

CHAPTER XIX.

FORESTRY.

§ 1. Forestry.

1. **General.**—Economic forestry aims at the preservation and development of existing forest areas by safeguarding against fire and other destructive agencies, by expert supervision of the removal of timber, by judicious thinning, and by re-afforestation of denuded areas with suitable new growths of local or exotic origin. It provides also for the continuance of an indispensable form of national wealth by the afforestation of available bare lands adapted to the growth of various timbers. Though large areas of virgin forests still remain in Australia, 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 Australia has demonstrated that the climate is suitable for the cultivation of a large number of the most valuable and beautiful of the world's timber trees.

2. **Extent of Forests.**—(i) *Australia.* 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:—

ESTIMATED FOREST AREA, 1921.

State.						Total Forest Area.	Percentage of Total Area.
						Acres.	%
New South Wales	..	..	..	..	..	11,000,000	5.54
Victoria	..	..	..	..	..	8,000,000	14.22
Queensland	..	..	..	..	..	24,000,000	5.59
South Australia	..	..	..	..	..	3,800,000	1.56
Western Australia	..	..	..	..	..	16,428,000	2.63
Tasmania	..	..	..	..	..	9,000,000	53.64
Total (a)	..	..	..	..	..	72,228,000	4.60

(a) Excluding Northern Territory.

(ii) *Comparison with other Countries.* The absolute and relative forest areas of Australia and other countries are shown below :—

FOREST LANDS.—RELATIVE AREAS, VARIOUS COUNTRIES.

Country.	Total Wooded Area.	Percentage on Total Area.	Country.	Total Wooded Area.	Percentage on Total Area.
	Sq. Miles.	%		Sq. Miles.	%
United States ..	864,380	29.07	France	38,172	17.95
Russia (Europe) ..	601,852	36.31	Poland	32,781	21.99
Canada	390,625	10.47	Norway	27,434	21.95
India (British) ..	250,949	22.96	Rumania	26,436	21.62
Argentine Republic	162,623	14.10	Spain	18,965	9.74
Australia	120,625	4.06	Italy	18,088	16.35
French Indo-China	96,523	37.58	Czecho-Slovakia ..	17,996	33.17
Sweden	91,666	52.98	New Zealand ..	17,969	17.30
Japan	71,923	27.53	Austria	11,795	38.34
Germany	49,469	26.96	United Kingdom	4,662	3.83
Finland	48,988	32.75			

3. *Distribution.*—The characteristics of the forest areas are given in some detail for each State in 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 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.

Special articles relating to Australian Eucalyptus timbers will be found in Official Year Book No. 10, pp. 85–98.

§ 2. Forestry Departments.

1. *Functions.*—Each State has organized a separate Department or Commission specially charged with the control and management of the State forests and timber reserves. Extensive survey work is carried on with a view to the classification of forest lands and the proclamation of State forests. The forests are improved by systematic cutting and silvicultural treatment, by judicious thinning and ringbarking, and by the making of roads and the establishment of fire-breaks, together with the removal and destruction of debris, and stunted, diseased and suppressed growth. Provision is made for effective patrols in forest districts to check the ravages caused by fire, often due, it is believed, to carelessness. The training of forest officers, the conduct of research work, and the collection of forestry statistics are also undertaken by the Forestry Departments.

2. **Forest Reservations.**—At the Interstate Conference on Forestry, held at Hobart in 1920, the forestry authorities of the various States estimated that to meet the future requirements of Australia an area of 24,500,000 acres of indigenous forest lands will be necessary, this estimate being based on the following distribution among the States :—

	Acres.
New South Wales	8,000,000
Victoria	5,500,000
Queensland	6,000,000
South Australia	500,000
Western Australia	3,000,000
Tasmania	1,500,000
Total	24,500,000

Having been endorsed by the Premiers' Conference held later in the same year, this area has been adopted as the Australian forest ration towards which the authorities are now aiming for permanent reservation. The progress that has been made in the various States to the end of June, 1922, is set out in the following table :—

AREA OF FOREST RESERVATIONS, 30th JUNE, 1922.

Particulars.	N.S.W.	Vic.	Q'land. (a)	S. Aust.	W. Aust.	Tas.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Dedicated State forests ..	5,371,994	3,401,738	1,320,647	190,474	45,888	14,040	10,344,781
Timber reserves	1,479,792	747,281	2,722,835	(b)	858,316	1,672,000	7,480,224
National parks ..	..	..	153,316	..	..	..	153,316
Total ..	6,851,786	4,149,019	4,196,798	190,474	904,204	1,686,040	17,978,321

(a) 31st December, 1921.

(b) Not available.

The area of State forests reserved in perpetuity amounted in June, 1922, to 10,344,781 acres, or 42 per cent. of the quota adopted for Australia, while the timber reserves, which may be cancelled at any time, embraced an area of 7,480,224 acres, making—with the addition of the Queensland National Parks—a total area of nearly 18,000,000 acres under the control of the various Forestry Departments throughout Australia. Of this area a considerable proportion consists of inaccessible mountainous country and cut-over lands, while the Australian quota recommended refers to merchantable forest only. The foresters of Australia are, therefore, faced with a difficult task in improving and preserving the existing forests, and in securing the reservation of further suitable forest country, if Australia is to have a permanent supply of accessible timber.

3. **Sylvicultural Nurseries and Plantations.**—Recognition of the necessity for systematic sylviculture has led to the creation in all 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 nurseries and plantations, together with the number of persons employed in Forestry Departments, are as follows :—

SYLVICULTURAL NURSERIES AND PLANTATIONS, 1921-22.

Particulars.	New South Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total.
State Forest Nurseries—							
Area (acres)	(b) 42	40	12	7	17	5	123
Plantations—							
Area planted during year .. (acres)	1,488	1,927	(a)	994	(a)	41	(c) 4,450
Area of effective plantations .. (acres)	3,736	8,557	800	25,080	(a)	41	(c) 38,214
Number of persons employed in Forestry Departments—							
Administrative ..	33	26	29	1	1	1	91
Professional ..	6	5	5	1	4	7	28
General ..	202	107	312	145	84	3	853

(a) Not available. (b) Exclusive of area of local nurseries at plantations, &c. (c) Incomplete.

4. Revenue and Expenditure.—The revenue and expenditure of the State Forestry Departments from 1917-18 to 1921-22 are given below :—

STATE FORESTRY DEPARTMENTS.—REVENUE AND EXPENDITURE, 1917-18 TO 1921-22.

State.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
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REVENUE.

	£	£	£	£	£
New South Wales	70,969	97,592	147,041	190,742	217,841
Victoria	55,917	57,731	67,298	95,517	155,160
Queensland	66,660	71,985	100,584	145,802	220,950
South Australia	14,279	23,880	22,003	23,872	11,234
Western Australia	23,866	41,015	45,278	58,617	88,529
Tasmania	3,860	3,860	7,340	20,444	18,891
Total	235,582	296,063	389,544	534,994	712,605
	(a)				

EXPENDITURE.

	£	£	£	£	£
New South Wales	77,688	121,162	134,997	179,540	186,588
Victoria	68,557	60,193	64,213	71,386	130,076
Queensland	13,930	21,877	35,158	72,718	201,865
South Australia	21,381	21,968	26,404	33,924	36,467
Western Australia	10,363	23,656	15,331	27,632	47,885
Tasmania	1,204	1,204	1,433	2,621	7,069
Total	193,123	250,060	277,536	387,821	609,950

(a) Including Northern Territory, £31.

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. 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 a Conference held in 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 a Professor 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. An Imperial Forestry Conference was held in London in the summer of 1920, at which also Australia was represented. Important Interstate Forestry Conferences were held in Adelaide in May, 1916; at Perth in November, 1917; at Hobart in April, 1920, and at Brisbane in April, 1922.

§ 3. Production.

1. **Timber.**—Estimates of the quantity and value of local timber sawn and hewn in each State are given hereunder:—

LOCAL TIMBER SAWN AND HEWN, 1917-18 TO 1921-22.

State.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.
New South Wales ..	126,745	131,617	155,114	156,112	143,593
Victoria ..	78,984	91,540	99,142	113,215	112,008
Queensland (a) ..	111,663	118,436	144,389	136,005	112,987
South Australia ..	3,425	5,223	6,178	5,598	3,398
Western Australia (a) ..	76,931	83,881	121,685	131,271	163,991
Tasmania (a) ..	42,341	46,481	54,291	59,047	54,518
Total ..	(b) 440,164	477,178	580,799	601,248	590,495

(a) Year ended 31st December. (b) Including Northern Territory, 75,000 sup. feet.

2. **Other Forest Products.**—(i) *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 connexion with ore-flotation processes. Complete information regarding local production and consumption is not available. Oversea exports amounted in 1919-20 to £92,000, in 1920-21 to £107,000, and in 1921-22 to £24,000, the bulk of the product being forwarded to the United Kingdom. Large quantities have also been exported to the United States.

(ii) *Tan Barks*. In addition to the wattle bark, mentioned at the close of this chapter, 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.

3. **Value of Production.**—Though the valuation of the quantity of firewood consumed in Australia presents serious difficulty, an estimate of the total value of forest production is annually compiled with the following results for the past five years:—

VALUE OF FOREST PRODUCTION.—AUSTRALIA, 1917-18 TO 1921-22.

Production.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
	£	£	£	£	£
Total ..	4,366,000	5,882,000	8,631,000	8,877,000	8,998,000

§ 4. Commercial Uses of Principal Australian Timbers.

1. **General.**—The uses of the more important Australian timbers are many and various, and are indicated in previous issues of this work. (See Official Year Book No. 6, pp. 454-6; and Official Year Book No. 10, Section III., § 7 and 8.)

The Commonwealth Government utilizes Australian woods for rifle stocks, telephone switch boards, aeroplane parts, etc. Queensland maple (*Flindersia chatawaiana*) is largely used for rifle stocks, and coachwood is available for the same purpose. Australian timber is also seasoned and stored, depots having been established by the Commonwealth Government at Canberra and Newington in New South Wales, and at Maribyrnong in Victoria; by State Governments at the principal centres; and by private enterprise as required.

2. **Lack of 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., § 7 and 8, in Official Year Book No. 10. At the 1916 Forestry Conference alluded to above, the matter came up for special consideration, and steps were taken to establish a uniform nomenclature.

§ 5. Oversea Trade.

1. **Imports.**—(i) *Dressed Timber.* The quantity and value of timber imports into Australia during the four years 1918-19 to 1921-22 inclusive are shown according to countries of origin in the following tables:—

DRESSED TIMBER.—IMPORTS, AUSTRALIA, 1918-19 TO 1921-22.

Country of Origin.	Quantity.				Value.			
	1918-19.	1919-20.	1920-21.	1921-22.	1918-19.	1919-20.	1920-21.	1921-22.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom ..	20	165,979	4,750	230	3	584	34	21
Canada ..	303,635	348,385	2,285,721	1,761,394	3,241	3,557	36,750	15,218
India ..	..	..	19,530	200	..	..	3,055	1
Other British Countries ..	27,222	1,350	200	3,982	398	20	1	54
Norway ..	..	9,433,921	34,241,593	3,794,952	..	201,593	808,562	242,092
Sweden ..	532,845	4,251,630	12,883,503	9,094,863	9,900	87,779	325,864	120,127
United States ..	262,335	67,438	1,712,904	2,508,918	7,126	2,838	34,599	34,189
Other Foreign Countries ..	13,294	2,329	6,059	67,307	641	109	421	1,998
Total ..	1,139,401	14,211,023	51,154,260	27,231,846	21,309	296,480	1,209,286	413,700

The figures in the above table are exclusive of items such as architraves, veneers, etc., quantities for which are either not shown, or are expressed in dissimilar units in the Customs entries. The total value of the items so excluded, however, amounted to only £28,335 in 1921-22.

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

(ii) *Undressed Timber.* Australian imports of undressed timber for the latest available four years are given hereunder :—

UNDRESSED TIMBER.—IMPORTS, AUSTRALIA, 1918-19 TO 1921-22.

Country of Origin.	Quantity.				Value.			
	1918-19.	1919-20.	1920-21.	1921-22.	1918-19.	1919-20.	1920-21.	1921-22.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom	800	33,861	205,546	7,179	3	1,803	4,929	259
Canada	2,204,774	5,766,398	12,361,386	17,579,302	22,250	90,882	181,072	173,974
India	89,436	129,395	639,964	21,338	3,687	8,022	62,094	471
New Zealand	59,027,859	56,470,627	61,548,649	47,234,577	632,613	673,922	879,960	638,861
Straits Settlements	201,325	817,675	400,625	16,967	1,376	8,147	5,890	156
Other British Countries	186,607	802,860	1,234,127	1,853,670	1,382	8,504	10,452	13,839
Japan	2,927,688	6,362,400	5,727,148	3,943,538	68,377	188,623	210,152	86,686
Java	13,399	578,538	1,925,464	965,820	173	6,436	23,337	5,678
Norway	10,140	44,600	117,142	339,185	90	836	2,390	14,290
Sweden		165,934	2,114,819	218,002		2,609	52,507	3,070
United States	79,013,943	70,976,919	104,085,707	94,129,093	1,023,391	1,069,341	2,048,517	969,722
Other Foreign Countries	106,666	1,059,665	2,097,200	2,667,925	3,397	19,781	37,845	40,960
Total	143,782,637	143,208,872	192,457,777	168,976,596	1,756,739	2,078,906	3,524,145	1,947,966

(a) Including other Dutch East Indian possessions.

By far the larger proportion of the undressed timber imports also consists of softwoods 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 (prior to the war) red deals from Russia, Norway, and Sweden. Amongst the hardwoods imported, the principal are oak from the United States of America and Japan, and teak from India.

2. *Exports.*—The quantity and value of undressed timber exported from 1917-18 to 1921-22 are given below, the countries of destination being also shown :—

UNDRESSED TIMBER.—EXPORTS, AUSTRALIA, 1917-18 TO 1921-22.

Country to which Exported.	Quantity. (a)					Value.				
	1917-18	1918-19	1919-20	1920-21	1921-22	1917-18	1918-19	1919-20	1920-21	1921-22
	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	£	£	£	£	£
United Kingdom	27	536	375	18,078	8,824	428	4,458	4,617	181,451	116,017
Canada	316	103	59	32	136	6,504	2,364	1,405	912	3,030
Ceylon	..	..	1,567	340	6,203	..	..	10,448	3,316	61,759
Egypt	..	..	2,171	6,890	402	..	..	14,472	55,800	4,696
Hong Kong	1	188	272	395	462	8	2,197	2,069	4,954	6,580
India	..	100	497	10,220	9,161	..	650	3,500	88,650	91,358
Mauritius	277	..	458	1,834	3,706	2,310	..	2,342	22,014	50,591
New Zealand	6,230	5,533	12,431	25,354	23,874	65,693	81,276	170,730	459,597	358,960
Pacific Islands—										
Fiji	918	428	742	1,011	845	12,638	4,490	11,224	17,238	12,604
Territory of New Guinea	99	41	226	158	95	1,376	906	4,254	4,254	2,401
Other Islands	315	272	665	896	586	3,952	4,157	13,763	20,684	12,587
Papua	132	99	140	189	99	1,720	1,877	3,155	10,990	2,391
South African Union	6,200	10,931	32,434	34,935	37,261	43,330	75,358	234,657	353,424	395,026
Straits Settlements	59	20	..	1	2	899	135	..	24	24
Belgium	..	..	..	2,597	1,766	..	..	27	24,897	18,790
China	..	..	760	3,420	1,939	..	..	5,996	39,682	19,796
Japan	704	105	355	625	128	11,827	2,276	6,021	8,380	2,478
Pacific Islands—										
New Caledonia	305	92	155	55	51	3,782	1,502	3,081	1,600	1,234
Other Islands	158	225	85	140	62	2,052	3,373	1,689	3,648	1,426
U.S. of America	4,050	2,189	275	668	489	75,674	41,867	6,588	17,466	12,550
Other Foreign Countries	16	72	5	380	303	223	1,503	43	6,126	4,417
Total	19,807	20,934	53,642	108,217	96,394	232,418	228,389	502,881	1,325,083	1,178,725

(a) Exclusive of timber not measured in super. feet.

As the table shows, 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. There was a notable increase in the quantity supplied to the United States of America in the later war years.

3. Classification of Imports and Exports.—(i) *General.* The quantities of timber classified according to varieties imported and exported during the year 1921–22 are given in the next table:—

TIMBER, VARIETIES IMPORTED AND EXPORTED.—QUANTITIES, AUSTRALIA, 1921–22.

Description.	Unit of Quantity.	Imports.	Exports.	Excess of Imports over Exports.
Veneers	sup. ft.	(a)	..	(a)
Dressed .. .. .	..	27,231,846	447,350	26,784,496
Undressed .. .. .	..	172,455,368	95,589,717	76,865,651
Logs .. .. .	..	4,044,323	804,245	3,240,078
Palings	No.	..	258,700	—258,700
Pickets .. .. .	..	214,950	4,156	210,794
Shingles .. .. .	..	98,500	8,700	89,800
Staves—				
Dressed, etc. .. .. .	..	210	5,162	—4,952
Undressed .. .. .	..	1,515,389	..	1,515,389
Laths—				
For blinds .. .. .	..	..	(a)	(a)
Other .. .. .	..	15,158,156	..	15,158,156
Spokes, rims, felloes, etc. .. .. .	..	(a)	(a)	(a)
Doors .. .. .	..	2,010	(a)	(a)
Architraves, mouldings, etc.	lin. ft.	2,350	265,496	—263,146
Wood pulp .. .. .	..	(a)	..	(a)
Other .. .. .	..	(a)	..	(a)

NOTE.—The minus sign — denotes an excess of exports. (a) Quantity not available.

Similar particulars relative to the values of imports and exports during the year 1921–22 are shown hereunder:—

TIMBER, VARIETIES IMPORTED AND EXPORTED.—VALUES, AUSTRALIA, 1921–22.

Description.	Imports.	Exports.	Excess of Imports over Exports.
	£	£	£
Veneers	23,057	..	23,057
Dressed	413,700	12,427	401,273
Undressed	1,978,889	1,168,126	810,763
Logs	30,969	10,599	20,370
Palings .. .. .	..	3,638	— 3,638
Pickets	1,341	75	1,266
Shingles	592	44	548
Staves—			
Dressed, etc.	115	254	— 139
Undressed	13,095	..	13,095
Laths—			
For blinds .. .. .	..	435	— 435
Other	24,873	..	24,873
Spokes, rims, felloes, etc.	5,238	11,495	— 6,257
Doors	1,225	751	474
Architraves, mouldings, etc.	90	2,512	— 2,422
Wood pulp	105,418	..	105,418
Other	1,351	..	1,351
Total	2,599,953	1,210,356	1,389,597

NOTE.—The minus sign — denotes an excess of exports.

(ii) *Sandalwood*. A considerable amount of sandalwood is annually exported, principally from Western Australia to China, where it is highly prized by all classes, and is largely used for artistic and ceremonial purposes.

SANDALWOOD.—EXPORTS, AUSTRALIA, 1917-18 TO 1921-22.

Country to which Exported.	Quantity.					Value.				
	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
	ton.	ton.	ton.	ton.	ton.	£	£	£	£	£
United Kingdom..			20	1	4			385	110	267
Hong Kong ..	5,116	6,225	9,363	6,495	3,334	76,093	92,518	174,659	111,730	57,714
India ..	100	121	98	424	333	1,275	1,573	1,860	7,736	6,144
Straits Settlements	979	1,699	4,081	1,793	228	12,236	22,063	71,522	35,191	3,935
Other British Countries ..		1			2		15			36
China ..	739	1,474	1,300	2,419	575	9,857	18,767	18,307	39,798	7,611
Other Foreign Countries ..	92	271	35	7	6	4,481	4,009	626	136	123
Total ..	7,026	9,791	14,897	11,139	4,482	103,942	138,945	267,359	194,701	75,830

(iii) *Tan Bark*. Tan bark figures both as an export and import in the Australian trade returns, as the following tables show. The first table refers to exports :—

TAN BARK.—EXPORTS, AUSTRALIA, 1917-18 TO 1921-22.

Country to which Exported.	Quantity.					Value.				
	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
	cwt.	cwt.	cwt.	cwt.	cwt.	£	£	£	£	£
United Kingdom..		1,220	3,700	360	1		860	2,561	202	1
New Zealand ..	95,192	27,320	60,900	56,360	17,047	45,007	13,801	37,616	39,356	11,927
Other British Possessions ..	208			100		72			88	
Foreign Countries	1,745	60	7,780	8,400	822	611	14	4,050	7,084	534
Total ..	97,145	28,600	72,380	65,220	17,870	45,600	14,675	44,227	46,730	12,462

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 also some trade with Japan, China, and Java. During recent years the largest proportion of the exports consisted of wattle bark from Tasmania, Victoria and New South Wales.

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

TAN BARK.—IMPORTS AND EXPORTS, AUSTRALIA, 1917-18 TO 1921-22.

Particulars.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
	cwt.	cwt.	cwt.	cwt.	cwt.
QUANTITIES—					
Imports	71,133	102,480	78,800	48,100	34,340
Exports	97,145	28,600	72,380	65,220	17,870
Excess of exports over imports ..	26,012	— 73,880	— 6,420	17,120	— 16,470
VALUES—	£	£	£	£	£
Imports	24,711	43,319	33,733	20,002	15,954
Exports	45,690	14,675	44,227	46,730	12,462
Excess of exports over imports ..	20,979	— 28,644	10,494	26,728	— 3,492

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 is 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 are given to account for the success of the industry in South Africa. (a) It is found that the treeless, grassy highlands of Natal are specially suitable for wattle culture, and the trees can therefore be grown in rows and economically attended to, while the necessary bark sheds and other appurtenances can be placed in the most advantageous positions. (b) There is an abundance of cheap and efficient Hindu labour available for employment on the plantations.