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WESTERN AUSTRALIA

REPORT

on the operations of

THE FORESTS DEPARTMENT

for the

YEAR ENDED 30th JUNE, 1948

by

T. N. STOATE, M. Sc. (Adel.), Dip. For. (Oxon.)
CONSERVATOR OF FORESTS

PERTH:

BY AUTHORITY: WILLIAM H. WYATT, GOVERNMENT PRINTER.

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1948.

Annual Report on the Operations of the Forests Department for the Year ended 30th June, 1948

INTRODUCTION.

An historical review covering the 50 years since the publication of the first Annual Report of the Forests Department was included in the Annual Report for 1946-47.

During the year ended 30th June, 1948, the timber industry has shown a slight but important increase in output and exceeded a production of 10 million cubic feet for the first time since 1942. This is still, however, somewhat less than three-quarters of the output in the pre-war year 1938. Shortage of manpower has been the limiting factor, though material shortages have hampered the erection of new mills. Important contributions towards the needs of South Australia and Victoria were continued and a small token export was sent overseas, largely in an endeavour to maintain important markets for our high quality timbers, jarrah and karri. A lessening of the shortage within the State was apparent.

Production of sawn timber for the year under review amounted to approximately 10,500,000 cubic feet, valued at £2,500,000. In 1938 the corresponding volume was 14,300,000 cubic feet.

Sandalwood production, owing to the chaotic conditions of trade in China, showed a serious falling off, the supply of 460 tons being less than one-third of the quantity delivered in the preceding year.

Firewood supplies for the metropolitan area for industrial and domestic use were mostly met by private property operators and by permit holders working on State Forest and Crown lands.

With increased quantities becoming available from private contractors, the Department was able gradually to discontinue the supply of firewood to the metropolitan woodyards, and all deliveries to these yards ceased in January, 1948. The Forests Department, as an emergency measure, has been supplying consumers in Perth and Fremantle since 1942.

Nevertheless, the Department still supplied firewood to a quantity of 30,000 tons from old reserve

stocks and new cutting. Production by cutters in direct employment is now confined almost entirely to the supply required by No. 1 and No. 2 Goldfields Water Supply Pumping Stations at Mundaring Weir. A camp of Balts is to be established to meet the serious shortage which has arisen at these stations.

Revenue for the year under review was £300,199 gross, as compared with £302,789 for the previous year, but the Reforestation Fund, depending upon three-fifths of the net revenue, is insufficient for maintenance work.

The Forests Department still faces two major problems, which can be met only by financial assistance, over a planned period, substantially above the normal income derived from revenue. These problems are, firstly, the extension of fire control and management over large areas of unprotected forest where annual losses of timber occur, and, secondly, the rapid extension of pine planting to ensure continuity of softwood supplies. The planting of pines has been virtually at a standstill for seven years, and the total area of only 13,000 acres needs to be rapidly expanded if adequate measures are to be taken to provide satisfactory supplies of timber within the State for the future.

During the year under review the fire fighting organisation proved capable of handling the situation in the area under protection. In spite of a very dry year and a particularly difficult autumn, only 0.1 per cent. of the protected forest was burnt over.

One new tower was manned in the southern divisions and proved of considerable value; another is in course of erection. The use of two-way radio was extended to the southern divisions and more complete cover given in the northern areas. Radio has proved everywhere successful. The saving in time and manpower in fire attack by having continuous communication between fire gangs and control centres represents the greatest advance in fire control since the advent of the power pumper.

Although some additional plant was secured during the year and it is expected that the position will improve with the hire of additional bulldozers in the coming year, the arrears of fireline and track maintenance are so great that little developmental work has been possible. Valuable additions to the fleet of fire-fighting trucks were made during the year by securing a number of ex-Army transports from the Commonwealth Disposals Commission.

The coastal belt of country stretching from Perth to the Moore River has been, for some time, the subject of investigation as a possible large-scale pine planting project. This sandy coastal region comprises a great area of country, the major portion of which is valueless for any agricultural purpose at present. In order to determine its suitability for the growth of pine, the Department has already made a commencement with a soil survey. From the aerial photographs covering the region vegetational and soil type plans are to be prepared.

Some three years ago five one-acre plots were established in the Lake Pinjar region. These are all doing well and results are most encouraging.

With the establishment of a small tree nursery at Kalgoorlie it has been possible to raise many of our inland species which could not be grown at the Hamel Nursery under the high rainfall there. Residents in the drier agricultural areas had been unable in the past to obtain many of the local species of trees most suitable for their climatic conditions, to fill such requirements as shelter belts, woodlots, ornamental purposes, and for planting in or near saline land. Considerable interest has been shown by private persons and local governing bodies in the trees available for distribution and the demand this year showed a very great increase.

Included as an appendix is a brief report on the administration of the Timber Industry Regulation Act. During the year 360 inspections of timber holdings were made. 668 notifiable accidents were investigated, one of which was fatal. The average period of incapacity was 21.2 days per person injured.

There were approximately 3,395 persons employed on timber holdings. Sawmills registered totalled 209, of which 128 operated on private property.

THE FOREST AREA.

(1).—*State Forest (Forests Act, 1918).*

With excisions from and additions to State Forest totalling 24 acres and 1,810 acres respectively the area of State Forest as at the 30th June, 1948, became 3,399,799 acres, an increase of 1,786 acres as compared with the area as at 30th June, 1947.

(2).—*Timber Reserves (Forests Act, 1918).*

No alterations occurred during the year, the total area of timber reserves remaining at 1,789,133 acres.

REVENUE.

The gross revenue of the Department for the year ended 30th June, 1948, was £300,199 as compared with £302,789 for the previous year.

Royalties on forest produce and rents totalled £155,501, an increase of £12,745 on last year's figure of £142,756. Revenue from sandalwood declined from £93,686 to £86,863. Inspection fees and sales of pine timber showed increases of £122 and £1,209 respectively. Receipts in respect of firewood supplied to metropolitan woodyards, Government Departments and Institutions, Water Supply Pumping Stations etc., totalled £37,461.

REBATES OF INSPECTION FEES.

The rebate of 25 per cent. on inspection fees on all sawn timber, including sleepers for export, amounted to £968 7s. 6d. This rebate has been discontinued, and will not be allowed on any timber inspected after 30th June, 1948.

SAWMILLING AND HEWING.

The production of sawn timber during the year increased to approximately 10.5 million cubic feet (approximately 10 million cubic feet in 1946-47). From a log intake during the year of 31,123,244 cubic feet the recovery in sawn and hewn timber was 10,459,323 cubic feet. Shortage of labour, particularly fallers, remained the chief factor in preventing a return to normal conditions in the industry, and a lack of materials has delayed the building of several new sawmills. The loss by fire of Jardee mill on the 30th April, 1948, was a further serious blow to sawn timber production.

7,799 cubic feet of hewn timber were produced, as compared with 8,277 cubic feet for the previous year.

Of a total quantity of 388,913 cubic feet of pine timber produced within the State 206,758 cubic feet came from Departmental plantations. Although it is still principally used for case making, the value of sawn marri (redgum) is being recognised and the production figure for the year was 348,655 cubic feet in the round as compared with 198,267 cubic feet last year.

Two firms are now engaged in veneer and plywood manufacture, and the total intake of peeler logs was 184,864 cubic feet. The principal species used were karri (177,892 cubic feet), pine (5,354 cubic feet) and jarrah (1,339 cubic feet).

The average number of men employed in the sawmilling industry each month for the year ended 31st December, 1947, was 3,395 against an average of 3,110 for the year ended 31st December, 1946.

TIMBER PRODUCTION.

Production of Timber for Year ended 30th June, 1948 (exclusive of Mining Timber, Firewood, Piles and Poles).

	MILL LOGS.					HEWN TIMBER.		GRAND TOTALS.	
	Jarrah.	Karri.	Other.	TOTAL.		Jarrah in Log.	Jarrah in Square.	In Log.	In Square.
				In Log.	Recovery of Sawn Timber.				
(1) Cub. ft.	(2) Cub. ft.	(3) Cub. ft.	(4) Cub. ft.	(5) Cub. ft.	(6) Cub. ft.	(7) Cub. ft.	(8) Cub. ft.	(9) Cub. ft.	
Crown Lands	17,025,023	4,469,703	745,309	22,240,035	7,426,436	11,310	2,262	22,251,345	7,428,698
Private Property	6,713,519	879,832	1,250,863	8,844,214	3,025,088	27,685	5,537	8,871,899	3,030,625
Grand Totals...	23,738,542	5,349,535	*1,996,172	31,084,249	10,451,524	38,995	7,799	31,123,244	10,459,323

Figures in columns 1, 2, 3, 4, 6, and 8 are in the round based on full volume measure.

Figures in columns 5, 7, and 9 are the volumes of sawn or hewn timber measured in the square.

* Comprises—841,542 cubic feet Wandoo ; 388,913 cubic feet Pine ; 348,655 cubic feet Marri ; 294,514 cubic feet Blackbutt ; 68,098 cubic feet Sheoak ; 21,363 cubic feet Morrell ; 20,691 cubic feet Tuart ; 5,134 cubic feet Yate ; 4,469 cubic feet River Banksia ; 2,793 cubic feet Bullich.

The quantity of sawn and hewn timber produced from Crown lands and private property for the past two years is set out in the following table :—

Year.	From Crown Lands.			From Private Property			Total Quantity.	Estimated value of Timber obtained.
	Sawn Timber other than sleepers.	Sawn sleepers.	Hewn sleepers.	Sawn Timber other than sleepers.	Sawn sleepers.	Hewn sleepers.		
	Cub. ft.	Cub. ft.	Cub. ft.	Cub. ft.	Cub. ft.	Cub. ft.	Cub. ft.	£
1946-47 ...	5,826,972	1,470,690	2,942*	2,224,187	433,856	5,335	9,963,982	2,067,000
1947-48 ...	5,995,413	1,431,023	2,262	2,510,894	514,194	5,537	10,459,323	2,505,000

* Includes 565 cub. ft. other hewn timber.

TIMBER INSPECTION.

Sawn and hewn sleepers inspected during the year amounted to 1,726,992 cubic feet, while sawn timber other than sleepers submitted for inspection totalled 164,840 cubic feet. The number of piles and poles inspected was 1,297, amounting to 41,837 lineal feet.

FIREWOOD PRODUCTION.

The estimated total consumption of firewood for the year was 715,000 tons, made up as follows :—

	tons.
Metropolitan Area	243,000
Goldfields Area	234,000
Goldfields Water Supply Pumping Stations	48,000
Mill Waste and for fuel at bush saw-mills	127,000
Country Centres (estimate) .. .	63,000
	<hr/>
	715,000
	<hr/>

The principal sources of supply from Crown lands were :—

Goldfields Licenses and Permits ..	257,681
Mill Waste ex bush sawmills ..	184,685
Firewood Permits (South-West) ..	89,132
Mill Waste ex sleeper and case mills	4,459
Miscellaneous Licenses etc.	321
Supplied by Forests Department :—	
(a) By piece work cutters for Nos. 1 and 2 G.W.S. Pumping Stations	12,703
(b) By direct conversion or existing stocks (Alien, P.O.W., etc.)	16,928

With increased supplies available from private contractors the Department was able gradually to discontinue the supply of firewood to metropolitan woodyards. Deliveries to these yards ceased in January, 1948. Mental hospitals, schools and other government institutions have continued to obtain their supplies from the Department from old stocks.

Although every effort consistent with transport facilities has been made to build up reserve stacks at Nos. 1 and 2 G.W.S. Pumping Stations, the position was not entirely satisfactory as at the 30th June, 1948. With Balt migrants being made avail-

able as firewood cutters it is anticipated that the position will be relieved before next summer, when the maximum quantities of firewood are required at the pumps. Practically the whole of the firewood cut by alien and P.O.W. labour in the Jarrahdale and Huntly Districts has been disposed of, and, of the estimated total stock of 4,067 tons held by the Department, approximately 2,622 tons are at Mar-rinup.

Supplies of firewood have been maintained to the Donnybrook Dehydration Plant and to the Pingelly Pumping Station as required.

The quantity of firewood supplied by the Department during the year was made up as follows:—

	tons.
For domestic use (metropolitan wood-yards)	5,654
Hospitals and Institutions	1,803
Government Departments (including G.W.S. Pumps)	7,805
Industrial concerns	1,666
Piecework firewood cutters for Nos. 1 and 2 G.S.W. Pumps	12,703
	29,631

A comparison with the total of 46,157 tons supplied by the Department during the year ended the 30th June, 1947, indicates that increased supplies are being delivered by private contractors, particularly to metropolitan woodyards for domestic use.

On the Goldfields the estimated production of firewood was 263,548 tons, details being as follows:—

	tons.
Mining firewood	205,717
Supplies to G.W.S. Pumps (Nos. 3 to 8)	29,750
Supplies to W.A.G.R. Pumps etc.	903
Domestic use, institutions and other industrial concerns	27,178
	263,548

SANDALWOOD.

Owing to the chaotic conditions overseas, sales of export sandalwood were limited and only 152 tons were exported during the year.

Orders were placed for 114 tons of sandalwood for export and 285 tons for oil distillation purposes within the State. The latter figure comprised 85 tons of logwood, 70 tons of old roots and stumps, and 130 tons of second grade sandalwood (small dead trees, etc., uncleaned). The second grade wood was treated experimentally to test the possibility of utilising this class of material for oil distillation purposes.

The quantity of sandalwood delivered under orders is set out in the following statement:—

	Oil Dis- tillation tons.	Export tons.
From Crown Lands—		
Logwood	113	142
Second Grade	137	—
Roots and Butts (sawn from export wood)	46	—
Old Roots and Stumps	13	—
From Private Property	—	9
	309	151

The quantity of sandalwood oil produced by local distillers during the year was 11,914 lb. and 18,563 lb. were exported.

OTHER FOREST PRODUCE.

Five hundred and twenty thousand one hundred and sixty two lineal feet of piles and poles were cut during the year. The production of mallet bark for tanning purposes was 1,120 tons, and wandoo logs used in the production of tannin extract amounted to 65,587 tons.

Six thousand mallet fring sticks, 542 pieces of mallet lagging, and 86 tons of wandoo logs for use as mining timber were supplied by the Department to the Big Bell Mines from the Narrogin Division.

FOREST PRODUCE NOT ELSEWHERE INCLUDED IN PRODUCTION TABLES, OBTAINED DURING YEAR ENDED 30TH JUNE, 1948.

Description of Forest Produce.	South-West Division and Agricultural Areas.	Northern Central and Eastern Goldfields.	Total.
Mining Timber*	14,429	15,276	29,705 Tons
Sleepers for Goldfields Wood Lines .. .. .	...	33,283	33,283 Cub. ft.
Firewood	109,678	57,831	167,509 Tons
Mill waste sold as firewood*	57,850	...	57,850 Tons
Mining Firewood* .. .. .	...	205,717	205,717 Tons
Mill waste used as fuel by sawmills*	126,835	...	126,835 Tons
Charcoal	204	336	540 Tons
Blackboy	68	...	68 Tons
Piles and Poles*	520,162	...	520,162 Lin. ft.
Fencing Posts and Rails	82,539	12,367	94,906 No.
Mallet Bark*	1,120	...	1,120 Tons
Wandoo Timber for Tannin extract*	65,587	...	65,587 Tons
Boronia megastigma*	693	...	693 Lbs.
Bean Sticks .. .. .	...	200	200 No.
Stone	2,624	...	2,624 Cub. Yds
Sand	1,120	...	1,120 Cub. Yds

* From Crown Lands and Private Property.

Note.—Except where otherwise stated, this statement includes only forest produce obtained from Crown Lands under permit or license.

FOREST OFFENCES.

Ninety-four forest offences were reported to Head Office during the year.

In six cases proceedings were taken against the offenders, convictions recorded and fines, costs and damages amounting to £82 imposed.

Warnings were issued in 30 cases and the remainder were dealt with by the collection of royalty, forfeiture of deposits, or confiscation and sale of the timber illegally cut. The amount received by the Department in this way totalled £263.

EXPENDITURE.

Expenditure totalling £35,073 was charged against the Consolidated Revenue Fund to cover the cost of general administration of the Forests Act and Regulations. In addition, £1,512 was expended in respect of the Timber Industry Regulation Act.

Firewood production and other direct conversion projects involved an expenditure of £34,513, whilst the cost of conversion of pine timber amounted to £6,174.

An average number of 294 wages employees was engaged during the year in the various activities of the Department. The shortage of manpower was still felt in the timber industry and the Department continued its assistance by providing labour for falling, etc.

Details of expenditure from the Forests Improvement and Reforestation Fund are set out in Appendix 1B.

The following statements show the transactions on the Fund during the year and details of the apportionment of the net revenue of the Department:

<i>Forests Improvement and Reforestation Fund.</i>					
	£	s. d.	£	s. d.	
Balance at 1st July, 1947:					
General Account	53,556	16 0			
Motor Vehicle Depreciation Account	4,146	3 1			
			57,702	19 1	
Three-fifths net revenue transferred			129,755	4 6	
Direct Credits (Cottage rents, etc.)			4,417	2 4	
Expenditure Recoups:—					
Federal Aid Roads Grant	13,809	13 3			
Assistance to Sawmills	5,413	8 11			
Pine Conversion Costs	6,173	16 4			
Running costs of Motor Vehicles used on Firewood Production	2,872	12 1			
Credits re petrol drums returned	1,333	1 7			
Various	1,213	8 3			
			30,816	0 5	
Transfer to Motor Vehicle Depreciation Account			2,000	0 0	
			£224,691	6 4	
Less Expenditure—					
Reforestation and Afforestation	152,038	12 10			
Other expenditure, recouped as above	30,816	0 5			
Purchase of Motor Vehicles from Depreciation Account	2,462	10 0			
			185,317	3 3	
Balance at 30th June, 1948—					
General Account	35,690	10 0			
Motor Vehicle Depreciation Account	3,683	13 1			
			39,374	3 1	

Apportionment of Net Revenue of the Department.

	£	s. d.	£	s. d.
Gross Revenue for year 1947-1948	300,199	9 11		
Less Revenue from Firewood, etc.	39,098	0 4		
	£261,101	9 7		
Consolidated Revenue Fund Expenditure	77,271	19 11		
Less Expenditure on Firewood, etc.	34,512	15 9		
	42,759	4 2		
Less Timber Industry Regns.—				
Salaries and Incidentals	1,511	18 4		
	41,247	5 10		
Salary of Conservator	1,266	13 4		
Audit Fee	100	0 0		
	42,613	19 2		
Net Revenue	£218,487	10 5		
Three-fifths Net Revenue	131,092	10 3		
Less amount over-credited in 1946-1947	1,337	5 9		
Amount transferred to credit of Reforestation Fund, 1947-48	129,755	4 6		
Net credit to Consolidated Revenue Fund, 1947-48	88,732	5 11		
	£218,487	10 5		

SILVICULTURE AND MANAGEMENT.

The Department has remained essentially on a maintenance basis. The essential features of the work have continued to be the control of trade cutting to ensure satisfactory regeneration and proper stocking of the forest, and protection of the forest from fire. Stock-taking and growth assessments, while continuing, are in arrears.

Pine planting has been virtually suspended for seven years, only 181 acres being planted during the year. The lack of maintenance in pruning will have a serious effect on the quality in the stands already planted.

Investigation is being carried out on an experimental basis into the possibility of utilising considerable areas of non-agricultural land along the coastal belt north from Lake Pinjar to the Moore River as an extensive plantation of *Pinus pinaster*. Sample plots have already been established near Lake Pinjar and preparations made for additional plots near Moore River. Further work was done on the soil survey of 45,000 acres of country South-West of Mt. Barker.

An additional 280 acres made up of small additions to a number of plantations were sown with *mallet*. The sale of young *mallet* for goldmining rendered it possible to make a commencement with a small scale thinning of some of the stands which had reached the stage of economic thinning and bark stripping.

Eight new houses were constructed during the year.

Over the last seven years road and track, as well as fire line, construction gradually fell into arrears, but during the year under review a beginning was made to overtake this deficit. Many of the old roads were too narrow and had too many sharp angles to accommodate heavy duty fire equipment. The widening and straightening of these tracks by hand labour is a very costly undertaking and requires power equipment for most efficient work. Gradually, as heavy earth-moving equipment becomes available, the Department is making progress with this work and in the opening up of more roads of access which are so vital to efficient management and fire control.

FIRE CONTROL.

The season was chiefly remarkable for the lengthy dry spell over the late spring, summer and autumn, the summer months being particularly dry. Dwellingup registered only 19 points between 23rd December and 28th March, and Manjimup only 33 points between 1st January and 24th March.

In many districts there was very little rain after September or October.

There was a very lush grass growth and this probably accounted in some measure for the large number of fires lit by W.A.G.R. locos.; 60 this year as against 30 last year.

There were five days of "dangerous" hazard and the temperature at Dwellingup reached 104 deg. on February 20th. The average hazard for the year was 5.8 as against 5.5, 5.3 and 5.5 for the previous three years.

The season was generally successful. Most trouble was caused by the dry autumn following on the long dry summer.

The forest was tinder dry and controlled burning was carried on up to the 2nd June, 1948.

A total of 278 fires (252 last year) were attended by fire gangs.

Of these fires, 118 occurred in the 1,152,356 acres of closely protected zone "A" forest, causing damage to 1,237 acres or 0.11 per cent. Much of the damage was slight as, generally speaking, the fires were confined to very small areas.

In zone "B," 775,800 acres, 78 fires were attended; the remaining 82 fires caused no loss to protected forest.

The number of fires and their causes are listed below:—

W.A.G.R. locos.	..	..	..	..	60
Mill locos.	..	..	..	..	47
Bush workers	..	..	..	..	6
Mill and bush navyv gangs	..	..	..	..	3
Hunters and fishers	..	..	..	..	22
Travellers in the forest	..	..	..	..	24
Stock owners and leaseholders	..	..	..	..	10
Escapes from private property to State Forest	..	..	..	..	30
Firewood cutters	..	..	..	..	3
Lightning	..	..	..	..	4
Deliberately lit	..	..	..	..	4
Escape from controlled burning	..	..	..	..	16
Mill surroundings	..	..	..	..	4
Mine surroundings	..	..	..	..	2
Employees of other Government departments	..	..	..	..	3
Householders	..	..	..	..	16
Children	..	..	..	..	9
Tractors	..	..	..	..	1
Unknown	..	..	..	..	14
Total	..	..	..	..	278

A comparison of this list with the fires of the previous year shows a big increase of fires lit by W.A.G.R. locos.; 60 this year as against 30 last. Hunters and fishers caused 22, against 18 last year, but travellers through the forest lit only 24 as against 36 last year.

Stock owners were responsible for ten fires, four last year, but escapes from private property clearing into State Forest showed a decrease from 52 to 30 this year.

The new tower at Dicksons, manned for the first time this season, proved its worth in overlooking some very bad country.

The usual schools of instruction in fire control were held for the field staff, and all gangs showed improvement in the handling of power equipment, which was considerably augmented during the year.

The bulldozer again proved invaluable, particularly in the more difficult country in the Southern Divisions.

Communication was again very good. The use of radio was extended to the Southern Divisions and the number of sets in the field considerably increased. Two-way radio-telephony is unquestionably the greatest advance in fire control in this State since the introduction of power pumpers.

This year, for the first time, the Department employed a black tracker full time during the fire season. He was stationed at Nannup and the convenience of having our own tracker always available at short notice was generally appreciated.

Demonstrations of fire fighting equipment and technique were given at Katanning and Darkan Shows, and a full-time demonstration was put on at the Royal Agricultural Show. This stand at the Royal Show, although entailing considerable work, excited great interest and was well worth while.

The heavy duty outfits at Dwellingup were responsible for saving the State Saw Mill at Holyoake from destruction by fire.

The sawmilling industry again provided willing assistance in fire fighting that was greatly appreciated, and, as always, the Police Department was most co-operative in prosecuting inquiries on our behalf.

ARBORICULTURE.

Hamel.

As was anticipated, there was a heavy demand for trees during the season, which closed on 31st August, 1947. Sales are now back to pre-war figures and appear likely to go on increasing.

During the season under review 54,018 trees were despatched from the nursery. Of these, 51,041 were sold to country residents and local authorities, 2,711 were supplied to other departmental centres for

experimental and ornamental planting, and a few supplied free to various public and charitable institutions.

Monterey pine (*Pinus radiata*) headed the list of sales and was closely followed by sugar gum (*Eucalyptus cladocalyx*). These two trees have, for many years, headed our sales list and the demand remains remarkably constant at from eight to ten thousand of each variety per annum. They were followed by Victorian ti-tree (*Leptospermum laevigatum*), a plant which has attained great popularity during recent years for hedges and low breakwinds. Other trees in good demand were maritime pine (*Pinus pinaster*), brush box (*Tristania conferta*), tuart (*Eucalyptus gomphocephala*), carob bean (*Ceratonia siliqua*) and pepper tree (*Schinus molle*).

Inland Areas.

During the 1947 season, 1,864 trees, comprised of 23 species, were sent out from Kalgoorlie nursery to local governing bodies, mining companies and farmers. The most popular species was salmon gum, of which 682 were distributed.

Interest in dry area trees is showing a marked increase and in view of this a permanent nursery attendant was engaged and sowings, aimed at quadrupling the output, were made during the year. In addition autumn sowings of New South Wales callitris, various acacias from the mulga zone and species from New South Wales were made.

Residents in the drier agricultural areas have been unable in the past to obtain many of the species of trees suitable for their climatic conditions to fill such requirements as shelter belts, woodlots, ornamental trees and trees for planting in or near saline country.

Now that it is becoming known that the Department, at its Kalgoorlie nursery, has embarked on a scheme for raising these trees, there are indications of a considerable expansion in the demand for them.

In order to make known to residents in the agricultural areas the behaviour of the various species of trees, a series of arboreta throughout the wheat-belt is projected, to be established by the Department in conjunction with local governing bodies.

Mining companies throughout the Goldfields are also showing a marked interest in tree planting as a means of beautification of their mining properties. This is largely the result of the publicity given to the excellent work in this direction carried out by the mining companies at Broken Hill, who, incidentally, have found in the Western Australian eucalypts some of the most useful trees in their scheme.

STAFF.

The following staff changes were effected during the year:—

Mr. A. C. Shedley was appointed Senior Assistant Conservator on the 1st July, 1947.

Mr. F. Gregson, Utilisation Officer, was granted twelve months leave without pay as from the 1st January, 1948.

Mr. G. W. M. Nunn, Divisional Forest Officer, resumed duty on the 15th March, 1948, after an absence on leave without pay from the 17th May, 1946. During this period he was attached to U.N.N.R.A. in China.

Mr. B. Boettcher was appointed District Inspector under the Timber Industry Regulation Act, 1926, on the 4th February, 1948, vice Mr. A. J. McDonald, who commenced six months' accrued long service leave on the 28th March, 1948, prior to retirement.

Mr. G. H. Yewers, Clerk (Stores) transferred to Government Tender Board Office of the Government Stores Department, on the 22nd January, 1948.

Mr. S. Kikiros was granted twelve months' leave without pay from the 19th January, 1948, in order to take a course under the Commonwealth Rehabilitation Training Scheme.

Mr. J. K. Tondut, Junior Clerk, resigned on the 13th February, 1948.

Messrs. V. F. Byrne, and D. G. Blight, who had been employed as Temporary Trainee Junior Clerks, were appointed to the Permanent Staff on the 14th April, 1948.

Miss I. M. Hawkins, Senior Comptometrist, resigned on the 18th May, 1948. Miss V. P. Allen, Junior Typist, resigned on the 5th December, 1947.

Miss G. Norman, Junior Machinist, and Miss P. Flanagan, Junior Typist, transferred to the Chief Secretary's Department on the 1st December, 1947, and 4th May, 1948, respectively.

Miss B. T. Watson, who had been employed as a Temporary Junior Typist, was appointed to the Permanent Staff on the 18th January, 1948.

Foresters W. T. Moriarty and W. F. Brown and Assistant Forester F. H. Crockenberg resigned and Assistant Forester S. W. Dunn and Forest Assistant L. E. Bell retired.

Five Assistant Foresters "B" Grade were appointed.

In conclusion I desire to place on record my appreciation of the loyalty and interest in the work of the Department which have been shown by all ranks of the Forest Service.

T. N. STOATE,
Conservator of Forests.

Perth, 30th September, 1948.

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APPENDIX 1A.

CONSOLIDATED REVENUE FUND.

Consolidated Statement of Revenue and Expenditure for the year ended 30th June, 1948.

DR.				CR.						
				£	s.	d.	£	s.	d.	
To Log Royalties	119,432	11	2	By Salaries	.....	.....	.....
„ Sleeper Royalties	12,805	6	3	„ Incidentals	.....	.....	.....
„ Sawn Timber Royalties	3,073	17	6	„ Timber Industry Regulations	.....	.....	.....
„ Miscellaneous Royalties	8,315	1	9	„ Pine Conversion Costs	.....	.....	.....
„ Goldfields Revenue	10,690	1	2	„ Firewood Nos. 1 and 2 Pumps	.....	.....	.....
„ Rents	1,183	19	0	„ Firewood (other) logs for milling and casemaking and other conversion projects	.....	.....	.....
„ Sandalwood Revenue	86,862	14	10				
„ Inspection Fees	2,625	0	9	Total C.R.F. Expenditure	.....	.....	.....
„ Miscellaneous Sales	2,875	5	9	Excess of Revenue over Expenditure	.....	.....	.....
„ Sales of Pine Timber	13,100	16	1				
„ Sales of Firewood	37,461	8	4				
„ Miscellaneous Receipts	1,773	7	4				
				£300,199	9	11				£300,199 9 11

APPENDIX 1B.

Consolidated Statement of Afforestation and Reforestation Expenditure for year ended 30th June, 1948.

DR.				CR.						
				£	s.	d.	£	s.	d.	
To Division No. 1.	7,297	4	7	By Reforestation Fund General Account	.....	.....	.....
„ Division No. 2.	7,737	18	9	„ Reforestation Fund—Motor Vehicle	.....	.....	.....
„ Division No. 3.	23,411	0	0	„ Depreciation Account	.....	.....	.....
„ Division No. 4.	9,843	17	4	„ Federal Aid Roads Grant	.....	.....	.....
„ Division No. 5.	14,244	3	7				
„ Division No. 6.	16,791	3	0				
„ Division No. 7.	7,432	12	1				
„ Division No. 9.	9,723	13	9				
„ Division No. 10.	14,008	18	3				
„ Division No. 11.	9,486	1	0				
Total Divisional Expenditure	119,976	12	4				
„ Training of Staff	276	11	11				
„ Research and Investigation	1,435	7	3				
„ Preparations of Working plans and Topo. Surveys	1,629	8	0				
„ Salaries and Allowances	9,436	17	4				
„ General Equipment and Incidentals	5,116	4	2				
„ General Silviculture and Aboriculture	24	16	10				
„ Motor Vehicle Depreciation	2,000	0	0				
„ Establishment	706	12	6				
„ Purchase of Fire Equipment	6,508	4	5				
„ Purchase of Land	1,257	15	0				
„ Purchase of Tractors, etc.	15,845	12	4				
„ Pay Roll Tax Unallocated	749	11	5				
„ Cash Orders Unallocated	884	12	7				
„ Purchase of Motor Vehicles (from Depreciation Fund)	2,462	10	0				
				48,334	3	9				
				£168,310	16	1				£168,310 16 1

APPENDIX 2A.

WESTERN AUSTRALIA.

*Exports of Timber, Tanning Substances and Essential Oils during the year ended 30th June, 1948.

Item and Country of Destination.	Quantity.	Value.	Item and Country of Destination.	Quantity.	Value.
TIMBER.			Timber, Cut to Size for making Boxes—		
<i>Logs Not Sawm—Jarrah.</i>	Cub. ft.	£	Commonwealth States :	Cub. ft.	£
Belgium	398	148	N.S.W.	3,119	943
<i>Logs Not Sawm—Karri</i>			Vic.	1,395	552
Ceylon	1,626	618	S.A.	240	50
<i>Railway Sleepers—Hewn or Sawm.</i>				4,754	1,545
Commonwealth States—			Timber, Tongued or Grooved :		
Victoria	Cub. ft.	£	Weatherboards—		
Sth. Australia	461,938	100,650	Commonwealth States :		
United Kingdom	61,598	29,956	S.A.	7,204	1,666
Ceylon	225,451	109,366			
Malaya, British	174,370	96,254			
Union of South Africa	72,719	37,352			
	1,011,406	376,712	Timber, Bent or Cut into Shape, Dressed or Partly Dressed—		
Palings—			Commonwealth States :		
Commonwealth States	No.	£	N.S.W.	£	
Victoria	200	4	Vic.	253	259
Sth. Australia	625	9			
	825	13			
Sandalwood—	Cwt.		Timber, Dressed or Moulded, N.E.I.—		
Burma	40	520	Commonwealth States :		
Ceylon	181	2,340	S.A.	1,790	496
Hong Kong	994	11,428			
Malaya	300	3,790	Total Timber Exports		1,134,644
Singapore	1,431	17,493			
	2,946	35,571			
Undressed, N.E.I.—Beams, Baulks, Joists and Other Sawm Timber N.E.I. (except Boards and Planks less than 2 in. in thickness)—Hardwood—			WOOD MANUFACTURES.		
Commonwealth States :	Cub. ft.	£	Incubators, Foster Mothers and Brooders—	No.	
New South Wales	37	10	Ceylon	2	8
Victoria	394,907	92,853			
South Australia	927,585	179,031			
Nth. Territory	750	263			
United Kingdom	630,701	258,310			
Ceylon	44,774	20,437			
Christmas Island	233	75			
Mauritius	22,930	6,922			
Union of South Africa	267,332	96,325			
Belgium	17,685	9,012			
Netherlands	17,116	8,275			
	2,324,050	671,513			
Undressed, N.E.I.—Boards and Planks, Sawm, less than 2 in. in thickness—Hardwood—					
Commonwealth States :	cub. ft.	£			
N.S.W.	422	106			
Vic.	76,398	15,243			
S.A.	155,848	27,054			
Ceylon	509	213			
	232,668	42,403			
	233,177	42,616			
Plywood, Veneered or Otherwise—					
Commonwealth States :	Sq. ft.	£			
N.S.W.	2,160	47			
S.A.	4,500	161			
	6,660	208			
Picture Frame Mouldings, Architraves, Skirtings and Room Mouldings—					
Commonwealth States :	Lin. ft.				
S.A.	37,425	544			
Pickets, Dressed and Undressed—					
Commonwealth States :	No.				
S.A.	320	4			
Staves, Undressed, Dressed or Partly Dressed—					
Commonwealth States :	No.	£			
N.S.W.	16,633	1,112			
Vic.	6,908	940			
S.A.	7,364	679			
	30,905	2,731			
			Furniture—		
			Commonwealth States :		
			N.S.W.	£	
			Vic.	490	
			S.A.	808	
			Northern Territory	17	
				322	
			United Kingdom		1,637
			New Guinea		229
			Burma		8
			Christmas Island		10
			Hong Kong		141
			New Zealand		26
			Singapore		275
			Egypt		527
					21
					2,874
			Total Wood Manufactures		6,572
			Total Timber and Wood Manufactures		1,141,216

* Exports to Commonwealth States are of Western Australian origin and Oversea Exports are of Australian origin.

Appendix 2A—continued.

WESTERN AUSTRALIA.

*Exports of Timber, Tanning Substances and Essential Oils during the year ended 30th June, 1948—continued.

Item and Country of Destination.	Quantity.	Value.	Item and Country of Destination.	Quantity.	Value.
<i>Tanning Bark—</i>	Cwt.	£	<i>Sandalwood—</i>		£
Commonwealth States :			Commonwealth States :		
Vic.	13,335	9,556	N.S.W. lb. 1,773		2,215
			Vic. 475		618
			United Kingdom	2,248	2,833
			Canada	4,480	9,520
			Hong Kong	1,848	3,927
			India	3,365	7,081
			Malaya, British	448	980
			New Zealand	84	183
			Singapore	74	59
			Union of South Africa	1,556	3,200
			Argentina Republic	56	119
			Brazil	448	952
			Cuba	1,102	2,342
			France	231	252
			Netherlands	2,800	6,130
			Philippine Republic	672	1,428
			Siam	674	1,374
				50	104
				20,136	40,484
<i>Tanning Extracts—</i>			<i>Essential Oils —Other—</i>		
Commonwealth States :			Commonwealth States :		
N.S.W. Cwt. 13,487	21,332		N.S.W. lb. 24,639	22,410	
Vic. 12,939	20,446		Vic. 28,316	28,887	
Queensland.... 1,657	2,559		Queensland.... 198	249	
S.A. 1,246	1,982		S.A. 2,303	2,503	
New Zealand	29,329	46,319	United Kingdom	55,456	54,049
Austria	1,197	2,089	Burma	8,233	767
Belgium	1,049	3,652	Kenya	181	183
Denmark	4,799	9,142	Hong Kong	123	106
Netherlands	20,773	41,294	Uganda	20	8
Norway	11,920	22,704	Malaya, British	112	126
Portugal	1,989	6,675	New Zealand	20	36
Sweden	1,055	2,645	Singapore	68	75
U.S.A.	4,615	11,760	Union of South Africa	7,516	1,482
	6,019	13,674	Egypt	3,548	1,906
	82,745	159,954	France	1,999	1,106
			Philippine Republic	1,600	3,500
			U.S.A.	258	391
				1,600	3,400
				80,734	67,135
ESSENTIAL OILS.			Total Essential Oils		116,465
<i>Eucalyptus—</i>	lb.		Total Value of Exports shown		1,427,191
Commonwealth States :			on this Return		
Vic.	80	57			
Malaya, British	23	7			
Singapore	892	377			
Union of South Africa	9,451	1,873			
Egypt	12	3			
Philippine Republic	212	56			
	10,670	2,373			
<i>Patchouli—</i>	lb.				
United Kingdom	1,546	6,473			

* Exports to Commonwealth States are of Western Australian origin and Oversea Exports are of Australian origin.

APPENDIX 2B.

WESTERN AUSTRALIA.

Imports of Timber, Tanning Substances and Essential Oils during the year ended 30th June, 1948.

Item and Country of Origin.	Quantity.	Value.	Item and Country of Origin.	Quantity.	Value.
			£		
<i>Wicker, Bamboo and Cane, and all Manufactures of, N.E.I.—</i>			<i>Timber Bent or Cut into Shape—Broom Sticks—</i>		
Commonwealth States:			Commonwealth States:		
N.S.W.		217	N.S.W.		637
Vic.		56			
Queensland		359			
S.A.		21			
		653	<i>Laths for Blinds and Laths, N.E.I.—</i>		
United Kingdom		34	Commonwealth States:		
Borneo, British		1,124	Vic.		250
Hong Kong		1,193			
India		280			
Malaya		5,330			
Singapore		521			
Netherlands Indies		291			
		9,426	<i>Picture Frame Mouldings—</i>		
			Commonwealth States:	£	
			N.S.W.	1,726	
			Vic.	134	
					1,860
TIMBER.			<i>Architraves, Skirtings and Room Mouldings—</i>		
<i>Logs not Sawed (including Merely Hewn or Squared with the axe)—Softwood and Hardwood—</i>					
Commonwealth States:	Cub. ft.		Commonwealth States:	£	
Queensland	5,202	1,125	N.S.W.	442	
Borneo, British	20,470	3,537	Vic.	719	
	25,672	4,662			1,161
<i>Undressed, N.E.I.—</i>			<i>Timber, Cut to Size for Making Boxes—</i>		
Commonwealth States:	Cub. ft.	£	Commonwealth States:	Cub. ft.	Cub. ft.
N.S.W.	1,986	1,808	Vic.	11,437	11,437
Vic.	2,614	1,465	Sweden		1,476
Queensland	37,313	16,148	U.S.A.		290
S.A.	6,697	7,095			13,203
Tasmania	23,237	6,747			9,641
					903
Canada					230
Sweden					10,774
Switzerland					
U.S.A.					
	71,847	33,263	<i>Timber, Tongued or Grooved, Weather boards—</i>		
	24,945	25,891	Sweden	2,928	1,469
	3,093	1,424			
	1	19	<i>Timber Bent or Cut into Shape, Dressed, Partly Dressed, N.E.I.—</i>		
	16,864	8,222	Commonwealth States:	£	
	116,750	68,819	N.S.W.	355	
			Vic.	203	
					558
<i>Dunnage and Timber, Undressed, N.E.I.—</i>			<i>Timber, Dressed or Moulded, N.E.I.—</i>		
Kenya		7	Commonwealth States:		
India		7	N.S.W.		22
U.S.A.		50			15
		64	Total Timber		160,197
<i>Veneers—</i>			<i>WOOD MANUFACTURES.</i>		
Commonwealth States:	Sq. ft.	£	<i>Casks and Vats—</i>		
N.S.W.	303,957	5,781	Commonwealth States:	No.	£
Vic.	72,255	407	N.S.W.	824	2,899
Queensland	192,938	1,422	Vic.	740	3,598
			Queensland	318	1,573
United Kingdom	569,150	7,610	S.A.	3,087	15,566
Finland	24,992	253			
	21,535	490	*Commonwealth of Australia	4,969	23,636
	615,677	8,353		380	1,328
<i>Plywood, Veneered or Otherwise—</i>					
Commonwealth States:	Sq. ft.	£			
N.S.W.	90,146	4,544			
Vic.	316,246	8,081			
Queensland	2,305,203	47,877			
S.A.	37,189	1,073			
	2,748,784	61,575			

*Produce of Australia previously exported now returned to this State.

APPENDIX 2C.

SUMMARY OF EXPORTS OF FOREST PRODUCE SINCE 1836.

Year.	Timber.		Sandal-wood.	Year.	Timber.		Wood Manu- factures.	Sandal-wood.	Tanning Bark.	Essential Oils.	Tanning Extracts.	
	Cub. ft.	Value.	Value.		Cub. ft.	Value.	Value.	Value.	Value.	Value.	Value.	
1836 ^a	10,000	£ 2,500	£	1891	1,273,950	£ 89,179	£	£ 37,600	£	£	£	
1837	.....	.....	.....	1892	1,082,650	78,419	.....	42,870	.....	.....	.....
1838	.....	.....	.....	1893	512,950	33,888	.....	32,160	.....	.....	.....
1839	.....	.....	.....	1894	1,063,700	74,804	.....	23,430	.....	.....	.....
1840	.....	.....	.....	1895	1,255,250	88,146	.....	30,863	.....	.....	.....
1841	.....	.....	.....	1896	1,545,600	116,420	.....	65,800	.....	.....	.....
1842	.....	.....	.....	1897	2,393,900	192,451	.....	49,480	.....	.....	.....
1843	.....	.....	.....	1898	4,086,150	326,195	.....	31,812	.....	.....	.....
1844	b	163	.....	1899	6,913,550	553,198	.....	29,719	.....	.....	.....
1845	.....	.....	40	1900	5,725,400	458,461	.....	39,038	.....	.....	.....
1846	2,550	255	320	1901	7,150,600	572,354	.....	73,931	.....	.....	.....
1847	12,200	1,120	4,444	1902	6,256,750	500,533	.....	61,771	.....	.....	.....
1848	3,350	333	13,353	1903	7,748,450	619,705	.....	37,913	.....	.....	.....
1849	.....	.....	.....	1904	8,072,300	654,949	.....	25,417	859	.....	.....
1850	10,500	1,048	.....	1905	8,709,500	689,943	.....	38,817	32,876	.....	.....
1851	1,250	268	1,593	1906	c 8,330,700	708,993	.....	30,817	154,087	.....	.....
1852	7,050	806	.....	1907	c 8,409,550	511,923	.....	70,958	140,720	.....	.....
1853	52,200	5,220	.....	1908	c 9,869,500	813,591	.....	65,999	98,773	.....	.....
1854	58,500	7,023	.....	1909	c 10,830,450	867,419	.....	76,698	79,934	.....	.....
1855	76,900	12,076	.....	1910	c 12,074,100	972,698	.....	37,456	59,633	.....	.....
1856	70,500	9,671	.....	1911	c 12,449,500	986,341	.....	70,775	93,733	.....	.....
1857	69,200	9,449	2,524	1912	c 11,297,100	903,396	.....	65,506	83,470	.....	.....
1858	29,250	2,340	7,455	1913	c 13,619,850	1,089,481	.....	27,533	49,094	.....	.....
1859	67,250	6,051	17,259	1914 ^d	c 6,279,750	502,153	.....	47,589	47,377	.....	.....
1860	54,800	4,932	16,360	1915 ^e	c 9,968,500	808,392	.....	39,800	18,197	5	.....
1861	27,750	2,497	24,945	1916 ^e	5,432,100	441,991	.....	78,926	6,127	381	.....
1862	68,800	7,151	21,541	1917 ^e	3,890,650	310,893	.....	61,381	10,208	1,102	.....
1863	32,900	2,963	25,265	1918 ^e	3,436,250	274,141	.....	72,669	18,959	2,060	.....
1864	58,300	5,508	24,520	1919 ^e	4,135,750	332,584	11,535	81,834	16,886	3,995	.....
1865	183,950	15,693	13,490	1920 ^e	5,065,300	465,781	21,935	117,072	18,875	3,987	.....
1866	85,650	6,849	23,722	1921 ^e	9,816,250	1,187,819	24,916	210,579	22,121	3,704	.....
1867	56,750	4,541	18,442	1922 ^e	8,309,750	1,041,047	22,248	181,801	23,073	10,107	.....
1868	8,000	638	26,045	1923 ^e	7,911,310	997,454	12,377	54,769	13,328	6,878	.....
1869	179,900	14,273	32,998	1924 ^e	11,126,861	1,367,517	11,505	102,912	21,161	20,075	.....
1870	157,200	17,551	48,890	1925 ^e	11,844,303	1,477,997	13,928	348,713	29,606	39,877	.....
1871	218,500	15,304	26,926	1926 ^e	12,001,384	1,522,958	10,072	186,775	40,136	42,057	.....
1872	37,000	2,590	31,536	1927 ^e	12,580,262	1,651,149	8,727	238,203	15,056	47,819	.....
1873	68,150	4,771	62,916	1928 ^e	10,384,784	1,265,383	7,783	199,754	15,818	26,454	.....
1874	345,600	24,192	70,572	1929 ^e	7,635,237	960,435	6,603	147,426	27,662	39,131	.....
1875	342,350	23,965	66,465	1930 ^e	6,579,743	807,425	4,687	225,208	35,850	63,307	.....
1876	219,050	23,743	65,772	1931 ^e	4,127,856	507,382	26,615	40,628	40,628	77,510	.....
1877	336,150	36,979	31,851	1932 ^e	3,062,673	361,700	85,488	.....	.....	.....	.....
1878	580,900	63,902	35,064	1933 ^e	2,235,540	262,617	80,332	43,790	35,333	56,170	.....
1879	627,250	69,742	35,001	1934 ^e	4,060,830	487,248	76,107	40,546	42,016	59,301	.....
1880	662,550	66,252	51,970	1935 ^e	5,326,117	636,466	65,494	88,846	33,352	26,331	.....
1881	792,750	79,277	77,165	1936 ^e	5,598,180	679,522	50,665	76,107	20,904	26,720	.....
1882	936,500	93,650	96,050	1937 ^e	5,673,903	699,684	52,338	66,474	15,284	35,363	.....
1883	997,000	79,760	56,250	1938 ^e	7,545,744	932,420	47,934	44,916	12,237	27,526	13,657	
1884	861,700	68,936	20,960	1939 ^e	5,704,250	722,310	43,518	44,916	14,491	38,185	15,514	
1885	848,150	67,850	36,216	1940 ^e	5,049,585	634,859	62,796	22,884	13,865	35,128	53,294	
1886	626,150	50,092	27,450	1941 ^e	6,091,187	790,876	74,935	34,571	17,842	25,550	48,329	
1887	354,800	28,384	34,533	1942 ^e	5,224,634	700,474	64,454	41,596	19,485	47,736	69,899	
1888	525,750	42,060	33,525	1943 ^e	3,516,566	605,327	32,426	.....	.....	.....	.....
1889	788,500	63,080	57,465	1944 ^e	3,645,354	613,994	25,324	.....	1,294	72,704	120,659
1890	1,172,200	82,052	51,355	1945 ^e	2,851,475	570,028	27,307	.....	2,795	103,055	106,884
				1946 ^e	3,373,025	722,061	f 2,616	7,584	4,872	128,050	111,614
				1947 ^e	3,458,628	865,255	f 13,118	100,616	12,056	151,768	133,543
				1948 ^e	3,584,405	1,099,073	f 6,572	35,571	9,556	116,465	159,954
				TOTAL	378,424,686	40,286,352	994,535	5,519,065	1,491,809	1,543,525	1,192,627

^a The exports up to the year 1834 consisted only of supplies to shipping, of which no record is kept. ^b Not available. ^c Approximate figures only. ^d Six months ended 30th June. ^e Year ended 30th June. ^f Excludes Casks (principally empty returns) previously included in this Item.

APPENDIX 3.

TIMBER INDUSTRY REGULATION ACT, 1926-1937.

Annual Report for the Year ended 31st December, 1947.

The number of mills operating under the provisions of the Act at the close of the year totalled 209 (81 Crown Lands, 128 Private Property). The average number of persons employed on timber holdings each month throughout the year was 3,395 as compared with 3,110 last year. The District and Workmen's Inspectors made 360 inspections of timber holdings and investigated and reported on 668 notifiable accidents, one of which was fatal.

The number of accidents per 100 persons employed was 20. The total period of incapacity as a result of accidents was 14,188 days, an average of 21.2 days per injured person (compared with 22.3 days last year).

Returns as listed hereunder have been prepared, but are not included in this report.

1. Number of notifiable accidents reported in accordance with Section 14 of the Act, according to months, and indicating the age and nationality of the injured person, the period of incapacity, and the number of cases on which the first aid outfit was used.
2. The number of accidents reported during 1947, and their classification according to location and nature of injury.
3. The number of accidents classified according to cause of accident and location of injury.
4. The number of accidents classified according to cause of accident and nature of injury.
5. The number of accidents classified according to the months and days of the week on which the accident occurred.
6. The number of hours worked on the day and up to the time of injury by the person injured.
7. A return showing by months the time at which the notifiable accidents occurred.
8. A return showing the personal cause of accidents as determined by the Inspectors.

September, 1948.

T. N. STOATE,
Controlling Officer.