
QUEENSLAND.

ANNUAL REPORT

OF THE

SUB-DEPARTMENT OF FORESTRY

FOR THE

YEAR 1951-52.

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ROAD CONSTRUCTION - KILCOY STATE FOREST.
Roads are the first essential to successful forestry operations. In 1951-52 the sum of £378,559 was expended in construction and maintenance of roads serving forests.

Report of the Director of Forests for the Year ended 30th June, 1952.

INTRODUCTION.

The outstanding features of 1951-2, from the point of view of this Department, were the severe and prolonged drought, the unprecedented severity of the fire season, the accomplishment of a record cut of log timber, and the creation, despite the unfavourable planting conditions, of 4,566 acres of new plantations, to bring the total area to 53,157 acres.

The story of the 1951-2 drought in Queensland is told by the following figures of monthly rainfall from typical centres in the various regions of forestry interest :—

Year.	Month.	Rainfall—points.				
		Atherton.	Brisbane.	Dalby.	Maryborough.	Rockhampton.
1951 ..	January	1,514	1,659	626	1,233	1,670
	February	1,164	218	160	268	127
	March	284	656	178	291	102
	April	8	130	70	195	..
	May	99	97	60	86	..
	June	130	199	123	78	48
	July	64	..	2	12	30
	August	29	53	64	56	55
	September	426	93	82	55	37
	October	52	120	132	90	158
	November	96	8	45	50	5
	December	327	156	153	189	230
1952 ..	January	1,299	131	64	565	468
	February	913	263	349	418	324
	March	477	565	220	2,159	346
	April	450	435	395	393	202
	May	267	206	212	576	237
	June	142	484	217	225	279

The widespread nature, duration and severity of the drought in these centres is even more clearly shown by the following comparisons with averages :—

The rainfall—

- in Atherton from March to December, 1951, was 1,515 points against an average of 3,027 points ;
- in Brisbane from April, 1951, to February, 1952, was 1,250 points (average 3,916 points) ;
- in Dalby from April, 1951, to January, 1952, was 795 points (average 1,715 points) ;
- in Maryborough from February to December, 1951, was 1,370 points (average 3,903 points) ; and
- in Rockhampton from February to December, 1951, was 792 points (average 3,168 points).

From all the figures can be clearly seen how the plentiful rains of the first quarter of 1951 had built up a large mass of ground vegetation which, dried to tinder by continuous drought, created from early spring an enormous fire hazard, which, over large areas, extended until February. Outbreaks of bush fire were constant and field staffs had a gruelling time. Many responsible officers had little leisure during this period and their self-sacrifice and devotion to duty deserves the highest commendation. Fire fighting costs for the year amounted to the very considerable sum of £133,234, and, since many of the fires were avoidable, the general public would have been saved much money, in this direction alone, by a greater sense of responsibility on the part of some of its members. The fire control organisation of the Department underwent, creditably, a most rigorous test and, of a total area of about 49,000 acres of plantation, less than 200 acres were lost through bush fires, while on the protected hardwood and cypress pine forests 85 per cent. of the protected area, or 800,000 acres, was kept free from fire. On unprotected forests damage was heavy ; here, also, much of the loss could have been avoided by greater care and a more responsible outlook in the use of fire. So that full value might be gained from the experience given officers by the arduous and dangerous fire season, a Conference of officers was held in Brisbane on 18th to 20th March to discuss, fully, the lessons learned and to improve technique in fire prevention and control.

The dry conditions not only brought about fire losses in the plantations, but were responsible for even heavier damage in another and unexpected direction. Bush birds and animals, scrub turkeys, rats and bandicoots were driven to search for moisture in the succulent, young planted trees, and the damage caused by them was equivalent to the destruction of 300 acres of plantation.

Because of the drought, also, plantation establishment percentages, as might be expected, were not as high as usual, but results on the whole were surprisingly good. The rigour imposed by the lengthy drought on the exotic plantations is indicated by unprecedented losses of marketable trees, totalling about 1,000,000 superficial feet, or the equivalent of about 100 acres of exotics. It is pleasing to record that our own native Hoop Pine plantations withstood the drought.

Not all the results of the dry weather were unfavourable. Conditions for logging, for instance, were excellent, and, as a consequence, an all-time record cut of mill logs from Crown areas was established. The following table gives a comparison of Crown log output in 1950-51 and 1951-52 :—

Class.	Log Cut (million superficial feet).		
	1950/51.	1951/52.	Increase.
Hoop and Bunya Pine	46.6	57.7	11.1
Kauri Pine	5.1	7.7	2.6
Softwood Plantation Thinnings	12.3	15.7	3.4
Cypress Pine	15.7	25.9	10.2
Hardwoods	69.5	80.0	10.5
Cabinet Timber	13.3	18.3	5.0
Miscellaneous	24.9	33.0	8.1
Totals	187.4	238.3	50.9

In the latter part of the year the demand for logs eased, due to stocking up following a record log cut, to the effect of the policy of credit restriction, and to the effects of drought.

The position at the end of the year, then, was one of comparative quietness in the timber industry, and the trend for the forthcoming financial year was difficult to forecast.

REFORESTATION.

The 1950-51 fire season was probably the least exacting in the history of Queensland forest management ; that of 1951-52, in sharp and unfortunate contrast, the worst.

A brief summary of the story is set out below :—

The prolonged fire season imposed a searching test on all phases of the Department's Fire Protection organisation, particularly on those areas where it had been possible to have complete precautions organised. The result inspires confidence in the Department's ability to meet an acute fire hazard.

The area of State Forest over which a reasonably complete protection system has been established is 956,000 acres, which includes approximately 50,000 acres of plantations.

The number of fires arising externally and which threatened protected areas was 324. Of these, 63 crossed external breaks and burnt 45,000 acres of natural forest and 41 acres of plantations.

Fires arising internally on protected areas numbered 115. The total area burnt over by these was 97,000 acres of natural forest and 180 acres of plantations. Of the figure of 97,000 acres, approximately 20,000 acres were on areas where only external and no internal breaks had been constructed. The plantation loss includes an area of 95 acres burnt by spread from a burn-off of felled scrub for planting.

The number of fires and area burnt on unprotected reserves exceeded 535 and 883,000 acres respectively.

It will be observed that the area burnt over on protected areas was of the magnitude of 142,000 acres (15 per cent. in the case of natural forest areas, plus $\frac{1}{2}$ per cent. on plantation areas). These figures, in the light of circumstances, can be regarded as reasonably satisfactory.

The lessons of the fire seasons have been deliberated at a conference of senior field officers, and weaknesses in organisation noted. One point that has emerged is the value of the radio installation, the cost of which, District Officers claimed, has been more than offset by otherwise inevitable losses, particularly in plantation areas.

The conditions that built up such a fire season were responsible for the softwood planting programme being below that planned. Actually, for the season April 1, 1951 to March 31, 1952, the area of new plantations established was 4,566 acres, compared with 5,277 acres for the previous season. The reduced area was due to the necessity for holding over the planting of a number of areas because of extreme drought conditions.

Other works were, however, of a magnitude greater than the previous year, one feature being the appreciable increase in the area of natural forest given silvicultural treatment, the figure having increased from 25,435 acres in 1950-51 to 36,727 acres in 1951-52.

Tending and pruning operations were both carried out on an increased scale and normality has been almost reached in all districts, although, in one district, this was only achieved at the expense of new plantings.

Removal of plantation thinnings stepped up appreciably at the beginning of the year and reached a monthly removal rate of over $1\frac{1}{2}$ million superficial feet. Rate, however, later decreased and total removals for the year reached 15,700,000 superficial feet, or 3,400,000 superficial feet in excess of last year.

As for the past several years, building has been largely concentrated on the provision of barracks and incidental buildings for single men or men living as such.

The 47 barracks completed during the year raise the number to 164 and, with the 37 under construction, bring the position to the stage where very few such men are housed in tents. It is hoped to be able to proceed, in the near future, with a housing scheme for the married men with families on the job.

The labour position is still far from satisfactory and in maintaining an average staff of just over 2,100 men, 2,439 new men were employed, while 2,601 left the job (comparable figures for 1950-51 were 3,031 and 3,060 respectively).

Plantations.—Reference to Appendix I. will show that the total area planted during the year 1st April, 1951, to 31st March, 1952, was 4,565.6 acres comprising :—

	Acres.
Native conifers (chiefly Hoop Pine)	1,794.5
Exotic conifers (<i>Pinus caribaea</i> , <i>taeda</i> , <i>patula</i> and <i>radiata</i>)	2,592.6
Broadleaved species	14.0
Eucalypts (chiefly <i>Eucalyptus grandis</i>)	164.5
	4,565.6

This represents a reduction of 711.3 acres on the total for 1950-51.

The decrease in the acreage planted with native conifers is due to the suspension of planting in the Mary Valley to enable the lag in tending and pruning to be overcome, and to the non-burning of one area in the Brisbane Valley.

During 1951-52 the State experienced one of the worst droughts on record and the reactions to drought conditions of the various species planted are of interest.

Planting conditions for Hoop Pine were not good, but, despite the adverse conditions, very little refilling was necessary. *Pinus caribaea* and *Pinus taeda* planted in the winter of 1951 in the coastal areas were subjected to very dry conditions until the drought broke in the early part of 1952. Losses varied from district to district and survival figures on individual areas ranged from 26 per cent. to 90 per cent.

Heavy losses occurred with *Pinus patula* planted at Passchendaele and Pechey during 1951, whilst at the former centre *P. radiata* gave reasonably good survival figures.

In established plantations of Hoop Pine scattered drought losses occurred in areas up to 4 years of age, but older stands suffered practically no losses. Hoop Pine has been outstanding as a drought resistant plantation species.

The older plantations of *P. caribaea* and *P. taeda* in the Beerwah-Glasshouse region came through with very few losses, and only minor losses were sustained at other coastal exotic plantations of from two to four years of age, except where limited plantings had been made on marginal soil types. Plantations of *P. caribaea* and *P. taeda* in the Mary Valley suffered heavily even in stands up to 20 years of age.

Heavy losses occurred in stands of *P. patula* up to three years of age at Passchendaele but very few deaths occurred in the older plantations. Losses at Pechey were considerably less than those at Passchendaele.

Drought conditions forced bandicoots and rats to search for moisture and, in the Brisbane Valley and Goomeri Districts, one and two year old Hoop Pine plantations were severely damaged by bandicoots digging around the trees, eating the roots, and, in a large number of cases, completely uprooting the trees.

Rat damage occurred in older stands of Hoop in practically every Hoop Pine district and losses from bandicoots and rats were equivalent to approximately 300 acres of fully stocked plantation.

Control of bandicoots was effected by using a bread, strychnine, arsenic and phosphorous bait and of rats by baits of Thallium sulphate.

The lag in tending and pruning has not yet been overtaken, but by the end of the next financial year it is hoped to have the position back to normal. The total area pruned shows an increase of 2,348 acres on the figure for 1950-51 and details are as follows :—

	Acres.
First operation	1,964
Second operation	3,230
Third operation	2,269
Fourth operation	949
	8,412

In addition, 348 acres were specifically covered for the removal of epicormic shoots.

The total area tended was 32,306 acres, an increase of some 10,000 acres on last year's total. Drought conditions favoured this work and first-year tending costs were lower than those for the past three years. The dry weather also assisted in the removal of lantana and tobacco from older areas, the tending of which had been delayed.

Thinning operations proceeded satisfactorily until the latter part of the financial year when adverse trade conditions forced a reduction and, in many cases, a cessation of operations. Despite these restrictions the cut from plantations for the year was a record of 15,666,081 superficial feet.

Total cut from plantations to date is 52,486,515 superficial feet.

The year's cut of 15,666,081 superficial feet is made up as follows :—

	Superficial feet.
Native conifers	7,109,529
Exotic conifers	7,874,207
Miscellaneous (chiefly <i>Grevillea robusta</i>)	682,345
	15,666,081

Nurseries.—The number of nurseries remained at 28, but with the cessation of planting of Reserve 220, Kilkivan, the nursery at that centre will now go out of production. Despite most unfavourable weather conditions, the number of plants produced rose by over 700,000 on the previous year's figures to 3,864,559. Plants on hand totalled 6,671,878.

In the report for 1950-51 reference was made to the use of filter press for the manuring of exotic seed beds at Tuan. The stock produced was most satisfactory and arrangements are in hand for the extended use of filter press at Beerwah and Tuan.

An examination of weeding costs at Tuan reveals that the use of filter press resulted in a saving of approximately 15s. per 1,000 plants.

During January and February heavy losses occurred in tubed *Pinus patula* at the Yarraman nursery. The plants were well established in the tubes and it was found that watering over a long period, necessitated by drought conditions, had raised the salt content of the soil within the tube to a level sufficiently high to kill the plants.

Difficulty is still being experienced in securing and holding mycorrhizal infection in the beds in the Gallangowan nurseries used for the production of patula stock.

It is pleasing to note that very little difficulty was experienced in producing the Department's requirements of Hoop Pine planting stock of more than satisfactory standard.

Regeneration Treatment of Natural Forests.—The total area treated during the year was 36,727 acres, an increase of 11,292 acres on last year's figures.

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

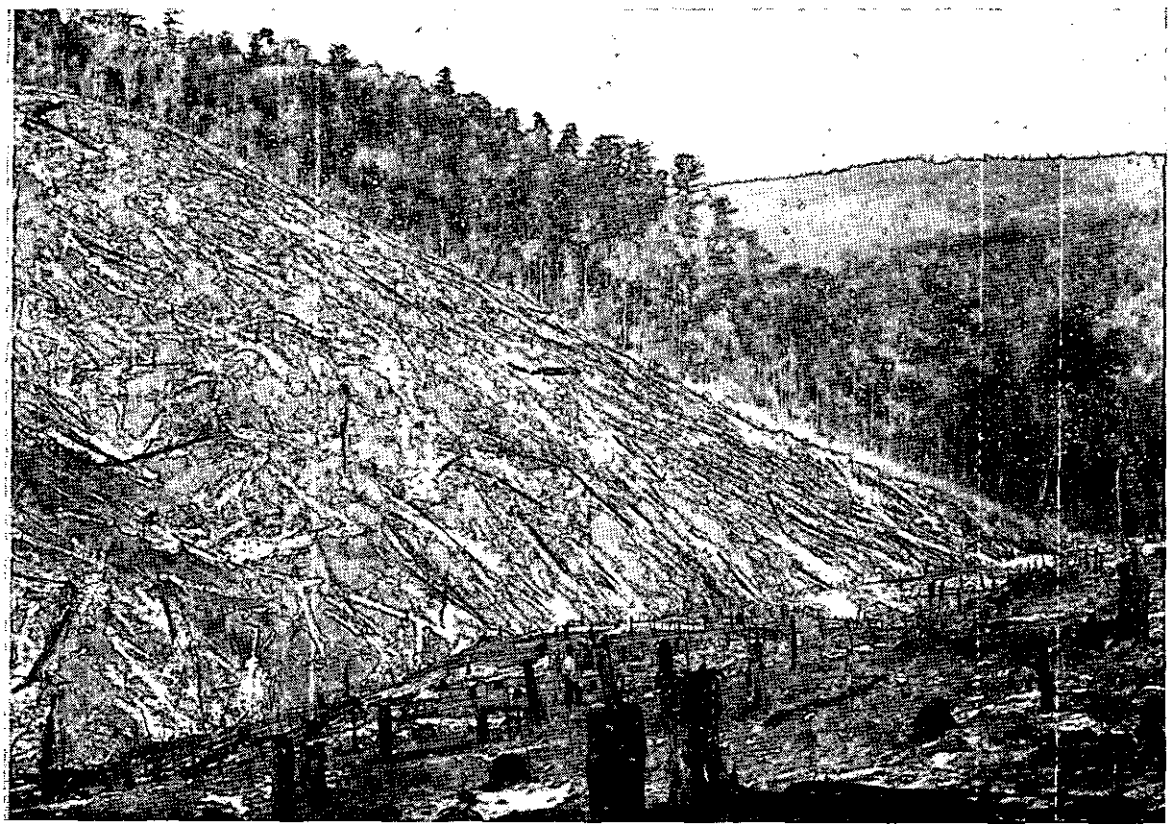
	First Treatment.	Other than First Treatment.	Total.
	Acres.	Acres.	Acres.
Hardwood	7,407	18,871	26,278
Cypress Pine	5,339	4,910	10,249
Other Species	45	155	200
Totals	12,791	23,936	36,727

Shortage of labour and difficulty of holding labour on the western reserves are still factors militating against the treatment of larger areas.



ALL WAS NOT LOST.

This flourishing natural regeneration of *Pinus putula* followed a fire at Pechey State Forest on 27-12-1941 which destroyed 40 acres of the original plantation. Photograph taken on 30-8-51.



THE GROUND IS READY.

Part of Benarkin State Forest clear felled and burnt ready for planting with hoop pine.
At 31-3-52 50,387 acres had been planted with softwoods.

Seed Collection : Hoop Pine.—No collection of Hoop Pine seed was made during the year. Stocks held in the Department's cold store at Rocklea were subjected to further germination tests in March–April, 1952, and with all batches the L.G.C. had dropped, the decrease ranging from 3·5 per cent. to 19·0 per cent. on the figure obtained immediately following collection. The reason for such drop is not apparent, but it may be a reflection of the climatic conditions prevailing during the development of the seed crop. The fall in viability has necessitated the discarding of 6,700 lb. of seed. At 30th June, 1952, stocks of Hoop Pine seed in cold storage were :—

	Lb.
40 per cent. plus	7,197
30–40 per cent.	5,949
20–30 per cent.	16,105
15–20 per cent.	7,998
	<u>37,249</u>

Exotic Pine.—A total of 1,442½ lb. of seed of exotic pines was collected during the year and details by species are as follows :—

<i>Pinus caribaea</i> —778 lb., of which 49 lb. were from select seed trees.
<i>Pinus taeda</i> —496 lb., of which 46 lb. were from select seed trees.
<i>Pinus palustris</i> —70 lb.
<i>Pinus echinata</i> —6 lb.
<i>Pinus patula</i> —52 lb., of which 41 lb. were from select seed trees.
<i>Pinus radiata</i> —39 lb., of which 39 lb. were from select seed trees.
<i>Pinus insularis</i> —1½ lb.

The yield of seed from select seed trees of *P. caribaea* is lower than was anticipated and it is intended to carry out additional thinning around these trees in an endeavour to encourage crown and cone development.

Eucalypts.—To meet an increasing demand for seed from local and overseas centres endeavours were made to build up stock of Eucalypt seeds and, during the year, collection totalled 43 lb. 5 oz., comprising 9 commercial species. At 30th June, 1952, stock totalled approximately 125 lb., covering 31 species.

Miscellaneous.—Seeds of a number of species used for shade, fodder, and as ornamental trees by the public in various parts of the State were obtained by Departmental collection, including National Parks staff, and also from various local authorities, the Brisbane Botanical gardens, and the Brisbane City Council.

Supply of Trees to the Public.—Sales to the public during the year totalled 246,704, made up as follows :—

<i>Pinus caribaea</i>	104,504
<i>Pinus taeda</i>	9,401
<i>Pinus patula</i>	20,798
<i>Pinus radiata</i>	30,552
Hoop Pine	15,516
Miscellaneous	65,933
	<u>246,704</u>

Although the figure is some 70,000 below the number sold last year, it is regarded as most satisfactory and is in no way indicative of a decrease in the public demand for trees. Drought conditions affected the yield of planting stock from the Department's nurseries and resulted in a far heavier demand for refilling than was allowed for. Had stock been available the figure of 246,704 would have been increased to over 500,000. Orders for the supply of over 280,000 plants could not be met.

The trees sold were distributed as follows :—

Farmers	161,880
Schools	11,515
General Purposes	73,309
	<u>246,704</u>

Revenue received from the sale of trees amounted to £2,341 10s. 5d.

The School Project Clubs furnished a considerable amount of information as to the behaviour of various species on different soil types under drought conditions. As with the Department's plantings, Hoop Pine stood out as a drought resistant species. *Pinus hondurensis* has been introduced into a number of school plots in the coastal strip north of Rockhampton and in practically all cases it has made better growth and has given better survival than *Pinus caribaea*. It appears to be a most promising species for this part of Queensland.

Supply of trees to Western Schools has continued and quite a number of new plots have been established.

It is also interesting to note that, despite severe drought conditions, no drought losses were experienced in the experimental plot on the property of Mr. Thomas, at Brookstead.

Research.—Officers have been appointed in the Dalby district (on Cypress Pine, Hardwoods, and shade and fodder trees) and in North Queensland (to assist in general research). Staff was maintained at Beerwah, Imbil, Yarraman and Atherton, and on tree breeding and coastal hardwoods.

North Queensland.

At the end of the year paired plots had been established in six of the principal rain-forest types in North Queensland. Plots are located in cut-over stands and one of each pair is untreated and the other afforded a standard silvicultural treatment involving brushing of all undesirable species in the understory, ringbarking of useless species and useless trees, and spacing of desirable species by merchantable and unmerchantable thinning. Basal area of untreated plots ranged from 190 to 270 square feet and averaged about 240 square feet. Treatment reduced the stand from that figure to about 70 square feet. It is too early for reliable figures to be obtained from these plots but remeasurements have indicated that the net growth on untreated stands cut over to the present intensity is very low (less than 1 square foot B.A. per year).

The need for silvicultural treatment is clearly indicated if the growth capacity of these forests is to be fully utilized and increment put on to the most valuable species.

Action is in hand to extend the range of these plots and to establish a third plot which will involve a treatment which aims only at removal of all useless trees. This will leave a basal area of about 130 square feet per acre.

First treatment of the standard type described above was applied to an area in 1948. This treatment was followed by the normal invasion of weed species, including stinging trees (*Laportea gigas* and *L. photiniphylla*), which have now thinned out to an extent that permits assessment of regeneration.

A count of regeneration less than 10 feet in height on a 1-acre plot, made in March, 1952, after brushing of useless regrowth, showed the following figures per acre:—

Kauri Pine (<i>A. palmerstoni</i>)	4
Special Purpose Cabinet Woods (chiefly Silver Ash— <i>Flindersia bourjotiana</i> and <i>F. pubescens</i>)	145
Other useful Cabinet Woods (chiefly <i>Darlingea spectatissima</i> and <i>Blepharocarya involucrigera</i>)	355
Special Purpose Hardwoods	28
Other Hardwoods (chiefly <i>Alstonia muelleriana</i>)	165
Other useful species (<i>Melia dubia</i>)	14
Species not at present useful but not removed	47
Total	758

The figures for Kauri Pine and Special Cabinet Woods are particularly encouraging. In these groups 140 of the 149 stems recorded were Silver Ash, and 93 of these *F. bourjotiana*.

Assessment of further plots is progressing.

Hoop Pine (*A. cunninghamii*) plantations in North Queensland continue to make excellent growth though increments for 1951–52 were down on previous years as a result of the dry year. Figures for Maple (*F. brayleyana*) were also satisfactory but Kauri (*A. palmerstoni*) shows no improvement.

Investigations into the reason for poor growth of Kauri on areas where it grew naturally are being initiated.

On account of incidence of root rot, part of the oldest planted plot of Hoop Pine was clear felled at age 34 years.

History and pertinent data for this plot are as follows:—

Planted 1918. Spacing 10 feet by 9 feet.
Plot established 1927 with 403 per acre.
Thinned 1934 to 257 per acre.
Removals 1945–50 (root rot) = 27 per acre.
Clear felled January, 1952.

Age.	Yield Data (per acre).			
	No.	Av. G.B.H.	Basal Area. sq. ft.	Merch. Vol. c. ft.
16	136	28"	58	1,385
27 to 32	27	56"	48	2,000
34	200	52"	299	10,600
Total Yield				13,985

M.A.I. (Merch. Vol. u.b. to 4 inches D.U.B.) = 410 c. ft.

On the unfelled section of the plot the merchantable C.A.I. for 1951–52 was 510 cubic feet, which indicates that it will be some time before the M.A.I. culminates.

The clear-felled section has been replanted to Hoop Pine to observe the behaviour of the second crop on an area subject to root rot.

It appears that the fungus responsible for root rot on this area is *Fomes* spp. (probably *pachyphloeus*).



"THEY GREW IN BEAUTY."

Virgin hardwoods on Timber Reserve at Conondale, Mary River head waters. 70,227,000 s. ft. of Hardwood logs from Crown areas were milled in 1951-52.



REPRODUCTION OF HARDWOOD FORESTS.

The result of Natural Regeneration treatment of hardwood forests on Deongwar State Forest is illustrated. To 30-6-52 503,982 acres of natural forest had been accorded treatment.

Underplantings of Kauri, Hoop, Maple, and Red Cedar (*Cedrela australis*) on rain forest under light canopy are showing promising growth and survival after two years in the field. The Cedar has been recently seriously attacked by the twig borer (*Hypsiphyla robusta*) after individuals had grown to 10 feet without attack in about eighteen months.

This type of work is being extended with the main object of increasing the representation of the most valuable species in these forests.

Underplanting of Red Cedar in plantations of Hoop, Maple, and Kauri has been carried out with varying intensities of thinning. It is too early to assess results but in all plots there has been borer attack.

Experiments are being initiated on the use of D.D.T. against the borer with the object of preventing attack until stems are about 15 feet in height.

Growth of *Pinus hondurensis* on well-drained sites in coastal North Queensland continues to be satisfactory and in school plots heights of up to 11 feet have been attained in twelve months from planting.

Central Queensland.

The centre of work in this part of Queensland is at Bowenia (previously Byfield), near Yeppoon. The 1951 drought was serious also in this area and afforded an interesting comparison in survival of *P. caribaea* and *P. hondurensis* over a range of soil types. On all sites the figures favoured *P. hondurensis*, with the greatest differences on the poorly-drained and the upland types. To date there is little between *P. caribaea* and *P. hondurensis* in rate of growth on plantable types.

Plots of *P. caribaea* on poorly-drained types, which were reported last year as showing improved colour, gave heavy losses in the drought.

Sufficient *P. tropicalis* was raised to allow the establishment of three small plots, one on a swampy type, and the others on average planting types.

South Queensland.

(1) *Exotic Pines—Tree Breeding—Beerwah, etc.—P. caribaea* and *P. taeda*. A site on State Forest Reserve 108 Bribie was selected during the year for the location of a seed garden for exotic pines, particularly *P. caribaea*. It is about 3 miles to the north of the existing exotic plantations at Beerwah and is well protected by hardwood forest.

Part of the area has been prepared for planting and the first planting was made of controlled crosses and selfed stock of proven parents. To this will be added grafted stock from old parents at present in the nursery.

Progeny assessment has been extended into younger plantings and to date there are 10 *P. caribaea* and 6 *P. taeda* accepted as good genotypes.

A further 12 *P. caribaea*, which are good phenotypes, are under test.

In April, 1952, 397 grafts were attempted with scions from old trees, nearly all *P. caribaea*. In September, 1952, 27 showed vigorous new growth and appear to have taken, 173 are green and healthy in appearance, and 197 are unhealthy or dead.

With scions from young trees, about 75 per cent. take seems assured.

Stock in all cases was 2-year old nursery plants and most scions were 2nd-order branches.

Work was also resumed in an effort to strike cuttings of *P. caribaea*. Cuttings were from both old and young trees and set out in the open and under a Windolite frame.

Cuttings from young trees under the frame were all green and 10 per cent. showed fresh growth. In the open practically all were green but none showed fresh growth.

P. radiata.—The principal aim with this species is to find a strain which will be relatively resistant to Diplodia. For progeny trials 10 parent trees have been selected at Pechey, in an area which suffered from severe Diplodia attack.

Cuttings from these, and other parents selected at Passchendaele, were set out in the Passchendaele nursery in March. At inspection in August it appeared that about a 20 per cent. take would be obtained from old trees and 80 per cent. from young. The influence of parent on take was clearly apparent.

In this work the methods elaborated by J. M. Fielding at Canberra were followed and at the same time cuttings were sent to the Forestry Bureau, from the Pechey trees, for establishment in Canberra.

General.—Examination was made of results of quantity trials of phosphate application to *Pinus taeda* following the 1951 measure. The area was planted in 1931 and treatments were applied in 1939. Total P_2O_5 in the surface 4 inches of soil was 55 p.p.m. Average standing merchantable volumes are shown against treatments for the 1951 measure in the following table:—

	Treatment.	Merch. to 3 inches D.U.B.
E	No addition of fertilizer	1,229 c. ft.
A	Broadcast, 190 lb. superphosphate per acre	1,922 c. ft.
B	Broadcast, 383 lb. superphosphate per acre	2,404 c. ft.
C	Broadcast, 818 lb. superphosphate per acre	3,398 c. ft.
D	Broadcast, 1,580 lb. superphosphate per acre	3,425 c. ft.

Converting the above quantities of superphosphate to equivalent addition of P_2O_5 based on the surface 4 inches the figures are—

Treatment.	E (Control).	A.	B.	C.	D.
P_2O_5 added	Nil	35 p.p.m.	70 p.p.m.	150 p.p.m.	290 p.p.m.
Total	55 p.p.m.	90 p.p.m.	125 p.p.m.	205 p.p.m.	345 p.p.m.

With current stumpages at an average of about £5 per 100 cubic feet the economic advantage of treatment C is clear.

Routine procedure has been to regard 135 p.p.m. as the minimum requirement of total phosphate in the surface 4 inches for healthy growth of *P. taeda*, and where *P. taeda* is planted on soils below that level to apply phosphate to raise it to 150 p.p.m.

South African studies on the wood of *P. hondurensis* have shown its advantage over that of *P. caribaea*, which is associated with the reduced amount of summer wood and consequently its more uniform texture. This has advantages in seasoning, in uniform density, and in working properties. The progressive monthly height growth of *P. caribaea* and *P. hondurensis* of the same age and on the same site is of interest, and measurements taken indicate that the major part of the *P. caribaea* growth is made in the spring months whilst the *P. hondurensis* grows evenly throughout the year.

Experiments on the use of filter press as a nursery manure were continued and figures for the past year confirm earlier ones to the effect that, compared with cowyard manure, equivalent quantities give a slightly greater height growth with filter press and that weeding problems are greatly lessened. This is supported by results from Coondoo and Beerwah.

To provide cost data large-scale experiments, involving half of each of two nurseries (Tuan and Beerburum), will be conducted in connection with the 1953 sowing.

Results from small-scale ploughing and fertilizer experiments on poorly-drained sites regarded as unplantable have provided encouraging early survival and growth.

As a result of this, a large-scale experiment has been commenced on a representative area of about 150 acres at Tuan Creek near Maryborough. It is proposed to handle this area at the rate of about 50 acres per year and preparations are being made for the initial planting in the winter of 1953. To date, contour drains have been dozed through the area at about 5-chain intervals and the first 50 acres have been cleared by bulldozer and debris pushed together for burning.

It is proposed to plough the area at right angles to the contour drains and apply a dressing of 3 cwt. Nauru per acre. Other treatments, including deep ripping to fracture the hardpan underlying a large part of the area, will be given a trial on carefully selected plots.

(2) *Hoop Pine (A. cunninghamii)*—Yarraman and Imbil.—In December, 1948, a general flowering of Hoop Pine occurred and observations were made for the first time on the mechanism of pollination with this species. In 1951 a further general flowering occurred and the opportunity was taken to repeat the earlier observations and to conduct a series of controlled pollinations with elite trees. In general the observations of the previous flowering were confirmed. Production of male amenta in quantity in the Mary Valley was mainly in stands 25 years or more. In plantations female cones were confined to the topmost whorls but in open grown trees they appeared well down in the crown.

Particular attention was paid to the period of receptivity of the female cone. The earlier observations indicated that the scales were open for a period of about one month. This differs markedly from the behaviour of the *Pinus* spp., where the scales remain open only for 3 or 4 days.

Grafting of Hoop Pine was unsuccessful, but following the work of Shea at the Queensland University a 90 per cent. strike was obtained at Yarraman from cuttings of leading shoots of carry over nursery stock. It is understood that similar cuttings from Norfolk Island Pine (*A. excelsa*) adopt a dwarfed habit. With trees more than 10 years of age cuttings from leading shoots have failed.

The effect of the drought was particularly evident in the growth of Hoop Pine. The reduction was greatest in the Mary Valley, where plots which exceeded 300 cubic feet increment in merchantable vol. to 4 inch d.u.b. in 1949-50 and 1950-51 averaged about 100 cubic feet in 1951-52. The drop was most severe in unthinned stands, as is shown from the following figures taken from a 17-years old stand:—

No. per Acre.	Treatment.	G.B.H. Inc. Select Stems.			Merch. Vol. Inc. per Acre.		
		49/50.	50/51.	51/52.	49/50.	50/51.	51/52.
350	routine thinning	in. 1.7	in. 1.35	in. .41	c. ft. 350	c. ft. 330	c. ft. 92
560	unthinned	1.0	.83	.13	380	370	38

Though a reduction in growth was also experienced in the lower rainfall areas of the Brisbane Valley it was not so severe.

Reports to hand, so far, for thinning experiments covering second thinning in a series of plots 17-24 years of age, remeasured in 1952, do not indicate any marked advantages of stockings less than 350 per acre over that density even in so severe a year. The indications are that thinnings subsequent to the first will be light and remove minimum economic quantities.

(3) *Coastal Hardwoods*.—A start has been made with experiments on prescribed burning in the Spotted Gum (*E. maculata*)—Red Ironbark (*E. siderophylloia*) type in the Maryborough district. Two principal treatments are being tried, one where the area is burnt as frequently as can be done without undue damage to the stand, and the other involving periodic burning aimed at securing regeneration of the major species and their protection to allow time for its establishment. The unit in each case is a compartment of about 1,000 acres and the initial burns have been made.

One of the problems associated with the silvicultural treatment of hardwood areas is the coppice growth resulting from ringbarked stems or those cut down. Use of arsenic pentoxide on unwanted stems has, through the agency of root grafts, caused loss of desirable stems.

Experiments in the use of hormones to prevent the development of coppice from small eucalypt stems removed in treatment were initiated. The hormones were applied by means of a "poison axe" to cut stumps or to frills made near ground level.

Of the hormone preparations tested, the triethanolamine salt of 245-T at .5 per cent. concentration has proved most effective. The table below summarises the position three months after treatment, in a plot treated with this material in April, as compared with the corresponding control (cutting only, without hormone):—

	Percentages of treated stems.	
	245-T.	Control.
<i>Frilled Stems—</i>		
Crown dead, no coppice	78 per cent.	2 per cent.
Crown dying, no coppice	22 per cent.	15 per cent.
Coppice showing .. .. .	..	20 per cent.
Crown still living .. .. .	..	63 per cent.
<i>Stumps—</i>		
Producing coppice	Nil	68 per cent.
No coppice	100 per cent.	32 per cent.

Large-scale trial to establish costs is proposed for the coming year.

Following the work of C.S.I.R.O. and the Forestry and Timber Bureau, the use of hormones in the control of mistletoe on Spotted Gum (*Euc. maculata*) and Blackbutt (*E. pilularis*) has been the subject of experiments. The hormone used was the triethanolamine salt of 2 4-D as a 5 per cent. solution, injected into cuts made near the base of the tree. While the action of the hormone is slow, the results to date show some promise. Below is set out the condition, six months after treatment, of mistletoe on trees treated in January, 1952.

	Percentage of mistletoe on treated trees.	
	<i>E. maculata.</i>	<i>E. pilularis.</i>
Not injured	Per cent. 2.3	Per cent. 1.2
<i>Injured—</i>		
Light	35.4	16.3
Moderate	28.4	14.0
Severe	23.7	47.7
Dead	10.2	20.8

(4) *Cypress Pine (C. glauca) and N.L. Ironbark (E. crebra)*.—In the course of forest inventory survey work a series of 1-acre plots is laid out for detailed observation. On the central $\frac{1}{2}$ -acre a study is made of regeneration. Stems over 15 feet in height are tagged and less than 10 feet are tagged or pegged according to size. During the year 30 detailed plots on S.F.R. 154 parish of Vignoles were remeasured 10 years after their establishment, and the chief points emerging from this study are:—

- (i.) The mortality of Cypress Pine regeneration is low and does not exceed 10 per cent. of stems less than 10 feet in height;
- (ii.) Cypress regeneration is generally adequate on sandy Cypress sites and on Poplar Box sites. Since 1940 stocking has increased by over 100 per acre;
- (iii.) Cypress regeneration is poorer on sites where the Narrow-leaved Ironbark is substantial and where Bull Oak (*Casuarina leuhmanni*) sapling growth is dense;
- (iv.) Protection from fire, silvicultural treatment, and removal of prickly-pear have promoted regeneration of Cypress but have not favoured Ironbark regeneration. However, progress of both species into the 10 feet + class has been assisted.
- (v.) Mortality of Narrow-leaved Ironbark (*E. crebra*) is high and more than 50 per cent. of stems less than 10 feet in height fail to attain 10 feet.
- (vi.) Narrow-leaved Ironbark regeneration is inadequate where Cypress Pine predominates and where Bull Oak saplings are dense.

Protection.—Because of the large amount of time occupied in fire-fighting the extent of firebreak construction work was below that of previous years. Nevertheless, it was possible to add over 200 miles of breaks to the protection system.

The magnitude of the works undertaken is expressed in the summary below. It will be noted that the annual maintenance job now exceeds 3,500 miles.

Reference has been made above to the fireseason experienced. Cost of fire-fighting and patrol for the year amounted to £133,234. Only on rare occasions previously has the cost exceeded £30,000.

Details of the firebreak construction and maintenance works carried out are :—

1. <i>Cleared Breaks (Western Forests)</i> —	Miles.
<i>Firebreak Construction—</i>	
Cutting and grubbing	31.2
Stacking and burning	43.6
Cutting auxiliary roads	63.8
<i>Firebreak Improvement—</i>	
Grubbing roads	39.6
Grading	72.3
Stumping	157.1
Green strips	130.1
<i>Firebreak Maintenance—</i>	
Suckering and burning	812.7
Grading	455.2
Rotary hoe	438.0
<i>2. Green Breaks (Coastal Hardwood Areas)</i> —	
<i>Firebreak Construction—</i>	
Felling dangerous trees	64.9
Stacking and burning	69.5
Firebreak Improvement	146.2
Roads	10.0
<i>Firebreak Maintenance—</i>	
Chipping and/or ploughing	2,178.7
Burning	899.6
Roads	344.8
Grading	163.1
<i>3. Cleared Breaks (Plantations)</i> —	
<i>Firebreak Construction—</i>	
Temporary breaks for scrub burning	76.8
Clearing	111.2
Rotary hoe	14.8
Grading	65.3
Scrub break improvements	78.6
<i>Firebreak Maintenance—</i>	
Chipping	94.9
Ploughing	36.6
Burning	99.5
Rotary Hoe	153.9
Grading	213.1

Other protection works were of minor character only. Previous reference has been made to the losses caused by rats, &c.

Capital Improvements.—The major items of construction are listed below.

The barracks programme is approaching a stage of sufficiency for the men for which it is intended and about 1,200 men are now so accommodated. Next year should see this programme completed.

Other items were chiefly small structures associated with improved accommodation for employees.



ENSURING GOOD PARENT STOCK.

Tree breeding is important and trees of good growth and superlative form are marked in plantations to provide seed for tree breeding work in nurseries.



A GEM OF THE FOREST.

A magnificent Rose Gum being felled for the mill (Mt. Lindsey State Forest).
The Crown forests yielded 238,339,000 s. ft. of milling logs in 1951-52.

The full list is as follows :—

Item.	Completed 1951/52.	Under Construction.
Cottages	4	..
Barracks	47	37
Bathrooms	25	3
Galley	31	10
Lavatories	75	..
Tent rigs	52	7
Laundries	11	2
Bathroom—laundry—galley combinations	8	..
Ranches	2	1
Offices	2	..
Garages	7	2
Sheds, toolrooms, &c.	29	4
Lookouts	4	1
Bridges	25	..
Grids	12	1
Water Towers	2	..
Dams	1	..
Bores .. .. .	..	1
Horse paddocks	1	..
Magazines	6	..
Wireless Masts	11	..
Telephone lines	20	2

Expenditure and Labour.—Expenditure on reforestation works amounted to £1,512,223, or just over £400,000 more than the previous highest expenditure.

Details are given in Appendix H, but the major headings of expenditure were :—

	£
Plantations	251,942
Natural Regeneration	30,133
Nursery Working Expenses	47,641
Protection (including fire-fighting)	397,282
Research	11,624
Capital Improvements	158,443
Surveys	13,909
Wet Time, Holidays, Leave	134,392
Tools, Tents, Cartage, Supervision	221,355
Workers' Compensation	15,278
Pay Roll Tax	28,649
Cartage of Rations	11,295
Camping Allowance	67,639
Travelling Time	67,896
Depot Stock	54,745
	<u>£1,512,223</u>

Though the turnover in labour for the year was only 115 per cent. compared with 150 per cent. of the previous year, it was still difficult to maintain staff of reasonable calibre. Wages staff at the beginning of the year on reforestation works was 1,785. This had decreased to 1,718 at the close of the year, but during the last few weeks no replacement of labour had been made because of possible curtailment of funds in 1952-53.

ACQUISITION OF LAND.

During the year 1951-52 an amount of £11,965 0s. 5d. was expended on the acquisition of land for Forestry purposes. The areas concerned have been, or will be, reserved as either State Forests, National Parks, or Timber Reserves.

Eleven properties, covering an area of 4,839 acres, were purchased at a cost of £9,425 14s. 5d. In one instance action was taken towards resumption of an area of 106 acres. Compensation paid during the year in respect of areas previously resumed amounted to £1,782 3s. 10d.

Three areas, covering 8,512 acres, previously held under grazing-farm tenure were converted to State Forest Reservations, the lessees to be granted Special Leases under forestry conditions.

Compensation amounting to £200 was paid in respect of improvements on a Forest Grazing Lease resumed because of outbreaks of fire.

During the year there were donations of two (2) areas of freehold land for permanent reservation as National Parks. Mr. T. S. G. Brown, of Ascot, Brisbane, donated an area of about eight (8) acres at Mount Glorious, to be added to the Maijala National Park, and Mr. T. Hobgen, of Springbrook, donated an area of about one (1) acre for addition to the Warree National Park.

The Department records its appreciation of these generous gifts.

FIRES.

Below is given a tabulated summary of detailed reports received of outbreaks of fire on or threatening forest reservations during the year ended 30th June, 1952.

An examination of the causes of the outbreaks, as disclosed by these reports, is interesting. It shows that—

- In 309 cases cause unknown.
- In 48 cases deliberate burning.
- In 25 cases from sparks from railway engines.
- In 17 cases from lightning.
- In 16 cases from burning off grass.
- In 11 cases from burning off logs.
- In 10 cases escaped from camp fire.
- In 6 cases from back burning getting out of control.
- In 5 cases from sparks from vehicles.
- In 3 cases from burning of carcasses.
- In 1 case from sawdust heap of sawmill.
- In 1 case from dropped cigarette butt.
- In 1 case from fire scattered by whirlwind.
- In 1 case from sparks from power saw.
- In 1 case from army exercises.

Total. 455 cases.

Whilst in the majority of cases the cause of outbreak could not be traced, there were a number where there was definite evidence of breaches of the Rural Fires Act, and in ten (10) of these cases proceedings were instituted and fines amounting to £99 imposed.

One case of prosecution is pending.

In a number of cases offenders were called on to pay fire-fighting costs and in this way £24 15s. 4d. was recovered.

The severity of the fire season this year is indicated by the number of outbreaks reported, as compared with previous years to 1946-47 :—

Year.	Number of Outbreaks Reported.	Year.	Number of Outbreaks Reported.
1946-47	144	1949-50	50
1947-48	41	1950-51	55
1948-49	155	1951-52	455

Magnitude of Fires :—

Half-acre or Less.	Over Half-acre to 10 Acres.	Over 10 Acres and under 100 Acres.	Over 100 Acres.	Figures Not Known.
3	24	68	122	238

FOREST SURVEYS.

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

Total expenditure for survey work amounted to £32,655 10s. 9d., of which £18,746 13s. 10d. was chargeable against Harvesting and Marketing projects and the balance, £13,908 16s. 11d., against Reforestation projects.

As a result, 8,182 acres were dealt with by intensive contour and assessment survey (Class 3); 38,280 acres were assessed (Class 2); 44,692 acres were subjected to either firebreak, compartment, or soil survey; 63,415 acres were covered by Forest Inventory Survey, entailing the establishment of 653 new plots, whilst 12,600 acres were closely inspected (Class 1 Surveys).

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

Mileage completed was—

	Mls.	Chs.
Theodolite and chain	26	59
Compass and chain	629	61
Strip survey	1,039	48
Elevations, old boundaries	68	33

Briefly, operations in each district were—

Atherton.—Two camps operated in North Queensland throughout the year.

Class 2 Survey was continued on Timber Reserve 55, Whyanbeel, until November, when it was decided to suspend survey on account of inaccessibility. Camp was transferred to Reserve 755, Bartle Frere (Russell River), on which assessment survey is being carried out.

The second camp completed the marking and location of flooding levels at Culpa on 22nd April. In addition, logging areas were tied up and road located to log the area subject to inundation. This party also assisted Surveyor Campbell on road surveys at Suttie's Gap and "H" road. On 13th June, camp shifted to Reserve 185, Danbulla, where the boundary of the area to be inundated by the proposed dam will be run and marked.

District staff carried out planting and firebreak surveys on R. 185, Danbulla, and over 36 miles of constructed roads in reserves were traversed.

Dalby.—Two camps operated, the first, after completion of Forest Inventory Survey of State Forests 50 and 21 (part) Goldsmith, moved to Tara on 13th September, 1951. After assessing portions 14, 18, 21, and 26 Marmadua (28,672 acres), Forest Inventory Survey proceeded on Reserve 155, Marmadua.

The second camp, working from the eastern section of the Stretchworth Forests, continued compartment and Forest Inventory Survey on State Forest 184, Halliford and Stretchworth. To date 183 plots have been completed.

Gympie.—Two camps were engaged in this district, the first completing approximately 21½ miles of theodolite control on State Forest 1004, Goomborian, with about 5½ miles of levels at R. 256, Imbil. In addition, firebreak and related surveys were effected on the Widgee, Imbil, Yabba, Kandanga, Amamoor, Glastonbury, Como, and Brooloo Forests. The second camp was almost wholly engaged at Coondoo (S.F. 1004) on soil and compartment surveys associated with exotic plantations, approximately 8,800 acres being dealt with. Early in May, Compartments 13, 14, and 17 East and Compartment 9 West Logging Areas were stripped for soil and site quality, whilst a further 260 acres of forest were covered by soil and vegetation strips.

Maryborough.—Soil and compartment surveys continued on State Forest 915, Poona and Tahiti; approximately 1,100 acres were compartmented, whilst a further 1,470 acres were subjected to soil strip surveys. Incidental work included Nursery water supply survey and access roads in the parishes of Warrah and Kolbore.

Another unit continued with Class 3 Survey of the Granite Creek section of Reserve 67, Thornhill, stripping 7,672 acres. Field work is almost complete.

A third camp completed Forest Inventory Survey of the St. Mary and Gungahlin group towards the end of February, laying out 155 plots and 18 yield plots. This camp then transferred to Fraser Island, where 10 detailed yield plots had been installed by the end of the report period.

The fourth camp was mainly engaged on district miscellaneous surveys in the Kilkivan and Maryborough Working Plan Areas. This included an area of 1,200 acres for planting on Reserves 97 and 99, Kilkivan, and a contour survey of 510 acres of part of Reserve 915, Poona.

Brisbane.—One camp operated throughout the year on reforestation surveys from Caboolture to Nambour. Soil survey of Reserve 611, Beerwah, was continued, private properties for planting and acquisition were assessed, and compartment surveys of Reserves 638 and 611 carried out. This included miscellaneous surveys of extraction tracks, swamp boundaries, and watercourses, together with the customary 1,000-acre planting programme.

A second camp was located at Jimna, working mainly on firebreak and related surveys on State Forests 207, Monsildale, and 137, Yabba.

On 17th March, a third camp was organised and is engaged on Forest Inventory Survey on State Forest 318, Maroochy. To date, approximately, 5,507 acres have been dealt with.

Brisbane Valley.—Two small camps operated until December, mainly engaged on the location of roads, firebreaks, and plantation work throughout the District.

From January onwards, only one camp was available.

Many Peaks.—Plantation and related miscellaneous surveys were carried out by District Staff on Reserve 67, Bulburin, and 95, New Cannindah, as required. An assessment was also made of the timber stand on Tinut Holding.

NATIONAL PARKS.

The proclamation of four new National Parks aggregating 23,622 acres brought the total area so reserved to 764,684 acres. The new National Parks were at Crystal Creek, Mount Spec (Ingham and Townsville Districts), Mount Aberdeen (Bowen District), Mount Maria (Innisfail District), and an addition to the Springbrook National Park aggregation. The new National Parks are for the most part rugged areas of forest and jungle, of high scenic quality.

The sum of £43,749 was expended on work on National Parks, making a total of £273,747 since the inception of this work in 1936-37. At 30th June, 1952, the number of men employed was 41.

The policy of preserving parks, as far as possible, in their original condition has been strictly maintained. Work, therefore, has been confined, in the main, to opening up graded pathways which, while interfering little with the parks, give easy access to all who wish to see the beauty of these areas.

At the end of the year 210 miles of such tracks had been provided. Maintenance of these, protection of the parks, removal of weed intrusions, and provision of facilities for visitors took up most of the vote allotted, but some 12½ miles of track were constructed.

Some features made accessible by graded tracks were—

Palmerston Highway National Park.—By a track from “K” tree to Crawford’s Lookout, some very fine views of jungle gorge and waterfalls. By a track commencing 10 chains west of Henrietta Creek bridge, the Nandroya Falls on Douglas Creek, said to be amongst the most picturesque in North Queensland.

Dunk Island.—By tracks up the mountain, pleasant walks through jungle and forest, and fine panoramas over islands and ocean.

Eungella.—A variety of vistas from the escarpments of the Clarke Range, “thence through glades rich in piccabeen palms, with an infinite variety of tropical scenery.”

Finch Hatton.—The track has risen to a height of 2,200 feet up the slopes of Mount Dalrymple and gives access to a 250-foot waterfall.

Long Island.—Continuation of the track system, giving jungle walks and varied panoramic views of islands of the Whitsunday group.

Springbrook.—Easy access provided to the track down the Canyon. Further views of palm and fern jungle, and cascades, provided on Purlingbrook Creek.

Cunningham’s Gap.—Interesting forest, with fine tree specimens, by a track at West Gap Creek.

Bunya Mountains.—Further vantage points provided overlooking the plains to the South-West.

Numinbah Natural Arch.—The track giving access to Cave Creek and the lower falls was completed.

Mount Glorious.—Further forest and jungle scenes made available at Boombana.

Noosa.—The track system extended to take in further scenic areas.

Queen Mary Falls.—The track system here gives opportunity for enjoying many lovely spots in this very beautiful area.

Montville (Kondalilla).—Many and varied charming scenes made accessible.

HARVESTING AND MARKETING.

General.—With generally dry weather conditions during the year logging roads were in good condition and this factor, combined with the heavy demand by the timber industry for all classes of timber for most of the year, saw the realisation of an all-time record cut of Crown log timber of 238,338,673 superficial feet, an increase of 50,904,082 superficial feet over the previous year’s deliveries.

The overall cut for the State of private and Crown timber was—

	Superficial Feet.
Hoop and Bunya Pine	56,155,000
Kauri Pine	7,731,000
Cypress Pine	44,721,000
Plantation Thinnings	14,278,000
Hardwood	267,563,000
Cabinet Timber	21,476,000
Miscellaneous Timber	61,103,000
	<hr/>
	473,027,000

This figure is by 66,367,000 superficial feet the highest on record. In 1949–50, the previously highest cut, 406,660,000 superficial feet, was recorded.

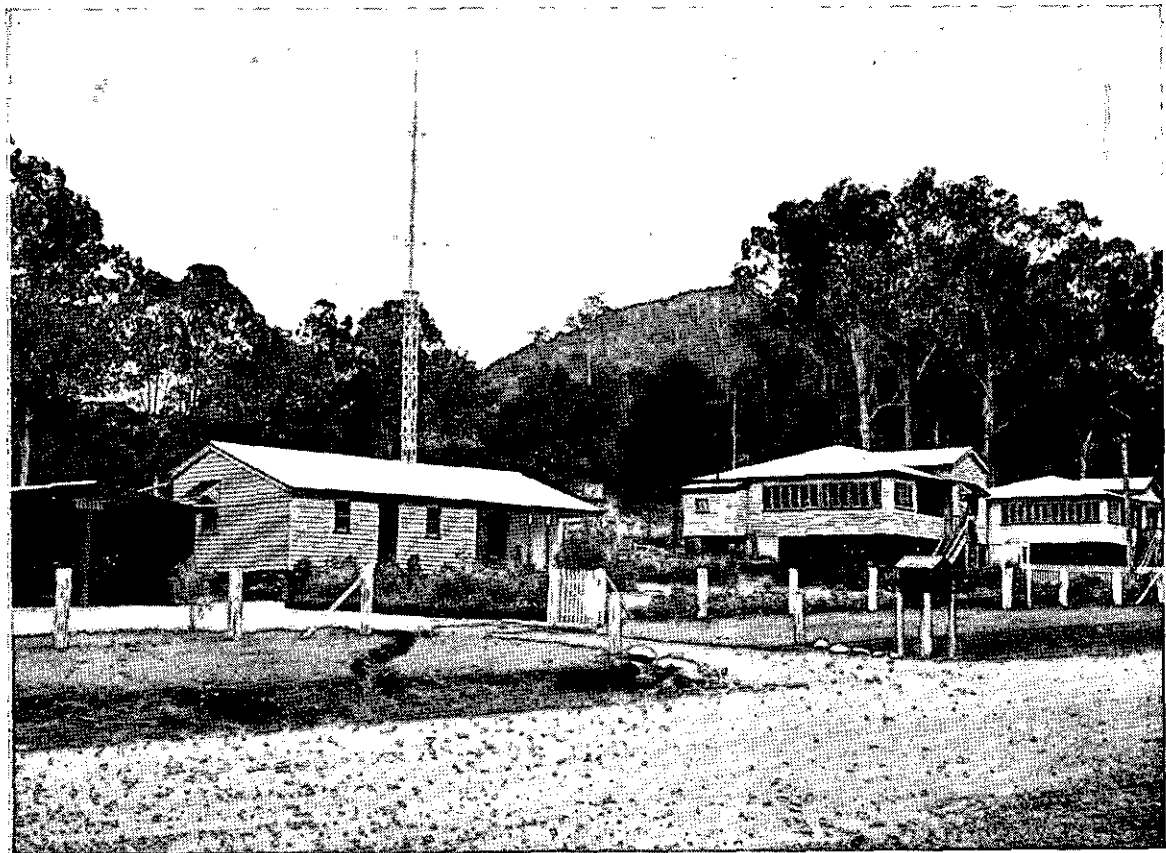
The main increases in cut of Crown timber, by species, over the previous year are listed hereunder :—

	Superficial Feet.
Hoop and Bunya Pine	11,000,000
Cypress Pine	10,000,000
Hardwoods	9,000,000
Miscellaneous species	8,000,000
Cabinet timbers	5,000,000
Plantation Thinnings	3,000,000
Kauri Pine	2,500,000



TIMBER IS INDISPENSABLE FOR RAILWAYS.

Section of a heap of sleeper blocks delivered by the Department to the Railway Sleeper Mill at Clermont.
In 1951-52 timbers representing 1,103,974 sleepers were delivered from Crown lands.



THE NERVE CENTRE OF THE FOREST.

Headquarters of Amamoor State Forest showing radio transmission mast. Two-way radio provides efficient communication with working gangs for fire control and general purposes.

There appeared to be an increase in the efficiency of logging operations during the year. The average production per logging unit increased, and lower rates were submitted for contracts for delivery of log timber for the first time in many years.

Towards the end of the year the demand for timber eased. This was first evident with the South Queensland scrubwood species, and later with plantation thinnings, and had extended by the end of the year to all classes of timber. Considering the very heavy burden that the forests have carried during and since the end of the war, this evidence of reduction of cut is welcome.

Increases in the basic wage, plant costs, rail freights, and oil and fuel prices added considerably to the cost of log production. It was necessary to counteract these increased costs by log-price increases from time to time.

Special attention was given to securing the constructional timber requirements of the Departments of Railways and Main Roads, and to this end close co-operation with officers of those Departments was maintained, with gratifying results. The shortage of sleepers, transoms, and girders, so pronounced in the previous four years, has been alleviated and the outlook for future supplies is promising.

A long overdue adjustment of the Crown log prices in North Queensland was effected during the year. This adjustment increased the prices of the superlative timbers to give them a reasonable margin on the general utility timbers. The prices of timbers generally used for house building and other constructional work and of the general utility "softwoods" were practically unaltered, but, for the first time, the price now reflects an appreciation of the fine quality of many of the North Queensland timbers.

The log prices of South Queensland scrubwoods were also adjusted during the year. The data collected during mill studies indicated that the price relationship for the size groups needed adjustment. To correct this a new group (under 48-inch centre girth) was introduced and margins between the size classes were adjusted to be in conformity with mill study results. In addition, the same system as applies with hardwoods was adopted—i.e., depot rates were gazetted on a sawn freight relationship with the principal market.

Auction sales of standing timber met with satisfactory results. In cases where the issue of a new sawmill license and security of timber supply were involved the bidding was strongly competitive.

Tenders called for cutting, hauling, and delivery of log timber met with a good response towards the end of the year. In the Brisbane Valley ten (10) lots offered attracted tenders at rates well below the Department's upsets.

The gross revenue from timber sales for the year was £2,182,406, and the net revenue, after meeting logging and other costs, was £1,155,234. These receipts are an all-time record and were brought about mainly by the establishment of realistic log prices for Hoop and Bunya Pine the previous year and for North Queensland Cabinet timbers this year.

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

Year.	Queensland Grown.							Imported.	Total.
	Hoop and Bunya Pine.	Kauri Pine.	Plantation Thinnings.	Cypress Pine.	Hardwood.	Cabinet Woods.	Miscellaneous.		
	(1,000 superficial feet.)								
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	47,681	5,558	11,925	34,736	229,510	21,211	54,365	8,552	413,538
1951-52	56,155	7,731	14,278	44,721	267,563	21,476	61,103	5,775	478,802

Mill Logs—Crown Lands.—The following are the annual quantities delivered from Crown Lands as from 1941-42 :—

1941-42	232,000,000	1947-48	204,000,000
1942-43	199,000,000	1948-49	208,000,000
1943-44	202,000,000	1949-50	202,000,000
1944-45	193,000,000	1950-51	187,000,000
1945-46	190,000,000	1951-52	238,000,000
1946-47	220,000,000		

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.	Miscellaneous.	Plantation Timbers.
(1,000 superficial feet.)								
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
1951-52	57,680	7,677	25,883	70,227	9,809	18,366	32,991	15,666

The Timber Business, 1951-52.

(a) Mill Logs—	1950-51.	1951-52.
Hoop and Bunya Pine ..	46,588,000 super. feet	57,680,000 super. feet
Forest Hardwoods ..	61,618,000 super. feet	70,227,000 super. feet
Scrub Hardwoods ..	7,907,000 super. feet	9,809,000 super. feet
Cypress Pine	15,667,000 super. feet	25,883,000 super. feet
Kauri Pine	5,055,000 super. feet	7,677,000 super. feet
Cabinet Woods	13,324,000 super. feet	18,366,000 super. feet
Miscellaneous Species ..	24,948,000 super. feet	32,991,000 super. feet
Plantation Timbers ..	12,313,000 super. feet	15,666,000 super. feet
Stumps and Flitches ..	14,000 super. feet	40,000 super. feet
Total Crown Mill Logs ..	187,434,000 super. feet	238,339,000 super. feet

(b) Construction Timbers—	1950-51.	1951-52.
Headstocks, Transoms, Crossings, Braces ..	278,119 super. feet	444,542 super. feet
Sleepers	643,407 pieces	1,103,974 pieces
Girders, Corbels, Piles, Sills, and Girder Logs } ..	90,892 lineal feet	133,945 lineal feet
	236,933 super. feet	715,087 super. feet
Poles	451,062 lineal feet	707,775 lineal feet
House Blocks	215,119 lineal feet	314,185 lineal feet
Mining Timbers	219,682 lineal feet	325,208 lineal feet
Mining Timbers	44,062 pieces	142,573 pieces
Gross Receipts from Timber Sales	£1,279,446	£2,182,406
Net Revenue	£551,738	£1,155,234

Logging.—During 1951-52 the following quantities were hauled by, and payment made to, contractors to the Department.

Class.	Quantity.	Expenditure.
	Super. feet.	£ s. d.
South Queensland—		
Hoop and Bunya Pine	31,434,883	
Forest hardwoods	3,062,555	
Scrub hardwoods	258,456	
Miscellaneous	1,057,840	
Cedar	39,787	
	35,853,521	269,874 11 6
North Queensland—		
Kauri Pine	2,896,585	
Cabinet-woods	7,439,825	
Forest hardwoods	1,384,124	
Scrub hardwoods	3,083,316	
Miscellaneous	11,807,932	
Cedar	135,508	
	26,747,290	218,559 19 10
Totals	62,600,811	488,434 11 4

The Plywood Industry.—Returns from plywood and veneer mills covering the quantities of logs treated during the year 1951-52 are not yet available. However, manufactured deliveries were as follows :—

	Sq. ft.	£
Through the Southern Board	51,096,803	1,200,777
Through the Northern Board	39,185,097	871,868
	<u>90,281,900</u>	<u>2,072,645</u>

Distribution of this production was as follows :—

	Southern Board.	Northern Board.	Total.
	Sq. ft.	Sq. ft.	Sq. ft.
Queensland	18,493,353	16,411,865	34,905,218
Interstate	32,421,068	22,773,232	55,194,300
Overseas	182,382	..	182,382
Total	<u>51,096,803</u>	<u>39,185,097</u>	<u>90,281,900</u>

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 30th July, 1951	8 12 0	to 9 1 0
On 29th October, 1951	9 1 0	to 9 11 0
On 4th February, 1952	9 11 0	to 10 5 0
On 28th April, 1952	10 5 0	to 10 13 0

Cutting rates and hauling and snigging allowances were adjusted in accordance with award variations. In October, 1951, and in April, 1952, the weekly rates allowed in Departmental assessment for motor trucks engaged in hauling and for tractors engaged in snigging Crown timber were revised to allow for the increased cost of plant, material, oil, fuel, and petrol, and adjustments in payments to contractors were made accordingly.

Stumpage prices to purchasers of Crown timber were reduced in conformity with increases granted.

Hewn Timber Prices.—Increased award rates also affected the prices of hewn timbers as follows :—

	25-7-51.	30-7-51.	1-10-51.	29-10-51.	4-2-52.	28-4-52.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Sleepers—squared 7 feet per 100 pieces ..	45 6 0	46 19 9	46 19 9	48 17 3	51 9 9	52 19 9
Sleepers—hogback 7 feet per 100 pieces ..	36 9 8	37 16 2	38 15 0	40 4 4	42 5 6	43 9 0
Crossing timbers per 100 super. feet ..	2 5 2	2 6 8	3 0 0	3 1 8	3 4 0	3 5 4
Transoms per 100 super. feet	2 19 7	3 1 3	3 10 0	3 11 10	3 14 4	3 15 10
Braces per 100 super. feet	2 9 3	2 11 1	3 1 0	3 3 0	3 5 8	3 7 7
Headstocks per 100 super. feet 12 inches by 6 inches	2 10 5	2 12 3	3 5 0	3 14 6	3 17 2	3 18 9

Key Market Rises.—To offset increasing costs of operations there were two increases in key market rates during the year.

The log prices of North Queensland timbers were also revised during the year, on the basis of intrinsic value.

In addition, the South Queensland scrubwood prices were adjusted in accordance with mill-study results and a depot price system, on the same basis as adopted for hardwoods, was applied.

Logging Roads.—Two forestry road engineers have been employed full time on the road construction programme in North and South Queensland respectively. A third engineer was appointed on 24th March, 1952, to deal with road matters in the Central Division, with headquarters at Mackay. The procedure adopted is for the Department of Main Roads to construct main arterial roads, whilst the Forestry Department normally carries out the location and working surveys.

Subsidiary roads within the Forestry Reserves are constructed and maintained by the Forestry Department.

Expenditure by the Department of Main Roads for the year totalled £170,855 18s. 9d. for construction and £36,481 4s. 8d. for maintenance. These roads were constructed to usual Main Roads standards, for location and grades and will provide heavy transport service under all weather conditions. The Forestry Department road programme for the year constituted 84 miles 26 chains of construction. Location and working surveys covering 136 miles 9 chains were carried out.

Maintenance on all existing roads was given attention and Shire Councils throughout the State were suitably subsidised where the Forestry use of Shire roads warranted subsidy.

Expenditure from Forestry Votes was as follows :—

	£
Construction	108,299
Maintenance	31,132
Subsidies to Shire Councils	25,177
Investigation Surveys	2,826
Workers' Compensation	2,484
Pay-Roll Tax	1,304
	<u>£171,222</u>

Constructional Timbers—Departmental Contracts.—A comparison of supply of constructional timber from Crown Lands with the two previous years is as follows :—

	1949-50.	1950-51.	1951-52.
Sleepers	341,898 pieces	463,181 pieces	865,537 pieces
Crossings	97,621 super. feet	114,403 super. feet	139,737 super. feet
Transoms	114,537 super. feet	97,950 super. feet	154,489 super. feet
Bridge timbers (round)	83,372 lineal feet	52,349 lineal feet	52,182 lineal feet
Bridge timbers (squared)	46,560 super. feet	45,444 super. feet	7,214 super. feet

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

Rosewood.

	Tons.	cwt.	qr.
In Stock at 1st July, 1951	29	10	0
Purchased during year	44	3	1
Exported to China	73	13	1
On Hand, 30th June, 1952	Nil		

No Sandalwood was purchased or exported during the year.

SAWMILL LICENSES.

The policy that has been in operation since 1946, of granting Sawmill Licenses, automatically, to applicants stating that privately-owned timber was available for the support of the proposed mill, was discontinued during the year.

In future, in dealing with applications for Sawmill Licenses, full consideration will be given to the needs of the existing sawmilling industry and to the general welfare of the community. The objective is to accord as great a measure of permanence as possible to the existing sawmilling and associated industries, and, at the same time, to meet the timber requirements of the community.

Permanence in the sawmilling industry can be achieved only by restricting the cut of sawmills to the capacity of the forests to produce timber. Over most of Queensland the capacity of licenses already granted greatly exceeds the growth of the forests—but the present policy should at least prevent the worsening of the already bad position.

During 1951-52 there was an increase of 121 in the number of licensed sawmills in operation.

The following table sets out the position at the commencement and the end of the year and gives the particulars of new licenses granted, etc.

Number of Licenses as at 30th June, 1951.	Sawmill Classification.	New Licenses Granted.	Number Ceasing to Operate.	Mills Re-licensed.	Restrictions Withdrawn.	Formerly Restricted now Unrestricted.	As at 30th June, 1952.
991	General Mills	148	42	..	..	8	1,105
55	Case Mills	2	1	..	6	..	50
41	Sleeper Mills	6	2	..	2	..	43
18	Other restricted	1	..	..	..	..	19
58	Resaw and dressing	10	1	..	..	..	67
1,163		167	46	..	8	8	1,284

OFFENCES.

During the year 1951-52, 191 cases of offences against Acts and Regulations administered by the Department were reported.

Action was taken as follows :—

Thirty-one prosecutions (involving 41 people) were undertaken, with fines totalling £257 11s., and proceeds from the sale of timber involved amounting to £981 2s. 8d. Also, 6 cases of prosecution from the previous year were finalised, fines amounting to £313 2s. being imposed.

Seven cases of prosecution are pending.

In 71 cases, the value of timber was collected and warnings issued, whilst in another 25 cases warnings only were issued.

In 11 minor cases no action was taken.

In 9 cases, insufficient evidence was available, while 16 cases are receiving attention, but action has not been completed.

As a result of action taken in all cases, the total amount recovered was £4,295 15s. 8d.

Under the Timber Users' Protection Act, 19 complaints were lodged and investigated.

Of the 191 cases reported, 11 dealt with offences on National Parks.

Five cases of timber cut without authority on Main Roads were investigated by officers of the Department and then referred to the Department of Main Roads for action.

Two cases of illegal ringbarking on Crown leaseholds were referred to the Land Administration Board for action and one case of unauthorised timber operations on the bed and banks of a river was referred to the Irrigation Department.

FOREST PRODUCTS RESEARCH.

General.—Market conditions in the timber trade changed radically during the latter part of the year. A rapid transition to a buyers' market placed a marked premium on quality of product and this was reflected in a considerable increase in the number of enquiries from all sections of the community, covering all aspects of timber utilisation. Consequently, much of the work of the branch has been directed to the satisfaction of these enquiries, with the attendant testing and identification of samples submitted. The principal activities, however, have been along the lines of sawmill studies, or the application of the results of these studies in log pricing.

Collaboration has been continued with other institutions, such as Division of Forest Products, C.S.I.R.O., Division of Wood Technology, Forestry Commission of New South Wales, the Government Botanist, and numerous State and Commonwealth Departments. Grateful acknowledgment is made of their ready assistance in numerous problems. Acknowledgment is also due to the trade associations and many individual firms who have co-operated in applied research activities.

Utilisation.—Continually increasing requests for identification of wood specimens, and advice on their qualities and uses, were received; 2,925 specimens were examined during the year, representing 266 different native and imported species.

Close collaboration with the Government Botanist was maintained in securing material for authentic identification, particularly of North Queensland species. Systematic determination of the species forming the complex North Queensland rain forests is an essential preliminary to efficient research into the silvicultural and management problems facing the Department. Concurrently, the correct utilisation of the many species must be determined if full use is to be made of the potential wealth of these forests.

Advice was frequently given on specific utilisation problems in the use of material from small-diameter softwood plantation thinnings.

Preliminary trials of electronic (U.H.F.) heating of glue lines in making up wide panels, &c., for core stock and commodity cases from the product of these small-diameter logs, indicate that considerable advantages in production rates and costs may be obtained, as compared to orthodox jointing methods.

Work with various sub-committees of the Queensland Joint Committee on Timber of the Standards Association of Australia was continued. Progress is reported on Standard Common Names and Standard Specifications for—

- Railway sleepers and transoms.
- Structural hardwood timbers.
- Hardwood transmission poles.
- Plywood.

No agreement has yet been reached on Standard hardwood flooring profiles.

In co-operation with Division of Forest Products, C.S.I.R.O., a survey of 2,000 new railway sleepers was commenced to determine the standard of acceptance of various species used in the State. The survey is part of the work entailed in drafting A.S.A. Standards for sleepers.

Preservation—1. Lyctus Control.—Experimental work on lyctus control has reached the stage where methods developed for impregnation of susceptible timber with boric acid and borax are suitable for efficient industrial application. The major work in this field has been technical assistance to industry by the provision of working drawings for treatment plants, supervision of the initial operation of plants, and the training of plant operators; 38 individual firms received this assistance during the year. There are now in operation 24 plants for the treatment of sawn timber, and all plywood mills handling susceptible timbers are using the momentary dip method for impregnation of veneers. The annual capacity of plants in operation is:—

										Super. ft.
Sawn Timber	..	..	..	..	..	..	..	..	..	15,000,000
Under Construction	..	..	..	..	..	..	..	..	..	4,000,000
Total	..	..	..	..	..	..	..	..	..	19,000,000
										Square ft.
Veneer Mills	..	..	..	..	..	..	..	..	..	66,000,000 (1/16" basis)

This in itself is a major contribution to the management of the forests of Queensland, enabling, as it does, the use of a considerable volume of wood which would otherwise be of doubtful value to the State.

Application of severe import restrictions by the Commonwealth Government during the year caused considerable disquiet among users of borax and boric acid, and, after a conference of all interested parties, representations regarding availability of supplies and allocation of the necessary foreign exchange were made to the Commonwealth Government, through the Commonwealth Forestry and Timber Bureau. Supplies of borax and boric acid appear to have been maintained in reasonable quantities and the Department has provided the Commonwealth with reliable estimates of quantities of these materials required for use in the State.

Further research work is aimed at the development of standard sampling procedures for the purposes of the Timber Users' Protection Act, the improvement of analytical methods and treatment schedules.

2. Timber Users' Protection Act.—During the year over 1,500 enquiries on borer control were dealt with and 25 complaints were made by aggrieved persons. The appointment of inspecting staff in November, 1951, has greatly helped the administration of this Act. Over 230 inspections of individual houses, joinery and furniture factories have been made.

In the majority of cases investigation of complaints has resulted in replacement of, or satisfactory arrangements for suitable treatment of, affected material by the offender. Prosecution action is under consideration in four cases. Extension of inspection work to the major country towns is proposed in the near future.

To secure accurate and up-to-date information on susceptible species arrangements have been made for C.S.I.R.O., Division of Forest Products, to conduct susceptibility tests on a large number of the lesser-known species. In all, 162 species are involved.

3. Other Preservation.—In co-operation with Division of Forest Products (C.S.I.R.O.), a major preservation experiment was commenced. This involves the use of "all round" oil-borne preservatives and the testing of their effectiveness as fungicides and insecticides for the preservation of wood.

Decay hazard tests have also been commenced in three locations to determine suitable sites for durability tests involved in this experiment.

Concern has been felt at the increasing evidence of failure of relatively durable hardwoods and cypress pine in floors of houses built in Brisbane since 1946. The modern tendency to enclosed low brick and concrete foundations must be accompanied by adequate underfloor ventilation designed to keep the wooden floor and sub-floor structure below 20 per cent. moisture content. Evidence of failure of floors of durable wood in five years is not uncommon and has been traced, in every case, to inadequate ventilation. It cannot be too strongly emphasised that, in a sub-tropical climate, builders and architects should always be alert to this fault. The State cannot afford the waste of wood which should otherwise have an indefinite service life.

Observations on railway sleepers treated with creosote and crude oil have been maintained. All test sleepers are still in position and in good condition. It is too early to draw any conclusions, but complete inspection and retreatments, as necessary, are scheduled for October, 1952.

Other activities concerned with termite and marine borer resistance of constructional timbers have been continued.

Plywood and Veneer.—The critical position of casein supplies reported in 1950–51 continued and an increasing number of plywood mills have turned to the use of synthetic resin adhesives, principally the ureaformaldehyde group.

In co-operation with the Plywood and Veneer Marketing Board and glue manufacturers, a major research project on the application of these resins was commenced during the year. It is designed to investigate—

- (1) Correct formulations for Queensland conditions ;
- (2) Effects of veneer preservative treatments (Boron and Pentachlorophenol) on glue line characteristics.

The necessary chemical determinations have been done and gluing trials and strength testing are now in progress. Market conditions have emphasised the necessity for manufacturers to pay particular attention to quality and, in this respect, deficiencies in glue line quality and seasoning procedure have resulted in the production of very poor-quality plywood by some manufacturers. Further research is proposed in the testing and application of adhesives, and the suitability of lesser-known Queensland timbers for veneer. It is also proposed to maintain a general survey of quality of product and manufacturing technique in the industry. The use of synthetic resin glues will require, in general, better technique and closer plant control by the industry.

Laboratory.—The laboratory is sufficiently equipped to handle most of the projects envisaged in the near future. Equipment has been provided to facilitate the determination of total phosphorus in soils from areas proposed for planting with *P. taeda*, *P. caribaea*, *P. palustris*, &c. The number of analyses carried out during the year is shown in the table below :—

<i>Preservation—</i>							
Commercial analyses	..	..	..	..	..	..	339
Research analyses	..	..	..	..	..	..	6,310
Timber Users' Protection Act	..	..	..	..	..	..	140
							6,789
<i>Plywood and Veneer—</i>							
Commercial analyses	..	..	..	..	..	..	1,199
Research analyses	..	..	..	..	..	..	1,438
							2,637
<i>General Wood Chemistry—</i>							
Research analyses	..	..	..	..	..	..	285
Commercial analyses	..	..	..	..	..	..	3
							288
Total	..	..	..	..	..	..	9,714

Seasoning.—Trade interest in kiln drying has increased, but the number of kiln installations has shown no significant change as yet. Advice on seasoning problems and provision of suitable kiln designs and specifications was continued as a service to industry. Air-seasoning research in progress was continued and a brief study was made to determine correct practice for material from thinnings of plantation grown Silky Oak (*G. robusta*).

The experimental kilns were partly employed on drying of special requirements in 1 inch and 2 inch stock for other Government Departments. Approximately 50,000 superficial feet was so handled. Moisture content determinations were made for 925 samples for 234 enquirers. A general survey of seasoning practices and kiln installations in the North Queensland sawmill, veneer and plywood industry was made during the year. Considerable room for improvement was noted and industry must pay much more attention to the fundamental requirements of correct seasoning technique if quality, satisfactory to a buyers' market, is to be maintained. It was particularly noticeable that in many plywood mills kilns were being used that were not of efficient design, and effective control of drying schedules was virtually absent.

Air drying was conducted under conditions such that it is doubtful whether suitable moisture content for satisfactory gluing would ever be attained.

Fancywoods.—The yard has been maintained solely to handle material becoming available from other sections. Sales were—

Sawn Timber	..	..	..	..	..	..	..	2,700 Super. ft.
Mouldings	..	..	..	..	..	..	..	400 Super. ft.
Fishing Rod Pieces	..	..	..	..	..	..	..	175 (pieces)
Black Palm	..	..	..	..	..	..	..	11 lb.

105,000 superficial feet of timber was dressed for other Government Departments.

Engineering and Mill Studies.—Designs of immunising plant, sawmill layout, and waste disposal systems were made for various sections of the industry. A bag-filter unit for collection of sander dust in plymills was designed and is operating satisfactorily.

Attention was given to the design of efficient immunising plant and particular attention has been given to methods of solution heating.

It is quite evident from mill studies that the production rates in the sawmilling industry are generally low in comparison with those of other countries. If the available timber resources are to be used efficiently it is essential that man-hour production be increased, particularly in view of rising costs of material, plant, and labour. There is need for elimination of wasteful manual handling methods and for the provision of modern sawmill equipment and efficient power.

It is proposed to commence experimental sawing trials to analyse the effects of circular saw tooth form, gauge, rim speed, and feed speed on the power consumption and surface finish of the sawn product.

Mill studies are primarily designed to examine sawmill economics and by extension of the data obtained to determine equitable stumpages for the standing tree. One study on hoop pine plantation thinnings was completed during the year and the analysis of the previous studies was continued. This work is a continuing project to meet changing market conditions and is the foundation for the Department's log prices.

The application of a system of stumpage assessment for hardwood logs on a gross hoppus volume basis was examined, using existing mill study data. The system has certain definite advantages and its application in practice is under consideration. Statistical analysis of the mill study data has given the general relationships between log girth and recovery, log girth and production rate, on a green off-saw basis. Formulae for allowances for defect and distance from keymarket have been developed. The essential differences between species are now being examined to separate them into correct log price groups.

The log price structure of North and South Queensland scrubwoods and plantation thinnings was examined during the year in the light of existing mill studies and certain alterations were made as a result. A small-scale time study of the operation of a Linderman jointer using softwood plantation thinnings was undertaken to provide further information on log prices of this material.

Attention has been paid to the design of mill studies in order that valid statistical estimates of the reliability of the results may be made.

STAFF.

The Department suffered a severe loss by the death in September, 1951, of Inspector Noel Drayton Allom, at the relatively early age of 54 years. In service to the Department, extending over 25 years, Mr. Allom had carried out forest survey work and district administrative control both in South and North Queensland and in 1945 was appointed Inspector. His very extensive knowledge of Queensland timbers and forests, and forestry and trade practices, together with the practical and impartial outlook he brought to his duties, made his loss felt not only by the Department but by the timber industry generally.

Foresters C. S. Faircloth (Brisbane) and J. Crothers (Cairns) were retired during the year after service of 39 years and 19 years respectively. Both of these officers rendered very valuable and efficient service.

The salaried staff during the year increased from 308 at 1st July, 1951, to 312 at 30th June, 1952.

Resignations amounted to 29 and transfers to other Departments 3.

The number of officers of the field staff remained stationary at 100.

Wages staff decreased from 2,157 as at 1st July, 1951, to 1,995 as at 30th June, 1952.

ACKNOWLEDGMENT.

It would not be fitting to close without making special mention of the sterling and, indeed, often heroic efforts of the field staff during the gruelling fire season of 1951-52. Very many of my officers sacrificed large parts of their leisure in devotion to their duty and their outlook and spirit cannot be too strongly commended. Not sparing themselves, they accomplished miracles in saving the forests from destruction. To these men, particularly, and to all officers I express my thanks for their excellent service during a very difficult year.

V. GRENNING,
Director of Forests.

Appendices.

APPENDIX A.

Return of Timber, &c., removed from Crown Lands during the year ended 30th June, 1952.

Species.	Quantity.	
	Super. Feet.	Super. Feet.
Milling Timber—		
Hoop and Bunya Pine—		
Ply	9,303,196	
Logs	24,355,216	
Tops	24,021,838	
		57,680,250
Kauri Pine	7,677,243	
Cypress Pine	25,882,762	
Forest Hardwoods	70,226,648	
Scrub Hardwoods	9,809,335	
Cabinet Woods	18,365,971	
Miscellaneous Species	32,990,424	
Stumps and Fitches	39,959	
		164,992,342
Plantation Thinnings—		
Hoop Pine	7,030,453	
Bunya Pine	59,011	
Kauri Pine	11,098	
Pinus caribaea	4,390,034	
Pinus taeda	2,625,650	
Pinus patula	564,242	
Pinus radiata	235,536	
Pinus leiophylla	3,657	
Pinus longifolia	11,778	
Pinus echinata	14,104	
Cupressus lusitanica	29,206	
Callitris arenosa	7,873	
Callitris cupressiformis	1,094	
Silky Oak	681,058	
Beech	1,092	
Cedrela mexicana	195	
		15,666,081
		238,338,673
Other Classes—		
		Expressed as
		Superficial Feet
		(Hoppus) Log Measure.
Sleepers	429,932 pieces	16,337,416
Sleeper Blocks (as sleepers contained)	674,042 pieces	24,265,512
Transoms	222,567 superficial feet	356,107
Headstocks, Crossings, Longitudinals	221,975 superficial feet	355,160
Girders, Corbels, Piles, Sills, Kerb Logs	133,945 lineal feet	2,411,010
Girder Logs	715,087 superficial feet	715,087
Poles (telephone poles, &c.)	707,775 lineal feet	4,954,425
Poles (small dimensions)	114,104 lineal feet	342,312
House Blocks, Round Posts	314,185 lineal feet	1,885,110
Fencing Material—Split	557,180 pieces	5,014,620
Fencing Material—Round	263,429 lineal feet	658,572
Hewn and Bridge Timbers	47,765 superficial feet	76,424
Mining Timbers—Split	142,573 pieces	570,292
Mining Timbers—Round	325,208 lineal feet	650,416
Stakes	11,221 pieces	89,768
Keel logs	864 lineal feet	5,184
Miscellaneous sawn timber (offcuts)	39,184 superficial feet	62,699
		58,750,114
Fuel	74,562 tons	
Charcoal	36,907 bags	
Trees and Plants (Number)	246,704	
Sand, Gravel, Soil	46,343 cubic yards	
Rosewood	44 tons	
Mulga Wood	10 tons	
Lawyer Cane	116 tons	
Shell Grit	130 tons	
Staghorns	160 pieces	
Distilled Oil	26 lb.	
Leaves	240 lb.	
Byfield Fern	£140	

APPENDIX B.

Annual Cut—Pine—Financial Year ended 30th June, 1952.

Forestry District.	Ply.	Logs.	Tops.	Total.
	Super. ft.	Super. ft.	Super. ft.	Super. ft.
Brisbane	668,417	3,715,382	2,948,404	7,332,203
Brisbane Valley	4,274,891	10,544,371	11,526,158	26,345,420
Gympie	212,208	1,318,724	911,386	2,442,318
Mackay .. .. .	..	360,870	80,730	441,600
Monto	1,767,037	3,117,983	3,204,047	8,089,067
Maryborough	2,380,643	4,874,350	4,953,338	12,208,331
Warwick .. .. .	..	423,536	397,775	821,311
Total	9,303,196	24,355,216	24,021,838	57,680,250

APPENDIX C.

Receipts under the State Forests and Timber and Quarry Regulations for the Year ended 30th June, 1952.

Districts.	Totals.	
	£	s. d.
Group 1—South Queensland (Brisbane, Bundaberg, Gympie, Monto, Maryborough, Toowoomba, Warwick, Yarraman)	1,330,134	10 2
Group 2—Goondiwindi, Inglewood, St. George, Stanthorpe	31,837	17 2
Group 3—Dalby	34,212	15 5
Group 4—Charleville, Cunnamulla, Roma, Quilpie	458	14 8
Group 5—Barealdine, Blackall, Jundah, Longreach, Muttaborra, Stonehenge, Winton, Aramac, Isisford, Jericho	1,797	12 11
Group 6—Clermont, Emerald, Springsure	4,435	18 0
Group 7—Gayndah, Gladstone, Taroom, Theodore, Mundubbera	235	11 10
Group 8—Rockhampton	2,692	17 0
Group 9—Mackay	7,711	6 4
Group 10—Bowen	5,701	5 6
Group 11—Townsville	16,139	6 9
Group 12—Charters Towers, Ravenswood	232	14 5
Group 13—Hughenden	397	6 7
Group 14—Cloncurry, Boulia, Kynuna, Mackinlay	461	10 3
Group 15—North Queensland (Atherton, Herberton, Cooktown, Port Douglas, Cairns, Innisfail, Ingham)	446,715	17 11
Group 16—Burketown, Coen, Croydon, Georgetown, Normanton, Thursday Island	3	3 4
	1,883,168	8 3
Receipts—Forestry and Lumbering	285,073	18 4
Sale of Plants, Material, &c.	27,909	5 3
Rents and Grazing Dues	5,475	16 11
	2,201,627	8 9
Less Treasury Refunds	19,220	18 9
	£2,182,406	10 0

COMPARISON WITH TOTALS OF PREVIOUS YEARS.

1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
£1,006,797	£1,029,282	£1,010,459	£1,279,446	£2,182,406

APPENDIX D.

Proceeds of Sales of Timber, &c., for the Period 1st July, 1948, to 30th June, 1952.

Districts.	1948-1949.		1949-1950.		1950-1951.		1951-1952.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Group 1	542,739	14 3	490,429	4 0	753,340	19 7	1,330,134	10 2
Group 2	9,066	14 6	13,638	14 9	10,869	11 9	31,837	17 2
Group 3	21,697	19 3	24,516	5 1	30,963	9 0	34,212	15 5
Group 4	438	14 6	602	7 6	505	9 4	458	14 8
Group 5	743	5 1	707	3 11	759	1 4	1,797	12 11
Group 6	2,175	1 6	2,525	4 8	2,268	8 9	4,435	18 0
Group 7	389	9 2	449	18 5	202	14 0	235	11 10
Group 8	1,248	12 4	2,146	1 6	1,269	13 0	2,692	17 0
Group 9	4,253	17 6	6,633	1 7	6,172	3 3	7,711	6 4
Group 10	4,073	5 2	2,224	10 4	2,838	5 1	5,701	5 6
Group 11	6,796	9 1	10,038	17 2	6,793	0 10	16,139	6 9
Group 12	210	16 5	162	4 3	206	8 9	232	14 5
Group 13	320	6 3	219	3 6	286	19 10	397	6 7
Group 14	376	12 5	345	3 1	402	5 7	461	10 3
Group 15	337,624	6 4	333,316	13 5	293,406	4 3	446,715	17 11
Group 16	17	2 0	6	9 6	7	12 5	3	3 4
	932,172	5 9	887,961	2 8	1,110,292	6 9	1,883,168	8 3
Receipts—Forestry and Lumbering	89,083	19 11	112,971	1 11	155,030	4 2	285,073	18 4
Sale of Plants, Material, &c.	5,685	3 8	7,586	6 1	11,239	18 3	27,909	5 3
Rents and Grazing Dues	4,360	19 2	4,821	15 5	4,769	5 5	5,475	16 11
	1,031,302	8 6	1,013,340	6 1	1,281,331	14 7	2,201,627	8 9
Less Treasury Refunds	2,019	19 6	2,880	14 3	1,885	6 8	19,220	18 9
Total	£1,029,282	9 0	1,010,459	11 10	1,279,446	7 11	2,182,406	10 0

APPENDIX E.

The following Schedule illustrates the market price of logs during the year 1st July, 1951 to 30th June, 1952:—

Species—Standard Trade Names. (Botanical Names and Common Names in Brackets).	Log Class.	Delivery.	Price per 100 super. feet (Hoppus measure).			
			As at 1-7-1951.	From 1-10-1951.	From 28-1-1952.	From 1-6-1952.
Red Tulip Oak (<i>Argyrodendron peralatum</i>)	7 ft. plus	F.o.r. Cairns ..	s. d. 28 10	s. d. 30 10	s. d. 32 10	s. d. 33 8
		F.o.r. Townsville	28 10	30 10	32 10	33 8
Red Cedar (<i>Cedrela toona</i>)	8 ft. plus	F.o.r. Cairns ..	52 10	54 10	56 10	63 8
		F.o.r. Townsville	52 10	54 10	56 10	63 8
		F.o.r. Netherdale	44 2	46 2	48 2	48 2
		F.o.r. Brisbane ..	67 8	69 8	71 8	71 8
North Queensland Kauri Pine (<i>Agathis palmerstoni</i>)	8 ft. plus	F.o.r. Cairns ..	30 10	32 10	34 10	53 8
		F.o.r. Townsville..	30 10	32 10	34 10	53 8
Queensland Walnut (<i>Endiandra palmerstoni</i>)	8 ft. to 8 ft. 11 in.	F.o.r. Cairns ..	40 7	42 7	44 7	44 7
		F.o.r. Townsville	40 7	42 7	44 7	44 7
Northern Silky Oak (<i>Cardwellia sublimis</i>)	8 ft. plus	F.o.r. Cairns ..	32 5	34 5	36 5	53 8
		F.o.r. Townsville..	32 5	34 5	36 5	53 8
Queensland Maple (<i>Flindersia brayleyana</i>)	8 ft. to 8 ft. 11 in.	F.o.r. Cairns ..	40 4	42 4	44 4	58 8
		F.o.r. Townsville..	40 4	42 4	44 4	58 8
Black Pine (<i>Podocarpus amara</i>)	8 ft. plus	F.o.r. Cairns ..	30 3	32 3	34 3	43 8
		F.o.r. Townsville..	30 3	32 3	34 3	43 8
Silver Silkwood (Putts Pine) (<i>Flindersia acuminata</i>)	8 ft. plus	F.o.r. Cairns ..	34 0	36 0	38 0	53 8
		F.o.r. Townsville..	34 0	36 0	38 0	53 8
White Beech (<i>Gmelina leichhardtii</i>) (<i>Gmelina fasciculiflora</i>)	8 ft. plus	F.o.r. Cairns ..	34 5	36 5	38 5	53 8
		F.o.r. Townsville..	34 5	36 5	38 5	53 8
		F.o.r. Brisbane ..	52 8	54 8	56 8	56 8
Hickory Ash (Hickory) (<i>Flindersia afflaina</i>)	8 ft. plus	F.o.r. Cairns ..	30 10	32 10	34 10	43 8
Northern Silver Ash (White Ash) (<i>Flindersia pubescens</i>)	7 ft. plus	F.o.r. Cairns ..	29 7	31 7	33 7	53 8
	8 ft. basis from	F.o.r. Townsville..	29 7	31 7	33 7	53 8
	1-6-52					
Queensland Silver Ash (Ash) (<i>Flindersia bourjotiana</i>)	7 ft. plus	F.o.r. Cairns ..	29 7	31 7	33 7	53 8
	8 ft. basis from	F.o.r. Townsville..	29 7	31 7	33 7	53 8
	1-6-52					
Bolly Silkwood (Tarzali Silkwood) (<i>Cryptocarya oblata</i>)	7 ft. plus	F.o.r. Cairns ..	28 10	30 10	32 10	33 8
	8 ft. basis from	F.o.r. Townsville..	28 10	30 10	32 10	33 8
	1-6-52					
Satin Sycamore (<i>Ceratopetalum succirubrum</i>)	7 ft. plus	F.o.r. Cairns ..	29 7	31 7	33 7	33 8
	8 ft. basis from	F.o.r. Townsville..	29 7	31 7	33 7	33 8
	1-6-52					
Yellow Walnut (<i>Beilschmiedia bancroftii</i>)	7 ft. plus	F.o.r. Cairns ..	26 9	28 9	30 9	33 8
	8 ft. basis from	F.o.r. Townsville..	26 9	28 9	30 9	33 8
	1-6-52					
Brown Pine (She Pine) (<i>Podocarpus elata</i>)	7 ft. plus	F.o.r. Brisbane ..	30 4	32 4	40 0	40 0
White Cedar (<i>Melia dubia</i>)	7 ft. plus	F.o.r. Brisbane ..	30 4	32 4	40 0	40 0
Yellowwood (<i>Flindersia oxleyana</i>)	6 ft. plus	F.o.r. Brisbane ..	32 3	34 3	41 11	41 11
Crows Ash (<i>Flindersia australis</i>)	6 ft. plus	F.o.r. Brisbane ..	32 3	34 3	41 11	41 11
Southern Silver Ash (Bumpy Ash) (<i>Flindersia schottiana</i>)	6 ft. plus	F.o.r. Brisbane ..	32 3	34 3	41 11	41 11
Bennett's Ash (<i>Flindersia bennettiana</i>)	6 ft. plus	F.o.r. Brisbane ..	28 5	30 5	38 1	38 1
Leopard Ash (Leopard's Wood) (<i>Flindersia collina</i>)	6 ft. plus	F.o.r. Brisbane ..	28 5	30 5	38 1	38 1
Yellow Almond (Bonewood) (<i>Emmenospermum alphonoides</i>)	6 ft. plus	F.o.r. Brisbane ..	28 5	30 5	38 1	38 1
Bollywood (Brown Bollywood) (Bollygum) (<i>Litsea reticulata</i>)	6 ft. plus	F.o.r. Brisbane ..	28 5	30 5	38 1	38 1
Brown Tulip Oak (Crows Foot Elm) (<i>Argyrodendron trifoliolatum</i>)	6 ft. plus	F.o.r. Brisbane ..	28 5	30 5	38 1	38 1
Yellow Carabeen (Carrobean) (<i>Sloanea woolfii</i>), Brush Mahogany (Red Carrobean) (<i>Geissois benthami</i>)	6 ft. plus	F.o.r. Brisbane ..	28 5	30 5	38 1	38 1
Ivorywood (<i>Siphonodon australe</i>)	6 ft. plus	F.o.r. Brisbane ..	36 1	38 1	41 11	41 11
Flame Kurrajong (Flame Tree) (<i>Brachychiton acerifolium</i>)	6 ft. plus	F.o.r. Brisbane ..	28 5	30 5	38 1	38 1
Pink Poplar (Blush Cudgerie) (Maiden's Blush) (<i>Euroschinus falcatus</i>)	6 ft. plus	F.o.r. Brisbane ..	28 5	30 5	38 1	38 1
Red Silky Oak (Beefwood) (<i>Stenocarpus salignus</i>)	6 ft. plus	F.o.r. Brisbane ..	30 4	32 4	40 0	40 0
Rose Mahogany (<i>Dysoxylum fraserianum</i>)	6 ft. plus	F.o.r. Brisbane ..	30 4	32 4	40 0	40 0
Rose Maple (Rose Walnut) (Pigeonberry Ash) (<i>Cryptocarya erythroxylon</i>)	6 ft. plus	F.o.r. Brisbane ..	30 4	32 4	40 0	40 0
Sassafras (<i>Daphnandra micrantha</i>) (<i>Doryphora sassafras</i>)	6 ft. plus	F.o.r. Brisbane ..	30 4	32 4	40 0	40 0
Silver Quandong (<i>Elaeocarpus grandis</i>)	6 ft. plus	F.o.r. Brisbane ..	30 4	32 4	40 0	40 0
Southern Silky Oak (<i>Grevillea robusta</i>)	6 ft. plus	F.o.r. Brisbane ..	30 4	32 4	40 0	40 0
Tulip Plum (Burdekin Plum) (<i>Pleio-gynium solandri</i>)	6 ft. plus	F.o.r. Brisbane ..	28 5	30 5	38 1	38 1
White Walnut (Pepperberry) (<i>Cryptocarya obovata</i>)	6 ft. plus	F.o.r. Brisbane ..	28 5	30 5	38 1	38 1
Yellow Boxwood (<i>Planchonella pohlmanniana</i>)	All sizes	F.o.r. Brisbane ..	46 4	48 4	41 11	41 11

APPENDIX E—continued.

The following Schedule illustrates the market price of logs during the year 1st July, 1951 to 30th June, 1952:—

Species—Standard Trade Names. (Botanical Names and Common Names in Brackets).	Log Class.	Delivery.	Price per 100 super. feet (Hoppus measure).			
			As at 1-7-1951.	From 1-10-1951.	From 23-1-1952.	From 1-6-1952.
			s. d.	s. d.	s. d.	s. d.
Scrubwood Species not elsewhere included in Forestry Sub- Department Log Price Lists—						
Light Scrubwoods	6 ft. plus	F.o.r. Brisbane	28 5	30 5	38 1	38 1
Heavy Scrubwoods	6 ft. plus	F.o.r. Brisbane	28 5	30 5	38 1	38 1
Scrubwoods and Scrub Hardwoods	7 ft. plus	F.o.r. Cairns	28 10	30 10	32 10	33 8
	8 ft. basis from 1-6-52	F.o.r. Townsville..	28 10	30 10	32 10	33 8
Hardwoods	6 ft. plus	F.o.r. Brisbane, Warwick	24 9	26 9	28 9	28 9
Hardwoods	6 ft. plus	F.o.r. Maryborough, Bundaberg	24 3	26 3	28 3	28 3
Hardwoods	6 ft. plus	F.o.r. Rockhampton	28 2	30 2	32 2	32 2
Hardwoods	6 ft. plus	F.o.r. Townsville..	26 9	28 9	30 9	33 8
Hardwoods	6 ft. plus	F.o.r. Mackay	26 4	28 4	30 4	30 4
Hoop Pine Ply	7 ft. plus	F.o.r. Brisbane	76 1	78 1	80 1	80 1
Hoop Pine "A" Quality Logs	7 ft. plus	F.o.r. Brisbane	55 7	57 7	59 7	59 7
Bunya Pine Logs	7 ft. plus	F.o.r. Brisbane	54 1	56 1	58 1	58 1
Hoop Pine Tops	7 ft. plus	F.o.r. Brisbane	44 1	46 1	48 1	48 1
Bunya Pine Tops	7 ft. plus	F.o.r. Brisbane	39 1	41 1	43 1	43 1
Cypress Pine	28 inch plus	F.o.r. Brisbane	23 8	23 8	27 4	27 10
		F.o.r. Rockhampton	23 8	23 8	26 8	26 8
		F.o.r. Gympie, Maryborough and Bundaberg	23 8	23 8	25 8	25 8

APPENDIX F.

Constructional Timbers supplied during Financial Year 1951-52 under Forestry and Lumbering Operations.

Class of Timber.	Quantity.	Sales Value.	
		£	s. d.
Hewn Crossings	137,832 superficial feet	5,226	17 3
Sawn Crossings	1,905 superficial feet	98	11 5
Headstocks, Longitudinals and Braces	6,845 superficial feet	236	9 10
Hewn Transoms	149,062 superficial feet	5,755	7 9
Sawn Transoms	5,427 superficial feet	264	3 1
Decking	369 superficial feet	2	9 10
Keel Logs	5,184 superficial feet	388	16 0
Girders—Dressed	14,713 lineal feet	8,056	0 2
Girder Logs	2,533 lineal feet	1,052	9 1
Piles	27,440 lineal feet	6,644	12 0
Sills	213 lineal feet	96	13 6
Poles	6,060 lineal feet	751	11 4
Round Posts	7,283 lineal feet	889	19 11
Split Posts and Rails	76,014 pieces	6,888	14 1
Hewn Sleepers	190,774 pieces	85,130	0 0
Sawn Sleepers	1,290 pieces	551	0 1
Sleeper Blocks (as sleepers contained)	673,473 pieces	232,119	11 7
Total		£354,153	6 11

APPENDIX G.

Comparative Statement of Expenditure for Years 1950-51 and 1951-52.

	1950-51.	1951-52.
	£	£
Revenue—		
Salaries	151,050	188,633
Travelling and Incidentals	18,529	26,105
Extra Living Allowances	1,439	1,541
Fares, Printing, Stores, &c.	4,490	4,173
Cash Equivalent Extended Leave	835	1,477
National Parks	150	43,749
Reforestation .. .. .	..	83,000
Loan—		
Reforestation	1,111,570	1,429,223
National Parks	44,671	..
Access Roads	67,576	114,913
Acquisition of Land for Forestry Purposes	14,127	11,965
Purchase of Plant	35,299	79,032
Trust—		
Hardwood Supplies to Railway Department and Others	159,027	319,814
Harvesting and Marketing Timber	534,581	651,049
Access Roads	34,101	56,309
	£2,177,445	£3,010,983

APPENDIX H.
Summary of Loan Reforestation Expenditure, 1951-52.

Reserves.	Reforestation.				Surveys.	Protection, Firefighting, &c.	Maintenance of Capital Improvements.	New Construction of Nurseries, Buildings, &c.	Overhead Expenses.				Pay-Roll Tax.	Reserve Total.
	Plantations.	Natural Regeneration.	Nursery Working and Maintenance.	Forest Experiment.					Stores, Fodder, Supervision, &c.	Holidays, Wet Time, &c.	Carriage of Materials, &c.	Camping Allowance.		
£ 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.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Reserve 60	1 14 1	1 012 1 6	853 18 10	..	202 2 6	230 17 1	9 14 0	..	..	1 809 9 3
Reserve 215	715 4 4	121 8 2	..	37 2 0	517 15 3	37 2 4	..	..	1 093 11 8
Reserve 309	1 182 1 4	20 3 4	1 278 18 3	1 178 8 0	517 15 3	..	..	..	4 463 15 0
Reserve 448	..	1 4 7	..	..	..	1 302 10 0	..	..	327 12 1	178 17 2	..	..	..	4 654 8 10
Reserve 494	3 6 5	1 335 15 10	18 14 5	12 17 0	395 19 10	418 17 6	52 8 5	..	..	1 646 15 18
Reserve 571	4 1 8	2 078 0 3	252 6 11	719 11 4	344 15 2	418 17 6	..	..	..	4 112 18 7
Reserve 667	..	182 10 0	..	..	..	2 586 0 3	..	232 4 3	814 19 2	422 2 1	..	..	..	5 40 19 7
Reserve 702	..	140 1 0	..	..	9 0 10	967 9 0	205 18 7	85 0 1	1 1 6	422 2 1	45 10 10	..	..	2 984 18 9
Reserve 727	..	6 17 8	..	..	..	132 15 11	..	2 10 0	..	2 16 7	..	..	..	2 984 18 9
Reserve 1345	602 14 10	..	..	51 19 9	123 1 4	0 4 0	..	..	2 10 0 0
Reserve 1376	..	249 12 10	..	..	..	701 1 9	..	..	0 9 10	9 11 8	..	..	..	1 027 19 9
Reserve 1436	7 11 8 3
Pay Roll Tax	166 16 11	..	..	..	528 12 11	523 12 11
Administration	166 16 11
Experiments	121 10 4	..	..	..	..	..	..	..	..	..	121 10 4
Firefighting and Patrol	4 467 9 10	..	..	..	..	..	..	..	121 10 4
Depot Stock Account	Cr. 1 933 6 1	..	..	..	..	4 467 9 10
	530 6 1	..	..	121 10 4	18 3 0	13 897 17 8	966 5 3	2 330 15 11	1 615 16 7	2 117 9 8	144 19 7	657 1 0	523 12 11	22 623 18 0
Reserve 137	2 589 6 11	..	74 19 1	1 128 19 7	1 632 10 6	4 949 0 5	5 211 2 8	1 801 17 2	..	1 067 16 6	..	19 494 5 10
Reserve 207	981 7 11	5 727 17 8	1 1 6	379 18 10	4 969 7 2	4 504 14 10	..	2 541 14 0	..	38 507 14 8
Reserve 270	0 8 0	1 333 5 4	6 11 1	19 13 2	293 10 0	387 10 0	74 3 4	158 7 0	..	2 957 14 5
Reserve 494	..	80 7 7	..	..	..	..	..	..	..	..	..	..	..	6 11 1
Reserve 893
Pay Roll Tax	..	2 1 8	..	..	..	1 066 9 0	56 12 9	527 17 7	390 6 0	313 12 3	154 1 1	168 18 0	1 184 0 8	2 679 17 11
Administration	1 301 2 11	..	..	..	..	1 184 0 8
Experiments	4 847 16 7	..	..	..	..	..	..	..	1 301 2 11
Firefighting and Patrol	100 1 11	..	..	..	..	..	..	..	..	..	4 847 16 7
Depot Stock Account	Cr. 334 0 3	..	..	..	..	100 1 11
	15 345 10 9	91 8 10	2 589 6 11	100 1 11	1 066 15 0	14 099 8 2	1 698 5 10	5 876 5 0	11 831 8 6	7 097 14 3	228 4 5	3 936 15 6	1 184 0 8	65 145 5 9

BRISBANE WORKING PLAN AREA.

KILCOY WORKING PLAN AREA.

APPENDIX H—continued.

Reserves.	Reforestation.					Surveys.	Protection, Firefighting, &c.	Maintenance of Capital Improvements.	New Construction of Nurseries, Buildings, &c.	Overhead Expenses.				Reserve Total.						
	Plantations.	Nursery Working and Maintenance.	Forest Experiment.	£	s. d.					£	s. d.	£	s. d.		Stores, Fodder, Supervision, &c.		Holidays, Wet Time, &c.	Cartage of Rations, &c.	Camping Allowance.	Pay-Roll Tax.
															£	s. d.				
1	2	4	5	6	7	8	9	10	11	12	13	14	15							
Reserve 60	5 0 6	..	..	..	935 6 9	296 12 0	422 7 5	102 5 0	268 8 8	..	18 18 0	..	2,043 17 10				
Reserve 108	..	..	..	..	108 10 3	60 2 9	..	12 0 0	..	..	..	..	180 13 0		
Reserve 173	..	..	..	..	2,154 17 4	982 11 2	38 17 10	635 13 0	606 12 6	52 6 8	127 19 0	..	5,029 2 5			
Reserve 243	..	..	..	..	432 3 6	59 1 4	..	44 9 6	78 15 7	..	..	..	587 12 9		
Reserve 244	..	..	..	..	532 8 6	55 0 5	..	40 8 2	11 13 6	..	..	..	645 1 9		
Reserve 318	280 3 10	..	..	880 6 9	1,669 2 11	135 16 5	2 15 6	1,472 12 6	864 16 0	9 2 10	31 16 0	..	6,248 10 4					
Reserve 345	..	..	..	..	2,011 10 9	687 12 9	714 5 8	2,901 18 6	1,150 9 8	221 9 1	302 3 0	..	11,281 5 8			
Reserve 361	70 10 6	4,512 12 11	..	98 2 6	500 12 0	689 18 8	132 18 6	1,546 0 1	1,356 16 5	74 19 7	87 13 0	..	9,870 5 8							
Reserve 379	8,091 17 1	..	..	2,624 2 4	3,315 14 2	3,614 14 7	4,782 18 10	10,361 0 5	3,881 4 6	..	740 3 0	..	54,153 9 1					
Reserve 390	18,737 10 0	1,583 19 5	..	184 1 9	2,492 17 6	1,875 13 4	947 4 0	2,487 16 7	1,805 9 8	1 4 0	2,712 4 10	..	16,647 2 0							
Reserve 393	6,688 1 10	..	..	..	..	..	..	..	..	..	..	..	2,766 10 3		
Reserve 398/9/474	..	..	..	..	..	..	..	..	..	..	..	..	..
Reserve 370	190 14 11	..	..	..	..	..	..	..	..	..	..	..	..
Reserve 376	3,350 7 6	..	..	..	15,345 18 3	..	..	..	..	..	..	..	..
Reserve 509	2,974 0 7	..	..	..	..	..	..	..	..	..	..	..	..
Reserve 527/8/9	..	1,435 3 2	..	..	..	..	..	..	..	..	..	..	..
Reserve 579	..	..	..	..	..	..	..	..	..	..	..	..	..
Portion 159, Dangere	..	..	..	..	..	..	..	..	..	..	..	..	..
Pay-Roll Tax	..	..	..	..	..	..	..	..	..	..	..	..	..
Administration	..	..	..	..	..	..	..	..	..	..	..	..	..
Firefighting and Patrol	..	..	..	..	..	..	..	..	..	..	..	..	..
Expenses	..	..	..	..	..	..	..	..	..	..	..	..	..
Merchandise	..	..	..	..	..	..	..	..	..	..	..	..	..
Miscellaneous Surveys	..	..	..	..	..	..	..	..	..	..	..	..	..
Yarraman	..	..	..	..	..	..	..	..	..	..	..	..	..
Office	..	..	..	..	..	..	..	..	..	..	..	..	..
Depot Stock Account	45,479 10 2	1,435 3 2	1,304 16 10	1,253 9 8	41,930 1 0	9,540 13 6	11,217 0 2	39,627 13 9	20,830 15 2	868 14 10	8,787 5 10	4,054 0 4	199,508 1 9							
Reserve 120	3,829 18 10	..	..	..	61 18 10	2,556 18 10	146 8 4	1,174 5 2	711 8 6	..	..	..	10,879 10 7		
Reserve 141	2,709 9 10	..	..	..	57 17 8	1,928 14 9	249 6 9	800 7 10	893 14 9	104 0 0	532 16 0	..	8,839 0 8				
Reserve 151	4,573 9 5	..	..	..	195 17 0	1,808 18 31	2,113 11 1	342 1 10	2,406 10 4	26 12 3	1,315 8 0	..	19,758 18 10				
Reserve 257	1,998 7 11	..	..	..	60 14 11	6,900 17 3	484 12 2	1,868 18 1	1,087 18 3	49 7 3	406 1 0	..	8,007 7 1				
Reserve 283	11,892 10 0	..	..	..	489 9 6	6,539 11 3	3,098 12 2	1,613 9 2	5,532 17 2	5 12 6	2,396 14 3	..	45,612 11 10				
Reserve 289	5,486 19 8	..	..	..	194 8 9	8,284 14 0	1,669 6 10	2,239 7 4	3,642 17 4	90 15 0	2,109 19 0	..	25,194 15 2				
Reserve 299	9,941 11 0	..	..	..	110 0 9	3,462 7 9	2,635 14 9	3,672 0 4	2,923 0 10	98 14 0	1,164 3 0	..	25,335 9 8				
Reserve 328	190 14 11	..	..	..	48 6 3	6 12 2	74 18 3	323 1 0	306 1 0	187 10 0	284 2 4	..	3,846 18 5				
Reserve 370	3,350 7 6	..	..	..	26 0 3	1,822 16 7	319 15 0	691 17 6	516 2 4	32 6 11	171 3 0	..	7,929 9 11				
Reserve 509	2,974 0 7	..	..	..	61 9 11	888 16 5	384 17 11	326 2 3	2,385 9 8	326 16 11	406 13 3	..	10,192 10 7				
Reserve 527/8/9	..	1,435 3 2	..	..	21 13 4	503 18 10	249 2 7	562 9 6	1,772 17 1	298 16 11	..	..	5,917 1 6			
Portion 159, Dangere	..	..	..	..	16 13 9	..	..	..	..	..	..	..	..
Pay-Roll Tax	..	..	..	..	..	..	..	..	..	..	..	..	..
Administration	..	..	..	..	..	..	..	..	..	..	..	..	..
Firefighting and Patrol	..	..	..	..	..	..	..	..	..	..	..	..	..
Expenses	..	..	..	..	..	..	..	..	..	..	..	..	..
Merchandise	..	..	..	..	..	..	..	..	..	..	..	..	..
Miscellaneous Surveys	..	..	..	..	..	..	..	..	..	..	..	..	..
Yarraman	..	..	..	..	..	..	..	..	..	..	..	..	..
Office	..	..	..	..	..	..	..	..	..	..	..	..	..
Depot Stock Account	45,479 10 2	1,435 3 2	1,304 16 10	1,253 9 8	41,930 1 0	9,540 13 6	11,217 0 2	39,627 13 9	20,830 15 2	868 14 10	8,787 5 10	4,054 0 4	199,508 1 9							

APPENDIX H—continued.

Reserves.	Reforestation.				Surveys.	Protection, Firefighting, &c.	Maintenance of Capital Improvements.	New Construction of Nurseries, Buildings, &c.	Overhead Expenses.				Pay-Roll Tax.	Reserve Total.
	Plantations.	Natural Regeneration.	Nursery Working and Maintenance.	Forest Experiment.					Stores, Fodder, Supervision, &c.	Holidays, Wet Time, &c.	Cartage of Hauls, &c.	Camping Allowance.		
£ 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.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Reserve 4	388 5 6	..	..	..	..	988 7 0	193 7 11	98 12 2	949 16 1	359 19 0	265 16 3	272 2 0	..	3,496 5 11
Reserve 10	1 8 6	9,909 13 4	1,218 12 2	1,095 16 2	8,077 1 4	2,645 2 0	844 1 9	2,262 9 0	..	29,821 0 10
Reserve 16	3 12 7	8,409 6 7	328 17 5	1,506 19 11	4,863 1 8	2,072 15 4	409 2 8	1,378 2 0	..	20,351 3 5
Reserve 78	1,561 1 8	552 7 0	1,104 4 1	1,376 16 9	726 6 10	272 0 9	1,316 19 0	..	6,044 10 10
Reserve 83/106	902 16 9	98 19 0	36 16 9	1,329 15 8	637 8 5	124 3 10	424 10 0	..	5,431 13 0
Reserve 93	368 1 2	41 11 0	94 6 3	1,179 2 11	116 7 6	47 6 3	70 16 0	..	1,293 1 4
Reserve 126	772 13 4	126 10 10	799 13 11	1,421 8 4	496 19 4	31 14 9	340 4 0	..	4,550 2 5
Reserve 150	14 2 5	5,418 14 1	257 12 11	287 8 5	3,951 11 10	1,322 19 1	364 1 6	1,119 15 0	..	14,342 1 3
Reserve 154	2,925 2 3	225 14 3	172 15 1	1,332 5 11	433 11 4	212 17 0	390 0 0	..	5,834 1 0
Reserve 155	121 4 2	..	..	..	..	..	..	..	121 4 2
Reserve 184	121 4 2
Pay Roll Tax	420 1 4	..	..	..	2,087 3 4	2,087 3 4
Administration
Firefighting and Patrol	13,816 16 0	..	..	..	..	..	..	..	..
Experiments
Construction of Garage
Dept Stock Account	117 14 1	..	..	..	..	..
	10,734 19 2	66 16 3	..	..	19 3 6	45,173 16 4	3,044 2 4	4,200 16 3	24,024 14 8	8,811 3 10	2,571 4 9	6,569 17 0	2,087 3 4	107,303 17 5

DALBY WORKING PLAN AREA.

FRASER ISLAND WORKING PLAN AREA.

Reserve 3	3,163 16 0	..	..	..	251 12 6	1,386 5 2	419 12 11	70 19 3	1,980 0 11	1,247 15 0	203 0 5	866 4 6	272 8 10	9,539 6 8
Pay Roll Tax	..	..	..	..	..	..	..	..	115 15 2	..	..	..	..	272 8 10
Administration	..	..	..	..	..	..	..	..	..	..	..	..	..	115 15 2
Firefighting and Patrol	..	..	..	..	..	1,978 13 2	..	..	..	..	..	..	..	1,978 13 2
Experiments	..	..	..	..	..	..	..	..	..	..	..	..	..	400 1 3
Dept Stock Account	..	..	..	..	..	..	..	..	178 0 4	..	..	..	..	178 0 4
	3,163 16 0	400 1 8	..	..	251 12 6	3,314 18 4	419 12 11	70 19 3	2,273 16 5	1,247 15 0	203 0 5	866 4 6	272 8 10	12,484 5 10

APPENDIX H—continued.

Reserves.	Reforestation.			Surveys.	Protection, Firefighting, &c.	Maintenance of Capital Improvements.	New Construction of Nurseries, Buildings, &c.	Overhead Expenses.				Pay Roll Tax.	Reserve Total.
	Plantations.	Natural Regeneration.	Nursery Working and Maintenance.					Forest Experiment.	Stores, Fodder, Supervision, &c.	Holidays, Wet/Time, &c.	Cartage of Battions, &c.			Camping Allowances.
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.
Reserve 117	709 16 1	..	..	8 19 2	1,732 7 10	8 5 11	120 3 4	1,847 4 0	386 7 9	107 4 2	270 6 0	..	4,656 15 1
Reserve 127	322 19 4	..	..	..	2,050 13 1	179 4 0	314 11 8	1,589 4 0	547 12 11	150 11 9	317 2 0	..	5,480 17 11
Pay Roll Tax	..	..	..	..	..	..	..	..	..	..	..	224 10 1	224 10 1
Administration	..	..	..	..	..	..	..	175 19 6	..	..	..	..	175 19 6
Freighting and Patrol	..	..	..	..	572 0 10	..	..	..	..	..	..	..	572 0 10
	1,032 15 5	..	..	8 19 2	4,355 10 9	182 9 11	434 15 0	3,112 7 6	914 0 8	257 15 11	587 8 0	224 10 1	11,110 12 5
CLEBMONTON WORKING PLAN AREA.													
Reserve 20	6,437 13 9	..	1,057 4 11	196 12 5	7,740 18 11	20 5 10	2,599 9 5	3,449 8 10	2,689 14 1	262 3 5	1,163 19 3	508 18 1	25,617 10 10
Pay Roll Tax	..	..	..	..	..	..	..	..	..	..	..	508 18 1	508 18 1
Administration	..	..	..	..	..	..	..	286 14 6	..	..	..	..	286 14 6
Freighting and Patrol	..	..	..	..	594 4 0	..	..	..	..	..	..	..	594 4 0
Experiments	..	..	198 18 6	..	..	..	..	..	..	..	..	..	198 18 6
Depot Stock Account	..	..	..	..	..	..	..	Cr. 314 18 11	..	..	..	..	314 18 11
	6,437 13 9	..	1,057 4 11	196 12 5	8,335 2 11	20 5 10	2,599 9 5	3,421 4 5	2,689 14 1	262 3 5	1,163 19 3	508 18 1	26,691 7 0
ROCKHAMPTON WORKING PLAN AREA.													
Reserve 28	..	..	..	4 12 0	5,377 17 7	395 0 10	1,372 4 0	2,593 17 4	1,513 7 4	436 7 8	853 17 0	..	19,147 8 4
Reserve 60	..	..	..	20 17 5	1,151 19 3	243 1 11	2,631 5 9	12 19 6	2,018 10 6	307 3 1	894 7 6	..	12 19 6
Reserve 67	3,653 19 3	..	..	..	..	..	..	2,586 18 10	..	..	..	..	14,569 11 7
Reserve 81	..	..	..	12 17 4	1,321 13 9	1,851 19 5	1,740 11 2	19 19 7	3,970 8 4	82 6 5	2,492 3 4	..	1,760 10 9
Reserve 95	11,606 4 9	..	..	..	..	1 11 10	2,560 5 2	0 1 0	..	..	..	..	30,118 14 9
Reserve 176	..	..	..	..	..	5 5 10	0 5 4	0 1 0	..	..	..	..	2,906 4 3
Reserve 179	..	..	..	..	..	0 6 7	..	1 6 8	..	..	..	..	1 18 3
Reserve 193	..	..	..	..	..	..	..	795 12 3	..	..	..	1,425 8 1	1,425 8 1
Pay Roll Tax	..	..	..	..	7,173 14 9	..	..	..	..	..	..	..	7,173 14 9
Administration	..	..	3 1 11	..	..	..	..	..	..	..	..	..	3 1 11
Freighting and Patrol	..	..	..	..	..	..	..	2,006 12 4	..	..	..	..	2,006 12 4
Experiments	..	..	..	..	..	..	..	..	..	..	..	..	..
Depot Stock Account	15,260 4 0	..	4,122 0 2	38 6 9	15,625 5 4	2,497 6 5	8,204 11 5	14,188 4 9	7,502 6 2	825 16 9	4,280 7 10	1,425 8 1	73,922 19 7
MANY PEAKS WORKING PLAN AREA.													
Reserve 1	..	..	..	42 0 3	..	..	..	..	..	..	..	..	..
Reserve 8	..	..	..	2,539 13 2	19,108 3 8	960 15 4	11,918 10 7	11 15 6	5,873 11 0	289 17 11	3,067 13 0	..	74,349 9 6
Reserve 12	..	..	..	4 6 4	1,946 17 10	13 18 7	224 2 6	1,835 10 0	597 6 2	137 15 10	855 7 0	..	5,707 2 10
Reserve 27	..	..	..	..	1,036 16 1	114 9 9	664 0 8	1,261 2 3	504 3 6	40 6 7	258 2 3	..	5,283 4 0
Reserve 57	..	..	..	12 10 8	3,586 15 5	217 5 6	972 4 7	2,747 5 2	714 4 5	63 6 8	390 3 0	..	6,153 15 1
Reserve 435	..	..	..	16 10 0	1,800 13 4	767 0 8	4,630 13 4	4,229 14 5	1,288 10 4	197 12 9	917 8 0	..	14,414 18 2
Pay Roll Tax	..	..	..	4 8 0	..	..	..	1,261 1 10	421 10 1	44 7 3	38 14 0	..	4,219 18 2
Administration	..	..	..	..	..	..	..	..	..	..	..	2,297 8 0	2,297 8 0
Freighting and Patrol	..	..	..	..	8,000 2 11	..	..	1,674 10 2	..	..	..	..	1,674 10 2
Experiments	..	..	549 8 7	..	..	..	..	..	..	..	..	..	8,000 2 11
Miscellaneous Surveys	..	..	..	185 10 11	..	..	..	..	..	..	..	..	549 8 7
Depot Stock Account	15,170 12 7	3,551 2 6	3,076 13 0	2,805 4 5	36,472 2 3	2,223 7 5	15,777 4 5	21,718 8 7	9,399 5 6	777 3 0	4,997 7 3	2,297 8 0	118,845 3 0

APPENDIX H—continued.

Reserves.	Reforestation.			Surveys.	Protection, Firefighting, &c.	Maintenance of Capital Improvements.	New Construction of Nurseries, Buildings, &c.	Overhead Expenses.				Pay Roll Tax.	Reserve Total.	
	Plantations.	Natural Regeneration.	Nursery Working and Maintenance.					Forest Experiment.	Holidays, Wet Time, &c.	Cartage of Rations, &c.	Stores, Fodder, Supervision, &c.			Camping Allowance.
£ 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.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Reserve 67	226 4 3	2,653 10 10	63 10 10	101 14 2	1,015 10 8	600 16 2	2 0 11	316 1 7	..	228 5 2
Reserve 80	6 6 5	2,991 2 5	176 15 8	1,806 2 0	2,110 16 1	958 18 11	59 2 5	503 10 0	..	4,825 13 1
Reserve 101/864	4,142 13 5	12 13 10	408 3 8	2,067 4 0	332 0 2	98 19 6	530 13 0	..	8,605 2 4
Reserve 275	1 1 0	4,067 1 4	51 0 0	1,513 0 5	2,067 4 0	330 3 1	29 16 3	199 19 0	..	8,519 13 0
Reserve 828	4,413 9 7	68 8 2	1,232 0 9	3,576 9 3	1,377 17 10	143 17 2	644 11 0	..	3,736 5 3
Pay Roll Tax	57 19 8	..	..	..	706 3 4	13,533 11 1
Administration	706 3 4
Firefighting and Patrol	5,539 2 10	..	..	..	..	..	..	..	57 19 8
Experiments	5,539 2 10
Depot Stock Account	Cr. 1,437 2 4	..	..	..	..	528 18 9
..	..	2,511 2 2	..	..	283 11 8	20,707 0 5	370 8 6	5,061 1 1	8,985 1 6	4,108 16 2	388 13 0	2,194 14 7	706 3 4	44,843 11 2
BUNDABERG WORKING PLAN AREA.														
Reserve 24	2 6 10	3,279 0 0	90 8 2	347 19 6	1,079 10 6	640 13 8	112 3 1	254 2 0	..	5,812 3 8
Reserve 26	2 2 10	12 12 2	2 6 7	..	2 6 7	..	0 9 0	..	..	17 0 0
Reserve 67	369 1 5	792 4 0	50 11 7	1,575 4 11	1,596 16 5	1,181 2 11	162 3 4	876 15 6	..	11,827 12 0
Reserve 138	110 11 1	..	..	69 7 3	8 1 1	..	2 0 0	..	416 0 11
Reserve 154	53 14 3	1,134 19 0	221 0 11	2,562 19 7	4,112 6 3	1,886 14 0	148 13 4	1,279 7 6	..	18,334 19 1
Reserve 185	8 15 0	1,016 6 5	328 8 7	411 8 3	4,455 13 6	2,300 13 10	81 4 2	982 7 0	..	17,172 0 7
Reserve 221	44 0 0	254 16 4	5 18 6	177 9 10	86 18 2	12 16 6	19 3 0	..	..	857 2 4
Reserve 298	2 8 10	4,399 15 5	531 10 1	4,568 17 11	9,408 4 9	3,877 1 7	408 7 9	2,699 0 6	..	38,436 13 2
Reserve 355	37 0 2	448 10 2	14 7 0	2 1 4	130 13 1	73 7 10	28 4 0	..	..	814 7 0
Reserve 424/7	2 3 8	414 10 4	281 15 6	527 11 3	3,018 6 5	940 2 0	358 7 4	680 7 6	..	7,814 11 10
Reserve 673	7,814 11 10
Pay Roll Tax	767 6 2	..	..	..	..	2,912 3 9
Administration	2,912 3 9
Firefighting and Patrol	10,032 7 3	..	..	..	..	..	..	..	5,571 0 2
Experiments	10,032 7 3
Maintenance	77 0 3
Kilkivan Office	77 0 3
Depot Stock Account	Cr. 3,753 17 3	..	..	..	..	2,211 5 11
..	..	26,975 1 8	..	..	521 13 0	21,887 18 9	1,653 13 6	10,173 12 7	20,979 16 11	10,913 16 11	1,884 0 3	6,921 9 0	2,211 5 11	110,684 8 1
KILKIVAN WORKING PLAN AREA.														
Reserve 185	..	283 18 5	..	..	72 11 2	424 16 4	367 3 2	477 13 10	746 15 9	366 10 7	12 0 0	175 9 0	..	3,157 18 7
Reserve 191	188 14 7	53 0 3	651 1 1	612 1 0	583 7 4	12 14 6	175 2 6	..	4,718 11 4
Reserve 194	19 16 8	5 3 1	..	35 15 4	23 19 8	..	..	..	127 4 0
Reserve 310	73 3 10	78 3 10	421 18 4	638 1 8	388 7 6	..	..	..	2,436 8 4
Reserve 438	15 3 7	1,784 15 0	50 1 3	118 15 2	1,461 3 4	539 5 11	5 14 0	181 16 0	..	4,209 17 4
Reserve 461	2,230 12 8	83 2 4	99 17 11	592 0 0	505 5 1	188 5 2	212 5 6	..	3,011 17 8
Pay Roll Tax	1,042 18 2	..	..	..	..	415 7 4
Administration	1,042 18 2
Firefighting and Patrol	1,143 0 8	..	..	..	..	..	..	..	1,143 0 8
Experiments	1,514 17 4
Depot Stock Account	Cr. 735 12 6	..	..	..	..	1,514 17 4
..	..	287 1 6	..	..	87 14 9	5,814 19 9	636 13 1	1,769 6 4	4,393 11 9	2,406 10 1	218 13 8	892 16 9	415 7 4	21,942 8 3
NORTH QUEENSLAND WORKING PLAN AREA.														

APPENDIX H—continued.

Reserves.	Reforestation.				Surveys.	Protection, Firefighting, &c.	Maintenance of Capital Improvements.	New Construction of Nurseries, Buildings, &c.	Overhead Expenses.				Pay-Roll Tax.	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.		
	£ 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.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Res. 263	6,514 8 1		1,253 14 3						2,580 17 7	2,445 17 4	82 18 10	884 8 8		17,539 3 0
Res. 444						3,865 12 5	126 4 10	305 1 6	690 19 7	155 10 7	107 2 9	50 8 0		1,735 11 3
Res. 574						430 18 0	203 1 9	88 1 7	749 6 10	147 4 1	48 12 8	85 13 0		2,099 17 9
Pay Roll Tax						942 14 11	21 4 0	105 2 3					477 16 2	477 16 2
Administration									372 4 1					
Firefighting and Patrol						1,036 16 11								
Experiments				142 1 8										1,036 16 11
Depot Stock Account									312 12 3					142 1 8
	6,514 8 1		1,253 14 3	142 1 8		5,770 2 3	350 10 7	498 5 4	4,685 19 10	2,752 1 0	238 14 3	1,026 9 8	477 16 2	23,716 3 1
WARWICK WORKING PLAN AREA.														
Reserve 40						4 10 0			102 17 6	17 9 8	16 5 1	14 17 0		4 10 0
Reserve 48						68 7 0			1,486 15 11	1,110 19 4	235 8 8	383 13 0		906 11 4
Reserve 79						090 19 3			1,550 5 3	234 15 1	229 14 1	350 8 0		6,510 2 1
Reserve 81						683 12 9			430 19 8	234 18 4	157 5 2	144 6 0		3,370 0 11
Reserve 101						153 12 10			85 10 4	11 2 4	202 10 0	22 10 0		2,978 10 8
Reserve 120						483 14 2			758 13 7	399 6 0	182 16 3	204 9 0		3,508 9 8
Reserve 122						44 6 0			39 14 0	5 10 5	110 12 0	146 8 0		3,148 14 2
Reserve 132						550 4 5			422 13 6	251 16 4				1,536 14 3
Reserve 134									534 12 10					1,531 13 0
Pay Roll Tax													531 13 9	531 13 9
Administration						4,473 9 4								4,473 9 4
Firefighting and Patrol														
Experiments									29 13 9					29 13 9
Depot Stock Account						8,027 13 6	636 1 0	763 17 8	5,441 16 4	3,094 17 6	882 1 3	1,281 11 0	531 13 9	25,741 16 7
INGLEWOOD WORKING PLAN AREA.														
Pay Roll Tax													323 4 3	323 4 3
Experiments														
Radio Equipment														
Nursery Site, Salisbury						12,443 4 11								12,443 4 11
Storeroom Expenses									2,916 3 5					2,916 3 5
Stores Suspense									47,179 1 4					47,179 1 4
Adjustment														
Stock Account									7 8 9					7 8 9
Depot Stock, Salisbury														Cr. 14 18 6
Aerial Photography														175 15 7
						175 15 7			49,787 15 0					49,787 15 0
						175 15 7								
Totals	251,942 5 5	30,133 4 11	47,641 3 11	11,623 19 3	13,908 16 11	397,281 18 4	33,976 13 3	119,466 3 4	320,069 19 11	134,391 12 5	11,294 12 5	67,639 5 6	28,049 8 7	1,482,019 4 2
Administration														
Fares and Freights														
Collection and Storage of Seed														
Workers' Compensation														
Grand Total														
£1,512,223 4 1														

APPENDIX I.

Net Area of Plantation Established 1st April, 1951, to 31st March, 1952.

Species.	North Queensland.	Brisbane.	Brisbane Valley.	Gympie.	Mackay.	Maryborough.	Monto.	Warwick.	Queensland Totals.
	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.
<i>Softwoods.</i>									
A. Native Conifers—									
Hoop Pine .. ..	..	133.9	843.5	306.8	0.2	385.0	125.1	..	1,794.5
B. Exotic Conifers—									
<i>P. caribaea</i> .. ..	..	685.6	..	455.8	155.4	389.9	..	28.0	1,714.7
<i>P. taeda</i> .. ..	..	341.3	..	..	..	..	..	..	341.3
<i>P. patula</i>	24.0	..	286.1	8.0	1.4	1.0	..	114.0	434.5
<i>P. radiata</i> .. ..	..	..	..	..	..	..	..	44.0	44.0
<i>P. palustris</i> .. ..	..	30.0	..	..	1.1	..	..	..	31.1
Others .. ..	..	0.5	..	2.5	22.0	..	..	2.0	27.0
C. Broadleaved Softwoods—									
Maple	2.5	..	..	3.0	..	..	..	..	5.5
Red Cedar	6.5	..	..	..	..	..	..	..	6.5
Others	2.0	..	..	..	..	..	..	..	2.0
Total—Softwoods	35.0	1,191.3	1,129.6	776.1	180.1	775.9	125.1	188.0	4,401.1
<i>Eucalypts.</i>									
<i>Euc. saligna</i> .. ..	..	6.5	..	131.0	..	..	..	..	137.5
Other Eucalypts .. ..	..	..	..	27.0	..	..	..	..	27.0
Total—Eucalypts .. ..	..	6.5	..	158.0	..	..	..	..	164.5
Total—All Species	35.0	1,197.8	1,129.6	934.1	180.1	775.9	125.1	188.0	4,565.6

APPENDIX J.

Net Area of Effective Plantation Classified into Forestry Districts to 31st March, 1952.

Species.	North Queensland.	Brisbane.	Brisbane Valley.	Gympie.	Mackay.	Maryborough.	Monto.	Warwick.	Fraser Island.	Queensland Totals.
	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.
<i>Softwoods.</i>										
A. Native Conifers										
Hoop Pine	574.2	1,808.2	11,332.6	11,637.3	15.4	3,799.4	1,522.2	..	126.1	30,813.4
Kauri Pine	285.0	1.7	..	1,451.1	0.7	..	..	..	69.7	1,808.2
Bunya Pine	0.3	3.8	8.0	207.4	1.7	14.8	..	..	0.7	236.7
Others	0.6	4.6	0.4	45.4	0.6	1.1	..	..	0.6	53.3
B. Exotic Conifers										
<i>P. caribaea</i>	7.8	4,676.7	962.4	1,155.2	366.6	1,551.0	50.8	379.8	6.7	9,157.0
<i>P. taeda</i>	13.7	2,803.2	41.4	94.5	5.4	84.9	..	220.7	2.4	3,266.2
<i>P. patula</i>	44.1	33.4	1,892.6	11.2	7.6	72.9	1.5	628.8	3.4	2,695.5
<i>P. radiata</i> .. ..	..	..	104.5	..	..	..	..	299.0	..	403.5
<i>P. palustris</i> .. ..	..	245.6	2.6	..	1.1	0.5	..	8.2	..	258.0
Others	8.1	40.2	21.9	13.7	37.0	9.7	1.0	18.8	6.8	157.2
C. Broadleaved Softwoods—										
Silky Oak	31.7	..	803.0	255.8	..	32.1	..	..	..	1,122.6
Maple	193.3	..	..	36.0	..	..	..	..	..	229.3
Others	104.6	0.1	..	79.8	..	1.2	..	..	0.4	186.1
Total—Softwoods	1,263.4	9,615.5	15,169.4	14,987.4	436.1	5,567.6	1,575.5	1,555.3	216.8	50,387.0
<i>Eucalypts.</i>										
<i>Euc. saligna</i>	3.5	36.2	197.3	908.2	..	35.2	..	..	..	1,180.4
<i>Euc. paniculata</i>	32.8	228.3	465.6	216.2	..	75.3	..	..	..	1,018.2
<i>Euc. microcorys</i>	27.7	215.4	35.4	17.5	..	..	..	..	..	296.0
<i>Euc. ptilularis</i>	0.2	160.9	..	..	..	..	..	..	..	161.1
Other Eucalypts	13.0	17.0	12.7	72.0	..	..	..	..	..	114.7
Total—Eucalypts	77.2	657.8	711.0	1,213.9	..	110.5	..	..	..	2,770.4
Total—All Species	1,340.6	10,273.3	15,880.4	16,201.3	436.1	5,678.1	1,575.5	1,555.3	216.8	53,157.4

APPENDIX K.

Net Area of Plantation Effective at 31st March, 1952, Classified into Five-yearly Establishment Periods.

(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.	1951.	Total.
	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.
<i>Softwoods.</i>									
A. Native Conifers—									
Hoop Pine	21.0	184.5	1,806.2	4,379.7	9,590.1	2,253.8	10,783.6	1,794.5	30,813.4
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
Others .. ..	..	3.7	42.6	2.4	4.6	..	..	..	53.3
B. Exotic Conifers—									
<i>P. caribaea</i> .. ..	..	6.7	48.1	2,032.1	1,195.6	509.5	3,650.3	1,714.7	9,157.0
<i>P. taeda</i> .. ..	..	..	32.5	560.3	594.4	453.0	1,284.7	341.3	3,266.2
<i>P. patula</i> .. ..	..	1.0	17.0	153.7	473.9	189.0	1,426.4	434.5	2,695.5
<i>P. radiata</i> .. ..	..	0.4	73.8	151.9	1.9	..	131.5	44.0	403.5
<i>P. palustris</i> .. ..	..	..	0.2	28.1	108.7	44.1	45.8	31.1	258.0
Others .. ..	..	1.6	18.8	37.4	20.5	1.0	50.9	27.0	157.2
C. Broadleaved Softwoods—									
Silky Oak .. ..	..	3.1	746.2	236.7	86.6	..	..	..	1,122.6
Maple	0.8	11.9	49.1	84.6	63.4	..	14.0	5.5	229.3
Others	9.7	14.7	110.0	25.9	6.3	9.3	1.7	8.5	186.1
Total—Softwoods	44.6	311.4	3,038.0	7,868.9	13,407.4	3,697.1	17,618.5	4,401.1	50,387.0
<i>Eucalypts.</i>									
<i>Euc. saligna</i> .. ..	..	..	1.0	4.0	126.6	129.3	782.0	137.5	1,180.4
<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. pilularis</i> .. ..	..	..	0.2	97.9	56.9	..	6.1	..	161.1
Other Eucalypts .. ..	..	..	0.5	15.4	22.7	9.4	39.7	27.0	114.7
Total—Eucalypts .. ..	..	..	21.4	736.6	802.3	216.0	829.6	164.5	2,770.4
Total—All Species	44.6	311.4	3,059.4	8,605.5	14,209.7	3,913.1	18,448.1	4,565.6	53,157.4

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 1951-52.	First Treatment 1951-52.	Total as at 30th June, 1952.	Treated 1951-52.	First Treatment 1951-52.	Total as at 30th June, 1952.	Treated 1951-52.	First Treatment 1951-52.	Total as at 30th June, 1952.	Total as at 30th June, 1952.
Many Peaks	28	..	..	6,711	..	..	..	..	..	..	6,711
	150	..	..	1,811	..	..	..	..	..	..	1,811
		..	..	8,522	..	..	..	..	..	..	8,522
Maryborough	435	3,023	..	15,926	..	..	..	..	..	..	15,926
	958		..		..	..	..	..	..
	59		..		..	..	..	..	..
	62	1,898	..	6,702	..	..	..	..	..	..	6,702
	12	3,946	..	5,426	..	..	..	..	..	..	5,426
	390	1,571	..	16,368	..	..	..	..	..	..	16,368
	511		..		..	..	..	..	..
	8		..		..	..	..	..	..	..
	1,454	506	180	14,483	..	..	..	..	..	..	14,483
27	..	..	7,050	..	..	..	..	..	..	7,050	
1	..	..	1,632	..	..	..	..	..	..	1,632	
	10,944	180	67,587	..	..	..	..	..	..	67,587	
Mary Valley	135	..	..	159	..	..	..	..	..	..	159
North Coast	318	..	..	8,910	..	..	..	..	..	..	8,910
	445		..		..	..	..	..	..
	583		..		..	..	..	..	..	..
	313	..	..	1,650	..	..	..	..	..	..	1,650
	249	..	..	1,050	..	..	..	..	..	..	1,050
	60	..	..	1,380	..	..	..	..	..	..	1,380
	108	..	..	1,750	..	..	..	..	..	..	1,750
	173	270	270	2,990	..	..	..	..	..	..	2,990
	531	..	..	200	..	..	..	..	..	..	200
	351	..	..	580	..	..	..	..	..	..	580
	689	..	..	340	..	..	..	..	..	..	340
	270	270	18,850	..	..	..	..	..	..	18,850	
Gympie	393	142	..	3,020	..	..	..	..	..	..	3,020
	234	34	..	1,730	..	..	..	..	..	..	1,730
	502	37	..	1,568	..	..	..	..	..	..	1,568
	627	135	..	2,423	..	..	..	..	..	..	2,423
	700	..	..	3,672	..	..	..	..	..	..	3,672
	124	..	..	770	..	..	..	..	..	..	770
	959	140	140	965	..	..	..	..	..	..	965
	950/1	325	325	1,135	..	..	..	..	..	..	1,135
	813	465	15,283	..	..	..	..	..	..	15,283	
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	..	..	..	..	..	..	200	45	279	279
	438	50	10	1,577	..	..	..	..	..	..	1,577
	343	..	..	200	..	..	..	..	..	..	200
	50	10	3,748	..	..	..	200	45	523	4,271	
Warwick	444	..	..	4,360	..	..	..	..	..	..	4,360
	574	..	..	4,230	..	..	..	..	..	..	4,230
	..	..	8,590	..	..	..	..	..	..	8,590	
Grand Totals ..		26,278	7,407	307,050	10,249	5,339	196,303	200	45	629	503,982

NOTE.—Areas quoted above show some variation from those in previous tables, due to a re-check (incomplete) of effective areas.

APPENDIX M.

Summary of Forest Survey Work—Year Ended 30th June, 1952.

Reserve or Portion.	Parish.	Area in Acres.
Class 1—INSPECTIONS OF VACANT CROWN LANDS AND TIMBER RESERVES.		
Tinut Holding	Yarrol	12,600
Class 2—ASSESSMENT SURVEYS.		
55	Whyanbeel	3,500
755	Bartle Frere (proceeding)	3,000
150	Toorbul	7
Portions 14, 18, 21, 26	Marmadua	28,672
Portion 686	Beerwah	63
Portions 29, 30	Beerwah	490
Portions 9, 44	Dangore	2,548
Total		38,280
Class 3—INTENSIVE CONTOUR AND ASSESSMENT SURVEY.		
Vacant Crown Land	Ramleh (levels) .. .. .	..
185	Danbulla (levels) .. .. .	..
67	Thornhill (part)	7,672
915	Poona (part)	510
Total		8,182

COMPARTMENT, FIREBREAK AND SOIL SURVEYS.

Reserve.	Parish.	Type.	Area in Acres.
915	Poona, Tahiti	Soil	2,570
1004	Goomboorian	Soil	8,800
392	Como	Soil	1,445
435	Kandanga	Compartment	8,600
97, 99	Kilkivan, Manumbar	Firebreak	1,200
611	Beerwah	Soil	7,500
638	Beerwah	Soil	1,400
589	Beerwah	Soil	149
674	Beerwah	Soil	1,360
561	Beerwah	Soil	4,614
95	New Cannindah	Firebreak	130
67	Bulburin	Firebreak	60
185	Danbulla	Soil	407
509, 909	Crow's Nest	Compartment	2,046
137	Yabba	Firebreak	45
207	Monsildale	Firebreak	3,252
Portion 61v	Canning .. .. .	.. .. .	10
242	Widgee	Firebreak, &c.	860
124	Glastonbury	Firebreak	138
673	Tagigan	Boundaries	106
299	Avoca	Firebreaks, &c. .. .. .	..
283	Colinton	Firebreaks, &c. .. .. .	..
257/8	Cooyar	Firebreaks, &c. .. .. .	..
120	Neumgna	Firebreaks, &c. .. .. .	..
289	Cooyar	Firebreaks, &c. .. .. .	..
151	Neumgna	Firebreaks, &c. .. .. .	..
Total			44,692

FOREST INVENTORY SURVEY.

Reserve.	Parish.	Area in Acres.
50, 21	Goldsmith	11,921
184	Halliford, Stretchworth (proceeding)	20,000
155	Marmadua (proceeding)	10,000
57	St. Mary	11,427
12	Gungahoon	4,560
3	Fraser Island .. .. .	..
318	Maroochy (proceeding)	5,507
Total		63,415

APPENDIX N.

State Forests, Timber Reserves, and National Parks at 30th June, 1952.

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	14	69,084	0 3	7	46,469	2 26	5	3,552	2 0
Bowen .. .. .	..	..	..	7	90,800	0 0	36	118,587	0 0
Brisbane	66	222,760	3 23	43	70,105	2 0	39	77,377	3 10
Bundaberg	19	130,739	0 15	34	153,212	1 38	..	..	..
Cairns	7	118,502	0 36	15	486,793	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	3,950	0 0	..	..	..
Cooktown .. .. .	..	..	..	8	623,460	0 0	7	10,691	0 0
Dalby	39	965,093	2 26	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	88,446	1 14	4	230	0 0
Goondiwindi	5	149,981	1 0	6	42,063	1 20	..	..	..
Gympie	48	427,407	1 13	15	67,680	0 21	5	922	2 7
Herberton	9	77,476	3 29	9	58,517	0 24	5	3,361	3 28
Ingham	1	43,620	0 0	3	68,840	0 0	4	18,495	0 0
Inglewood	15	185,942	3 35	4	8,407	1 8	..	..	..
Innisfail	2	57,167	0 0	12	364,653	2 18	21	106,787	1 31
Ipswich	31	168,747	1 24	24	66,362	0 33.2	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	60	697,135	3 13	26	30,781	0 13	4	8,185	0 0
Monto	10	196,227	3 20	11	75,042	2 32.6	..	..	..
Nanango	46	219,733	2 34	12	8,157	0 19	2	9,636	1 18
Rockhampton	8	182,578	1 0	16	126,768	1 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
Taroom	3	22,186	0 0	5	48,864	2 0	..	..	..
Toowoomba	22	258,837	0 2	15	27,805	1 27	5	3,214	3 0
Townsville	1	23,123	0 0	2	17,199	1 31	2	64,260	0 0
	428	4,500,708	2 35	354	3,099,434	1 0.8	241	764,684	0 27

At 30th June, 1952—

Total area reserved for—

State Forests .. .. .	..	..	..	..	..	..	..	4,500,708	2 35
Timber Reserves .. .. .	..	..	..	..	..	..	..	3,099,434	1 0.8
National Parks .. .. .	..	..	..	..	..	..	..	764,684	0 27

Total Reservations 8,364,827 0 22.8

APPENDIX O.

Reservations for the Year Ended 30th June, 1952.

State Forests.—Twelve (12) State Forests, with a total of 207,135 acres, were proclaimed during the year. The largest of these are as follows:—

Acres.		Land Agent's District.
126,580	Reserve 1004, Como, Ullirrah, Toolara, &c.	Gympie
32,834	Reserve 41, Herberton	Atherton, Cairns and Herberton
	Reserve 194, Barron and East Barron	
	Reserve 99, Western	
15,160	Reserve 161, Condamine and Mackie	Dalby
9,070	Reserve 700, Canning and Toorbul	Brisbane
7,750	Reserve 1635, Kholo and Sahl	Ipswich
2,555	Reserve 187, Daandine	Dalby
1,367	Reserve 1014, Mourilyan	Innisfail

10,251 acres were added to existing reserves and 3 reserves were rescinded for inclusion in adjoining State Forests.

Timber Reserves.—At 30th June, 1952, the number of Timber Reserves was 354, compared with 364 at 30th June, 1951.

Five (5) new areas, with a total of 26,651 acres, were reserved, the largest being—

Acres.		Land Agent's District.
14,750	Reserve 52, Coomoooolaroo	Rockhampton
10,915	Reserve 53, Coomoooolaroo	Rockhampton

Thirteen (13) areas, totalling 32,271 acres, were converted to State Forests and one reserve of 5,000 acres was converted to National Park. 6 acres of Crown Land were added to existing Timber Reserves. One reserve of 3,072 acres was cancelled, and 780 acres were released.

National Parks.—Four (4) new National Parks, totalling 23,611 acres, were proclaimed during the year, these being—

Acres.		Land Agent's District.
18,560	Reserve 40, Hinchinbrook (Mount Spec)	Townsville and Ingham
	Reserve 477, Waterview	
4,120	Reserve 287, Aberdeen (Mount Aberdeen)	Bowen
800	Reserve 1024, Gladly (Mount Maria)	Innisfail
131	Reserve 775, Numinbah	Brisbane

Eleven (11) acres of Crown Land were added to existing reserves.

1ST JULY, 1951, TO 30TH JUNE, 1952.

STATE FORESTS.		No.	A.	R. P.
At 1st July, 1951		419	4,283,322	0 35
Proclaimed 1-7-51 to 30-6-52		12	207,135	0 28
V.C.L. added to existing reserves . . . . .		..	10,251	1 12
		431		
Reserves rescinded		3		
Total at 30th June, 1952		428	4,500,708	2 35
TIMBER RESERVES.		No.	A.	R. P.
At 1st July, 1951		364	3,113,900	1 16
Proclaimed 1-7-51 to 30-6-52		5	26,650	3 31.2
V.C.L. added to existing reserves . . . . .		..	6	0 0.6
		369	3,140,557	1 7.8
13 reserves converted to State Forests	A. R. P.			
1 reserve converted to National Park	32,271 0 7			
1 reserve cancelled	5,000 0 0			
Areas released	3,072 0 0			
	780 0 0			
15		15	41,123	0 7
Total at 30th June, 1952		354	3,099,434	1 0.8
NATIONAL PARKS.		No.	A.	R. P.
At 1st July, 1951		237	741,061	3 37
Proclaimed 1-7-51 to 3-6-52		4	23,611	0 0
V.C.L. added to existing reserves . . . . .		..	11	0 30
Total at 30th June, 1952		241	764,684	0 27
Total Reservations at 30th June, 1952 . . . . .		..	8,364,827	0 22.8

APPENDIX P.

Expenditure, Surveys, Year ended 30th June, 1952.

Particulars of Survey—

Harvesting and Marketing Project—	£	s.	d.
Survey Prints, Maps and Mountings, Miscellaneous	14	15	0
Surveys, Portions 9 to 44E Dangore, Brisbane Valley	26	3	5
Class 2 Survey, Reserve 54 Bania, Bundaberg	3	12	0
Class 3 Surveys, Reserve 67, Bundaberg	2,790	13	3
Soil Survey, Reserve 67, Bundaberg	7	2	6
Resumption Surveys, Dalby	9	11	9
Class 2 Survey, Reserve 53, Dalby	7	17	4
Class 2 Survey, Taylors Plains, Dalby	97	5	7
Forest Inventory Survey, Reserve 21, Dalby	1,204	1	0
Forest Inventory Survey, Reserve 61, Dalby	2,313	8	11
Forest Inventory Survey, Reserve 78, Dalby	9	11	1
Forest Inventory Survey, Reserve 150, Dalby	213	3	4
Forest Inventory Survey, Reserve 154, Dalby	117	6	10
Forest Inventory Survey, Reserve 155, Dalby	2,051	8	4
Forest Inventory Survey, Reserve 182, Dalby	103	19	6
Forest Inventory Survey, Reserve 184, Dalby	1,091	0	4
Soil Survey, S. 6, Reserve 154, Dalby	48	7	8
Forest Inventory Survey, Reserve 3, Fraser Island	291	9	4
Surveys, Reserve 67, Kilkivan	18	18	0
Road Survey, Reserve 301, Miva	212	15	9
Elginvale Road Survey, Reserve 298, Gallangowan	168	1	0
Forest Inventory Survey, Reserve 298, Kilkivan	7	6	2
Access Road Survey, Mackay	196	10	0
Forest Inventory Survey, Monto	219	17	4
Investigation Survey, Bobby Range and Granite Creek	22	6	0
Road Survey, Biggenden	42	6	3
Forest Inventory Survey, Maryborough	152	17	1
Road Investigation Survey, Reserve 85, Dunbar	35	8	5
Forest Inventory Survey, Reserve 57, Maryborough	1,534	10	2
Miscellaneous Surveys, Reserve 57, Maryborough	39	17	5
Forest Inventory Survey, Reserve 435, Mary Valley	3	5	8
Miscellaneous Surveys, North Coast	4	16	11
Forest Inventory Survey, Reserve 318, North Coast	293	15	8
Survey Camp Carr, North Queensland	3,042	13	3
H. and M. Road Surveys, North Queensland	9	0	2
Survey Camp Arnold, North Queensland	2,241	15	3
Class 2 Survey, Palmerston, North Queensland	99	16	2
	<u>£18,746</u>	<u>13</u>	<u>10</u>
Reforestation Branch Projects—			
As Detailed in Appendix H.	13,908	16	11
	<u>£32,655</u>	<u>10</u>	<u>9</u>

APPENDIX Q.

Distribution of Personnel, 30th June, 1952.

Salaried Officers	312
Other Employees	<u>1,995</u>
	<u>2,307</u>