large quantities in Canary Sassafras (Doryphora sassafras), Rose Walnut (Cryptocarya erythroxylon), Rose Alder (Ackama quadrivalvis), Satin Sycamore (Ceratopetalum virchowii), Silver Ash (Flindersia pubescens), and Red Tulip Oak (Tarrietia peralata).

The last named timber makes a very handsome plywood and is. now much in demand for panelling in new Brisbane houses.

All these and several other species of lesser importance were, until. quite recently, regarded as unsaleable amongst the despised " scrubwoods."

Export of Plywoods.-A detailed standard specification of sizes and qualities for plywoods of all types for export was drawn up but, so far; we have not been successful in getting the trade to sell on this. Considerable trade has been worked up in first class Hoop Pine three-plywood of varying thicknesses from $\frac{3}{16}-\mathrm{in}$. to $\frac{3}{8}-\mathrm{in}$. for the British market.

Prevention of Borer Attacks.-The- occurrence of occasional borer attacks in certain core veneers has made necessary some treatment to prevent this, and the Technological Museum, Sydney, is at present making experiments with aqueous solutions of zinc sulphate, borax, sodium fluosilicate, copper sulphate, zinc chloride, ammonia alum; and sodium fluoride.

## (9.) MINOR FOREST PRODUCTS.

Essential Oils-Eremophila mitchelli-Sandal Box.-The Curator of the Technological Museum, Sydney, reported last year that a sample of the above oil, distilled by him, so greatly impressed some London buyers, that it was considered that its value would be equal to that of the true Sandalwood Oil of Western Australia.

A large scale distillation on a-half ton parcel provided by this Department from Hughenden has been carried out by Messrs. Burnside, Limited, Melbourne, and the Curator of the Technological Museum is now working on the chemical composition of the oil yielded.

He hopes to have some information available for publication this year and adds :-." The data which I hope to put out should be of considerable value in establishing an excellent market for this oil."

The Customs Department advises that, under the name of "Rosewood," 547 tons of this timber, valued at $£ 3,342$, was shipped to Hong Kong and China last year.

Essential Oils from Bark-Cinnamomum oliveri (Camphorwood).In response to an enquiry from the Curator of the Technological Museum, Sydney, supplies of the above bark were collected at Imbil and Many Peaks and forwarded to Sydney. The Curator later advised that his Western Australian enquirer for this product had intimated that they were not further interested in this bark on account of the low oil yield.

Essential Oils from Leaves-Eucalyptus micrantha (White Gum). -Further supplies of the leaves of this tree were supplied to the Technological Museum, Sydney, to allow research work of the essential oil to proceed. The last sample, weighing 105 lb . (dry), was secured at Tinana. The tree is also very plentiful along the North Coast Line to Caboolture and east of the Main Sydney Line for about twelve miles south of Brisbane. It usually occurs on useless sandy soils. The Curator stated that the oil, which had a piperitone content of 47 per cent., was equivalent in chemical composition to that obtained in New South Wales and Victoria from Eucalyptus dives, which is of considerable commercial value on account of its piperitone content. The oil as obtained on the market contains 40-45 per cent. piperitone.

Essential Oils from Leaves-Backhousia angustifolia.-.Two hundredweight of leaves of the above oil were collected at Eidsvold and made available to Dr. T. G. H. Jones, at the Queensland University, for research work on the essential oil. After distillation the oil yielded was forwarded to the Technological Museum, Sydney, and thence to Professor Simonsen, in England, for further work.

The following papers have been published regarding the essential oil of this species :-
J. Proceedings, Royal Society, New South Wales, 1924, 57 page 300 (Penfold).
J. Chemical, Society of London, 1930, p. 1184 (Simonsen and Penfold).

Essential Oils.-Leptospermum citratum (Golden or Lemon Scented Teatree).-Considerable interest in the commercial distillation of the oil of the above species was shown by a number of firms during the past year, and` a good deal of new data has been secured.

Experiments are also being made to ascertain the best methods of coppicing this species. For this purpose ten (10) of the best plants on the 10 -mile experimental plot near Maryborough have been selected and cuttings made as follows:-
(1) Cut at ground level ;
(2) Cut at 6 inches above ground;
(3) Cut at 12 inches above ground.

The foliage secured in these experiments is being forwarded to the Technological Museum, Sydney, for distillation. This will enable the yield and the physical characters of oil from this locality to be determined.

Essential Oil of Leptospermum liversidgei (a Citron Sceńted Teatree).In December, 1931, extensive areas of citron scented teatree were reported in the parishes of Tahiti and Cowra, east of Tinana Creek. Botanical specimens forwarded to the Government Botanist were determined as the above species.

The Curator of the Technological Museum, Sydney, agreed to make a distillation of the leaves and examine the essential oil yielded if 30 lb . of dried leaves were made available. These are now being collected.

VISITORS' PLANTATIONS, IMBIL.
Empire Forestry Conference, 21st September, 1928.
"And so in a far-away spot in. Queensland will be perpetuated for many a year the names of foresters rapresentative of nearly every part of our Empire."-(Professor Troup, Empire Forestry Journal, July 1929.)

(Odd numbers represent Hoop Pine ; even numbers Bunya Pino trees.)

Parliamentary Sub-committef and Party, 6th May, 1930.


VISITORS' PLANTATIONS, IMBLL-continued.
Australlan Forestry Conference, 2nd April, 1922.


## Appendices.

APPENDIX A.
Return of Timber Cut on Crown Lands for Financial Year 1931-1932.


APPENDIX $B$.
Annual Cut-Hoop and Bụnya Pine, Financial Year ended 30th June, 1932.

| Working Plan Area. | Ply. | Loge. | Tops. | Total Cut. | Approved Cut. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Super. Ft. | Super. Ft. | Super. Ft. | Super. Ft. | Super. Ft. |
| Brisbane | . | 773,450 | 291,766 | 1,065,216 | 3,250,000 |
| Brisbane Valley | 349,480 | 2,316,602 | 1,899,381 | 4,565,463 | 17,750,000 |
| Bundaberg | - | 588,897 | 7,461 | 596,358 | 2,000,000 |
| Kilcoy | 3,678 | 2,935,739 | 1,504,554 | 4,443,971 | 5,750,000 |
| Kilkivan | 29,276 | 3,711,186 | 1,105,653 | 4,846 115 | 10,500,000 |
| Mackay | . | . | . | . | 100,000 |
| Many Peaks | . | 348,072 | 159,283 | 507,355 | 4,800,000 |
| Maryborough | . | 221,818 | 108,697 | 330,515 | 1,500,000 |
| Mary Valley | 192,273 | 2,599,620 | 1,311,968 | 4,103,861 | 8,500,000 |
| Nanango | . | 2,887,814 | 1,464,583 | 4,352,397 | 4,000,000 |
| North Coast . . | . | 76,710 | 32,987 | 109,697 | 100,000 |
| Warwick | - | 738,885 | 391,435 | 1,130,320 | 2,750,000 |
| Totals . . | 574,707 | 17,198,793 | 8,277,768 | 26,051,268 | 61,000,000 |

D

APPENDIX $C$.
Revenue Collected under State Forests and Timber and Quarry Regulations for the Twelve Months ended 30th June, 1932.


APPENDIX D.
Collections under the State Forest and Timber and Quarry Regulations from 1st January, 1925, - to 30th June, 1932.

| Land Agents' Districts. | 1st January, 1925, to 30th June, 1925. | 1925-26. | 1926-27: | 1927-28. | 1928-29. | 1929-30. | 1930-31. | 1931-32. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Southern Queensland .. |  | $\begin{array}{ccc} \underset{317,708}{ } & \stackrel{\text { g. }}{9} & d . \\ 2 \end{array}$ | $\begin{array}{ccc} £ \\ 320,559 & 1 & 1 \\ \hline \end{array}$ | $\begin{array}{ccc} \& & \text { s. } & a . \\ 279,821 & 1 & 9 \end{array}$ | $\underset{291,753}{£} \text { i. } \begin{array}{ccc} \text { s. } & 8 . \end{array}$ | $\underset{225,571}{\stackrel{E}{2}} \stackrel{8 .}{2} \stackrel{d}{9}$ | $\begin{array}{ccc} £_{1} & \text { s. } & d_{.} \end{array}$ | $\begin{array}{ccc} £ & \text { s. } & d . \\ 103,488 & 2 & 7 \end{array}$ |
| $\begin{array}{ll}\text { Aramac } & \text { Atherton }\end{array} \quad$. | $\begin{array}{rrrr}0 & 10 & 0 \\ 15,929 & 6 . & 8\end{array}$ | $\begin{array}{rrr}015 & 0 \\ 35,142 & 0 & 4\end{array}$ | 64,519 $\begin{array}{rrrr}16 & 0 & 0 \\ 8\end{array}$ | $\begin{array}{crr}0 & 15 & 0 \\ 56,477 & 2 & 1\end{array}$ | $\begin{array}{rrrr}2,727 & 7 & 6 \\ 62\end{array}$ | $\begin{array}{r}4619 \\ 74,939 \\ \hline 12\end{array}$ | $\begin{array}{rrrr}\mathbf{4}, 644 & 3 & 0 \\ & 1 & 8\end{array}$ | $\begin{array}{rrrr}0 & 14 & 3 \\ 29,851 & 11 & 1\end{array}$ |
| $\begin{aligned} & \text { Barcaldine } \\ & \text { Birdsville }\end{aligned} \quad$. | ${ }_{63} 151$ | $\begin{array}{lll}135 & 4 & 8\end{array}$ | $\begin{array}{llll}91 & 9 & 5\end{array}$ | $\begin{array}{lll}76 & 4 & 2\end{array}$ | $\begin{array}{rrr}142 & 0 & 9 \\ 0 & 4 & 0\end{array}$ | 98171 | $\begin{array}{lll}146 & 18 & 7\end{array}$ | 110157 |
| Blackall $\quad \because$ | 29 <br>  <br> 9 | $\begin{array}{llll}35^{* *} & 1 & 1\end{array}$ | $4{ }^{\prime} 1818$ | $18^{\prime \prime} 186$ | $\begin{array}{llll}33 & 4 & 10\end{array}$ | 531710 | $88^{\circ} 3$ | $\begin{array}{llll}5 & 7 & 7\end{array}$ |
| Boulia | 0 4 | $2{ }^{2} 10$ | 1716 | 7109 | 13136 | 7162 | 3130 | $\begin{array}{llll}6 & 15 & 8\end{array}$ |
| Bowen | $154{ }_{*} 129$ | 459*11 6 | 778* 11 6 | 282* 4 | 27512 | 50013 | 387.85 | 431 * 89 |
| Bundaberg | * | * |  |  | * |  |  |  |
| Burketown .. | 168 | 050 | 6156 | 6106 | $7 \quad 46$ | 10180 | 3100 | 576 |
| Cairns |  | $\dagger$ | 60185 | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ |
| Camooweal | 016 60 60 | 14038 | 788 | $110^{\circ} 111$ | $4 \ddot{9}^{\circ} 160$ | $3{ }^{*} 711$ | 104711 | 31.4 |
| Oharters Towers | 498 4 | 1,499 91 | 920 0 0 | 1902 | 1,684 $13 \quad 5$ | 1,482 ${ }^{3} \quad 4$ | 892510 | $\begin{array}{llll}784 & 7 & \mathbf{6}\end{array}$ |
| Chillagoe | $\begin{array}{llll}0 & 6 & 0\end{array}$ | 0180 | 0100 |  |  | 0100 | 020 |  |
| Clermont | 85188 | 928 0 11 | 147161 | 2430 | 403199 | 3421210 | 176710 | 2019 |
| Oloncurry | $\begin{array}{llll}55 & 1 & 6\end{array}$ | 184101 | 871111 | 348149 | 127 1 9 | 45402 | 84700 | 221160 |
| Cooktown | $\begin{array}{llll}26 & 5 & 0 \\ 0 & 8\end{array}$ | 69 6 0 | $5{ }_{5}^{5} 50$ |  | -14 | $5 \quad 29$ | $\begin{array}{llll}3 & 1 & 11\end{array}$ | 41177 |
| Oroydon <br> Cunnamulla | $\begin{array}{llll}0 & 2 & 0 \\ 6 & 9 & 5\end{array}$ | 41319 2219 | $\begin{array}{rrrr}3 & 6 & 0 \\ 24 & 3 & 11\end{array}$ | 2 29 2908 | $\begin{array}{rrr}114 & 14 \\ 29 & 3 & 8\end{array}$ | $\begin{array}{rrr}1 & 18 & 6 \\ 59 & 1 & 4\end{array}$ | 113 45 4 | $1417{ }^{17} 11$ |
| Dalby | 454 18 2 | 1,042 18 | $\begin{array}{llll}1,155 & 3 & 9\end{array}$ | 848 5 $\quad 9$ | $\begin{array}{llll}1,875 & 8 & 3\end{array}$ | 1,830 661 | 1,503 68 | 1,408 3 3 6 |
| Eldavold Emerald |  | . | 124114 | $16 \ddot{2} 10 \cdot 2$ | $\begin{array}{rrr}1 & 10 \\ 273 & 12 & 3\end{array}$ | $149^{\circ} 16$ | $173^{*} 74$ | $8{ }^{\prime \prime} 18 \quad 5$ |
| Gayndah | $355 \quad 610$ | 3024 | 281911 | 173198 | 11535 | 11919 | 74711 | 531610 |
| Georgetown .. | ${ }_{8} 11.2$ | 3.7 | 0180 | 2.211 | $\begin{array}{llll}4 & 5 & 0\end{array}$ | 215 | $2{ }^{2} 8$ | 2110 |
| Gladstone Goondiwindi | 26714 |  |  |  |  |  | $23 \quad 910$ | $65 \quad 26$ |
| Gymple $\quad \because$ | ${ }^{267} 14$ | 32410 | 380 | +12 | 6 | 9 132 | 168 | 145* 15 |
| $\begin{array}{ll} \text { Herberton } & . \\ \text { Hughenden } \end{array}$ | $790^{\dagger} 410$ | $541^{\dagger} 50$ | ${ }_{638}{ }^{+} 4$ | ${ }_{555}^{\dagger}{ }^{\dagger} 8$ | $\begin{array}{ccc}\dagger \\ 54 & 16 & 1\end{array}$ | $362^{\dagger} 15 \quad 3$ | $184{ }^{\dagger} 4$ | $128^{\dagger} 211$ |
| Ingham | $161 \quad 15$ | 46917 | 343119 | 280 | 509160 | 38 | 28746 | 182711 |
| Inglewood | 27298 | $542 \quad 15 \quad 3$ | 41713 | $330 \quad 611$ | $425 \quad 1310$ | 8263.4 | $31919 \quad 5$ | $7911 \quad 4$ |
| Innisfail | 1,467 1 11 | 2,470 114 | 271* 112 | 581511 | ${ }_{0} 150$ | $6713 \cdot 9$ | + | + |
| Ispswich $\quad \ldots$ | $\begin{array}{lll}* & 2 & 0\end{array}$ | 4880 |  | * |  |  |  |  |
| Jundah | 10171 | $\begin{array}{lll}11 & 8\end{array}$ | 0130 | 136 | 188 | 170 | 0 O 20 | $\begin{array}{llll}0 & 9 & 0\end{array}$ |
| Kynuna | 2830 | 8130 | 2106 | 3180 | $0 \begin{array}{lll}0 & 4 & 0\end{array}$ | 150 | 240 | 020 |
| Longreach | $\begin{array}{llll}1713 & 1\end{array}$ | 951411 | 90881 | 28112 | $\begin{array}{llll}47 & 6 & 2\end{array}$ | $\begin{array}{llll}24 & 5 & 1\end{array}$ | $1217 \quad 5$ | 53192 |
| Mackay | $\begin{array}{ccc}3,365 & 2 & 4\end{array}$ | 5,910 4 8 |  | 1,319 710 | 1,293 610 | $82718 \quad 2$ | 1,458 $19 \quad 2$ | 814154 |
| Mackinlay | $10 \quad 6 \quad 7$ | 10* 66 | ${ }_{1} 136$ | $0_{*} 180$ | ${ }_{4} 110$ | 5.5 | $1_{*} 140$ | 1. 00 |
| Maytown .. | $16 \quad 3$ | .. |  |  |  |  |  |  |
| Mitchell . |  | $\cdots$ | . | . | $\because$ | $\ddot{3}^{\circ}$ | $\ddot{6} 1310$ | 4'9 8 |
| Monto |  |  |  |  |  | 1294 | ${ }_{66} \quad 2 \quad 4$ | 3311 |
| Mossman Muttaburra | $\therefore{ }_{3} 6$ | $\because{ }_{\square} 40$ | 0 | 8 |  | 110 2 | 300 |  |
| Mr $\quad \cdots$ |  |  |  | 8 |  |  | 300 |  |
| Nanango |  |  |  | * |  |  | $\ddagger$ | * |
| Normanton | 130 | 0150 | 550 | $34 \quad 16$ | . |  |  |  |
| Port Douglas Proserpine | $\ddot{0} 18$ 6 | $\begin{array}{rrr}4 & 5 & 0 \\ 15 & 5 & 2\end{array}$ | $\begin{array}{lll}1 & 0 & 0 \\ 1 & 4 & 0\end{array}$ | $\begin{array}{rrr}10 & 13 & 0 \\ 1 & 3 & 0\end{array}$ | $\ddot{9} 56$ | $\begin{array}{lll}0 & 9 & 0 \\ 3 & 5 & 0\end{array}$ | $\dot{2} 50$ | $0{ }^{\prime \prime} 19$ |
| Ravenswood Rockhampton | 1,295 151 |  |  |  |  |  |  | 21617 |
| Roma | 1,29515111 | 2,719 406 $1 \begin{aligned} & \text { 2 }\end{aligned}$ | $\begin{array}{r}5,672 \\ 189 \\ \hline 17\end{array}$ | $\begin{array}{r}5,503 \\ \mathbf{1 8 7} \\ \hline 10\end{array}$ | $\begin{array}{r}5,56216 \\ 493 \\ \hline 8\end{array}$ | $\begin{array}{rrrr}4,528 & 1 & 10 \\ \mathbf{5 1 9} & 3 & 4\end{array}$ | $\begin{array}{lll}167 & 12 & 9 \\ 188 & 14 & 6\end{array}$ | $\begin{array}{lrrr}216 & 17 & 7 \\ 295 & 2 & 9\end{array}$ |
| St. George . . | 55165 | 1591210 | 143149 | $\begin{array}{llll}145 & 7 & 7\end{array}$ | 216133 | 122174 | 74 0-1 | 7193 |
| St. Lawrence ${ }^{\text {Springsure }}$. | 442187 |  | $4 \dot{8}^{\circ} 164$ | 130150 | $3 \dot{4}^{\circ} 58$ |  | $32 \cdot 611$ |  |
| Stanthorpe $\quad .$. | 321711 | $\begin{array}{llll}13 & 7 & 4 \\ \end{array}$ |  | $\begin{array}{rrr}130 & 15 & 0 \\ 0 & 2 & 0\end{array}$ | $\begin{array}{rrr}34 & 5 & 8 \\ 0 & 5 & 0\end{array}$ | $\begin{array}{rrrr}90 & 8 & 7 \\ 1 & 7 & 6\end{array}$ | 32* 611 | 12.109 |
| Stonehenge |  | 18 20 | $0_{0} 96$ | $\begin{array}{llll}0 & 7 & 6\end{array}$ | 076 | $\begin{array}{lll}1 & 2 & 6 \\ & 2\end{array}$ |  |  |
| Surat | 0150 | 460 |  |  |  |  |  |  |
| Tambo | 2184 | 191411 |  |  |  |  |  |  |
| Taroom | 9100 | - 251111 | $\begin{array}{lll}32_{2} & 5 & 2\end{array}$ | 251310 | $17^{\circ} 196$ | $5 \ddot{3} 1811$ | $\ddot{8}^{\circ} 15$ | $\ddot{9} 15 \quad 7$ |
| Thargomindah | $1 \begin{array}{lll}1 & 6 & 0\end{array}$ | 140 | $1 \begin{array}{lll}1 & 8 & 0\end{array}$ | 050 | $\begin{array}{llll}0 & 9 & 0\end{array}$ |  |  |  |
| Torres ${ }_{\text {Towoomba }} \quad \because$ | 66 19 122 | $\begin{array}{r}248 \\ 1,464 \\ \hline 13\end{array}$ | $\begin{array}{rr}50 & 8 \\ 2 \\ 2,213 & 810\end{array}$ | 102 680 13 | 69 <br> 1,359 <br> 8 <br> 8 | $\begin{array}{r}38 \\ \hline 685 \\ \hline 65 \\ \hline\end{array}$ | $17{ }_{*} 164$ | 10.02 |
| Townsville | $\begin{array}{llll}495 & 9 & 8\end{array}$ | 1,607 1411 | 1,039 7 | 1,203 511 | $\begin{array}{r}740 \\ \hline 18\end{array}$ | 537 <br> 18 | 598145 | 875110 |
| Warwick | * | * | * | * |  |  |  | - |
| $\begin{array}{ll} \text { Windorah } & \because \\ \text { Winton } & \ldots \end{array}$ | $\begin{array}{rrrr}1 & 14 & 0 \\ 3 & 7 & 0\end{array}$ | $13^{*} 46$ | 4151 | 20103 | $78^{*} 29$ | $428^{\circ} 009$ | $136^{\circ} 66$ | 130 |
| Totals | 190,538 010 | 375,704 611 | 400,465 1110 | 350,55188 | 371,313 311 | 315,274 76 | 159,775 1510 | 139,629 3 0 |

* Included in Southern Queensland collections.
$\dagger$ Included in Atherton collections.
§ Ineluded in Charters Towers colleotions.


## APPENDIX E.

## Prices of Log Timber.

The following Schedule illustrates the fluctuations in the market price of logs during the year 1st July, 1931, to 30th June, 1932 :-


## APPENDIX F .

Railway Timbers supplied during Financial Year 1931-32, under Forestry and Lumbering Operations.


APPENDIX G.
Expenditure, Year ended 30th June, 1932.

|  | From 1st July, 1931, to 30th June, 1932. |  |  |  | Total. | Per Cent. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Revenue. | Loan. | Trust. | Relief. |  |  |
| Overhead Expenses- | £ | £ | ¢ | £ | £ | . |
| Salaries .. .. .- | 28,086 | $\cdots$ | $\cdots$ | .. | . | . |
| Extra Living Allowances .. .. .. | $\stackrel{626}{ }$ | . | . | . | . | . |
| Travelling and Incidentals | 4,015 | . | . | . | . |  |
|  | 32,727 | . | . | . | 32,727 | 20.4 |
| Reforestation .. | '. | 20,000 | . | 22,347 | 42,347 | $26 \cdot 4$ |
| Timber Trading Operations- <br> Harvesting and Marketing (Log Timber), including Roadwork | . | $\ldots$ | 57,648 | 304 | 57,952 | . |
| Lumbering (Hewn. Split, and Pole Timber) | . | . | 27,286 |  | 27,286 | . |
|  | - | . | 84,934 | 304 | 85,238 | $53 \cdot 2$ |
| Tota | . | . | -• | . | 160,312 | $100 \cdot 0$ |

APPENDIX H.
Financial Statement, 1st January, 1904, to 30th June, 1932.


APPENDIX I.
Loan Expenditure-1st July, 1919, to 30th June, 1932.


Noix.-The sum of $£ 7,935$ has been paid to the Treasury during the years $1927-32$ in reduction of loan indebtedness, making he debit balance of Forestry Loan Vote at the Treasury on $30-6-32$ to be $£ 418,142$.

APPENDIX J.
Analysis of Expenditure from Loan Votes, 1st July, 1919, to 30th June, 1932.


## APPENDIX Ji.

Analysis of Expenditure from Unemployment Relief Fund, 1st July, 1930, to 30th June, 1932.


APPENDIX K.
Summary of Loan Reforestation Expenditure, Year onded 30th June, 1932.

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[b]{2}{*}{Reserve.} \& \multicolumn{4}{|c|}{Reforestation.} \& \multirow[b]{2}{*}{\[
\begin{aligned}
\& \text { Minor } \\
\& \text { Surveys. }
\end{aligned}
\]} \& \multirow[b]{2}{*}{Protection,
Fire Fighting,
Pear Clearing, \&c.} \& \multirow[b]{2}{*}{Maintenance of Capital ments.} \& \multirow[t]{2}{*}{New Construction of Buildings, \&e.} \& \multirow[b]{2}{*}{Total of 2-9.} \& \multicolumn{5}{|c|}{Ovirarad Exprestrs.} \& \multirow[b]{2}{*}{Total Overhead.} \& \multirow[b]{2}{*}{(Reserve} \\
\hline \& Plantations. \& \[
\begin{gathered}
\text { Natural } \\
\text { Regeneration. }
\end{gathered}
\] \& Nursery
Working and
Maintenance. \& \[
\begin{array}{|c|}
\hline \text { Forest } \\
\text { Experiment. } \\
\hline
\end{array}
\] \& \& \& \& \& \& \[
\begin{aligned}
\& \text { Stores, } \\
\& \text { Fodder, } \\
\& \text { Cartage. }
\end{aligned}
\] \& Supervision, Repairs, \&c. \& Wet Time. \& Holidays and Leave. \& Workers' Compensation \& \& \\
\hline 1 \& 2 \& 3 \& 4 \& 5 \& 6 \& 7 \& 8 \& 9 \& 10 \& 11 \& 12 \& 13 \& 14 \& 15 \& 16 \& 17 \\
\hline \& £ s. d. \& £ s. d. \& £ 8.' \({ }^{\text {d. }}\) \& \& s. \(\mathrm{d}^{\text {d }}\) \& e 8. d. \& ( 8. \({ }^{\text {d }}\). \& \& s. \(d\). \& £ s. \(\boldsymbol{d}\). \& \& s. \(d^{\text {d }}\) \& \& \(8 . d\). \& £ s. \(d\). \& \& s. \({ }^{\text {d }}\) \& f s. \(d\). \& \& s. d. \& \& s. d. \(^{\text {d }}\) \& \& s. \({ }^{\text {d }}\). \\
\hline \& \& \& \& \& \& \& therton \& vorking P \& an area. \& \& \& \& \& \& \& \\
\hline R. 191.0. \& \(\begin{array}{rrr}123 \& 16 \& 6 \\ 1 \& 16 \& 7 \\ 24 \& 10 \& \end{array}\) \& \& \(|\)\begin{tabular}{lll}
203 \& 12 \& 1 \\
2920 \& \\
\hline 20 \& 7
\end{tabular} \& \begin{tabular}{|l|l|}
16 \& 11 \\
1 \& 4 \\
\hline \& 17 \\
\hline 25 \& 6 \\
\hline
\end{tabular} \& \(\because\) \& \begin{tabular}{rrrr}
192 \& 14 \& 8 \\
1 \& 16 \\
0 \& 7 \\
\hline
\end{tabular} \& \[
\begin{array}{lll}
0 \& 1 \& 11
\end{array}
\] \& \[
\begin{array}{lll}
120 \& 4 \& 1 \\
291 \& 12
\end{array}
\] \& \(|\)\begin{tabular}{cccc}
657 \& 0 \& 7 \\
5 \& 10 \& 2 \\
789 \& 10 \& 11 \\
7 \& \& \& \\
\hline
\end{tabular} \& 75

26 911 \& 109
13
0

8 \& | 9.0 |
| :--- |
| 8 |
| 8.19 | \& $\begin{array}{llll}36 & 4 & 11 \\ \\ 25 & 0 & 0\end{array}$ \& \[

$$
\begin{array}{lll}
50 & 5 & 3
\end{array}
$$

\] \& $\left|\begin{array}{cccc}280 & 13 & 11 \\ 0 & 8 & 0 \\ 692 & 16 & 0\end{array}\right|$ \& | 937 |
| ---: |
| 5 |
| 518 |
| 148 |
| 182 |
| 7 | <br>


\hline  \& | 24416 |
| :---: | \& \& 222107 \& ${ }^{25} 105$ \& $\because$ \& 077 \& 414

0
0 140 \& $\begin{array}{r}291121 \\ 9 \\ \hline 10\end{array}$ \& ( 789 \& 26.84 \& 21612

$\cdots$ \& 81910 \& 2502 \& $415 \cdot 159$ \& 692163 \& $\begin{array}{r}1,482 \\ 10 \\ \hline 10 \\ \hline\end{array}$ <br>
\hline $\stackrel{\text { Sundry }}{ }$ \& $\because$ \& \& \& 2 2i9 11 \& $\because$ \& $\cdots$ \& \& \& ${ }_{21919} 11$ \& $\because$ \& $\because$ \& \& : \& .. \& $\because$ \& 21911 <br>
\hline Total \& 37094 \& \& 4262 \& 4619 \& \& 19418 \& 5911 \& 4216 \& 1,465 5 \& 101183 \& 326137 \& $18 \quad 0.3$ \& 615 \& 4661 \& 97318 \& 2,439 <br>
\hline
\end{tabular}





APPENDIX K-continued.


APPENDIX K-continued.

|  | Reforkstamion. |  |  |  | $\begin{aligned} & \text { Minor } \\ & \text { Surveys. } \end{aligned}$ | $\begin{aligned} & \text { Protection, } \\ & \text { Fire Fighting, } \\ & \text { Pear } \\ & \text { Clearing, \&c. } \end{aligned}$ | $\begin{gathered} \text { Maintenance } \\ \text { of Capital } \\ \text { Improve- } \\ \text { ments. } \end{gathered}$ | New Construction of Buildings, dec. | $\begin{aligned} & \text { Total of } \\ & \text { Columns } \\ & 2-9 . \end{aligned}$ | Overhead Expensrs. |  |  |  |  | TotalOverhead. | $\underset{\text { Reserye }}{\text { Rental }}$ Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Researve. ${ }^{\text {a }}$ | Plantations. | Natural Regeneration. | Nursery Working and Maintenance | Forest Experiment. |  |  |  |  |  | Stores, Fodder, Cartage | Supervision, Repairs, \&c. | Wet Time. | Holidays and Leave and Leave. | Workers' Compen satio |  |  |
| $\cdots 1$ | 2 | 3 | 4 | 5 | 6 | 7. | 8 | 9 | 10 | 11 | 12 | 13 | 14. | 15 | 16 | 17 |
|  | \& s. d. | \& s. d. | £ 8. d. | £ 8. d. | £ 8. d. | £ s. d. | \& s. d. | \& s. $\mathrm{d}^{\text {d }}$ | \& 8. $d$. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | \& s. $d$. | \& s. d. | ¢ s. $d$. |




APPENDIX Ki.
Summary of Expenditure-Silvical Works-Unemployed Relief Fund-Year ended 30th June, 1932.


APPENDIX KI-continued.




APPENDIX L.
Areas Placed under Plantations. (Exclusive of Areas Refilled.)

| Working Plan Area. | Reserve | area Planted (Aqres). |  |  |  |  |  | Totals. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Eucalypts. |  | Other Species. |  | Softwoods. |  |  |  |
|  |  | 1931-32. | To 30th June, 1932. | 1931-32. | $\begin{gathered} \text { To 30th } \\ \text { June, } 1932 . \end{gathered}$ | 1931-32. | To 30th June, 1932. | 1931-32. | To 30th June, 1932. |
| Mary ValleyTotal | 135 435 256 | $\cdots$ | $\begin{array}{ll}\cdots \\ \cdots & \cdot \\ \cdots & \end{array}$ | . | $\cdots$ | 422.0 <br> 181.3 <br> . | $\begin{gathered} 1,744.75 \\ 671.8 \\ 134.2 \end{gathered}$ | 422.0 181.3 | $\begin{gathered} 1,744 \cdot 75 \\ 671 \cdot 8 \\ 134 \cdot 2 \end{gathered}$ |
|  | . | . | . | . | . | 603.3 | 2,550.75 | 603.3 | 2,550.75 |
| Brisbane Valley and Nanango | 283 289 379 257 299 151 | 66.0 9.0 $\cdots .0$ 6.0 $\cdots$ | $66 \cdot 0$ <br> .9 .0 <br> 39.0 <br> $\cdots$ <br> $\square$ | $\because$ $\square$ $\because$ $\square$ | $\cdots$ | $\begin{array}{r}32.0 \\ 220.0 \\ \hline 9.0 \\ 60.0 \\ \\ \hline\end{array}$ | 706.7 $489 \cdot 0$ $40 \cdot 0$ 394.4 $407 \cdot 0$ 148.0 | 98.0 229.0 $\square 050$ 1050 60.0 .$\cdot$ | $\begin{array}{r} 772.7 \\ 498.0 \\ 40 \cdot 0 \\ 433.4 \\ 407.0 \\ 148.0 \end{array}$ |
| TotalWarwick .. | . | 81.0 | 114.0 | . | . | 411.0 | 2,185.1 | 492.0 | 2,229•1 |
|  | 263 | . | $\cdot 3$ | . | 18.5 | $110 \cdot 0$ | 394.05 | 110.0 | $412 \cdot 85$ |
| Total | $\cdots$ | . | $\cdot 3$ | . | 18.5 | 110.0 | 394.05 | 110.0 | $412 \cdot 85$ |
| Rockhampton Tótal | 20 | $\cdots$ | . | . | . | $\ldots$ | 94.0 | . | 94.0 |
|  | . | . | . | $\cdots$ | . | . | 94.0 | $\because$ | 94.0 |
| Brisbane .. .. | 509 | . | $\cdots$ | . | . | 130.0 | 361.0 | 130.0 | 361.0 |
| Total |  | . | - . | . | . | 130.0 | 361.0 | 130.0 | 361.0 |
| North Coast <br> Total | 561 | . | 5.0 | . | $5 \cdot 5$ | 425.0 | 478.0 | 425.0 | 488.5 |
|  | $\cdots$ | . | $5 \cdot 0$ | $\cdots$ | 5.5 | $425 \cdot 0$ | 478.0 | 425.0 | 488.5 |
| Atherton | 191 194 418 310 | $\begin{aligned} & 41 \cdot 5 \\ & \because \\ & \ddot{9 \cdot 0} \end{aligned}$ | $\begin{array}{r} 43.5 \\ 109.5 \\ \because 9.0 \end{array}$ | $\begin{gathered} 8 \cdot 0 \\ \because \\ \ddot{4 \cdot 0} \end{gathered}$ | $\begin{array}{r} 12.0 \\ -12.5 \\ 4.0 \\ 263.5 \end{array}$ | $\begin{gathered} 46.5 \\ \cdots \\ \ddot{23 \cdot 0} \end{gathered}$ | $\begin{gathered} \hline 182.95 \\ 22.0 \\ \dddot{26.0} \end{gathered}$ | $\begin{aligned} & 96.0 \\ & \because \\ & \because 66.0 \end{aligned}$ | $\begin{gathered} 238 \cdot 45 \\ 144 \cdot 0 \\ 4 \cdot 0 \\ 298 \cdot 5 \end{gathered}$ |
| Total | . | 50.5 | 162.0 | 52.0 | 292.0 | 69.5 | 230.95 | 172.0 | 684.95 |
| Fraser Island | 3 | . | 161.0 | . | . | . | 749.5 | $\cdots$ | 910.5 |
|  |  | . | 161.0 | . | . | . | 749.5 | $\cdots$ | $910 \cdot 5$ |
|  | $\begin{aligned} & 220 \\ & 355 \end{aligned}$ | $\ldots$ | $\cdots$ | $\cdots$ | $\cdots$ | 42.0 | $\begin{aligned} & 171.75 \\ & 102.5 \end{aligned}$ | -42.0 | $\begin{aligned} & 171 \cdot 75 \\ & 102.5 \end{aligned}$ |
|  |  | $\ldots$ | . | . | $\cdots$ | $42 \cdot 0$ | $274 \cdot 25$ | 42.0 | $274 \cdot 25$ |
| $\begin{array}{cc}\text { Mackay } & . . \\ & \text { Total }\end{array}$ | 120 | . | . | . | . | 10.0 | $20 \cdot 5$ | 10.0 | 20.5 |
|  |  | . | $\cdots$ | $\cdots$ | . | 10.0 | $20 \cdot 5$ | 10.0 | 20.5 |
| Maryborough | 287 | . | . | . | . | . | $35 \cdot 0$ | . | 35.0 |
| Total | $\because$ | . | . | . | $\cdots$. | . | -35.0 | . | $35 \cdot 0$ |
| $\left.\begin{array}{ll}\text { Experimental } \\ \text { Areas- } \\ \text { Imbil } & \text { Plots } \\ \text { Wallum } & \ldots \\ \text { Dalby } & \ldots\end{array}\right]$ | 135 $\because 4$ $\because 93$ | $\cdots$ $\cdots$ | ${ }^{4.0}$ | $\cdots$ | 8.75 $\cdots$ | ${ }^{-25}$ | $\begin{gathered} 45.5 \\ 2.0 \\ .25 \\ 1.0 \\ \hline \end{gathered}$ | $\overbrace{}^{-25}$ | $\begin{gathered} 58.25 \\ 2.0 \\ .25 \\ 1.0 \end{gathered}$ |
| Total | $\cdots$ | - | $4 \cdot 0$ | . | 8.75 | . 25 | 48.75 | . 25 | 61.50 |
| Grand Totals | . | 131.5 | $446 \cdot 3$ | 52.0 | . 324.75 | 1,801.05 | 7,421 $\cdot 85$ | 1,984.55 | 8,192.9 |

APPENDIX M.

## Areas Treated for Natural Regeneration.



APPENDIX M-continued.
Area Treated for Natural Regeneration-continued.

| Working Plan Area. | Reserve. | area Treated (adres). |  |  |  |  |  |  |  |  | Total AreaTreated to30th June, 1932. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Eucalypts. |  |  | Other Species. |  |  | Softwoods. |  |  |  |
|  |  | Treated, <br> 1931-32. | $\begin{gathered} \text { First } \\ \text { Treatment } \\ 1931-32 . \end{gathered}$ | $\begin{gathered} \text { Total at } \\ \text { 30th June, } \\ 1932 . \end{gathered}$ | Treated, <br> 1931-32. | First Treatment 1931-32 1031-32. | Total at 30th June 1932. | Treated, <br> 1931-32. | $\begin{gathered} \text { First } \\ \text { Treatment. } \\ \text { 1931-32. } \end{gathered}$ | Total at 30th Jun 1932. |  |
| Brisbane | $\begin{array}{r} 509 \\ 69 \\ 63 \\ 215 \end{array}$ | $\begin{array}{r} \dddot{30} \\ 230 \\ 561 \end{array}$ | $\begin{aligned} & \ddot{230} \\ & 155 \end{aligned}$ | $\begin{array}{r} 1,616 \\ 1,548 \\ 487 \\ 925 \end{array}$ | $\because$ $\cdots$ $\cdots$ | $\cdots$ | $\cdots$ | $\square$ $\square$ $\square$ | $\cdots$ | $\cdots$ | $\begin{array}{r} 1,616 \\ 1,548 \\ 487 \\ 925 \end{array}$ |
| Total | $\ldots$ | 821 | 385 | 4,576 | $\ldots$ | . | $\ldots$ | . | $\cdots$ | $\ldots$ | 4,576 |
| Atherton .. | $\begin{aligned} & 194 \\ & 191 \\ & 310 \\ & 418 \\ & 452 \\ & 254 \end{aligned}$ | $\square$ $\because$ $\square$ $\square$ | $\square$ $\square$ $\square$ | $\begin{aligned} & 175 \\ & \ddot{-} \\ & \ddot{\square} \\ & \ddot{339} \end{aligned}$ | $\cdots$ | $\square$ $\cdots$ $\square$ | $\begin{gathered} 53 \\ 128 \\ 42 \cdot 5 \\ 20.5 \end{gathered}$ | $\cdots$ | $\because$ $\square$ $\square$ $\square$ | $\because$ $\cdots$ $\square$ | $\begin{gathered} 175 \\ 53 \\ 128 \\ 42.5 \\ 20.5 \\ 339 \end{gathered}$ |
| Total | . | . | . | 514 | . | . | 244 | . | - | . | 758 |
| North Coast . . | $\begin{array}{r} 318 \\ 313 \\ 583 \\ 445 \\ 249 \\ 60 \end{array}$ | 606 <br> 770 <br> $\ddot{289}$ | $\begin{aligned} & 295^{\circ} \\ & \because \\ & \ddot{140} \\ & \ddot{289} \end{aligned}$ | $\begin{array}{r} 3,265 \\ 1,039 \\ 820 \\ 883 \\ 788 \\ 1,410 \end{array}$ | $\square$ $\because$ $\because$ $\square$ | $\cdots$ | $\because$ | $\cdots$ | $\square$ $\because$ $\because$ $\because$ $\square$ | $\square$ $\square$ $\square$ | $\begin{array}{r} 3,265 \\ 1,039 \\ 820 \\ 883 \\ 788 \\ 1,410 \end{array}$ |
| Total | . | 1,665 | 724 | 8,205 | . | . | . | . | . | . | 8,205 |
| Grand Totals | . | 5,244 | 3,542 | 43,277 | - | . | 405 | 4,828 | 4,828 | 38,836 | 82,518 |

APPENDIX N.
Summary of Seed Collocted in Year. 1931-32.


APPENDIX 0
Nursery Output for Year ended 30th June, 1932.

| Species. |  |  |  |  |  |  |  |  |  |  |  |  |  | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | R. 283. Colinton. | R. 289. <br> Cooyar. | R. 299. <br> Avoca. | R. 135. Brooloo. | $\text { R. } 435 .$ Amamoor. | R. 263. <br> Pikedale. | $\begin{gathered} \text { R. } 509 . \\ \text { Crow's Nest. } \end{gathered}$ | R. 561. <br> Bribie. | R. 12. <br> Eungella. | E. 355. <br> Kilkivan. | $\text { B. } 220 .$ Kilkivan. | $\begin{gathered} \text { R. } 310 . \\ \text { Gadgarra. } \end{gathered}$ | R. 191. <br> Bonaro. |  |
| Agathis Palmerstoni | . | . | .. | .. | . | . | . | 800 | 400 | .. | .. | 1,100 | 200 | 2,500 |
| Araucaria Cunninghamii | 42,000 | 40,100 | 19,700 | 177,400 | 66,800 | . | . | .. | 2,700 ${ }^{\text {- }}$ | 10,900 | 20,400 | 8,600 | 23,900 | 410,500 |
| Oupressus lusitanica | . | . | . | . | . | . | 3,500 | 1,000 | . | . | . | . | 100 | 4,600 |
| Flindersia Brayleyana | . | .. | .. | .. | . | . | . | . | .. | . | .. | 20,900 | 3,500 | 24,400 |
| Grevillea robusta .. .. | 22,900 | 42,600 | 12,000 | 12,800 | 2,200 | .. | . | . | $\cdots$ | . | . | 1,000 | .. | 93,500 |
| Pinus caribea | $\therefore$ | . | . | . | .. | 18,400 | 22,600 | 375,200 | $\therefore$ | . | .. | .. | .. | 416,200 |
| Pinus palustris. | . | .. | . | . | . | . | 4,000 | . | . | . | .. | . | . | 4,000 |
| Pinus patula | 6,200 | . | . | . | . | 4,100 | 70,800 | .. | $\cdots$ | $\cdots$ | $\because$ | 1,700 | . | 82,800 |
| Pinus radiata | $\ldots$ | . | .. | .. | $\cdots$ | 40,300 | .. | . | . | . | .. | . | $\cdots$ | 40,300 |
| Pinus toda : | $\cdots$ | . | . | :. | . | 8,200 | . | 132,500 | . | .. | . | . | .. | 140,700 |
| Euealyptus microcorys | 7,700 | 2,400 | . | .. | . | . | .. | . | .. | . | $\ldots$ | 300 | . | 10,400 |
| Eucalyptus paniculata | 25,200 | 1,800 | .. | .. | .. | $\cdots$ | . | .. | $\cdots$ |  | .. | 1,200 | 8,600 | 36,800 |
| Miscellaneous spp. | 200 | . | . | 2,300 | 3,000 | . | .. | 1,200 | .. | 100 | .. | 2,600 | 4,400 | 13,800 |
| Totals | 104,200 | 86,900 | 31,700 | 192,500 | 72,000 | 71,000 | 100,900 | 510,700 | 3,100 | 11,000 | 20,400 | 35,400 | 40,700 | 1,280,000 |

${ }^{\circ}$ APPENDIX $P$.
Forest Service Nursery Stocks as at 30th June, 1932.


APPENDIX Q.
Buildings, \&c.-Construction for Year ended 30th June, 1932.


APPENDIX R.
Buildings, \&c.-Maintenance for Year onded 30th June, 1932.


APPENDIX S.
Water Supply-Establishment for Year onded 30th June, 1932.


APPENDIX T.
Forest Paddocks-Establishment for Year ended 30th June, 1932.


APPENDIX U.
Forest Paddocks-Maintenance for Year ended 30th June, 1932.


APPENDIX.V.
Expenditure on Roads, Year ended 30th June, 1932.

| Particulars. | Vote. | Construction. | Maintenance. | Subsidies. |
| :---: | :---: | :---: | :---: | :---: |
| Atherton- |  | £ s. $d$. | £ s. $d$. | £ $8 . d$. |
| R. 191, Barron | Relief | $\cdots$ | 120 |  |
| R. 310, Gadgarra | Loan |  | 0.310 |  |
| R. 310, Gadgarra . . . . . . | Relief . |  | $\begin{array}{llll}5 & 3 & 5\end{array}$ |  |
| R. 310, Gadgarra, harvesting and marketing | H. and M. |  | 0142 | . . |
| road <br> R. 310, Gadgarra, harvesting and marketing road | Relief | $617 \quad 2$ | 3130 | . |
| Forestry aid road No. 9, harvesting and marketing road | Relief | . | 31611 | $\cdots$ |
| Tinaroo Shire Council-Ringrose Creek Bridge | H. and M. . . | . | . | $16 \quad 0.6$ |
| Brisbane |  |  |  |  |
| R. 69, Bunya silvical road | Loan | 11115 | 0145 | . |
| R. 69, Bunya, silvical road | Relief | 176 |  |  |
| Foxlowe-Yednia road . . | H. and M. |  | $200 \quad 8 \quad 3$ |  |
| Foxlowe-Yednia road | Relief |  | 63130 |  |
| R. 509, Crow's Nest | Loan | $1 \begin{array}{lll}1 & 2 & 4\end{array}$ | . |  |
| Nerang Shire Council-Road to T.R. 362, Numinbah | H. and M. | . . | . | $\begin{array}{lll}35 & 0 & 0\end{array}$ |
| Brisbane Valley and Nanango- | Lobin |  |  |  |
| R. 257, Cooyar, silvical roads R. 257, Cooyar, silvical roads | Lobn |  | $\begin{array}{llll}5 & 10 & 5 \\ 5 & 19 & 10\end{array}$ |  |
| Resumption for road access to R. 510 , Cooyar | H. and M. | $59{ }^{\circ} 6$ |  |  |
| R. 283, Colinton, silvical roads .. .. | Loan |  | $\begin{array}{llll}311 & 6\end{array}$ |  |
| R. 283, Colinton, silvical roads | Relief |  | $1018 \quad 3$ |  |
| R. 283, Colinton, harvesting and marketing road | H. and M. .. | .. | 500 | . |
| Rosalie Shire Council-Forestry aid road No. 10 | H. and M. | . | - | $99 \quad 0 \quad 0$ |
| Nanango Shire Council-Forestry aid road No. $13$ | H. and M. | $\cdots$ | -• | 66 Ll 3 |
| R. 289, Cooyar, silvical roads | Loan | 21311 | $\cdots$ | . |
| R. 289, Cooyar, silvical roads . | Relief | 1488 |  |  |
| R. 299, Avoca, silvical roads .. .. | Relief | . . | 9180 | . |
| Fraser Island- |  |  |  |  |
| R. 3, silvical roads . . . | Loan | . | $\begin{array}{lrr}4 & 5 & 7 \\ 5 & 10 & 0\end{array}$ | $\ldots$ |
| R. 3, silvical roads .. .. | Relief | . |  | . |
| Kilkivan- |  |  |  |  |
| R. 220, Kilkivan, silvical roads | Loan | . | $\begin{array}{lll}1 & 19 & 4\end{array}$ | $\ldots$ |
| R. 220, Kilkivan, silvical roads | Relief | . | $\begin{array}{lll}10 & 9 & 0\end{array}$ | . |
| R. 355, Kilkivan, silvical roads | Loan | . | $\begin{array}{lll}1 & 8 & 8\end{array}$ | . |
| R. 355, Kilkivan, silvical roads. | Relief | $\cdots$ | $1 \begin{array}{lll}1 & 4 & 8\end{array}$ | . |
| Mackay- | H. and M. |  |  |  |
| J. Smith-Forestry aid road No. 8 <br> J. Smith-Forestry aid road No. 7 | ${ }_{H}$ H. and $M$. |  |  | $\begin{array}{lll}36 & 0 & 0 \\ 90 & 0 & 0\end{array}$ |
|  |  |  |  |  |
| Mary Valley- <br> R 124, Glastonbury, Mary's Creek road, | Relief |  | $3 \quad 21$ |  |
| R. 124, Glastonbury, Mary's Creek road, harvesting and marketing road | Relief |  |  |  |
| R. 124, Glastonbury, Mary's Creek road, harvesting and marketing road | H. and M. | - | 5196 | . |
| R. 135, Brooloo, Western Creek road . .. | H and M . | 4114 |  | - |
| R. 135, Brooloo, road No. 2 .. .. .. | H. and M. |  | $26 \quad 5 \quad 4$ | . |
| R. 135, Brooloo, road No. 2 . | Relief | . | $\begin{array}{llll}9 & 1 & 4\end{array}$ |  |
| R. 135, Brooloo, road No. 3 | H. and M. | $\cdots$ | 16115 | $\cdots$ |
| R. 135, Brooloo, road No 3 .. .. .. | Relief |  | 6786 |  |
| R. 135, Brooloo, road No 6 .. .. . . | H. and M. | . | $\begin{array}{lll}19 & 9 & 6\end{array}$ | $\cdots$ |
| R. 135, Brooloo, road No 9 .. .. | H. and M. |  | 14131 | . |
| R. 135, Brooloo, road No. 9 . | Relief | $\cdots$ | 2100 | . |
| Coonan Gibba road and paddock No. 13 | H. and M. |  | $\begin{array}{llll}49 & 17 & 3\end{array}$ |  |
| Coonan Gibba road and paddock No. 13 | Relief |  | $\begin{array}{lll}31 & 18 & 0\end{array}$ |  |
| R. 135, Brooloo, Casey's Gully road . . | H. and M. | - | $\begin{array}{lll}26 & 4 & 8\end{array}$ | . |
| R. 135, Brooloo, Casey's Gully road . . | Relief |  | 1166 | . |
| R. 256, Imbil, Cold Creek road . . . | Relief | 26 8 4 <br> 18 13 8 | . | . |
| R. 256, Tmbil, Cold Creek road ... .. | H. and M. | 48138 |  |  |
| R. 256, Imbil, Mitchell's Creek road, harvesting and marketing road | Relief |  | $21 \quad 3 \quad 6$ | . |
| R. 256, Imbil, Mitchell's Creek road, harvesting and marketing road | H. and M. | " | $9 \quad 6 \quad 5$ | - |
| R. 435, Amamoor, culvert on 300 Creek road | H. and M. | $\begin{array}{llll}18 & 4 & 1\end{array}$ | . | " . |
| R. 435, Amamoor, culvert on 300 Creek road | Relief | 11110 | 419 |  |
| R. 435, Amamoor, Zachariah Creek road . . | H. and M. | . . | $\begin{array}{lll}41 & 9 & 4\end{array}$ |  |
| R. 435, Amamoor, main Amamoor road . | Relief | $\cdots$ | $\begin{array}{llll}1 & 7 & 3\end{array}$ |  |
| R. 435, Amamoor, forestry aid road No. 12, Widgee | H. and M. | - | .. | $39619 \quad 5$ |
| R. 435, Amamoor, forestry aid road No. 17, | H. and M. . . | - | - | 180100 |
| Widgee | H. and M. . . |  |  |  |
| R. 435, Amamoor, forestry aid road No. 19, Widgee | H. and M. . . |  |  | 48120 |

## APPENDIX V.-continued.

Expendituis on Roads, Year ended 30th June, 1932.-continued.

| Particulars. | Vote. | Construction. | Maintenance. | Subsidies. |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
| R. 561 , Bribie, silvical roads and bridges | Loan | 5157 |  |  |
| R. 561, Bribie, silvical roads and bridges | Relief | 18127 |  | . |
|  | Relief . . | . . | 4180 | 50 |
| Landsborough Shire Council-Forestry aid | H. and M. . . | . | .. | $\begin{array}{lll}50 & 0 & 0\end{array}$ |
| Noosa Shire Council-Forestry aid road No. 16 | H. and M. |  | . | 7500 |
|  |  | £231 38 | £645 210 | £1,093 $13 \quad 2$ |
| Total Expenditure .. .. | - |  | $1,96919.8$ |  |
| Loan Expenditure . . |  | $\begin{array}{cccc}\text { £ } & \text { s. } & d . \\ 37 & 4 & 11\end{array}$ |  |  |
| H. and M. Expenditure | $\ldots$ | 1,640 |  |  |
|  |  |  |  | $\cdots$ |

APPENDIX W.
Forest Protection, Destruction of Noxious Plants, \&c., for Year ended 30th June, 1932.


APPENDIX X.
Forest Protection from Fire for Year ended 30th June, 1932.


APPENDIX X.-continued.
Forest Protection from Fire for Year ended 30th June, 1932-continued.


APPENDIX X.-continued.
Forest Protection from Fire for Year Ended 30th June, 1932-continued.


APPENDIX Y.
Summary of Forest Fire Reports, 1st July, 1931, to 30th June, 1932.



BUNDABERG WORKING PLAN AREA.



INGLEWOOD WORKING PLAN AREA.


KILKIVAN WORKING PLAN AREA.


MARYBOROUGH WORKING PLAN AREA.



| Date. | Locality. | Cause and Origin. | Area Burned. | Estimated Damage. | Cost of Fireflghting | Remarks. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| NORTH COASt working plan area. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5-10-31 | F.P. 3, T.R. 700, Gympie and Curra | Fire came in from road skirting reserve; originated on road | 100 acres of grass | No damage | . | Forest Overseer of opinion fire caused by some person travelling along thereby starting the grass burning |
| 21-12-31 | S.F.R. 318, Maroochy . . | Burning-off operations on special lease held over reserve | About 10 acres | Good blackbutt regeneration totally destroyed | . |  |
| 11-12-1-32 | Blackall L.A., S.F.R. 292, Maroochy | Incendiarism suspected. . | 140 acres | No damage .. | .. | subduing outbreak <br> Outbreak extinguished by storm |
| 15-1-32 | S.F.R. 583, Kenilworth.. | Fire caused accidentally | 8 acres | No damage | . |  |
| 26-29-1-32 | $\begin{array}{\|c} \text { Kureelpa } \\ \text { Kind } \\ \text { L.A.s.s, } \\ \text { Maroochy } \end{array} \text { S.F.R. } \quad \text { 292all },$ | Incendiarism suspected.. | 600 acres | No damage .. | .. | Outbreak subdued by Forest Overseer assisted by J. Edwards and F. Bampton, of Mapleton. cause of outbreak not discovered |
| 1-3-2-32 | Compts. 4 and 5, S.F.R. 583, Kenilworth | Thought to have been caused by some person or persons passing | 200 acres | No damage .. | -• | $\underset{\substack{\text { Outbreak } \\ \text { control } \\ \text { Overseer by }}}{\text { brought }} \underset{\text { Forest }}{\text { under }}$ |
| 2-4-2-32 | T.R. 700, Gympie .. | Thought to have been caused by some one skirting reserve | 100 acres | Very little damage .. | . | . |



APPENDIX Z.
General Protection for Year ended 30th June, 1932.


## APPENDIX AA.

Expenditure on Surveys-Financial Year, 1931-32.


## APPENDIX BB.

Particulars of Forest Survey Work, Year ended 30th June, 1932. Class 1.-Inspections of Vacant Crown Land and Timber Reserves.


Class 2.—Assessment Surveys.


Class 3.-Intensive Contour and Assessment Surveys.


Misoeiluneous Surveys.


## APPENDIX CC.

## Forest Reservations for the Year ended 30th June, 1932.

State.Forests.-Five new State Forests, with a total area of 36,676 acres, were proclaimed during the year, the largest being as follows :-
S.F.R. 527, Deongwar .. 2,310 acres (Ipswich Land Agent's District).
S.F.R. 1355, Dundas, \&c. • . 12,700 acres (Brisbane Land Agent's District).
S.F.R. 700, Gympie .. .. 11,250 acres (Gympie Land Agent's District).
S.F.R. 350, Kirrama .. .. 10,500 acres (Herberton Land Agent's District).

National Parks.-Three new National Parks were proclaimed, these being-
N.P. 281, Broadwater .. .. 3,960 acres (Stanthorpe Land Agent's District).
N.P. 282, Tenterfield . . . 6,500 acres (Stanthorpe Land Agent's District).
N.P. 6, Acland .. .. 65,000 acres (Roma Land Agent's District).

Provisional Reserves.-At 30th June, 1932, the number of Timber Reserves was 354 as against 366 at 30 th June, 1931. Four new areas with a total of 3,997 acres were reserved, the largest being R. 1351, St. John, 3,470 acres (Ipswich Land Agent's District). Seven thousand seven hundred and sixty acres of Crown Land were added to existing reserves and 18,160 acres were converted into State Forests.

Fifteen thousand three hundred and one acres were released for selection and a further area of 20,904 acres are under process 'of being proclaimed State Forests.
lst JULY, 1931, TO 30th JUNE, 1932.
State Forests.


Timber Reserves.


APPENDIX DD.
State Forests, Timber Reserves, and National Parks as at 30th June, 1932.

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{3}{|r|}{\multirow{2}{*}{Land Agentrs Distriot.}} \& \& \multicolumn{3}{|c|}{State forests.} \& \multicolumn{3}{|c|}{Tmber Reserves.} \& \multicolumn{4}{|c|}{National Paris.} <br>
\hline \& \& \& \& No. \& Area \& \& No. \& Area. \& \& No. \& Area. \& \& <br>
\hline Atherton \& \& \& . \& 10 \& $$
\stackrel{\Delta}{\mathrm{A}}
$$ \& $$
\begin{array}{rl}
x_{0} \\
0 & \mathrm{P} \\
\hline
\end{array}
$$ \& 5 \& $$
31,741^{\mathrm{A}}
$$ \& $$
\begin{array}{ll}
\mathrm{P} . \\
2 & 19
\end{array}
$$ \& . \& A. R. \& \& <br>
\hline Bowen. \& . \& . \& $\ldots$ \& \& \& \& 8 \& 114,310 \& 0 0 \& is \& \& \& <br>
\hline Brisbane \& . \& . \& . \& 35 \& 111,555 \& 311 \& 37 \& 146,208 \& 114 \& 15 \& 50,478 \& 0 \& <br>
\hline Bundaberg \& . . \& . \& . \& 11 \& 59,952 \& 19 \& 30 \& 133,381 \& 212 \& - \& \& \& <br>
\hline Cairns \& \& . \& . \& 3 \& 85,844 \& 00 \& 11 \& 383,774 \& 120 \& 1 \& 78,000 \& 0 \& <br>
\hline Charleville \& \& $\cdots$ \& $\ldots$ \& \& \& \& 3 \& 20,037 \& $\begin{array}{lll}0 & 37 \cdot 3 \\ 0 & 0\end{array}$ \& . \& . $\cdot$ \& \& <br>
\hline Charters Towers \& . \& $\cdots$ \& $\cdots$ \& i \& \& \& 2 \& 125,550 \& $\begin{array}{ll}0 & 0 \\ 0 & 0\end{array}$ \& - \& \& \& <br>
\hline Clermont \& . \& . \& . . \& 1 \& 14,500 \& 00 \& 4 \& 122,040 \& $\begin{array}{ll}0 & 0 \\ 0 & 0\end{array}$ \& $\cdot$ \& . \& \& <br>
\hline Cloncurry \& $\cdots$ \& $\cdots$ \& $\cdots$ \& . \& \& \& 9 \& 4,800
429,075 \& $\begin{array}{ll}0 & 0 \\ 0 & 0\end{array}$ \& \& \& \& <br>
\hline Cooktown \& $\cdots$ \& $\ldots$ \& $\cdots$ \& 8 \& 345,428 \& 125 \& 27 \& 4894,940 \& 0
0

2 \& i \& 22,500 \& 0 \& <br>
\hline Gaymidah \& $\cdots$ \& $\cdots$ \& $\ldots$ \& \& 315,28 \& \& 14 \& 38,426 \& 227 \& . \& .. \& \& <br>
\hline Gladstone \& \& . \& . \& 4 \& 35,000 \& 0 0 \& 18 \& 77,821 \& 216 \& $\cdots$ \& . \& \& <br>

\hline Goondiwindi \& $\cdots$ \& -. \& \& \& \& \& 1 \& - ${ }_{17,410}$ \& | 0 |
| ---: | ---: | ---: | \& 4 \& \& \& <br>

\hline Gympie \& $\cdots$ \& $\cdots$ \& $\cdots$ \& 22 \& 188,801 \& \& 24 \& 117,956
22,273 \& \& 4
3 \& 1,040 \& \& <br>
\hline Herberton \& $\cdots$ \& $\cdots$ \& $\cdots$ \& 5 \& 64,131 \& \& 5 \& 22,273
252,560 \& $\begin{array}{rr}1 & 10 \\ 0 & 0\end{array}$ \& 3 \& 1,040 \& \& <br>
\hline Ingham \& $\cdots$ \& $\cdots$ \& $\cdots$ \& 6 \& 98,270 \& \& 12 \& 252,660 \& 0
215 \& \& \& \& <br>
\hline Inglewrood \& $\cdots$ \& $\cdots$ \& $\cdots$ \& 6 \& 88,270 \& 0 \& 4 \& 15,926 \& 038 \& \& \& \& <br>
\hline Ipswich \& $\ldots$ \& $\cdots$ \& $\ldots$ \& 15 \& 98,411 \& 217 \& 24 \& 91,700 \& 30 \& 2 \& 4,344 \& \& <br>
\hline Jundah \& . \& . \& . \& \& \& \& 1 \& 25,600 \& 0 0 \& . \& .. \& \& <br>
\hline Mackay \& . \& $\cdots$ \& . \& 1 \& 27,800 \& \& 18 \& 289,359 \& 25 \& \& \& \& <br>
\hline Maryborough \& . \& . . \& . \& 10 \& 409,978 \& \& 28 \& 101,913 \& 24 \& 2 \& 165 \& \& <br>
\hline Monto \& \& . \& \& 4 \& 13,359 \& \& 10 \& 137,974 \& \& \& . \& \& <br>
\hline Nanaingo \& . \& $\cdots$ \& . \& 30 \& 128,983 \& \& 23 \& 47,038
119,398 \& \& \& \& \& <br>
\hline Rockhampton \& ... \& . \& . \& 3 \& 117,640 \& \& $\begin{array}{r}14 \\ 4 \\ \hline\end{array}$ \& 119,398
20,525 \& \& 1 \& 216
65,000 \& \& <br>
\hline Roma \& . \& \& \& 1 \& 8,685 \& \& 4 \& 20,525 \& 10 \& 1 \& 65,000 \& \& <br>
\hline Springsure \& . \& . \& . \& i \& \& \& 1 \& 20,600 \& 00 \& \& \& \& <br>
\hline Stanthorpe \& $\because$ \& . \& $\cdots$ \& 1 \& 4,020 \& \& \& \& \& 2 \& 10,460 \& 0 \& <br>
\hline St. George \& $\because$ \& \& . \& . \& \& \& 1 \& 3,072 \& \& $\cdots$ \& : . \& \& <br>
\hline Taroom \& \& \& \& \& \& \& 12 \& 3,403
29,184 \& $\begin{array}{ll}0 & 0 \\ 0 & 31\end{array}$ \& \& \& \& <br>
\hline Toowoomba \& \& \& \& 11 \& 82,196 \& \& \& 29,184 \& \& 3 \& 3,245 \& \& <br>
\hline Totals \& \& \& . $\cdot$ \& 181 \& 1,941,339 \& 330 \& 354 \& 3,378,563 \& 324.3 \& 35 \& 236,711 \& 1 \& <br>
\hline
\end{tabular}

At 30th June, 1932-


APPENDIX EE.
The Forest Area, 1900-1932.


APPENDIX FF.
Special Leases Granted on State Forests and Timber Reserves, from 1st July, 1931, to 30th June, 1932.


## APPENDIX FF-continued.

Special Leases Granted on State Forests and Timber Reserves from 1st July, 1931, to 30th June, 1932-continued.


APPENDIX GG
Distribution of Staff.

| ! |  |  |  |  |  |  | 30th June, 1931. | 30th June, 1932. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | .. .. .. | $\cdots$ | . | . | . | $\cdots$ | 108 | 106 |
| General Staff | $\cdots \quad .$. | . . | $\cdots$ | . | . | . . | 94 | 101 |
| Forest Service | Sawmills Employees | . | . | . | . | . | 54 | 55 |
|  | Totals | - | . | $\cdots$ | -• | . | 256 | 262 |

## APPENDIX HH.

QUEENSLAND FOREST SERVICE SAWMILLS AND TIMBER YARDS.
1931-32.

- TRADING ACCOUNT.



## 1 QUEENSLAND FOREST SERVICE SAWMILLS AND TIMBER YARDS.

BALANCE-SHEET, 30тн JUNE, 1932.

V. GRENNING,

Acting Director of Forests.
er Yards have been examined

## S. V. Gardiner, A.F.I.A., Accountant.

 I certify that the Books, Accounts, and Vouchers of the Forest Service Sawmills and Timber Yards have been examined to 30th June, 1932, and that this Balance-sheet, together with the attached Trading and Profit andand agrees therewith.
G. L. BEAL, Auditor-General.


[^0]:    Refilling has been of little account, and had ayerage planting conditions prevailed no refilling would have been required.

    Planting on S.F.R. 435, Amamoor, was not quite so successful. Rainfall here was even less than at Imbil, and the planting for the most part was on deserted banana farms on high steep land, on which the soil became very dry and loose. Results however, are still good.

