QUEENSLAND FOREST SERVICE.

## REPORT

OF THE

## PROVISIONAL FORESTRY BOARD

FOR THE
YEAR ENDED 30th JUNE, 1927.

## DEPARTMENT OF PUBLIC LANDS.

QUEENSLAND FOREST SERVICE.

## Report of the Provisional Forestry Board for the Year ended 30th June, 1927.

T0 The hon. t. Dunstan, minister for lands, brisbane.

> Offices of the Provisional Forestry Board, Brisbane, 22nd October, 1927.

Sir,-We have the honour to present to you the Annual Report of the Provisional Forestry Board upon the operations of the Queensland Forest-Service during the financial year ended 30th June, 1927.

We are, \&c.,
E. H. F. SWAIN, Chairman.
$\left.\begin{array}{l}\text { A. A. STAINES, } \\ \text { C. R. PATERSON, }\end{array}\right\}$ Members.

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## QUEENSLAND FOREST SERVICE.

## Report of the Provisional Forestry Board for the Year ended 30th June, 1927.

In its report for the year preceding the present one, the Board surveyed exhaustively the forestry situation in Queensland as it had developed up to that time.

To that report, which was in the nature of a decennial review, the 1926-27 results now are added but briefly.

The acreage of State Forests was increased by 1.06 per cent. during the year, as against $\cdot 22$ per cent. during the previous year, and 40 per cent. for the five years ended 30th June, 1926 ; and now stands at $1,799,155$ acres as against $6,000,000$ acres laid down as the Queensland quota (vide Appendix M).

The year has been one of high drought, reaching its peak in abnormal bush fires in the spring of 1926, but broken in the middle by unusually heavy coastal rains which ended at the termination of summer as suddenly as they had begun with it.

The department was hard put to it to defend its reservations against the bush fire invasions of October and November 1926. A number of. forests were swept by conflagrations which damaged the hardwood stands and incinerated their reproduction. The fires entered the coastal jungles and created havoc in the semi-logged Hoop Pine forests of the Kilcoy district. Yarraman areas were attacked, and at Benarkin and Imbil portions of the new plantations were lost. At Braemar, in the Dalby district, the regenerated Spotted Gum areas were overwhelmed.

In the fire defences of its forests, the Forest Service employs fire breaks, patrol, and fire-fighting. The defeat of these measures in the above instances in 1926 occasioned a general review of the situation. From this review developed the fact that forest fires for the most part originate outside the forests, and can be dealt with fundamentally only at their point of origin. Rural fires generally, however, were subject to no control, and the Careless Use of Fires legislation extant consisted of a few slight clauses promulgated in 1865. The matter accordingly was remitted to the Minister, in consequence of which the general issue has become the subject of inquiry by a Rural Fires Advisory Committee, and the submission to Parliament of a Rural. Fires Bill of 1927 has been announced. Given such enabling legislation on the issue, it should become possible to organise safeguards against bush fires whieh should do much in the future to conserve the increasing assets in Queensland of both farm and forest.

The year's drought has affected the country at large, and has resulted naturally in temporary financial stringency.

Whilst the sale of logs from the State's Forests has been well maintained throughout the period of the annual report, the point has now
been reached at which reduced business has produced a heavy accumulation of sawn stocks in the sawmilling trade, and this accumulation has reacted upon the logging operations, so that deliveries at this date have had to be curtailed.

Forestry finances at the year end, however, were buoyant. The total receipts, exclusive of those from sawmilling, amounted to $£ 543,825$, out of which $£ 292,944$ was expended in trading costs. Against the balance of $£ 250,881$, , $£ 69,262$ was expended in administration and works, and the surplus from forestry activities during 1926-27 was therefore $£ 181,619$.

The sawmilling and timber-yards branch of the department, in spite of the general business depression of the year, made a net profit of $£ 5,357$, after paying $£ 85,315$ for logs derived from the State’s forests, and making an ex gratia payment to the Brisbane Municipal Council in lieu of taxes, \&c., of $£ 187$ 10s. (vide Appendix G).

Fifty-two million superficial feet of pine logs and ten million superficial feet of hardwood logs were sold by the Forest Service during the year.

Silvical operations for the year similarly have been successful. Despite the extreme drought conditions of 1926, the 1925 planting (which covered 534 acres) shows the remarkably high percentage of survival of about 80 per cent., thanks to the planting tube developed to meet Queensland conditions, and to the adoption of maize as a nursing crop to shelter the young plantations in the dry Benarkin-Nanango areas.

The maize harvest itself has been excellent, yielding around 50 bushels to the acre for the 153 acres to which the method was applied.

In forest plantation work the department achieved a record, 1,084 acres of new forests of Hoop and Bunya and Kauri Pines, Silky Oak, and other species having been established during the period in the Mary Valley, Benarkin, Fraser Island, and other districts. The copious rains of the planting season, plus the after influences of the planting tube during the ensuing droughty winter, have given us a 90 per cent. establishment result thus far.

The taungya method of devoting plantation areas to a preliminary banana crop, commenced experimentally, is proving popular, and promises to be remunerative both to the department and to the lessee banana grower. The banana rotation occuipies around six years, and the rentals derived will go a long way towards paying the costs of the tree plantations destined to succeed them. During the year seven persons were successful at tender, and took up taungya propositions accordingly on the Mary Valley State Forests. Inquiries are now being received from many districts for an extension of the scheme thereto. Surveys of the banana soils of the Goomboorian forests were made during the period with a view to developing the method on those areas. As preliminary organisation is essential to the well-being of the policy, the many desultory applications which have been received cannot be dealt with offhand and at once.

In natural regeneration activities, Forest Service operations have yielded very satisfying results for the year. In the several hardwood forests under treatment, the summer rains produced a prolific germination, and the survival thus far has been good.


In the Cypress Pine areas the results are even better, and the thinning work has produced extraordinary changes in the growth rate, converting a stagnant asset of congested thickets to excellent wood productivity. The illustrations herein included, of the treated as compared with the untreated stands of Cypress Pine regeneration on the Fairylands State Forest in the Jandowae district, afford illuminating evidence of the possibilities of silvical operation in this type of forest. In a stand thinned to $8 \times 8 \mathrm{ft}$. spacing, the annual girth increment was 2.8 in . as opposed to 1.3 in . in untreated adjoining areas. The thinnings effected seven years ago among the Cypress Pine trees of the Yeulba forest are now bearing fruit in increased girth increment, the average annual increase measuring 44 in .

The Cypress Pine forests of South-western Queensland are assuming larger importance in the economy of Queensland forestry, because they offer the most advanced growth of coniferous timber against the pine timber supply deficiency which is descending upon Brisbane with the imminent exhaustion of the Hoop Pine resources of the coast. The species has contributed importantly to the building of the inland towns but has scarcely reached the metropolis yet. It is, however, the most likely competitor to imported Baltic Pine, and the lesson from New South Wales, where general development is in a later stage than that of Queensland, is that the Cypress Pine forests of the West will be subject to heavy levy for future building programmes of the capital city of this State.

The minimum softwood plantation necessity for Queensland is 5,000 acres per annum. Up to 30th June, 1927, we had laid down 4,465 acres against this necessity, but these 4,465 acres will not be ripe for the logging axe for forty to fifty years, whereas the Hoop Pine supply, notwithstanding severe rationing, will be used up within the next twenty or thirty years.

For the interregnum of timber famine, the fire-ridden and neglected Cypress Pine forests of inland can be made to produce economically by applied silviculture a helpful contribution to our sheer needs in wood. They regenerate abundantly in a satisfactory season, and, with fire protection and tending by thinning, can be organised into remarkably sound and extremely opportune timber supply investments. Thus far little has been done with them. Forestry in Queensland is a development of only very recent years, and it is difficult to impress upon a generation sufficiently embarrassed by present-day cares, the simple truth that the next generation in Queensland will have to buy its timber from foreigners, if it can, because original limited resources are being used up much more rapidly than reinvestment is replacing them.

Because of its heavy weight and large bulk, timber should be produced locally to its place of consumption, and the advantage lies inevitably with local production. The Pinus insignis forests which are being evolved in the Stanthorpe district by the Queensland Forest Service, to meet the case-timber demands of the fruit-growing industry of the Granite Belt, have a 15 s . freight advantage per 100 sup. ft. over any New Zealand supplies which may enter into competition with it. In any case it is of fundamental consequence to Queensland that she should maintain an export balance in her favour. The $£ 40,000,000$ sterling which we will be forced to ship from this State during the next thirty years in order to make up our softwood deficiency will react heavily upon our trade position.

The newly arrived plantation companies are parading before the investing public the advantages of forestry investments, but their
prospectus claims are generally so grotesquely extravagant, and their silvical policies are often so defective, that little assistance is yet visible from that source. The public would be well advised to refrain from investment in any such concern whose silvicultural programme is not clearly worked out in a proper forest working plan, and expressed precisely in understandable terms of profit and loss. Forestry is a legitimate commercial risk, but, as in all businesses, its ultimate and somewhat far-off dividends depend upon clear policy and direct production management.

The department in Queensland has been concerned for silvical methods and processes and costs, because its investments of money in local forest propositions must be rewarded at harvest time by compound interest upon the capital employed all the years if forestry is to justify itself. To the development of the most directly effective formule of production at the lowest possible cost it has devoted much thought and experiment. During the year, as a consequence of a study of existing plantations and their establishment expenditures, the espacements have been widened generally as an economy measure in order to reduce acreage costs and hasten growth even at the expense of wood quality.

For the 1927 operation, Hoop Pine and Grey Teak will be planted at $10 \times 8 \mathrm{ft}$. and Silky Oak at $11 \times 9 \mathrm{ft}$., in lieu of $8 \times 8 \mathrm{ft}$. as heretofore.

The budgeted allotment of $£ 37,377$ 15s. 8d., entrusted to the department in 1926-27 for investment in forest management and timber production in Queensland, was employed as follows:-


These figures are compressed in the following graph, which expresses the distribution per pound sterling of forest loan expenditure.


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By comparison with private prospectuses, the Queensland Forest Service prospectus may appear a dull document and its claims for forestry as a State investment may seem colourless. The true position, however, has been made clear in conservative fact and figure, and the Board, having in view its responsibilities to Government in so far as the timber supply situation of the State is concerned, hopes that, so soon as financial circumstances permit, it may be instructed to advance its reforestation programme to the point of minimum necessity for Queensland.

## HARVESTING AND MARKETING.

The principal logging operation is that of the Hoop and Bunya Pine forests in the south-east of the State. Some $29,000,000$ sup. ft. of pine logs were felled, hauled, and marketed directly by the department. In addition, $1,544,000$ sup. ft . of hardwood logs were handled, the produce principally of the departmental logging tramway on Fraser Island, which commenced operating in April 1927 for the supply of the Maryborough trade.

In North Queensland, the Forest Service logging activity was restricted to the removal of cyclone and borer damaged timber and secondary woods, from the State Forests, and the marketing of stands growing on lands shortly to be alienated. Of the total quantity removed, $4,570,545$ sup. ft. were logged directly by the department, and $1,981,657$ sup. ft. were removed by purchasers of timber at stump. Of this total cut of $6,552,000$ sup. ft., $1,770,900$ sup. ft. consisted of Maple Silkwood and $2,352,523$ sup. ft. of Kauri Pine. Of Silky Oak, of which comparative abundance is available for sale, only 623,947 sup. ft. were sold. Of Hickory Ash, 554,221 sup. ft. were disposed of. Red Cedar sales amounted to 126,548 sup. ft.

The department's export sales to the South were restricted to Maple Silkwood, Kauri Pine, Silky Oak, and Silver Silkwood (Putts Pine) and totalled 338,993 sup. ft. Among the secondary cabinet woods and hardwoods, of which $1,238,909$ sup. ft. were marketed, the more readily sold were White Silkwood (88,312 sup. ft.), Yellow Siris (325,938 sup. ft.), Yellow Satinash ( 189,129 sup. ft.), Grey Teak ( 56,415 sup. ft.), Rose Alder ( 64,646 sup. ft.), Silver Quandong (49,571 sup. ft.), Red Tulip Oak (48,109 sup. ft.), and Walnut Bean (36,096 sup. ft.). In lesser quantities, Miva Mahogany, Laurel Silkwood, Rose Butternut, Grey Sassafras, Caledonian Oak, White Ash, Red Siris, \&c., were marketed. About 100,000 sup. ft. of Northern hardwoods consisting of Cadaghi, Red Bloodwood, and Lemon and Red Trongum were disposed of.

In these several logging operations, the department expended the sum of $£ 143,466$.

In addition to direct departmental operation, sales at stump in the forests under existing contracts yielded $22,974,000$ sup. ft. of pine and $8,373,775$ sup. ft. of hardwood for the period.

As economic circumstances dictated, further sales at stump were made in quantity sufficient to warrant the establishment of mills for operation in situ in the stands. Among such sales.made during the year were the following :-
$10,000,000$ sup. ft. Pine, 72 -in., standing on State Forest Reserve 154, Gallangowan. Gympie sale 6-8-26.
$10,000,000$ sup. ft. Kauri Pine, 84 -in. ; 2,250,000 sup. ft. Hickory, 84-in., standing on Timber Reserve 19, Garioch. Atherton sale $24-8-26$.
$10,000,000$ sup. ft. pine, $60-\mathrm{in}$., standing on State Forest Reserve 207, Monsildale. Brisbane sale 1-9-26.
$5,000,000$ sup. ft. hardwood, 72 -in., standing on State Forest Reserve 370, Durundur. Brisbane sale 1-9-26.
$1,500,000$ sup. ft. pine, 72 -in., standing on State Forest Reserve 893, Byron. Brisbane sale 2-11-26.
1,200,000 sup. ft. pine, 72 -in., standing on Timber Reserve 124, Glastonbury. Gympie sale 1-12-26.
$10,000,000$ sup. ft. pine, 72 -in., standing on State Forest Reserve 298, Gallangowan. Brisbane sale 11-1-27.
$3,000,000$ sup. ft. pine, 72 -in., standing on State Forest Reserve 123, Manumbar. Brisbane sale 11-1-27.
$10,000,000$ sup. ft. pine, 72 -in., standing on State Forest Reserve 343, Monsildale. Brisbane sale 11-1-27.
$10,000,000$ sup. ft. pine, 72 -in., standing on State Forest Reserve 137, Yabba. Brisbane sale 11-1-27.
$3,000,000$ sup. ft. pine, standing on Timber Reserve 376 and Portion 79, Boompa. Gympie sale 21-3-27.
Until the last month of the report year when slump conditions supervened, the demand for pine logs was in excess of supplies. Pine log prices, which at the begimning of the period were on the basis of 23 s . 6d. Brisbane and 22s. 6d. Maryborough and Bundaberg for $60-\mathrm{in}$. plus mill logs, advanced in October 1926 by ls. per 100 sup. ft. and remained at this to the end of the period.

Prices for ply-quality logs, of which $1,806,943 \mathrm{sup}$. ft. were marketed, increased from 29s. Brisbane basis in July 1926 to 30 s . in October and 31s. in June 1927, when the specification provided for "bird's-eye" quality to be included as ply, but price to be 2s. 6d. over A quality. Hardwood prices remained unaltered, supplies being in excess of demand. The market for Northern cabinet-wood logs remained stagnant, and prices for Maple Silliwood were reduced from 40s. on an 8 - ft . girth basis at beginning of period to 36 s . at end of period.

With regard to sales of milling logs on truck, prices realised were in no case in excess of upsets. The sawmillers' organisation appointed one of its number to bid, and timber was subsequently allotted to various nembers.

Regariding the large stump blocks under competition, upsets were exceeded in one or two instances.

Under contract to supply the Queensland Railway Department with its annual requirements in hewn, split, and pole hardwood, the Forest Service expended the sum of $£ 149,478$ in the operation of converting timber on Crown lands and purchase of timber from private lands, and was recouped by the Railway Department to the extent of $£ 143,360$.

1. The year's harvesting and marketing operations, after deducting the trading expenditures quoted above, resulted in a net revenue of $£ 250,881$.

## ILLEGAL REMOVALS.

During the year, 122 cases of illegal removal of Crown timber, involving a total value of approximately $£ 3,000$, came under the Board's notice for investigation.

In 28 cases proceedings were instituted; 26 were successful. Tines imposed amounted to $£ 237$ 10s. Prosecution action is pending in 5 cases. In 62 cases offenders were warned and royalty was charged in respect of
timber removed. In 5 cases timber was seized and confiscated to the Crown. In 22 cases definite information as to offenders could not be obtained.

As a result of action taken in all cases, an amount of approximately $£ 1,300$ was recovered to the Crown.

## THE SILVICULTURAL OPERATIONS.

Thm Mary Valley Working Plan Area-
The Mary Valley Working Plan Area is probably the most promising field of silvicultural activity in Queensland, being the scene of important natural Araucarian forests and the original source of much of the technique of our present silviculture.

The department's programme is to develop here the principal plantation operation of the Forest Service.

During 1926-27, 230 acres of new plantation were laid down, being 50 acres more than for the previous year. The objective plantation area is 850 acres, and the plan provides for gradual extension as follows:-

| , | Year. | $\begin{aligned} & \text { R. } 135 \\ & \text { and } \\ & \text { R. } 256 . \end{aligned}$ | Reserve 435. |  |  | $\bigcirc$ - Peserve 124. |  |  | W.P.A. Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  | Feiling. | 'Taungya. | Total. | Felling. | Taungya. | Total. |  |
|  |  | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres, | Acres. |
| 1927-28 | . | 300 | 50 |  | 50 | . |  |  | 350 |
| 1928-29 |  | 325 | 59 | 16 | 75 | . | . | .- | 400 |
| 1929-30 | $\dot{\circ}$ | 375 | 125 |  | 125 | . | . |  | 500 |
| 1930-31 | $\stackrel{.}{ }$ | 425 | 175 | . | 175 |  | . |  | 600 |
| 1931-32 |  | 450 | 120 | 80 | 200 |  |  | . | 650 |
| 1932-33 | $\cdots$ | 450 | 30 | 170 | 200 | 20 | 30 | 50 | 700 |
| 1933-34 |  | 500 | 50 | 150 | 200 | 50 | 50 | 100 | 800 |
| 1934-35 |  | 500 | 75 | 125 | 200 | 75 | 75 | 150 | 850 |

The species employed in making the 1926-27 plantations were as follows:-

$$
\begin{aligned}
& \text { Araucaria Bidwilli (Bunya Pine) .. .. }{ }^{\text {Por cent. }} 36 \\
& \text {. Araucaria Cunninghamii (Hoop Pine) .. } 34 \\
& \text { Gmelina Leichhardtii (Grey Teak-White Beech) } 23 \\
& \text { Grevillea robusta (Southern Silky Oak) .. } 5 \\
& \text { Other species .. .. .. . .. .. } 2 \\
& 100
\end{aligned}
$$

Although the year's work began in drought, it finished with $56 \cdot 40$ in. of rain during the last seven months, resulting in a rainfall of 62.37 in . for the twelve months, or much above the average.

The survival of plants over the establishment period has been good, and present indications point to a very successful issue for the plantings.

The previous year's plantations, however, caught the full brunt of the drought, and patches on the more exposed western aspects show considerable mortality, particularly in the case of the large Grey Teak (White Beech) seedlings used to make up the deficiency in Hoop Pine nursery stocks. This year, the Grey Teak seedlings were tubed at 3 to 4 in . high, without cutting the taproot, and planted six to seven weeks later. These have shown satisfactory survival and development.

In experimental silviculture, continued attention was given to the problems of -
(i.) The best spacing for the chief species;
(ii.) Suitable mixtures of species;
(iii.) The possibilities of various exotic and indigenous species.

To date, of the experimental species, the Cigar-box Cedar of Honduras (Cedrela odorata), the Loblolly Pine of Florida (Pinus toeda), and the Cypress Pine (Callitris cupressiformis) offer most encouragement. Although the Cigar-box Cedar is said to be subject to attack by the twig-borer, which makes the forestation of our native Red Cedar a hopeless proposition, the species thus far has shown immunity and gives promising results under shelterwood.

The Brisbane Valley and Nanango Working Plan Area-
This working plan area has the biggest plantation showing for 1926-27, the figure of 430 acres having been reached, as against 192 acres for the previous year. Of the 430 acres, 268 acres were planted with Hoop Pine spaced $8 \times 8 \mathrm{ft}$. Southern Silky Oak (Grevillea robusta) was used in respect of 102 acres, whilst exotic pines, chiefly Pinus. insignis and Pinus canariensis, were applied to the remaining 60 acres. The locations of the plantations were 279 acres on the Benarkin State Forest, 55 acres on the Nanango State Forest, 52 acres on the Bunya Mountain State Forest, 23 acres on Googa State Forest, and 21 acres on Yarraman State Forest.

As the result of the improved nursery processes, a better type of plant was made available this year for plantation use, and at the end of June a success of over 90 per cent. was assured the 1926-27 plantations.

It is in this working plan area that the maize is used as a shelter crop. The effect is to protect the newly planted seedlings against insolation and against weed suppression. Incidentally they share the cultivation benefit of the chipping which goes on among the maize. The plants established under these shelter crops show to great advantage in survival and health as compared with those planted in exposed situations.

Silky Oak, unlike Hoop Pine, prefers the open sun-heat, and in the case of this species the maize crop was not used. Plants set out 5 to 6 in . in height reached a minimum of 2 ft .6 in . in four months, whilst the Silky Oak plantations of the previous year had grown through the drought to a maximum height of 10 ft .

The Brisbane Valley Working Plan Area includes at Benarkin one of the finest Grey Tronbark forests in Australia, and 63 acres of new regeneration of this species were thinned out. It was not possible to deal more extensively with this type this year, but experiments in poisoning useless Eucalypts were continued, with a view to economising the prescription for future operations.

A plot of Eucalyptus Staigeriana was established in order to obtain information about oil production, and seventeen experimental species were planted out in the arboretum.

The Fraser Tsland Working Plan Area-
The Fraser Island Working Plan Area, the scene of a forty-year-old logging operation in hardwood for supply to Maryborough markets, is the seat of one of the most important of the Forest Service Eucalyptus
regeneration activities. Some 2,100 acres underwent the initial ringbarking operation precedent to the regeneration burn due to take place towards the end of 1927.

In addition, 470 acres of the Cypress Pine working circle was subjected to the initial regeneration operation, and indications of success are already apparent.

Some 56,700 plants were despatched to plantation, of which 60 per cent. were Hoop Pine, 9 per cent. Pinus patula, 7 per cent. Kauri Pine and Pinus caribcea, 6 per cent. Pinus maritima, 4 per cent. Pinus tceda, and 14 per cent. miscellaneous species. Exceptionally heavy rains amounting to 95 in . fell during the last seven months of the period, covering most of the time of planting, whereas for the previous five months there had been only 7 in . The average rainfall is approximately 63 in . The planting result has been good, and some of the credit for the result is due to the better type of plant coming from the forest nursery, following upon the improvement of the soil therein.
$\therefore$ In addition to the establishment of these plantations, the tending -and refilling of previous plantations, and initial preparation of site work, were carried out over an area of 1,040 acres. A very welcome Hoop Pine seedfall occurred on the island at the beginining of 1927. This was the only Hoop Pine seed collected in Queensland. Unfortunately, only 516 lb . were obtained; nevertheless the plants raised from this seed will prove of great value for planting work in 1929 when Hoop Pine stocks will be very low.

## The Inglewood Worising Plan Area--

Silvicultural work was carried out for the first time in this district during the past year. On that part of R. 79 which adjoins the railway line, 1,600 acres of Cypress Pine (Callitris glauca) regrowth were treated with a combined thinning and cleaning. Increment plots have been established to determine the rates of growth of the two local species of value, Ironbark ( $E$. crebra) and Cypress Pine. Plots established to illustrate the effect of thiming to various spacings are already showing interesting results. A start was made with the establishment of an arboretum to determine the possibilities of various species in this locality. There can be no doubt that, if fire can be excluded, prolific natural regeneration will be obtained on these Cypress Pine areas-now almost cut over.

## The Dalby Working Plan Arfa-

Natural regeneration work was continued on three reservesFairylands Forest, R. 93 Nudley; Braemar State Forest, R. 4 Braemar ; and Yeulba State Forest, R. 78 Inglebogie.

Following the dry period at the end of winter, Reserve 4 Braemar was swept by bush fires. A heavy seedfall of Spotted Gum fortunately occured later, and this, with the subsequent good rains, enabled an excellent stand of small seedlings to become established. Prolific germination of Spotted Gum occurred everywhere, particularly on the burnt-over areas, after the rains of December and January. Cypress Pine regeneration was good in places, but the seedfall was poor. A good fall is expected in the spring of 1927.

Initial regeneration operations were carried out over an area of 985 acres on R. 4 Braemar, 907 acres on R. 93 Nudley, and 250 acres on
R. 78 Inglebogie. Now that the prickly-pear is well in hand on the last-mentioned reserve, the thinning and cleaning operation is showing splendid results in the Cypress Pine. Experimental thinning plots in this species already demonstrate that it undoubtedly pays to thin overdense stands of young Cypresss in accessible areas.

## The Bundaberg Working Plan Area-

In accordance with the approved working plan, the work of liberating Hoop Pine on the Goodnight Forest (R. 169 St. Agnes) was commenced. A splendid stand of undergirth pine exists in this forest, and it is considered that the rotation will be considerably reduced by a comparatively cheap liberation. Incidentally it is expected that this operation will eventually enable the sustained yield-now fixed at 500,000 sup. ft. (exclusive of tops)-to be increased. Increment plots have been established to determine the effect of liberation on growth.

The Rockhampton Working Plan Area-
Experimental work on R. 20 Maryvale was advanced a step further. The object is to determine the most suitable softwood species for planting up a considerable area on this reserve to supply eventually the Rockhampton and Central Queensland market. The following species were added to those already tried:-Grevillea robusta,' Pinus teeda, Pinus caribrea, Pinus patula, and Araucaria. Cookii. A considerable number of species have now been tried, not one of which, however, shows much promise; Callitris; spp., Pinus toeda, and Araucaria Cunninghamii being the best.

## The Warwick Workting Plan Area-

The forest station on R. 263 Pikedale, in the Stanthorpe district, was established only a short time ago for the purpose of developing plantations of Pinus insignis to provide case timber for the local fruit industry. Nursery operations were carried out under extreme difficulties of drought and innumerable insect pests, despite which, however, sufficient stock is on hand for planting up 92 acres (already prepared) in August 1927. For the present, all plants are being tubed, but it is hoped that experiments will demonstrate the possibility of eliminating transplanting and tubing. Progress has been made with a number of experiments concerning the nursery treatment of Pinus insignis and the poisoning of trees. The arboretum has been started, and nursery and plantation experiments of various tan-bark species are in hand.

## The Maryborough Working Plan Area-

Little work was done in this working plan area. On R. 287 Woowoonga a few acres of Hoop Pine were planted, and about 190 acres of natural regeneration of the same species were liberated. The small experimental plot. of Red. Cedar, which showed great promise at last report, is now unfortunately riddled with the Red Cedar twig-borer (Hypsipyla robusta). This experiment ends the attempt of the Forest Sérvice to. develop commercial plantations with this species.
Further work was done to determine the possibility of 'reforesting the Wallum lands. ' Small plots of the following species have been planted:- Pinus tceda, Pinus caribcea, Pinus patula, Pinus maritima, Pinus insignis, Pleiogynium Solandri, Grevillea robusta, and Callitris arenosa,

The Mackay Working Plan Area-
Work of an experimental nature was continued on P. 6 Eungella. Plots were established with a view to determining the possibility of natural regeneration of the more valuable local species. A number of locai and exotic species were raised in the nursery and transferred to the arboretum, an area of 5 acres being planted.

The Kilkivan Working Plan Area-
Small plantings were made on both R. 355 and R. 220 Kilkivan. Unfortunately, the wet season set in before the planting site was burned on R. 355 , consequently operations were hindered considerably. Some 30 acres were planted on R. 220 and 12 acres on R. 355, mainly with Hoop Pine. On the former area later plantings gave better survivals. A number of Hoop Pine plants on hand were too large for tubing, so were tried out open-root. With early planting on R. 220, 40 per cent. success was obtained, and 80 per cent. with later planting. Tubed plants gave 95 per cent. success on R. 355, and large open-root plants 60 per cent. Additional species were transferred to the arboretum.

## The Atherton Working Plan Area-

This area covers the most considerable of the cabinet-wood jungles of Queensland, but utilisation at present is concerned mostly with the rapid culling of alienated lands for the best trees of the best species prior to clearing, and has not reached such a stage on the State Forests as to permit of much silvicultural development.

In the meantime, the department is engaged in this area in necessary preliminary studies of the silvical types and species against the time of future silvicultural practice.

At the four small forest stations in the area, experimental nursery and planting and natural regeneration work continued, and Hoop and Kauri Pines, Maple Silkwood, Silky Oak, and the exotic species Pinus toeda, Pinus caribcea, Pinus canariensis, Pinus patula, Cupressus Benthami, Cryptomeria japonica, Cedrela odorata, and Juniperus procera were isolated as the species showing promise under Northern conditions.

Some 71 acres of softwoods and 28 acres of cabinet woods were planted.

There is in the North a strong deficiency of hardwood for structural uses, and some 256 -acres of natural hardwood stands on the Ravenshoe Forest were treater for natural regeneration. Some 29 acres of Eucalypts were planted on the Atherton Forest. A commencement was made also towards the demareation of the rather considerable natural hardwood areas of the Cardwell region.

The area was visited by cyclone in Febraary and the forests were subjected to some wreckage. Many of the trees of the 1916 Hoop Pine plantation had their tops torn off, but show signs of recovery. The expected Kauri Pine seedfall of 1927 was destroyed by the cyclone and by the heavy rains which characterised the period, and the Mapie Silkwood seed crop for the year was practically nil, although a new seedfall is now promised.

## The North Coast Working Plaf Area-

This working plan area, which extends from Brisbane to Gympie, is important because of its location to the metropolis. It is within a one-time very considerable hardwood belt, now shredded by settlement,
and hardwood regeneration is the chief engrossment of the department in the area.

On the Yandina State Forest, 420 acres were treated by much the same method but for the production of mill-logs. At 30th June, 1927, most of the area operated upon was partially stocked with natural regeneration and coppice of the desired species, and the indications are that, given immunity from bush fires, the entire area, except for the poorer rocky sites, will speedily attain to full stocking. Most of the sites of previous years' treatment now show excellent regrowth from 6 to 60 ft . in height, Red Messmate and Tallowwood favouring the lightly opened patches where the shelter has been too heavy for the more intolerant Blackbutt.

On the Corella Forest, adjacent to Gympie, 303 acres of 1925-26 treatment were re-coppiced after the regeneration burn, and any surplus seed trees ringbarked. Some 446 acres of $1920-23$ treatment were brushed free of wattle and additional ringbarking and coppicing carried out, and on 200 acres excellent coppice and new seedling growth have now appeared.

The North Coast Working Plan Area includes a large area of poor. coastal lands edged by the Wallum belt, and at Beerwah the department has established a Forest Station having as its object the development of a new forest to supply a measure of the Brisbane softwood needs of the future. At the moment the operations are in the experimental stage. A first planting of 13 acres was effected during the report period. At 30th June, the Caribæan and Loblolly Pines of Florida-the climatic equivalent of the site-and the Hoop Pine of Queensland offered most promise with 90 to 95 per cent. survival for the tube-planted operation and 45 to 68 per cent. for a small open-root operation. The Southern Silky Oak and Bunya Pine evinced little growth, and Pinus patula and Pinus insignis show a 40 to 50 per cent. mortality.

In addition to this planting, 11 acres were dealt with under other experiments, viz., $6 \frac{1}{2}$ acres of tan-bark species (Acacia decurrens and Eucalyptus alba) and 4 acres of oil-producing species (Eucalyptus Staigeriana and Leptospermum citraium). An acre of the Swamp Cypress of the Mississippi (Taxodium distichum) was planted on a moist creek site and put on a maximum growth of 18 in . for the nine months.

## The Brtsbane Working Plan Area-

The chief operation in this area was that located at Pechey, 30 miles north of Toowoomba. Here an area of 2,046 acres has been acquired for the purpose of developing softwood supplies for the Toowoomba market, under a forest working plan approved in 1925-26. Stands of hardwood occupy the area at present and the silvical task is to convert to softwood by regulated utilisation and co-ordinated plantings.

An increment cutting was made over 825 acres of the best hardwood stands destined for the final hardwood felling; in order to expedite wood production in the interim. In the meantime, forest nursery establishment is proceeding, and propagation has commenced. At 30th June, approximately 60,000 seedlings had been produced.

The sites of $1927-28$ plantings in compartments 69 and 70 are being prepared, and Red She oak and as much dry hardwood as possible have been removed by firewood sales,


On the small reservation at Enoggera, R. 69 Bunya, intensive utilisation of the stand has been made possible because of the location of the forest on the city edge, and the working plan provides for the production from the forest of firewood, posts, poles, and logs for metropolitan use. An area of 237 acres was dealt with by an intensive ringbarking of undesired species and faulty trees, combined with coppicing. Some of the Spotted Gum coppices re-developed 10 ft . of stem within the year.

## FOREST SURVEYS.

Three fully equipped camps operated continuously throughout the financial year, whilst temporary smaller camps. were engaged on minor survey work.

The total expenditure for survey work amounted to $£ 4,4534 \mathrm{~s}$., of which $£ 3,211$ 3s. 1d. was charged to Loan Reforestation Vote, and the balance, $\mathfrak{£ 1 , 2 4 2}$ 0s. 11d., charged to Harvesting and Marketing Vote.

As a result, 8,540 acres were estimated, 62,382 acres were subjected to intensive contour and assessment survey, 109,720 acres were subdivided into compartments, whilst 730 acres were surveyed for the purposes of Taungya Leasing.

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

| Compass and chain | $\ldots$ |  |  |  |  | Miles: |
| :--- | :---: | :--- | :--- | :--- | ---: | ---: | Chains.

Exploratory investigation-927 miles.
Class 2.-Estimating by Strit.

| Reserve No. | Parish. |  |  |  | Area in Acres. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Portion 262 and head of Kilcoy Creek (now | Kilcoy | -• | . | . | 3,080 |
| Timber Reserve 480 (part) |  |  |  | . |  |
| Vacant Crown lands (Palmerston Area) | Jordan | . | . | - | 4,500 |
| Timber Reserve 355 | Kilkivan | - | . | $\cdots$ | 960 |
|  |  |  |  |  | 8,540 |

Class 3.-Intensive Contour and Assessment Surveys.


B

Compartment Surveys.


## The Kilcoy Workiñg Plan Area-

Operations were continued in the form of a Class 2 survey on vacant Crown land at the head of Kilcoy Creek, together with portion 262 , parish of Kilcoy, an 'area totalling 3,080 acres being dealt with.

Survey. was completed towards the end of July, and on the 26 th of that month the camp was shifted to Timber Reserves 209, 316, and 317, parishes of Kilcoy, Neara, Bowman, and Cressbrook, and known locally as the Deer Reserve. Approximately 12,080 acres were dealt with by Class 3 survey, fieldwork being finalised on the 9 th December, when camp: was closed down for Christmas vacation.

- Survey work was considerably hampered by lack - of water-and grass owing to drought conditions obtaining.

In the beginning of the New Year, camp was transferred to the Brisbane Valley Working Plan Area.

Details of mileage are as follows :-


## The Brisbane Valley Worktivg Plan Area-

On the 4th January, field duties : were recommenced, the camp shifting by road from Reserve 209 Kilcoy to State Forest 120 parish of Neumgna, where operations were started on a compartment and Class 3 survey of the greater part of the State Forest.

The area treated to subdivision into compartments totalled 7,550 acres, seventy-three compartments being surveyed, and three, situated in forest, designed. In addition an area of approximately 3,000 acres on
the north-west of State Forest (Portion B) was dealt with by Class 3 survey, making a total of 10,550 acres treated during the last six-monthly period. About a week's work remained to complete survey on the 30th June.

| Mileage was as follows:- |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Compass and chain |  |  | Miles. 54 | Chains $33$ |
| Strip survey |  |  | 64 | 26 |
| Old boundaries (Abney) |  |  | 40 | 24 |
| Exploratory investigation |  | $\cdots$ | 291 | 0 |

The Norte Coast Working Plan Area-
Compartment surveys were carried out on parts of two reserves, viz., State Forest $318^{\circ}$ Maroochy and Timber Reserve 561 Bribie. On the former, twenty-five compartments were laid out on the four eastern logging areas, having a total area of 2,832 acres, while on the latter, the logging area adjacent to the Forest Station was divided into twelve compartments, the total area dealt with being 1,295 acres.

Mileage was as follows :-


In addition, groups of Taungya Lease blocks were marked out on State Forests 502 Gympie and 627 and 628 Goomboorian. In all, twenty blocks were demarcated, the total area being 405 acres.

Mileage was as follows :-
Compass and chain $\quad$. .. .. .. $\quad 10 \quad 4$
The Mary Valley Working Plan Arma-
Further Taungya Lease and sub-compartment surveys were effected on State Forest 435 Amamoor during the financial year, on the following logging areas :-


In addition, two minor sub-compartment surveys were effected on Branch Gully Logging Area, State Forest 256 Imbil, and on State Forest 135 Brooloo.

## The Kilkivan Working Plan Area-

In May of this year, a soil survey with estimate and contours was made by two Forest Assistants, of Reserve 355 Kilkivan, in order to collect data necessary for the compilation of a working plan. About eight miles of strip survey were run and a total of 960 acres dealt with.

Compartment survey on that part of State Forest 16 Malcolm south of Dogwood Creek was continued and completed by the 17 th July.

Survey of compartments on Timber Reserve 14, parishes of Hookswood and Wongongera, was then undertaken, being finalised by the 22nd of Séptember. This reserve has an area of 34,600 acres, and was divided into sixty-six compartments, having an average acreage of 500 .

Camp was then shifted to Timber Reserve 86, parish of Brownlie, and commenced traversing principal tracks and creeks to form basis for compartment design.. Work was continued until the end of October, when camp was temporarily closed down pending arrival of camp from Yeulba. :

Mileage is given hereunder:-

Compass and chain .. .. .. .. | Miles. |
| :---: |
| 31 |$\frac{\text { Chains. }}{43}$

Camp transferrěd from the Bundaberg district, arrived at Yeulba (Timber Reserve 78 Inglebogie) on the 26th November, and subdivided this reserve into 200 -acre compartments, a total of 1,288 acres being dealt with.

Camp was then shifted to Barakula, arriving on the 3rd December, and compartment surveys were continued on Timber Reserve 86 Brownlie, and subsequently extended northerly to State Forest 21 Macdonald. In all, 22,500 acres were dealt with by compartment survey on Reserve 86 .

The camp then moved to Reedy Creek on State Forest 21 Macdonald, early in . April, and completed approximately 7,000 acres of compartment survey before being transferred urgently to Timber Reserve 15, parishes of Pelham and Quandong, on account of motor timber trucks obtaining a suitable crossing over Hellhole Creek. In all, about 24,000 acres were completed by the middle of June, when camp was temporarily closed down.

Mileage is given hereunder:-

| Compass and chain |  | . |  |  | Miles. | Chains. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Compass and step | $\because$ | $\cdots$ | . | . | 98 | 78 |
| Check survey | $\ldots$ | $\cdots$ | . | . | . | 12 |
| 56 |  |  |  |  |  |  |

## The Inglewood Working Plan Area-

Compartment surveys: were carried out and completed over the southern section of State Forest 79, parish of Sands, during the year. Approximately 16,135 acres were dealt with, the average area of compartments being in the vicinity of 500 acres. This entailed the running of forty-nine miles of compass and chain traverse.

## The Bundaberg Working Plan Arra-

Class 3 survey of the northern section of State Forest 169, parish of St. Agnes (Goodnight Scrub), was continued and fieldwork finalised by the 18 th November. In all, four logging areas, having a total area of 6,277 acres, were laid out, estimated, and subdivided into compartments. Camp was then transferred to the Dalby Working Plan Area:


## The Atherton Working Plan Area-

The period commenced with the continuation of the Class 3 survey of State Forest 607, parishes of Cairns and Grafton. Work was carried
out until the 20 th September, on which date the camp was moved to Timber Reserve 194 Barron. About a week's work remained to complete the survey of State Forest 607.

A Class 3 survey of Reserve 194 Barron was commenced on .the 30th September, and continued until the 10th November, when camp moved out to Millaa Millaa to carry out an urgent timber estimate of certain lands in the Palmerstone area. This work was completed by the 17th November, the camp returning to Atherton and resuming on Timber Reserve 194, closing down for the Christmas holidays on the 24th December.

Approximately 4,200 acres of State Forest 607, Cairns and Dinden, were completed, whilst a further 5,000 acres were in readiness for estimating. On Reserve 194, Sylvia Creek Logging Area (about 1,470 acres) was subdivided into compartments and an estimate and soil survey completed of same.. Four compartments on Mitchell Logging Area and one on Scrubby Creek Logging Area were resurveyed.

In the second half of the financial year, survey work did not recommence until the 6th March, owing to the abnormal wet season. Work was recommenced on Reserve 194 Barron on the above date and continued until the end of May, when camp was shifted to Reserve 398 (Lake Barrine),' in order to carry out a timber assessment, and to clean out external boundaries on State Forests 310 Gadgarra and 475 Danbulla. Work was proceeding on these reserves when report period ended.

The period through was abnormally wet, there being 74 out of a total 143 working days on which survey work was impossible. The damage to the jungle by the February cyclone rendered survey work extremely difficult, and has increased the time occupied per mile on all classes of work 20 to 50 per cent. Mention must also be made of the exceptionally difficult and tiring nature of the work on State Forest 607. Very long walks were necessary, 44 -degree slopes being experienced on compass and chain traverse, whilst on strip assessment surveys tracks had to be brushed through impenetrable lawyer vine to allow work to proceed.

Assistance was also rendered when required, to harvesting and marketing and silvicultural officers, in investigation of illegal removals and fire-fighting on Timber Reserve 194.

Total mileage for the period is as follows:-





Total, $\mathfrak{£ 1 , 2 4 2 0 \mathrm { s } . 1 1 \mathrm { d } .}$
Grand Total .. .. ... .. .. .. .. .. $£ 4,453$ 4 0


## TECHNOLOGICAL OPERATIONS.

The activities of this section have been directed chiefly to gathering and recording information regarding the special qualities possessed by each of our many woods and the uses for which they are best fitted. Authentic records of durability, strength, and uses to which various timbers have been successfully applied have been noted in the files provided for each species. These "species" files now number 289 for Queensland timbers, while 33 files are kept to record the features of imported timbers for reference purposes. Of these files, 117 were commenced during last year. Amongst the files of exotic timbers will eventually be included all those species which are being introduced. For the recording of the uses for which timber is employed in Queensland a separate set of "uses" files are used. These now number 63, and contain information regarding practically every wood-consuming industry in the State.

## Prescriptions of Timber for Industrial Use-

During last year many callers were interviewed and advice was given regarding the timbers best suited for the particular work in which they were interested.

Wood samples to the number of 101 were received and identified. Of this number 26 were received from Forest Officers, 13 from timber companies, 14 from other departments, and the remaining 48 from private individuals interested in timber. The greater number of those received from Government Departments were from the State Advances Corporation, mostly from house-stumps which did not appear to be of a durable species. A very wide range of Queensland timbers was represented in the specimens submitted, while a few were from overseas, including English Oak (Quercus robur), European Beech (Fagus sylvatica), Weeping Willow (Salix babylonica), and Red Lauan (Shorea sp.) from the Pacific Islands.

Among those dealt with was a timber which was being used for wharf decking, for which was specified Grey Ironbark and Red Irongum. The wood proved to be Rose Gum (Eucalyptus saligna), and the following comment was given regarding its use for decking:-"This timber, being light, soft, and free-grained, is quite unsuitable for wharf-decking, and would wear away very rapidly under the pressure of heavy wheels."

A local firm having ascertained that Yellow Box (Eucalypius melliodora) was a very durable timber in the ground, called tenders for the supply of a large number of piles of Ironbark or Yellow Box for the foundations of a new unit of machinery. A number of "Box" piles were supplied from Woodford, which, when identified, proved to be Brush Box (Tristania conferta). When the company's engineer was informed that this species was not durable in damp places, he decided that he would use Ironbark only. The Box piles numbering about a dozen were then left on his hands, but, on being informed that they could be sawn and used for inside building work provided that they were seasoned, it was decided to use them in this way. The foundation site was on low, wet land, and it is most likely that, if the Brush Box piles had been used, the foundations would not have lasted more than a decade.

Quite a number of samples called Sandalwood were received. Several were the commercial Sandalwood (Santalum lanceolatum), but the majority were Sandal Box (Eremophila Mitchelli). A sample was received of Santalum lanceolatum from persons who had supplies and wished to
dispose of them, and shortly afterwards another piece was received from a firm which inquired where supplies could be obtained: In this case, the name and address of the first party was given to the second. The section thus serves as a bureau for the introduction of buyers and sellers of forest products. It also serves to keep the Forest Service in more direct touch with the wood-using trades.

Samples were submitted of a timber of which large supplies were held and which were being made into flooring boards, but the millers were not sure of its qualities. This was identified as Miva Mahogany (Dysoxylon Muelleri), and the inquirers were informed that, in addition to this being suitable for a number of building purposes, it was also valued for cask-heads, and they were given the name of a cooper who required supplies. The cooper had previously complained that he had been obliged to send outside the State for "heading" timber, as he was not able to obtain sufficient supplies here.

A very interesting sample was received which had been taken from a telegraph pole known to have been standing for thirty years. The wood was without doubt Brown Bloodwood (Eucalyptus trachyphloia), and it was found later that this tree grew to a good size and was very common in the locality where the pole was erected. This timber is usually regarded as an inferior type, but this is not the only recorded case where great durability has been obtained. Possibly the fact that it is usually ai smaller tree and that it possesses paler wood than Red Bloodwood has influenced people against it.

Seven different timbers were identified in a locally made violin. Only the neck was of imported timber, this being American Sycamore (Acer pseudo-platanus). The back and belly of the instrument were made of the following timbers in parallel bars, glued together about threequarters of an inch wide:-Black Bean (Castanospermum australe), Maple Silkwood (Flindersia Brayleyana), Hoop Pine (Araucaria Cunninghamii), and Miva Mahogany (Dysoxylon Muelleri). The bars and timbers were carefully balanced across the instrument, with Black Bean in the centre. The effect of the varying colours was unique, and although the timbers varied greatly in hardness and density the tone was excellent. The bent sides were of Blush Tulip Oak (Tarrietia actinophylla) and the finger-board of Queensland Ebony (Maba humilis).

Another violin back was made of Blush Cudgerie (Euroschinus falcatus), which, in spite of the woolly nature of the wood, had been very well carved out.

Specimens of Rose Alder: (Ackama quadrivaluis) were identified for a local furniture manufacturer, who is using this timber and is pleased: with it. Many similar cases are recorded where information regarding the lesser known woods is secured.

Probably the most unusual identification given was for an inspector of the Customs Department, who was investigating a pillage case on an overseas steamer. A case containing valuable goods consigned to a city firm had been opened en route and the contents replaced by a quantity of chips to make up the weight. The inspector wished to determine where the theft took place. If it happened in Queensland, the consignee must pay the necessary duty; if elsewhere, he was not liable. The chips, which were of sapwood only, were identified as English Oak (Quercus robur), and, as this timber is not imported into Queensland except. in.
hewn staves free of sapwood, it was evident that the case had been opened in Europe. This evidence was quite sufficient for the purpose of the inspector.

Information of interest gained during the year is summarised in the list of uses hereunder :-

Aircraft Construction.--In the last published Annual Report, attention was drawn to the value of Silver Ash (Flindersia Schottiana), Silver Quandong (Elcoccarpus grandis), and Maple Silkwood (Flindersia Brayleyana) for aircraft construction. Reports since received from the Defence Department state that Bunya Pine (Araucaria Bidwilli) can also be favourably considered for certain work. Other experiments carried out by the same department show that, for the hull planking and floats of local seaplanes, Grey Teak (Gmelina Leichhardtii) has given the best results, on account of its small swelling properties when wetted. Kauri Pine (Agathis Palmerstoni) and Red Cedar (Cedrela australis) also stand well but are not equal to Grey Teak. Maple Silkwood was found to be quite unsatisfactory, as it buckled very badly, due to a high swelling factor.

Bending Timbers (Steamed).--The present scarcity of Yellowwood Ash (Flindersia Oxleyana) for steam-bent work has led to inquiries being made for substitutes. A large quantity of timber is used for such purposes as motor hood sticks, carriage roof sticks, boat ribs, and staves for barrels. Silver and White Ash (Flindersia Schottiana and pubescens) have been found to be eminently suited to this work, and supplies have been obtained by the Fancywoods Section for this work. Although not suitable for use in exposed positions, Red Tulip Oak (Tarrietia peralata) can be bent successfully and is suitable for indoor work.

Buildiny Timbers.-A great deal of work has been done during the past year towards establishing the use of a wider range of timbers for building purposes. The restricted building specifications of the past have led to many excellent building timbers being wasted for want of a market. To obtain the greatest value from our natural timber wealth, it is necessary that as many species as possible shall be used, and, to obtain the highest efficiency from each timber, each should be used for the work for which it is best suited, and be treated in the correct way. The shortage of pine is already being felt in building circles, and, as this trade consumes the greatest quantity of pine, information on any timber which can be used as a substitute is of great value. Many such timbers are available and should be fully exploited. Taken collectively, these species represent a very large quantity of timber. The use of pine for exposed chamfer boards is wasteful when durable hardwoods are available. Flooring of hardwoods and semi-hardwoods should be used in greater quantities, so that more pine can be reserved for joinery and cabinet work. These timbers, being stronger, can be used in thinner boards and still be equal in strength to pine. Large quantities of Oregon and Baltic pine are now being imported into Queensland for flooring, while timbers suitable for this work are being destroyed.

At the request of the Department of Public Works, a complete specification of all Queensland building timbers was prepared in February last. The specification supplied contains 84 species which are set out under the uses-plates, flooring, \&c., for which they are best suited. Extensive notes were also supplied to show varying features of the different timbers and the treatment they require to obtain the best results.

Cases.-Information supplied by the Secretary of the Palmwoods Fruit-growers' Association shows that a very great quantity of timber iss required annually for fruit-cases in that district, for which Rọse Gumi (Eucalyptus saligna) is principally used. An estimate of the timber used annually was as follows :-


Details of case timber required for the Stanthorpe district for the above, received from the Committee of Direction of Fruit Marketing, gave for the above (1) $1,250,000$ cases, (2) 300,000 cases, and (3) 250,000 cases, which requires $18,715,000$ sup. ft. (face) per annum. Increasing supplies are also required in Northern districts, especially in the Innisfail district, where the fruit industry is extending.

This information was collected so that future timber supplies for the district could be provided for in planting schemes.

Cooperage:-A number of timbers are at present being tested for cooperage work at Messrs. Mercer Ltd., South Brisbane, but the tests are not yet complete. It has been proved, however, that Rose Mahogany (Dysoxylon Fraseranum), Miva Mahogany (Dysoxylon Muelleri), and Red Satinay (Syncarpia Hillii) are well suited for "headed" work and the first two timbers are being used extensively.

## Sporting Goods--

Fishing Rods.-To bring before the notice of local anglers the excellent qualities of a number of Queensland timbers for the manufacture of fishing rods, and the best methods of treating the timber, two articles were written on this subject during last year. A further circular was also. forwarded to local fishing clubs, giving details of timbers available and the prices charged. As a result of this action, sales of Saffron Heart (Halfordia scleroxyla), Brown Spearwood (Acacia rhodoxylon) and Green Satinheart (Geijera Muelleri) have increased greatly during the past few months, and sufficient timber was sold during the year to make over 300 rods. Saffron Heart was used for the tip and middle sections, and Tulip Plumwood (Pleiogynium Solandri) for the butt pieces, of the twwo fine rods presented to H.R.H. The Duke of York and H.R.H. The Ducheṣs of York during their stay in Queensland.

Cricket Wickets:-An inquiry from Melbourne for supplies of these articles was passed on to a local firm, with an offer of supplies of suitable timber. It is hoped that business will result.

## Furniture Woods-

Queensland furniture timbers gained further laurels during last year when they played an important part in furnishing Federal Government House and the Prime. Minister's cottage at Canberra, under the direction of Mrs. C. E. Lane-Poole. While Maple Silkwood (Flindersia Brayleyana) and Red Cedar (Cedrela australis) have taken the most important positions, Walnut Bean -(Endiandra Palmerstoni) has been used with success, especially in the manufacture of beds. The $22-\mathrm{ft}$. Georgian table in the dining-room of Government House is of figured Maple Silkwood, and an attractive Adams writing table has been made from Red Satinay (Syncarpia Hillii).

A Forest Service display at the Brisbane Exhibition consisted of furniture constructed of Walnut Bean, Maple Silkwood, Red Satinay, Red Tulip Oak (Tarrietia peralata) and Rose Walnut (Cryptocarya erythroxylon).

Experiments carried out on a number of native timbers showed that, while the many were little affected by the action of ammonia fumes, Red Satinay and Blush Coondoo (Sideroxylon Richardii) were very susceptible. Red Satinay could be changed through all stages to a beautiful grey tone without losing any of its characteristic ripple figure. Blush Coondoo also assumed a handsome grey colour without loss of figure.

Gun Stocks.-Grey Satinash (Eugenia sp.) and Rose Walnut (Crpytocarya erythroxylon) were tested for this work last year by B.S.A. Guns Ltd., Birmingham, England, and the Small Arms Factory at Lithgow of the Defence Department. Neither of the two woods was considered suitable by B.S.A. Guns Ltd., but Rose Walnut is considered by the Defence Department to be promising, and further tests will be made. Grey Satinash was found unsuitable for rifle stocks on account of its being liable to warp under severe shooting strain. It was also reported to give off an offensive dust while machining.

## Durableity Tests; North Queensland Woods-

Billets of local woods from the Atherton district, which were placed in the ground in February 1924, showed the following condition when examined after the lapse of two years and eight months. The respective values of the timbers with regard to durability are well demonstrated.

| No. | Local Name. |  | Botanical Name. | Remarks. |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Ghittoe |  | Halfordia scleroxyla | Sound |
| 2 | Lignum |  | Vitex lignum vite | Rotten |
| 3 | Davidsonian Plum |  | Davidsonia pruriens | Sound |
| 4 | Brown Plum |  | Pleiogynium Solandri | Sound |
| 5 | Bean |  | Castanospermum australe.. | Sound |
| 6 | Penda |  | Xanthostemon pubescens.. | Sound |
| 7 | Cherry Penda | $\cdots$ | Xanthostemon sp. .. .. | Sound |
| 8 | Spurwood |  | Dysoxylon Pettigrewianum | Rotten |
| 9 | Red Watergum |  | Eugenia hemilampra | Sound |
| 10 | Turpentine |  | Canarium Muelleri . | Slightly decayed |
| 11 | Blood in bark |  | Weinmannia sp. . | Rotten |
| 12. | Sarsaparilla |  | Alphitonia sp. .. | Slightly decayed |
| 13 | Wattle |  | Acacia sp. .- | Slightly decayed |
| 14 | Ash |  | Flindersia pubescens | Borer-eaten, otherwise sound |
| 15 | White Beech |  | Gmelina fasciculiflora | Sound |
| 16 | Maple |  | Flindersia Brayleyana | Decayed |
| 17 | Black Walnut |  | Endiandra Palmerstoni | Rotten |
| 18 | Yellow Walnut |  | Cryptocarya Bancroftii | Rotten |
| 19 | Sillky Oak |  | Embothrium Wickhamii | Sound |
| 20 | Bull Oak |  | Cardwellia sublimis | Decayed |
| 21 | Black Oak |  | Musgravea stenostachya | Sound |
| 22 | Red Oak |  | Carnarvonia araliæfolia | Rotten |
| 23 | Cypress Pine |  | Callitris Macleayana | Sound |

Investigations as to the suitability of South Hardwood (Xanthostemon pachyspermus) for piles are being continued.

Publications Issued and General Information Supplied-
In November 1926, the Queensland Wood Index key was published in the Journal of Forestry in America; and in June this year, Bulletin No. 7 of the Forest Service was issued, entitled "A Universal Index to Wood," containing the index system and a numerical list of 320 woods
indexed for reference under the system. To complete the list, 70 new species had to be indexed during the past year.

In May, a pamphlet "Building Timbers" was published, giving the properties of Queensland building timbers, and containing the names of over 50 species arranged under a number of headings according to their general suitability for use in the ground, in the weather, or indoors for various purposes.

## Identification of Botainical Spectmens-

In all 141 specimens were received from all sources, and the Board is much indebted to the Government Botanist (Mr. C. T. White, F.L.S.) for supplying the botanical names of the species represented. Only 11 specimens were received from parties outside the Forest Service.

A number of very interesting specimens were received, including Eucalyptus quadrangulata from Warwick, which had not previously been recorded for Queensland, and a new Xylosma species from Reserve 220 Kilkivan. Only one Xylosma has previously been recorded for Australia.

This work is of value to the Forest Service as it improves the field knowledge of trees of the collectors, and admits of the keeping of a more accurate record of all species which occur in the different districts. Details of the size of the trees, uses of the wood, and an idea of the quantity of timber available can also be obtained for reference, while the collector is informed of the uses of the timber concerned.

Research Work on Forest Products-
Leaf Products-Oils.
Lemon-scented Teastree -(Leptospermum citratum).-Investigations carried out by the Technological Museum, Sydney, have shown that the leaves of this tree grown under natural conditions yield nearly 2 per cent. (on green weight) of a valuable oil containing 90 per cent. citral and citronellal. Tests are now being made by the Australian Chemical Co., South Brisbane, on the leaves of the experimental trees from Fraser Island, to determine the amount of oil yield and the season when the yield is greatest. The information gained will assist in determining if it would pay to make plantations of this species.

White Gum (Eucalyptus hcemastoma).-A report from the Technological Museum, Sydney, stated that leaves of this tree collected near Brisbane yielded 1.27 per cent. of oil (on green weight) of which 41 per cent. was found to be piperitone. It was considered that this would be a useful supplementary source of this oil, usually distilled from Peppermint (Eucalyptus dives), which does not occur in Queensland. A further supply of leaves from Beerwah was forwarded to the Technological Museum for analysis in April.

Wood Products-Oils..
Sandalwood (Santalum lanceolatum).-Investigations of the oil of this wood are being continued at the Queensland University with material supplied by this Department. The oil yield of the wood is about 5 per cent. by weight.

Bark Products-TTannins.
An interesting work has recently been undertaken by the Technological Museum, Sydney, to determine the tannin value of the Acacia decurrens group in different parts of Sóuthern Queensland. Samplés have been . supplied for this purpose from Benarkin, Kilkivan, and Passchendaele.

## Appendices.

## APPENDIX A.

Return of Timber cut on Crown Lands for Financial Year ended 30th June, 1927.


## APPENDIX $B$.

Annual Cut-Pine, Financial Year ended 30th June, 1927.

| Working Plan Area. | Ply. | Logs. | Tops. | Total Cut. | Approved Cut. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{ll}\text { Bundaberg } \\ \text { Brisbane } & . . \\ \end{array}$ | $\begin{array}{r} \text { Super. Ft. } \\ 635 \\ 27,768 \end{array}$ | Super. Ft. <br> 1,079,554 <br> 2,803,982 | Super. Ft. 231,979 657,104 | Super. Ft. <br> 1,312,168 <br> 3,488,854 | Supor. Ft. 2,000,000 <br> 3,250,000 |
| Brisbane Valley | 1,000,785 | 8,818,832 | 4,720,366 | 14,539,983 | $\left\{\begin{array}{r}7,625,000 \\ 8,875,000\end{array}\right.$ |
| Dalby . |  | 90,529 | 30,523 | 121,052 |  |
| Kilcoy | 65,840 | 3,907,006 | 1,199,060 | 5,171,906 | 5,750,000 |
| Kilkivan | 69,525 | 7,404,861 | 1,333,321 | 8,807,707 | 10,500,000 |
| Mary Valley | 551,093 | 5,973,038 | 1,747,855 | 8,271,986 | 8,500,000 |
| Maryborough | 12,571 | 1,802,255 | 354,690 | 2,169,516 | 1,500,000 |
| Many Peaks | 62,809 | 1,764,534 | 487,635 | 2,314,978 | 4,800,000 |
| Mackay .. | .. | 3,522 | 3,846 | 7,368 | 100,000 |
| Nanango .- | 15,397 | 3,594,737 | 1,264,538 | 4,874,672 | $\left\{\begin{array}{l}3,250,000 \\ 2,000,000\end{array}\right.$ |
| North Coast | 520 | 74,213 | 9,349 | 84,082 | 100,000 |
| Warwick | . . | 822,088 | 162,746 | 984,834 | 2,750,000 |
| Total | 1,806,943 | 38,139,151 | 12,203,012 | 52,149,106 | 61,000,000 |

APPENDIX C.
Revenue collected under the Timber and Quarry and State Forest Regulations,
Financial Year ended 30th June, 1927.


[^0]APPENDIX D.
Collections under the Timber and Quarry and State Forest Regulations from 1st January, 1920, to 30th June, 1927.

| Land Agents' Districts. | * 1920. | 1921. | 1922. | $1923 .$ | $1924 .$ | 1st January, 1925, to 30th June, 1925. | 1925-26. | 1920-27. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Southern Queensland .. | £ s.d. | £ 8.d. | £ s. $d$. |  |  | $\begin{array}{ccc} £^{£} & \stackrel{s .}{ } . & d . \\ 162,920 & 13 & 5 \end{array}$ | $\begin{array}{ccc} \hline f & s . & d . \\ 317,708 & 9 & 2 \end{array}$ | $\begin{array}{ccc} \mathcal{E} & s . & d . \\ 320,550 & i & i \end{array}$ |
| $\begin{array}{lll} \text { Aramac } \\ \text { Atherton } & \because & . \end{array}$ | 3,347 $12 \quad 1$ | $\begin{array}{llll}7,063 & 2 & 0\end{array}$ | 23,737 16 6 | 34, 150 | 32,274411 | $\begin{array}{r}0 \\ 15,929 \\ \hline 10\end{array}$ | $\begin{array}{rrrr}0 & 15 & 0 \\ 35,142 & 0 & 4\end{array}$ | 64,519 $\begin{array}{rrr}1 & 18 & 0 \\ 9\end{array}$ |
|  |  | 7,063 20 | 23,737 10 | 34,1501011 | $32,274{ }^{4}-11$ | $15,929 \quad 6 \quad 8$ | 35,142 0 | 64,519 16 |
| Banana <br> Barcaldine | $\begin{array}{r}499 \\ \hline 19\end{array}$ | $\begin{array}{r}0 \\ 148 \\ \hline 13\end{array}$ | $\begin{array}{crrr}0 & 7 & 0 \\ 105 & 17 & 2\end{array}$ |  |  |  |  | 9195 |
| Blackall | 49135 | 1400 3 <br> 1 7 | 5718182 | 12 42 | 131 8 | ${ }_{29} 120$ | 35緊1 1 | $4618 \quad 3$ |
| Boulia | $1015 \quad 6$ | $\begin{array}{llll}13 & 13 & 0\end{array}$ | $7{ }^{7} 58$ | $\begin{array}{llll}5 & 4 & 0\end{array}$ | 2160 | $\begin{array}{llll}0 & 4 & 0\end{array}$ | 2810 | 1716 6 |
| Bowen | 1,700 1910 | 691.15 | 9671810 | 1,365 176 | 75098 | $15 \pm 129$ | 459 * 11 | 778.110 |
| Brisbane | 4,6111515 | $2,957 \times 1{ }^{1}$ | 7,2201118 | 29,761119 | * | * | * | * |
| Bundaberg <br> Burketown |  | $\begin{array}{r}6,0971410 \\ 3219 \\ \hline\end{array}$ | 3,8591810 13 13 | $\begin{array}{rrrr}2,270 & 18 & 3 \\ 13 & 1 & 7\end{array}$ | 9154 | 168 | 0 5 0 | 6150 |
| Cairns | 1,218 00 | $\begin{array}{llll}2,657 & 5 & 10\end{array}$ | $\dagger$ | $1 \begin{array}{lll}1 & 4 & 0\end{array}$ | $\dagger$ |  | $\dagger$ | 6018 5 |
| Camooweal |  |  |  |  |  | 0160 |  |  |
| Charleville .. | 16126 | $\begin{array}{llll}30 & 4 & 5\end{array}$ | 35108 | 15011 | $\begin{array}{lll}42^{*} & 3 & 0\end{array}$ | 60131 | 14038 | $78 \quad 81$ |
| Charters Towers | 1,542 125 | $92716 \quad 2$ | $465 \quad 0 \quad 0$ | 641190 | $\begin{array}{llll}1,079 & 6 & 1\end{array}$ | $\begin{array}{llll}498 & 4 & 2\end{array}$ | 1,499 9 | $920 \quad 0$ |
| Chillagoe $\quad$ - |  |  |  |  |  | $\begin{array}{ccc}0 & 6 & 0 \\ 80 & 8\end{array}$ | $0{ }^{0} 180$ | 0100 |
| Clermont | 1,787 76 | $\begin{array}{llll}819 & 6 & 1\end{array}$ | $427 \quad 6 \quad 1$ | 1,539 1 15 | 1,801 168 | 851888 | 928 0 11 | 147161 |
| Cloncurry | 83126 | $\begin{array}{lll}70 & 2 & 1\end{array}$ | 71 16165 | 70.1511 | 205181 | $\begin{array}{llll}55 & 1 & 6\end{array}$ | 184101 | 871111 |
| Cooktown | 26436 | $\begin{array}{llll}205 & 5 & 10\end{array}$ | 131169 | 5610 | 901511 | $26 \quad 50$ | 6960 | $5{ }_{5}^{5} 50$ |
| Croydon Cunnamulla | 10182 | 1815.2 | $3 \stackrel{5}{5} \cdot 6 \quad 4$ | $29^{\circ} 18.7$ | $21^{\circ} 196$ | $\begin{array}{lll}0 & 2 & 0 \\ 6 & 9 & 5\end{array}$ | 413 2219 | $\begin{array}{rrrr}3 & 6 & 0 \\ 24 & 3 & 11\end{array}$ |
| Dalby | 2,251 $15 \quad 8$ | 1,317 010 | 1,021 $16 \quad 5$ | 1,222 13 |  | $45418 \quad 2$ | 1,042 18 | 1,155 3 3 |
| Emerald |  |  |  |  |  |  | . | 124114 |
| Gayndah | $\begin{array}{lll}26 & 9 & 9\end{array}$ | 70.68 | 155 | $\begin{array}{lll}173 & 6 & 6\end{array}$ | $242 \quad 7 \quad 3$ | $355 \quad 610$ | 30248 | 281 |
| Georgetown | 13106 | - 819 | 11, $6512 \quad 12$ | 0100 | $0.11 \quad 9$ | ${ }_{*}^{3} 1112$ | $3 \times 7$ | ${ }_{*}^{0} 180$ |
| Gladstone | 2,243 18 2 | 2,043190 | 11,155 1310 | 11,459 19 9 |  |  |  |  |
| Goondiwindi | 50182 | $14313 \quad 0$ | 177.512 | 19411 | 382100 | 267144 | 324108 | 380 |
| Gympie | 51,924 <br> 2 | 44,622 <br> 8 | 82,741 $13 \quad 7$ | 110,401 90 | * 10 - | *14 4 | , |  |
| Herberton | 8231011 | $\begin{array}{llll}462 & 1 & 5\end{array}$ | $\dagger$ |  |  |  | $\dagger$ | $\dagger$ |
| Hughenden | $38519 \quad 2$ | $23611 \quad 7$ | 22196 | 252101 | $\begin{array}{llll}661 & 3 & 1\end{array}$ | 790410 | 54150 | 6384 |
| Ingham | 49794 | $15817 \cdot 7$ | 371129 | $\begin{array}{llll}596 & 7 & 9\end{array}$ | 8604 | 161 | $46917 \quad 0$ | 343119 |
| Inglewood | 1,178 $11 \begin{aligned} & 3\end{aligned}$ | 95718 | 1,226 150 | 1,561 14 | 1,387 130 | 27290 | 54215 | 41713 |
| Innisfail | $\begin{array}{llll}10617 & 1\end{array}$ | 22648 | 63184 | $358 \quad 29$ | 2,670 411 | 1,467 11.1 | 2,470 11 4 | 271 |
| Ipswich | 21,974 1011 | 20,626 16 | 20,893 1011 | $89,076{ }^{9} 11$ | * | * |  |  |
| Isisford | 180 | 302.6 | $2 \begin{array}{lll}2 & 5\end{array}$ | 0116 | 1610 | $\begin{array}{lll}0 & 2 & 0\end{array}$ | 480 |  |
| Jundah | 22139 | 2968 | 2745 | $1213 \quad 7$ | $\begin{array}{lll}13 & 3 & 6\end{array}$ | 10171 | $\begin{array}{llll}11 & 9 & 5\end{array}$ | 013 0 |
| Kynuna |  |  |  |  |  | $\begin{array}{llll}28 & 3 & 0\end{array}$ | 8130 | 210 |
| Longreach | $8716 \quad 1$ | 8168 | $\begin{array}{llll}140 & 0 & 8\end{array}$ | 11110 | $12317 \quad 9$ | 17131 | 951411 | $\begin{array}{llll}90 & 8 & 1\end{array}$ |
| Mackay . | 553143 | 42.94 | 2,305 1211 | 7,506 192 | 5,582194 |  | ,910 48 |  |
| Mackinlay ${ }_{\text {Maryborough }}$. |  |  | $5,63 \dot{3} 13 \quad 2$ | 5,010 | 5,082 10 - | 10 * 6 | 10. 60 | ${ }_{*} 18$ |
| Maytown $\quad$. |  |  |  |  |  |  |  |  |
| Muttaburra |  |  |  |  |  | $\begin{array}{rrrr}16 & 6 & 8\end{array}$ | $\because 40$ | 280 |
| Nanango | 25,364 1210 | 30,664 $11 \quad 1$ | $\begin{array}{llll}38,230 & 1 & 2\end{array}$ |  |  |  |  |  |
| Normanton | 13658 | $14417 \quad 9$ | 137129 | 50139 | 169 | 130 | 0150 | 55 |
| Port Douglas | 0100 | 11.910 | 0120 | $64 \cdot 0$ | 0 5 50 |  |  | 100 |
| Proserpine . |  |  |  |  |  | 0186 | 15.52 | 140 |
| Ravenswood | $\begin{array}{llll}593 & 6 & 5\end{array}$ | $440 \begin{array}{lll}1 & 10\end{array}$ | $\begin{array}{lll}7 & 0 & 6\end{array}$ | \% |  |  |  |  |
| Rockhampton | 3,219 00 9 | 1,468 $19 \quad 2$ | 1,791 815 | 1,970 18 2 | $3,695 \quad 6 \quad 6$ | 1,295 $15 \begin{array}{lll}15\end{array}$ | 2,719 220 | ¢,672 $17{ }^{3}$ |
| Roma | $\begin{array}{llll}772 & 2 & 3\end{array}$ | 5575 | $760 \quad 2.1$ | $657 \quad 210$ | $38318 \quad 6$ | $163 \quad 311$ | $\begin{array}{llll}406 & 1 & 1\end{array}$ | 1891711 |
| St. George | 631410 | 112189 | 165138 | 861910 | 31811 | 5516 | 1591210 | 143149 |
| St. Lawrence | 51480 | 16015 | $275 \quad 2 \quad 2$ | $\begin{array}{llll}0 & 7 & 6\end{array}$ | 01.50 |  |  |  |
| Springsure | 1,035 1414 | 1,153 1210 | 53611.2 | 743178 | - 468186 | $44218{ }^{7}$ |  | $4810 \quad 4$ |
| Stanthorpe | 12872 | $224 \quad 0 \quad 9$ | $\begin{array}{llll}63 & 9 & 4\end{array}$ | 71104 | 152140 | 321711 | 13.70 | 096 |
| stonehenge Surat | 1]13, 9 | 4611 | 161910 | 2142 | $\square 170$ | $\ddot{0} 150$ | $\begin{array}{ccc}2 & 0 & 0 \\ 4 & .6 & 0\end{array}$ | 096 |
| Tambo: : | 3312.7 | $42 \quad 23$ | $\begin{array}{lll}38 & 4 & 0\end{array}$ | 38-811 | 50182 | 21.84 | 191411 |  |
| Taroom : | 36011 | 84119 | $16.12 \quad 6$ | $18 \quad 75$ | 9 9 24 | 910 | 25111 | $\begin{array}{llll}32 & 5 & 2\end{array}$ |
| Thargomindal. |  | $1 \begin{array}{lll}1 & 2 & 0\end{array}$ | 0180 | 010 | $\begin{array}{llll}0 & 4 & 0\end{array}$ | $1 \begin{array}{lll}1 & 6 & 0\end{array}$ | $1 \begin{array}{lll}1 & 4 & 0\end{array}$ | 188 |
| Torres | $195 \quad 211$ | 209116 | 92154 | 32141 | 73194 | 66192 | 2481310 | $\begin{array}{llll}50 & 8 & 3\end{array}$ |
| Toowoomba | 3,272 141 | 1,802 3 | 67926 | 1,756 170 | 1,025 171 | 12200 | 1,464 219 | 2,213810 |
| Townsville | 519 <br> 1 | 611 1411 | $\begin{array}{llll}675 & 2 & 2\end{array}$ | $570 \quad 30$ | 76619 | $\begin{array}{llll}495 & 9 & 8\end{array}$ | 1,607 1411 | 1,039 7 3 |
| Warwick | $\begin{array}{lll}523 & 7 & 3\end{array}$ | $\begin{array}{llll}110 & 9 & 9\end{array}$ | 129115 | 1431910 |  | * |  | - |
| Windorah | 11100 | $6{ }^{6} \quad 0 \quad 3$ | 788 | 362 | 3100 | 1140 |  |  |
| Winton | 26103 | $40 \quad 12 \quad 4$ | 53119 | -46.9 9 | $7917 \quad 3$ | 370 | $13 \quad 46$ | 4151 |
| T.C.O. Operations \|| |  |  | $\begin{array}{llll}233 & 19 & 1\end{array}$ |  |  |  |  |  |
| Totals | £ 145,801 $19 \quad 7$ | 137,240 $13 \quad 7$ | 207,259711 | 304,219 $13 \quad 2$ | $371,45411 \quad 9$ | 190,538 010 | 375,704 611 | 400,465 1110 |
| * Included in Souther § Included in | Queensland co Charters Towers | lections. ollections. | $\dagger$ Include <br> $1 / \mathrm{P}$ | in Atherton co offts made on 1 | llections. xport Timber | es handled | cluded in Ipsw mber Contract | ch collections. Office. |

## APPENDIX E.

Prices of Log Timber.
The following Schedule illustrates the fluctuation in the market price of logs during the year lst July, 1926, to 30th June, 1927:-


APPENDIX F:
Railway Timbers supplied during Financial year 1926-27, under Forestry and Lumbering Operations.



## APPENDIX H .

Summary of Seed Collected in Year 1926-27.


35
Nursery Output for the Year ended 30th June, 1927

Forest Service Nursery Stocks as at 30th June, 1927.


## APPENDIX K.

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

\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline \multirow{3}{*}{Working Plan Area.} \& \multirow{3}{*}{Reserve.} \& \multicolumn{6}{|c|}{Area Planted (Acres).} \& \multirow{3}{*}{Total Area
Planted.} \\
\hline \& \& \multicolumn{2}{|c|}{Eucalypts.} \& \multicolumn{2}{|l|}{Other Species.} \& \multicolumn{2}{|c|}{Softwoods.} \& \\
\hline \& \& 1926-27. \& To 30th June, 1927. \& 1926-27. \& \[
\begin{gathered}
\text { To 30th } \\
\text { June, } 1927 .
\end{gathered}
\] \& 1926-1927. \& \[
\begin{aligned}
\& \text { To 30th } \\
\& \text { June, } 1927 .
\end{aligned}
\] \& \\
\hline Brisbane Valley \& \begin{tabular}{l}
R. 283 .. \\
R. 289 \\
R. 257
\end{tabular} \& \(\cdots\) \& \begin{tabular}{l}
\(\because\) \\
\(\cdots\) \\
\hline
\end{tabular} \& \(\because\) \& \(\cdots\) \& 279
21
23 \& \(373 \frac{1}{2}\)
51
54 \& \[
\begin{gathered}
* 373 \frac{1}{2} \\
51 \\
\quad 54
\end{gathered}
\] \\
\hline Total \& \& \& \(\ldots\) \& . \& . \& 323 \& . \(478 \frac{1}{2}\) \& 478 \({ }^{\frac{1}{2}}\) \\
\hline Nanango .. .. \& \begin{tabular}{l}
R. 151 . \\
R. 299 . .
\end{tabular} \& \(\ldots\) \& \(\cdots\) \& \(\ldots\) \& \(\cdots\) \& \[
\begin{aligned}
\& 52 \\
\& 55
\end{aligned}
\] \& \[
\begin{array}{r}
84 \\
105
\end{array}
\] \& \[
\begin{array}{r}
84 \\
105
\end{array}
\] \\
\hline Total \& \& . \& . \& . \& . \& 107 \& 189 \& 189 \\
\hline Mary Valley \& R. 135
R. 435
R.
256 \& \(\cdots\) \& \(\cdots\) \& \(\cdots\) \& \(\ldots\) \& \begin{tabular}{c}
. 1561 \\
.60 \\
\hline 14
\end{tabular} \& 513
146
45
4 \& \[
\begin{gathered}
\dagger 513 \frac{1}{4} \\
146 \\
45
\end{gathered}
\] \\
\hline Total \& . \& . \& . \& . \& . \& 2301 \& 7044 \& \(704 \frac{1}{4}\) \\
\hline Fraser Island .. \& R. 3 \& . \& 911 \& . \& . \({ }^{\text {. }}\) \& 155 \& 535 \& 1446 \\
\hline Total \& . \& . \& 911 \& \(\ldots\) \& . \& 155 \& 535 \& 1,446 \\
\hline Atherton \& R. \(194 .\).
R. \(194 \ldots\)
R. 310
R. 418. \& \& \(109 \frac{1}{2}\)
\(\cdots\) \& \(\cdots{ }^{\cdot}{ }_{21}^{31}{ }_{2}^{1 \frac{1}{2}}\) \& \[
\begin{gathered}
12 \frac{1}{2} \\
\cdots \\
53 \frac{1}{2} \\
4
\end{gathered}
\] \& ( \begin{tabular}{l}
22 \\
. \\
\hline
\end{tabular} \& \(\begin{array}{r}22 \\ .65 \\ \hline\end{array}\) \& \begin{tabular}{c}
144 \\
65 \\
\(53 \frac{1}{2}\) \\
4 \\
\hline
\end{tabular} \\
\hline Total \({ }^{-}\) \& \& 29 \& 1091 \& 27 \& 69 \& 49 \& 87 \& \(265 \frac{1}{2}\) \\
\hline Kilkivan \& \begin{tabular}{l}
R. 220 .. \\
R. 355 ?.
\end{tabular} \& \& \(\cdots\) \& \(\cdots\) \& \(\ldots\) \& 30
12 \& \[
\begin{aligned}
\& 67 \\
\& 19 \frac{1}{2}
\end{aligned}
\] \& \[
\begin{aligned}
\& 67 \\
\& 19 \frac{1}{2}
\end{aligned}
\] \\
\hline Total \& \& \& \(\ldots\) \& . \& . \& 42 \& \(86 \frac{1}{2}\) \& \(86 \frac{1}{2}\) \\
\hline Maryborough .. \& R. 287 .. \& \& . \& \(\cdots\) \& . \& 6 \& 18 \& 18 \\
\hline ''otal \& \& \& \& . \& . \& . 6 \& 18 \& 18 \\
\hline Rockhampton . .. \& R. 20 \& . \& . \& . \& . \& 11 \& 69 \& 69 \\
\hline Total \& \& . \& \(\cdots\) \& . \& \(\ldots\) \& 11 \& 69 \& 69 \\
\hline Mackay .. ... \& R. 6 \& . . \& . \& ... \& . \& 5 \& 61 \& 61 \\
\hline Total \& \& . \& . \& \(\cdots\) \& \& 5 \& \(6 \frac{1}{2}\) \& \(6 \frac{1}{2}\) \\
\hline North Coast , . . \& R. \(561 \ldots\) \& 5 \& 5 \& \(5 \frac{1}{2}\) \& \(5{ }^{\frac{1}{2}}\) \& 131 \& 1312. \& 24 \\
\hline  \& \begin{tabular}{l}
P. 135 . \\
R. 263 \\
R. 4 \\
R. 93
\end{tabular} \& \begin{tabular}{ll}
\(\cdots\) \\
\\
\& \\
\& \\
\& \\
\hline 1
\end{tabular} \& \[
0 \frac{1}{3}
\] \& \[
18 \frac{1}{2}
\] \& \[
\begin{gathered}
.^{5} \\
\ldots^{18 \frac{1}{2}}
\end{gathered}
\] \& 11
1
0
\(0_{3}^{13}\)
1 \& 263
2
2

$0 \frac{1}{3}$
$0 \frac{1}{3}$
1 \& 313
2
4
198
08
1 <br>
\hline 'rotal \& \& $0 \frac{3}{3}$ \& $0 \frac{1}{3}$ \& $23 \frac{1}{2}$ \& 2331 \& 133 \& $30 \frac{1}{3}$ \& $54 \frac{1}{6}$ <br>
\hline Grand Totals . . \& \& 343 \& 1,026 \& 56 \& 98 \& $855{ }^{\frac{1}{3}}$ \& 2,2173 ${ }^{\text {2 }}$ \& 3,341 $\frac{1}{2}$ <br>
\hline
\end{tabular}

* Excludes $44 \frac{1}{2}$ acres previously planted and destroyed by fire, November 1926.
$\dagger$ Includes 160 acres of underplanting and excludes 102 acres replanted.

APPENDIX L.
Areas Treated for Natural Regeneration.


APPENDIX L-continued.

| Working llan Area. | Reserve. | area Treated. |  |  |  |  |  | Total Area. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Eucalypts. |  | Other Species. |  | Softwood. |  |  |
|  |  | 1926.27. | To 30th June, 1927. | 1026-27. | To 30th June, 1927. | 1926-27s. | $\begin{aligned} & \text { To 30th } \\ & \text { June, } 1927 . \end{aligned}$ |  |
| North Coast | R. 318 . <br> R. 561 <br> R. 700 | 420 | 2,234 | $\cdots$ | $\ldots$ | $\ldots$ | . | 2,234 |
|  |  |  | $\ddot{2,327}$ | $\because$ |  | $\ldots$ | $\cdots$ |  |
| 'lotal |  | 860 | 4,561 | . | . |  |  | 4,561 |
| Grand Totals . . |  | 5,981 | 20,820 | . . $12 \frac{1}{2}$ | 1,161 $\frac{1}{2}$ | 2,784 | 7,160 | 29,141 ${ }^{\frac{1}{2}}$ |

## APPENDIX M.

## Forest Reservations for the Year ended 30th June, 1927.

State Forests.-Five areas, aggregating 19,826 acres, were proclaimed during the year. The largest of theso was R. 124 parish of Glastonbury ( 14,250 acres), whilst an area of 2,046 acres in the parish of Crow's Nest (R. 509) was specially purchased for this purpose.

National Parks.-One area of 68 acres was reserved in the parish of Tambourine.
Provisional Reserves.-At 30th June, 1927, the number of Timber Reserves was 355, as against $3,356,187$ acres. The comparatively small increase in the actual number of Timber Reserves is due to the new method of cancelling individual adjacent reserves and amalgamating them as one reservation.

Notes on Timber Reserves.-The largest Timber Reserves proclaimed during the year are as follows :-R. 119 Tandon, 11,270 acres, and R. 122 Inglewood, 33,300 acres (both in Inglewood Land Agent's District) ; R. 46 Bembil, 21,780 acres; R. 47 Wongongera, 20,166 acres ; and R. 50 Goldsmith, 11,400 acres (all in Dalby Land Agent's District); R. 1235 Samsonvale, 7,100 acres (Brisbane Land Agent's District); R. 657 Formartine, Dinden, and Tinaroo, 38,300 acres (Cairns Land Agent's District); and R. 170 Spier and Thalberg, 22,640 acres (Rockhampton Land Agent's District). A total area of 53,035 acres of Crown Land was also added to existing Timber Reserves, the largest of these being 36,200 acres added to R. 28 parish of Coominglah (Gayndah Land Agent's District).

30th June, 1926, to 30th June, 1927.
State Forests.


National Parks.

| National Parks at 30th June, 1926 | Number. 22 | Area in Acres 156,131 |
| :---: | :---: | :---: |
| Proclaimed 1st July, 1926, to 30th June, 1927 | 1 | 68 |
|  |  | 156,199 |
| Grand Total Reservations at 30th June, 1927 | . | 5,374,172 |

APPENDIX N.
State Forests, Timber Reserves, and National Parks on 30th June, 1927.


APPENDIX 0.
The Forest Area, 1900-27.

| Date. |  | No. | State Forests. | No. | National Parks. | No. | Timber Reserves | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Acres. |  | Acres. |  | Acres. | Acres. |
| 31st December, 1900 |  | - |  | . |  | - | 1,622,855 | 1,622,855 |
| 31st December, 1901 |  |  |  |  |  | . | 2,219,177 | 2,219,177 |
| 31st December, 1902 |  |  |  |  |  |  | 3,124, 160 | 3,124,160 |
| 31st December, 1903 |  |  |  |  |  |  | 3,518,520 | 3,518,520 |
| 31st December, 1904 |  |  |  |  |  |  | 3,673,331 | 3,673,331 |
| 31st December, 1905 |  |  |  |  |  |  | 3,606,709 | 3,606,709 |
| 31st December, 1906 |  |  |  |  |  |  | 3,460,826 | 3,460,826 |
| 31st December, 1907 |  |  | 416,872 |  |  |  | 3,255,706 | 3,672,578 |
| $31 \mathrm{st} \mathrm{December}$, |  | 15 | 793,097 | 5 | 23,175 |  | 3,019,919 | 3,836,191 |
| 31st December, 1909 |  | 18 | 809,697 | 7 | 26,645 |  | 2,981,111 | 3,817,353 |
| 31st December, 1911 |  | 24 | 819,937 | 7 | 26,645 |  | 2,868,337 | 3,714,919 |
| 31 st December, 1912 |  | 25 | 855,037 | 7 | 26,645 | $\cdots$ | 3,211,855 | 4,093,537 |
| 31st December, 1913 |  | 25 | 886,137 | 7 | 26,645 |  | 3,195,688 | 4,108,470 |
| 31 st December, 1914 |  | 37 | 962,557 | 8 | 26,751 | . | 3,076,159 | 4,065,467 |
| 31 st December, 1915 |  | 52 | 1,003,733 | 9 | 73,751 | . | 2,998,851 | 4,076,335 |
| $37 . s t$ Decembor, 1916 |  | 54 | 1,006,829 | 9 | 73,751 | . | 2,887,646 | 3,968,226 |
| 31 st Decembor, 1917 |  | - 64 | 1,069,134 | 9 | 73,751 |  | 2,804,967 | 3,947,852 |
| 31 st December, 1918 |  | 69 | 1,121,900 | 14 | 73,980 |  | 2,671,139 | 3,867,019 |
| 30th June, 1919 |  | 71 | 1,151,500 | 14 | 73,980 |  | 2,559,717 | 3,785,197 |
| 30th June, 1920 |  | 84 | 1,260,832 | 14 | 73,980 |  | 2,583,450 | 3,918,262 |
| 30th June, 1921 |  | 100 | 1,273,830 | 15 | 74,316 |  | 2,679,091 | 4,027,237 |
| $31 \mathrm{st} \mathrm{December}$, |  | 103 | 1,320,647 | 16 | 153,316 |  | 2,722,835 | 4,196,798 |
| 3 Ist December, 1922 |  | 117 | 1,410,364 | 21 | 168,809 |  | 3,123,072 | 4,702,245 |
| 31st December, 1923 |  | 131 | 1,503,951 | 22 | 169,53!) |  | 3,090,077 | 4,763,567 |
| 3lst December, 1924 |  | 145 | 1,533,727 | 22 | 169,539 |  | 3,173,058 | 4,876,324 |
| 304 h June, 1925 |  | 151 | 1,775,309 | 21 | 156,000 | 333 | 3,246,746 | 5,178,055 |
| 30th June, 1926 |  | 153 | 1,779,349 | 22 | 156,131 | 347 | 3,356,187 | 5,291,667 |
| 30th June, 1927 | . | 158 | 1,799,155 | 23 | 156,199 | 355 | 3,418,818 | 5,374,172 |

## APPENDIX P.

Special Leases Granted on State Forests and Timber Reserves, 1926-27.


APPENDIX Q.
Buildings \&c.-Construction for Year ended 30th June, 1927.


APPENDIX R.
Buildîngs, \&c, Maintenance for Year ended 30th June, 1927.


APPENDIX S .
Water Supply-Establishment for Year ended 30th June, 1927.


APPENDIX $\dot{T}$.
Forest Raddocks-Establishment for Year ended 30th June, 1927.


APPENDIX U.
Forest Paddocks-Maintenance and Repairs for Year ended 30th June, 1927.


## APPENDIX V.

Expenditure on Roads, Year ended 30th June, 1927.


APPENDIX W.
Forest Protection, Destruztion of Noxious Plants \& . ., for Year ended 33th June, 1927.


APPENDIX X.
Forest Protection from Fire for Year ended 30th June, 1927.


APPENDIX X-continued.


## APPENDIX Y.

Summary of Forest Fire Reports, 1926-27. BENARKIN.


BRISBANE.
2-9-26
12-10-26
28-10-26
18-10-26
29-11-26
3-11-26
5-11-26
3-11-26
30-11-26
?8-11-26

Damage not great.
Commenced on private property.
Commenced from billy fire.
Fair regeneration of Blackbuitt de-
stroyed.
No damage to pine.
No great damage.
$\begin{gathered}\text { Carol Creek, Brown's Creek L.A., } \\ \text { burnt over. Not much damage. } \\ \text { Not much damage. Fire started from } \\ \text { burning-off operations. } \\ \quad .\end{gathered}$
Damage principally to young trees:

## APPENDIX Y-continued.

BRISBANE-continued.

| Date. | Locality. |  | . | Area Burned. | Remarks. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Middle Oct. | R. 893, Byron | $\ldots$ | . |  | Not much damage. Fire followed hardwood country. |
| 11-11-26 | R. 893, Byron | . |  |  | Small quantity pine damaged. |
| --11-26 | R. 207, Monsildale | $\cdots$ | . | 536 acres .. | In addition to scrub areas, all surrounding forest area burnt. Ex. tensive damage to young pine. |
|  | R. 480, Kilcoy - | $\cdots$ | $\cdots$ |  | Grass burnt. |
| $\begin{aligned} & -11-26 \\ & -\quad 11-26 \end{aligned}$ | R. 4.34, Conondale <br> R. 192, Kilcoy | $\cdots$ | $\cdots$ | 492 aċes . | Forest area only burnt. |

GYMPIE.

| 14-9-26 | R. 700, Gympie | 80 acres | Chiefly gum-top box. Very little damage. |
| :---: | :---: | :---: | :---: |
| 10-10-26 | R. 700, Gympie | 60 acres | Very little damage. |
| 13-14-10-20 | R. 700, Gympie | 180 acres | Some spotted gum regeneration destroyed. |
| 10-11-26 | R, 700, Gympie | $\begin{aligned} & 5,000 \text { to } 6,000 \\ & \text { acres } \end{aligned}$ | Considerable damage. About 200 acres of regeneration burnt. |
| 10-11-26 | R. 502, Gympie | 300.to 400 acres | Damage not severe. |
| 13-11-26 | R. 124, Glastonbury - |  |  |
| 20-11-26 | R. 340, Noosa Town Reserve |  | Slight damage to pine regeneration, |
| 30-11-26 | R.393, Woondum .. .. | . | Fire commenced from burning-off operations on land adjoining reserve. All grass burnt. |

## DALBY.



## ATHERTON.

$27-10-26$
| Compt. 10A, R. 191, Barron . .
| Burnt Compt. 10A badly.

ROCKHAMPTON.
10.22-10-26 | Stony Creek, R. 20, Maryvale |

Extinguished by Forest Service employees.

- WARWICK.

| 11-16-10-26 | R. 405, Gladfield, and R. 401, Gilbert |
| :---: | :---: |
| 10-11-26 | Cryptocarya L.A. (adjoining Por. 35 v ), P. 399 , Emu Vale |
| $\begin{aligned} & 9-11-26 \text { and } \\ & 10-11-26 \end{aligned}$ | Pors. 24v and 89 v , and R. 400 , Emu Vole |



## INGLEWOOD.

5-10-26
8-10-26
13-10-26

10-12-26

12-12-26


## APPENDIX Y-continued.

INGLEWOOD-continued.


## BRISBANE.



$|$| R. 287, Woowoonga |  | $\ldots$ | 200 acres .. |
| :---: | :---: | :---: | :---: |
| R. 303, Doongul | $\ldots$ | $\ldots$ |  |
| . | $\ldots$ |  |  |

Fire was caused intentionally by someone inside the reserve. No damage done.
Report not yet to hand, but from first notification not much damage is likely to have been caused

APPENDIX Z.
General Protection for Year ended 30th June, 1927.


APPENDIX AA-continued.


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: : : : :
::::: :
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::::: :
:: : : :
::::: :
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APPENDIX BB.
Expenditure, Year ended 30th Junc, 1927.


APPENDIX DD.
Distribution of Staff.


## Price, 2s.]

By Authority: Anthony James Comming, Government Printer, Brisbane.


[^0]:    * Includes Brisbane, Bundaberg, Gladstone, Gympie, Maryborough, Mackay, Ipswich, Warwick.

