



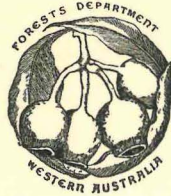
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WESTERN AUSTRALIA.



Forestry and Forest Resources Western Australia

Progress Statement prepared for Fourth
British Empire Forestry Conference
(South Africa)

1935

S. L. KESSELL, M.Sc. (Adel.), Dip. For. (Oxon.),
Conservator of Forests.

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LIST OF BOTANICAL NAMES OF THE PRINCIPAL LOCAL SPECIES REFERRED TO
IN THIS REPORT.

Eucalypts :—

- Jarrah (*Eucalyptus marginata*).
- Karri (*Eucalyptus diversicolor*).
- Tuart (*Eucalyptus gomphocephala*).
- Wandoo (*Eucalyptus redunca* var. *elata*).
- Powder Bark Wandoo (*Eucalyptus accedens*).
- Salmon Gum (*Eucalyptus salmonophloia*).
- Marri (*Eucalyptus calophylla*).
- Blackbutt (*Eucalyptus patens*).
- Yate (*Eucalyptus cornuta*).
- York Gum (*Eucalyptus foecunda* var. *loxophleba*).
- Red Morrell (*Eucalyptus longicornis*).
- Gimlet (*Eucalyptus salubris*).
- Red Tingle Tingle (*Eucalyptus Jacksoni*).
- Yellow Tingle Tingle (*Eucalyptus Guilfoylei*).
- Brown Mallet (*Eucalyptus astringens*).
- Bullich (*Eucalyptus megacarpa*).

Non-Eucalypts :—

- Sandalwood (*Santalum spicatum*).
- North-West Sandalwood (*Santalum lanceolatum*).
- Sheoak (*Casuarina Fraseriana*).
- River Banksia (*Banksia verticillata*).
- Raspberry Jam (*Acacia acuminata*).
- Peppermint (*Agonis flexuosa*).

WESTERN AUSTRALIA.

PROGRESS STATEMENT, 1935.

This Statement should be read in conjunction with the full Statement prepared for the 1928 Conference.

SECTION I.

General Description of the Country from the Forestry Point of View.

(See 1928 Statement.)

SECTION II.

Description of Main Types of Forest Growth.

(See 1928 Statement.)

SECTION III.

Area and Contents of Existing Forest.

TABLE I.
AREA (IN SQUARE MILES).

	Forest.			Agricultural Land (Arable Land only).	Other (includes Sheep and Cattle Country).	Total.
	Merchantable.	Unprofitable or Inaccessible.	Total.			
	(1)	(2)	(3)	(4)	(5)	(6)
Conifers	15·0	...	15·0	...	...	15
Broadleaved	4,329·6	1,572·5	5,902·1	93,750	876,253	975,905
Total	4,344·6	1,572·5	5,917·1	93,750	876,253	975,920
Forest Area as percentage of Total Land Area	0·45	0·16	0·61	9·60	89·79	100

The figures in Column (1) referring to Merchantable forest are for the Jarrah, Karri, Tuart, Wandoo, Tingle, plus a comparatively small area planted with exotic conifers.

The figures in Column (2) refer only to country which has a value for hewing at the present time but much of which may prove to have a value for sawmilling in the future. The greater proportion of the State originally carried trees of some description providing timber for development, but clearing for agricultural purposes has led to the destruction of much of that timber and, ultimately, practically the whole State will have to rely on the forest regions of the South-West for timber supplies.

"Agricultural land" in Column (4) refers to areas in the South-West Division and Eucla Division within the safe rainfall belt.

"Other land" in Column (5) comprises the area of the State exclusive of the South-West and portion of the Eucla Division mentioned above. Of this area, approximately half a million square miles are leased for pastoral and mining purposes, and a large proportion of the balance will eventually be used for pastoral pursuits, while portions of the Kimberley Division may support tropical agriculture.

TABLE IA.
VOLUME OF STANDING TIMBER.

	Forests.				
	Merchantable.		Unprofitable or Inaccessible.		Total.
	Per sq. mile.	Total.	Per sq. mile.	Total.	
	(1)	(2)	(3)	(4)	(5)
	Cub. ft. in the round.	Million cub. ft. in the round.	Cub. ft. in the round.	Million cub. ft. in the round.	Million cub. ft. in the round.
Conifers ... ..	...	...	...	...	...
Broadleaved	291,935	1,267·33	46,000	72·3	1,339·63
Total	291,935	1,267·33	46,000	72·3	1,339·63

The figures above refer to Jarrah, Karri, Tuart, Wandoo and Tingle forests, and represent quantities in the round, based on the full volume measure, compiled from detailed assessment survey carried out along regular strips spaced from 15 to 40 chains apart, depending on the density of the forest crop. This assessment dealt with mature and semi-mature timber only and no estimate of the volume of the immature growing stock is possible at present. There is a serious deficiency in the older age classes from the small pole stage onwards.

A start has been made to carry out more intensive assessments as part of regional survey work on modern lines and before the next statement is prepared much more complete data should be available. Although 8,257 acres have been planted with conifers, practically the whole of these plantations are under 10 years of age and therefore no estimate of timber volumes is possible.

SECTION IV.

Notes on Most Important Timbers and Forest Products.

(See 1928 Statement.)

SECTION V.

Ownership of Forests.

TABLE 2.
FOREST AREA BY OWNERSHIP (IN SQUARE MILES).

Type of Forest.	The State.				Corporate Bodies.	Private Individuals.	Total.
	Dedicated to Timber Production.	Permanent Dedication pending.	Other Forest.	Total.			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Merchantable	4,179	...	66	4,245	...	100	4,345
Unprofitable or Inaccessible	655	...	217	872	...	700	1,572
Total	4,834	...	283	5,117	...	800	5,917
Percentage of Total Forest Area	81.7	...	4.8	86.5	...	13.5	100

The 1928 Statement showed the area of State Forests dedicated as 1,925 square miles and the area awaiting dedication as 2,410 square miles. Attention is drawn to the greatly improved position shown in Table II. Major dedications were made by the Governor in Council on the following dates in conformity with the recommendation of the 1928 Conference.

	acres.						
1928	907,286
1929	1,117,820
1930	1,424
1932	15,202
1933	124,606

SECTION VI.

The Relationship of the State to the Forests.

A.—Brief Summary of Existing Legislation.

No important alterations have been made in the Forestry Laws of the State since 1928.

Regulations under "The Forests Act, 1918," have been consolidated and reprinted during 1935.

B.—Brief Summary of the Development of Forest Practice and Management, 1928-1934.

Working Plan control of the whole of the output of the sawmilling industry in the Jarrah and Karri forests of the State was established in 1929, when the General Working Plan for the Jarrah forests received approval of the Governor in Council in March, 1929, and the General Working Plan for the Karri forests had received approval in August, 1927. The Jarrah Working Plan, which controls the exploitation of 2,785,800 acres of forest in which mills with a total intake capacity of 700,000

loads were already established, is the more important document and it aims to reduce the output to a sustained yield basis within 10 years. Steady progress has been made in this direction and the necessary re-organisation of the timber industry to give effect to the provisions of the Plan is well advanced. Local Working Plans to control the detailed order of cutting, silvicultural treatment, and fire protection of the forest have been prepared for 913,495 acres, but owing to relief labour available since the depression reforestation work in all centres is considerably ahead of schedule, and, if the present rate of progress can be sustained for a further two years, practically the whole of the good quality cut over forest resulting from nearly seventy years of uncontrolled exploitation will receive silvicultural attention and be brought under intensive fire control and management.

As a basis for this work topographical survey to locate important natural features and routes of access such as old timber tramline formations has been carried out over 1,725,000 acres. Subsequently, compartments have been subdivided and provided with necessary firelines and roads of access, necessitating the opening up of 2,697 miles of combined tracks and firelines and 1,440 miles of firelines.

The following table shows the progress made in reforestation operations in the Jarrah forest in the past seven years:—

Year.	Top Disposal. acres.	Regeneration Cleaning. acres.	Thinning. acres.	Improvement Work. acres.
Total prior to 1928 ...	137,847	26,832	...	...
1928	59,795	4,431	2,058	...
1929	47,649	14,015	7,117	...
1930	38,777	19,389	11,582	14,344
1931	24,593	27,601	16,350	23,994
1932	7,828	17,293	22,977	27,195
1933	8,842	30,920	18,576	6,988
1934	22,519	29,411	14,870	327
Total	347,850	169,892	93,530	72,848

During this period the practice of marking under the Group Selection System trees which may be cut from the forest by sawmillers and sleeper hewers has been substituted for minimum girth control of trade cutting operations, leading to more economical utilisation.

In the Karri forest a clear felling system is adopted, sufficient over-mature or damaged trees remaining to serve as seed trees for natural regeneration. Operations carried out during the past seven years are as follows:—

Year.	Regenerated. acres.	Thinned (second growth). acres.
Prior to and including 1929 ...	687	...
1930	3,850	1,000
1931	60	1,366
1932	1,390	...
1933	348	...
1934	3,778	...
Total	10,113	2,366

In the Mallet Reserves of the Narrogin District, the pure stands of this species (*Eucalyptus astringens*) have been considerably extended by spot sowing and small areas of natural regrowth have been thinned and fire broken. The extent of these operations is shown in the attached statement:—

Year.	Regenerated by Sowing. acres.	Thinned (second growth). acres.
Prior to and including 1929 ...	764	48
1930	277	232
1931	403	477
1932	955	...
1933	1,579	93
1934	1,429	105
Total	5,407	955

Regeneration operations on sandalwood reserves have been suspended owing to the damage caused to the young plants by rabbits. It has been found impracticable to deal with these pests on uncleared land carrying a stocking of sandalwood host plants.

The softwood planting programme of 1,000 acres per annum has been maintained as shown in the following table:—

Year.	Areas of Conifers Established.			Total. acres.
	P. radiata. acres.	P. pinaster. acres.	Other. acres.	
Total prior to and including 1928 ...	1,204	1,842	104	3,150
1929	293	373	126	792
1930	183	520	152	855
1931	123	895	37	1,055
1932	197	709	13	919
1933	434	1,050	2	1,486
Total	2,434	5,389	434	8,257

With the rapid extension of silvicultural work set out above has been associated an increase in the permanent cadre necessary for the tending and fire protection of the regenerated forest. In 1928 the professional and field staff numbered 122 while to-day the number has risen to 212. There has been a big increase in the employment of casual labour occasioned by the engagement of relief workers, which at present number approximately 1,100.

During the seven-year period a further 74 houses have been erected or purchased for the accommodation of field staff and permanent workmen in the forest. Seven additional lookout towers have been erected on prominent hills commanding a view of forest areas, and 442 miles of tree telephone lines have been constructed to connect towers with district offices and departmental houses in addition to linking in a number of farmers on the edges of the forest who are prepared to assist in fire detection and suppression. The success which has attended our fire control measures is shown by the following table:—

Year.	Area under general fire control measures.	Area burnt.	Percentage.	Area under complete protection.	Area burnt.	Percentage.
	acres.			acres.			acres.
1928-29 ...	817,000	231	·03	49,963	231	4·6
1929-30 ...	723,700	2,835	0·3	117,122	2,835	2·4
1930-31 ...	724,430	741	0·1	160,638	741	0·5
1931-32 ...	717,800	395	·06	196,879	395	0·2
1932-33 ...	679,200	533	·08	220,583	533	0·3
1933-34 ...	864,700	196	·02	249,257	196	·08

SECTION VII.

The Forest Authority.

(See 1928 Statement.)

REVENUE AND EXPENDITURE.

The following are statements showing the revenue and expenditure from all sources for the years 1927 to 1934:—

REVENUE.

Year.	Gross Revenue.	Total Revenue Appropriations for Administration and Reforestation.	Balance contributed to Consolidated Revenue.
		£	£
1927-28 ...	228,614	122,296	106,318
1928-29 ...	191,023	104,900	86,123
1929-30 ...	170,128	113,883	56,245
1930-31 ...	95,277	62,200	33,077
1931-32 ...	57,138	36,983	20,155
1932-33 ...	65,875	40,641	25,234
1933-34 ...	89,895	58,340	31,555
Total ...	£897,950	£539,243	£358,707

EXPENDITURE.

Year.	Consolidated Revenue Fund.	Re- forestation Fund.	Sandalwood Trust Fund.	Loan Fund.	Total of all Sources.
			£		
1927-28 ...	24,081	87,080	4,613	9,972	125,746
1928-29 ...	23,081	121,921	2,826	9,997	157,825
1929-30 ...	24,116	107,748	2,942	...	134,806
1930-31 ...	18,511	91,438	1,410	2,511	113,870
1931-32 ...	26,363	20,424	765	45,454	93,006
1932-33 ...	12,835	10,379	1,370	133,880	158,464
1933-34 ...	14,742	13,946	1,590	141,520	171,798
Total ...	£143,729	£452,936	£15,516	£343,334	£955,515

From the above it will be seen that despite heavy loan expenditure as an unemployment relief measure the gross revenue for the period has practically balanced the gross expenditure.

SECTION VIII.

Forestry Activities: Municipal, Corporate and Private.

(See 1928 Statement.)

SECTION IX.

Forestry Societies.

(See 1928 Statement.)

SECTION X.

Educational, Research, and Experimental Work.

A.—EDUCATIONAL.

The only school for higher training in forestry in Australia recognised under Section 14 of "The Forests Act, 1918," is the Australian School of Forestry, Canberra. The University of Western Australia confers the degree of Bachelor of Science in Forestry on men holding the Diploma of the Australian Forestry School, subject to production of satisfactory evidence of one year's practical work and to the submission of a thesis on an approved forestry subject.

Staff conferences and schools of training for subordinate staff are held periodically.

B.—RESEARCH.

(1) *Silviculture.*

Observation plots and replicated experiments have been established to test the soundness of the technique being applied to large scale regeneration operations, and improvements and modifications are being made constantly to the standard practice in connection with all classes of operations as a result of this work.

Reference is made in the following paragraphs to a number of the more important projects only.

The character and composition of the Jarrah forest is being studied and local and regional differences assessed with regard to (a) the composition of the forest embracing height variances with diameter classes, basal area, distribution in diameter classes, log length and volumes for the principal crop and any associated species; (b) the determination of quality classes; (c) the correlation of soil type with crop quality and ground vegetation types; (d) the crown development and its distribution and its relation to breast high diameter.

The mapping of soil types and mechanical and chemical analyses of soils has been carried out in connection with a number of projects. Standard lines laid down for the work in Australia by the Soils Division of the Council for Scientific and Industrial Research at the Waite Institute, Adelaide, have been followed. Intensive soil surveys have been made of a number of plantation areas and marginal forest types. This work has extended over some 6,500 acres, and has formed the basis for extension of planting operations on a number of exotic plantations, and to decide areas to be cleared for pasture purposes in connection with forest settlements.

Pine establishment experimentation has lent itself to modern methods of field trials with plot replication and statistical analysis of results. As a result of this work during the past four years very valuable data has been secured in connection with different treatments in nursery practice, lifting, packing, transporting and setting in the field, preparation and subsequent treatment of planting site, manuring in plantation and nursery, and provenance studies particularly in connection with *Pinus pinaster*.

(2) *Fire Control.*

Considerable investigations have been carried out in connection with fire hazard in relation to weather conditions and in fire suppression methods. A fire weather research station has been established at Dwellingup and valuable data secured concerning methods of measuring the degree of fire danger on any day in summer and to a less extent in forecasting the probable occurrence of bad fire weather. The greatest advances in fire-fighting methods have resulted from the use of motor transport in enabling trained fire-fighters to reach the scene of the fire quickly, and the use of water pack sprays in lieu of direct beating, raking and counter firing.

(3) *Utilisation.*

Although considerable assistance is received in utilisation problems from the Forest Products Division of the Council for Scientific and Industrial Research, there are many problems requiring local attention, and the Utilisation Branch acts as a liaison between the Division and the Department.

During the past few years increasing attention has been paid to seasoning and grading problems. As a result of a combined study of the sawmilling industry in Western Australia by officers of the Division and the Department, a bulletin entitled "The Grading of Western Australian Timbers" was published in 1933 by the Council for Scientific and Industrial Research. As a result of this study standard specifications have been prepared for a number of the more important classes of timber produced in Western Australian saw mills.

Based on designs of cross-shaft internal fan kilns prepared by the Forests Products Division, designs have been prepared for a number of seasoning units using this type of kiln with Christensen type transfer systems, and excellent results are being obtained in the better seasoning of local hardwoods for higher grade uses.

Another project being developed in conjunction with the Forests Products Division is the preservation treatment of non-durable species for use as fence posts, particularly in the Wheat Belt. A number of experimental fence lines have been erected using seven different preservative treatments.

SECTION XI.

Annual Increment and Utilisation of Home-Grown Timber and Minor Forest Produce.

A.—Increment.

The total area of merchantable forest is given under Table I. as 4,345 square miles. Of this 1,265,920 acres, or 1,978 square miles, is cut-over forest on Crown lands from which the best mature logs have been taken for the most part under minimum girth restrictions. Owing to the uncontrolled fires of past years and the presence of faulty over-mature trees and useless species the increment on this cut-over forest is low, and although 193,000 acres of Jarrah and 12,500 acres of Karri have been treated for regeneration during the past seven years, resulting in a full stocking of regrowth over practically the whole area dealt with, the same estimated increment figure has been used as in the 1928 statement. It is hoped that assessment and sample plot work now in progress will enable a much more reliable estimate to be prepared for use in future statements. The remaining stand of virgin forest has been treated as maintaining itself at a constant volume of merchantable timber.

TABLE 3.

ANNUAL INCREMENT.

Ownership.	Conifers.	Broadleaved Species.				Net Increment.
		Area.	Estimated Gross Increment. Per square mile.	Total.	Loss by Fire, Water, Decay, etc.	
	(1) sq. mile.	(2) sq. mile.	(3) cub. ft.	(4) million cub. ft.	(5) million cub. ft.	(6) Million cub. ft.
STATE—						
<i>Merchantable :</i>						
(a) Virgin	15	2,252	...	...	...	...
(b) Cut-over	<i>Nil</i>	1,978	3,200	6,369	...	6,369
OTHER—						
<i>Merchantable</i>	<i>Nil</i>	100	...	...	...	...
Totals	15	4,330	...	...	...	6,369

B.—Utilisation.

TABLE 4.

ANNUAL UTILISATION OF HOME-GROWN TIMBER.

Ownership.	Conifers.	Broadleaved.			
		Converted (all types of product). Quantity. million cub. ft.	Value. £	Equivalent in Standing Timber. Quantity. million cub. ft.	Value. £
		(1)	(2)	(3)	(4)
State	<i>Nil</i>	6,400	826,806	21,263	61,280
Other	<i>Nil</i>	1,449	187,194	6,330	18,243
Total	<i>Nil</i>	7,849	1,014,000	27,593	79,523

For the purpose of this table the timber converted during the year ended 30th June, 1934, has been used.

TABLE 4A.

ANNUAL UTILISATION OF HOME-GROWN TIMBER AND MINOR FOREST PRODUCE.

(1) *Timber.*

Type of Product.	Broadleaved.	
	Quantity. million cub. ft. in the square.	Value. £
Jarrah	6.542	844,900
Karri	1.137	147,080
Wandoo ... ..	.098	12,750
Tuart ... ..	.043	5,550
Other Timbers ... ..	.029	3,720
Firewood and Mining Timber (various Timbers)	tons. 459,714	386,160
Piles and Poles (Jarrah and Wandoo)	lin. ft. 210,307	not known
Total ... ..	...	1,400,160

(2) *Minor Forest Produce.*

Type of Product.	Broadleaved.	
	Quantity. tons.	Value. £
Sandalwood	2,819	81,000
Tanning Bark	3,154	31,500
Essential Oils ... ..	...	13,885
Total ... ..	...	126,385

The quantities stated for the first five items in Part 1 of this table represent sawn and hewn timber which, in terms of standing timber, total 27,593,000 cubic feet in the round. The figures given for piles and poles represent only the quantity cut on State owned forests. Piles and poles are being obtained from private property, but no particulars regarding quantities or values are available.

SECTION XII.

Primary Forest Industries.

TABLE 5.

Industry.	Quantity of Timber and Minor Forest Produce consumed (Home-grown and Imported). cub. ft. in the round.	Value of Product.* £	Number of Persons Employed.
Hewing	9,806,935	245,173	950
Mining Timber and Firewood ...	tons. 459,714	344,785	830
Tan Bark Stripping	3,154	31,500	Not available
Sandalwood	2,819	81,000	160
Total ... ..	...	1,467,281	3,840

* These values are based on the value of the product delivered on rails in an undressed condition at port of shipment or local market.

The stripping of mallet bark is done chiefly by farmers during a short slack period and is more or less spasmodic. It is not possible to estimate the number engaged in such work.

Sandalwood getters are not engaged continuously in supplying sandalwood, and many find it necessary to seek other employment for portion of each year.

This table does not include town sawmills and associated secondary industries.

SECTION XIII.

Exports and Imports.

As these matters form the subject of a special statement to be presented to the Conference, the tables only have been printed in this section without comments.

(1) Timber Exports.

Year.	—Exports (Jarrah and Karri).—		Imports Value. £
	Quantity. cub. ft. in the square.	Value. £	
1911	12,449,500	986,341	152,133
1912	11,297,100	903,396	167,244
1913	13,619,850	1,089,481	202,640
1923	7,911,310	1,009,831	109,428
1924	11,126,861	1,379,022	113,893
1925	11,844,308	1,491,925	161,898
1926	12,001,384	1,533,030	144,989
1927	12,580,262	1,659,876	162,193
1928	10,384,784	1,274,482	183,196
1929	7,635,237	967,038	241,601
1930	6,579,743	812,112	197,532
1931	4,127,856	533,997	76,533
1932	3,062,673	447,188	164,496
1933	2,235,540	342,949	197,916
1934	4,060,830	563,355	183,944

(2) Minor Forest Produce Exported.

Year.	—Exports.—			—Imports.—	
	Sandalwood.	Tanning	Essential	Tanning	Essential
	Quantity. tons.	Value. £	Materials, Value. £	Oils, Value. £	Oils, Value. £
1911	6,907	65,506	83,470	2,912	4,938
1912	3,154	27,533	49,094	3,089	4,598
1913	6,260	47,589	47,377	2,651	5,392
1923	7,705	103,958	21,161	6,991	4,033
1924	14,081	348,713	29,607	2,790	3,301
1925	6,243	186,775	40,136	42,057	4,429
1926	7,771	238,203	15,056	47,819	4,449
1927	6,821	199,746	15,818	26,307	4,254
1928	4,829	147,426	27,662	38,919	6,955
1929	7,583	225,208	35,850	63,307	4,413
1930	943	22,228	40,628	77,510	3,980
1931	1,606	43,790	35,333	56,170	3,160
1932	1,386	40,546	42,016	59,301	3,505
1933	3,068	88,846	33,352	26,331	3,421
1934	2,508	75,424	20,904	26,720	3,888

EXPORTS AND IMPORTS OF TIMBER, SHOWING DESTINATION AND COUNTRY OF ORIGIN RESPECTIVELY, FOR YEAR 1934.

	—Exports.—		—Imports.—	
	Quantity. cub. ft. in the square.	Value. £	Quantity. cub. ft. in the square.	Value. £
Commonwealth of Australia	1,507,631	182,290	121,082	22,921
South African Union	534,075	60,770	...	...
New Zealand	101,367	12,163	15,766	3,349
India	74	8	...	...
Ceylon	459,513	55,564	...	...
United Kingdom	603,658	74,522	7	8
British Malaya	1,793	184	8,267	622
Egypt	2,409	329	...	...
Mauritius	91,350	11,011	...	...
Sweden	398	36	53,692	4,963
Belgium	34,294	4,257	...	...
Germany	13,736	1,598	20	103
Holland	24,993	3,071	190	170
China	4,399	556	...	...
Norway	...	...	24,473	2,242
Canada	...	...	144,086	9,854
Japan	...	...	91	31
Philippine Islands	...	...	4,796	465
United States of America	...	...	65,508	9,991
France	361	21	...	...
Netherlands East Indies	443	36	...	...
Hong Kong	215,389	25,847	...	...
Irak	15,000	1,800	...	...
Portuguese East Africa	195,380	23,637	...	...
Persia	251,808	29,217	...	...
Italy	2,759	331	...	...
Honduras	...	...	4	5
French Indo-China	...	...	185	66
Noumea	...	...	280	127
Pacific Islands	...	...	213	74

This table refers to timber only and not to small wood manufactures and minor forest produce.

TABLE 6.
AVERAGE ANNUAL EXPORTS AND IMPORTS.
(1) *Timber, Wood Manufactures.*

	Exports.			Imports.			Balance (plus or minus).		
	Value.	Quantity.		Value.	Quantity.		Value (col. 1 — col. 4).	Quantity.	
		Converted.	Equivalent in Standing Timber. (3)		Converted.	Equivalent in Standing Timber. (6)		(Col. 2 — col. 5). (8)	Equivalent in Standing Timber (col. 3 — col. 6). (9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
	£	million cub. ft.	million cub. ft.	£	million cub. ft.	million cub. ft.	£	million cub. ft.	million cub. ft.
Conifers ...	<i>Nil</i>	<i>Nil</i>	<i>Nil</i>	183,944	·439	·878	— 183,944	— ·439	— ·878
Broadleaved...	563,355	4·161	13·870	<i>Nil</i>	<i>Nil</i>	<i>Nil</i>	+ 563,355	+ 4·161	+ 13·870
Total ...	£563,355	4·161	13·870	£183,944	·439	·878	+ £379,411	+ 3·722	+ 12·992

TABLE 6A.
AVERAGE ANNUAL EXPORTS AND IMPORTS.
(2) *Minor Forest Produce.*

Type of Produce.	Exports.		Imports.	
	Value.	Quantity.	Value.	Quantity.
	£	tons.	£	tons.
Sandalwood ...	75,424	2,508	<i>Nil</i>	<i>Nil</i>
Tanning Barks ...	20,904	2,095	1,795	156
Tanning Extract ...	<i>Nil</i>	<i>Nil</i>	2,515	Not known
Essential Oils ...	26,720	Not known	3,888	Not known
Totals ...	123,048	...	8,198	...

Owing to difficulty of estimating average year through and following the trade depression, 1934 figures are taken as representing a normal year's trading on the immediate outlook for the purpose of Table 6, parts 1 and 2.

SECTION XIV. Summary and Outlook.

TABLE 7.
SUMMARY STATEMENT.

(The total Home Consumption of Home-grown and Imported Timber, compared with the total Increment.)
(EXPRESSED AS STANDING TIMBER.)

	Utilisation. (Table IV., Col. 3).	Exports. (Table VI., Col. 3).	Consumption of Home-grown Timber. (Col. 1 — Col. 2).	Imports. (Table VI., Col. 6).	Total Consumption of Home and Imported Timber. (Col. 3, plus Col. 4).	Net Increment. (Table III., Col. 6).	Balance plus (+) or minus (—). (Col. 6, minus Col. 5). (7)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	million cub. ft.	million cub. ft.	million cub. ft.	million cub. ft.	million cub. ft.	million cub. ft.	million cub. ft.
Conifers ...	...	...	...	·878	·878	...	— ·878
Broadleaved ...	27·593	13·870	13·723	...	13·723	6·369	— 7·354
Total ...	27·593	13·870	13·723	·878	14·601	6·369	— 8·232
Per head of population (Total population = 442,706)	62 cub. ft.	31 cub. ft.	31 cub. ft.	1·9 cub. ft.	32·9 cub. ft.	...	...

Although the above table has been prepared again on the standard form, its value as a means of ascertaining the relation of forest capital and increment to consumption is questioned. Remarks made in this connection and also with reference to probable duration of merchantable supplies in the 1928 statement still hold good, but detailed assessment work on a regional survey basis now in progress will enable much more accurate forecasts to be made in the next statement prepared.

The forestry position in Western Australia has improved materially since the 1928 Conference.

Practically the whole of the merchantable forest area which remains in the possession of the Crown has been permanently dedicated to the production of timber, thus increasing the area of State Forests from 1,232,000 acres to 3,093,697 acres.

Working Plan control has been established over the output of all timber from State Forests and Timber Reserves, and, in so far as the Jarrah sawmilling industry is concerned, considerable progress has been made towards the goal of sustained yield.

A new crop of timber has been established on 210,900 acres of indigenous forest and provision has been made for the necessary permanent establishment for tending and protecting this growing forest.

The planting programme for the purpose of providing home-grown softwood supplies has been maintained, and 8,257 acres of coniferous plantations established.

An efficient organisation has been built up whereby inexperienced and unskilled labour is being employed effectively on reforestation work, and in this way appreciable progress has been made in the rehabilitation of cut-over forest areas which were reverting rapidly to waste land. The importance of this great national undertaking has been recognised by the Commonwealth Government, who are now subsidising this work on a pound-for-pound basis. If this assistance can be continued on the present scale for a further period of two years, practically the whole of the cut-over good quality forest will be brought back into production. The State Government for its part realises that, for some years ahead, it is creating a liability as well as an asset, and that a greater proportion of forest revenue than is provided for this work at present under Section 41 of the Forests Act, 1918, may be necessary to insure that the very extensive areas of forest in the sapling stage are tended effectively and well guarded from fire damage.

A review of the immediate outlook for forestry in Western Australia would not be complete without reference to the unfortunate failure of the States and Commonwealth to bring about fuller co-operation in matters of higher forestry education and silvicultural research. It is hoped that, in reviewing the resolutions of the 1928 Conference, the coming Conference will draw the attention of all Australian Governments to the importance of the national aspect of these two phases of forest policy.

APPENDIX.

List of bulletins published since 1928.

41. Description of 50 new species and 6 varieties of Western and Northern Australian Acacias and notes on 4 other species, by J. H. Maiden and W. F. Blakely.
42. Forests and Forest Resources of Western Australia, 1928. (With Vegetation Map of Western Australia.)
43. The Development of Forest Practice and Management in Western Australia, by S. L. Kessell.
44. A Taxonomic Study of the Genus Santalum, with special reference to the Sandalwoods of Australia, by C. A. Gardner.
45. The Air Seasoning of Jarrah Flooring, 1929.
46. The Hardwoods of Western Australia, 1929.
The Grading of Western Australian Timbers, by F. Gregson and R. F. Turnbull. (Published by the Forests Products Division of the Commonwealth Council for Scientific and Industrial Research.)