
ANNUAL REPORT

OF THE

Sub-Department of Forestry

(DEPARTMENT OF PUBLIC LANDS)

FOR THE

Year 1933-34.

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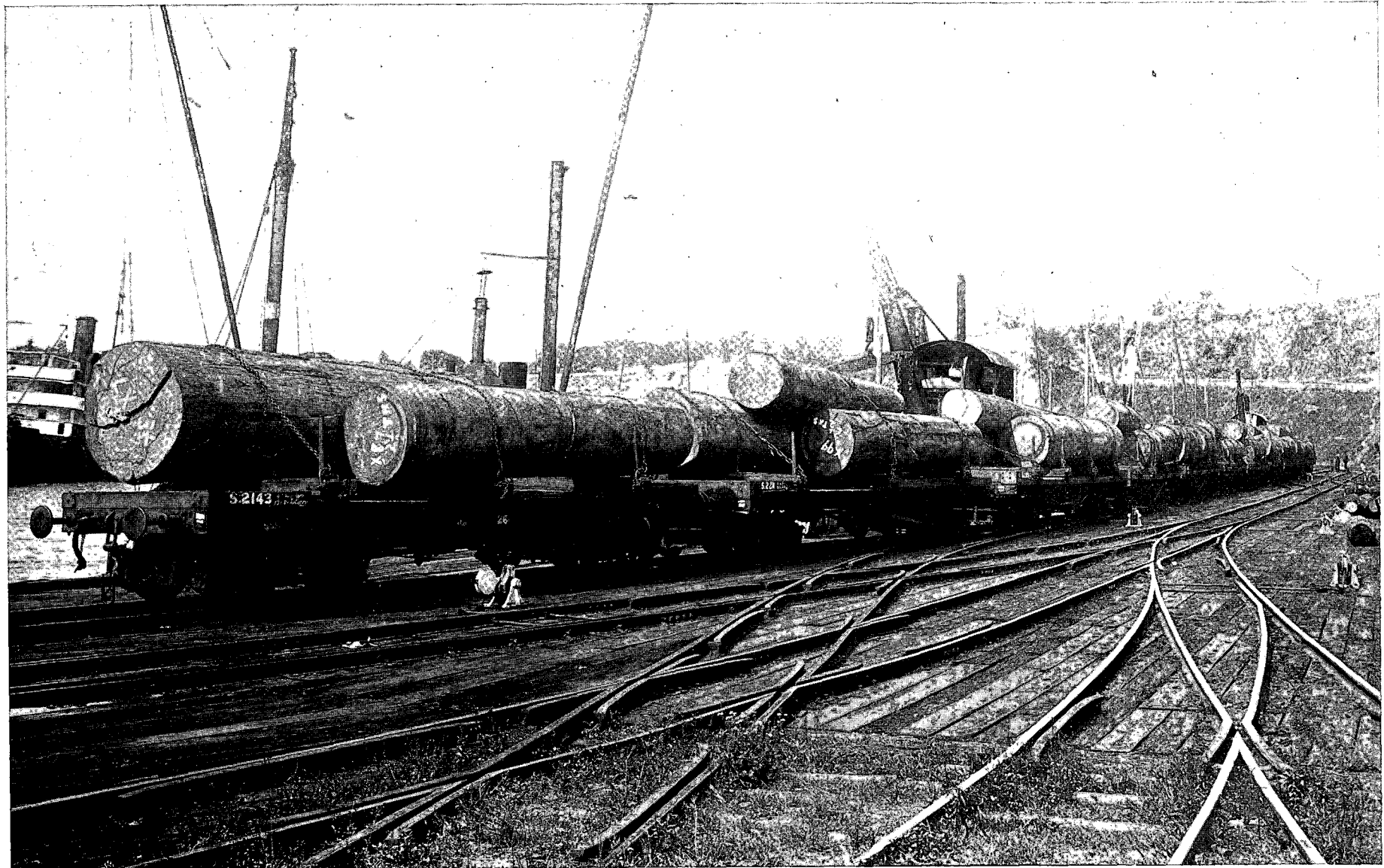


Photo., J. A. Lunn.]

Revival of Timber Industry, Cooktown District.

The year 1933-34 marked a revival of logging operations in the Cooktown district. This picture shows one of the first consignments of Kauri Pine logs to arrive in Brisbane. Great activity marked all sections of the Queensland milling industry during 1933-34, total Crown log sales being 80,800,000 s. ft.

Report of the Director of Forests for the Year ended 30th June, 1934.

INTRODUCTION.

MAJOR FEATURES OF THE YEAR'S WORK.

The year 1933-34 has been one of records.

Continued improvement in the Pine milling industry in South Queensland saw a new figure set in the matter of Crown sales of Pine logs, of which nearly 59,000,000 super. feet were sold. The previous highest total was 53,000,000 super. feet made in 1925-26.

Crown sales of hardwood logs totalled nearly 11,000,000 super. feet, which is the highest figure since 1915 when a like quantity (11,000,000) was sold.

In sales of Crown logs of Kauri Pine, Cypress Pine, cabinetwoods, and scrubwoods, despite extremely adverse weather conditions, increases were recorded as against the previous year, and the total quantity of these—over 11,000,000 super. feet—is the highest since 1929-30 when a quantity of 14,000,000 super. feet was sold.

The total Crown log sales were nearly 81,000,000 super. feet, and this is a record for any one year over the period covered by available statistics—i.e., 1911 to date.

Treasury figures of timber revenue for 1933-34 were £166,878, the amounts for the past three years being:—

	£
1931-32	78,155
1932-33	144,805
1933-34	166,878

These indications of emergence from the pit of depression to an enhanced prosperity and greatly increased employment in the timber industry, not only in the mills but in the logging centres, are naturally very pleasing.

During the year the Cooktown district became a centre of logging activity and logs were shipped from Cooktown for the first time for many years.

Veneer and plywood mills were active, and, with a view to securing full advantage of markets and consequently increasing employment, the Government during the year granted the request of manufacturers for the constitution of a Veneer and Plywood Board to organise and control the industry. During the year a special publication was issued by the Sub-Department dealing with the Veneer and Plywood industry of Queensland.

A Departmental timber seasoning kiln of modern design served by a storage yard planned for efficient handling was established during the year. This kiln has been working full time since its inception, and a programme of working has been drawn up whereby the kiln will be of the greatest benefit to industry in furnishing information as to results of experiments with seasoning of the various commercial species.

In reforestation works record figures were also attained. During 1933-34 an expenditure of £70,000 was made in this work, this being the highest on record.

Resulting from this expenditure over 1,250,000 trees were planted—a record figure—and 3,400,000 trees were in nursery stocks at the end of the year.

The acreage planted—2,060 acres—was also greater than in any previous year, and the total area planted went into five figures, the acreage being 11,518 at 30th June last.

The work of treatment of the natural forest for betterment of the stand and promotion of regeneration was actively continued, areas embracing 20,450 acres being dealt with, to make the total area so treated in Queensland 109,361 acres.

New centres where reforestation activity was commenced during the year are:—Reserve 298, Gallangowan (Kilkivan W.P.A.); Reserve 392, Como (North Coast W.P.A.); Reserve 435, Gundiah (Maryborough W.P.A.); Reserve 80, Littabella (Bundaberg W.P.A.); Reserve 126, Barabanbel (Dalby W.P.A.); and Reserves, 117 Bracker, 81 Beebo, and 101 Devine (Inglewood W.P.A.).

The work of protecting and tending reforestation works already established was given due attention during the year, and provision of housing for the permanent forest station staff was also proceeded with as far as practicable.

Silvicultural research work was actively continued and interesting results were secured. Appointment of a pathologist to specialise in forestry work was made during the year to the Department of Agriculture and Stock.

Co-operation was maintained with the Department of Public Instruction in the establishment of school forestry plots, some of which are now giving interesting results.

In reforestation works over 800 men were given employment. At 30th June, 1934, the number of wages men employed by the Sub-Department was 167 greater than at 30th June, 1933, and 321 greater than at 30th June, 1932.

Survey work carried out by the Sub-Department embraced inspections of Vacant Crown Lands and Timber Reserves covering an area of 145,000 acres; assessment surveys of 21,935 acres of State Forest and Vacant Crown Lands; intensive contour and assessment surveys of several State Forests and Timber Reserves, and the Enoggera Water Reserve covering 38,422 acres; compartment surveys on eight State Forests and several miscellaneous surveys. In all an area of about 230,000 acres were dealt with.



Hoop Pine Planting Stock in Nursery.
At 30th June, 1934, nursery stocks totalled 3,400,000 trees.



Young Hoop Pine Plantation—7 years old.
Hoop Pine is the chief species used in Queensland's planting programme. 2,061 acres of plantation of all species were established during 1933-34.

Photos., J. A. Lumm.]

Important additions were made to the State Forest area, which was increased from 2,038,000 acres to 2,287,000 acres. Foremost amongst these were valuable Cypress Pine areas in the Toowoomba district (Western Creek), Dalby district (south of Dulacca), Inglewood district (parish of Bringalily), and Roma district (two areas near Yeulba and one near Mitchell); hardwood areas at Gundiah (Maryborough district), Parishes of Cherbourg and Charlestown (Nanango district), and Woodford (Brisbane district); areas for plantation at Como, Beerwah, and Glasshouse Mountains; and a tract of cabinetwood forest near Atherton.

The acreage of timber reserves was reduced by 135,000 acres during the year, the greater part of areas cancelled being proclaimed as State Forests.

At the end of the year the total acreage of State Forests, Timber Reserves, and National Parks in the State exceeded 6,000,000 acres for the first time on record.

HARVESTING AND MARKETING OPERATIONS.

The Timber Trade—

In the last Annual Report of this Sub-Department reference was made to the considerable recovery which had been made by the timber trade of Queensland. This year it is most gratifying to be able to record that the figures set last year have not only been maintained but have been considerably improved.

This progress is visible in North Queensland and South Queensland alike in all main branches of the industry, whether operating on pine, hardwood, or cabinetwood timbers or manufacturing veneers and plywoods.

Taking as an index the sales of Crown logs, it is found that since 1930-31 an improvement of over 130 per cent. has occurred, the sales increasing from 35,000,000 super feet in that year to a record figure of 81,000,000 super. feet in 1933-34. As compared with 1932-33 the increase is 36 per cent.

The percentage increase in the quantity of log timber sold affords a fairly reliable indication of the increased employment which has resulted, and this is a most pleasing aspect.

From the viewpoint of the Department as the supplier of the bulk of the raw material for the milling industry the year has been a very busy one, and constantly increasing demands have placed a heavy burden on the shoulders of officers of the Harvesting and Marketing section, whose task has been rendered very much more difficult—especially so in North Queensland—by adverse weather hampering logging operations. Month after month, reports from the country centres have indicated the extent to which weather has interfered with operations and the phrase "roads impassable for logging" was a regular feature of these

reports. Measures were taken to overcome as far as possible the curtailment in operations brought about by wet weather by engaging a larger number of haulage contractors, and it has been necessary for officers to be almost constantly locating new blocks for haulage, and in other ways every effort has been made to ensure log supplies to the mills.

The improvement in trade has been greatest on the home market, but there has also been a fairly large increase in trade with the Southern States, where Queensland pine has supplanted importations of softwoods from overseas for use in joinery, building, cases, &c.

Locally the increased trade has been consonant with improved economic conditions which have consistently bettered since 1932. Figures of the logs, both Crown and private, put through the mills in Queensland from 1924-25 to 1932-33 (the latest figures available) are:—

Year.	Softwoods (Hoop, Bunya, Kauri, Cypress Pine.)	Hardwoods (Principally Eucalyptus spp.)	Other Timbers.	Total.
1924-25.. .. .	111,565,000	91,500,000	24,500,000	227,565,000
1925-26.. .. .	90,615,000	87,600,000	31,960,000	210,175,000
1926-27.. .. .	90,832,000	80,320,000	23,330,000	194,482,000
1927-28.. .. .	73,499,000	80,570,000	19,250,000	173,319,000
1928-29.. .. .	85,109,000	72,660,000	20,190,000	177,959,000
1929-30.. .. .	70,411,000	63,350,000	19,460,000	153,221,000
1930-31.. .. .	42,711,000	46,120,000	14,700,000	103,531,000
1931-32.. .. .	41,459,000	39,960,000	13,220,000	94,639,000
1932-33.. .. .	50,804,000	44,230,000	13,800,000	108,834,000

This table indicates the improvement that took place in the year 1932-33 to which reference was made in the last Annual Report of this Sub-Department.

Unfortunately figures for 1933-1934 in respect of private logs cut by the sawmills are not yet available, and whilst owing to the depletion of private supplies these figures, especially in regard to pine, could not show the same increase as that shown in the case of Crown logs, still it is safe to say that the total log cut of the sawmills would be considerably greater in 1933-1934 than in 1932-1933.

The total Crown cut of mill logs of all species from 1924 to date is as follows:—

1924	.. .. .	65,000,000
1-1-25 to 30-6-25	.. .. .	30,000,000
1925-26	.. .. .	72,000,000
1926-27	.. .. .	71,000,000
1927-28	.. .. .	56,000,000
1928-29	.. .. .	65,000,000
1929-30	.. .. .	57,000,000
1930-31	.. .. .	35,000,000
1931-32	.. .. .	39,000,000
1932-33	.. .. .	60,000,000
1933-34	.. .. .	81,000,000

The progress indicated is gratifying but it is probable that a serious check will be experienced if the tariff against imported timbers is materially altered. Representatives of this Sub-Department and of the timber industry in this and Southern States have been in active co-operation to combat any such measure, and it is hoped in the interests of employment in this State that no such action will be taken.

The Pine Log Market—

Crown sales of Hoop and Bunya Pine logs showed another sharp increase during the year and reached a record figure. Nearly 59,000,000 super. feet of logs were sold as compared with 42,500,000 super. feet in the preceding year, 26,000,000 in 1931-1932 and 22,100,000 in 1930-1931, so that it will be seen that since the lastmentioned year the output has increased over two and a-half times. During the six months ended 30th June, 1934, the quantity of logs sold was nearly 35,000,000 super. feet as compared with 7,500,000 super. feet during the similar period of 1931, or almost five times as great. These figures indicate very satisfactory progress, and at the same time show the extent to which the organisation which during the period of depression was reduced was called on to meet extra work.

The feature of the demand has been the consistent upward tendency and at the end of the financial year logs were most keenly in demand. If there is no setback in the shape of tariff reductions or otherwise, it is confidently hoped that 1934-35 will be a very satisfactory year.

Wet weather caused a great deal of trouble, and on many occasions held up the logging operations both of the Department and holders of blocks of timber. The following extracts from reports of officers in the main Pine logging districts are indicative of the conditions prevailing:—

Officer in Charge, Mary Valley District:—"Most extraordinary conditions prevailed throughout the year, it being found impossible to cope with the demand for pine logs. The reduction in the Mary Valley haulage organisation brought about by depression conditions left a serious shortage of teams, and it was found necessary to take urgent action to increase the organisation. This was repeated several times during the year, and at time of writing, the organisation is still being found incapable of coping with the demand, despite the fact that the monthly quantity of pine being removed from Mary Valley areas is well over 1,000,000 super. feet. The wet winter experienced was unsuitable for regular deliveries, timber being hauled under most difficult conditions, due to the deplorable state of many of the scrub roads. Local haulage contractors have spared no effort in an attempt to cope with the demand. The revival in the timber trade is playing a great part during the present stressful period towards the relief of unemployment, particularly amongst timber workers. At the moment it can safely be said that there is not a genuine timber worker unemployed in the district."

Officer in Charge, Brisbane Valley District:—"All haulage has been greatly restricted by weather conditions, the roads in most cases being too slippery for motor haulage. The lightest shower of rain prevents a loaded lorry from working. Generally the rough state of bush roads is very heavy on motor lorries, breakdowns being very frequent with the consequent stoppage of haulage. Mills in this district have been idle on many occasions owing to shortage of log supplies, haulage having been stopped by weather conditions. The rainfall for the period must constitute a record for the number of days on which rain fell."

Officer in Charge, Kilkivan District:—"During the whole of 1933 and until the present time, the period has been one of the worst on record for haulage, on account of incessant rain and consequent bad state of roads. Since January, 1934, there have been scarcely three consecutive dry weeks, therefore, although the demand for logs has been extraordinary, supplies could not have been delivered at faster rates."

Every effort has been made by the Sub-Department to overcome the drawback caused by adverse weather and to keep the industry supplied with logs. That these efforts have met with some measure of success is indicated by the fact that over 10,000,000 super. feet more Pine logs were hauled by Departmental teamsters than in the preceding year, and in the last six months, despite the fact that the weather was generally anything but favourable, the quantity hauled was 20,500,000 super. feet, or nearly 1,000,000 super. feet more than the total for the year 1932-33.

The increased demand is noticeable primarily in the local market, due to the increase in building locally as indicated in the statistical figures issued by the Bureau of Industry, and to the general improvement in other wood using industries.

The veneer and plywood industry, to which reference is made elsewhere, showed much greater activity and was a larger consumer of Pine logs.

The export trade of the sawmills also increased fairly considerably. The policy of making Hoop and Bunya Pine logs available to sawmills at a rate to enable them to compete with and replace importations was continued during the year, when a quantity of 8,464,000 super. feet of logs was approved to be so made available as against 3,013,000 super. feet in the previous financial year. The bulk of this timber found its way to Southern States.

The Veneer and Plywood Industry—

Although during 1932-33 the output of the veneer and plywood factories of Queensland was estimated in the last Annual Report of this Sub-Department at 26,000,000 square feet or 53 per cent. greater than the preceding year, the actual returns subsequently made available by the Registrar-General showed that actual outturn was 31,658,000 square feet of plywood, representing an increase of nearly 86 per cent. In addition 6,276,000 square feet of veneers were produced.

For the year 1933-34 the results are even better. The year has been a very busy one for the plywood industry, and the market both in Queensland and in the Southern States has been buoyant.

The estimated production of plywood for the year was 33,000,000 square feet. Figures supplied by the Registrar-General in respect of the years 1927-28 to 1932-33 inclusive are as follows:—

Year.	Log Timber.	Producing :	
		Plywood.	Veneers.
	super ft.	square ft.	square ft.
1927-28	4,769,822	19,434,306	..
1928-29	6,862,314	24,901,448	..
1929-30	5,875,253	21,376,034	..
1930-31	3,546,483	12,942,476	..
1931-32	5,309,652	17,029,995	..
1932-33	10,115,492	31,652,667	6,275,696

The opinion was expressed in the last Annual Report that increased orders and more profitable business could be secured were this industry organised for marketing. That this view was shared by practically all those engaged in the industry was demonstrated during the year by the fact that nine out of ten South Queensland factories petitioned the Government to create a marketing Board to deal with veneers and plywood.

This request was granted, and a Veneer and Plywood Board was created. This Board controls the marketing of plywoods and veneers produced in Queensland south of the twenty-third degree of south latitude. Two Government representatives have been appointed to the Board to watch Government interests, one being an officer of the Department of Agriculture and the other the Chairman of the Timber Advisory Committee (Mr. G. A. Duffy).

Following this step it has been possible for the Department to deal with the industry as a whole as regards log supplies, and to make much better arrangements for ensuring that prime quality logs are used only for production of plywood and veneers than has hitherto been the case. This has been accomplished by the following steps:—

- (1) Arrangements have been made to sell to the Veneer and Plywood Board the whole output of Hoop and Bunya Pine logs suited for veneer manufacture and which are hauled under Departmental logging contracts.
- (2) A quantity of 3,000,000 super. feet of Kauri Pine logs from North Queensland has been sold to the Board.
- (3) Steps have been taken to amend the ply log specification to permit of a larger number of logs being diverted to the purpose of veneer manufacture.

During the year 1932-33 a Tariff Board inquiry was held in Melbourne into the question of duties on veneers. This Sub-Department was represented at such inquiry by the Chairman of the Timber Advisory Committee (Mr. G. A. Duffy), and the Queensland industry was also represented. So far, although the inquiry has been so long completed, no decision has been given by the Federal Government.

This Sub-Department is of opinion that there is every prospect of the Veneer and Plywood Board being very successful and that increased employment and greater prosperity should accrue from its operations.

The Cabinetwoods Market—

Sale of cabinetwoods increased substantially during the year. These are drawn from the forests of North Queensland and, but for a phenomenally wet season which made logging enormously difficult, the sales would have been considerably higher. The fact that the figures show an increase at all is significant of the efforts made by Departmental officers and contractors to supply commitments.

The Deputy Forester reports:—

“The timber trade after five years in the doldrums revived only to be dealt another severe setback by lack of log supplies, owing to adverse weather conditions. During the whole twelve months under review consistent rains made roads impassable to teams and lorries with the result that the heavy orders for all classes of timber could not be supplied. Notwithstanding abnormal wet conditions the year's output of logs by Forestry exceeds annual deliveries by the Department for many years, which was mainly brought about by concentration of logging from Danbulla State Forest to which a comparatively good wet-weather road gives access.

“Organisation of available logging plants and encouragement to contractors to purchase the newer designs of caterpillar tractors and motor lorries has resulted in sufficient means to supply all log demands if normal weather prevails, and I expect to catch up to the trade's demands by next Christmas if the usual dry spring occurs. For year 1933-34 the district did not register eight consecutive fine days.”

The demand for all prime species—Walnut, Maple, Kauri, and Oak—was keen. For small parcels of Walnut logged from private lands fierce competition has ensued and prices have reached 50s. per 100 super. feet for ordinary logs and 100s. per 100 super. feet for figured or special logs. Forest Service prices for the quantities sold in discharge of commitments ranged from 20s. for 8 feet to 8 feet 11 inches girth logs to 35s. for logs 13 feet girth and upwards. Small logs of Kauri are now finding a ready market, and Maple also sells readily in all sizes. Greater interest is being displayed in Oak by buyers in Sydney and Melbourne, where this Department for some years has made displays featuring this timber. Red Cedar was in greater demand during the year, and Red Tulip Oak is also coming into prominence on the market. This timber has come into use for veneers and interior decoration and for purposes requiring bentwood.

Owing to the shortage of supplies of primary species all logs of secondary woods offering were readily purchased.

The quantities of logs of principal species sold during the year, as compared with sales for the preceding year, are shown as follows:—

Species.	1932-33.	1933-34.
Kauri Pine	2,789,000	3,675,000
Maple	646,000	1,349,000
Walnut	520,000	461,000
Other cabinet woods .. .	3,385,000	3,012,000

Operations for marketing of cabinetwoods in the Cooktown district were commenced during the year, and by the 30th June last over 220,000 super. feet of timber (principally Kauri logs) had been removed and shipped from Cooktown. A mill was in course of establishment at Shipton's Flat at the end of the year, thus giving an impetus to industry in a district where for a considerable time it has languished.

According to figures supplied by the Deputy Forester, the total quantity of timber cut in the North Queensland Forestry district during 1933-34 was 9,359,000 super feet, as compared with 6,645,000 super. feet during 1932-33, an increase of 40 per cent.

It is expected that 1934-35 will see a very heavy demand for cabinetwood logs from the North Queensland forests and great activity in the timber trade in that region.

Hardwood Market—

Sales of hardwood logs from Crown lands continued on the upgrade, the output from the forests being 10,896,000 super. feet, as compared with 8,250,000 super. feet during 1932-33 and 4,824,000 super. feet in 1931-32. The year's sales were the highest since 1915, when 11,000,000 super. feet were sold.

It is pleasing to note this increase as seeing that most of the sawn hardwood is used in house building in Queensland it is a further indication of the improving economic conditions of the State.

At the same time the figures available are only those in respect of Crown logs, which are not by any means the principal factor in the market. Owing to extensive alienations of hardwood-carrying areas private lands still supply the bulk of the logs to Queensland hardwood mills, but the following table showing the percentage of Crown to private logs for the years 1927-28 to 1932-33 indicates a steady increase, and it is considered probable that an increasing burden will henceforward be thrown on the Crown forests in the direction of providing hardwood logs. The figures are:—

Year.						Crown to Private Logs. Per cent.
1927-28..	..	..	..	..	..	9.3
1928-29..	..	..	..	..	..	11.2
1929-30..	..	..	..	..	..	12.2
1930-31..	..	..	..	..	..	11.7
1931-32..	..	..	..	..	..	13.7
1932-33..	..	..	..	..	..	18.6

Cypress Pine Market—

As forecast in the last Annual Report there was some improvement in the Cypress Pine market, and although the Crown log cut does not show any considerable increase, here again the position is complicated by private lands supplies. The actual figures for the year were 1,647,000 super. feet, as against 1,230,000 in 1932-33 and 1,796,000 super. feet in 1931-32.

The Forest Officer in charge of the Dalby district furnishes the following information in regard to the Cypress Pine market:—

“Timber sales generally have now taken a definite upward trend. During the last three months of the year just passed Cypress Pine log sales totalled 402,204 super. feet. To give some idea of the increase during the latter part the total Cypress Pine log sales for the year were 970,989 super. feet, so that in the case of Pine almost half was sold during the last three months.

"Appreciably more Cypress Pine milling timber is being sold at the present time than at any previous period since the establishment of a Forest Office in this district. Out of twenty Cypress Pine mills operating in this district eight are operating on privately owned timber. These mills are selling as much timber, pro rata, as the mills operating on Crown. The big demand for timber in the West has been the means of quite a number of new mills opening up. I was of the opinion a few years ago that privately-owned stocks of Cypress Pine would soon become depleted, but after seeing the class of log being milled by some of these smaller mills I have concluded that there is sufficient private timber to last for the next twenty years. I feel certain that the majority of logs being milled in some of these mills would not average over 40 super. feet per log—in fact, I have inspected sawn timber and in some cases noticed 3 by 3 showing sap on the four edges. Nevertheless, they find a market."

Sandalwood—

During 1933-34 463 tons of Sandalwood were marketed by the Sandalwood Syndicate. This is 17 tons more than in 1932-33. The syndicate agreement expired in June, 1934, and it was decided not to renew the agreement or reoffer the rights, but in future all marketing will be carried out by the Department, which will engage and pay getters and will ship wood to the Chinese market. The Australian Sandalwood Company, which already handles practically the whole output from the other Sandalwood exporting States—viz., South Australia and Western Australia, has been appointed as Queensland agents, and an agreement has been entered into whereby under existing market conditions 500 tons of Queensland wood will be disposed of. As this represents an increase on the annual quantity which has been marketed in the past, increased employment is thus provided for; but, further than this, the agreement also provides that this quantity shall be maintained unless sales in China fall below half their present volume (about 5,000 tons per annum), and moreover that should sales increase beyond 5,500 tons per annum Queensland will participate to the extent of 10 per cent. in such increase.

The royalty received from the syndicate was £5 per ton of Sandalwood, and it is expected that under the new arrangement the return to the Government after meeting marketing costs will be considerably increased; in fact, under the agreement the Sandalwood Company agrees to forego any commission on sales of Queensland wood unless the net return to the Queensland Government exceeds £9 per ton.

The agreement is an advantageous one from the Queensland viewpoint, but it also ensures to the company that it will not be exposed to danger of unrestricted marketing of Queensland wood which would be likely to have serious effects on the market (with final results detrimental to Queensland as well as to other States).

Constructional Timbers—

Operations for direct supply of Railway bush timbers and bridge timbers to the Railway Department, the Main Roads Commission, and other public and private bodies reveal that the quantities of timber supplied were vastly in excess

of those for the previous year, despite the abnormal weather conditions experienced. A comparison of the principal items reveals:—

	1932-33.	1933-34.
Sleepers	25,304 pieces	58,918 pieces
Crossings	21,284 s. ft.	123,212 s. ft.
Transoms	658 s. ft.	97,606 s. ft.
Bridge Timber	1,846 lin. ft.	22,857 lin. ft.

Apart from the Railway supply, which constituted the bulk of operations and included a special project "Strengthening of Bridges—Theebine to Nanango," the most important of other supplies were electric light poles to Toowoomba Electric Light and Power Company, Limited, for the transmission line to Clifton, and to the Postmaster-General's Department for stock; round and hewn timbers to P.E.I. Section for South and Big Maria Creek bridges, El-Arish; to the Main Roads Commission for Boney Creek Bridge; for the Roma-Surat road; for the Coolangatta Creek Bridge; and for the Pacific Highway and Jubilee Creek Bridge, Southport. A number of Turpentine piles were supplied to the Townsville Harbour Board. Further efforts were made to secure business in Railway sleepers from the New Zealand Government, but the Department's tendered price was not competitive with those submitted by other States. While with the Delegation to the East the late Mr. W. H. Austin made extensive inquiries into the possibility of trade with China in Railway sleepers, but here, again, the question of competitive prices obtrudes itself, the Chinese market being one of cheapness, not quality. Several overseas inquiries for wharf timbers were received but no business resulted.

In addition to the sales made of timbers cut and hauled by Departmental contractors, a large quantity of standing timber is disposed of annually for constructional purposes. Total sales of some of the principal items for 1932-33 and 1933-34 are compared as follows:—

	1932-33.	1933-34.
Sleepers	159,028 pieces	177,045 pieces
Sleeper blocks	67,561 pieces	18,577 pieces
Headstocks, transoms and crossings	198,386 s. ft.	344,900 s. ft.
Girders, corbels, piles, and sills	22,501 lin. ft.	89,549 lin. ft.

Further details of constructional timbers sold during 1933-34 are given in Appendix "A."

It can be said that the depression so far as the broadaxeman is concerned is a thing of the past, and that the year closed, if not exactly with an unprecedented demand for hewn timbers, at least with sufficient work offering to keep all broadaxemen in the State fully employed to the end of 1934. There were the names of approximately 200 timbergetters on the Departments books at the close of the year.

Butter-boxes—

The question of utilisation of Hoop Pine for butter-boxes, which had come under disfavour of the Federal authorities because of allegations of wood taint, was settled during the year by the issuance of a regulation providing for spraying with a casein-formalin mixture to a formula prepared by the Council for Scientific and Industrial Research. Hoop Pine boxes sprayed with this mixture are acceptable to the authorities, and as box-making factories have installed spraying plants it would appear that the last has been heard of the wood-taint objection. Kauri Pine, which is not required to be sprayed, was in good demand for butter-box manufacture during the year.

Assistance to Local Authorities—

The policy was continued during the year of co-operation with local authorities in improvement of roads to Crown timber areas with a view to reducing haulage costs and also facilitating haulage operations. In pursuance of this policy the following subsidies were approved:—

ROAD SUBSIDIES APPROVED TO SHIRE COUNCILS.

Shire.	Road.	Amount of Forestry Subsidy Approved.		
		£	s.	d.
Eacham ..	Haines Bridge—Forestry Aid Road, No. 9	15	0	0
Kilkivan ..	Bridge over Wide Bay Creek, Mudlo Road	330	0	0
ditto	Road from Timber Reserve 67, Parish of Grongah, to Goomeri Road	500	0	0
Noosa ..	Road to State Forest Reserve 392, Parish of Como—Forestry Aid Road 27	20	0	0
Rosalie ..	Road from State Forest Reserve 257, Parish of Cooyar to Gilla—Forestry Aid Road 26	100	0	0
Tinaroo ..	Danbulla Road—Forestry Aid Road 4	150	0	0
ditto	Repairs to bridges, Danbulla Road—Forestry Aid Road 4	178	0	0
Widgee ..	Yabba Creek Road—Forestry Aid Road 28	3,480	10	0
ditto.	Coonoongibber Creek Road—Forestry Aid Road 25	291	0	0

TIMBER TO THE APPROXIMATE VALUE SHOWN HEREUNDER GRANTED ROYALTY FREE.

		£	s.	d.
Herberton	Nettle's Creek Bridge	5	0	0
ditto	Bridge on road to Tully State Forest	2	10	0
Tinaroo ..	Mobo Creek Bridge	19	4	0
Widgee ..	Upper Kandanga Developmental Road	17	16	0
ditto ..	Gympie—Sandy Creek Road	34	9	0
ditto	Bridge over Banks' Creek	9	8	0

In dealing with roads it is interesting to record that mechanical haulage is becoming rapidly more popular—viz., motor-lorry haulage and caterpillar-tractor snigging. The tendency is to use smaller and speedier lorries shod with pneumatic tyres, and an incidental feature is that these do less damage to roads than the heavy solid-tyred vehicle.

General—

The general policy of the Department in regard to marketing Crown timbers has been one of co-operation with the industry, and in this respect the Chairman of the Timber Advisory Committee has been particularly active. Besides being a member of the Plywood and Veneer Board, Mr. Duffy has attended many meetings of the Timber Merchants' Association and Timber Export Association. His advice and assistance in determining matters of policy relating

to the timber trade is therefore very valuable. Mr. Duffy has also represented the Sub-Department on tariff matters and timber trade conferences in Southern States, and is the Queensland representative on an Interstate Committee formed to watch native timber interests.

At the beginning of the year the policy was adopted in the case of sales at competition of Hoop and Bunya Pine logs of limiting the bidding to bona fide sawmillers. This was introduced to prevent exploitation of millers by persons seeking to acquire and deal in timber blocks.

The Director of Forests has endeavoured as far as official duties will permit to visit mills and discuss with their owners matters of mutual interest to them and the Department. During a visit to North Queensland the persons interested in the timber industry were met in conference, and all matters brought forward were fully discussed. It was found possible to meet one of the major requests of the millers by adopting the policy of giving preference in log supplies to local mills.

Unauthorised Timber Operations—

During the year 103 cases of breaches of the Land Act and the State Forest and National Parks Act came under notice for investigation, and in fifteen instances proceedings were instituted, being successful in each instance and resulting in fines amounting to £68 being imposed. In addition, in these cases the timber was either seized and realised upon or royalty was collected. In three cases prosecution action is pending.

Offences in fifty-four cases were met either by charging royalty on the quantity of timber involved or disposing of timber seized and issuing warnings against further offences, and in three cases where purchasers of timber committed breaches by removing timber either from the sale areas before Crown branding or outside the sale area penalties were imposed and warnings issued. In two instances where persons ringbarked timber contrary to the terms of the permit issued them, penalties as laid down in the Land Act were imposed in respect of the marketable trees destroyed and warnings were issued, whilst in one of the cases the terms of the permit were restricted.

In two cases of unauthorised grazing of stock on reserves the offenders were warned and advised they must take out permits if they wished to continue grazing stock on the reserves.

In nine instances of minor offences warnings only were issued, and in one case where damage to land resulted this was required to be rectified. Unauthorised operators in thirteen cases could not be traced or there was not sufficient evidence to connect up the suspected persons with the offence. In four of these cases timber was seized and disposed of. There are two cases still being investigated.

As a result of action taken in all cases an amount of approximately £525 has been recovered to the Crown.

Acknowledgment is made of the ready assistance rendered by officers of the Police Department in these matters.

FOREST PRODUCTS SHOWROOM AND FANCYWOOD SECTION.

The work of this section in advertising and marketing those Queensland secondary woods of which there are sufficient supplies available to warrant attention was continued during the year. Over the past few years the following species has been selected for special work in the order named:—Red Tulip Oak; Red Touriga and Silver Ash ex North Queensland, Rose Gum, Satinay Rose Mahogany, Rose Walnut, Grey and Brown Satinash ex Central and South Queensland.

To encourage interest and later trial of the various species, small quantities of each were obtained, correctly seasoned and classified and from these tests have been carried out in the various classes of work to which it was considered the timber was most suitable. These have been made the centres of display in their most suitable guise, samples have been issued to the trade and stocks procured and prepared for marketing. This system has proved satisfactory. During the four years 1929-1930 to 1933-34 the actual sales of this section have increased from 10,003 super. feet to 103,078 super. feet, without taking into account increased business gained by the timber and plywood industries from the operations of this section.

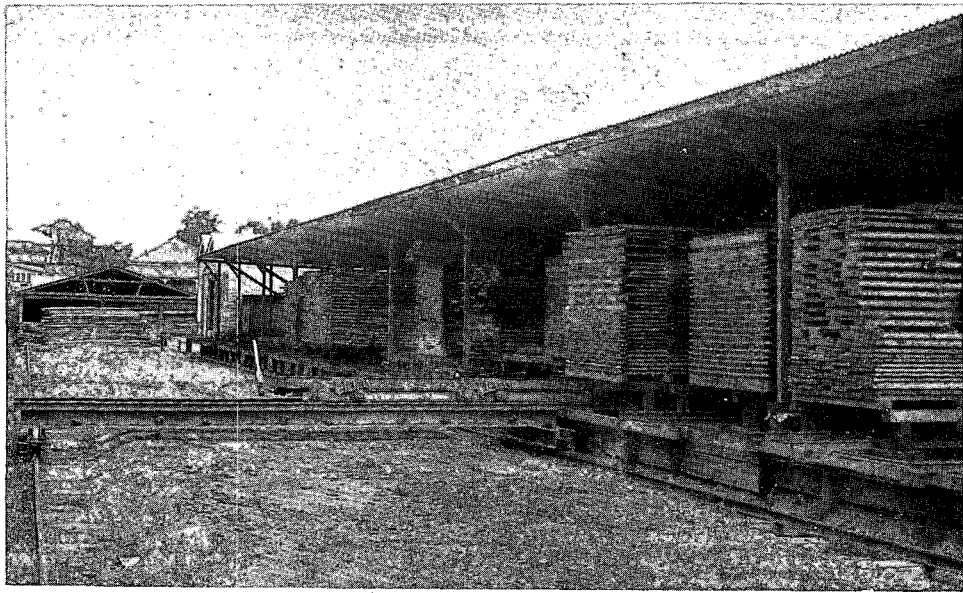
Red Tulip Oak is becoming rapidly more popular and is used successfully for plywood, joinery, all classes of internal decorations, wheels, motor hoods, motor bodies, flooring, furniture, and fancy goods. Plywood made from this species is becoming very popular on the New South Wales and Victorian markets, and increasing quantities of sawn Red Tulip Oak are being used for joinery and flooring and internal decorations in conjunction with the plywood.

It is necessary, however, to warn the public that when buying Tulip Oak they should stipulate Red Tulip Oak from North Queensland as related woods somewhat similar in appearance coming from South and Central Queensland are not nearly so satisfactory in use. The Showroom Section of this Department will be glad at all times to assist buyers in securing supplies of Red Tulip Oak.

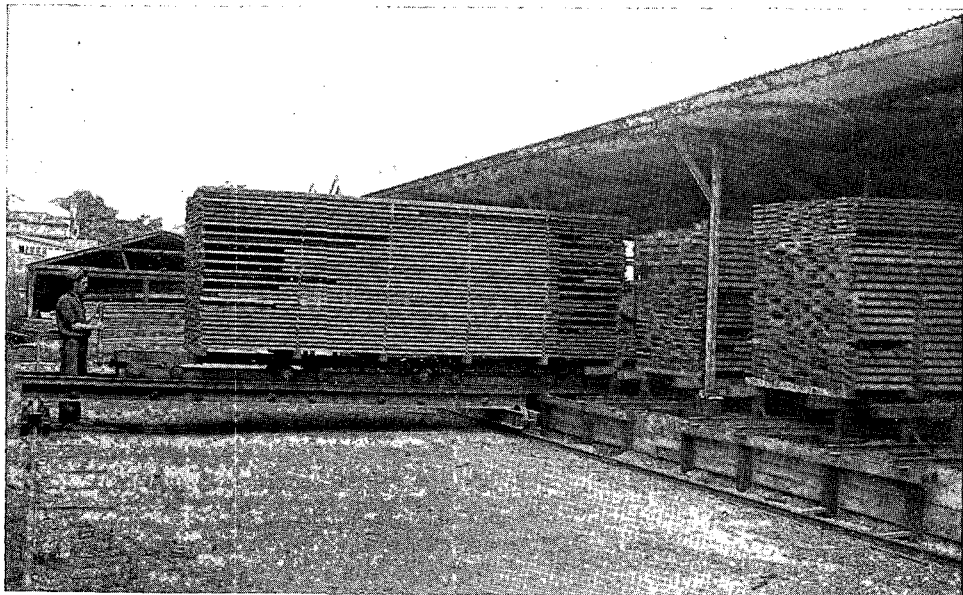
Silver Ash, another Northern species for which there was practically no market, has now become popular, and it would appear that the sale of all available timber is assured. Of special interest is the fact that this timber has enabled local manufacture of articles, particularly sporting goods, which were previously imported.

The efforts of the Department to encourage the use of 3-ply panelling and polished hardwood floors in Queensland homes, which have been helped very considerably by the co-operation freely extended by the Workers' Dwellings Department, have had satisfactory results. An estimate supplied by the Workers' Dwellings Department indicates that four years ago in about 5 per cent. of the houses panelled walls and hardwood floors were specified, whereas, during 1933-34 90 per cent. of the houses erected contained at least one room panelled with 3-ply with a hardwood floor.

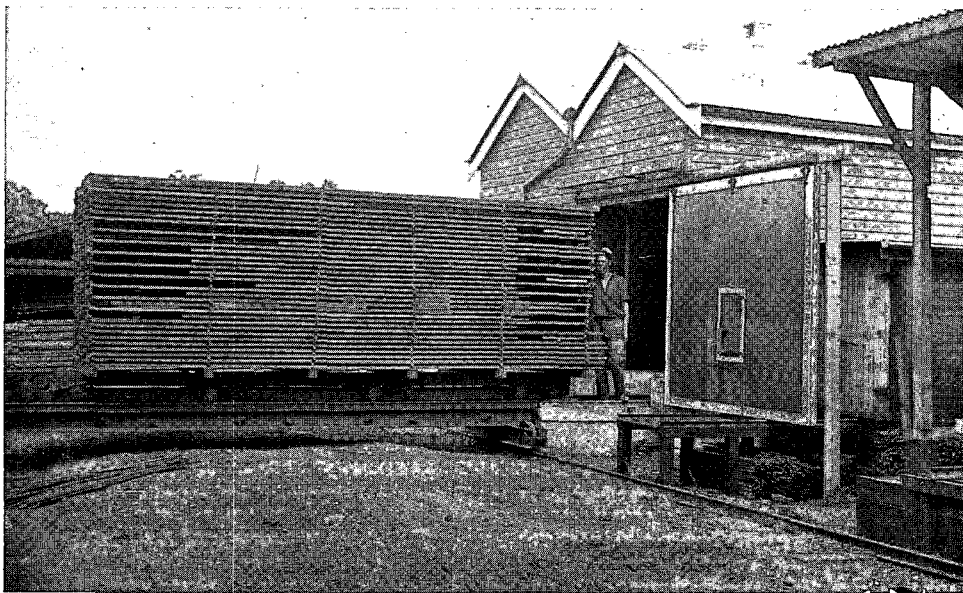
While dealing with the advertising activities of the Department, it must be placed on record that the Government and latterly the Brisbane City Council have given an excellent lead to other users in the matter of supporting local



No. 1.



No. 2.



No. 3.

Experimental Seasoning Kiln—Established at Newstead, Brisbane, 1934.

This kiln is being used for research work to determine the most efficient drying schedules for Queensland timbers. The method of bulk handling of timber is illustrated above. No. 1 illustrates general view of transfer track, with lifting truck being inserted under stack; kiln in background. No. 2 shows stack lifted and being brought out of bay to transfer track. No. 3 shows stack entering kiln.

Photos., J. A. Lum.

industry by using Queensland timbers. The policy has been definitely laid down by both the Government and the City Council that only Queensland timbers are to be used in Government and City buildings.

Sales of the Fancywoods Section attached to the Forest Products Showroom during the year totalled 103,078 super. feet to the value of £3,819 1s. 7d. made up as follows:—

	super. ft.	£	s.	d.
Red Tulip Oak	42,969	1,250	7	4
Silver Ash	16,266	528	11	5
Satinay	9,269	305	1	5
Rose Mahogany	8,559	277	19	4
Cedar	6,059	257	12	8
Plywood	3,528	47	6	0
Miscellaneous timbers	16,428	1,052	3	5
Total	103,078 super. ft.	£3,819	1	7

This covers approximately 2,000 sales ranging from 6d. to £125 for the following work:—Furniture, flooring, joinery, mouldings, fretwork, boat-building, tool handles, fishing rods, building, turnery, wheels, rifle butts, motor bodies and hoods, fancy goods, smoking pipes, printers' blocks, musical instruments, aeroplanes, gliders, engine bearings, tennis racquets, baseball bats, javelins, cricket stumps, prawn nets, masts, oars, boat gear, lacrosse racquets, hockey sticks, blackboards, butter pats, churns, golf heads and shafts, skis, bicycle rims, washers, casks and heads, crutches, and measuring sticks.

Approximately 9,038 samples were issued during the year including 38 sets to schools and 900 to the Agent-General's Office, London. In addition samples were forwarded to all Australian States and to many countries overseas.

Displays were made at the following:—Royal National Shows, Melbourne, Sydney, and Brisbane; Queensland Government Tourist Bureau, Melbourne and Sydney; Queensland Preference League, Brisbane; Marburg Rural School; Agent-General's Office, London; Trade Commissioner's display, Toronto, Canada.

Enquiries were received from China, Japan, America, England, Germany, Czecho Slovakia, France, England, Canada, Sweden, Norway, in addition to all the Southern States, and necessary action was taken to supply all available information regarding Queensland timbers.

TECHNOLOGICAL SECTION—FOREST PRODUCTS INVESTIGATION.

The year's operations are summarised under the following paragraphs:—
 (1) Experimental Yard and Seasoning Kiln; (2) Machine Shop; (3) Seasoning; (4) Entomology; (5) Technology; (6) Physics and Chemistry; (7) Specific Uses; (8) Forest By-products; (9) Preservation; (10) General.

Experimental Yard and Seasoning Kiln—

The experimental yard consists of seasoning bays, transfer track system, and the experimental kiln. The erection of these was completed during the year, and at the close of the report period they were in operation. Included in the layout there are sixteen seasoning bays each 40 feet long and each capable

of holding 5,000 super. feet of timber, equal to a charge of the kiln. The transfer system is a track of two rails, 18 feet apart and 300 feet long, on which is operated a transfer and lifting truck, the latter to lift from the seasoning bays, the former to transport the stack and lifting truck to the kiln. In this way handling is reduced to a minimum, the stacks being transferred in bulk to the kiln in the one operation.

As stated, the kiln itself will accommodate a charge equal to the content of a bay—viz., 5,000 super. feet of 1-inch timber. It was built on the design of the Division of Forest Products, Melbourne, and was erected by the Department of Public Works, Brisbane. An interesting part of this unit is the steam supply, which is worked by a cast iron sectional boiler fitted with an automatic coal stoker.

The installation was completed towards the end of the year and has been in operation almost continually since its completion.

The increasing use of kilns in America and on the Continent, where the prejudices against kiln drying have already been overcome, and nearer at home in Victoria, Tasmania, and New South Wales, indicates that kiln seasoning is rapidly becoming the accepted practice in industry to-day. To assist the Queensland miller by first demonstrating these values, and secondly by experimenting on Queensland species, is the objective behind the establishment of the experimental yard.

The programme includes a comprehensive study to arrive at the most efficient method of seasoning Hoop Pine, Silky Oak, Maple, Cedar, Red Stringy, Tallowwood, Turpentine, and, in fact, the whole range of Queensland commercial species. It aims not only to improve practice with present trade timbers but—and this is considered of equal if not greater importance—to introduce other species such as Blackbutt, Spotted Gum, Brush Box, and Rose Gum, to a place of greater eminence in the industry. Given seasoned timber there is no better flooring anywhere than can be found in Queensland Eucalypts. What may be done here is exemplified in Victoria, where, prior to 1928, over 80 per cent. of its flooring was imported, and where to-day the imports are less than 10 per cent. of the volume, and in addition a steady demand for Victorian (once despised) floorings has arisen on the English market. Such success would not have been possible without modern kilns.

At the end of the year the kiln was in operation, and already interesting results indicating that timber can be thoroughly seasoned in short periods have been secured. The work is proceeding in the current financial year, and results will be more fully dealt with in the next Annual Report. In the meantime monthly bulletins are being issued summarising the current work, and to those who are interested in following more closely the details of each run full copies of individual reports are forwarded.

Machine Shop—

This will consist of the installation of a rip-saw and moulding machine, the laying down of tracks, and erection of storage racks required to accommodate the Fancywood Section in the marketing of little-used species. It will be connected with the experimental yard system. Timber required by the Fancywood Section

will be forwarded to the experimental yard for seasoning, and will then be tracked to the machine shop to be dressed. The machines are not yet erected, but when installed they should be of considerable assistance in placing our little-used species on the Queensland market.

Seasoning—

Though the chief activity of this Sub-Department in seasoning work in the past year has been the installation of our experimental kiln, considerable time was devoted to seasoning generally. The number of moisture-content determinations requested by architects, merchants, builders, and engineers showed a considerable increase on the previous year's, and is a gratifying indication that this important factor is being more widely appreciated. The section provides a free service in this direction, but where an inspection of a commercial shipment is made a fee is charged. In such cases, however, our moisture meter is made available free of charge.

In the study of air seasoning it has been found that under favourable conditions such timbers as Silky Oak can be fully air seasoned in three months, but this does not hold for quarter-sawn material. These figures are sufficiently striking to warrant a more thorough investigation into the air seasoning of all of our timbers.

This work will be extended in the new year when the programme for the experimental yard is determined.

An investigation of interest to sawmillers and timber merchants was conducted during the year into the merits of various end coatings for logs and timber for the prevention of checking and cracking. The results indicated that the use of crude petroleum jelly was quite satisfactory.

Entomology—

Throughout the year inquiries have been received regarding satisfactory methods of borer control, information being sought by timber merchants, Government departments, contractors, and private individuals.

In view of complaints received regarding the borer infestation of plywood, a small-scale control test on infected material was arranged. Single brush treatments of (1) Creosote and kerosene solution in the proportion of 1 to 8, (2) Kerosene 90 per cent. and para-dichlorobenzene 10 per cent., and (3) Kerosene Solution No. (1) proved most effective, and the results were very satisfactory. On account of the small scale of the test, however, they must be regarded merely as an indication. The experiments will be continued on a larger scale for the year 1934-35.

The effect of kiln temperatures on borers will be demonstrated in the new year. As recent tests by the Forest Products Division of the Council for Scientific and Industrial Research suggest that there may be some lasting benefits of heat treatment, this Department has recently supplied the Division with borer-infested timber for further test study.

Plywood infested with borers can be effectively treated, one of the best insecticides being creosote which, unfortunately, stains readily. However, when diluted with kerosene, the stain produced is negligible, and the liquid itself will not prevent a first-class polish being obtained. Experiments on this aspect of borer control were made during the year, samples of timber being brushed with creosote, kerosene, and paradichlorobenzene in varying proportions. The samples were later polished, and a high-grade surface was obtained in every case. These samples may be inspected at the Forestry Showrooms in George street.

Research work was continued on the borer problem of North Queensland logging. This work is being done by the Department of Agriculture and Stock assisted by this Department, where possible.

Technology—

During the year 143 samples of wood were received and identified. These included seventy different species of timber, four of which were exotics. Samples came from all parts of Queensland as well as from outside the State.

In order of number, samples were received from timber merchants, sawmillers, architects, builders, and engineers.

A considerable number of samples were submitted by other Government Departments. In all cases a report on the quality and suitability of the timber for the particular use required was given.

Approximately 100 samples of the principal Queensland species, together with supporting botanical material, has been forwarded to Dr. H. P. Brown, Professor of Wood Technology of the Syracuse University, United States of America, a world authority on wood technology. Under his direction Mr. E. S. Harrar, M.Sc., is undertaking an anatomical study of Queensland timbers. Dr. Brown advises that Mr. Harrar is making considerable progress with the work, and a copy of his thesis should be received in due course.

The Division of Forest Products, Council for Scientific and Industrial Research, proposes to study the structure and identification of our Queensland timbers, also their chemical composition and behaviour, and such properties as toughness and ability to take preservative treatment, &c.

The first genus being investigated is the *Flindersia* (which includes Maple Silkwood, Yellowwood, Crow's Ash, Cairns Hickory, &c.), and collection of material of twelve members of this genus is being arranged by this Department.

Special acknowledgment must be made of the assistance of the Government Botanist in naming a large number of botanical specimens during the year.

Physics and Chemistry—

In the work of testing timbers for strength and other physical properties and for determination of chemical constituents, the Department is co-operating with the Division of Forest Products of the Council for Scientific and Industrial Research, which is undertaking comprehensive projects on Queensland timbers.

The co-operation of local Departments was also secured during the year on bending tests on Corkwood and Fibrewood, impact tests and shear tests on Hoop Pine plywood amongst others. In view of the importance of plywood in Queensland, the Department realises the desirability of surveying the existing standards of manufacture. At present enquiries are being made with a view to purchasing a machine especially for plywood tests.

Specific Uses—

This phase of the work of the section touches on all branches of the industry. Many enquiries are made as to timber for special uses, and the Department almost invariably is able to recommend at least one timber that will meet the enquirer's needs.

Of the work covered during the year the following are mentioned as being typical instances:—

Selected straight-grained Red Tulip Oak (*Tarrietia peralata*) has proved itself satisfactory for steambent work, including motor-body building. Considerable quantities of the species are now being used both locally and in Sydney, and enquiries for large parcels of timber are continually being received.

The suitability of Silver Ash (*Flindersia pubescens*) for cricket stumps was definitely established in the last season's Sheffield Shield matches, and it is now officially accepted.

Brush Box (*Tristania conferta*) has a natural toughness which has found for it an application in skate rollers, and a Southern manufacturer reports it most suitable.

In a mechanical test on fruit cases arranged by the Division of Forest Products, Council for Scientific and Industrial Research, opportunity was taken to add Blackbutt (*Euc. pilularis*) and White Gum (*Euc. micrantha*); and results indicate that both species are suitable. This work is being followed up by a service test.

A trial of Kauri, Hoop, and Bunya Pine for battery separators was arranged through the Technological Museum, Sydney, and further tests are being arranged with the Division of Forest Products, Council for Scientific and Industrial Research.

On account of the continued enquiries received regarding wood finishing, several tests have been inaugurated.

The demand for information on glues has increased greatly, particularly in regard to the production of plywoods, and arrangements have been made with the Civil Engineering Branch of the Queensland Railways for the shear tests on plywood to determine the glue strengths. In addition the Chemistry Branch of the Department of Agriculture and Stock has assisted in the carrying out of analyses of commercial casein.

Efforts to improve the quality of locally produced tool handles were continued during the year, and new specifications now officially adopted by the State Stores Board were drawn up for adze, hoe, and all types of shovel handles.

Timber placed on trial in cooperage work of various types includes Hoop Pine, Blush Cudgerie, Brush Box, Red Lustre, Rose Gum, Silver Ash, and Grey and Rose Satinash. In addition, Satinay is being used for a trial for beer-cask staves following its successful use in beer cask heads.

Tentative specifications for flooring have now been drawn up by the Subcommittee in Queensland of the Australian Standards Association, and these have regard to the necessity for seasoning.

Samples of wood wool from Silver Ash, Silver Quandong, Pine, and Blackbutt supplied by this Department were manufactured by a Melbourne firm. The first two named proved the most successful.

The new regulation recently issued by the Commonwealth Government which provides that Hoop Pine may be used for butter-boxes for export only provided that it is sprayed with a casein formalin mixture in a manner approved by the Department of Commerce. Under this regulation, New Zealand White Pine, the chief competitor of Hoop Pine, does not require spraying, although the evidence of many official tests shows that White Pine does taint butter and should be sprayed. A plant suitable for spraying casein has been designed by the Council for Scientific and Industrial Research. Plans and specifications have been secured, and may be obtained upon request.

Forest By-products.

Work has been continued in investigations of forest products, some of these being the possibility of utilising Cypress Pine resin and oil of *Eremophila mitchelli* (Western Sandalwood). These are being continued.

There was commercial activity in utilisation of essential oils of various Queensland trees, and sales were made of rights to get leaves in the Maryborough and Gladstone districts.

Experiments were laid down to determine the proper method of harvesting of leaf crops.

The species attracting most attention are *Euc. citriodora*, *Melaleuca linariifolia*, *Euc. micrantha*, *Backhousia citriodora*, *Melaleuca leucadendron*, and *Leptospermum citratum*.

Preservation—

The matter of the preservability of our less durable species is important and will demand much more attention in the years ahead.

With the continued cutting of the more durable of our native woods the need for preservation is being more and more felt, and the Department is endeavouring to foster the use of preservatives. In other parts of the world creosote has been found to be a most satisfactory preserving agent, and it is reasonable to expect that satisfactory results will be obtained in Queensland.

During the year specially selected material of Grey Satinash (*Eugenia* sp.), Red Tulip Oak (*Tarrietia peralata*), Hoop Pine (*Araucaria Cunninghamii*), Spotted Gum (*Euc. maculata*), Grey Blackbutt (*Euc. pilularis*), and Rose Gum (*Euc. saligna*) was obtained and forwarded to the Council for Scientific and Industrial Research for tests as to preservability with both creosote and water soluble preservatives.

Experiments were conducted in the case of house-block timber to test penetrability with creosote. This was found satisfactory in the timbers tried, viz.:—Yellow Stringybark, Spotted Gum, Grey Ironbark, Grey Blackbutt, Brush Box. A number of treated house blocks were installed in service and a record of their service will be kept. Further blocks will be installed as opportunity offers.

In 1932 ten sleepers of Rose Gum and Blackbutt were sent to the Council for Scientific and Industrial Research for seasoning and pressure creosoting. The treatment of this material was completed during the year, and the sleepers have now been installed at the Roma Street Yards with suitable controls of untreated material. Reports on the condition of these sleepers will be obtained from time to time.

The development of a satisfactory and economical method of treating fence posts so that non-durable species may be rendered durable is being investigated in North Queensland, where farmers are forced to use untreated non-durable species, or to bring durable material from more or less distant localities.

White Ants.—An experiment to determine the comparative merits of different methods of prevention of white ant damage was initiated this year. When results are ascertained they will be made available.

During the year 1932-33 a number of test pieces of creosote-oil treated Rose Gum (*Euc. saligna*), Grey Ironbark (*Euc. paniculata*), and Hoop Pine (*Araucaria Cunninghamii*) were installed at Home Hill with suitable controls. This is an area heavily infested with white ants, and progress reports indicate that the open-tank treated material is behaving satisfactorily, but both the brush-treated and the untreated specimens have been attacked.

Marine Borer Research, carried out in conjunction with the Australian Museum and the Sydney Harbour Trust, was continued during the year.

The work carried out in previous years in Brisbane was particularly concerned with the investigation of the natural resistance of the various timber species used for marine piling, and the types of borers present. In the last year, however, reports on pressure-creosoted piling sections installed have been very encouraging, and work along these lines has been extended.

Test specimens of creosoted material treated by the open-tank and the charring-creosoting methods were installed during the year at three test stations—Chelmer, Kangaroo Point, and St. Helena Island.

Fluorised Karri specimens received from Western Australia have also been installed, and these should give some interesting comparisons with the creosoted material.

Data collected on the marine borers in Brisbane waters were revised during the year, and it is intended that all available information be published in due course.

General—

Acknowledgment is made of the assistance given in much of our work in Timber and Forest Products Investigations by the Forest Products Division of the Council for Scientific and Industrial Research, Melbourne, the Technological Museum, Sydney, the Department of Agriculture and Stock, the Government Botanist and the Government Analyst, Brisbane, as also by many individuals and private firms. Without this valuable co-operation much work could not have been undertaken.

During the year the Sub-Department, under direction from the Minister, published an illustrated booklet dealing with the veneer and plywood industry of Queensland. This has been widely circulated to persons and firms interested, not only in Australia but also overseas.

The staff of this section was increased early in 1934, and this has enabled additional work to be done, but with the kiln now in full operation the work of arranging and supervising charges and recording results has added very considerably to the work of the section. A definite programme of working has been laid down, however, following recommendations by Mr. G. A. Duffy, Chairman of the Timber Advisory Committee, and every effort will be made to discharge the more important investigational work with the existing staff.

SILVICULTURAL MANAGEMENT.**General—**

The year 1933-34 is a notable one from the reforestation viewpoint for Queensland. The Loan Funds devoted to the provision and protection of Queensland's future timber requirements were increased to £70,000, which is the highest allotment for any one year to date. Correspondingly, reforestation operations also exceeded any previous figure, the net area planted being 2,060 acres, which is 756 acres higher than the previous year's total and 76 acres more than the area of new plantations established in any previous year. Owing to the time involved in raising Hoop and Kauri Pine nursery stock (two to three years old at planting) rather more of this area was planted with exotics (one-year stock) than would be normally desirable. In addition, 20,450 acres were treated for the improvement of natural stands of Cypress Pine and hardwoods. In this way and in foundation work for future expansion the total allotment was spent. In Appendix "J" this expenditure is shown in detail.

Probably even greater progress may be claimed in securing practically full survival and maximum growth by the adoption of early spring planting for Hoop Pine and by improved tending of plantations after establishment and, as it were, the touching up of areas planted in several previous years by the removal therefrom of all harmful, competing weed growth.

At the same time, the foundations were laid for a further expansion in reforestation work by the establishment of new nurseries and forest stations at Reserve 298, Gallangowan (Kilkivan Working Plan Area), Reserve 392, Como (North Coast Working Plan Area), and stations for the initiation of hardwood regeneration and improvement treatment at Reserve 435, Gundiah (Maryborough Working Plan Area), and Reserve 80, Littabella (Bundaberg Working Plan



A Section of Brisbane Valley District Plantations.
11,518 acres of forest plantations have been established in Queensland.



A Typical Forest Workman's Dwelling.
Twelve houses were provided for resident forest staff during 1933-34.

Photos., J. A. Lumm.]

Area), and Cypress Pine and Ironbark treatment at Reserve 126 (Dalby Working Plan Area), and Reserves 117, 81, and 101 (Inglewood Working Plan Area). Additions were made to the nurseries at Benarkin, Reserve 283, Colinton, and Yarraman, Reserve 289, Cooyar (Brisbane Valley Working Plan Area), in order to develop operations on these reserves to the full extent consistent with sustained operations. Established nurseries were sown to capacity or the maximum planned for the dependent reserves.

With the increased demand for timber during the year, little difficulty was experienced in securing the complete logging of areas required for silvicultural purposes.

The services of the Department of Public Works were largely used in developing plans and specifications for standard houses for overseers and workmen for construction at reserves where other accommodation is lacking and resident staff is necessary both for more efficient working and in particular for fire-protection activities. On these lines, the construction of eight houses was begun in the financial year under the supervision of that Department. This co-operation has been highly beneficial to the Sub-Department of Forestry.

The results of the year demonstrate the large ratio of total funds used in actual labour as distinct from machinery, tools, and accommodation, for over 800 men were found employment at various times during the year on reforestation work. It may be pointed out that this ratio will be increased after the initial period of establishment and improvement construction is passed.

During 1933-34 also a most noteworthy step in establishing the permanent basis essential for a long-term work such as reforestation on sustained yield principles was made by the Land Administration Board in securing the detailed examination of all State forests in the Brisbane Valley, Nanango, and Mary Valley Working Plan Areas. This examination, conducted conjointly by senior officers of the Lands Department, the Survey Branch, and the Forestry Sub-Department, aimed to place at the Board's disposal the full facts as to classified land areas comprised in these reservations, and the relationship of all areas to forestry programmes.

From a forestry viewpoint, the examination revealed the deficiency in total area available and suitable for intensive reforestation as compared with the area estimated to be required for the production in full of the future requirements in softwoods of the State. It is a matter of forestry policy to place very great reliance on our native conifers—Hoop, Kauri, and Bunya Pines—for softwood reforestation purposes. The results secured with exotic pines do not warrant as yet, nor indicate for the near future, any reduction in the use of Queensland species for supplying Queensland's future timber needs.

Attention should also be drawn to the increasing difficulty and cost attendant on the eradication of lantana from reforestation areas. With the enlarging of the latter, more and more funds are absorbed in coping with this prolific weed, which is capable of very serious damage to seedling trees. Every avenue is being explored with a view to finding the most satisfactory method for the control or elimination of lantana.

Many applications for forest-grazing rights were received and granted under suitable conditions in accordance with the adopted policy to make the State Forests and Timber Reserves as widely useful as possible consistent with the purpose of their reservation.

Silvicultural research has progressed continuously, and the demonstrated findings are being applied with beneficial results in actual practice on a large scale. The appointment of a Forest Pathologist during the year, working under the direction of the Chief Entomologist of the Department of Agriculture and Stock, has enabled considerable progress to be made in the understanding of the various pathological conditions affecting for the very large part the exotic conifers used.

SILVICULTURE.

Plantations—

Planting.—The year's planting for the first time has exceeded 2,000 acres, over 1,250,000 plants being used in the planting. A detailed statement of this work is given in Appendix "K."

Of the 2,060 acres of new plantations, 750 acres were of Hoop Pine (chiefly in the Brisbane Valley, Mary Valley, Nanango, and North Queensland Working Plan Areas), 895 acres of Slash and Loblolly Pines (*Pinus caribaea* and *Pinus taeda*) (North Coast Working Plan Area chiefly), 225 acres of Mexican Pine (*Pinus patula*), 145 acres of Grey Ironbark (*E. paniculata*) and 45 acres of miscellaneous species.

Weather conditions generally during the year were very favourable to plant growth, in direct contrast to the two preceding years. The spring months, usually the driest period of the year, yielded heavy rains, which persisted, with slight falling-off in January and March, throughout summer and autumn into early winter.

At Yarraman, Brisbane Valley district, the fall for the year was 16½ inches above average and 7 inches higher than for any period since records were started in 1914.

Air temperatures were more moderate than last year, the summer being unusually mild.

Hoop Pine plantings were commenced generally in late October or early November, and were complete by the end of January. This is the earliest date at which these plantings have yet been completed. The excellent survival and quick growth from these early plantings of Hoop Pine on a large scale confirm the results of the research plots of the past few years, which indicated that early spring operations are most successful with this species.

On one area in the Brisbane Valley planting was commenced in late September as a trial to confirm earlier research indications. Establishment and growth were particularly good under the very favourable rainfalls experienced.

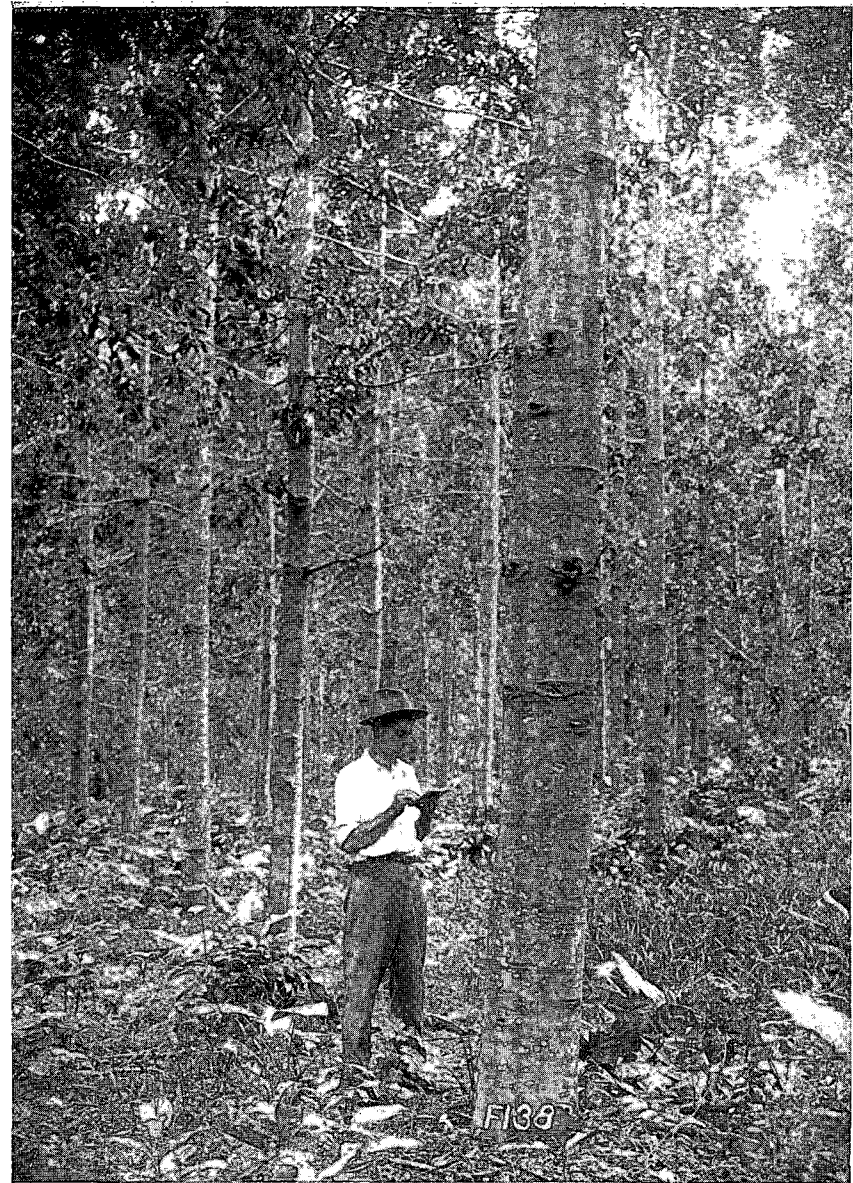
Careful demarcation of expected frost lines and the substitution of other species for Hoop Pine on possible frosted sites have resulted in further improvement in obtaining full stocking.



Silky Oak in Plantation.

Showing first thinning. Trees 10 years from planting.

Photos., J. A. Lunn.]



Kauri Pine Plantation, 17 years old.

This species makes a good plantation tree, and is used to the greatest extent permitted by seed supplies, which are difficult to obtain.

Establishment successes from the open-root winter planting of Slash and Loblolly Pines at Beerwah have again been very good. It is hoped that the "Fused Needle" disease now attacking some of the trees at this centre will not become epidemic in proportion.

The tubed planting of these species on frost sites in the Brisbane Valley and Mary Valley districts this year gave satisfactory results in contrast to the heavy losses of open-root plants in the severe conditions of the previous two years.

At Pechey and Passchendaele the results from the year's open-root plantings of Mexican pine—the bulk of the planting at both centres—have not been satisfactory.

Survival at Pechey has only been about 60 per cent., and at Passchendaele probably lower. Previous plantings of this species have shown it to be somewhat difficult to handle, and for this reason a trial planting of some 20 acres was carried out at Passchendaele in early spring. Establishment was about 65 per cent.

Though results from the Slash and Loblolly Pines included in the year's planting at Passchendaele were good the poorer results with Mexican Pine can be attributed to some extent to the very dry-weather conditions that prevailed here subsequent to planting—an unusual occurrence in view of the good conditions that obtained elsewhere.

The losses at Pechey are at present difficult of explanation, but a series of experiments has been initiated with a view to overcoming the difficulty in handling the species.

The Ironbark and other species (chiefly Kauri Pine) planted during the year have proved successful.

The year's planting has now brought the total figure of planted areas to over 11,500 acres. Certain of the plantings in early years, carried out in experimental fashion, have not developed satisfactorily, and an inventory is being made of all planted areas with a view to revising this figure to one of fully established and satisfactory plantation. On present indications the necessary reduction in area will be small.

Tending.—The weather conditions, so very favourable to tree growth, have also been equally in favour of weed growth, very heavy crops of which were met with on all areas—particularly newly-burnt compartments and abandoned taungya leases (banana farms).

Tending costs have accordingly been fairly high generally, and this cost has been further raised by difficult tendings on areas which, owing to heavy rains, gave only poor burns.

The spreading and prolific growth of lantana under favourable rainfall conditions as obtained last year also add greatly to tending costs.

The consistently improved growth rate that the new clean tending method outlined in last year's report has achieved shows it to be a large improvement over previous methods in this respect.

Nurseries.—The stock of plants in the nurseries at the close of the year was 3,400,000, and most of the exotic nurseries at this stage had just completed their plantation output for the year and were being prepared for the spring sowings.

Hoop Pine sowings, aiming at the production of stock for 1,800 acres, were this year carried out in September from cold-stored seed collected mostly in December, 1931. Germination was good in all cases and the tree yield promises to be higher than was anticipated.

All Hoop Pine nurseries are now working on standard practice with considerable improvement both in working and production, which has been reflected in the lower production costs as revealed by the nursery accounts.

Seed Collection.—The Hoop Pine seed crop in December was a heavy one, and opportunity was taken to collect about 20,000 lb. of seed, of which 14,000 lb. were despatched to cold storage, the balance being retained in the districts of collection for sowing.

Only small collections of Kauri Pine and Maple seed were possible.

Seed collected from plantation trees of Slash and Loblolly Pines at Beerwah has germinated freely, yielding sturdy and healthy seedlings.

School Forestry Plots.—Plants for a further seven new plots were supplied gratis this year, and the Department was represented by two officers at the "Forestry Week" held at the Marburg Rural School, where the first Queensland school forestry plot was established in 1928.

Natural Forests—

Silvicultural treatment work on regeneration and improvement treatment of the natural forests this year extended over an area of 20,450 acres, more than two and one-half times the area treated last year. The details of this work are given in Appendix L.

Of this total 9,370 acres were Cypress Pine stands in the Dalby and Inglewood districts which were subjected to a treatment of thinning of the over-dense stands and of ringbarking of useless and defective trees.

Cypress Pine regeneration appears thickly on all reserves each year and, though a considerable percentage is lost during the summer months, the exclusion of fires has resulted in comparatively easy restocking of the Cypress Pine forests.

A further 7,500 acres of Spotted Gum or Narrow Leaf Ironbark forests were treated in these districts also. Regeneration of these species has been difficult to secure owing to practically no seed falls for several years. During this year, however, Spotted Gum in the Dalby district carried a medium seed crop, and patches of regeneration have been secured, whilst on the Inglewood reserves a 25 per cent. to 50 per cent. flowering of the Ironbark is reported.

On the almost pure Hoop Pine stands of the Goodnight State Forest a further 450 acres were liberated. Increment plots show considerable response in growth to this treatment.



Natural Regeneration of Ironbark (*E. paniculata*), showing Firebreak.

Operations for the promotion of natural regeneration are undertaken on areas where condition of the natural forest warrants. 20,453 acres were so treated in 1933-34, making a total acreage of 109,361 acres.



Plantation of Tallowwood (*Euc. microcorys*), 4 years old.

Treatment of the natural stand is the method usually adopted of regenerating hardwood forests. Owing to a deficiency of the better class species, however, small plantings of these are made annually.

Photos., J. A. Lunn.]

At Fraser Island 180 acres of Blackbutt were covered. The treatment here consists of a brushing and burning of the entire area just prior to seed fall. Seed this year commenced to fall before March and burns were effected in late January and early February, both of which gave very successful results. The later burns in March did not give equal success.

The balance of the areas treated were on the Ironbark, Blackbutt, Tallowwood, and Spotted Gum stands of the Brisbane and North Coast districts, except for about 350 acres of Ironbark forest near Benarkin which were cleaned up partly also as a fire-protection measure.

SILVICULTURAL RESEARCH.

During the year research activities were continued on many lines, preference being given to problems of immediate practical importance in accordance with adopted policy. Major activities centred on Hoop Pine nursery and planting technique, progress being made towards the fulfilment of the comprehensive Research Working Plan for the species.

The year 1933-34 presented, from the research viewpoint, a very fortunate and decided climatic contrast to the previous years. This contrast, combined with the results secured from the repetition of experiments which had previously given promising results, will aid greatly in determining the extent to which the experimental findings can be safely applied in practice.

The general experiments supported the previous results regarding the most desirable time for sowing, transplanting, tubing and field planting of Hoop Pine, which is during the early spring months. The work on the season of planting can now be considered as entirely conclusive and will not be repeated in future years except for local application.

Advantage was taken of the heavy crops of Hoop and Bunya Pine seed produced in the year to secure data on such points as yield of seed per tree, size and type of seed tree, viability of seed from various portions of cone, &c. These data will be of great assistance in planning future collections of seed of these species. The establishment of germinator rooms at Yarraman and Imbil greatly facilitated the carrying out of this work and also all other seed investigations in hand.

In connection with Hoop Pine seed it was demonstrated that cold storage in sacks is as effective as in airtight containers. It was also ascertained that Hoop Pine seed on removal from cold storage maintains its viability for a considerable period.

The relative advantages of seedlings or transplants as planting stock were tested with varying results for the Brisbane Valley and the Mary Valley. Further work is therefore necessary. Large-scale watering experiments carried out, contrary to expectations, did not give any definite trends towards increased growth resulting from increased watering. The very favourable rains experienced, however, greatly complicated the position and the experiments will be repeated using improved layouts.

The spacing of plants in the field and the pruning of unwanted branches also came under experiment on a large scale. Results, of course, will not be available for some years

A very large volume of experimental data dealing with Hoop Pine has now been accumulated. Much of this has been successfully applied in routine operations, and the initial steps in the preparation of a bulletin on the subject have been taken. It is hoped this may be released in 1934-35.

The work dealing with exotic conifers has been maintained and enlarged. This refers particularly to *Pinus patula* (Mexican Pine), which has proved difficult to handle in routine operations. Refinement in planting methods has been dealt with in a large-scale experiment at Beerwah.

Existing trial plots of exotic species were kept under observation. No new areas were thus brought under trial in the year, but arrangements for the establishment of two plots on Bribie Island were put in hand.

The research work in connection with the natural regeneration of the Eucalyptus and Cypress Pine forests of the State is given much less attention than the urgent plantation problems at present. However, more data was collected concerning the seeding habits of the more important species, and in addition further light was thrown on the most desirable period for the natural regeneration treatments of various types of eucalypt forest.

FOREST PROTECTION.

Fire Outbreaks.—The very favourable rains during the fire season reduced the fire danger almost to a minimum and no fires of any consequence occurred. The growth of grass and weeds that followed the rains, however, threatens a serious danger during the coming season should dry weather be experienced.

Firebreak Work.—Considerable attention was devoted to fireline work on the Inglewood Cypress Pine areas during the year. Under the heading of fireline construction, 142 miles of lines (externals 60 feet and internals 20 feet wide) were felled and stacked ready for burning; 130 miles were burnt and 70 miles ploughed, while maintenance work of ploughing 205 miles and burning 115 miles was carried out.

In the Dalby district felling, stacking, and burning is practised in fireline construction and 21 miles of lines were so treated. Ploughing is not adopted, but 44 miles of previously constructed breaks were suckered.

Protection work on the North Coast and Brisbane hardwood forests included the construction of $2\frac{1}{4}$ miles of firelines and the maintenance by chipping, raking, and burning of 55 miles.

The adopted practice of preserving belts of standing scrub as firebreaks on the Hoop Pine areas reduces fireline work here considerably. In the Brisbane Valley $5\frac{1}{2}$ miles of breaks were constructed and 54 miles maintained, while in the Mary Valley over 22 miles of lines were covered.

On the other plantation areas at Beerwah, Passchendaele, and Pechey felling, stumping, and ploughing of breaks is carried out.

So successful have the results secured from the use of graders on these lines been that two graders of light type were purchased during the year.

Other Fire Measures.—A fire lookout tower, with cabin and telephone, erected this year on a North Queensland reserve is the first of its kind for use in fire detection in Queensland.

Animals.—Protection of newly planted areas from wallaby attack necessitated the erection of $6\frac{1}{2}$ miles of netting fences in the Brisbane Valley and $\frac{1}{2}$ mile in North Queensland. Trapping and the laying of poisoned baits, together with the fencing, have kept losses from this source very low. Rabbit damage at Passchendaele was also low this year.

Further baits for the extermination of dingoes were distributed over many reserves.

Insects.—The cockchafer continues to be troublesome, particularly on new plantings in the Brisbane Valley, but experiments are in hand in an effort to reduce the damage from this pest.

No other serious insect damage was reported.

Pathological.—With the appointment of a full-time Forest Pathologist several problems have been given a large amount of attention that was not previously possible.

“Fused needle,” which has made its appearance on several of the exotic pine species, similar to attacks in the Southern States of Australia and in New Zealand, has received considerable attention, but the experiments are yet too recent to furnish conclusive information.

Another important investigation is that of the plant root-fungus associations—mycorrhiza—of the coniferous species used. These mycorrhiza appear to be essential to the growth of the exotic pines in particular, and as several types have been found an investigation is being made to determine the most beneficial types.

Various minor diseases of Hoop Pine—e.g., Phomopsis, chlorosis of nursery plants, &c., are under investigation, together with some work on forest products lines, such as blue stain, wood rot, &c.

CONSTRUCTIONAL WORKS.

Buildings and Forest Stations.—Initiation of operations on several reserves called for forest station establishment in each case. Cottages, tool sheds, horse paddocks, &c., were constructed on five reserves, dams being necessary in a few instances.

With the assistance of the Public Works Department, standard cottages of two types were designed for overseers and workmen respectively. Six such cottages, together with two of other types, were under construction at the close of the year.

A new office for the accommodation of the Brisbane Valley administrative staff was erected at Yarraman.

The custom of erecting portable bunk huts in lieu of tents for the housing of workmen where semi-permanent camping sites are possible was continued, and permanent bunkhut accommodation for workmen was commenced at Gadgarra, in North Queensland.

Nurseries and Water Supplies.—New nurseries, together with water-supply units, were constructed on Reserve 298, Gallangowan, and Reserve 392, Como, whilst on Reserve 393 Woondum, a temporary nursery for the production of hardwood planting stock was erected.

Extensions to the nurseries at Reserve 283, Colinton, and Reserve 289 were put in hand.

Temporary shading on the nursery at Reserve 310, Gadgarra, was replaced with sawn timber.

A seed-drying shed and a germinating room, with seed-mixing floor, were erected on both Reserves—289, Cooyar, and 135, Brooloo.

EXPENDITURE AND LABOUR.

The total amount of the Loan Funds—£70,000—voted for reforestation work this year was expended, and work for over 800 men has been provided.

The satisfactory results of the year is tribute to the good standard of work these men have given and to their interest and keenness. Only on few occasions has it been necessary to dispense with unsatisfactory men.

FOREST SURVEYS.

Six fully-equipped Survey Camps operated during the financial year, whilst temporary small camps were formed in order to carry out miscellaneous surveys.

The total expenditure for survey work amounted to £4,475 12s. 2d.

As a result, 145,000 acres were closely inspected, 21,935 acres were assessed, 38,422 acres subjected to intensive contour and assessment survey, 528 acres were surveyed for banana leasing, and 22,269 acres were subdivided into compartments.

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

	Miles.	Chains.
Compass and chain	379	34
Rough traverse	52	5
Strip survey	396	74
Topo. levels	33	27
Track-making	26	35
Exploratory	316	0

Atherton Working Plan Area—

Two Survey Camps operated under supervision of the District Officer. Contour and assessment survey were continued on Timber Reserve 756 (part) and vacant Crown lands, known as area "B," situated in the parishes of Jordan and Dirran. Work on the Palmerston lands was completed on

17th December, an area of approximately 15,500 acres being dealt with. Camp reopened on 9th April, and Class 3 survey of State Forest 310, Gadgarra, was continued, about 3,500 acres being completed at the end of report period. Exploratory surveys were also conducted by another camp on Timber Reserve 755, Bartle Frere, and Timber Reserves 756, 757, and 353.

Approximately 55,000 acres were dealt with on Reserve 756 up to 12th August, whilst 60,000 acres were roughly mapped on Reserves 756 and 757 by 17th December.

During the wet season this camp surveyed and prepared up-to-date plans of silvicultural work done on State Forests 310, Gadgarra, and R. 191, Barron.

On 28th May camp transferred to R. 353, and by the end of the report period had completed approximately 20,000 acres.

Cardwell District—

Valuation and contour survey of State Forest 344, Kirrama, was continued until the 16th December, closing down until the 21st May, operations being then resumed. Up to the end of report period 6,327 acres had been subdivided into logging areas, whilst 9,714 acres were stripped.

Townsville Working Plan Area—

Valuation and contour survey of Timber Reserves 28 and 268, parishes of Hinchinbrook, Waterview, Blackfriars, and Holbourn (Mount Spec), were continued, the work being finalised on the 16th December. In all, 5,800 acres were dealt with.

Kilkivan Working Plan Area—

Class 3 survey was commenced of Timber Reserve 67, Grongah, on 31st August and continued until 28th February, when camp was temporarily closed down pending reorganisation. Camp reopened on 12th June, and work is continuing. An area of 13,000 acres was divided into logging areas, and 9,960 acres were stripped. Difficulty of access and wet weather hampered operations.

A planting survey was also undertaken on State Forest 298, Gallangowan, 1,550 acres of scrub being designed into compartments and firebreaks run.

Road survey was also effected on this reserve.

Brisbane Valley Working Plan Area—

A ten-chain strip estimate was effected of most of State Forest 289, Cooyar, an area of 6,435 acres being completed.

Other work was confined to miscellaneous surveys, set out hereunder:—

Reserve.	Parish.	Survey.	Compartments.	Logging Areas.	Acreage.	Miles.	Chains.
120	Neumgna ..	Subdivisional ..	6	Meandu .. ..	..	..	37
289	Cooyar ..	ditto	14	Tarong Road ..	..	..	22
289	Ditto ..	ditto	18	ditto .. ..	..	..	15
289	Ditto ..	ditto	3 and 4	Yarraman .. ..	..	..	44
283	Colinton ..	ditto	14	Sandy .. ..	..	..	20
283	Ditto ..	Firebreak	14	ditto .. ..	..	..	19
289	Cooyar ..	Strip .. ..	..	.. ..	6,435	62	13
257	Ditto ..	Resurvey	1, 9, 10, 11	North .. ..	..	..	31
257	Ditto ..	Firebreak	1, 9, 10, 11	ditto .. ..	..	1	17
257	Ditto ..	ditto	11	ditto .. ..	..	..	25
257	Ditto ..	ditto	4, 5a, 5b	Googa .. ..	..	2	57
120	Neumgna ..	Log Area .. ..	..	{ Duck Valley ..	..	2	52
		boundaries ..	..	{ Coomba .. ..	..	..	..
283	Colinton ..	Road	2	Sandy .. ..	..	..	10
283	Ditto ..	Tracks	3, 8, 11, 12	ditto .. ..	..	6	60
289	Cooyar ..	ditto	6a, 7a, 7b	Rocky .. ..	..	1	77
				Total .. ..	..	80	19

Mary Valley Working Plan Area—

An inspection and rough estimate was made of vacant Crown land situated in the parish of Kandanga, locally known as the Bluebell scrubs, about 10,000 acres being dealt with.

State Forest 540, Maleny, was subdivided into six compartments, whilst the following miscellaneous surveys were effected:—

Reserve.	Compartment No.	Logging Area.	Chainage.
135, Brooloo	{ 11, 7, 9	Western Creek	192
	{ 13B.	Derrier	6
	{ 20	ditto	41
	{ 9, 19, 20	ditto	327
124, Glastonbury	10	Mary Creek	83
435, Amamoor	{ 1A.	Skyring	220
	{ 2A.	ditto	99
	{ 1B.	Lethren	107
		Total	13M. 37 chs.

North Coast Working Plan Area—

On 24th July survey was commenced of twenty-five banana blocks having a total area of 252 acres on State Forest 451, Cooloolah (Tin. Can Bay). This work was completed by 25th October.

On 20th June type survey started on State Forest 392, parish of Como, and is still proceeding.

Nine more banana leases (area 49.2 acres) were surveyed on Bottle Logging Area, State Forest 318, Maroochy.

Firebreak and contour survey of 1,396 acres was carried out during February of this year over part of State Forest 589, parish of Beerwah. In all, nineteen compartments were laid out.

Brisbane and Kilcoy Working Plan Areas—

On 15th January a camp was opened on Water Reserve 309, parish of Enoggera, a total of 8,295 acres being dealt with by feature, type, and compartment survey, camp closing on 21st May.

The camp then transferred to State Forests 200 and 359, parish of Palen, in order to carry out a contour, type, compartment, and firebreak survey of this selected prison-camp site.

Up to the end of the report period approximately 1,500 acres have been dealt with.

Seven compartments were surveyed at Mount Pleasant (State Forest 893, Byron); area, 1,273 acres.

Maryborough Working Plan Area—

State Forest 435, parishes of Gundiah and Neerdie, was subdivided into eighteen compartments, the total area dealt with being 9,470 acres.

Dalby and Roma Working Plan Areas—

Eight compartments, comprising an area of 4,850 acres, were run at State Forest 78, parish of Yeulba, whilst six compartments were completed on State Forest 4, Braemar; area, 4,280 acres.

ACKNOWLEDGMENT.

The Director of Forests desires to acknowledge with appreciation the valuable service and loyal support rendered by the Staff during a trying year. As a result of the greatly increased demand for logs, and the abnormally wet-weather conditions, the duties of officers were generally rendered extremely difficult.

Nevertheless, the work, often entailing long hours, has been carried out without complaint; and it was in no small measure due to the efforts of the Staff that the Sub-Department was able to put on record the figures of operation disclosed in this report.

V. GRENNING, Director of Forests.

Brisbane, October, 1934.

Appendices.

APPENDIX A.

Return of Timber, &c., Removed from Crown Lands for the Year ended 30th June, 1934.

Species.	Quantity.
MILLING TIMBER—	
Hoop Pine Ply	2,401,555 super. ft.
Hoop and Bunya Pine—	
Logs	37,176,312 super. ft.
Tops	19,253,125 super. ft.
Kauri Pine	3,675,194 super. ft.
Cabinetwoods	3,952,080 super. ft.
Scrubwoods	1,817,416 super. ft.
Hardwoods	10,896,493 super. ft.
Cypress Pine	1,646,834 super. ft.
OTHER CLASSES—	
Sleepers	177,045 pieces
Sleeper blocks	18,577 pieces
Headstocks, transoms, crossings	344,900 super. ft.
Girders, corbels, piles, and sills	89,549 lin. ft.
Poles	88,958 lin. ft.
Saplings	4,177 lin. ft.
House blocks	113,112½ lin. ft.
Fencing material	57,475 pieces and 14,755 lin. ft.
Hewn and bridge timbers	35,560 super. ft.
Mining timber	36,459 pieces and 115,294 lin. ft.
Fuel	65,411 tons.
Tram sleepers	1,249 pieces
Sandalwood	462 tons 19 cwt. 3 qr. 27 lb.
Rosewood (Buddha)	37 tons 17 cwt. 2 qr.
Sand	933 cub. yds.
Gravel	1,598 cub. yds.
Charcoal	1,417 bags

APPENDIX B.

Cut of Hoop and Bunya Pine—Financial Year ended 30th June, 1934.

Working Plan Area.	Ply.	Logs.	Tops.	Total Cut.	Approved Cut.
	Super. Ft.	Super. Ft.	Super. Ft.	Super. Ft.	Super. Ft.
Brisbane	5,282	2,416,418	1,002,923	3,424,623	3,250,000
Brisbane Valley	1,006,658	10,341,912	7,688,147	19,036,717	17,750,000
Bundaberg	50,269	668,052	359,115	1,077,436	2,000,000
Kilcoy	135,284	1,993,621	1,108,783	3,237,688	5,750,000
Kilkivan	145,025	8,441,863	2,368,356	10,955,244	10,500,000
Mackay .. .. .	..	..	..	..	100,000
Many Peaks	108,923	925,595	642,343	1,676,861	4,800,000
Maryborough	3,850	909,865	312,135	1,225,850	1,500,000
Mary Valley	885,641	6,395,930	2,913,558	10,195,129	8,500,000
Nanango	60,623	3,080,523	1,836,792	4,977,938	4,000,000
North Coast .. .. .	..	344,006	255,483	599,489	100,000
Warwick .. .. .	..	1,634,977	760,433	2,395,410	2,750,000
Totals	2,401,555	37,152,762	19,248,068	58,802,384	61,000,000

APPENDIX C.

Revenue Collected under the State Forests and Timber and Quarry Regulations for the Year ended 30th June, 1934.

Districts.	Licenses.			Sales.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.
Southern Queensland*	202	15	6	223,490	12	9	223,693	8	3
Atherton	50	9	0	49,878	5	1	49,928	14	1
Bowen	17	0	0	488	14	5	505	14	5
Charters Towers	25	4	0	167	4	9	192	8	9
Clermont	2	2	0	645	8	2	647	10	2
Dalby	10	0	0	1,088	17	7	1,098	17	7
Goondiwindi	2	5	0	508	1	10	510	6	10
Hughenden	10	19	0	90	15	8	101	14	8
Ingham	15	0	0	216	10	3	217	5	3
Inglewood	2	12	0	172	3	10	174	15	10
Mackay	12	11	0	692	0	11	704	11	11
Rockhampton	11	4	6	97	15	11	109	0	5
Roma	1	10	0	89	8	8	90	18	8
Townsville	41	2	6	2,843	12	7	2,884	15	1
Other Districts†	99	10	6	1,071	3	8	1,170	14	2
	£490	0	0	£281,540	16	1	£282,030	16	1
Less Loan Fund Receipts				2,976	12	8	2,976	12	8
	£490	0	0	£278,564	3	5	£279,054	3	5

*Southern Queensland includes Brisbane, Ipswich, Toowoomba, Warwick, Gympie, Maryborough, Bundaberg, Gladstone Districts.

†Other districts include Aramac, Barcaldine, Blackall, Boulia, Burketown, Charleville, Chillagoe, Cloncurry, Coen, Cunnamulla, Emerald, Gayndah, Georgetown, Jundah, Kynuna, Longreach, Mackinlay, Mitchell, Monto, Springsure, St. George, Thursday Island, and Winton Districts.

APPENDIX D.

Collections under the State Forest and Timber and Quarry Regulations from 1st July, 1926, to 30th June, 1934.

Districts.	1926-27.	1927-28	1928-29.	1929-30.	1930-31.	1931-32.	1932-33.	1933-34.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Southern Queensland ..	322,772 9 11	280,501 11 2	293,112 10 4	225,836 17 3	115,936 3 6	103,488 2 7	181,466 10 5	223,693 8 3
Atherton	64,852 6 4	56,535 18 0	62,728 1 11	75,007 6 1	35,644 1 8	29,851 11 1	36,083 11 0	49,928 14 1
Bowen	778 11 6	282 4 7	275 1 2	500 13 3	367 8 5	431 8 9	577 2 6	505 14 5
Charters Towers	920 0 0	902 6 5	1,684 13 5	1,482 5 4	892 5 10	784 7 6	975 16 0	192 8 9
Clermont	147 16 1	243 4 10	403 19 9	342 12 10	176 7 10	20 19 9	597 5 5	647 10 2
Dalby	1,155 3 9	848 5 9	1,875 8 3	1,830 6 1	1,503 6 8	1,408 3 6	786 16 9	1,093 17 7
Goondiwindi	380 9 4	399 12 3	386 4 6	479 13 2	168 7 9	145 15 8	96 15 11	510 6 10
Hughenden	688 4 4	555 8 2	546 16 1	362 15 3	184 4 7	128 2 11	97 6 8	101 14 8
Ingham	343 11 9	280 5 1	509 16 0	381 6 8	287 4 6	182 7 11	357 4 3	217 5 3
Inglewood	417 13 5	330 6 11	425 13 10	826 3 4	319 19 5	79 11 4	45 2 0	174 15 10
Mackay	*	1,319 7 10	1,293 6 10	827 18 2	1,458 19 2	814 15 4	841 0 1	704 11 11
Rockhampton	5,672 17 3	5,503 7 8	5,562 16 7	4,528 1 10	167 12 9	216 17 7	164 0 9	109 0 5
Roma	189 17 11	187 10 3	493 2 10	519 3 4	188 14 6	295 2 9	96 0 1	90 18 8
Townsville	1,039 7 3	1,203 5 11	740 18 0	537 18 6	598 14 5	875 11 9	2,774 15 1	2,884 15 1
Other Districts	1,157 3 0	1,458 13 7	1,274 14 5	1,811 6 5	1,882 4 10	906 4 7	1,447 11 11	1,170 14 2
Totals	400,465 11 10	350,551 8 5	371,313 3 11	315,274 7 6	159,775 15 10	139,629 3 0	226,406 18 10	282,030 16 1
						Less Loan Fund Receipts	2,976 12 8	2,976 12 8
								£279,054 3 5

* Included in Southern Queensland Collections.

See appendix C for districts included in Southern Queensland and other districts.

APPENDIX E.

Prices of Log Timber.

The following Schedule illustrates the fluctuations in the market price of logs during the year 1st July, 1933, to 30th June, 1934:—

Species.	Log Class.	Delivery.	Price.
Maple Silkwood and Rose Silkwood	8 ft. to 8 ft. 11 in.	F.o.b. Cairns	July 30s.
Kauri Pine	8 ft. plus	F.o.b. Cairns	July 20s., December 19s. 6d.
Grey Teak (White Beech) ..	8 ft. plus	F.o.b. Cairns	July 23s. 6d., December 23s.
Grey Teak (White Beech) ..	7 ft. plus	F.o.r. Brisbane	July 27s. 6d.
Red Cedar	8 ft. plus	F.o.r. Brisbane	July 40s.
Red Cedar	8 ft. plus	F.o.r. Mackay	July 36s.
Red Cedar	8 ft. plus	F.o.b. Cairns	July 42s. 6d.
Queensland Satinay	6 ft. plus	F.o.b. Brisbane	July 23s.
Brown Bollywood (Bolly Gum)	6 ft. plus	F.o.r. Brisbane	July 15s. 6d.
Rose Butternut (Bolly Gum N.Q.)	7 ft. plus	F.o.b. Cairns	July 15s. December 14s. 6d.
Silver Quandong	6 ft. plus	F.o.r. Brisbane	July 17s. 6d.
Rose Mahogany	6 ft. plus	F.o.b. Brisbane	July 20s.
Yellowwood Ash	6 ft. plus	F.o.r. Brisbane	July 17s. 6d.
Crow's Ash	6 ft. plus	F.o.r. Brisbane	July 16s.
Silver Ash	6 ft. plus	F.o.r. Brisbane	July 16s.
Blush Cudgerie (Pink Poplar)	5 ft. plus	F.o.r. Brisbane	July 10s. 6d.
Red Tulip Oak (N.Q.)	7 ft. plus	F.o.b. Cairns	July 17s., December 16s. 6d.
Brown Tulip Oak (S.Q.)	5 ft. plus	F.o.r. Brisbane	July 12s. 6d.
Yellow Satinash (Watergum)	7 ft. plus	F.o.b. Cairns	July 18s., December 17s. 6d.
Silky Oak	8 ft. plus	F.o.b. Cairns	July 21s. 6d., December 21s.
Putts Pine	8 ft. plus	F.o.b. Cairns	July 21s. 6d., December 20s.
Walnut Bean	8 ft. to 8 ft. 11 in.	F.o.b. Cairns	July 20s.
Cypress Pine	All sizes	Central Line west to Comet	July 11s.
		Central Line Comet and West	July, 12s.
		Western Line to Miles ..	July 10s.
		Western Line Miles to Morven	July 10s. 6d.
		Western Line Morven and West	July 11s.
Hoop Pine Ply	84 in. plus	F.o.r. Brisbane	July 28s. 6d.
Hoop Pine	84 in. plus	F.o.r. Brisbane	July 21s. 6d.
Hoop Pine Tops	84 in. plus	F.o.r. Brisbane	July 13s.
		F.o.r. Brisbane, Warwick and Gladstone	1st class, July 11s. 6d. 2nd class, July 10s. 6d. 3rd class, July 8s. 6d.
		F.o.r. Maryborough, Bundaberg, and Toowoomba ..	1st class, July 11s. 2nd class, July 9s. 6d. 3rd class, July 8s.
Hardwood	6 ft. plus	F.o.r. Rockhampton	1st class, July 12s. 2nd class, July 11s. 3rd class, July 9s.

APPENDIX F.

Expenditure, Year ended 30th June, 1934.

Item.	FROM 1ST JULY 1933, TO 30TH JUNE, 1934.			Total.	Per Cent.
	Revenue.	Loan.	Trust.		
Overhead Expenses—					
Salaries	£ 27,936	£ ..	£ ..	£ ..	..
Extra Living Allowances	487	..	..	..	..
Travelling and Incidentals	3,732	..	..	..	..
	32,155	..	..	32,155	13·8
Reforestation .. .. .	..	70,000	..	70,000	30·1
Timber Trading Operations—					
Harvesting and Marketing (Log Timber) .. .. .	..	..	115,533	115,533	..
Lumbering (Hewn, Split and Pole Timber) .. .. .	..	..	15,242	15,242	..
	..	..	130,775	130,775	56·1
Total .. .. .	..	..	..	232,930	100·0

APPENDIX G.

Financial Statement, 1st January, 1904, to 30th June, 1934.

Year.	Gross Revenue (less amounts refunded from Revenue.)	Payments in connection with Market- ing of Forest Service Timber (including Roads).	Net Revenue.	OTHER EXPENDITURE FROM REVENUE VOTES.			Surplus Paid to Revenue.
				Overhead.	Capital Improve- ments, &c.	Total.	
1904-11	£ 216,478	£ ..	£ 216,478	£ 14,487	£ ..	£ 14,487	£ 201,991
1912-18	469,024	..	469,024	42,298	30,834	73,132	395,892
1919 (to 30th June)	38,574	..	38,574	5,619	6,947	12,566	26,008
1919-20	121,152	13,876	107,276	14,483	13,209	27,692	79,584
1920-21	163,461	23,578	139,883	21,434	11,821	33,255	106,628
1921 (1st July to 31st December)	61,517	11,825	49,692	11,783	5,278	17,061	32,631
1922	267,816	91,945	175,871	25,911	7,518	33,429	142,442
1923	367,686	185,253	182,433	28,755	5,630	34,385	148,048
1924	492,586	224,555	268,031	28,823	846	29,669	238,362
1925 (to 30th June)	234,051	102,853	131,198	14,075	..	14,075	117,123
1925-26 (1st July, 1925, to 30th June, 1926)	453,037	227,667	225,370	30,230	..	30,230	195,140
1926-27	543,825	292,944	250,881	31,884	..	31,884	218,997
1927-28	455,015	213,451	241,564	33,087	..	33,087	208,477
1928-29	414,516	174,407	240,109	38,720	..	38,720	201,389
1929-30	336,762	141,288	195,474	38,049	..	38,049	157,425
1930-31	174,106	80,323	93,783	36,080	..	36,080	57,703
1931-32	162,246	84,934	77,312	32,727	..	32,727	44,585
1932-33	235,440	89,345	146,095	33,112	..	33,112	112,983
1933-34	293,991	130,775	163,216	32,155	..	32,155	131,061
Totals	£5,501,283	2,089,019	3,412,264	513,712	82,083	595,795	2,816,469

APPENDIX H.

Loan Expenditure—1st July, 1919, to 30th June, 1934.

Year.	Amount Expended.	Revenue Surplus.	Per Cent. of Surplus reinvested.
	£	£	
1919-20	17,197	79,584	22
1920-21	46,949	106,628	44
July-December, 1921	18,794	32,631	57
1922	33,246	142,442	23
1923	44,134	148,048	30
1924	32,178	238,362	13
January-June, 1925	16,795	117,123	14
1925-26	42,006	195,140	21
1926-27	37,378	218,997	17
1927-28	30,995	208,477	15
1928-29	32,175	201,389	16
1929-30	29,833	157,425	19
1930-31	24,397	57,703	42
1931-32	20,000	44,585	44
1932-33	44,101	112,983	39
1933-34	*70,000	138,596	50.5
Total	£540,178	£2,200,113	24.6

NOTE.—The sum of £14,536 has been paid to the Treasury during the years 1927-34 in reduction of loan indebtedness making the debit balance of Forestry Loan Vote at the Treasury on 30-6-34 to be £525,642.

*Includes £27 expended on clearing of banana farms on account of relief fund and unrecovered.

APPENDIX I.

Analysis of Expenditure from Loan Vote, 1st July, 1919, to 30th June, 1934.

	£	£
REFORESTATION AND INCIDENTAL WORKS—		
Plantations	91,606	
Regeneration areas	39,076	
Nursery working and maintenance	48,253	
Forest experiment	15,968	
Construction of buildings, nurseries, &c.	56,765	
Maintenance of capital improvements	10,738	
Forest protection	54,206	
Supervision, miscellaneous stores, fodder, &c.	48,737	
Wet time, holidays, recreation leave, sick leave	30,442	
Workers' Compensation and unemployment insurance	9,031	
Surveys	34,264	
Purchases of land and improvements	11,166	
Miscellaneous	287	
	<hr/>	450,539
OTHER WORKS—		
Roads, construction	11,570	
Roads, maintenance	1,965	
Logging	6,094	
Fire protection (established stands)	3,431	
Purchase of timber lands	917	
Supervision of timber sales	32,960	
Surveys—estimates and reconnaissances	29,508	
Miscellaneous	2,991	
Relief expenditure unrecouped	27	
Banana blocks	176	
	<hr/>	89,639
	Total	<hr/> 540,178
Less REPAYMENTS—		
Reforestation and incidental works—		
Sale of buildings	40	
Sale of land and improvements	165	
Sale of material	248	
Refund of survey fees	846	
Rent	3,931	
Grazing dues	9,069	
Other Works—		
Disposal of road material	85	
Sale of fuel	15	
Banana blocks	137	
	<hr/>	14,536
	Net Total	<hr/> <hr/> £525,642

APPENDIX J.
Summary of Lean Reforestation Expenditure, Year ended 30th June, 1934.

Reserve.	REFORESTATION.				Surveys.	Protection, Fire Fighting, Clearing, &c.	Maintenance of Capital Improvements.	New Construction of Nurseries, Buildings, &c.	Total of Columns 2-9.	OVERHEAD EXPENSES.				Total Overhead.	Reserve Total.	
	Plantations.	Natural Regeneration.	Nursery Working and Maintenance.	Forest Experiment.						Stores, Fodder, Supervision, &c.	Holidays, Wet Time, Leave, &c.	Workers' Compensation.	Total Overhead.			Reserve Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
R. 185	1,796 2 7	..	840 11 4	64 7 4	54 5 1	248 12 4	5 7	218 5 6	2,748 10 8	329 7 9	348 3 3	78 4 6	750 15 6	3,499 6 2		
R. 191	1,094 10 3	..	862 5 10	111 9 8	18 19 3	63 19 2	26 6 6	416 16 8	2,681 8 6	15 19 5	11 5 1	..	27 4 6	101 16 6		
R. 194	5 12 8	..	4 0 3	23 6 6	600 0 0	600 0 0	414 17 9	276 19 0	12 1 11	703 18 8	3,335 7 2		
R. 310	600 0 0		
Sundry Reserves	600 0 0		
Total..	3,491 8 5	..	702 17 2	193 7 0	73 4 4	314 11 9	49 18 7	1,285 2 2	6,060 9 5	760 4 11	631 7 4	90 6 5	1,481 18 8	7,542 8 1		
*Purchase of Portions 17 and 20, Parish of Gadgarra, with Improvements.																
BRISBANE WORKING PLAN AREA.																
R. 69	..	82 13 0	..	1 16 8	..	58 4 0	43 19 7	..	108 19 10	21 18 11	18 3 2	40 8 5	40 2 1	144 1 1		
R. 1376	41 15 7	38 4 9	..	..	120 17 9	25 18 5	21 6 5	..	37 10 3	208 8 0		
Rs. 200 and 359	..	44 3 9	..	..	54 3 5	..	..	..	41 15 7	52 2 1	23 12 6	..	26 2 4	98 17 8
R. 215	174 1 0	..	..	..	98 7 2	4 9 10	..	..	26 2 4	128 9 6		
Rs. 309 and 1017	219 14 0	12 0 5	..	234 0 0	8 7 4	102 17 3	1,378 14 10	25 18 5	174 14 5	8 13 7	347 16 9	1,199 16 5		
R. 509	801 15 10	..	219 14 0	13 16 8	215 16 7	384 12 2	52 6 11	102 17 3	1,917 16 2	294 10 5	237 16 6	49 2 0	581 8 11	2,499 5 1		
Total	801 15 10	126 16 9	219 14 0	13 16 8	215 16 7	384 12 2	52 6 11	102 17 3	1,917 16 2	294 10 5	237 16 6	49 2 0	581 8 11	2,499 5 1		
BRISBANE VALLEY AND NANANGO WORKING PLAN AREA.																
R. 120	3 3 3	60 18 4	2 8 10	154 14 11	221 5 4	34 1 11	8 7 0	4 5 10	34 1 11	255 7 3		
R. 151	14 9 0	343 1 10	44 9 10	435 18 10	2,467 17 2	123 11 10	367 3 2	4 19 9	12 12 10	384 17 2		
R. 257	18 11 6	357 13 10	408 4 1	613 8 9	5,029 10 10	513 7 0	900 8 2	14 11 11	485 17 10	2,983 12 0		
R. 283	..	492 2 10	815 12 2	33 6 8	7 18 5	591 19 6	61 11 0	1,016 12 2	5,512 1 8	384 6 3	588 17 3	644 18 0	1,432 7 1	6,457 17 1		
R. 289	1,516 12 10	10 1 10	..	241 7 0	66 4 11	80 18 11	1,871 19 7	190 4 3	206 15 6	10 7 9	1,617 19 6	7,130 1 2		
R. 299	275 7 1	..	..	..	2 14 2	..	1,871 19 7	190 4 3	206 15 6	10 7 9	407 7 6	2,278 7 1		
R. 316	4 9 9	2 14 2	..	64 12 4	..	..	..	..	64 12 4		
R. 379	223 10 9	..	..	..	..	..	223 10 9	12 7 10	..	..	..	223 10 9		
Research	12 7 10		
†	15 2 6		
Total	6,356 6 6	492 2 10	3,244 17 3	266 19 3	44 2 2	2,124 1 4	589 13 1	2,316 16 1	15,434 18 6	1,257 19 1	2,071 11 2	678 18 3	4,008 8 6	19,443 7 0		
*Committee of Inspection.																
B. 169	..	202 11 1	..	4 18 10	..	6 19 6	36 8 10	..	250 18 3	44 15 4	47 18 7	..	92 13 11	343 12 2		
Total	..	202 11 1	..	4 18 10	..	6 19 6	36 8 10	..	20 0 0	20 0 0	47 18 7	..	92 13 11	363 12 2		
†Deed fees, &c., purchase of Mill property for Nursery and Office site.																
BUNDABERG WORKING PLAN AREA.																
R. 4	..	162 12 2	..	15 4	6 13 3	73 10 9	7 12 8	..	251 4 2	33 17 11	54 8 4	..	88 6 3	389 10 5		
R. 16	..	254 18 4	..	..	27 3 0	16 18 5	1 16 6	..	315 19 7	7 15 1	39 9 7	7 4 10	47 4 8	363 4 3
R. 78	..	284 7 1	..	..	..	27 19 8	8 6 9	..	403 5 6	9 3 11	56 5 3	..	72 14 0	475 19 6
R. 95	..	240 2 6	..	..	..	105 1 6	..	..	368 5 10	38 13 3	25 13 11	..	95 2 5	461 8 3
R. 127	167 6 8	10 2 11	..	289 12 6	57 7 8	8 9 0	..	82 19 2	352 11 8		
R. 139	105 1 6	40 14 9	54 1 8	..	118 7 10	113 18 2		
R. 150	..	140 11 11	..	..	..	..	..	..	50 6 0	368 7 1	23 11 5	..	118 7 10	486 14 11
Total	..	1,439 18 7	..	2 8 9	33 16 3	524 2 5	27 18 10	51 16 4	2,079 16 2	187 17 10	294 16 11	30 16 3	513 11 0	2,593 7 2		

APPENDIX J—continued.

Reserve.	REFORESTATION.				Surveys.	Protection, Fire Fighting, Clearing, &c.	Maintenance of Capital Improvements.	New Construction of Nurseries, Buildings, &c.	Total of Columns 2-9.	OVERHEAD EXPENSES.			Total Overhead.	Reserve Total.
	Plantations.	Natural Regeneration.	Nursery Working and Maintenance.	Forest Working and Experiments.						Stores, Fodder, Supervision, &c.	Holidays, Wet Time, Leave, &c.	Workers' Compensation.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
..	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
B. 3 ..	285 9 5	149 19 3	..	150 14 9	..	87 1 1	162 15 11	2 1 0	848 1 5	592 7 0	132 0 3	13 11 1	737 18 4	1,585 19 9
FRASER ISLAND WORKING PLAN AREA.														
INGLEWOOD WORKING PLAN AREA.														
R. 79 ..	..	284 13 5	..	..	..	345 11 10	9 0	56 6 8	687 0 11	141 18 10	124 15 7	54 18 6	321 12 11	1,008 13 10
R. 81 ..	..	..	..	..	..	283 13 4	..	..	283 13 4	95 12 9	35 16 0	..	71 8 9	355 2 1
R. 101 ..	..	34 12 9	..	..	..	549 9 11	..	..	534 12 4	98 10 0	53 18 11	..	157 17 11	742 0 7
R. 117 ..	..	380 18 5	..	..	..	27 7 8	..	5 5 3	531 11 4	48 12 3	68 5 4	..	147 14 11	559 6 3
R. 122 ..	..	644 0 6	..	..	..	218 3 0	18 5	47 0 1	911 12 0	79 11 13	122 11 5	..	208 18 0	1,119 0 0
R. 134 *	..	..	..	..	25 16 5	558 14 0	..	205 12 0	790 15 2	64 0 2	88 9 7	..	153 5 4	943 7 9
Total	..	1,344 5 1	..	..	26 11 7	1,982 19 9	1 7 5	312 4 0	3,667 7 10	466 14 11	498 16 10	95 6 1	1,060 17 10	4,728 5 8
KILCOY WORKING PLAN AREA.														
R. 137 ..	..	..	..	..	..	..	3 16 6	..	3 16 6	..	..	..	..	3 16 6
R. 207 ..	..	..	..	..	4 13 0	22 10 0	..	..	163 6 0	19 3 3	49 17 5	..	69 0 8	232 6 8
R. 393 ..	..	136 3 0	..	..	4 13 0	22 13 6	3 16 6	..	167 11 0	19 3 3	49 17 5	..	69 0 8	236 11 8
Total	..	136 3 0	..	..	4 13 0	22 13 6	3 16 6	..	167 11 0	19 3 3	49 17 5	..	69 0 8	236 11 8
KILKIVAN WORKING PLAN AREA.														
R. 220 ..	599 19 11	..	135 19 2	..	..	50 11 6	69 12 6	48 11 0	904 14 1	85 6 7	127 18 0	..	213 4 7	1,117 18 8
R. 296 ..	218 2 8	..	65 14 3	..	..	3 3 11	1,329 15 3	1,329 15 3	1,369 6 0	155 7 7	59 19 1	..	215 6 8	1,534 12 8
R. 355 ..	..	..	..	..	6 19 5	2 9 3	1 11 9	..	237 17 11	37 3 1	48 13 4	..	85 16 5	373 14 4
R. 24 ..	..	..	..	..	..	..	..	..	6 19 5	..	..	..	..	6 19 5
Total	818 2 7	..	202 5 2	..	42 14 6	56 4 8	71 4 3	1,378 6 3	2,568 17 5	277 17 3	236 10 5	..	514 7 8	3,083 5 1
MACKEY WORKING PLAN AREA.														
R. 12 ..	75 10 1	..	8 10 4	..	..	..	1 11 1	..	85 11 6	13 7 1	15 15 7	..	29 2 8	114 14 2
MARYBOROUGH WORKING PLAN AREA.														
R. 435 ..	..	..	..	32 15 5	37 17 10	..	..	171 10 6	209 8 4	257 1 7	26 19 9	..	284 1 4	493 9 8
..	..	..	..	..	..	..	..	133 10 0	32 15 5	12 9 6	..	..	12 9 6	43 4 11
..	..	..	..	..	..	..	..	..	183 10 0	..	..	..	..	133 10 0
Total	..	..	..	32 15 5	37 17 10	..	..	305 0 6	375 13 9	269 11 1	26 19 9	..	286 10 10	672 4 7
MANY PEAKS WORKING PLAN AREA.														
R. 95 ..	..	..	..	4 13 6	5 14 10	123 11 5	79 17 1	213 16 10	213 16 10	19 19 3	16 19 5	..	36 18 8	250 15 6
R. 144 ..	..	..	..	..	..	12 17 6	..	12 17 6	12 17 6	..	..	..	..	12 17 6
R. 176 ..	..	..	..	18 14 0	..	2 8 8	51 12 6	89 19 9	89 19 9	8 4 6	7 0 3	..	15 4 9	105 4 6
R. 179 ..	..	..	..	2 16 0	..	8 5	5 11 8	233 3 2	628 16 1	58 2 11	49 16 3	..	107 19 2	736 15 3
Ports. 42 and 43	..	..	..	..	..	..	95 18 11	95 18 11	95 18 11	..	..	..	..	95 18 11
Total	..	..	..	26 3 6	5 14 10	126 8 6	35 13 9	461 11 8	1,041 9 1	86 6 8	73 15 11	..	160 2 7	1,201 11 8

*Portions 12, 13, 14, Parish of Taudan, proposed State Forest.

†v.C.L., Parish of Ferguson.

‡Compensation for improvements.

APPENDIX J—continued.

Reserve.	REFORESTATION.				Surveys.	Protection, Maintenance of Capital Improvements.	New Construction of Nurseries, Buildings, &c.	Total of Columns 2-9.	OVERHEAD EXPENSES.			Total Overhead.	Reserve Total.
	Plantations, Regeneration.	Nursery Working and Maintenance.	Forest Experiment.						Stores, Fodder, Supervision, &c.	Holidays, Wet Time, Leave, &c.	Workers' Compensation.		
1	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
R. 124	488 14 9	188 11 4	..	6 16 0	64 19 1	44 6 6	743 11 0	66 5 8	142 9 8	28 16 6	237 11 10	981 2 10	
R. 135	4,371 16 3	653 12 10	25 5 5	9 9 11	491 5 4	114 4 6	6,006 19 5	445 2 3	971 13 0	159 17 6	1,576 12 9	7,583 12 2	
R. 256	212 6 4	..	..	..	14 4 0	1 8 3	227 18 7	16 7 5	52 10 8	..	68 18 1	296 6 8
R. 435	4,043 10 0	368 10 9	37 12 4	4 14 7	252 15 10	23 11 11	4,808 18 10	353 13 10	951 2 7	113 5 9	1,421 2 2	6,230 1 0	
Research	..	..	18 1 8	..	..	..	18 1 8	..	..	..	..	18 1 8
	9,071 7 4	1,210 14 11	80 19 5	21 0 6	823 4 3	139 8 0	11,805 9 6	881 9 2	2,120 15 11	301 19 9	3,304 4 10	15,109 14 4	
MARY VALLEY WORKING PLAN AREA.													
	..	..	..	..	48 13 9	..	86 5 6	12 4 9	25 7 9	..	37 12 6	123 18 0
R. 60	37 11 9	..	..	..	14 2	..	54 14 7	9 17 11	23 2 2	..	33 0 1	14 2
R. 249	..	..	..	..	1 15 5	..	64 10 4	2 15 10	11 3 5	..	13 19 3	87 19 8
R. 292	..	..	..	..	39 19 7	..	187 10 8	59 3 5	19 10 1	..	69 15 6	237 6 2
R. 313	2 7 9	..	32 6 0	..	61 10 8	10 16 2	80 10 1	..	..	..	1 3 0	1 11 10
R. 318	..	..	..	..	8 10	..	538 18 9	111 18 10	50 17 0	..	102 15 10	701 14 4
R. 368	..	..	..	35 12 7	12 3 11	..	192 11 3	33 12 8	26 4 2	..	59 16 10	155 8 1
R. 393	..	..	..	..	108 0 6	..	77 4 8	..	80 7 0	..	134 9 6	947 8 11
R. 399	..	..	..	..	..	..	443 10 10	..	..	..	102 15 10	155 8 1
R. 445	59 16 1	142 11 7	14 3	..	..	..	3,857 10 4	537 6 7	508 14 3	46 19 10	1,093 0 8	4,754 11 0
R. 451	260 19 3	..	27 4 4	..	..	..	100 2 5	176 7 11	169 11 5	2 17 1	349 16 7	1,315 9 1
R. 461	..	..	..	34 2 8	382 2 0	52 13 11	1,163 12 8	..	..	..	31 1	134 18 0
R. 561	2,518 8 0	566 15 2	27 6 2	37 14 11	280 0 0	3 2 5	69 19 6	..	..	..	57 17 3	123 12 5
R. 589	774 15 10	..	..	..	23 6 9	1 6 10	123 16 5	17 14 8	20 2 7	..	2,044 12 9	8,662 9 11
R. 583	..	..	7 4	..	24 0 2	..	87 13 2	..	..	..	..	..
R. 700	3,616 6 11	264 13 8	709 6 9	107 10 2	982 15 9	67 19 4	6,617 17 2	1,037 8 4	957 7 6	49 16 11	2,044 12 9	8,662 9 11	
	
R. 20	..	..	34 0 0	..	..	..	34 0 0	15 5 4	..	..	15 5 4	49 5 4
ROCKHAMPTON WORKING PLAN AREA.													
	
R. 263	708 15 4	222 17 5	17 1 1	28 5 0	235 0 8	15 4 9	1,264 12 9	127 5 4	107 12 3	15 13 0	250 10 7	1,515 3 4	
	..	..	..	..	..	..	96 14 1	..	..	..	..	96 14 1
Total	708 15 4	222 17 5	17 1 1	28 5 0	235 0 8	15 4 9	1,361 6 10	127 5 4	107 12 3	15 13 0	250 10 7	1,611 17 5	
CLERMONT LAND AGENTS' DISTRICT.													
R. 117	..	..	..	..	53 0 0	..	53 0 0	..	..	..	..	53 0 0
GRAND TOTALS	25,235 2 5	4,156 5 3	6,906 19 10	911 2 9	641 6 9	7,734 0 4	54,390 4 0	6,332 3 0	7,503 2 4	1,325 9 9	15,160 15 1	69,550 19 1	
	..	..	Administration Head Office	..	..	..	..	..	..	..	..	600 5 3
	..	..	Workers' Unemployed Insurance	..	..	..	..	..	..	..	..	70 12 5
	..	..	Stationery	..	..	..	..	..	..	..	..	29 13 9
	..	..	Stores Suspense	..	..	..	..	..	..	..	..	Cr. 265 11 3
	..	..	Purchase of Relief Maps of R. 135, Brooloo	..	..	..	..	..	..	..	..	17 10 0
	..	..	Relief Expenditure Unrecouped	..	..	..	..	..	..	..	..	26 10 9
	..	..	..	..	..	..	..	..	..	..	..	£70,000 0 0

*Purchase of improvements.

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

Working Plan Area.	Reserve No.	AREA PLANTED (ACRES).						Totals.	
		Eucalypts.		Softwoods.		Other Species.		1933-34.	To 30th June, 1934.
		1933-34.	To 30th June, 1934.	1933-34.	To 30th June, 1934.	1933-34.	To 30th June, 1934.		
Mary Valley ..	135	..	..	166.8	2,068.0	..	..	166.8	2,068.0
	435	..	..	187.5	1,061.0	..	..	187.5	1,061.0
	256	..	..	..	134.2	..	..	..	134.2
	124	..	..	33.6	68.3	..	..	33.6	68.3
Total ..	..	..	..	387.9	3,331.5	..	..	387.9	3,331.5
Brisbane Valley and Nanango	283	8.0	84.0	85.0	879.5	..	..	93.0	963.5
	289	22.0	80.5	186.5	829.1	..	..	208.5	909.6
	379	..	..	..	40.0	..	..	..	40.0
	257	23.0	72.0	70.0	510.4	..	..	93.0	582.4
	299	..	..	75.0	554.8	..	..	75.0	554.8
	151	..	..	..	148.0	..	..	..	148.0
	..	53.0	236.5	416.5	2,961.8	..	..	469.5	3,198.3
Warwick	263	..	0.3	*138.0	502.0	..	18.5	138.0	520.8
Brisbane	509	..	..	154.5	563.0	..	..	154.5	563.0
North Coast ..	561	..	5.0	601.0	1,295.0	..	5.5	601.0	1,305.5
	589	..	..	64.0	139.0	..	..	64.0	139.0
	393	91.0	91.0	..	..	..	..	91.0	91.0
Total ..	..	91.0	96.0	665.0	1,434.0	..	5.5	756.0	1,535.5
Rockhampton ..	20	..	..	..	94.0	..	..	..	94.0
North Queensland	191	..	51.8	55.0	302.1	3.0	18.9	58.0	372.8
	310	..	13.8	69.0	121.0	5.0	270.4	74.0	405.2
	194	..	109.5	..	22.0	..	12.5	..	144.0
	418	..	..	..	..	..	4.0	..	4.0
	..	..	175.1	124.0	445.1	8.0	305.8	132.0	926.0
Fraser Island ..	3	..	161.0	..	749.5	..	..	..	910.5
Kilkivan	355	..	..	..	102.5	..	..	..	102.5
	220	..	..	23.0	194.7	..	..	23.0	194.7
	..	..	..	23.0	297.2	..	..	23.0	297.2
Mackay	12	..	..	..	30.5	..	..	..	30.5
Maryborough ..	287	..	..	..	35.0	..	..	..	35.0
Experimental Areas									
Imbil	135	..	4.0	..	47.5	..	9.7	..	61.2
Maryborough ..	..	..	..	..	5.0	..	..	..	5.0
Fraser Island ..	3	..	..	..	8.0	..	..	..	8.0
Dalby	4	..	..	..	0.2	..	..	..	0.2
	93	..	..	..	1.0	..	..	..	1.0
Total ..	..	..	4.0	..	61.7	..	9.7	..	75.4
Grand Totals ..	..	144.0	672.9	1,908.9	10,505.3	8.0	339.5	2,060.9	11,517.7

*Includes the planting of 40 acres of plantations burnt, 1931-32.

APPENDIX L.

Areas of Natural Forests Treated and Improved.

Working Plan Area.	Reserve. No.	AREA TREATED (ACRES).									Total Area Treated to 30th June, 1934.
		Eucalypts.			Softwoods.			Other Species.			
		Treated, 1933-34.	First Treatment, 1933-34.	Total at 30th June, 1934.	Treated, 1933-34.	First Treatment, 1933-34.	Total at 30th June, 1934.	Treated, 1933-34.	First Treatment, 1933-34.	Total at 30th June, 1934.	
Brisbane	283	349	349	1,589	..	..	747	..	..	40	2,376
Valley and Nanango	289	..	..	32	..	..	25	..	..	..	57
	257	..	..	125	..	..	..	..	..	66	191
	151	..	..	..	..	..	337	..	..	..	337
	299	..	..	50	..	..	332	..	..	..	382
Total .. .. .	..	349	349	1,796	..	..	1,441	..	..	106	3,343
Fraser Island .. ..	..	180	..	9,183	..	..	2,310	..	..	..	11,493
Dalby	93	1,109	1,109	10,733	65	65	1,124	..	..	..	11,857
	141	..	..	802	..	..	..	..	..	..	802
	4	762	762	4,425	..	..	..	..	..	..	4,425
	78	..	..	..	1,063	1,063	8,048	..	..	..	8,048
	34	..	..	1,270	..	..	2,496	..	..	..	3,766
	150	..	..	..	357	357	2,489	..	..	..	2,489
	139	..	..	900	..	..	..	..	..	..	900
	16	..	..	..	680	680	1,545	..	..	..	1,545
	127	..	..	..	765	765	765	..	..	..	765
Total .. .. .	..	1,871	1,871	18,130	2,930	2,930	16,467	..	..	..	34,597
Bundaberg	169	..	..	..	450	450	3,819	..	..	..	3,819
Kilkivan	221	..	..	..	..	..	560	..	..	..	560
	220	..	..	..	..	..	155	..	..	..	155
	355	..	..	..	..	..	40	..	..	..	40
	26	..	..	..	..	..	150	..	..	..	150
	700	250	250	3,672	..	..	..	..	..	..	3,672
	494	..	..	1,350	..	..	..	..	..	..	1,350
Total .. .. .	..	250	250	5,022	..	..	905	..	..	..	5,927
Mackay	12	..	..	82	..	..	24	..	..	..	106
Mary Valley	135	..	..	159	..	..	277	..	..	..	436
	435	..	..	..	..	..	70	..	..	55	125
	..	..	..	159	..	..	347	..	..	55	561
Maryborough	287	..	..	..	..	..	240	..	..	..	240
Inglewood	79	..	..	..	1,993	1,993	17,939	..	..	..	17,939
	122	..	..	..	4,449	4,449	9,592	..	..	..	9,592
	117	5,137	5,137	5,137	..	..	..	..	..	..	5,137
	101	540	540	540	..	..	..	..	..	..	540
	..	5,677	5,677	5,677	6,442	6,442	27,531	..	..	..	33,208
Brisbane	509	..	..	1,616	..	..	..	..	..	..	1,616
	69	..	..	1,548	..	..	..	..	..	..	1,548
	1,376	339	339	1,037	..	..	..	..	..	..	1,037
	215	175	..	925	..	..	..	..	..	..	925
	893	540	540	830	..	..	..	..	..	..	830
	..	1,054	879	5,956	..	..	..	..	..	..	5,956
North Coast	318	..	..	3,318	..	..	..	..	..	..	3,318
	313	135	135	1,174	..	..	..	..	..	..	1,174
	583	495	495	1,455	..	..	..	..	..	..	1,455
	445	270	200	1,208	..	..	..	..	..	..	1,208
	249	..	..	788	..	..	..	..	..	..	788
	60	350	..	1,410	..	..	..	..	..	..	1,410
Total .. .. .	..	1,250	830	9,353	..	..	..	..	..	..	9,353
North Queensland ..	194	..	..	175	..	..	..	..	..	..	175
	191	..	..	..	..	..	..	..	..	53	53
	310	..	..	..	..	..	..	..	..	128	128
	418	..	..	..	..	..	..	..	..	43	43
	452	..	..	..	..	..	..	..	..	20	20
	254	..	..	339	..	..	..	..	..	..	339
Total .. .. .	..	..	..	514	..	..	..	..	..	244	758
Grand Totals .. ..	..	10,631	9,856	55,872	9,822	9,822	53,084	..	..	405	109,361

APPENDIX M.

Particulars of Forest Survey Work, Year ended 30th June, 1934.

CLASS 1.—INSPECTIONS OF VACANT CROWN LAND AND TIMBER RESERVES.

Reserve.	Parish.	Area in Acres.
Vacant Crown Land	Kandanga	10,000
Timber Reserve 756	Jordan	55,000
Timber Reserve 757	Japoon	60,000
Timber Reserve 353	Ongera	20,000
	Total	145,000

CLASS 2.—ASSESSMENT SURVEYS.

Reserve.	Parish.	Area in Acres.
State Forest 289	Cooyar	6,435
Vacant Crown Land	Jordan Dirran (part)	15,500
	Total	21,935

CLASS 3.—INTENSIVE CONTOUR AND ASSESSMENT SURVEYS.

Reserve.	Parish.	Area in Acres.
State Forest, 344	Kirrama (part)	6,327
State Forest, 200,359	Palen (part)	1,500
Timber Reserves, 28, 268	Hinchinbrook, Waterview (part)	5,800
Water Reserve, 309	Enoggera	8,295
Timber Reserve 67	Grongah (part)	13,000
State Forest 310	Gadgarra (part)	3,500
State Forest 392	Como (proceeding) .. .. .	..
	Total	38,422

TAUNGYA LEASE SURVEYS.

Reserve.	Parish.	Area in Acres.
State Forest 318	Maroochy	49
State Forest 393	Woodum	133
State Forest 583	Kenilworth	94
State Forest 451	Cooloolah	252
	Total	528

COMPARTMENT SURVEYS.

Reserve.	Parish.	Area in Acres.
State Forest 540	Maleny	1,000
State Forest 893	Byron (part)	1,273
State Forest 435	Gundiah, Neerdie	9,470
State Forest 589	Beerwah (part)	1,396
State Forest 4	Braemar (part)	4,280
State Forest 78	Yeulba (part)	4,850
State Forest 191	Barron .. .. .	..
State Forest 310	Gadgarra .. .. .	..
	Total	22,269

MISCELLANEOUS SURVEYS,

Reserve.	Parish.	Class of Survey.	Area in Acres.
State Forest 298	Gallangowan	Firebreak	1,550
State Forest 298	Gallangowan	Road .. .. .	..
State Forest 263	Pikedale	Firebreak	567
		Total	2,117

APPENDIX N.

Forest Reservations for the Year ended 30th June, 1934.

State Forests.—Twenty-two (22) new State Forests, with a total of 248,456 acres, were proclaimed during the year, the largest being as follows:—

104,000 acres	R. 154 Vignoles and Brigalow	..	Toowoomba (Land Agent's District).
26,300 acres	R. 61 Gideon and Moraby	..	Dalby (Land Agent's District).
20,900 acres	R. 134 Bringalily	..	Inglewood (Land Agent's District).
15,670 acres	R. 435 Gundiah and Neerdie	..	Gympie and Maryborough (Land Agent's District).
12,700 acres	R. 12 Cherbourg	..	Nanango (Land Agent's District).
12,050 acres	R. 78 Inglebogie and Yeulba	..	Roma (Land Agent's District).
10,250 acres	R. 392 Como	..	Gympie (Land Agent's District).
9,442 acres	R. 368 Combabula	..	Roma (Land Agent's District).
8,840 acres	R. 561 Bribie	..	Brisbane (Land Agent's District).
7,488 acres	R. 24 Charlestown	..	Nanango (Land Agent's District).
4,200 acres	R. 589 Beerwah	..	Brisbane (Land Agent's District).
3,916 acres	R. 534 Durundur	..	Brisbane (Land Agent's District).
3,411 acres	R. 126 Barabanbel	..	Roma (Land Agent's District).
2,135 acres	R. 772 Danbulla	..	Cairns (Land Agent's District).

Two State Forests were rescinded, and, together with vacant Crown land, were amalgamated with an adjoining State Forest.

National Parks.—No new National Parks were proclaimed during the year.

Provisional Reserves.—At 30th June, 1934, the number of Timber Reserves was 339 as against 357 at 30th June, 1933. Ten new areas, with a total of 50,435 acres, were reserved. The largest of these areas are:—

19,500 acres	R. 216 Dryander	..	Bowen (Land Agent's District).
6,400 acres	R. 808 Stanton, Eureka and Booyal	..	Bundaberg (Land Agent's District).
5,183 acres	R. 56 Goldsmith	..	Dalby (Land Agent's District).

One thousand eight hundred and forty (1,840) acres of Crown land were added to existing reserves, one hundred and eleven thousand seven hundred and seventy-six (111,776) acres were converted into State Forests.

Twenty-seven thousand eight hundred and eighteen (27,818) acres were released for selection.

1ST JULY, 1933 TO 30TH JUNE, 1934.

STATE FORESTS.

	Number.	A.	R. P.
At 1st July, 1933	196	2,038,113	3 18
Proclaimed 1st July, 1933, to 30th June, 1934 (2 rescinded)	20	248,895	3 14
Total reservation at 30th June, 1934	216	2,287,009	2 32

TIMBER RESERVES.

	A.	R. P.	
At 1st July, 1933			3,609,558 3 9
Cancelled (28) and revoked	75,528	2 0	187,304 2 36
Converted into State Forests	111,776	0 36	3,422,254 0 13
Balance			
Additions to reserves	1,840	0 0	
New reserves	50,435	0 4	
Total additions			52,275 0 4
Total reservation at 30th June, 1934			3,474,529 0 17

NATIONAL PARKS.

	Number.	
At 1st July, 1933 and 30th June, 1934 (No addition)	37	333,440 2 29
Grand total reservations at 30th June, 1934		6,094,979 1 38

APPENDIX O.

State Forests, Timber Reserves, and National Parks at 30th June, 1934.

LAND AGENT'S DISTRICT.	STATE FORESTS.			TIMBER RESERVES.			NATIONAL PARKS.		
	No.	Area.		No.	Area.		No.	Area.	
		A.	R. P.		A.	R. P.		A.	R. P.
Atherton	11	46,919	1 30	5	61,721	2 19	..	..	..
Bowen .. .. .	..	..	..	9	153,510	0 0	..	..	..
Brisbane	41	132,873	3 11	32	120,465	0 4	16	50,507	2 22
Bundaberg	11	66,806	1 9	32	144,648	0 18	..	..	..
Cairns	4	87,979	0 0	11	380,924	1 20	1	79,000	0 0
Charleville .. .. .	..	..	..	3	20,037	0 37	..	..	..
Charters Towers .. .. .	..	..	..	2	125,550	0 0	..	..	..
Clermont	1	14,500	0 0	4	127,756	0 0	..	..	..
Cloncurry .. .. .	..	..	..	1	4,800	0 0	..	..	..
Cooktown .. .. .	..	..	..	11	416,189	3 0	..	..	..
Dalby	11	405,349	3 25	23	300,341	1 29	1	22,500	0 0
Gayndah .. .. .	..	..	..	13	40,713	0 27	..	..	..
Gladstone	4	35,000	0 0	18	77,821	2 16	..	..	..
Goondiwindi .. .. .	..	..	..	1	2,410	0 0	..	..	..
Gympie	22	203,701	3 17	18	111,742	1 20	4	262	2 7
Herberton	6	65,016	2 8	5	64,273	1 10	3	1,040	0 0
Ingham .. .. .	..	..	..	4	243,910	0 0	1	96,700	0 0
Inglewood	8	152,910	0 0	11	34,020	2 15	..	..	..
Innisfail .. .. .	..	..	..	7	203,926	0 38	..	..	..
Ipswich	18	111,580	2 2	22	89,835	2 0	2	4,344	0 0
Jundah .. .. .	..	..	..	1	25,600	0 0	..	..	..
Mackay	1	27,800	0 0	16	253,405	0 0	..	..	..
Maryborough	11	419,448	0 0	30	92,315	2 4	2	165	0 0
Monto	5	13,362	3 20	11	142,544	3 36	..	..	..
Nanango	37	160,915	2 4	14	32,791	2 5	..	..	..
Rockhampton	3	117,640	0 0	14	117,398	1 20	1	216	2 0
Roma	5	34,309	1 24	2	10,606	1 0	1	65,000	0 0
Springsure .. .. .	..	..	..	1	20,500	0 0	..	..	..
Stanthorpe	3	4,341	3 39	..	..	..	2	10,460	0 0
St. George .. .. .	..	..	..	1	3,072	0 0	..	..	..
Taroom .. .. .	..	..	..	1	3,403	0 0	..	..	..
Toowoomba	14	186,554	2 3	14	31,096	2 28	3	3,245	0 0
Townsville .. .. .	..	..	..	2	17,199	1 31	..	..	..
Totals	216	2,287,009	2 32	339	3,474,529	0 17	37	333,440	2 29

As at 30th June, 1934 :—

Total Area reserved for—	A.	R.	P.
State Forests	2,287,009	2 32	..
Timber Reserves	3,474,529	0 17	..
National Parks	333,440	2 29	..
	<u>6,094,979</u>	<u>1 38</u>	..

APPENDIX P.

Distribution of Staff—Sub-Department of Forestry.

	30th June, 1933.	30th June, 1934.
Salaried Staff	100	104
General Staff	255	422
Totals	355	526