
QUEENSLAND.

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ANNUAL REPORT

OF THE

SUB-DEPARTMENT OF FORESTRY

FOR THE

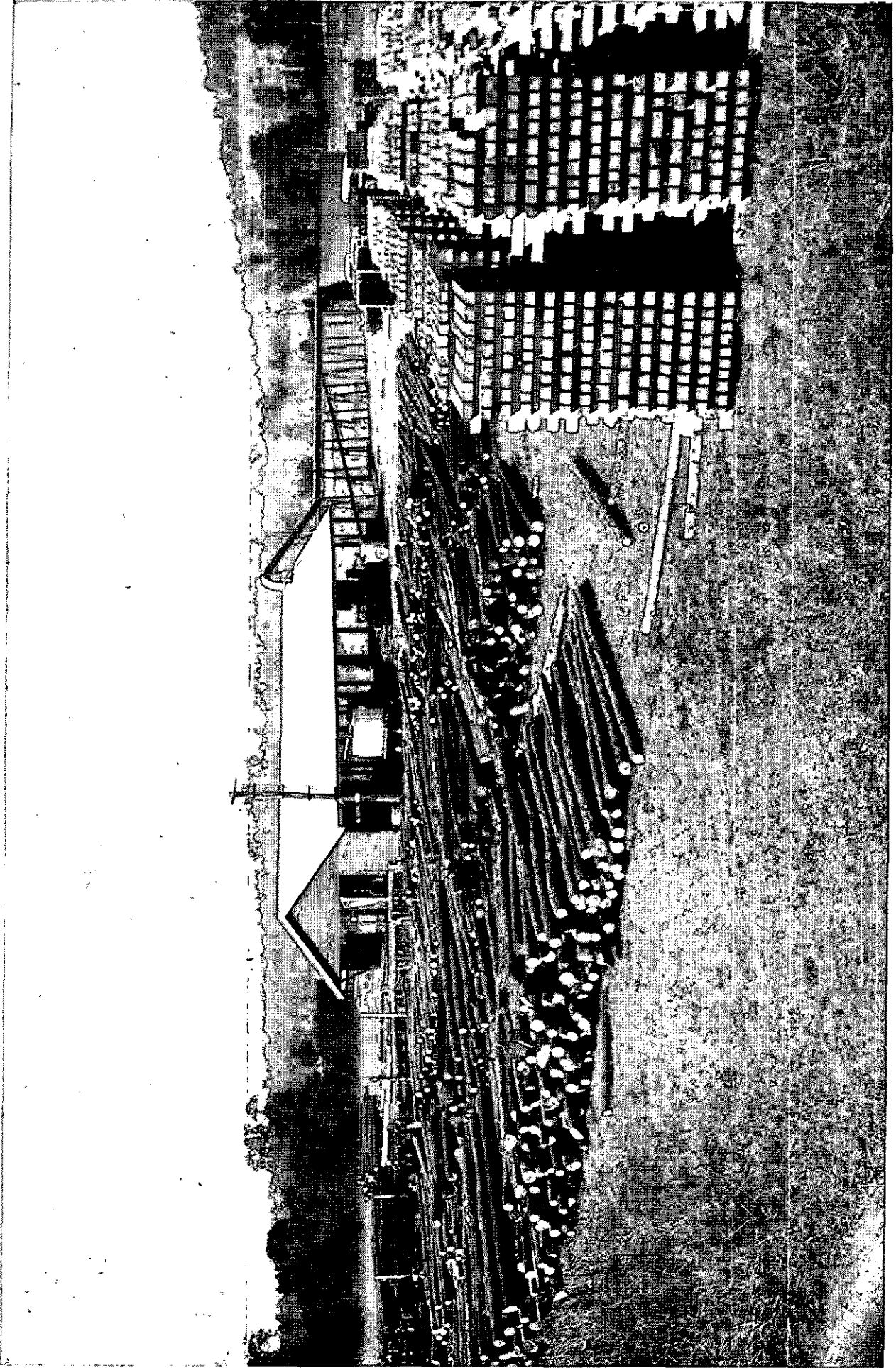
YEAR 1950-51.

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PRODUCTION FROM YOUNG PINE PLANTATIONS IS INCREASING.
Picture of mill operating Hoop Pine thinnings in Gympie District. Sixteen small mills cut thinnings from plantations last year.

Report of the Director of Forests for the Year ended 30th June, 1951.

INTRODUCTION.

Since prewar days there has been a marked change in the quantities of the various types of logs cut by the ply mills and sawmills of Queensland. The following table briefly illustrates this change (also see graph opp. p. 2). The prewar figure is the average for the three years immediately preceding the war.

LOGS CUT BY PLY AND SAWMILLS (MILLIONS SUPERFICIAL FEET.)

Class of Timber.	Prewar.	1949-50.	Movement.
Pine (Hoop, Bunya, Kauri and plantation thinnings)	143	69	- 74
Hardwood species (excluding logs cut into sleepers)	94	202	+108
Cabinet woods	20	24	+ 4
Cypress Pine	13	37	+ 24
Miscellaneous species	11	58	+ 47
Total	281	390	+109

The overall cut shows an increase of nearly 40 per cent. despite the very wet conditions experienced in 1949-50. The intense demand for housing is illustrated by the increased cut of hardwood and cypress pine from 107,000,000 superficial feet to 239,000,000 superficial feet, an increase of 214 per cent.

The most disturbing feature of the picture is the continued fall in the cut of pine. As the virgin forests of Hoop, Bunya, and Kauri Pines are fast approaching extinction, the annual output will continue to fall. The cut for 1950-51 is estimated to be 52 million, a further reduction of 9 million on the previous year. The one bright feature in the pine cut for 1950-51 was the increase in thinnings from Crown plantations from 8 million in 1949-50 to 12 million in 1950-51. However, no considerable increase from this source can be expected for several years, and it is forecast that the total pine output from virgin forests and plantations will fall to 35,000,000 superficial feet before the increasing production from plantations will halt the downward trend of the total pine cut.

Queensland can again supply the whole of her softwood requirements, but at what date this will occur will depend on the rapidity with which we can establish new plantations, and the rate of growth we can achieve in our plantations.

During the past year an area of 4,847 acres of softwood plantation was established—slightly below the previous year's record. But a total only of 46,150 acres has been established of a minimum objective of 200,000 acres. The sooner this objective is achieved, the sooner will the State again be self-supporting in softwood. It cannot be too strongly reiterated that the annual rate of planting should not be less than 5,000 acres, but an annual establishment of 8,000 acres would be a reasonable objective.

Furthermore, it is extremely important that all avenues should be explored of improving rates of growth of plantation trees, and to this end a strong forest research branch must be maintained.

But for some 20 to 30 years, at least, there will continue to be a deficiency of locally grown softwoods, and, to replace these, increasing quantities of native hardwoods and miscellaneous species and high-priced imported softwoods are being used. This position, however, may not be possible of continuance. The hardwood log supply position gives cause for serious concern. Sixty-five per cent. of the present hardwood cut comes from private lands, and 65 million of the 108 million increased cut, referred to in the table above, was from private sources, due to the rapid liquidation of private hardwood forests by a multiplicity of mills, cutting to small sizes.

Forest lands in private ownership are not being managed with a view to maximum permanent wood production.

In many cases, small rapidly growing trees that should provide a future crop of mill logs are being cut out now. Where this is not so, the rate of cutting of mature trees is such that only by operating smaller and smaller sized trees can production be continued. In the not far distant future, a continually receding cut, comprised of small-size trees, is all that can be expected from private areas. It is expected that the cut from Crown lands will be maintained by sound management practices, but the anticipated falling off in production from private lands must affect seriously the overall output in the future.

The time is approaching when consideration must be given to regulating the management of private forests in the public interest.

Although Queensland has a remarkable variety of good-quality hardwood species, its resource is probably the least of all Australian States, except South Australia, which never had any extent of hardwood forest. Despite this, Queensland has the largest per capita consumption of wood and builds the greatest percentage of wooden houses of the mainland States.

Increasing difficulty is being experienced in providing larger structural dimensions of hardwood in species of high strength and durability—i.e., girders, piles, large poles, sleepers, &c.

In order to obtain girder requirements for Railways Department and Main Roads Commission, it has been provided that all purchasers of Crown hardwood mill logs must deliver to rail all logs suitable for conversion into girders. Even this action has not provided adequate supplies.

In prewar days sufficient timber supplies for all purposes were always readily available. Now the position shows a marked change. Not only are there increasing shortages of special timbers for special purposes, but there is growing difficulty in obtaining the overall quantities needed, irrespective of quality.

While this Department will do everything possible to bring maximum supplies of logs to market over the periods of shortage, nevertheless the inescapable conclusion is that, for the carrying out of constructional programmes, greater use will have to be made of materials other than wood, such as steel, concrete, bricks, building boards, and similar substances.

REFORESTATION.

The record of the year's work in character is closely patterned to that of the previous year but in magnitude is, generally, smaller.

Since each year's new assets leave behind what might be termed accumulating maintenance, and since the lag of the war years has not been entirely overtaken and the labour position has deteriorated considerably, consideration will now have to be given to reviewing some phases of new operations.

The labour difficulty was more acute during the past year than at any time since the war.

During 1949-50 on the works programme 2,945 new men were employed while 2,660 left the job. In 1950-51 the figures were 3,031 and 3,060, respectively. Total wages staff at 30th June, 1951, was 2,157.

The net loss in strength last year will be noted. Add to this the loss of efficiency by the transient labour and the effect on administration and the difficulties are more appreciated.

The year's operations were hampered, in several respects, by the unusually wet conditions of spring and early summer. While the fire season was, accordingly, one of the least hazardous ever experienced, the burning of areas felled for planting and weed tendings became real difficulties.

Generally, however, burns were good and only one area remained unburnt, while in two other cases the burns were so poor as to require their abandonment for at least a year.

The total planting for the year—4,976 acres—fell short of last year's record by about 250 acres, which is less than the extent of the three areas, referred to above, that could not be planted.

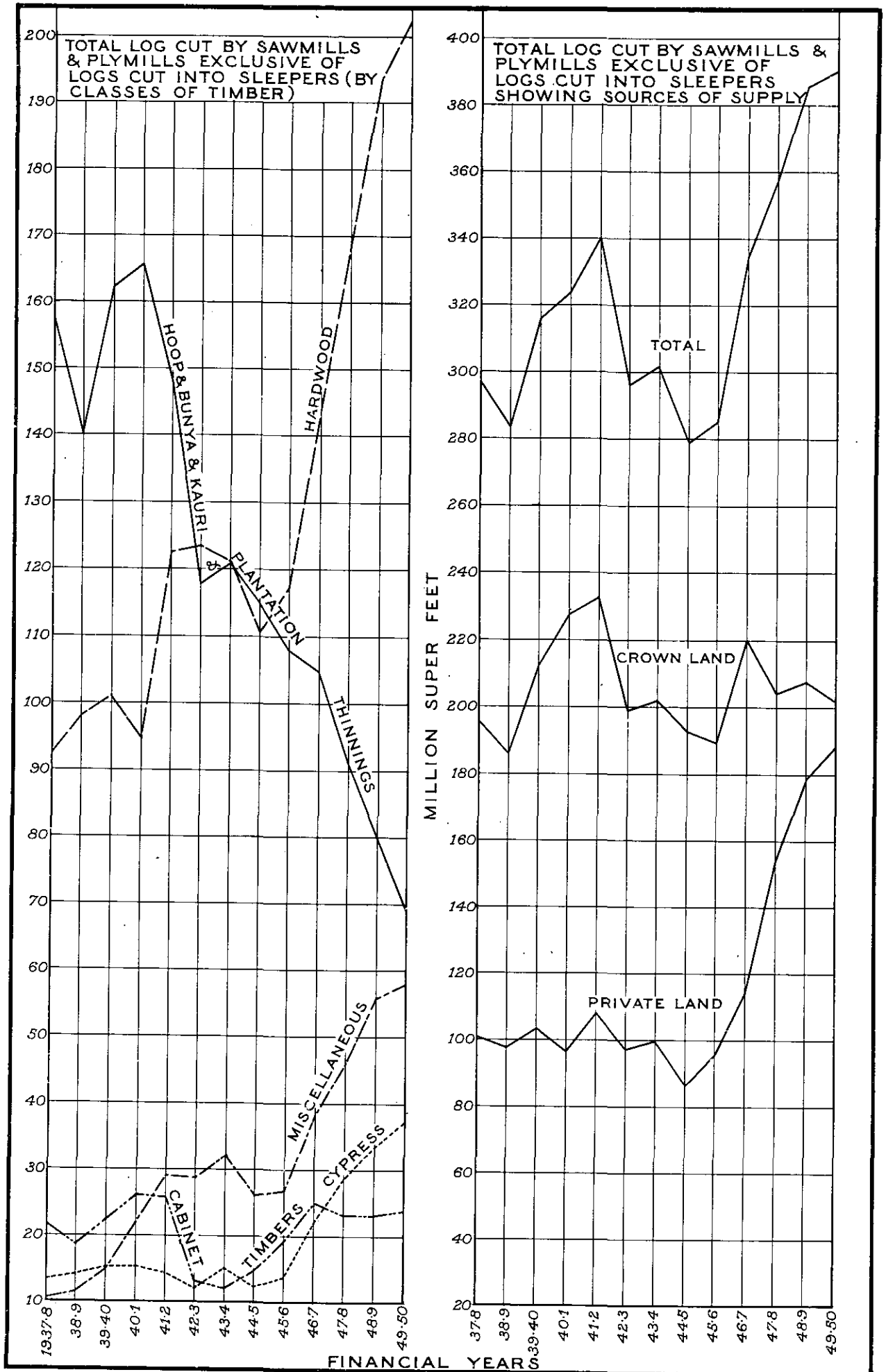
New tables showing areas of plantations have been introduced in the appendices to this year's report and based on the year ending on 31st March. This date allows determination of accurate figures for report purposes since 30th June falls in the middle of the winter plantings.

The total acreage planted from 1st April, 1950, to 31st March, 1951, was 5,277 acres, of which hoop pine comprised 2,578 acres and exotic *Pinus* species 2,557. Total planted area at 31st March, 1951, was 48,779 acres, 46,150 of these being softwoods.

The figures shown in the appendices are the result of a careful check of areas during the year and represent an accurate statement of net effective acres.

No new centres of planting were embarked upon, but nursery work preparatory to the initiation of an underplanting programme in conjunction with natural regeneration treatment of the North Queensland rain forest, and clear planting of other sections, was put in hand.

Further sales of plantation thinnings were made during the year and the quantity removed rose to 12,300,000 superficial feet, or almost 4,000,000 feet above the previous highest cut.



Work on the natural forests was on a reduced scale; this was necessitated by the need to concentrate labour, as far as practicable, on the softwood plantation areas. The area of such forest given a silvicultural treatment was 25,435 acres.

Inventory plot establishment on the plantation areas was completed during the year on all areas planted at the outbreak of the last war, while the work on the natural hardwood and cypress pine forests was continued. This latter work is proceeding very much slower than is desirable, but surveyors and labour for survey camps are very difficult to secure.

Towards the latter end of the year it was possible to devote an officer full time to the job of summing up our forest resources. This appointment is long overdue.

Provision for improved camping and accommodation for employees was continued during the year. Full details are given later, but 32 new barracks were completed, raising the number to 117, which are accommodating over one-third of the wages staff in the field.

Details of reforestation operations were:—

Plantations.—Reference to Appendix will show that the total area planted during the year 1st April, 1950, to 31st March, 1951, was 5,276.9 acres, comprising—

	Acres.	Acres.
Hoop Pine (<i>Araucaria cunninghamii</i>)	2,577.6	2,577.6
<i>Pinus caribaea</i>	1,879.3	
<i>Pinus taeda</i>	214.4	
<i>Pinus patula</i>	400.0	
<i>Pinus radiata</i>	29.0	
<i>Pinus palustris</i>	34.0	
		2,556.7
Other softwoods	13.6	13.6
<i>Euc. grandis</i>	129.0	129.0
	5,276.9	5,276.9

It will be noted that of a total softwood planting of 5,148 acres, the exotic pines represent practically 50 per cent.

The total area planted to 31st March, 1951, is shown by Appendix as 48,779.9 acres. Of this, 46,150 acres are softwood and it is interesting to note that Hoop Pine accounts for 29,111 acres, the exotic pines 13,281 acres.

Of the total area planted, 30,138 acres, or 62 per cent., are located in the Brisbane Valley and Gympie districts. See Appendices I, J, and K for details.

The estimate in the 1949-50 report that the bulk of the lag in pruning work would be overtaken during 1950-51 has not been realised. The total area pruned shows a decrease of 502 acres on the 1949-50 figure. Details are as follows:—

	Acres.
First operation	2,754
Second operation	1,952.5
Third operation	1,298.7
Fourth operation	59
	6,064.2

Weed-tending operations were accorded to 22,004 acres—a slight decrease on last year's figures. Weed growth on first-year areas was prolific and in a number of cases not only did first-year weeds appear in abundance but also weeds which normally do not make their appearance until the second and third year. Tendings on post-war areas are up to date, but there is still an appreciable lag of tending work on pre-war areas to be overtaken.

All areas requiring first thinning are now under sale and, as pointed out above, the plantations yielded 12,313,415 superficial feet of log timber for the year. The total yield of thinnings to date is 36,820,000 superficial feet. During the coming year it is hoped to offer new sales in the Kilkivan, Gympie and Monto areas.

A start on the removal of second thinnings has been made at Beerwah and during the year 48.5 acres were so thinned, yielding 451,986 superficial feet, equal to 9,319 superficial feet per acre.

The total area covered with first thinning, total yield, and yield per acre are as follows:—

District.	Acres.	Yield.	Average per Acre.
Brisbane	346	2,736,950	7,910
Brisbane Valley	469	3,628,869	7,730
Gympie	694	4,913,419	7,080
Warwick	103	412,370	4,010

The lower yield per acre for the Warwick district can be ascribed chiefly to the occurrence of rock areas which are either unplanted or else planted with a reduced stocking per acre.

Nurseries.—The number of nurseries in production remained at 28 and output for the year totalled 3,150,500 plants. Stock on hand at the close of the year totalled 8,150,000. A departure from the usual practice of manuring exotic pine seedbeds with cow manure was made this year at Tuan. Beds to be sown in the winter of 1951 were manured with filter press; experimental results are favourable and an acute shortage of cow manure led to the decision to use the filter press in routine. Further experimental work with filter press is in progress.

The advantage of filter press over manure would be chiefly ease of supply and the elimination of the weeding problem which follows the use of manure.

Regeneration Treatment of Natural Forests.—The total area treated during the year was 25,435 acres—a reduction on last year's figure.

Details are shown in Appendix L, which, briefly summarised, shows—

	First Treatment.	Other than First Treatment.	Total.
	Acres.	Acres.	Acres.
Hardwood	4,207	11,940	16,147
Cypress Pine	4,405	4,794	9,199
Other Species	10	79	89
Totals	8,622	16,813	25,435

Shortage of labour and the difficulty of holding labour on the western reserves are the two factors chiefly responsible for the reduction in the acreage treated.

Seed Collection: Hoop Pine.—During December, 1950, and early January, 1951, a record collection of Hoop Pine seed was made. Total weight of green cones collected from natural stands was 155,439 lb. and the yield of dry seed therefrom totalled 73,523 lb. Cost of collection, drying, and bagging averaged 1s. 0½d. per lb. Germination tests are complete and, summarised, the results are as follows:—

Laboratory Germination Capacity.	Weight of Seed.
	Lb.
40 per cent. plus	23,771
30-40 per cent.	15,697
20-30 per cent.	4,784
10-20 per cent.	12,362
Under 10 per cent.	15,612
	72,226

The difference of some 1,300 lb. between this figure and the total yield is due to the elimination of two small batches from the summary.

A new cold-storage room, located at the Salisbury Depot, was almost completed at the end of the year and this will make the Department independent of hitherto inconvenient storage.

Exotic Pines.—A large collection of exotic pine seed was again made during last seed fall and details are as follows:—

RESERVES 561-589.—

- Pinus caribaea*—731 lb., of which 120 lb. was from select trees.
- Pinus taeda*—135 lb. 8 oz., of which 58 lb. 8 oz. was from select trees.
- Pinus palustris*—88 lb.
- Pinus insularis*—1 lb. 8 oz.

RESERVE 509.—

- Pinus patula*—6 lb. 12 oz. from select stems.

Miscellaneous.—To meet the increased public demand for shade, fodder, and ornamental trees, collection of small quantities of seed has been made of a number of species, chief of which are *Callitris arenosa*, *cupressiformis*, and *glauca*; *Cupressus forbesii*, *arizonica*, *lusitanica*; *Celtis sinensis*, *Melia dubia*, *Albizia lebbek*, &c.

Supply of Trees to Public.—The increasing demand by the public for trees, referred to in the last report, has been maintained. During the year 314,905 trees were supplied to the public and to State schools.



PINUS CARIBAEA PLANTATION, AGE 19 YEARS, SECOND THINNING COMPLETED.
4,847 acres of softwood were planted in 1950-51, bringing total area to 46,150 acres.



PROTECTED CYPRESS PINE FOREST, SHOWING EXCELLENT NATURAL REGENERATION.
An area of 530,000 acres of natural hardwood and Cypress Pine forest has now been given protection and improvement treatment to assist natural regeneration.

Species supplied were as follows:—

<i>Pinus caribaea</i>	..	..	..	..	..	..	..	..	123,368
<i>Pinus taeda</i>	..	..	..	..	..	..	..	..	59,781
<i>Pinus patula</i>	..	..	..	..	..	..	..	..	32,368
<i>Pinus radiata</i>	..	..	..	..	..	..	..	..	36,175
Hoop Pine	..	..	..	..	..	..	..	..	18,364
Miscellaneous	..	..	..	..	..	..	..	..	44,849
									314,905

Details of trees supplied during 1950-51, as compared with previous years, set out below, illustrate the increasing public demand for trees:—

	1947-48.	1948-49.	1949-50.	1950-51.
To farmers (plots)	82,708	130,395	198,000	268,861
To school plots	7,125	10,238	17,366	18,070
General purposes	19,705	53,770	19,634	27,974
	109,538	194,403	235,000	314,905

The trees supplied to farmers represent, at an average stocking of 600 trees per acre, an increase in the State planting programme of nearly 450 acres.

A considerable number of enquiries are received for information and advice as to the most suitable trees for planting on the black-soil plains of the Downs. To meet this demand experimental plots were established on the property of Mr. Thomas, of Brookstead, in July, 1948. Some 30 species have been tried to date and, of these; the most promising are—

<i>Tamarix aphylla</i>	..	..	..	..	..	..	..	..	The Athel tree
<i>Melia dubia</i>	..	..	..	..	..	..	..	..	White Cedar
<i>Euc. microtheca</i>	..	..	..	..	..	..	..	..	Coolibah
<i>Gleditschia triacanthos</i>	..	..	..	..	..	..	..	..	Honey Locust
<i>Schinus molle</i>	..	..	..	..	..	..	..	..	Pepperina
<i>Euc. sideroxylon</i>	..	..	..	..	..	..	..	..	Mugga Ironbark
<i>Euc. hemiphloia</i>	..	..	..	..	..	..	..	..	Gum-topped Box
<i>Cup. arizonica</i>	..	..	..	..	..	..	..	..	Arizona Cypress
<i>Cup. forbesii</i>	..	..	..	..	..	..	..	..	Tecate Cypress
<i>Celtis sinensis</i>	..	..	..	..	..	..	..	..	Chinese Elm
<i>Brachychiton populneum</i>	..	..	..	..	..	..	..	..	Kurrajong

The number of trees supplied to school plots is steadily increasing and quite a number of the earlier-established plots have yielded satisfactory financial return from first thinnings.

The supply of trees to western schools has recommenced in co-operation with the Department of Public Instruction. The scheme has been put on a similar basis to that governing the normal school forestry plots.

Research.—During the year it was possible to improve the forest research staff position by the placing of an officer full time on tree-breeding work and the provision of an officer for part-time work on cypress pine and hardwoods of the West. Officers were retained at Beerwah, Imbil, Yarraman, and Atherton, and work on coastal hardwoods was resumed.

North Queensland.—The principal job in this region is to find the best method of handling large areas of rain forest which are unsuitable for conversion to plantations. During the year a series of plots was established to provide growth data in the various forest types involved. Plots on natural regeneration were maintained, but it is too early for results to be obtained from this work. Action is in hand for the preparation of volume tables for the main species involved.

Other work involves the investigation of problems associated with plantations and with the use of areas of inferior open forest for production of softwoods.

Early reports on *Pinus hondurensis* plots established in coastal North Queensland indicate that this species will not handle the poorly drained soil types but that it is quite promising on well-drained sites. Further plots are to be established this year.

Yield plot data for Hoop Pine on the Atherton Tableland has been summarised and the following table gives average growth figures:—

Age.	R. 310 Gadgarra.				R. 191 Barron.			
	G.B.H.	Pre-dominant Height.	Basal Area per Acre.	Merch. Vol. to 4" D.U.B.	G.B.H.	Pre-dominant Height.	Basal Area per Acre.	Merch. Vol. to 4" D.U.B.
	Ins.	Feet.	Sq. ft.	C. ft.	Ins.	Feet.	Sq. ft.	C. ft.
10	20	55	120	1,800	18	50	100	1,500
15	27	75	175	4,000	24	70	150	3,000
20	33	90	225	6,200	29	85	200	5,000
25	..	..	..	..	34	95	250	7,000

Hoop Pine will be the principal species used when planting is resumed in the North.

A number of experiments involving the underplanting of Red Cedar in plantations of Hoop, Kauri, and Maple were established and work on Red Cedar will be intensified. Encouraging results have been obtained at R.191 Barron in the use of *Grevillea robusta* (Silky Oak) as a cover crop. This experiment was established 11 years ago and the stage has now been reached when the removal of the Silky Oak on a merchantable basis is being considered.

Root rot is still causing losses in some of the older plots of Hoop Pine, more particularly on R.191 Barron, and this is being investigated.

Central Queensland.—Based on results from trial plots established in 1930 routine planting commenced at Byfield, near Yeppoon, 2 years ago, with *P. caribaea* as the main species and with *Pinus insularis* used to a lesser degree. Work here involves trial of additional species, such as *Pinus hondurensis* and *Pinus tropicalis*, and the investigation of species on the different soil types involved.

An experiment on season of sowing, commenced in 1950, confirmed the results of earlier experiments and August is now accepted as the month for sowing *Pinus caribaea* at Byfield.

Pinus hondurensis plots are most promising on better-than-average sites and more extensive trial plantings are proposed.

Trial plantings of *Pinus caribaea* on poorly-drained types, made in 1949, have shown considerable improvement in colour over the past year and there are early indications of response to phosphate on these types.

Seed of *Pinus tropicalis* has been obtained for trial in this area.

South Queensland.—The principal work in this centre covers the handling of Hoop Pine plantations. Over the years a sound technique has been developed for the establishment and maintenance of plantations to the stage of first merchantable thinning, and problems associated with later thinnings have now assumed major importance.

The position regarding Exotics used mainly on the low-lying coastal areas is somewhat similar, in that thinning prescriptions are the main study. In new centres, such as Tuan Creek and Coondoo, trial of species on different soil types is also involved. Work is also being undertaken on tree breeding.

Hardwood and Cypress Pine research during the year was confined to remeasurement of thinning plots with the object of formulating a programme for the years to come.

Following are some notes on activities of interest:—

Tuan Creek—near Maryborough—Exotic Plantation Area.—Results of the initial experiments in the use of filter press to maintain fertility in the nursery beds are most promising. Results to date show that equivalent applications of filter press and manure have given similar responses. The filter press has the additional advantage of not introducing weeds to the nursery. Initial fears that continued applications of filter press might cause a pH unsuitable to mycorrhiza have been allayed by the fact that a number of mills produce a filter press with an acid reaction. The experimental use of filter press has been extended to other exotic nurseries and also to Hoop Pine.

Ploughing experiments established on inferior types in 1949 have given encouraging results and during the year a 10-acre plot on a poorly-drained site was established with drainage lines at approximately 24-foot intervals.

Beerwah-Exotics—Tree Breeding.—Further form assessments made in the older progeny trials support earlier conclusions on the immediate gain that can be obtained by collecting seed from the best individuals available.

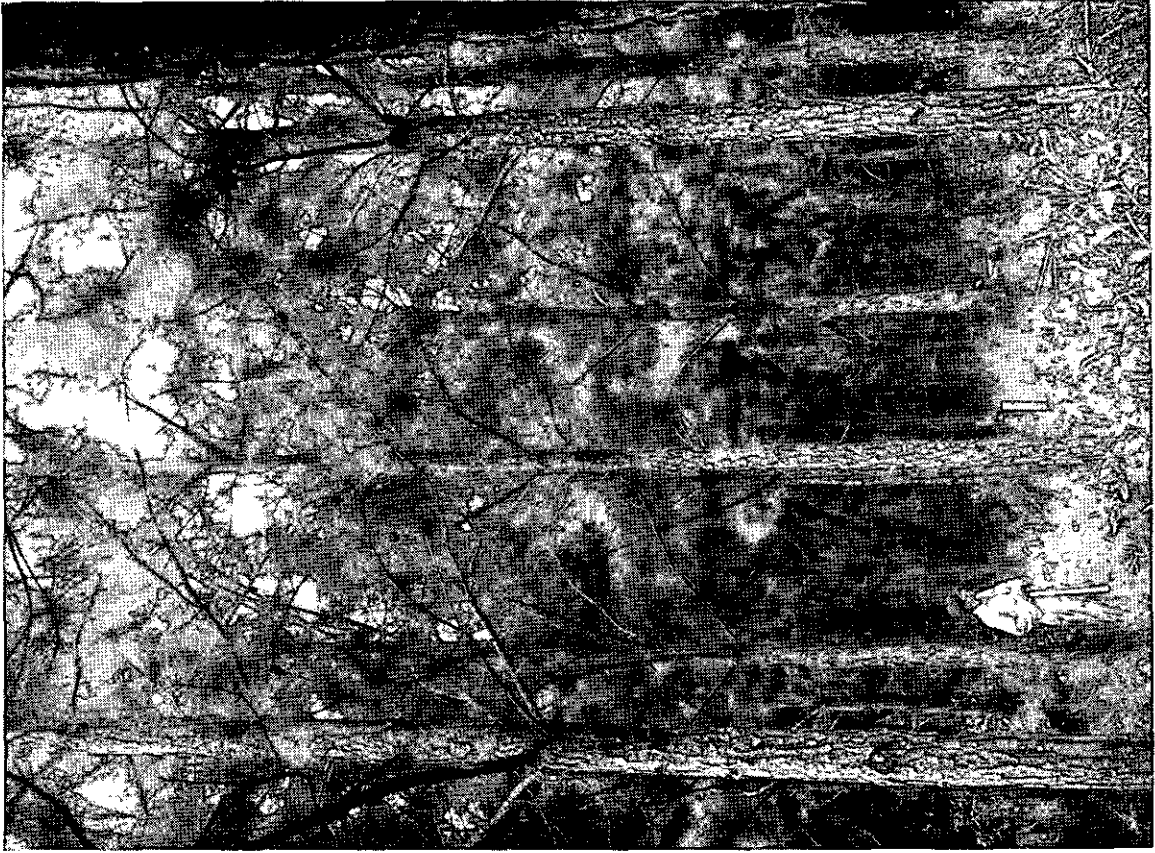
A big programme of controlled pollination with *Pinus caribaea* and *Pinus taeda* was embarked upon and, in addition, attempts were made to effect a cross between *Pinus caribaea* and *Pinus radiata*, and *Pinus radiata* and *Pinus patula*.

Work in the grafting of *Pinus taeda* and *Pinus caribaea* was resumed and promising results obtained under conditions of controlled humidity and temperature. Overall results gave a 27 per cent. and the best treatment approximately a 45 per cent. take. The stock in all cases was *Pinus caribaea*, 20 months old, and the scions which took were from 2nd order branches on 5-year-old trees. This work will be extended during the coming year and an effort made to establish grafts from a number of trees whose merit has been proved by progeny tests.

Thinning in Exotic Plantations.—The main point on which work is being concentrated is that of thinning schedules. The older plantations at Beerwah have reached the stage at which a second thinning is desirable and results are being reviewed with this in mind. The principle adopted in considering the problem is to select the lowest stocking which gives near maximum volume increment. Comparison of basal area per acre and increment showed that



EXCELLENT GROWTH OF HOOP PINE, 23 YEARS OLD.—NORTH QUEENSLAND.
29,000 acres of Hoop Pine plantation have now been established in the State.



FOREST RESEARCH PAYS DIVIDENDS.
Clones of high quality—*Pinus taeda* trees established by grafting. A programme of tree breeding work is under way.

maximum increment on first quality sites has been associated with basal areas from 110 to 160 square feet, the higher figure giving maximum in favourable and the lower in unfavourable seasons.

Thinning schedules aim at reducing the stand to approximately 100 square feet and stands are thinned from above with the object of conferring maximum benefit on select high-pruned trees.

On first-quality sites planted 8 feet by 8 feet this means reduction to a stocking of 350 per acre at age 12 to 13 years and to 240 per acre at age 18 to 19 years. With 7 feet by 7 feet plantings the figure is about 450 at 13 years.

Yarraman and Imbil—Hoop Pine.—In connection with the 1948 flowering of Hoop Pine, which gave the 1950 seed crop, observations were made for the first time on the mechanism of pollination, and the first efforts were made at controlled pollination. Observations showed that the female cone appears at about Christmas time and is receptive for about 1 month, during which time pollen flies on the same tree. The only provision against selfing in nature appears to be in the fact that the male amenta are, in general, located below the female cones on the tree.

Controlled pollinations including selfing were successful. Selfed cones on two trees at Imbil gave laboratory germination percentage of up to 66 per cent. compared with a 40 per cent. maximum for open-pollinated seed in the same crop. This high percentage of viable seed differs greatly from the behaviour of *Pinus taeda* and *Pinus caribaea* where selfing is associated with very poor viability.

Routine thinning prescriptions provide for the reduction of Hoop Pine to 350 effective stems per acre when the predominant height is about 50 feet. This, in Site Quality I., is at about 13 years from planting. This was based on results of experiments and recent work has confirmed this treatment in so far as volume production is concerned. However, the last two years have been above average for rainfall and have resulted in heavy weed growth in thinned stands in the Mary Valley. Accordingly, work is being intensified on lighter treatments at more frequent intervals, as a means of maintaining control of the site without sacrifice of clean wood production. In the Brisbane Valley the weed problem is not serious and no modification of prescription is contemplated. Experiments, designed at affording information on intensity of second thinning, indicate that the initial thinning does the important job of ensuring the dominance of the pruned crop trees and that there is no urgency for subsequent thinnings. It appears that subsequent thinnings will remove minimum economic quantities at relatively frequent intervals.

Of particular interest is an experiment dealing with the thinning of Northern Kauri Pine (*Agathis palmerstoni*), in that it shows that, under favourable conditions, this species can give volume growth comparable with the best Hoop Pine stands. Age at measurement in 1950 was 17 years and average height was 50 feet. In 1942 two plots were thinned on an unmerchantable basis from 550 per acre to 376 and 296 per acre respectively. In 1948 the two remaining plots were reduced to comparable numbers.

Increment for 1949-50 was—

Plot.	G.B.H. (Select).		Basal Area per Acre Increment 1948-50.		Merch. Vol. per Acre Increment 1948-50.	
	Average 1950.	Increase 1948-50.	Select.	Whole Stand.	Select.	Whole Stand.
	Ins.	Ins.	Sq. ft.	Sq. ft.	C. ft.	C. ft.
1 (376 since 1942)	27.6	3.05	14.6	28.2	496	956
2 (376 since 1948)	26.4	3.46	15.8	31.7	520	1,029
3 (296 since 1942)	29.0	3.08	15.2	22.7	510	761
4 (296 since 1948)	26.4	3.25	14.5	24.5	485	812

These figures indicate that unmerchantable early thinnings are not necessary and show that Kauri responds in similar fashion to Hoop.

Protection.—As indicated previously, the fire season was one of only low hazard.

Following the good conditions of the past few seasons, and the dry conditions that prevailed generally during the last three months of the report period, an early severe season can be expected in 1951-1952.

Radio installation has proceeded as rapidly as possible but was far from complete at the end of the year.

A summary of the work carried out under firebreak (and firebreak road) headings for the year is as follows:—

	Miles.
1. Cleared Breaks (Western Forests)—	
Firebreak construction—	
Cutting and grubbing	72.7
Stacking and burning	71.3
Cutting auxiliary roads	8.6
Firebreak improvement—	
Grubbing roads	239.5
Grading	77.5
Green strips	206.1
Firebreak maintenance—	
Suckering and burning	730.5
Grading	429.1
Rotary hoe	333.0
2. Green Breaks (Coastal Hardwood Areas)—	
Firebreak construction—	
Felling dangerous trees	93.6
Stacking and burning	61.4
Firebreak improvement	157.3
Firebreak maintenance—	
Chipping and/or ploughing	1,955.8
Burning	736.6
Roads	35.0
Grading	232.9
3. Cleared Breaks (Plantations)—	
Firebreak construction—	
Temporary breaks for scrub burning	29.0
Clearing	129.9
Rotary hoe	13.7
Grading	21.3
Firebreak maintenance—	
Chipping	116.6
Ploughing	—
Burning	100.5
Rotary hoe	187.1
Grading	80.3

Capital Improvements.—As during the past few years considerable attention was paid to provision of improved accommodation for the field workers and this is shown on list set out below.

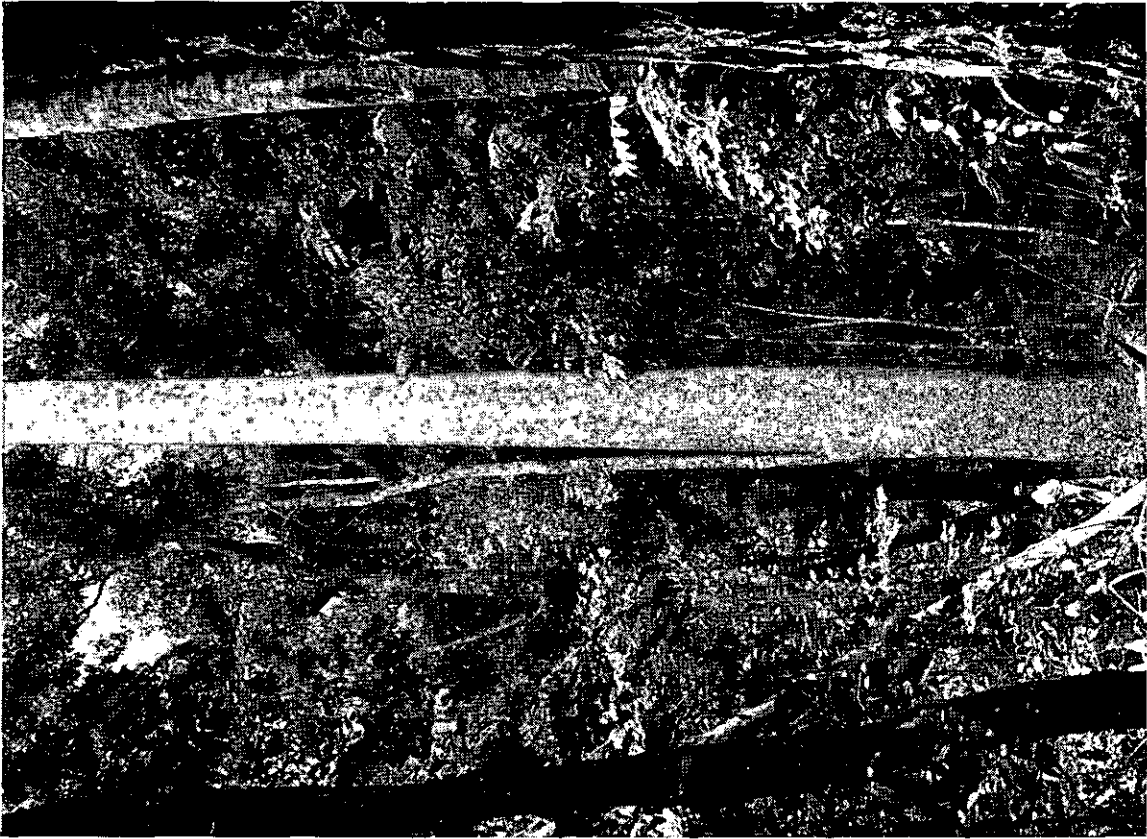
The barracks-building programme was maintained at a steady rate and over 700 employees are now so accommodated.

One further ranch was completed and others are listed for construction.

Generally, there was a stepping up of all works under this heading, while more satisfactory progress was made in the painting jobs so long delayed.

Major items of construction were:—

Item.	Completed 1950-51.	Under Construction.
Cottages	3	4
Barracks	32	13
Bathrooms	65	6
Galleys	42	6
Lavatories	80	6
Double Rigs	87	10
Single Rigs	9	3
Laundries	15	2
Ranches	1	..
Office—tool sheds	1	1
Garage—storerooms	15	3
Offices	1	2
Lookouts	1	..
Sheds, tubing shelters, &c.	4	..
Magazines	3	..
Grids	3	..
Smithies	2	..
Water Towers .. .. .	..	1
Horse Paddocks .. .. .	..	1
Nurseries .. .. .	..	1



KAURI PINE—KIRRAMA, NORTH QUEENSLAND.
Another valuable softwood. The output has dropped from 12 to 5 million super. feet in the last ten years.



A FINE SPECIMEN OF HOOP PINE—A VANISHING ASSET.
The cut of Hoop and Bunya Pine from Crown land fell from 146,000,000 s. ft. in 1940-41 to 46,500,000 in 1950-51.

Expenditure and Labour.—Expenditure on reforestation works for the first time exceeded the million pounds mark, the figure being £1,111,570.

Details are in Appendix H. but major headings are:—

	£
Plantations	226,942
Natural Regeneration	19,199
Nursery working expenses	32,038
Protection (including fire-fighting)	206,272
Research	7,459
Capital improvements	141,784
Surveys	10,190
Wet time, holidays, leave	165,321
Tools, tents, cartage, supervision	219,294
Workers' compensation	12,852
Pay-roll tax	21,542
Cartage of rations, &c.	11,383
Camping allowance	68,639
Depot stock	<i>Credit</i> 31,345
	£1,111,570

Average monthly employment during the year on reforestation works was 1,848, which is slightly in excess of the 1949-50 figure, but employment at 30-6-1951 was 1,833, or 33 less than at 1-7-50. This figure includes 308 New Australians.

ACQUISITION OF LAND.

During the year 1950-51 an amount of £14,127 6s. 3d. was expended on the acquisition of areas for forestry purposes. The areas concerned have been, or will be, reserved as either State Forests, National Parks, or Timber Reserves.

Fourteen properties, covering a total area of 7,590 acres, were purchased at a cost of £8,228 5s. 4d. In four instances resumption action was taken, the total area involved being 434 acres. Compensation paid during the year in respect of areas resumed amounted to £2,607 18s. 7d.

In several cases lessees of grazing tenures have consented to surrender their areas for Forest Reservation and subsequent granting of Special Lease under Forestry conditions.

Compensation amounting to £2,300 5s. 9d. was paid in respect of improvements on Forest Grazing Leases resumed for Departmental reasons.

During the year three properties were generously donated to the Department.

In June, 1950, Mr. G. Lambert gave part of portion 86, parish of Numinbah, for National Park purposes. This is Mr. Lambert's second free grant to the Department.

In January, 1951, Mrs. F. E. Rudder presented subdivision 108 of portion 25, parish of Numinbah, and in November, 1950, Mr. D. J. Kynoch made a gift of part of portion 3v, parish of Buaraba, both donations being for National Park purposes.

In addition, the surrender of an area of 95 acres, being portion 423, parish of Durundur, which was donated by Mr. Inigo Jones, has now been completed.

The Department here places on record its appreciation of these generous gifts to the people of Queensland.

FIRES.

During 1950-51, 55 outbreaks of fire on or threatening forest reservations were reported and investigated.

These reports are summarised as follows:—

Magnitude of Fires.—

½ Acre or Less.	Over ½ Acre to 10 Acres.	Over 10 Acres and under 100 Acres.	Over 100 Acres.	Figures not Known.
3	9	26	16	1

Causes.—

Unknown.	Deliberate.	Burning Logs.	Railways.	Burning off Grass.
28	17	4	3	1
Escape from Camp Fire.		Break Burning Process getting out of Control.		
1		1		

FOREST SURVEYS.

Thirteen fully-equipped survey camps operated for the greater part of the year.

Total expenditure for survey work amounted to £30,047 2s. 5d., of which £19,857 7s. 7d. was chargeable against Harvesting and Marketing projects and the balance £10,189 14s. 10d. against Reforestation projects.

As a result, 2,651 acres were dealt with by intensive contour and assessment survey (Class 3), 198,859 acres were assessed (Class 2), 21,682 acres were subjected to either fire-break, compartment, or soil survey, 94,499 acres covered by Forest Inventory Survey entailing the establishment of 744 new plots and the remeasurement of 49, whilst 13,604 acres were closely inspected (Class 1 Surveys).

Miscellaneous district surveys, mainly concerned with planting, were carried out as required.

Mileage completed was—

	Miles	Chains
Theodolite and chain	4	58
Compass and chain	768	31
Strip survey	1,475	02
Compass and step	8	71
Elevations, old boundaries	40	51
Cross Sections	14	04
Access roads, pack tracks	23	59

Briefly, the operations in each district were—

Atherton.—Two camps operated—one completing timber assessments for Soldier Settlement in the parish of Glady and a strip survey of vacant Crown land, Palmerston, plus miscellaneous surveys in Hull, Rockingham, and Dirran. From March until the end of report period, traverse was carried out of flooding levels for salvage logging at Culpa. The second camp was wholly engaged on Class 2 Surveys of Timber Reserve 55, parish of Whyanbeel, covering approximately 3,200 acres.

Dalby.—Three camps operated, one on compartment and forest inventory survey of Reserves 21 and 50, Goldsmith, one on similar work on R.61, Stretchworth, and a third on cypress pine assessment of Hognanthulla and Hillside Holdings in the Mungallala district.

Gympie.—Firebreak and related surveys on the Brooloo, Imbil, Kandanga, Como, Cambroon, and Widgee forests, together with assessments for land acquisitions, occupied the period for one camp, while soil and compartment survey for exotic plantations continued at Coondoo for the second camp.

Maryborough.—Soil and firebreak surveys for exotics on R.915, Poona, were continued, whilst a second camp was engaged on Forest Inventory Survey at R.57, St. Mary.

In the Bundaberg area, one camp was engaged on Class 2 Survey of R.54, Bania, and adjoining portions, but was closed down in March owing to lack of transport.

A fourth camp continued Class 3 Survey of the Granite Creek catchment of R.67, Thornhill. Sample plot work on plantations at Gallangowan and Kilkivan was effected by a fifth camp.

Miscellaneous surveys included acquisition, compartment, road, and related surveys on various reserves throughout the District.

Brisbane.—A two-party camp operated throughout the year, mainly on compartment and soil surveys on R.611 and 638, Beerwah.

Sample plantation plots were also established on the Jimna plantations.

Early in April, a new camp was established at Jimna, whose duties will be mainly firebreak surveys.

Brisbane Valley.—Two small camps operated, mainly engaged on firebreaks and the survey of falling areas. Compartment survey of State Forest 509, Crow's Nest, was partially completed.

Many Peaks.—Sample plots were established on plantations at R.95, New Cannindah.

NATIONAL PARKS.

The sum of £44,821 was expended on National Parks work in 1950-51.

The parks on which works were carried out were:—

South Queensland.—(1) Lamington; (2) Springbrook; (3) Tamborine; (4) Numinbah Valley; (5) Cunningham's Gap; (6) Killarney; (7) Bunya Mountains; (8) Ravensbourne; (9) Mount Glorious; (10) Montville; (11) Burleigh Heads, and (12) Noosa.

(1) to (4) are highly scenic rain-forest areas on the Macpherson Range and foothills; (5) to (8) are interesting and striking forested tracts on the Great Dividing Range and offshoots; (9) and (10) have been reserved for their scenic quality and are situated on the coastal D'Aguilar and Blackall Ranges; while (11) and (12) are rocky forested coastal areas and preserve the natural character of the regions.

Central Queensland.—(1) Eungella; (2) Finch Hatton; (3) Long Island.

(1) and (2) are on the summits and slopes of the coastal range west from Mackay, while (3) is a mountainous island of the Whitsunday group separated by a narrow and beautiful sea passage from the mainland east of Proserpine.

Work had ceased on South Molle Island (in the same locality) just prior to the commencement of the financial year.

North Queensland.—(1) Lakes Barrine and Eacham; (2) The Crater; (3) Millstream Falls; (4) Palmerston Highway; (5) Dunk Island; (6) Green Island.

(1) and (2) are old volcanic craters, the lakes being deep and relatively extensive bodies of clear water, while The Crater is a narrow vent, with sheer walls dropping several hundred feet to a stagnant pool. Jungle surrounds the craters, and there are running streams and pretty waterfalls. Dunk Island is vegetated and mountainous, while Green Island is a sand cay carrying a heavy growth of coastal trees, and set in coral reefs. The Palmerston Highway National Park embraces a rugged area of jungled gorges, with many waterfalls and fine vistas.

In all, the parks present a great variety of scenery and of forest and plant life, and a correspondingly diversified population of fauna. The aim is to keep the parks unspoilt, for the complete enjoyment, education, recreation, and cultural uplift of the people, for all time.

The work carried out was mainly provision and maintenance of easy access by walking tracks. These tracks, while causing a minimum of interference, make it possible for any person really desirous of seeing the features of the parks to do so, and, in fact, are the only practicable means of giving immediate access to many scenes of great charm. About 14½ miles of such tracks were constructed, and approximately 175 miles maintained.

Other works included provision and maintenance of fire-places, rest areas, and other amenities; construction and maintenance of access facilities (Bunya Mountains road, Green Island jetty) and other works of a similar nature.

The number of men employed at 30th June, 1951, was 76.

Officers reported a considerable increase in the number of visitors to National Parks, the total being estimated at considerably in excess of 200,000 persons. This is proof of the great value of the areas, both as recreational and tourist resorts. Rangers also report a lessened tendency to vandalism and the committing of breaches against national park law.

The National Parks Ranger at Brisbane has presided over and addressed several meetings of honorary rangers during the year. Other public addresses have been given at various times.

HARVESTING AND MARKETING.

General.—For the greater part of the year under review weather conditions were again unfavourable for log extraction. This, in addition to heavy rains experienced in year 1949-50, had an adverse effect on roads generally and has been a dominating factor in the reduced supplies of logs.

In the western Cypress pine forests wet conditions from July to March had an adverse effect on Cypress pine deliveries, which is reflected in a reduced cut by purchasers of standing timber of 2,650,000 superficial feet less than last year.

Due to continual wet weather, logging contractors have again been seeking avenues of employment which are not governed, to such a large extent, by the vagaries of weather, with consequent loss of earning capacity, and have diverted plants to road works, clearing operations and reclamation works. This has meant that, in some cases, when short spells of fine weather would have permitted logging activities, contractors were otherwise occupied, which fact caused a further drop in log output.

Experienced bush workers, particularly cutters, tractor and truck drivers, are becoming fewer, as these men are leaving the timber industry to take up work of a less hazardous and more congenial nature, where their earnings are not affected by wet weather.

Shortages of Railway Department "S" wagons have, on occasions, necessitated using supplementary road transport, in lieu of rail, for carriage of logs from Railway depots to sawmills.

Increases in basic wage, plant costs, rail freights, and oil and fuel prices added considerably to the cost of log production. To compensate for these increases, key market prices were increased on three occasions during the year.

Unfortunately, costs are still rising in every avenue connected with the timber industry and further rises in key market prices are inevitable.

Despite these adverse conditions, the volume of Crown logs handled for the period was 187,000,000 superficial feet, against a total of 202,000,000 superficial feet last year, which must be regarded as satisfactory. Credit is due to those who were engaged in the industry under these most trying circumstances.

Hoop and Bunya Pine log output showed a decline of approximately 8,500,000 superficial feet in comparison with the previous year. However, an increase in plantation thinnings of approximately 4,000,000 superficial feet has assisted in alleviating the shortage of pine logs.

Building hardwoods and scrub hardwoods showed a decrease of only 1,200,000 superficial feet for the period.

As previously mentioned, the Cypress Pine log cut was 2,650,000 superficial feet lower.

The requirements of the Railways Department and the Main Roads Commission for constructional timbers were again given close attention during the year. A very definite improvement in deliveries of sleepers and hewn railway timbers has resulted.

Production of sleepers for railways was increased by 122,000 pieces, and the organisation now operating should continue to improve supplies of constructional timbers to both Departments.

The demand for log timber throughout the year was keen. Blocks of standing timber offered by auction were readily sold, and where issue of a sawmill license was permitted bidding was strongly competitive. In a number of cases prices well above upsets were realised.

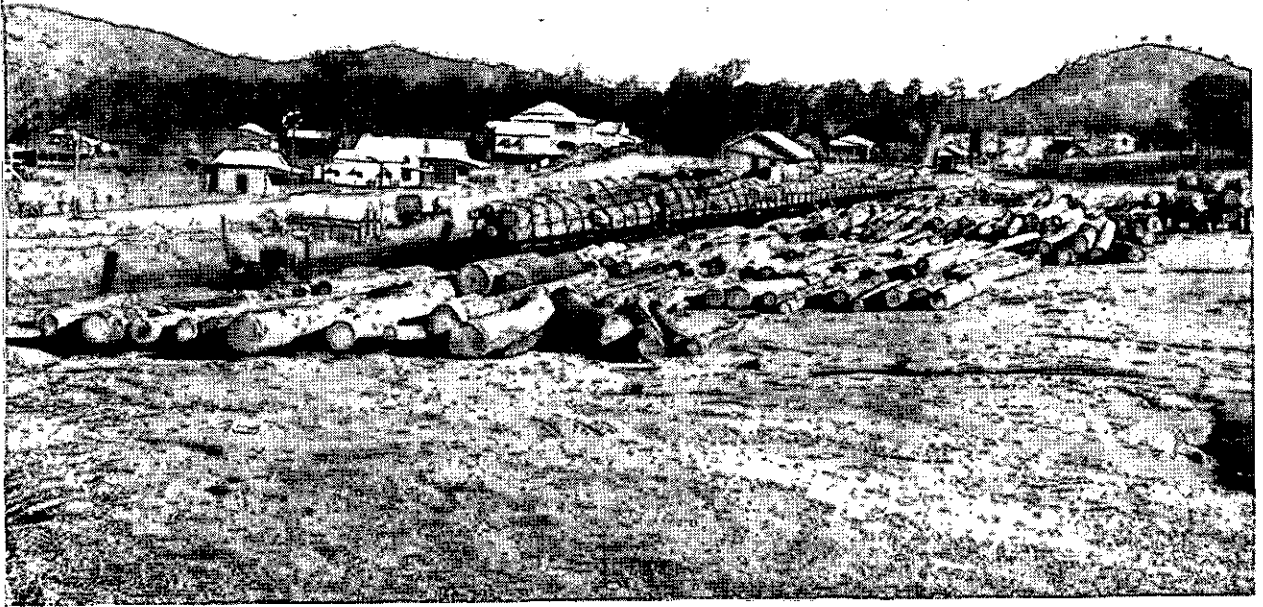
Tenders called for cutting, hauling, and delivery of log timber again met with poor response, and competition was virtually non-existent, many contracts being arranged by negotiation after closure of tenders.

The gross revenue from timber sales for the year was £1,279,446, and the net revenue after meeting logging and other costs was £551,738, an increase of £263,603, due to substantially increased key market rates for pine and to the fact that in the year 1949-50 key market rates were not increased in keeping with increased extraction costs.

Mill Logs Cut—Crown and Private Lands.—This table shows logs cut by all mills in the State for the periods indicated:—

Year.	Queensland Grown.							Im-ported.	Total.
	Hoop and Bunya Pine.	Kauri Pine.	Plantation Thinnings.	Cypress Pine.	Hardwoods.	Cabinet Woods.	Miscel-laneous.		
	(1,000 superficial feet)								
1945-46 ..	98,690	9,265	..	13,919	131,054	19,283	26,749	46	299,006
1946-47 ..	95,874	8,706	..	22,270	158,227	25,038	38,515	180	348,810
1947-48 ..	82,336	6,072	2,739	28,711	186,444	23,371	45,903	2,432	378,008
1948-49 ..	69,104	4,406	6,626	33,524	211,553	23,117	55,564	5,964	409,858
1949-50 ..	55,779	4,904	8,384	37,159	218,649	23,913	57,871	9,499	416,158
1950-51 ..	33,809	4,190	8,240	23,438	162,736	15,539	38,896	6,226	293,074
(9 months to 31.3.51)									

The quantity of logs cut by all mills during the 9 months ended 31st March was 23,800,000 s. ft. less than for the same period in 1949-50, but some leeway may be made up in the June quarter of 1951 when the weather was more favourable for logging.



THE FORESTS YIELD THEIR TREASURE.

Loading depot for logs from a State Forest. The Crown forests provided over 223,000,000 s. ft. of timber for milling and other purposes during the year.



LOADING CYPRESS PINE LOGS ON A WESTERN STATE FOREST.

With the depletion of supplies from coastal forests this durable timber is now in great demand.

Mill Logs (Crown Lands).—The following are the annual quantities delivered from Crown lands as from 1940-41:—

	Super. feet.
1940-41	228,000,000
1941-42	232,000,000
1942-43	199,000,000
1943-44	202,000,000
1944-45	193,000,000
1945-46	190,000,000
1946-47	220,000,000
1947-48	204,000,000
1948-49	208,000,000
1949-50	202,000,000
1950-51	187,000,000

A comparison of quantities of the various species of log timbers cut from Crown forests during the past five years is illustrated hereunder:—

Year.	Hoop and Bunya Pine.	Kauri Pine.	Cypress Pine.	Forest Hardwoods.	Scrub Hardwoods.	Cabinet Woods.	Miscel- laneous.	Plantation Timbers.
	(1,000 superficial feet)							
1946-47	34,119	8,957	12,375	51,029	8,228	22,927	20,618	2,005
1947-48	78,811	5,418	14,851	52,148	9,145	15,956	24,735	3,021
1948-49	66,739	3,986	19,612	58,727	10,006	15,376	26,889	6,268
1949-50	55,215	4,906	18,317	59,272	11,417	16,452	27,735	8,648
1950-51	46,588	5,055	15,667	61,618	7,907	13,324	24,948	12,313

The Timber Business, 1950-51.

CROWN SALES.

(a) Mill Logs—	1949-50.	1950-51.
Hoop and Bunya Pine	55,215,000 super. feet	46,588,000 super. feet
Forest Hardwoods ..	59,272,000 super. feet	61,618,000 super. feet
Scrub Hardwoods ..	11,417,000 super. feet	7,907,000 super. feet
Cypress Pine	18,316,000 super. feet	15,667,000 super. feet
Kauri Pine	4,906,000 super. feet	5,055,000 super. feet
Cabinet Woods ..	16,452,000 super. feet	13,324,000 super. feet
Miscellaneous Species	27,735,000 super. feet	24,948,000 super. feet
Plantation Timbers ..	8,648,000 super. feet	12,313,000 super. feet
Total Crown Mill Logs ..	201,961,000 super. feet	187,420,000 super. feet
(b) Construction Timbers—		
Headstocks, Transoms, Crossings, Braces ..	240,000 super. feet	278,000 super. feet
Sleepers	526,000 pieces	648,000 pieces
Girders, Corbels, Piles, Sills Girder Logs ..	151,000 lineal feet	{ 91,000 lineal feet 287,000 super. feet
Poles	371,000 lineal feet	451,000 lineal feet
House Blocks	195,000 lineal feet	215,000 lineal feet
Mining Timbers ..	367,000 lineal feet	220,000 lineal feet
Mining Timbers ..	88,000 pieces	44,000 pieces
Gross Receipts from Timber Sales	£1,010,460	£1,279,446
Net Revenue	£288,135	£551,738

Logging.—During 1950-51 the following quantities were hauled and payments made to contractors to the Department:—

Class.	Quantity.	Expenditure.
	Super. feet.	£
South Queensland—		
Hoop and Bunya Pine	30,877,313	
Forest hardwoods	2,213,996	
Scrub hardwoods	335,710	
Miscellaneous	1,350,826	
Red Cedar	3,179	
	34,781,024	209,714
North Queensland—		
Kauri Pine	2,081,762	
Cabinet-woods	8,502,567	
Forest hardwoods	1,101,753	
Scrub hardwoods	3,542,704	
Miscellaneous	10,316,400	
Red Cedar	258,411	
	25,803,597	181,712
Totals	60,584,621	391,426

The Plywood Industry.—Returns from plywood and veneer mills covering the quantities of logs treated during year 1950-51 are not yet available. However, manufactured deliveries were as follows:—

	Square feet.	£
Through the Northern Board	33,661,949	589,084
Through the Southern Board	52,708,010	1,054,160
	86,369,959	£1,643,244

The distribution of the product was as follows:—

	Southern Board.	Northern Board.	Total.
	Sq. ft.	Sq. ft.	Sq. ft.
Queensland	21,422,133	15,653,662	37,075,795
Interstate	31,285,877	18,008,287	49,294,164
	52,708,010	33,661,949	86,369,959

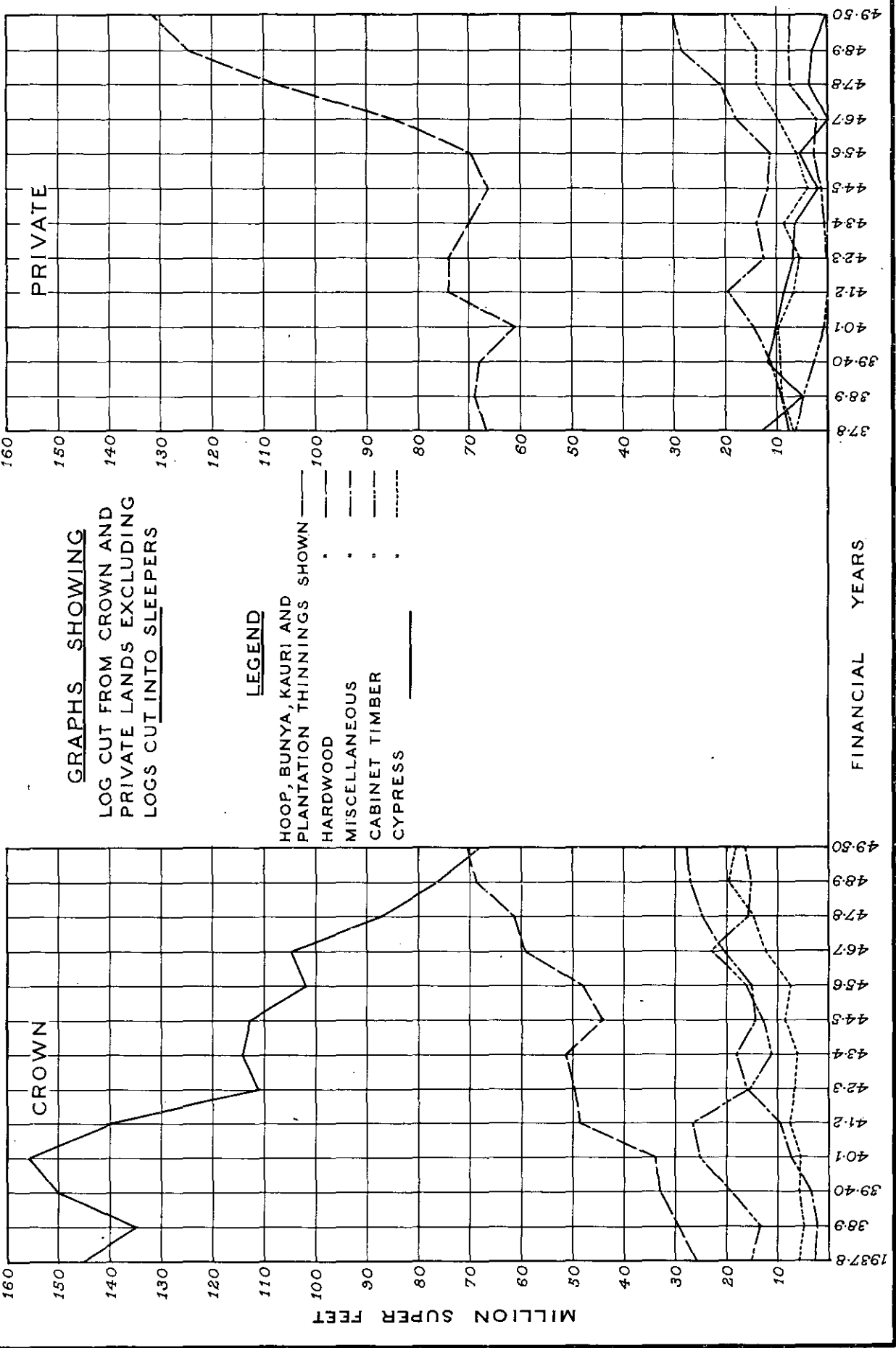
Timber Felling and Timber Getting Award—State.—During the twelve months under review the basic wage under the above Award was varied as follows:—

	£ s. d.	£ s. d.
On 31st July, 1950	6 19 0	to 7 2 0
On 30th October, 1950	7 2 0	to 7 5 0
On 7th December, 1950	7 5 0	to 8 0 0
On 5th February, 1951	8 0 0	to 8 5 0
On 30th April, 1951	8 5 0	to 8 12 0

Piecework cutting rates were adjusted to conform with variations in the set-to-earn cutting rates, and hauling and snigging allowances were adjusted to conform with variations in the owner-truckdriver rate and tractor driver-offsider rates as provided in this Award and the Engine Drivers' Award. In December, 1950, and June, 1951, increased costs of plant, materials, oil, fuel, &c., were also taken into consideration, and adjustments in allowances to purchasers and payments to contractors made accordingly. Stumpage prices to purchasers at stump were reduced to allow for increases granted in logging costs.

Hewn Timber Prices.—The abovementioned increases in award rates have affected the prices of hewn timbers as follows:—

	1-9-50.	1-10-50.	7-12-50.	5-2-51.	30-4-51.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Sleepers—squared 7 feet per 100 pieces ..	40 18 6	40 18 6	44 6 0	45 4 9	46 11 0
Sleepers—hogback 7 feet per 100 pieces ..	33 6 5	33 6 5	35 19 5	36 14 1	37 14 8
Crossing timbers per 100 super. feet ..	2 2 7	2 2 7	2 5 8	2 6 6	2 7 8
Transoms per 100 super. feet ..	2 16 6	2 16 6	2 19 11	3 0 10	3 2 1
Headstocks per 100 super. feet 9 inches by 6 inches ..	2 5 10	2 5 10	2 9 5	2 10 5	2 11 9
Headstocks per 100 super. feet 12 inches by 6 inches ..	2 7 0	2 7 0	2 10 7	2 11 7	2 12 10



Key Market Rises.—There were three increases in key market rates during the year to cover increased costs, a full statement of which can be seen by referring to Appendix E.

Logging Roads.—Two forestry road engineers have been employed full time for the period, and, with the appointment of a third engineer to Mackay district, more efficient supervision of an expanding road programme will be possible.

The policy laid down is that for road works in excess of £5,000 the constructing authority is to be the Main Roads Commission, the Forestry Department to be responsible for location and working surveys. For projects under £5,000 the Forestry Department is to be responsible for both survey and construction.

For the year under review on Main Roads Commission projects £153,327 was spent on construction and £38,537 on maintenance. These roads are built to a high standard and will give service under all weather conditions.

Under Forestry Department projects 75 miles of new logging roads were built and location and working surveys covering 107 miles were carried out.

Maintenance of existing Forestry roads was carried out and Shire Councils were subsidised where heavy log transport created damage to Shire roads.

Expenditure from Forestry Votes was as follows:—

	£.
Construction	64,245
Maintenance	26,741
Subsidies to Shire Councils	6,942
Investigation Surveys	2,172
Workers' Compensation	321
Pay Roll Tax	1,256
	£101,677

Constructional Timbers—Departmental Contracts.—The supply of constructional timber under Departmentally-arranged contracts, as compared with the two previous years, is as follows:—

	1948-49.	1949-50.	1950-51.
Sleepers	285,067 pieces	341,898 pieces	463,181 pieces
Crossings	138,550 super. feet	97,621 super. feet	114,403 super. feet
Transoms	151,039 super. feet	114,537 super. feet	97,950 super. feet
Bridge timbers (round)	61,963 lineal feet	83,372 lineal feet	52,347 lineal feet
Bridge timbers (square)	65,509 super. feet	46,560 super. feet	45,444 super. feet

Sandalwood and Rosewood.—The following figures show the position regarding supply and sale of Rosewood and Sandalwood during the year under review:—

<i>Rosewood—</i>		T.	C.	Q.	L.
In stock, 1st July, 1950		72	4	0	0
Purchased during year		7	6	0	0
		79 10 0 0			
Exported to China		50	0	0	0
		29 10 0 0			
	On hand, 1st July, 1951				
<i>Sandalwood—</i>					
In stock, 1st July, 1950		6	1	1	4
Less loss in store		0	12	1	18
		5 8 3 14			
Exported to China		5	8	3	14
		Nil			
	On hand, 1st July, 1951				

SAWMILL LICENSES.

During the year the policy was maintained of granting sawmill licenses to—

- (a) Applicants stating that they had supplies of privately-owned timber available to them. 144 such licenses were issued. In these cases it is stipulated that operations must be maintained from private timber supplies only.
- (b) Applicants purchasing Crown timber at auction where conditions of sale provide that a license would be granted to the purchaser. Nine licenses were so issued.

The following table sets out the position at the commencement and at the end of the twelve months:—

Number of Licenses as at 30-6-50.	Sawmill Classification:	New Licenses Granted.	Number Ceasing to Operate.	Mills Re-licensed.	Restrictions Withdrawn.	Formerly Restricted now Unrestricted.	As at 30-6-51.
887	General mills	138	39	1	..	4	991
60	Case mills	3	6	..	2	..	55
37	Sleeper mills	9	4	..	1	..	41
19	Other restricted	2	3	..	..	..	18
60	Resaw and processing	1	2	..	1	..	58
1,063		153	54	1	4	4	1,163

OFFENCES.

During the year 1950-51, 198 cases of offences against Acts and Regulations administered by the Department were reported. This is, regrettably, the largest number of cases dealt with in any year.

Action was taken as follows:—

Twenty-six prosecutions (involving 28 people) with fines totalling £137 and proceeds from the sale of timber involved amounting to £178 13s. 8d.;

Four cases of prosecution are pending;

In 70 cases the value of the timber was collected and warnings issued, whilst in another 41 cases warnings only were issued;

In 5 minor offences no action was taken;

In 16 cases insufficient evidence was available, whilst 21 cases are still receiving attention but action has not been completed.

As a result of action taken in all cases the total value of timber recovered amounted to £1,554 0s. 10d.

Under the Timber Users' Protection Act, which was proclaimed on 3rd January, 1950, 15 complaints were lodged and investigated.

It is of interest to note that, of the 198 cases reported, 41 cases dealt with offences on the National Parks and, from these, 9 prosecutions (involving 10 people) eventuated, with fines amounting to £25.

Eleven cases of timber cut without authority on Main Roads were investigated by officers of the Department and the matter then referred to the Main Roads Commission to deal with the offenders.

FOREST PRODUCTS RESEARCH.

General.—Because of the number of enquiries, covering many aspects of timber utilisation, received from all sections of the community, work has been directed mainly to the answering of these enquiries and there has been limited opportunity to pursue research projects.

Collaboration has been maintained with other institutions—amongst the most active being the Divisions of Forest Products and Entomology of the C.S.I.R.O.; the Defence Research Laboratory of the Department of Supply and Development; the Museum of Applied Arts and Sciences, Sydney; Division of Wood Technology, Sydney—as well as with numerous State Departments, to all of which it is desired to express grateful appreciation of their ready and valuable assistance throughout the year. In particular, special appreciation is due to the Government Botanist and the Chief, Division of Forest Products, C.S.I.R.O., Melbourne, and their officers.

Preservation.—The main activity in this field has continued to be in the application of treatment of timbers susceptible to the Powder Post Beetle. Some 25 major enquiries were received from firms seeking advice in the design of plants suitable for their particular requirements. Numerous enquiries were received from firms operating preservation plants and who desired advice in problems that arose in their routine operations. Individual instruction in plant operation and control was given to the staff of 14 firms, and lectures and demonstrations were given to interested industrial groups. The general position is that treatment practices are well established in this State and are now on a sound footing. Some problems involving refinement of details remain, but these are of a minor nature and will be attended to as soon as time permits.

At 30th June, 1951, 46 plants were operating in Queensland and had been registered under the Timber Users' Protection Act, while a further three plants were under construction. Of these plants 20 are treating veneer.

During the year 128 enquiries dealing specifically with various aspects of the Timber Users' Protection Act were received.

There has been sustained demand from the public generally for advice on the treatment of borers in houses. An advisory leaflet was prepared on the subject and this leaflet has been widely distributed.

Laboratory work, which is being supplemented with research at commercial treatment plants, has been directed towards developing improved schedules for treatment using boric acid, borax for hot-cold, steam-cold quench, cold soak and surface treatments. Details of plant design have been examined to effect economies in installation and operating cost. Investigations of treatment schedules using fluorines and chlorinated phenols have been carried out. Laboratory procedure to determine the concentration of toxic agents in treatment solutions and in treated timber is not regarded as being satisfactory, and is still under examination.

In co-operation with the Railway Department, some 700 sleepers, involving several different treatments with creosote and crude oil, were laid down in the metropolitan area. This test is designed to determine if the increase in service life is economically attractive. The sleepers laid down in the tests will be subjected to regular inspections at periods of from five to two years.

Other activities have been concerned with termite and marine borer resistance of constructional timbers, with various fungi including yellow doze and brown rot in Cypress Pine, and brown heart in Hoop Pine. The material from 12 species has been supplied to the Division of Forest Products, C.S.I.R.O. for tests on their treatability with creosote.

Plywood and Veneer.—The increase in the number of ply mills operating has led to a greater number of samples of basic materials for adhesives being submitted for examination.

Tests were made of lime from new sources of supply, and advice given to firms re changed glue formula to suit the chemical content of the lime.

Casein supplies have become critical and the industry is facing a serious position, the solution of which is not apparent at the moment. Some substitution of soya bean is being made, but at best this can be only a partial solution of the problem. Greater interest is now being shown by individual firms in the application of extended urea resins for adhesive. Conversion to synthetic resin would have certain attractions since the variation in quality of such resins is not as great as the variations met with protein adhesives.

Chemical Laboratory.—The previously cramped position in the laboratory has been eased by the installation of additional bench space and provision of a storeroom. The laboratory has continued to provide technical analyses for industry. Chemical determinations have covered preservation, treatment solutions, and treated timber, in addition to which gluing problems have been investigated. The number of analyses carried out during the year is shown in the table below:—

<i>Preservation—</i>											
Commercial Analyses	..	..	..	..	..	..	..	..	..	680
Research Analyses	..	..	..	..	..	..	..	..	..	371
Spot Tests	..	..	..	..	..	..	..	..	..	51
										<hr/>	1,102
<i>Plywood and Veneer—</i>											
Chemical Analyses	..	..	..	..	..	..	..	..	..	76
Plywood Shear Tests	..	..	..	..	..	..	..	..	..	150
										<hr/>	226
Total	<hr/>	1,328

Drug Plant Investigation.—The search of the C.S.I.R.O. for native drug plants in Queensland has been continued during the year with the active assistance of this Department in securing leaf, bark and wood or seed samples from 33 Queensland species, which were collected and despatched to the various chemical groups co-operating in the Australian Phytochemical Survey. Compounds, several of which are pharmacologically active, have been isolated and characterised. Of special interest to timber workers is the investigation on Miva Mahogany (*Dysoxylum muelleri*) to isolate the active irritant substance which causes discomfort to mill personnel.

Seasoning.—Trade interest in kiln drying has been maintained during the year, but the number of kiln installations by sawmillers increased by only one. Several joinery firms who previously had been able to secure seasoned material from timber merchants, but who now find that seasoned material is no longer available from these sources, have installed small electrically-heated kilns to meet their requirements. A number of new veneer mills have come into operation during the past twelve months and a considerable amount of time has been spent with these firms in the design of kiln installations.

Requests for moisture content determinations were received from 138 enquirers and 550 moisture-content determinations were carried out. Air-seasoning observations were carried out on a number of timbers in the Fancywoods Yard—both air and kiln drying—approximately 50,000 superficial feet of timber in sizes from 1 inch to 2 inches stock being dried, mostly for other Government Departments.

With many new timbers coming on the Queensland market it has been found necessary to extend the list of timbers for which official moisture meter correction figures were available. The previous list contained 77 Queensland species and action is now in hand to have a further 40 timbers added. For each of these species 20 samples, supported by authentic botanical material, have been assembled and laboratory determination of moisture content correction figures is now in hand.

In collaboration with C.S.I.R.O., equilibrium-moisture surveys have been carried out in the capital cities of all States and in North Queensland, as well as for a few isolated spots in South-eastern Queensland. As a result of this work the Division of Forest Products has issued charts of Australia on which have been plotted "isomems," joining places in which timber should have approximately the same equilibrium-moisture content. Further experimental work is needed to check the accuracy of these "isomems" and with this object in view further studies have been arranged, involving test stations in Brisbane, Cunnamulla, and Atherton. The preparation of test pieces for these studies is proceeding.

Work on vapour drying has been carried out by C.S.I.R.O. over the past eighteen months, and this Department has supplied samples of Queensland timbers for testing. Whilst specific information regarding the behaviour of particular species is not yet available, it has been determined that the structural characteristics of species influence their behaviour very markedly when dried by the vapour process. Results of the work to date indicate that softwoods (non-pored timbers) are more promising than hardwoods. The main Queensland timbers in which the Department is interested are Spotted Gum, Tallowwood, and Turpentine, but should the process be found to be attractive the full range of Queensland hardwoods will be examined.

Fancywoods.—The activities of the Fancywoods Section have been maintained at a reduced level, being confined for the most part to the handling of timbers becoming available from other Sections. Sales for the year were approximately the same as for the previous year, being—

Sawn Timber	3,379 super. feet
Mouldings	3,222 lineal feet
Fishing rod pieces	922 pieces
Black Palm	12 lb.

Utilisation.—There has been an insistent demand by wood-using industries for cabinetwoods to fill the gap created by the reducing supply of native pine production. The continuous search for new cabinetwoods to replace pine for plywood, joinery, and furniture resulted in a record number of wood specimens being brought in for identification and advice upon their qualities and uses; 1,850 specimens were submitted during the year, representing 234 different species. These samples were received from various groups as follows:—

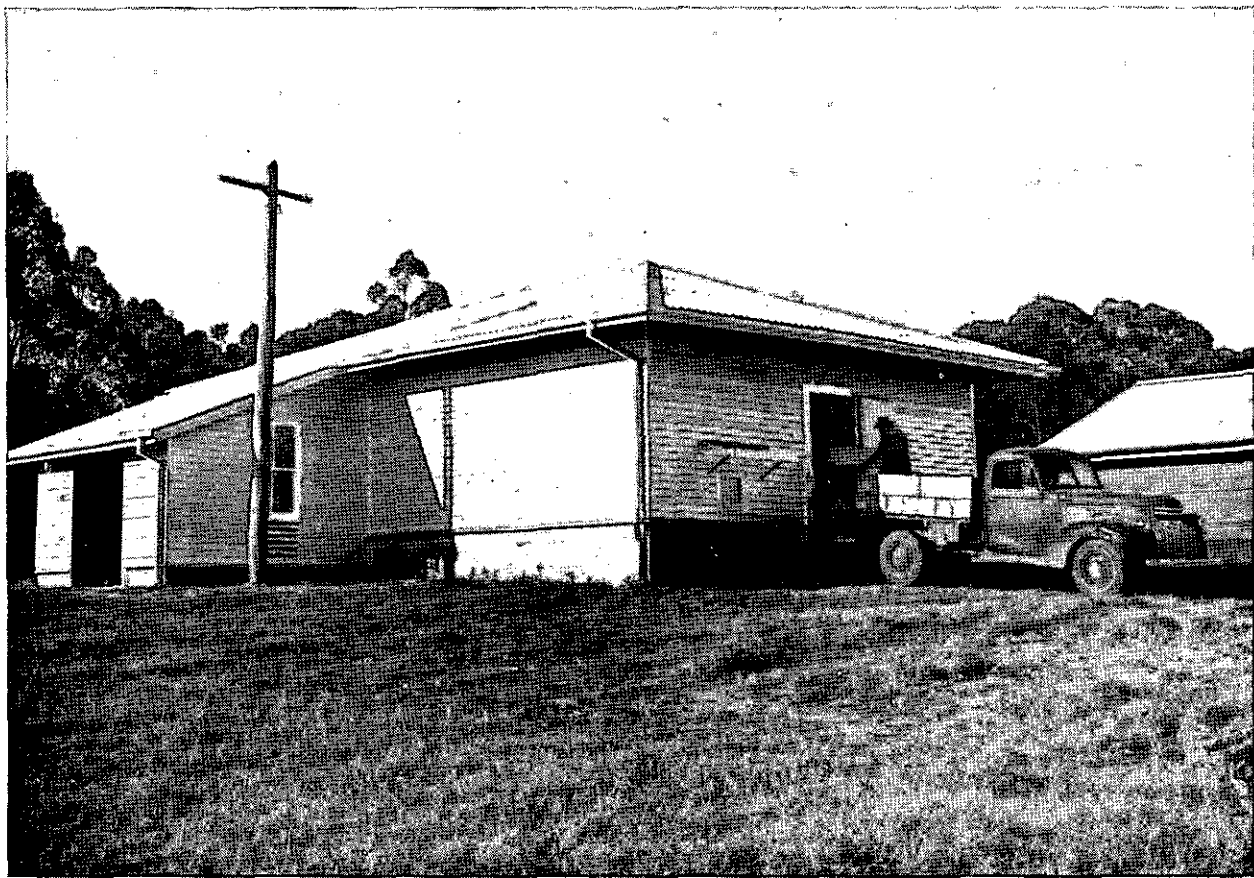
Timber Industry	943
Commonwealth and State Departments	293
Forestry Officers	614
Total	<u>1,850 Specimens.</u>

This represents an increase of 37 per cent. on the figures for 1949-50. During the year advice was received from the Government Botanist of a considerable number of changes in old-established botanical names of Queensland tree species. Such changes are inclined to produce confusion, but, following international rules on the subject, this Department has accepted the new determinations.

The increasing number of species being imported for various uses has greatly added to the number of enquiries dealt with in regard to physical properties and uses. Timbers are being imported from New Zealand, the South West Pacific, Malaya, Africa, and Europe. The importation of European softwoods for many hundreds of prefabricated houses in the Brisbane area has now reached considerable volume.

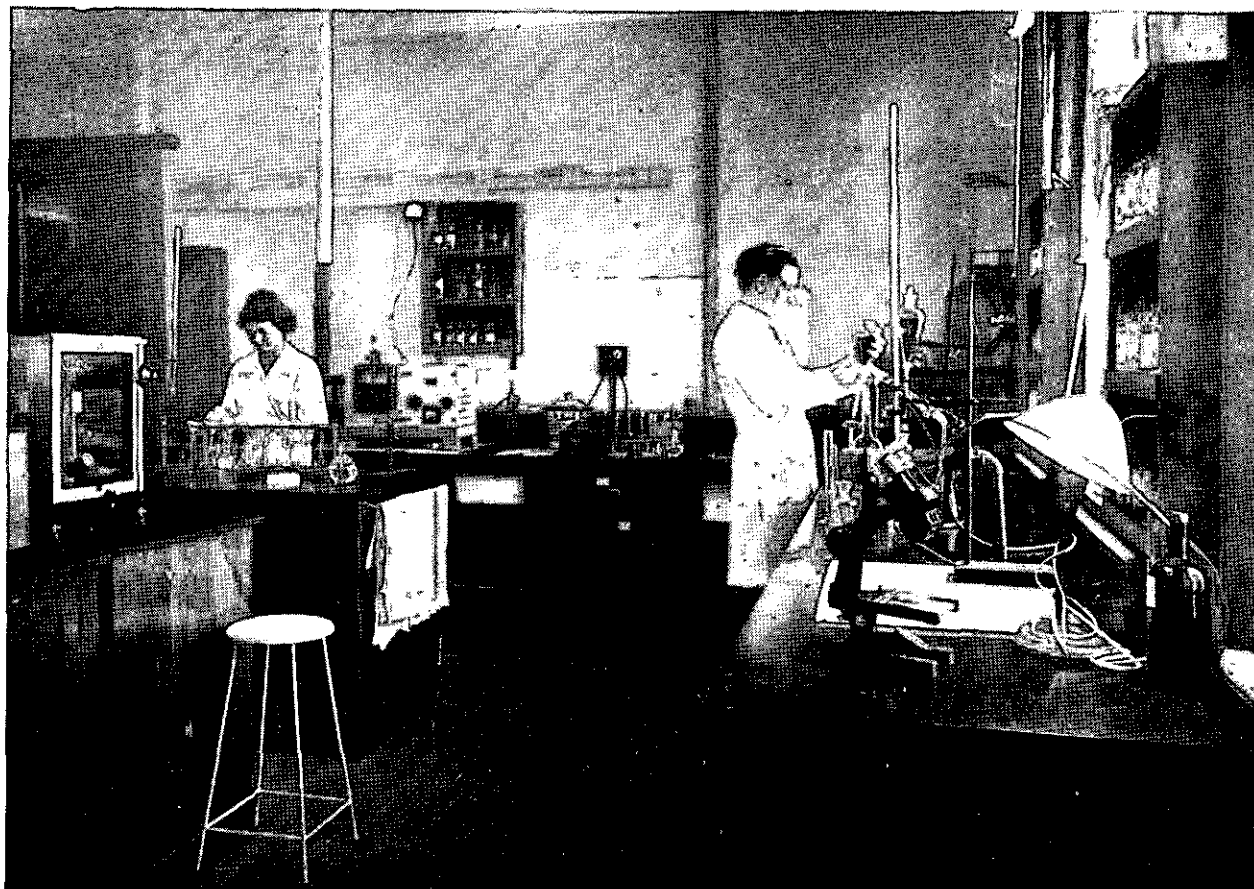
Further work on small diameter thinnings of Hoop Pine, Kauri, *Pinus caribaea*, and *Pinus taeda* showed that with lathe knives of special quality excellent veneers could be produced from plantation material. It will be some years yet before existing pine plantations will be producing logs of a size that will be economically attractive for veneering, but these early tests have clearly indicated that, in due course, there will be available to the native plywood industry a considerable volume of logs which will produce high-quality veneers.

Working through various sub-committees the Queensland Joint Committee on timber of the Standards Association of Australia has made some progress in the development of Standards covering Queensland timbers. Amongst the matters discussed, and on which progress is reported, were hardwood flooring grades, standard common names, marine and waterproof plywood, plywood for general purposes, fruit cases (standard sizes), wooden door frames and doors, rough sawn Eastern Australian hardwoods and brushwoods, and



SEED FOR FUTURE PLANTATIONS.

Part of the record collection of 33 tons of Hoop Pine seed going into the Department's new cold storage plant.



FOREST PRODUCTS RESEARCH.

The work of this Branch aims at developing the most effective and economical uses of our timbers.

hardwood flooring profiles. A forward step has been achieved in securing the concurrence of all parties concerned in the adoption of grading rules for hardwood flooring to allow non-susceptible sapwood in first and second grades.

No agreement has been reached on the question of profiles in flooring but this subject is being further pursued. In the meantime, following the recommendations of the Building Research Division of C.S.I.R.O. that a finished thickness of 9/16 inch is satisfactory for hardwood flooring, this Department has advocated its general use for domestic construction in Queensland. To date, not much interest is being shown by the trade in this thinner flooring, but it is believed that it will be generally adopted in the near future.

Mill Studies.—No further field studies have been conducted in the last twelve months, the time being devoted to an analysis of data already on hand. Data is available from 29 separate studies conducted at 27 mills as follows:—

Hardwood studies	..	..	..	..	..	..	..	12
Cypress studies	..	..	..	..	..	..	..	10
Thinnings (softwoods)	..	..	..	..	..	..	..	4
Scrubwoods	..	..	..	..	..	..	..	3
Total	..	..	..	..	..	..	..	29

The appointment of a biometrician has enabled the work to be carried to a fairly advanced stage. The most interesting conclusion from the data to date is the effect of girth on log values and rate of production for all species.

STAFF.

It is with regret that the deaths are recorded of two officers, Mr. W. J. Bowden, Senior Clerk, Atherton, and Mr. H. J. G. Cowley, Temporary Assistant, Forest Products Research Branch, Brisbane, who passed away during the year 1950-51. Mr. Bowden had had thirty years' service with the Department. An efficient officer, with a most likeable personality, his death is a loss both personally and officially.

Resignations from the permanent staff during the year totalled 22. In addition there were four transfers to other Departments and one retirement—that of Forester W. S. Joyner, who retired in January last.

There was an increase of four in the field staff, which totalled 100 at 30-6-51. The total salaried staff at this date was 308. Wages staff decreased from 2,186 at 30th June, 1950, to 2,157 at 30th June, 1951.

ACKNOWLEDGMENT.

To all my staff, whose efforts are reflected in these pages, I take this opportunity of expressing my thanks.

V. GRENNING,
Director of Forests.

21st September, 1951.

Appendices.

APPENDIX A.

Return of Timber, &c., removed from Crown Lands during the year ended 30th June, 1951.

Species.	Quantity.	
	Super. ft.	Super. ft.
Milling Timber—		
Hoop and Bunya Pine—		
Ply	8,129,042	
Logs	19,084,268	
Tops	19,374,710	
		46,588,020
Kauri Pine	5,046,535	
Cypress Pine	15,666,877	
Forest Hardwoods	61,617,612	
Scrub Hardwoods	7,871,598	
Cabinet Woods	13,305,037	
Miscellaneous Species	24,474,819	
		127,982,478
Plantation Thinnings—		
Hoop Pine	7,722,355	
Bunya Pine	208,414	
Pinus caribaea	3,754,884	
Pinus taeda	149,945	
Pinus patula	120,525	
Pinus radiata	14,552	
Pinus palustris	2,366	
Pinus longifolia	685	
Callitris cupressiformis	916	
Cedrela mexicana	58,207	
Beech	640	
Cypress	2,539	
Maple	40,335	
Silky Oak	226,870	
Teak	1,601	
Kauri	8,581	
		12,313,415
Regeneration Thinnings—		
Kauri Pine	8,555	
Maple	15,555	
Oak	1,633	
Forest Hardwoods	504	
Cedar	1,243	
Scrub Hardwoods	35,722	
Miscellaneous	473,567	
		536,779
		187,420,692

Other Classes—		Expressed as	
		Superficial Feet	(Hoppus) log measure.
Sleepers	243,210 pieces	9,242,000	
Sleeper Blocks (as sleepers contained)	400,197 pieces	14,407,000	
Transoms	97,950 superficial feet	157,000	
Headstocks, Crossings, and Longitudinals	180,169 superficial feet	288,000	
Girders, Corbels, Piles, Sills, Kerb Logs	90,892 lineal feet	1,636,000	
Girder Logs	286,933 superficial feet	287,000	
Poles	451,062 lineal feet	3,157,000	
House Blocks, Round Posts	215,119 lineal feet	1,291,000	
Round Timbers	117,222 lineal feet	352,000	
Fencing Material—Split	444,698 pieces	4,002,000	
Fencing Material—Round	229,114 lineal feet	573,000	
Decking	23,935 superficial feet	38,000	
Hewn and Bridge Timbers	43,147 superficial feet	69,000	
Mining Timbers—Split	44,062 pieces	176,000	
Mining Timbers—Round	219,682 lineal feet	439,000	
Stakes	10,232 pieces	82,000	
		36,196,000	
Fuel	79,077 tons		
Charcoal	40,770 bags		
Trees and Plants (Number)	314,908		
Sand, Gravel and Soil	147,553 cubic yards		
Rosewood	50 tons		
Mulga Wood	120 tons 1 cwt.		
Lawyer Cane	88 tons 15 cwt.		
Shell Grit	165 tons		
Sleeper Chips	7 loads		
Staghorns	18 pieces		
Offcuts	6,679 superficial feet		
Stumps and Fitches	13,899 superficial feet		

APPENDIX B.

Annual Cut—Pine—Financial Year ended 30th June, 1951.

Forestry District	Ply.	Logs.	Tops.	Total.
	Super. ft.	Super. ft.	Super. ft.	Super. ft.
Brisbane	744,045	2,212,337	1,911,295	4,867,677
Brisbane Valley	3,617,044	7,856,700	8,570,157	20,043,901
Dalby	Nil	2,320	Nil	2,320
Gympie	215,143	1,362,683	942,578	2,520,404
Mackay	Nil	485,689	320,133	805,822
Monto	1,580,901	2,961,866	3,131,931	7,674,698
Maryborough	1,971,909	4,024,868	4,332,857	10,329,634
Warwick	Nil	177,805	165,759	343,564
Total	8,129,042	19,084,268	19,374,710	46,588,020

APPENDIX C.

Constructional Timbers supplied during Financial Year 1950-51 under Forestry and Lumbering Operations.

Class of Timber.	Quantity.	Sales Value.		
		£	s.	d.
Crossing Timbers	114,403 superficial feet	3,921	12	11
House Blocks	4,688 lineal feet	477	2	3
Decking	21,775 superficial feet	843	15	0
Split Posts and Rails	29,358 pieces	3,509	18	0
Round and End Posts	8,533 lineal feet	608	8	11
Girder Logs	1,142 lineal feet	273	12	9
Girders and Corbels	15,952 lineal feet	7,096	2	3
Transoms	97,950 superficial feet	3,470	17	10
Headstocks, Longitudinals, Wales, and Braces	22,058 superficial feet	602	8	2
Kerb Logs	126 lineal feet	34	13	0
Poles	8,227 lineal feet	1,229	1	10
Piles	20,224 lineal feet	4,692	11	3
Sills	372 lineal feet	45	17	0
Sleeper Blocks (as sleepers contained)	348,754 pieces	95,780	16	11
Sleepers	114,427 pieces	42,547	1	8
Spiking Planks and Miscellaneous Timber	1,611 superficial feet	63	12	4
Total		£165,197	12	1

APPENDIX D.

Receipts under the State Forests and Timber and Quarry Regulations for the Year ended 30th June, 1951.

Districts.	Totals.		
	£	s.	d.
Group 1—South Queensland (Brisbane, Bundaberg, Gympie, Monto, Maryborough, Toowoomba, Warwick, Yarraman)	753,340	19	7
Group 2—Goondiwindi, Inglewood, St. George, Stanthorpe	10,889	11	9
Group 3—Dalby	30,963	9	0
Group 4—Charleville, Cunnamulla, Roma, Quilpie	505	9	4
Group 5—Bacaldine, Blackall, Jundah, Longreach, Muttaborra, Stonehenge, Winton, Aramac, Isisford, Jericho	759	1	4
Group 6—Clermont, Emerald, Springsure	2,268	8	9
Group 7—Gayndah, Gladstone, Taroom, Theodore, Mundubbera	202	14	0
Group 8—Rockhampton	1,269	13	0
Group 9—Mackay	6,172	3	3
Group 10—Bowen	2,838	5	1
Group 11—Townsville	6,793	0	10
Group 12—Charters Towers, Ravenswood	206	8	9
Group 13—Hughenden	286	19	10
Group 14—Cloncurry, Boulia, Kynuna, Mackinlay	402	5	7
Group 15—North Queensland (Atherton, Herberton, Cooktown, Port Douglas, Cairns, Innisfail, Ingham)	293,406	4	3
Group 16—Burketown, Coen, Croydon, Georgetown, Normanton, Thursday Island	7	12	5
Receipts—Forestry and Lumbering	1,110,292	6	9
Sale of Plants, Material, &c.	155,030	4	2
Rents and Grazing Dues	11,239	18	3
	4,769	5	5
	1,281,331	14	7
Less Treasury Refunds	1,885	6	8
	£1,279,446	7	11

COMPARISON WITH TOTALS OF PREVIOUS YEARS.

1946-47.	1947-48.	1948-49.	1949-50.	1950-51
£988,910	£1,006,797	£1,029,282	£1,010,459	£1,279,446

APPENDIX E.

The following Schedule illustrates the market price of logs during the year 1st July, 1950, to 30th June, 1951:—

Species—Standard Trade Names. (Botanical Names and Common Names in Brackets).	Log Class.	Delivery.	Prices per 100 super. feet (Hoppus measure).			
			As at 1-7-1950.	From 28-7-1950.	From 16-12-1950.	From 1-6-1951.
			s. d.	s. d.	s. d.	s. d.
Red Tulip Oak (<i>Argyrodendron peralatum</i>)	7 ft. plus	F.o.r. Cairns ..	22 1	22 1	27 10	28 10
		F.o.r. Townsville..	23 1	23 1	27 10	28 10
Red Cedar (<i>Cedrela toona</i>)	8 ft. plus	F.o.r. Cairns ..	46 1	46 1	51 10	52 10
		F.o.r. Townsville..	47 1	47 1	51 10	52 10
		F.o.r. Netherdale..	37 5	37 5	43 2	44 2
		F.o.r. Brisbane ..	44 8	60 0	66 6	67 8
		F.o.r. Townsville..	24 6	24 6	30 3	30 10
North Queensland Kauri Pine (<i>Agathis palmerstoni</i>)	8 ft. plus	F.o.r. Townsville..	25 6	25 6	30 3	30 10
Queensland Walnut (<i>Endiandra palmerstoni</i>)	8 ft. to 8 ft 11-ins.	F.o.r. Cairns ..	33 10	33 10	39 7	40 7
		F.o.r. Townsville..	34 10	34 10	39 7	40 7
Northern Silky Oak (<i>Cardwellia sublimis</i>)	8 ft. plus	F.o.r. Cairns ..	25 8	25 8	31 5	32 5
Queensland Maple (<i>Flindersia brayleyana</i>)	8 ft. to 8 ft. 11 ins.	F.o.r. Cairns ..	26 8	26 8	31 5	32 5
		F.o.r. Townsville..	33 7	33 7	39 4	40 4
Black Pine (<i>Podocarpus amara</i>)	8 ft. plus	F.o.r. Townsville..	34 7	34 7	39 4	40 4
		F.o.r. Cairns ..	22 6	22 6	29 3	30 3
Silver Silkwood (Putts Pine) (<i>Flindersia acuminata</i>)	8 ft. plus	F.o.r. Cairns ..	23 6	23 6	29 3	30 3
		F.o.r. Townsville..	27 3	27 3	33 0	34 0
White Beech (<i>Gmelina leichhardtii</i>) (<i>Gmelina fasciculiflora</i>)	8 ft. plus	F.o.r. Cairns ..	28 3	28 3	33 0	34 0
		F.o.r. Townsville..	27 8	27 8	33 5	34 5
Hickory Ash (Hickory) (<i>Flindersia iffiana</i>)	8 ft. plus	F.o.r. Townsville..	28 8	28 8	33 5	34 5
		F.o.r. Brisbane ..	32 2	45 0	51 6	52 8
Northern Silver Ash (White Ash) (<i>Flindersia pubescens</i>)	7 ft. plus	F.o.r. Cairns ..	24 1	24 1	29 10	30 10
Queensland Silver Ash (Ash) (<i>Flindersia bourjotiana</i>)	7 ft. plus	F.o.r. Cairns ..	22 10	22 10	28 7	29 7
Bolly Silkwood (Tarzali Silkwood) (<i>Cryptocarya oblata</i>)	7 ft. plus	F.o.r. Townsville..	23 10	23 10	28 7	29 7
		F.o.r. Cairns ..	22 1	22 1	27 10	29 10
Satin Sycamore (<i>Ceratopetalum succirubrum</i>)	7 ft. plus	F.o.r. Townsville..	23 1	23 1	27 10	29 10
		F.o.r. Cairns ..	21 10	21 10	28 7	29 7
Yellow Walnut (<i>Beilschmiedia bancroftii</i>)	7 ft. plus	F.o.r. Townsville..	22 10	22 10	28 7	29 7
		F.o.r. Cairns ..	20 0	20 0	25 9	26 9
Brown Pine (She Pine) (<i>Podocarpus elata</i>)	7 ft. plus	F.o.r. Townsville..	21 0	21 0	25 9	26 9
		F.o.r. Brisbane ..	21 8	22 8	29 2	30 4
White Cedar (<i>Melia dubia</i>)	7 ft. plus	F.o.r. Brisbane ..	21 8	22 8	29 2	30 4
Yellowwood (<i>Flindersia oxleyana</i>)	6 ft. plus	F.o.r. Brisbane ..	24 2	24 7	31 1	32 3
Crows Ash (<i>Flindersia australis</i>)	6 ft. plus	F.o.r. Brisbane ..	24 2	24 7	31 1	32 3
Southern Silver Ash (Bumpy Ash) (<i>Flindersia schottiana</i>)	6 ft. plus	F.o.r. Brisbane ..	24 2	24 7	31 1	32 3
		F.o.r. Brisbane ..	22 8	24 7	31 1	32 3
Bennett's Ash (<i>Flindersia bennettiana</i>)	6 ft. plus	F.o.r. Brisbane ..	23 8	20 9	27 3	28 5
Leopard Ash (Leopard's Wood) (<i>Flindersia collina</i>)	6 ft. plus	F.o.r. Brisbane ..	23 8	20 9	27 3	28 5
Yellow Almond (Bonewood) (<i>Emmenospermum alphonoides</i>)	6 ft. plus	F.o.r. Brisbane ..	23 8	20 9	27 3	28 5
Bollywood (Brown Bollywood) (Bollygum) (<i>Litsea reticulata</i>)	6 ft. plus	F.o.r. Brisbane ..	21 5	20 9	27 3	28 5
Brown Tulip Oak (Crows Foot Elm) (<i>Argyrodendron trifoliatum</i>)	6 ft. plus	F.o.r. Brisbane ..	19 11	20 9	27 3	28 5
Yellow Carabeon (Carrobean) (<i>Sloanea wooleii</i>), Brush Mahogany (Red Carrobean) (<i>Geissois benthami</i>)	6 ft. plus	F.o.r. Brisbane ..	18 5	20 9	27 3	28 5
Ivorywood (<i>Siphonodon australe</i>)	6 ft. plus	F.o.r. Brisbane ..	23 8	20 9	27 3	28 5
Flame Kurrajong (Flame Tree) (<i>Brachychiton acerifolium</i>)	6 ft. plus	F.o.r. Brisbane ..	28 5	28 5	34 11	36 1
Pink Poplar (Blush Cudgerie) (Maiden's Blush) (<i>Euroschinus falcatus</i>)	6 ft. plus	F.o.r. Brisbane ..	18 5	20 9	27 3	28 5
Red Silky Oak (Beefwood) (<i>Stenocarpus salignus</i>)	6 ft. plus	F.o.r. Brisbane ..	14 11	20 9	27 3	28 5
Rose Mahogany (<i>Dysoxylum fraserianum</i>)	6 ft. plus	F.o.r. Brisbane ..	21 5	22 8	29 2	30 4
Rose Maple (Rose Walnut) (Pigeonberry Ash) (<i>Cryptocarya erythroxylon</i>)	6 ft. plus	F.o.r. Brisbane ..	22 5	22 8	29 2	30 4
Sassafras (<i>Daphnandra micrantha</i>) (<i>Doryphora sassafras</i>)	6 ft. plus	F.o.r. Brisbane ..	21 11	20 9	29 2	30 4
Silver Quandong (<i>Elaeocarpus grandis</i>)	6 ft. plus	F.o.r. Brisbane ..	19 11	22 8	29 2	30 4
Southern Silky Oak (<i>Grevillea robusta</i>)	6 ft. plus	F.o.r. Brisbane ..	21 11	22 8	29 2	30 4
Tulip Plum (Burdekin Plum) (<i>Pleio-gynium solandri</i>)	6 ft. plus	F.o.r. Brisbane ..	23 5	20 9	27 3	28 5
White Walnut (Pepperberry) (<i>Cryptocarya obovata</i>)	6 ft. plus	F.o.r. Brisbane ..	21 9	20 9	27 3	28 5
Yellow Boxwood (<i>Planchonella pohlmanniana</i>)	All sizes	F.o.r. Brisbane ..	21 9	20 9	27 3	28 5
Scrubwood Species not elsewhere included in Forestry Sub-Department Log Price Lists—						
Light Scrubwoods	6 ft. plus	F.o.r. Brisbane ..	38 8	38 8	45 2	46 4
Heavy Scrubwoods	6 ft. plus	F.o.r. Brisbane ..	14 11	20 9	27 3	28 5
Scrubwoods and Scrub Hardwoods	7 ft. plus	F.o.r. Cairns ..	18 5	20 9	27 3	28 5
		F.o.r. Townsville..	22 1	22 1	27 10	28 10
		F.o.r. Townsville..	23 1	23 1	27 10	28 10

APPENDIX E—continued.

The following Schedule illustrates the market price of logs during the year 1st July, 1950, to 30th June, 1951:—

Species—Standard Trade Names. (Botanical Names and Common Names in Brackets).	Log Class.	Delivery.	Prices per 100 super. feet (Hoppus measure).			
			As at 1-7-1950.	From 28-7-1950.	From 10-12-1950.	From 1-6-1951.
Hardwoods	6 ft. plus	F.o.r. Brisbane, Warwick	s. d. 18 4	s. d. 18 4	s. d. 23 9	s. d. 24 9
Hardwoods	6 ft. plus	F.o.r. Maryborough, Bundaberg	17 10	17 10	23 1	24 3
Hardwoods	6 ft. plus	F.o.r. Rockhampton	18 10	18 10	26 11	28 2
Hardwoods	6 ft. plus	F.o.r. Townsville ..	23 1	23 1	28 6	26 9
Hardwoods	6 ft. plus	F.o.r. Mackay	18 10	18 10	25 0	26 4
Hoop Pine Ply	7 ft. plus	F.o.r. Brisbane	34 6	40 6	75 0	76 1
Hoop Pine "A" Quality Logs	7 ft. plus	F.o.r. Brisbane	27 6	28 3	54 6	55 7
Bunya Pine Logs	7 ft. plus	F.o.r. Brisbane	25 0	25 9	53 0	54 1
Hoop Pine Tops	7 ft. plus	F.o.r. Brisbane	17 0	17 9	43 0	44 1
Bunya Pine Tops	7 ft. plus	F.o.r. Brisbane	15 6	16 3	38 0	39 1

APPENDIX F.

Proceeds of Sales of Timber, &c., for the Period 1st July, 1947, to 30th June, 1951.

Districts.	1947-48.	1948-49.	1949-50.	1950-51.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Group 1	555,735 18 3	542,739 14 3	490,429 4 0	753,340 19 7
Group 2	6,430 3 10	9,066 14 6	13,638 14 9	10,869 11 9
Group 3	13,007 14 2	21,697 19 3	24,516 5 1	30,963 9 0
Group 4	767 5 11	438 14 6	602 7 6	505 9 4
Group 5	639 0 8	743 5 1	707 3 11	759 1 4
Group 6	1,555 19 6	2,175 1 6	2,525 4 8	2,268 8 9
Group 7	292 12 11	389 9 2	449 18 5	202 14 0
Group 8	1,029 12 7	1,248 12 4	2,146 1 6	1,269 13 0
Group 9	5,032 17 1	4,253 17 6	6,633 1 7	6,172 3 3
Group 10	1,770 11 3	4,073 5 2	2,224 10 4	2,838 5 1
Group 11	3,895 15 7	6,796 9 1	10,038 17 2	6,793 0 10
Group 12	382 2 2	210 16 5	162 4 3	206 8 9
Group 13	273 15 8	320 6 3	219 3 6	286 19 10
Group 14	164 19 11	376 12 5	345 3 1	402 5 7
Group 15	314,343 16 1	337,624 6 4	333,316 13 5	293,406 4 3
Group 16	20 3 4	17 2 0	6 9 6	7 12 5
Receipts — Forestry and Lumbering	905,342 8 11	932,172 5 9	887,961 2 8	1,110,292 6 9
Sale of Plants, Material, &c. ..	93,890 15 10	89,083 19 11	112,971 1 11	155,030 4 2
Rents and Grazing Dues	4,556 6 6	5,685 3 8	7,586 6 1	11,239 18 3
	4,176 8 5	4,360 19 2	4,821 15 5	4,769 5 5
Less Treasury Refunds	1,007,965 19 8	1,031,302 8 6	1,013,340 6 1	1,281,331 14 7
	1,169 8 8	2,019 19 6	2,880 14 3	1,885 6 8
Total	£ 1,006,796 11 0	1,029,282 9 0	1,010,459 11 10	1,279,446 7 11

APPENDIX G.

Comparative Statement of Expenditure for Years 1949-50 and 1950-51.

	1949-50.	1950-51.
Revenue—	£	£
Salaries	123,585	151,050
Travelling and Incidentals	14,445	18,529
Extra Living Allowances	1,277	1,439
National Parks	34,685	150
Fares, Printing, Stores, &c.	3,842	4,490
Cash Equivalent Extended Leave	190	835
Loan—		
Reforestation	807,574	1,111,570
National Parks		44,671
Access Roads	52,623	67,576
Acquisition of Land for Forestry Purposes	16,447	14,127
Purchase of Plant	16,413	35,299
Trust—		
Hardwood Supplies to Railway Department and Others	112,140	159,027
Harvesting and Marketing Timber	610,186	534,581
Access Roads		34,101
Treasury—		
Post-War Reconstruction and Development Fund—		
Reforestation	62,000	
Access Roads	25,641	
	£1,881,048	£2,177,445

APPENDIX H.
Summary of Loan Reforestation Expenditure, 1950-51.

Reserves.	Reforestation.				Surveys.	Protection, Firefighting, &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, &c.	Cartage of Rations, &c.	Camping Allowance.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Res. 69	87 2 4				3 15 2	624 16 0	41 7 2	163 16 4	720 4 3	124 2 4	345 12 4		29 14 0	469 14 8	1,189 18 11
Res. 215					1 6 0	948 10 8	4 17 10	1,075 10 2	787 5 4	34 1 6	171 10 8		163 10 0	285 6 2	1,022 11 6
Res. 309					6 4 8	434 12 1	3 11 6	450 3 11	1,450 3 11	578 5 1	484 0 2	38 7 9	10 10 0	1,264 3 0	2,339 13 2
Res. 446						475 15 10	10 4 8	26 15 6	782 0 4	107 8 5	83 15 4	0 7 11	27 6 0	285 11 9	685 15 8
Res. 494						510 0 1	46 19 9	751 18 2	1,608 18 0	412 9 8	175 15 6	29 11 4	104 1 0	331 1 3	1,063 7 7
Res. 571						178 9 4	14 10 5	344 14 3	1,344 14 3	32 16 0	345 6 4			861 17 0	2,470 15 0
Res. 667						1,148 16 4	112 0 7	514 11 5	1,775 8 4	574 9 4	569 10 0	18 17 6		106 3 7	4,507 17 10
Res. 702						358 0 5	4 9 8	2 5 8	369 4 7	42 5 11	82 8 7			1,237 6 10	3,062 15 2
Res. 727						55 18 1	1 2 8	2 5 8	61 18 3	11 7 5	10 4 0			74 14 6	443 19 1
Res. 729						390 0 4	17 4 9	36 16 3	61 18 3	13 12 0	15 13 1			27 5 5	89 3 8
Res. 740									54 1 0	17 12 2				33 18 1	95 5 8
Res. 1355									890 0 4	35 1 0	139 8 11			174 9 11	71 13 2
Res. 1376										238 17 3	308 0 10			308 0 10	878 18 1
Res. 1526														233 17 3	390 0 4
Pay Roll Tax															308 0 10
Administration															233 17 3
Plantation Experiments															56 15 9
Firefighting and Patrol															56 15 9
Depot Stock and Drum Account															97 9 6
										Cr. 6,752 13 4				Cr. 6,752 13 4	Cr. 6,752 13 4
										Cr. 4,894 6 9				Cr. 1,091 10 11	Cr. 1,091 10 11
										9,284 9 9	2,754 13 4	78 4 6	469 18 0	8,192 18 10	8,192 18 10
Res. 137	1,951 14 6				18 8 8	685 18 7	1,534 7 8	6,933 2 0	11,800 12 8	4,203 11 1	2,466 5 10		1,216 7 2	7,888 4 1	19,886 16 9
Res. 207	14,047 4 8				213 13 4	2,039 12 2	5 4 9	443 4 0	16,762 19 2	1,336 18 3	4,630 2 8		2,031 2 8	7,998 3 7	24,751 2 9
Res. 434															0 0 0
Res. 637															0 16 0
Pay Roll Tax															855 18 2
Administration															573 19 5
Plantation Experiments															373 19 5
Firefighting and Patrol															106 18 5
Depot Stock and Drum Account															20 13 7
	15,998 19 2				235 7 0	2,718 8 0	1,539 12 5	6,376 6 0	28,681 7 3	6,135 2 4	7,953 2 8		3,247 9 10	17,385 14 10	48,017 2 1

BRISBANE WORKING PLAN AREA.

KILCOY WORKING PLAN AREA.

APPENDIX H—continued.

Reserve.	Reforestation.			Surveys.	Protection, Firefighting, &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 Yams, &c.	Cartage of Rations, &c.			Camping Allowance.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	£ 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.	£ s. d.
Res. 4	34 1 6								1,919 7 3	1,182 15 4	397 11 1	179 17 7	201 6 0	2,031 10 0	3,950 17 3
Res. 16								13,301 2 6	7,970 4 10	2,776 0 11	706 2 1	2,083 14 0		13,546 1 10	26,937 4 4
Res. 21	1,187 4 9							85 10 3							55 0 3
Res. 61								8,584 11 11	4,040 2 11	1,790 16 4	282 16 5	1,091 9 6		7,194 5 2	15,778 17 1
Res. 76	882 13 2							2,806 12 6	1,400 1 5	1,879 18 0	188 11 10	367 10 0		2,886 2 0	5,642 14 6
Res. 83	40 6 9							2,857 0 9	1,388 14 8	523 13 7	184 15 3	837 4 0		2,879 7 6	5,682 8 8
Res. 93	410 11 2							2,863 10 10	1,128 8 2	1,67 18 6	97 13 6	63 15 0		2,882 13 1	1,248 3 11
Res. 126	208 3 2							2,903 9 11	1,534 14 7	389 0 11	11 12 4	264 6 0		2,199 13 10	4,403 3 11
Res. 150	112 3 8							6,322 16 7	3,735 9 2	1,534 15 2	411 19 8	1,082 8 6		6,744 12 6	13,067 9 1
Res. 154	209 19 10							2,912 8 7	1,051 16 8	438 0 9	112 17 2	340 17 6		1,943 12 1	4,556 0 8
Res. 155	609 13 5							284 10 1							284 10 1
Res. 204								9 8 6		1,501 15 9				1,501 15 9	1,501 15 9
Res. 328									354 14 7					354 14 7	354 14 7
Pay Roll Tax Administration															
Experiments				9 0 10											
Miscellaneous Surveys					11 3 6										
Firefighting and Patrol						1,065 17 0									
Depot Stock and Drum Account															
	3,664 17 5			9 0 10	88 9 6	33,397 18 8	1,388 11 3	4,656 16 0	43,155 13 8	15,209 19 0	10,399 9 8	2,036 5 10	5,912 10 6	33,558 5 0	76,713 18 8
										Cr. 7,556 3 4				Cr. 7,556 3 4	

DALBY WORKING PLAN AREA.

FRASER ISLAND WORKING PLAN AREA.

Res. 3	2,421 5 2				141 8 9	864 18 9	716 4 3	613 17 7	4,757 14 6	1,756 13 6	1,005 1 0	144 9 8	748 0 6	3,654 4 8	8,411 19 2
Pay Roll Tax Administration										71 9 5	183 7 0			183 7 0	183 7 0
Experiments				97 5 5										71 9 5	71 9 5
Firefighting and Patrol						60 16 2									60 16 2
Depot Stock and Drum Account															
	2,421 5 2			97 5 5	141 8 9	925 14 11	716 4 3	613 17 7	4,915 16 1	1,391 5 9	1,188 8 0	144 9 8	748 0 6	3,372 3 11	8,288 0 0
										Cr. 536 17 2				Cr. 536 17 2	

APPENDIX H—continued.

Reserves.	Reforestation.					Surveys.	Protection, Firefighting, &c.	Maintenance of Capital Improve-ments.	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.	£ s. d.						£ s. d.	£ s. d.	£ s. d.	£ s. d.			£ s. d.	£ s. d.	£ s. d.	£ s. d.
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.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		
Pomona	2,912 1 11	208 14 8	886 10 0	...	17 12 2	7,420 10 3	495 7 0	1,498 6 0	13,200 7 10	4,420 1 11	3,816 5 0	16 13 9	945 3 8	9,198 4 4	22,398 12 2					
Tewantin	...	152 13 3	...	...	...	4,693 18 1	184 4 11	44 12 8	5,101 10 4	903 3 2	1,714 12 3	11 16 6	158 4 4	2,775 19 9	7,877 10 1			
Coonoo Creek	12,731 8 0	...	2,331 14 0	...	1,085 7 11	1,913 4 9	37 9 0	117 6 6	2,280 13 6	501 16 10	565 13 8	92 9 10	...	1,069 7 0	3,350 0 6					
Por. 77v, Neeride	...	...	...	...	18 4 9	7,170 8 7	636 16 8	4,044 9 8	28,000 4 10	8,606 0 1	5,801 11 10	...	3,130 2 4	17,630 4 1	45,630 8 11			
Por. 261/262, Tucheol	...	...	...	...	57 2 10	...	...	...	34 15 1	...	...	...	...	...	34 15 1			
Res. 22/242	7,477 7 4	...	589 7 10	...	57 2 10	1,024 17 10	616 12 11	10,949 17 6	20,715 7 3	4,134 16 10	3,262 18 11	51 19 6	1,095 6 0	8,545 1 3	29,260 8 6					
Res. 124	6,989 2 2	...	633 10 4	...	6 13 4	2,162 14 3	601 18 9	2,210 6 0	12,354 6 10	2,954 17 0	4,604 2 0	119 2 10	1,460 12 8	9,138 14 6	21,493 1 4					
Res. 234	...	...	...	...	...	1,509 14 3	33 3 2	654 18 5	2,447 15 10	594 17 8	4,717 17 4	136 5 11	1,006 10 4	1,238 1 7	3,685 17 5			
Res. 392	4,886 4 6	...	1,131 1 0	...	32 5 1	4,706 0 0	387 0 7	1,651 4 2	9,823 15 4	3,688 8 4	5,077 15 8	...	...	9,448 16 2	19,272 11 6			
Res. 393	375 2 2	...	...	...	48 1 4	4,177 8 0	191 9 7	300 14 4	5,092 15 5	2,396 10 1	2,762 5 8	105 0 0	813 11 8	6,077 7 5	11,170 2 10			
Res. 502	...	...	...	...	21 6 8	3,694 17 4	23 13 9	387 14 1	2,108 5 2	1,259 0 1	1,143 3 10	2 10 0	180 15 8	2,585 9 7	4,693 14 9			
Res. 932	150 19 0	...	...	...	2 6 10	3,291 18 8	102 12 4	489 16 8	1,059 1 10	580 7 3	1,374 18 3	19 0 3	197 12 0	2,171 17 9	6,228 6 1			
Por. 1624, Gympie	...	...	...	...	3 14 7	1,056 15 0	...	...	8 14 7	20 0 11	2,08 0 5	...	...	228 1 4	1,287 3 2			
Pay Roll Tax	...	...	...	...	...	...	...	...	...	1,783 4 11	3,722 13 9	...	...	3,722 13 9	8 14 7			
Administration	...	...	...	...	...	1,825 0 5	...	...	1,825 0 5	...	...	...	...	1,783 4 11	1,783 4 11			
Firefighting and Patrol	...	...	...	...	123 0 0	...	...	...	123 0 0	...	...	...	...	...	123 0 0			
Experiments	...	...	...	...	107 12 3	...	...	...	107 12 3	...	...	...	...	...	107 12 3			
Construction of Oil Room, Storeroom and Work-shop	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Depot Stock Account	35,071 6 1	512 6 11	5,622 3 2	123 0 0	1,440 7 10	39,947 2 5	3,332 9 2	22,704 12 0	108,753 7 7	30,354 12 5	34,191 16 10	554 18 7	9,125 5 4	74,226 13 2	182,980 0 9					
Res. 135	20,753 14 7	...	2,467 12 6	...	549 1 3	2,141 4 11	2,441 2 7	13,840 9 5	32,213 5 3	20,220 7 11	12,079 3 2	137 17 9	5,204 5 3	37,641 14 1	69,854 19 4					
Res. 256	5,919 11 10	...	626 10 5	...	18 5 9	199 4 1	67 5 6	5,504	5,504	582 14 8	1,285 15 10	224 8 5	487 14 8	2,530 13 7	8,985 0 9					
Res. 274	8,009 10 11	...	870 15 3	...	34 14 4	471 8 1	401 1 8	818 1 7	10,861 7 0	2,797 11 1	3,649 19 0	90 17 9	1,607 8 0	8,145 15 10	19,007 2 10					
Res. 435	11,059 8 10	...	...	...	113 17 11	2,201 9 1	685 6 10	3,291 11 9	18,232 9 8	9,528 9 6	6,850 0 1	146 6 0	3,240 8 5	19,865 4 0	38,087 13 8			
Pay Roll Tax	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Administration	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Experiments	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Firefighting and Patrol	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Storeroom Stock Account	45,542 6 2	...	3,984 18 2	2,606 2 0	715 19 3	5,456 3 10	3,594 16 7	7,950 2 9	69,850 8 9	36,672 7 10	26,847 5 3	599 9 11	10,539 16 4	74,658 19 4	144,509 8 1					
Pay Roll Tax	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Administration	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Depot Stock Account	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Res. 117	547 6 2	...	...	...	13 4 0	1,164 12 6	70 15 1	99 13 1	1,832 6 10	1,328 1 7	333 16 5	90 19 1	223 6 4	1,976 3 5	3,858 10 3			
Res. 127	552 6 4	...	...	...	...	2,617 14 8	121 16 11	237 11 8	3,542 13 7	1,777 18 1	561 8 8	19 14 3	397 2 0	2,756 3 0	6,298 16 7			
Pay Roll Tax	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Administration	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Experiments	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Firefighting and Patrol	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Storeroom Stock Account	1,099 12 6	...	...	...	13 4 0	4,014 11 5	192 12 0	337 4 9	5,796 8 3	3,137 8 8	1,088 19 3	110 13 4	620 8 4	4,957 9 7	10,753 17 10			

APPENDIX I.

Net Area of Plantation Established 1st April, 1950, to 31st March, 1951.

Species.	Brisbane.	Brisbane Valley.	Gympie.	Mackay.	Maryborough.	Monto.	Warwick.	Total.
	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.
<i>Softwoods.</i>								
A. Native Conifers—								
Hoop	291.0	831.9	876.9	..	473.6	104.2	..	2,577.6
Kauri .. .. .	..	..	..	..	..	..	..	..
Bunya .. .. .	..	..	..	..	..	..	..	..
B. Exotic Conifers—								
<i>P. caribaea</i>	810.6	..	399.0	128.2	520.5	..	21.0	1,879.3
<i>P. taeda</i>	209.4	..	..	5.0	..	..	..	214.4
<i>P. patula</i>	23.0	204.9	..	2.7	62.9	..	106.5	400.0
<i>P. radiata</i> .. .. .	..	..	..	..	..	..	29.0	29.0
<i>P. palustris</i>	34.0	..	..	..	..	..	..	34.0
C. Broadleaved Softwoods—								
Silky Oak .. .. .	..	..	..	..	..	..	..	..
Maple .. .. .	..	..	..	..	..	..	..	..
D. Other Softwoods .. .. .	..	1.5	..	12.1	..	..	..	13.6
Total—Softwoods	1,368.0	1,038.3	1,275.9	148.0	1,057.0	104.2	156.5	5,147.9
<i>Eucalypts.</i>								
<i>Euc. saligna</i> .. .. .	..	..	129.0	..	..	..	..	129.0
Total—All Species	1,368.0	1,038.3	1,404.9	148.0	1,057.0	104.2	156.5	5,276.9

APPENDIX J.

Net Area of Effective Plantation Classified into Forestry Districts to 31st March, 1951.

Species.	Brisbane.	Brisbane Valley.	Gympie.	Mackay.	Maryborough.	Monto.	North Queensland.	Warwick.	Fraser Island.	Queensland Totals.
	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.
<i>Softwoods.</i>										
A. Native Conifers—										
Hoop Pine	1,660.0	10,569.3	11,339.9	15.2	3,414.4	1,412.1	574.2	..	126.1	29,111.2
Kauri Pine	1.7	..	1,451.1	0.7	..	..	285.0	..	69.7	1,808.2
Bunya Pine	3.8	8.0	207.4	1.7	14.8	..	0.3	..	0.7	236.7
B. Exotic Conifers—										
<i>P. caribaea</i>	3,991.1	962.4	695.4	196.9	1,242.1	50.8	7.8	351.8	6.7	7,505.0
<i>P. taeda</i>	2,461.9	41.4	94.5	5.1	84.9	..	13.7	220.7	2.4	2,924.6
<i>P. patula</i>	36.4	1,611.2	3.2	2.8	71.9	1.5	20.1	514.8	3.4	2,265.3
<i>P. radiata</i> .. .. .	..	104.5	..	..	..	..	..	255.0	..	359.5
<i>P. palustris</i>	215.6	2.6	..	..	0.5	..	..	8.2	..	226.9
C. Broadleaved Softwood—										
Silky Oak .. .. .	..	803.0	261.9	..	32.1	..	31.7	..	..	1,128.7
Maple .. .. .	..	..	33.0	..	..	..	190.8	..	..	223.8
D. Other Softwood Species	44.4	22.3	136.4	14.6	12.0	1.0	104.8	16.8	7.8	360.1
Total—Softwood Species	8,414.9	14,124.7	14,222.8	237.0	4,872.7	1,465.4	1,228.4	1,367.3	216.8	46,150.0
<i>Eucalypts.</i>										
<i>Euc. saligna</i>	29.7	197.3	801.3	..	35.2	..	3.5	..	..	1,067.0
<i>Euc. paniculata</i>	228.3	465.6	216.2	..	75.3	..	32.8	..	..	1,018.2
<i>Euc. microcorys</i>	215.4	35.4	17.5	..	..	..	27.7	..	..	296.0
<i>Euc. pihularis</i>	160.9	..	..	..	..	..	0.2	..	..	161.1
Other Eucalypts	17.0	12.7	44.9	..	..	..	13.0	..	..	87.6
Total—Eucalypts	651.3	711.0	1,079.9	..	110.5	..	77.2	..	..	2,629.9
Total for all Species	9,066.2	14,835.7	15,302.7	237.0	4,983.2	1,465.4	1,305.6	1,367.3	216.8	48,779.9

APPENDIX K.

**Net Area of Effective Plantation Classified into Five-yearly Establishment Periods to
31st March, 1951.**

(Calendar year planting includes areas established to 31st March of succeeding year.)

Species.	1920 and Earlier.	1921-25.	1926-30.	1931-35.	1936-40.	1941-45.	1946-50.	Total.
	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.
<i>Softwoods.</i>								
A. Native Conifers—								
Hoop Pine ..	21.0	184.5	1,814.0	4,390.7	9,590.1	2,253.8	10,857.1	29,111.2
Kauri Pine ..	7.1	55.0	18.7	125.2	1,137.5	237.4	227.3	1,808.2
Bunya Pine ..	6.0	28.8	74.8	0.9	123.9	..	2.3	236.7
B. Exotic Conifers—								
<i>P. caribaea</i> ..	..	6.7	48.1	2,032.1	1,195.6	509.5	3,713.0	7,505.0
<i>P. taeda</i> ..	..	..	32.5	560.3	594.4	453.0	1,284.4	2,924.6
<i>P. patula</i> ..	..	1.0	17.0	153.7	473.9	189.0	1,430.7	2,265.3
<i>P. radiata</i> ..	..	0.4	73.8	151.9	1.9	..	131.5	359.5
<i>P. palustris</i> ..	..	..	0.2	28.1	108.7	44.1	45.8	226.9
C. Broadleaved Species—								
Silky Oak ..	..	3.1	738.4	300.6	86.6	..	..	1,128.7
Maple ..	0.8	11.9	49.1	84.6	63.4	..	14.0	223.8
D. Other Softwood Species ..	9.7	20.0	171.4	65.7	31.4	10.3	51.6	360.1
Total—Softwoods ..	44.6	311.4	3,038.0	7,893.8	13,407.4	3,697.1	17,757.7	46,150.0
<i>Eucalypts.</i>								
<i>Euc. saligna</i> ..	..	..	1.0	4.0	126.6	129.3	806.1	1,067.0
<i>Euc. paniculata</i> ..	..	..	7.7	529.3	402.1	77.3	1.8	1,018.2
<i>Euc. microcorys</i> ..	..	..	12.0	90.0	194.0	..	..	296.0
<i>Euc. pitularis</i> ..	..	..	0.2	97.9	56.9	..	6.1	161.1
Other Eucalypts ..	..	..	0.5	15.4	22.7	9.4	39.6	87.6
Total—Eucalypts ..	..	..	21.4	736.6	802.3	216.0	853.6	2,629.9
Total—All Species ..	44.6	311.4	3,059.4	8,630.4	14,209.7	3,913.1	18,611.3	48,779.9

APPENDIX, L.—continued.

Areas of Natural Forest Treated—continued.

Working Plan Area.	Reserve No.	Eucalypts. (Acres.)			Softwoods. (Acres.)			Other Species. (Acres.)			All Species. (Acres.)
		Treated 1950-51.	First Treatment 1950-51.	Total as at 30th June, 1951.	Treated 1950-51.	First Treatment 1950-51.	Total as at 30th June, 1951.	Treated 1950-51.	First Treatment 1950-51.	Total as at 30th June, 1951.	Total as at 30th June, 1951.
Kilkivan	221	..	..	1,730	..	..	560	..	..	..	2,290
	220	..	..	..	..	..	155	..	..	..	155
	355	..	..	..	..	..	40	..	..	..	40
	26	..	..	..	..	..	150	..	..	..	150
	494	..	..	1,350	..	..	..	..	..	..	1,350
	24/12	..	..	19,935	..	..	..	..	..	..	19,935
	424/7	..	..	80	..	..	..	..	..	..	80
..	..	..	23,095	..	..	905	..	..	..	24,000	
Many Peaks	28	..	..	6,711	..	..	..	..	..	..	6,711
	150	..	..	1,811	..	..	..	..	..	..	1,811
..	..	..	8,522	..	..	..	..	..	..	8,522	
Maryborough	287	..	..	..	..	..	240	..	..	..	240
	435	1,364	..	16,158	..	..	..	..	..	..	16,158
	59	624	..	7,139	..	..	..	..	..	..	7,139
	62	..	..	..	..	..	..	..	..	..	..
	12	..	174	5,304	..	..	..	..	..	..	5,304
	390	1,112	..	17,660	..	..	..	..	..	..	17,660
	8	701	..	13,521	..	..	..	..	..	..	13,521
	27	..	..	7,736	..	..	..	..	..	..	7,736
1	..	..	1,639	..	..	272	..	..	..	1,911	
..	3,801	174	69,157	..	..	512	..	..	..	69,669	
Mary Valley	135	..	..	159	..	..	277	..	..	..	436
	435	..	..	..	..	..	70	..	..	55	125
	..	..	..	159	..	..	347	..	..	55	561
North Coast	318	..	..	4,310	..	..	..	..	..	..	4,310
	313	..	..	1,824	..	..	..	..	..	..	1,824
	583	..	..	1,455	..	..	..	..	..	..	1,455
	445	..	..	3,772	..	..	..	..	..	..	3,772
	249	..	..	1,299	..	..	..	..	..	..	1,299
	60	..	..	1,410	..	..	..	..	..	..	1,410
	611	..	..	2,223	..	..	..	..	..	..	2,223
	589	..	..	53	..	..	..	..	..	..	53
	108	..	..	1,750	..	..	..	..	..	..	1,750
	173	10	10	2,917	..	..	..	..	..	..	2,917
	531	..	..	295	..	..	..	..	..	..	295
..	10	10	21,308	..	..	..	..	..	..	21,308	
Gympie	393	..	..	3,020	..	..	..	..	..	..	3,020
	234	..	..	1,730	..	..	..	..	..	..	1,730
	502	..	..	1,568	..	..	..	..	..	..	1,568
	627	68	68	2,423	..	..	..	..	..	..	2,423
	700	..	..	3,672	..	..	..	..	..	..	3,672
	124	..	..	770	..	..	..	..	..	..	770
	959	32	32	825	..	..	..	..	..	..	825
	950/1	130	130	810	..	..	..	..	..	..	810
..	230	230	14,818	..	..	..	..	..	..	14,818	
North Queensland	191	..	..	..	..	..	..	..	..	53	53
	194	..	..	175	..	..	..	..	..	..	175
	310	..	..	..	..	..	..	..	..	128	128
	418	..	..	..	..	..	..	..	..	43	43
	452	..	..	..	..	..	..	..	..	20	20
	245	..	..	339	..	..	..	..	..	..	339
	243	..	..	1,457	..	..	..	..	..	..	1,457
	185	..	..	..	..	..	..	89	10	234	234
	438	397	397	1,567	..	..	..	..	..	..	1,567
343	..	..	200	..	..	..	..	..	..	200	
..	397	397	3,738	..	..	..	89	10	478	4,216	
Warwick	444	125	125	2,825	..	..	..	..	..	..	2,825
	574	..	..	4,022	..	..	..	..	..	..	4,022
	..	125	125	6,847	..	..	..	..	..	..	6,847
Grand Totals	..	16,147	4,207	321,380	9,199	4,405	208,208	89	10	639	530,227

APPENDIX M.

Summary of Forest Survey Work—Year Ended 30th June, 1951.

Reserve or Portion.	Parish.	Area in Acres.
Class 1—INSPECTIONS OF VACANT CROWN LANDS AND TIMBER RESERVES.		
Portions 23, 24	Kullogum	2,351
Portions 100v, 101v, 103v, 104v, 85v, 88v	Miva	1,480
Portions 5v, 6v, 51v, 53v, 118v, 119v, 120v, 121v, 123v, 124v, 133v, 135v, 138v, 139v, 172, 173, 175 to 177, 179, 180 to 183, 189, 190	Woowoonga	9,773
	Total	13,604
Class 2—ASSESSMENT SURVEYS.		
Portions 51v, 64v	Doongul	635
Portions 1v, 2v, 3v	Ferguson	180
Portion 73v	Glenbar	670
Portions 1301, 1464	St. Mary	376
Portions 18, 19, 20	Warrah	200
Portion 136v	Woowoonga	168
Portion 33	Woocoo	368
Portions 18v, 238, 241, 248, 254, 1150	Young	1,607
Cooloomala Holding	Condamine, Mackie	15,160
229, portions 1, 2	Baywulla	16,294
230, 231, portion 9	Bania	52,760
Hoganthulla Holding	Koolbellup	52,160
Hillside Holding	Copland	20,000
Portion 2	Tom	10,817
Portion 2	Warranna	80
Portion 28	Beerwah	160
Portion 125v	Beerwah	1,705
Portions 63, 63A, 66, 67 to 74, 92, 93, 52 to 54, 64, 65	Burpengary	156
Portions 233v, 114	Mooloolah	7
Portions 26v, 112, 114, 118	Caboolture	914
Portion 526	Beerwah	3,960
Portion 510	Toorbul	3,200
Portion 9 and V.C.L.	Glady	5,787
Vacant Crown Land	Palmerston	2,311
55	Whyanbeel (proceeding)	8,196
Portions 1, 2, 4	Baywulla	640
Portion 9	Bania	310
54	Bania and Baywulla	38
Portion 77v	Neerdie	
Portions 261, 262	Tuchekoi	
Portion 1624	Glastonbury	
	Total	198,859
Class 3—INTENSIVE CONTOUR AND ASSESSMENT SURVEY.		
Vacant Crown Land	Ramleh (levels)	
67	Bulburin (proceeding)	2,651
	Total	2,651

COMPARTMENT, FIREBREAK OR SOIL SURVEYS.

Reserve.	Parish.	Type.	Area in Acres.
135 (part)	Brooloo	Firebreak, Breakneck Logging Area	2,100
242 (part)	Widgee		85
915 (part)	Poona	Compartment	3,400
915 (part)	Poona	Soil	2,058
509	Crows Nest	Compartment	
Vacant Crown Land	Goomboorian	Soil	6,432
20, portions 45, 47, 15v, 12v, 24v, 28v, 54	Maryvale	Soil	650
589 (part)	Beerwah	Soil	1,200
611 (part)	Beerwah	Soil and compartment	3,348
638 (part)	Beerwah	Soil and compartment	2,409
		Total	21,682

APPENDIX M—continued.
FOREST INVENTORY SURVEY.

Reserve.	Parish.	Area in Acres.
137, 207	Yabba, Monsildale	.. .. .
298	Gallangowan	875
154	Gallangowan	138
220	Kilkivan	497
355	Kilkivan	94
95	New Cannindah	882
435	Gundiah	.. .. .
57	St. Mary (proceeding)	27,333
581	Woocoo	400
21, 50	Goldsmith (proceeding)	22,000
61	Stretchworth (proceeding)	30,340
61, 302	Ballon, Nudley	7,508
289	Büchan	4,432
	Total	94,499

APPENDIX N.

State Forests, Timber Reserves, and National Parks at 30th June, 1951.

L.A.D.	State Forests.			Timber Reserves.			National Parks.		
	No.	Area.		No.	Area.		No.	Area.	
		A.	R. P.		A.	R. P.		A.	R. P.
Atherton	13	49,284	0 3	8	66,269	2 26	5	3,552	2 0
Bowen	..	..	..	8	95,800	0 0	35	114,467	0 0
Brisbane	65	213,690	3 23	44	70,268	1 1	38	77,235	2 20
Bundaberg	19	130,614	0 15	34	153,212	1 38	..	..	..
Cairns	7	108,985	0 36	15	489,913	2 0	20	92,300	3 24
Charleville	..	..	..	2	20,037	0 0	..	..	..
Charters Towers	..	..	..	2	125,550	0 0	..	..	..
Clermont	2	126,500	0 0	4	49,065	2 35	..	..	..
Cloncurry	..	..	..	1	4,290	0 0	..	..	..
Cooktown	..	..	..	8	623,510	0 0	7	10,691	0 0
Dalby	37	946,550	0 32	7	45,638	2 0	1	13,100	0 0
Gayndah	1	4,790	0 0	14	52,562	0 19	..	..	..
Gladstone	5	35,490	0 0	26	88,456	1 14	4	230	0 0
Goondiwindi	4	143,231	1 0	6	42,063	1 20	..	..	..
Gympie	46	293,156	1 30	23	72,907	2 29	5	922	2 7
Herberton	9	73,959	3 29	9	61,597	0 24	5	3,361	3 28
Ingham	1	43,620	0 0	3	68,840	0 0	3	1,835	0 0
Inglewood	14	185,393	3 35	4	8,407	1 8	..	..	..
Innisfail	1	55,800	0 0	12	364,653	2 18	20	105,987	1 31
Ipswich	30	160,997	1 24	23	66,337	3 0	3	5,044	0 0
Jundah	..	..	..	1	25,600	0 0	..	..	..
Mackay	1	18,450	0 0	19	148,725	0 0	56	148,736	0 29
Maryborough	61	692,567	3 17	27	31,080	0 13	4	8,185	0 0
Monto	10	196,227	3 20	11	75,036	2 32	..	..	..
Nanango	46	219,733	2 34	12	8,157	0 19	2	9,636	1 18
Rockhampton	8	182,018	1 0	14	101,103	2 22	15	2,597	0 0
Roma	10	89,434	3 22	1	8,600	0 0	..	..	..
Springsure	..	..	..	3	49,276	0 0	1	65,000	0 0
Stanthorpe	3	9,699	1 20	..	..	..	6	12,604	3 0
St. George	..	..	..	1	3,072	0 0	..	..	..
Taroom	3	22,186	0 0	5	48,864	2 0	..	..	..
Toowoomba	22	257,817	3 15	15	27,805	1 27	5	3,214	3 0
Townsville	1	23,123	0 0	2	17,199	1 31	2	62,360	0 0
	419	4,283,322	0 35	364	3,113,900	1 16	237	741,061	3 37

At 30th June, 1951—

Total area reserved for—

State Forests	4,283,322	0 35
Timber Reserves	3,113,900	1 16
National Parks	741,061	3 37

Total Reservations 8,138,284 2 8

APPENDIX O.

Reservations for the Year Ended 30th June, 1951.

State Forests.—Fourteen (14) State Forests with a total of 148,947 acres were proclaimed during the year.

The largest of these are as follows :—

Acres.		Land Agent's District.
55,800	Reserve 343, Ellerbeck, Meunga, and Pitt	Innisfail
21,723	{ Reserve 164, Ferrett	Dalby
	{ Reserve 64, Bartsch	
19,906	Reserve 70, Jarrah	Dalby
17,895	Reserve 63, Pelham and Quandong	Dalby
10,166	Reserve 60, Binkey	Dalby
9,600	Reserve 77, Columba	Rockhampton
9,211	Reserve 65, Hookswode	Dalby
1,970	Reserve 313, Pikedale	Stanthorpe
1,000	Reserve 134, Yabba	Gympie

33,028 acres were added to existing reserves and 15 reserves were rescinded for inclusion in adjoining State Forests.

Timber Reserves.—At 30th June, 1951, the number of Timber Reserves is 364, compared with 365 at 30th June, 1950.

Twelve (12) new areas with a total of 63,779 acres were reserved, the largest being—

Acres.		Land Agent's District.
23,280	Reserve 167, Badgery	Goondiwindi
11,466	Reserve 236, Molangul	Bundaberg
11,428	Reserve 168, Bendidee	Goondiwindi
5,519	Reserve 234, Thornhill	Bundaberg
4,200	Reserve 183, Miles	Dalby
2,432	Reserve 171, Moogoon	Goondiwindi
1,393	Reserve 766, Wickham	Briabane
1,264	Reserve 212, Wooroon	Gympie
1,040	Reserve 1,010, Gadgarra and Grafton	Cairns

Thirteen (13) Reserves totalling 80,766 acres were converted to State Forests and 13,790 acres of Crown Land were added to existing Timber Reserves. 6,825 acres were released for selection and recomputation of boundaries accounted for 3,550 acres.

National Parks.—Four (4) new National Parks totalling 468 acres were proclaimed during the year, these being :—

Acres.		Land Agent's District.
200	Reserve 52, Eungella	Mackay
181	Reserve 772, Tallebudgera	Brisbane
56	Reserve 773, Tallebudgera	Brisbane
31	Reserve 586, Cooyar (The Palms)	Nanango

1,043 acres of Crown Land were added to existing reserves and 1 reserve was rescinded for inclusion in adjoining National Park. One reserve of 216 acres was cancelled.

1st JULY, 1950, TO 30th JUNE, 1951.

STATE FORESTS.		No.	A.	R.	P.
At 1st July, 1950	.. .. .	420	4,101,347	2	4
Proclaimed 1st July, 1950, to 30th June, 1951	.. .. .	14	148,946	3	23
V.C.L. added to existing reserves	.. .. .	..	33,027	3	8
		434			
Reserves rescinded	.. .. .	15			
Total at 30th June, 1951	.. .. .	419	4,283,322	0	35
TIMBER RESERVES.		No.	A.	R.	P.
At 1st July, 1950	.. .. .	365	3,127,472	2	34
Proclaimed 1st July, 1950, to 30th June, 1951	.. .. .	12	63,779	0	0
V.C.L. added to existing reserves	.. .. .	..	13,790	0	0
		377	3,205,041	2	34
13 Reserves converted to State Forests	80,766	1	18		
Recomputation for Selection	6,825	0	0		
Recomputation of boundaries	3,550	0	0		
			91,141	1	18
Total at 30th June, 1951	.. .. .	364	3,113,900	1	16
NATIONAL PARKS.		No.	A.	R.	P.
At 1st July, 1950	.. .. .	235	739,768	0	12
Proclaimed 1st July, 1950, to 30th June, 1951	.. .. .	4	467	2	25
V.C.L. added to existing reserves	.. .. .	..	1,042	3	0
		239	741,278	1	37
Reserve cancelled	.. .. .	1	216	2	0
Reserves rescinded	.. .. .	1	..	..	..
Total at 30th June, 1951	.. .. .	237	741,061	3	37
Total Reservations at 30th June, 1951	.. .. .	..	8,138,284	2	8

APPENDIX P.

Expenditure, Surveys, Year Ended 30th June, 1951.

PARTICULARS OF SURVEY—

Harvesting and Marketing Project—

	£	s.	d.
Survey Prints, Maps and Mountings, Miscellaneous	57	12	2
Miscellaneous Surveys, Brisbane	40	18	1
Forest Inventory and Miscellaneous Surveys, Brisbane Valley	98	8	6
Class 2 Survey R. 54, Bania, Bundaberg	1,761	10	6
Class 3 Forest Inventory Survey R. 67, Bulburin, Bundaberg	2,242	19	6
Class 2 Survey Redford Holding, Dalby	680	15	4
Class 2 Survey, Taylors Plains, Dalby	760	17	7
Forest Inventory Survey R. 21, Coondarra, Dalby	2,688	15	9
Forest Inventory Survey R. 61, Stretchworth, Dalby	2,545	14	8
Miscellaneous Surveys, Dalby	27	3	8
Miscellaneous Surveys, V.C.L., Conondale	64	6	5
Forest Inventory Survey, Kilcoy	208	15	5
Forest Inventory Survey, Kilkivan	1,093	6	7
Forest Inventory Survey, Many Peaks	261	1	2
Forest Inventory Survey, R. 67, St. Mary, Maryborough	1,085	5	3
Forest Inventory Survey, R. 435 Gundiah, Maryborough	206	14	7
Miscellaneous Surveys, Maryborough	51	6	6
Class 2 Survey R. 353, Ongera, North Queensland	2,671	6	10
Class 2 Survey R. 55, Whyanbeel, North Queensland	3,012	11	5
Class 2 Survey V.C.L., Palmerston, North Queensland	118	13	4
Levels Culpa Lands, North Queensland	86	0	0
Survey Camp, Molyneaux	12	8	4
Compartment Survey R. 20, Maryvale, Rockhampton	80	16	0
	<u>£19,857</u>	<u>7</u>	<u>7</u>
Reforestation Branch Projects—			
As detailed in Appendix H.	10,189	14	10
Total Expenditure	<u>£30,047</u>	<u>2</u>	<u>5</u>

APPENDIX Q.

Distribution of Personnel, 30th June, 1951.

Salaried Officers	308
Other Employees	2,157
	<u>2,465</u>