

## SECTION X.

## FORESTS, FORESTRY, AND FORESTAL PRODUCTS.

## § 1. The Forests of Australia.

1. **Extent of Forests.**—Although no definite survey of forest lands has been made on a uniform basis for the different States of Australia, the following table gives the results of careful estimates made for each State:—

## FOREST RESERVES AND FOREST AREAS, STATE AND COMMONWEALTH, 1915.

State.	Specially Reserved for Timber.	Total Forest Area.	Percentage of State Area.		Percentage of Commonwealth Area.	
			Specially Reserved.	Total Forest.	Specially Reserved.	Total Forest.
	Acres.	Acres.	%	%	%	%
New South Wales	5,764,125	15,000,000	2.90	7.57	0.30	0.79
Victoria ...	4,160,342	11,800,000	7.40	20.98	0.22	0.62
Queensland ...	4,076,335	40,000,000	0.95	9.32	0.21	2.10
South Australia ...	147,380	3,800,000	0.03	1.56	0.01	0.20
Western Australia	1,610,435	20,400,000†	0.26	3.27	0.08	1.07
Tasmania ...	1,019,449	11,000,000	6.08	65.56	0.05	0.58
Commonwealth	16,778,066	102,000,000	—	—	0.87	5.36

\* Inclusive of Federal area. † S.W. division only.

The actual area of wooded land is probably in all cases much greater than shewn above. For example, that of Western Australia is estimated at 97,900,000 acres; Queensland has probably 143,000,000 acres; and Victoria has a considerable extent of "Mallee" country not included in the above estimate. The basis of estimation for each State in any case cannot be regarded as quite identical. Considerable areas not included as forest lands possess timber of local value.

In each of the States areas have been set apart as State forests and "timber reserves," in some cases the reservation being made in perpetuity, in others for a definite period; in others again the reservation may be cancelled at any time.

The absolute and relative forest areas of Australia and other countries, to the latest available date, are shewn in the table on the next page.

## RELATIVE AREAS OF FOREST LANDS, AUSTRALIA AND OTHER COUNTRIES.

Country.	Total Forest Area.	Percentage of Total Area.	Country.	Total Forest Area.	Percentage of Total Area.
	Sq. Miles.	%		Sq. Miles.	%
<b>Commonwealth</b> ...	<b>159,375</b>	<b>5.32</b>	Rumania ...	10,836	21.36
New Zealand ...	26,562	25.63	Sweden ...	90,241	52.20
United Kingdom ...	4,820	3.84	Norway ...	26,685	21.50
France ...	36,005	17.58	Russia in Europe ...	859,375	39.00
Algeria ...	10,249	2.98	United States ...	860,000	24.08
Germany ...	54,015	25.90	Canada ...	625,000	17.34
Switzerland ...	3,290	20.60	Cape Colony ...	537	0.19
Italy ...	17,613	15.92	British India ...	126,330	11.55
Austria ...	37,700	31.66	Japan ...	60,918	56.04
Hungary ...	34,750	29.30			

2. **Distribution of Timber.**—The characteristics of the forest areas are given in some detail for each State in the Official Year Book No. 6, pp. 446-9. The more conspicuous timber regions of Australia as a whole are the eastern and southern portions, including Tasmania, and, again, the south-western portion northwards and eastwards from Cape Leeuwin. In regard to distribution, on the eastern side of the continent the largest timber is found on the crests and coastal slopes of the mountain ranges, but in the south-west, in addition to the vegetation between mountains and sea, a large area of forest stretches inland from the coastal ranges. The hills encircling Adelaide and Yorke and Eyre Peninsulas also bear good forest. The Kimberley district is timbered, and in the Northern Territory and round the shores of the Gulf of Carpentaria there are considerable forest areas. In the coastal regions of parts of West and North-West Australia, and along the shores of the Great Australian Bight and Encounter Bay, there is little forest. The areas in the centre of the continent are thinly timbered.

See also special article Section III., § 8, "Australian Eucalyptus Timbers."

## § 2. Forestry.

1. **Objects.**—Economic forestry, aiming at the conservation of forestal wealth by safeguarding forests against inconsiderate destruction, and by the suitable re-afforestation of denuded areas, is essential to the preservation of industries dependent upon an adequate supply of timber, and to the perpetuation of a necessary form of national wealth. Though in Australia large areas of virgin forests still remain, the inroads made by timber-getters, by agriculturists, and by pastoralists—who have destroyed large areas by "ring-barking"—are considerable; and it is not unlikely that climatological changes are caused thereby. It is stated that beneficial consequences follow on the planting of trees on denuded lands, or along eroding coasts, and that a forest covering beneficially regulates the effects of rainfall.

Successful planting of exotics in various parts of the Commonwealth has demonstrated that the Australian climate is suitable for the cultivation of a large number of the most valuable and beautiful of the world's timber trees.

2. **Forestry Departments.**—Each State of the Commonwealth, has organised a separate forestry department or branch of service specially charged with forestal matters. Forest improvement work is carried on, areas of young forest being cleaned up by the felling and removal of stunted, diseased and suppressed growth, the burning of debris and the making of fire breaks. Provision is made for effective patrols in forest districts, to check the ravages caused by fires, often caused, it is believed, through carelessness.

3. **Sylvicultural Nurseries and Plantations.**—Recognition of the necessity for systematic sylviculture has led to the creation in most of the States of a number of sylvicultural nurseries and plantations. The locality of these establishments, together

with a brief statement of the nature of their activities, is given in previous issues of the Year Book. (Reference may be made to Official Year Book No. 6, pp. 451-3.) Details regarding forest reserves, nurseries, and trial stations are as follows:—

#### FOREST RESERVES AND NURSERIES, 1915.

Particulars.	New South Wales.*	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Commonwealth.
State Forest Reserves—							
Number (for area see page 393) ...	1,155	317	346	41	334	.64	2,257
State Forest Nurseries—							
Number ...	3	3	2	7	1	..	16
Area ... (acres)	26	54	1	7	17	...	105
Plantation Trial Stations—							
Number ...	6	14	2	...	2	...	24
Area ...	512	19,760	60	...	1,000	...	21,332
Number of persons employed in Forestry Departments—							
Administrative ...	24	12	2	1	6	1	46
Professional ...	6	5	1	1	1	2	16
General ...	162	119	20	138	23	7	469

Included in the 162 employees in the General Division in New South Wales there are 58 Acting Foresters in the ranks of the Mounted Police.

\* Including Federal Territory area.

4. Revenue and Expenditure.—The revenue and expenditure of the State Forestry Departments from 1911-12 to 1915-16 are given below:—

#### REVENUE OF STATE FORESTRY DEPARTMENTS, 1911-12 to 1915-16.

State.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
	£	£	£	£	£
New South Wales ...	95,231	96,145	99,333	87,386	68,107
Victoria ...	45,077	51,146	57,746	70,834	59,189
Queensland ...	53,840	63,467	62,973	75,318	70,691
South Australia ...	4,849	5,609	6,868	5,588	5,981
Western Australia ...	23,456	33,805	48,236	53,904	45,726
Tasmania ...	3,800	4,414	4,659	4,224	3,615
Commonwealth ...	226,253	254,586	279,815	297,254	253,309

#### EXPENDITURE OF STATE FORESTRY DEPARTMENTS, 1911-12 to 1915-16.

State.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
	£	£	£	£	£
New South Wales ...	34,408	42,154	44,828	47,207	50,531
Victoria ...	41,686	56,899	58,007	65,219	65,142
Queensland ...	2,954	5,397	7,386	7,654	7,416
South Australia ...	23,296	22,858	22,832	24,217	24,892
Western Australia ...	8,874	10,469	11,463	12,068	8,870
Tasmania ...	220	760	760	1,204	683
Commonwealth ...	111,488	138,537	145,276	157,569	157,534

5. Instruction in Scientific Forestry.—Several schools have been established in which, while general scientific instruction is imparted, special attention is paid to forestry. In the classes, theoretical forestry, botany, geology, physics, land surveying, etc., are taught; while in outside work trainees receive practical instruction in the

preparation of seed-beds, seed-sowing, propagation, planting out, pruning, the general care and improvement of plantations and natural forests, and the employment of timber to the best advantage. The desire is to give the prospective forester a thorough training in all branches of the work. Courses of lectures are also given at various centres, and, at some of the higher technical schools, members of the forest staffs are afforded opportunities of qualifying in special subjects. Methods of training, etc., are not uniform in the various States, and one of the prime objects of the Conference of 1916 was the evolution of a system which, while aiming at uniformity, would be sufficiently elastic to provide for special needs in any State.

6. **Forest Congresses.**—Interstate Conferences on Forestry were held in 1911 and 1912, chiefly with a view of securing uniformity of management. An International Forest Congress was held at Paris in June, 1913, when Professor Percy Groom, of South Kensington Imperial College, represented the Commonwealth Government. The papers and reports dealt chiefly with the threatened shortage of timber, and the measures necessary to avert the danger. In May, 1916, an Interstate Forestry Conference was held at Adelaide under the presidency of the Governor-General.

### § 3. Commercial Uses of Principal Australian Timbers.

1. **General.**—The uses of the more important of Australian timbers are many and various, and are indicated in previous issues of this work (see Official Year Book No. 6, pp. 454-6). See also Section III., § 8 of the present volume.

The Commonwealth Government is experimenting with Australian woods for rifle stocks, telephone switch boards, etc. Queensland maple (*Flindersia chatawaiana*) is at present largely used for rifle stocks, and supplies of coachwood are being accumulated at Lithgow for the same purpose. It has also made available a sum of money for the seasoning and storing of Australian timber, and depôts have been established at Canberra and Newington in New South Wales, and at Maribyrnong in Victoria. Timber seasoning depôts have also been established by States Governments at the principal centres, and from these, contractors may obtain timber at scheduled rates. Other timber seasoning works have been established by private enterprise.

2. **Uniformity in Nomenclature.**—Unfortunately the vernacular names applied to the gums, ironbarks, etc., in the various States, and even in different parts of the same State, do not always refer to identical timbers. The resulting confusion has not only been productive of loss, but it has, to some extent, prejudicially affected the timber trade. This subject is referred to at some length in the special article, "Australian Eucalyptus Timbers," in Section III., § 8. At the 1916 Forestry Conference alluded to above, the matter came up for special consideration, and a resolution was passed affirming the desirability of establishing a uniform nomenclature. It was further resolved that committees should be appointed in each State to take the necessary steps to give practical effect to that resolution.

### § 4. Forestal Industries and Production.

1. **Timber.**—Estimates of the quantity and value of timber cut and sawn have been prepared by the States Forestry Departments, and are as follows:—

#### QUANTITIES OF LOCAL TIMBER SAWN OR HEWN IN EACH STATE OF THE COMMONWEALTH DURING THE YEARS 1911 to 1915.

State.	1911.	1912.	1913.	1914.	1915.
	sup. feet.	sup. feet.	sup. feet.	sup. feet.	sup. feet.
New South Wales	142,358,000	162,604,000	164,899,000	140,940,000	115,201,000
Victoria	53,000,000	60,000,000	81,770,000	84,374,000	62,589,000
Queensland	138,896,000	163,828,000	156,634,000	168,456,000	144,950,000
South Australia	217,000	183,000	100,000	118,000	111,000
Western Australia	191,114,000	217,696,000	218,908,000	227,297,000	123,494,000
Tasmania	66,061,000	63,243,000	60,780,000	52,182,000	47,890,000
Commonwealth	591,646,000	667,554,000	683,091,000	673,367,000	494,235,000

2. **Other Forest Produce.**—(i.) *General.* No satisfactory estimates of the total value of forest production are available. Large returns are credited to firewood, but these are subject to a wide range of uncertainty.

(ii.) *Eucalyptus Oil.* A considerable quantity of eucalyptus oil is produced each year, chiefly in Victoria, the product being used as a drug and also in connection with ore flotation processes. Complete information regarding local production and consumption is not available. Oversea exports amounted in 1913 to £40,000, in 1914-15 to £21,000, and in 1915-16 to £36,000, the bulk of the product in each year being forwarded to the United Kingdom.

(iii.) *Tan Barks.* In addition to the wattle bark, mentioned at the close of this section, a valuable tan bark is obtained from the mallet (*E. occidentalis*) of Western Australia. Its exploitation has, however, been so rapid that the available supply is now comparatively small.

### § 5. Oversea Trade.

1. **Imports.**—The quantity and value of timber imports during the four years 1912 to 1915-16 inclusive are shewn according to countries of origin in the following tables. The figures in the first table are exclusive of a few items such as veneers, etc.:

#### IMPORTS OF DRESSED TIMBER, COMMONWEALTH, 1912 to 1915-16.

Country of Origin.	Quantity.				Value.			
	1912.	1913.	1914-15.	1915-16.	1912.	1913.	1914-15.	1915-16.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom ...	95,938	3,537	12,834	265	1,070	191	211	23
New Zealand ...	77,821	4,427	25,719	117,929	1,107	32	355	1,653
Other British Poss. ...	951,085	2,344	...	78,622	8,488	26	...	718
Germany ...	7,647	66,737	447,678	...	245	1,106	3,383	...
Norway ...	45,796,037	56,251,225	46,289,602	46,858,100	341,731	399,899	334,459	145,895
Sweden ...	23,827,979	23,571,012	11,699,062	7,690,606	176,677	197,968	95,994	66,729
United States ...	4,239,729	1,938,088	1,438,799	717,003	37,477	19,658	14,628	7,295
Other For. Countries	14,636	634,072	4,530	2,711	172	4,460	132	73
<b>Total ...</b>	<b>75,080,872</b>	<b>82,471,445</b>	<b>59,918,224</b>	<b>25,465,236</b>	<b>566,987</b>	<b>613,360</b>	<b>449,162</b>	<b>222,396</b>

As the table shews, the bulk of the imports of dressed timbers comes from Norway, Sweden and the United States. Practically the whole of this timber consists of soft-woods—deal and pine—used for lining, weatherboards, flooring, shelving, doors, box-making, etc.

#### IMPORTS OF UNDRESSED TIMBER, INCLUDING LOGS, COMMONWEALTH, 1912 to 1915-16.

Country of Origin.	Quantity.				Value.			
	1912.	1913.	1914-15.	1915-16.	1912.	1913.	1914-15.	1915-16.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom ...	311,535	65,342	236,396	91,707	3,409	1,189	2,248	1,336
Canada ...	12,271,444	12,263,586	1,484,840	73,166	54,116	54,369	5,366	532
India ...	740,059	682,724	858,999	831,939	20,847	18,490	26,550	17,924
New Zealand ...	93,524,793	64,489,943	71,000,372	75,138,381	654,093	433,798	469,063	479,454
Straits Settlements	544,190	281,155	194,255	217,450	2,785	1,454	1,18	1,203
Other British Poss.	59,607	2,723	50,273	12,317	550	61	558	207
Japan ...	11,911,714	16,011,418	12,576,157	12,796,031	61,900	72,095	64,713	83,876
Java ...	7,319	45,890	6,239	48,599	147	1,312	41	1,345
Norway ...	4,152,072	6,204,961	2,857,057	1,557,451	29,083	42,162	22,086	12,279
Russia ...	9,258,609	10,516,517	3,301,910	211,931	56,099	66,434	20,795	1,212
Sweden ...	6,986,236	5,905,476	2,276,154	1,653,468	50,072	44,696	19,108	14,119
United States ...	227,112,385	256,331,192	171,222,415	138,033,305	1,209,626	1,418,760	943,834	799,888
Other For. C'tries	2,074,393	317,975	265,236	948,134	18,878	2,771	3,466	6,091
<b>Total ...</b>	<b>368,954,356</b>	<b>373,118,802</b>	<b>266,330,303</b>	<b>231,613,879</b>	<b>2,161,605</b>	<b>2,157,591</b>	<b>1,579,001</b>	<b>1,412,466</b>

By far the larger proportion of the undressed timber imports also consists of soft-woods such as yellow pine, redwood, and oregon from the United States and Canada; kauri, rimu, and white pine from New Zealand; pine from Japan, and red deals from Russia and Norway and Sweden. Amongst the hardwoods imported the principal are oak from the United States and Japan, and teak from India.

2. Exports.—The quantity and value of undressed (sawn) timber exported from 1911 to 1915-16 are given below, the countries of destination being also shewn.

**EXPORTS OF UNDRESSED TIMBER (SAWN), COMMONWEALTH, 1911 to 1915-16.**

Country to which Exported.	Quantity.*					Value.				
	1911.	1912.	1913.	1914-15.	1915-16.	1911.	1912.	1913.	1914-15.	1915-16.
	1000 sup. ft.	1000 sup. ft.	1000 sup. ft.	1000 sup. ft.	1000 sup. ft.	£	£	£	£	£
United Kingdom...	10,436	11,325	20,222	20,185	5,741	77,070	79,940	140,082	143,698	45,286
Canada ...	546	456	619	67	19	6,640	5,893	8,023	990	321
S. African Union	19,243	39,544	33,793	34,403	23,100	132,094	270,282	233,782	241,139	162,788
Ceylon ...	611	576	1,926	5,307	30	4,110	4,153	12,923	36,142	203
Egypt ...	...	...	...	+7	†413	...	...	...	149	†3,638
Fiji ...	1,900	2,359	1,421	1,534	780	12,416	17,342	12,939	17,238	5,830
India ...	52,254	31,477	23,960	13,130	...	353,488	209,312	160,577	87,260	...
Mauritius ...	278	225	235	655	655	2,138	1,501	1,587	4,366	4,368
New Zealand ...	27,137	21,061	38,586	25,517	15,912	199,666	162,518	278,975	202,398	140,507
Ocean Island ...	120	446	347	241	197	768	3,682	3,139	1,690	1,873
Papua ...	435	614	598	192	205	4,223	6,410	6,184	2,026	2,412
Straits Settlements	52	81	88	12	10	380	506	478	118	100
Other British Pos.	103	18	249	504	599	774	184	2,151	4,714	4,987
Argentine Repub.	2,474	667	1,584	...	...	16,492	4,447	10,558	...	...
Belgium ...	2,887	2,727	2,429	203	...	21,665	19,193	17,146	1,378	...
China ...	2,138	1	1	2,582	...	14,250	2	2	17,764	...
Egypt ...	7,289	50	56	...	...	48,594	333	377	49	...
Germany ...	1,829	1,774	1,762	177	...	18,122	17,394	14,293	1,365	...
Japan ...	36	90	86	7	1	354	771	890	73	15
Kaiser Wilhelm L.	79	98	131	23	...	648	891	1,522	297	3
Marshall Islands...	226	140	211	6	5	2,023	1,366	2,227	81	59
Netherlands ...	3	...	...	...	...	26	...	...	...	...
Bismarck Archip.	373	611	...	282	41	3,498	6,231	5,100	3,258	580
New Caledonia ...	355	232	201	96	33	3,096	2,017	2,123	800	417
Philippine Islands	2,941	61	63	...	...	19,608	414	449	...	...
Port'guese E. Africa	2,639	380	3,106	24	606	17,416	3,890	21,775	239	4,039
U.S. of America ...	4,907	942	1,295	294	469	25,032	11,182	13,979	3,891	6,826
Uruguay ...	1,888	1,754	...	668	...	12,589	11,689	...	4,618	...
Other For. Count.	3,346	1,692	1,836	256	124	22,468	16,814	13,752	2,581	1,398
<b>Total</b> ...	<b>146,524</b>	<b>119,401</b>	<b>134,805</b>	<b>106,376</b>	<b>48,940</b>	<b>1,019,648</b>	<b>858,357</b>	<b>964,938</b>	<b>778,122</b>	<b>385,650</b>

\* Exclusive of timber not measured in super. feet. † Previously included with foreign countries.

As the table shews, the bulk of the exports of undressed timber was consigned to South Africa, New Zealand, and the United Kingdom, and consisted of Australian hardwoods, which have earned an excellent reputation for such purposes as railway sleepers, harbour works, wood paving, etc.

The quantities of timber imported and exported during the last five years are given in the next table.

**QUANTITIES OF TIMBER IMPORTED INTO AND EXPORTED FROM THE COMMONWEALTH, 1911 to 1915-16.**

Description.	1911.	1912.	1913.	1914-15.	1915-16.
<b>IMPORTS.</b>					
Veneers ... Sup. feet	994,575	1,815,917	1,959,436	1,438,272	430,060
Dressed ... "	90,672,708	76,513,670	83,849,002	62,789,849.	28,653,427
Undressed ... "	324,325,658	350,052,617	349,680,896	255,897,777	223,278,433
Logs ... "	29,902,216	18,901,739	23,437,906	10,432,526	8,335,446
Palings ... No.	...	...	...	...	...
Pickets ... "	1,523,849	2,065,145	2,302,748	923,155	808,342
Shingles ... "	937,270	1,242,720	1,526,994	1,067,060	2,677,620
Staves—Dressed, etc. ... "	5,440	920	...	73,609	67,380
Undressed ... "	3,363,457	2,181,121	3,639,969	2,535,831	591,750
Laths for blinds ... "	*	*	*	*	*
" other ... "	30,213,094	29,631,746	46,337,501	18,544,270	17,629,168
Spokes, rims, felloes ... "	1,916,045	*	*	*	*
Doors ... "	234	12,172	1,410	1,611	1,925
Architraves, mouldings, etc. ... Lin. feet	23,601	35,106	80,398	2,313	6,202
Other (Free) ...	*	*	*	*	*

\* Quantity not available.

## QUANTITIES OF TIMBER IMPORTED AND EXPORTED, ETC.—Continued.

Description.	1911.	1912.	1913.	1914-15.	1915-16.
EXPORTS.					
Veneers ...	...	...	...	...	...
Dressed ... Sup. feet	1,071,683	975,679	716,621	742,844	498,074
Undressed ... "	146,262,683	119,401,434	134,805,222	106,375,692	48,939,938
Logs ...	3,252,115	1,913,973	1,899,474	411,204	226,400
Palings ... No.	942,220	630,670	487,094	462,705	322,240
Pickets ...	6,628	5,335	1,411	1,350	800
Shingles ...	35,790	21,332	31,300	...	...
Staves—Dressed, etc. "	1,300	...	...	...	...
" Undressed "	...	...	...	840	...
Laths for blinds "	*	*	*	*	*
" other "	110,900	406,980	7,190	284,521	111,600
Spokes, rims, felloes "	*	*	*	*	*
Doors ...	*	*	*	*	*
Architraves, mouldings, etc. ... Lin. feet	92,162	125,327	107,664	99,152	41,673
Other ...	...	...	...	...	...

## EXCESS OF IMPORTS OVER EXPORTS.

Veneers ...	994,575	1,815,917	1,959,436	1,438,272	430,060
Dressed ... Sup. feet	89,601,025	75,537,991	83,132,381	62,047,005	28,155,353
Undressed ... "	178,062,975	230,651,183	214,875,674	149,522,085	174,338,495
Logs ...	26,650,101	16,987,766	21,538,432	10,021,322	8,109,046
Palings ... No.	—942,220	—630,670	—487,094	—462,705	—232,240
Pickets ...	1,517,221	2,059,810	2,301,337	921,805	807,542
Shingles ...	901,480	1,221,388	1,495,694	1,067,060	2,677,620
Staves—Dressed, etc. "	4,140	920	...	73,609	67,380
" Undressed "	3,363,457	2,181,121	3,639,969	2,534,991	591,750
Laths for blinds "	*	*	*	*	*
" other... "	30,102,194	29,224,766	46,330,311	18,259,749	17,517,568
Spokes, rims, felloes "	*	*	*	*	*
Doors ...	*	*	*	*	*
Architraves, mouldings, etc. ... Lin. feet	—68,561	—90,221	—27,266	—96,839	—35,471
Other ...	*	*	*	*	*

\* Quantity not available.

Note. — signifies excess of exports over imports.

The values of the timber imports and exports during the last quinquennium are shewn hereunder.

**VALUE OF TIMBER IMPORTED INTO AND EXPORTED FROM THE COMMONWEALTH, 1911 to 1915-16.**

Description.	1911.	1912.	1913.	1914-15.	1915-16.
IMPORTS.					
Veneers ...	£ 25,795	£ 42,379	£ 55,374	£ 43,625	£ 20,610
Dressed ...	683,430	578,427	625,032	468,025	243,155
Undressed ...	1,819,832	2,061,666	2,036,330	1,534,188	1,383,140
Logs ...	165,460	99,939	121,261	44,813	29,326
Palings ...	...	...	...	...	...
Pickets ...	5,622	10,270	8,497	3,406	4,030
Shingles ...	1,280	1,892	2,208	1,654	3,487
Staves—Dressed, etc. ...	131	14	...	1,607	1,907
" Undressed ...	20,417	15,744	22,870	16,440	11,164
Laths for blinds ...	38	26	4	...	...
" other ...	23,181	26,436	40,131	24,676	14,809
Spokes, rims, felloes ...	40,047	21,616	13,993	21,228	11,239
Doors ...	137	3,616	445	591	910
Architraves, mouldings, etc. ...	65	145	250	31	22
Other (Free)...	129	1,043	81	156	90
Total value ...	2,785,564	2,863,213	2,926,476	2,160,440	1,723,889

## VALUE OF TIMBER IMPORTED AND EXPORTED, ETC.—Continued.

Description.	1911.	1912.	1913.	1914-15.	1915-16.
EXPORTS.					
	£	£	£	£	£
Veneers ... ..	...	...	...	...	...
Dressed ... ..	12,599	11,542	8,160	9,327	7,190
Undressed ... ..	1,016,510	858,357	964,938	778,073	385,650
Logs ... ..	23,024	14,950	25,325	4,020	1,716
Palings ... ..	4,931	3,734	2,688	2,403	1,225
Pickets ... ..	84	66	40	20	7
Shingles ... ..	91	106	42	...	...
Staves—Dressed, etc. ... ..	16	...	...	...	...
Undressed ... ..	...	...	...	22	...
Laths for blinds ... ..	946	363	297	367	152
" Other ... ..	105	495	11	246	245
Spokes, rims, felloes ... ..	9,989	12,214	8,039	6,769	6,570
Doors ... ..	743	1,053	960	492	554
Architraves, mouldings, etc. ... ..	589	723	541	457	152
Other ... ..	...	...	...	...	...
Total value ... ..	1,069,627	903,603	1,011,041	802,186	403,461

## EXCESS OF IMPORTS OVER EXPORTS.

Veneers ... ..	25,795	42,379	55,374	43,625	20,610
Dressed ... ..	670,831	566,885	616,872	458,698	235,965
Undressed ... ..	803,322	1,203,309	1,071,392	756,115	997,490
Logs ... ..	142,436	84,989	95,936	40,793	27,610
Palings ... ..	-4,931	-3,734	-2,688	-2,403	-1,225
Pickets ... ..	5,538	10,204	8,457	3,386	4,023
Shingles ... ..	1,189	1,786	2,166	1,654	3,487
Staves—Dressed, etc. ... ..	115	14	...	1,607	1,907
Undressed ... ..	20,417	15,744	22,870	16,418	11,164
Laths for blinds ... ..	-908	-337	-293	-367	-152
" other ... ..	23,076	25,941	40,120	24,430	14,564
Spokes, rims, felloes ... ..	30,058	9,402	5,954	5,417	4,669
Doors ... ..	-606	2,563	-515	109	356
Architraves, mouldings, etc. ... ..	-524	-578	-291	-426	-130
Other ... ..	129	1,043	81	156	90
Total value ... ..	1,715,937	1,959,610	1,915,435	1,349,212	1,320,428

Note. — signifies excess of exports over imports.

A fair amount of sandalwood is exported each year, principally from Western Australia, and to a much smaller extent from Queensland. The largest proportion of this product is consigned to Hong Kong and China, while small quantities are taken chiefly by the Straits Settlement and India.

## EXPORTS OF SANDALWOOD, 1911 TO 1915-16.

Country to which Exported.	Quantity.					Value.				
	1911.	1912.	1913.	1914-5.	1915-6.	1911.	1912.	1913.	1914-5.	1915-6.
	cwt.	cwt.	cwt.	cwt.	cwt.	£	£	£	£	£
Hong Kong ... ..	120,432	22,854	91,054	98,600	96,949	62,566	11,567	41,476	48,338	51,087
Straits Settlements ... ..	13,783	2,330	17,835	15,985	10,620	5,967	1,034	5,931	9,634	6,410
Other British Possessions... ..	5,687	7,863	10,760	11,333	8,576	2,506	3,455	4,560	6,426	4,602
China ... ..	7,140	36,755	13,540	50,845	18,850	2,348	16,619	5,593	27,544	9,316
Other Foreign Countries ... ..	6	233	486	386	120	9	225	367	273	78
Total ... ..	147,048	70,095	133,675	177,149	135,115	73,396	32,900	57,947	92,435	71,493



Tanning bark figures both as an export and import in the Commonwealth trade returns as the following tables shew:—

## EXPORTS OF TANNING BARK, 1911 to 1915-16.

Country to which Exported.	Quantity.					Value.				
	1911.	1912.	1913.	1914-15.	1915-16.	1911.	1912.	1913.	1914-15.	1915-16.
	cwt.	cwt.	cwt.	cwt.	cwt.	£-	£	£	£	£
United Kingdom ...	3,154	605	3,078	218	3,018	1,195	197	1,010	102	1,434
New Zealand ...	66,574	73,667	45,013	57,873	51,138	29,105	34,224	20,559	24,604	23,574
Other British Poss. ...	1,868	1,684	621	1,006	714	921	802	307	382	371
Belgium ...	29,100	40,180	36,250	7,256	...	11,576	15,520	14,281	2,688	...
France ...	...	204	...	...	...	...	101	...	...	...
Germany ...	148,490	49,849	58,011	3,256	...	60,121	20,630	23,653	1,109	...
Other For. Countries ...	4,166	2,060	1,379	8,049	39,598	1,627	752	601	3,140	16,354
Total ...	253,556	168,045	144,352	77,658	94,468	104,646	72,128	60,411	32,025	41,733

Prior to the war there was a fairly considerable export of tan bark to Germany and also to Belgium. The exports westward have naturally dwindled away, and at the present time New Zealand receives the largest share of the available export, while there is an increasing trade with Japan. During the last two years the largest proportion of the exports consisted of wattle bark from Tasmania and Victoria.

A comparison of the imports and exports of tan bark during the last five years is given in the next table.

## TANNING BARK IMPORTED INTO AND EXPORTED FROM THE COMMONWEALTH, 1911 to 1915-16.

Particulars.	1911.	1912.	1913.	1914-15.	1915-16.
<b>QUANTITIES—</b>	cwt.	cwt.	cwt.	cwt.	cwt.
Imports ...	72,447	119,253	77,689	66,136	122,188
Exports ...	253,556	168,045	144,352	77,658	94,468
Excess of exports over imports	181,109	48,792	66,663	11,522	-27,720
<b>VALUES—</b>	£	£	£	£	£
Imports ...	31,253	50,920	27,987	24,924	47,698
Exports ...	104,646	72,128	60,411	32,025	41,733
Excess of exports over imports	73,393	21,208	32,424	7,101	-5,965

Note. The minus sign — denotes excess of imports.

The imports consist almost exclusively of wattle bark from the plantations in South Africa. One variety of Australian wattle was found to flourish in the sandy belts near the Coast, but it is the *Acacia decurrens*, var. *mollis*, which is chiefly relied upon for the production of wattle bark in the South African plantations. Seed has been tried from New South Wales, Tasmania, and Victoria, but it is stated that most of the seed is obtained from the best wattle bark areas in eastern Tasmania and western Victoria.

Two reasons have been given to account for the success of the industry in South Africa. (1.) It was found that the treeless, grassy highlands of Natal, were specially suitable for wattle culture, and the trees could therefore be grown in rows and economically attended to, while the necessary bark sheds and other appurtenances could be placed in the most advantageous positions. (2.) There was an abundance of cheap and efficient Hindoo labour available for employment on the plantations.