

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.* Scientific surveys of the forests of the various States have not yet been completed, and there are, in consequence, conflicting reports regarding the total forest area of Australia. Expert foresters, however, estimate the true forest area at approximately 24,500,000 acres, distributed throughout the States as follows:—

ESTIMATED FOREST AREA—AUSTRALIA, 1923-24.

State.						Total Forest Area.	Percentage on Total Area.
						Acres.	%
New South Wales	..	..	..	..	..	8,000,000	4.04
Victoria	..	..	..	..	..	5,500,000	9.78
Queensland	..	..	..	..	..	6,000,000	1.40
South Australia	..	..	..	..	..	500,000	0.21
Western Australia	..	..	..	..	..	3,000,000	0.48
Tasmania	..	..	..	..	..	1,500,000	8.94
Total	..	..	..	..	..	24,500,000	1.29

(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 ..	733,594	24.24	France ..	38,172	17.95
Russia (Europe) ..	601,852	36.31	Poland ..	32,781	21.99
Canada (a) ..	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
French Indo-China	96,523	37.58	Italy ..	18,088	16.35
Sweden ..	91,666	52.98	Czecho-Slovakia ..	17,996	33.17
Japan ..	71,923	27.53	New Zealand ..	17,969	17.30
Germany ..	50,608	26.29	Austria ..	11,795	38.34
Finland ..	48,988	32.75	United Kingdom	4,662	3.83
Australia ..	38,281	1.29			

(a) In addition, the pulpwood forests of Canada are estimated at 541,791 sq. miles.

3. *Distribution.*—The characteristics of the forest areas are given in some detail or 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 and the chemical products of Eucalypts 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 scientific treatment, by judicious thinning and ringbarking, by the making of roads and the establishment of fire-breaks, and by the removal and destruction of debris, and stunted, diseased or 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.

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 would be necessary, this estimate being based on the following distribution among the States :—

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

Having been endorsed by the Premiers' Conference held later in the same year, this area was adopted as the Australian forest ration towards which the authorities are now aiming for permanent reservation. The progress made in the various States to the end of June, 1924, is set out in the following table :—

AREA OF FOREST RESERVATIONS, 30th JUNE. 1924.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Dedicated State forests ..	5,221,415	3,500,000	1,536,003	206,109	54,099	31,259	10,548,885
Timber reserves ..	1,659,987	749,000	3,215,202	..	863,426	1,695,985	8,183,600
Total ..	6,881,402	4,249,000	4,751,205	206,109	917,525	1,727,244	18,732,485

(a) Includes area of Timber reserves.

The area of State forests reserved in perpetuity amounted in June, 1924, to 10,548,885 acres, or 43.06 per cent. of the quota adopted for Australia, while the timber reserves, which may be cancelled at any time, embraced an area of 8,183,600 acres, making a total area of 18,732,485 acres under the control of the Forestry Departments. 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 to ensure 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 plantations and employment are given hereunder :—

SYLVICULTURAL PLANTATIONS AND FORESTRY EMPLOYMENT, 1923-24.

Particulars.	New South Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total.
Total area of Effective Plantations—							
Softwoods .. Acres	7,180	8,550	601	10,380	1,250	40	28,001
Hardwoods .. Acres	..	2,160	1,027	5,751	..	..	8,938
Number of persons employed in Forestry Departments—							
Office Staff .. No.	30	35	53	8	36	2	164
Field Staff .. No.	234	121	212	143	196	11	917

4. Revenue and Expenditure.—The revenue and expenditure of the State Forestry Departments from 1919-20 to 1923-24 are given below :—

FORESTRY DEPARTMENTS.—REVENUE AND EXPENDITURE, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
REVENUE.					
	£	£	£	£	£
New South Wales	147,041	190,742	217,841	168,698	186,393
Victoria	67,298	95,517	155,160	163,076	166,556
Queensland	100,584	145,802	220,950	267,816	227,830
South Australia	22,003	23,872	11,234	8,362	11,110
Western Australia	45,278	58,617	88,529	87,658	127,253
Tasmania	7,340	20,444	18,891	19,346	21,150
Total	389,544	534,994	712,605	714,956	740,292
EXPENDITURE.					
	£	£	£	£	£
New South Wales	134,997	179,540	186,588	137,108	137,705
Victoria	64,213	71,386	130,076	138,714	160,373
Queensland	35,158	72,718	201,865	158,618	66,670
South Australia	26,404	33,924	36,467	40,822	40,487
Western Australia	15,331	27,632	47,885	38,827	48,333
Tasmania	1,433	2,621	7,069	8,293	8,277
Total	277,536	387,821	609,950	522,382	461,845

5. Instruction in Scientific Forestry.—Forestry schools have been established in several of the States, in which general scientific instruction is imparted, special attention being 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. A site for a forestry school was chosen, a curriculum was drawn up, and complete unanimity was arrived at regarding the higher training to be given at the institution, but matters were allowed to remain in abeyance. Early in 1925, however, the Commonwealth Government decided to establish a National Forestry School at Canberra, and the co-operation of the States is being sought in the planning of the necessary details.

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; at Brisbane in April, 1922, and at Sydney in September, 1924.

§ 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, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.
New South Wales ..	155,114	156,112	143,593	147,108	167,493
Victoria ..	99,142	113,215	112,008	118,336	134,639
Queensland (a) ..	144,389	136,005	112,987	126,088	141,672
South Australia ..	6,178	5,598	3,398	1,187	1,350
Western Australia (a) ..	121,685	131,271	163,991	149,158	161,749
Tasmania (a) ..	54,291	59,047	54,518	45,564	63,120
Total ..	580,799	601,248	590,495	587,441	670,023

(a) Year ended 31st December.

2. **Other Forest Products.**—(i) *Eucalyptus Oil*. Oil may be distilled from the foliage of all varieties of eucalyptus, and several of them furnish a product widely known for its commercial and medicinal uses. Complete information regarding Australian production and consumption of eucalyptus oil is not available, but large quantities are manufactured, particularly in Victoria. Oversea exports amounted in 1921-22 to £24,000, in 1922-23 to £33,990, and in 1923-24 to £66,339, the bulk of the product being shipped from Victoria to the United Kingdom and the United States.

(ii) *Tan Barks*. The forests of Australia contain a wealth of tanning materials, all the eucalypts being capable of furnishing a percentage of tannin. For many years tan bark has been obtained in Australia from the golden, and the black or green wattle, but this source of supply has been largely depleted by the gradual destruction of the trees, and the bark is now imported from Natal where the plantations were originally started from Australian seed. In addition to the wattle bark, 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. An investigation of the resources in tanning materials of Western Australia recently completed by the Institute of Science and Industry proved that barks of common trees such as karri, gimlet and ridge-gum, formerly regarded as waste materials, are rich in tannin and excellent tanning agents. Investigations in the other States would probably reveal additional sources of supply. In Western Australia, moreover, there are extensive areas of red-gum which exudes considerable quantities of a kino (gum) possessing a very high percentage of tannin. This material has not been very largely used, however, owing to the red colour it imparts to the leather, but this disadvantage has been overcome by the Institute of Science and Industry, which has applied for a patent covering the preparation of the tan solution from raw kino. The production of tan bark in Australia is estimated at about 30,000 tons per annum.

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, 1919-20 TO 1923-24.

Production.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Total ..	8,631,000	8,877,000	8,998,000	9,344,000	10,292,000

§ 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 Newton 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 1920–21 to 1923–24 inclusive are shown according to countries of origin in the following tables:—

DRESSED TIMBER.—IMPORTS, AUSTRALIA, 1920–21 TO 1923–24.

Country of Origin.	Quantity.				Value.			
	1920–21.	1921–22.	1922–23.	1923–24.	1920–21.	1921–22.	1922–23.	1923–24.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom	4,750	230	625	3,443	34	21	33	659
Canada	2,285,721	1,761,394	4,119,889	5,112,662	36,750	15,218	44,113	59,456
India	19,530	200	..	..	3,055	1	..	..
Other British Countries	200	3,982	2,995	17,998	1	54	124	568
Norway	34,241,593	13,794,952	49,971,566	38,671,271	808,562	242,092	724,507	528,346
Sweden	12,883,503	9,094,863	30,299,618	46,363,406	325,864	120,127	421,307	633,704
United States	1,712,904	2,508,918	7,196,660	8,040,984	34,599	34,189	63,998	94,492
Other Foreign Countries	6,059	67,307	497,096	48,032	421	1,998	6,468	1,168
Total	51,154,260	27,231,846	92,088,449	97,657,796	1,209,286	413,700	1,260,550	1,318,393

The figures in the table above 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 amounted to £123,489 in 1923–24, including plywood, veneered or otherwise, £92,781.

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, INCLUDING LOGS (b).—IMPORTS, AUSTRALIA, 1920-21 TO 1923-24.

Country of Origin.	Quantity.				Value.			
	1920-21.	1921-22.	1922-23.	1923-24.	1920-21.	1921-22.	1922-23.	1923-24.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom	205,546	7,179	23,736	25,226	4,929	259	1,216	1,482
Canada ..	12,361,386	17,679,952	43,543,208	62,976,045	181,072	174,878	314,978	475,450
India ..	639,964	24,382	62,009	97,869	62,094	482	769	2,693
Malaya (British)	400,625	226,145	237,433	257,560	5,890	1,944	2,057	1,944
New Zealand ..	61,545,649	49,038,544	42,822,742	42,843,088	879,960	660,824	533,962	510,165
Other British Countries ..	1,234,127	1,854,686	1,699,662	971,622	10,452	13,852	14,471	9,803
Japan ..	5,727,148	3,943,538	6,116,548	5,082,326	210,152	86,686	130,550	113,196
Java ..	a 1,925,464	a 1,051,820	a 884,416	a 577,930	a 23,337	a 6,753	a 8,097	a 8,058
Norway ..	117,142	339,135	416,729	1,724,176	2,390	14,290	5,761	27,207
Sweden ..	2,114,819	816,902	3,220,682	6,914,823	52,507	10,669	44,012	96,407
United States ..	104,083,707	98,849,251	169,636,426	226,360,751	2,048,517	998,259	1,665,312	2,762,302
Other Foreign Countries ..	2,097,200	2,668,107	3,871,076	6,147,964	37,845	40,962	69,751	67,349
Total ..	192,457,777	176,499,691	272,535,558	343,979,380	3,524,145	2,009,858	2,790,936	4,076,056

(a) Including other Dutch East Indian possessions.

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

By far the larger proportion of the undressed timber imports consists of softwoods such as yellow pine, redwood, and oregon from the United States of America 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 1919-20 to 1923-24 are given below, the countries of destination being also shown:—

UNDRESSED TIMBER, INCLUDING LOGS (a).—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Country to which Exported.	Quantity.					Value.				
	1919-20	1920-21	1921-22	1922-23	1923-24	1919-20	1920-21	1921-22	1922-23	1923-24
	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	£	£	£	£	£
United Kingdom	375	18,078	8,824	5,731	14,154	4,617	181,451	116,017	75,556	143,443
Canada ..	59	32	136	41	198	1,405	912	3,030	866	2,915
Ceylon ..	1,567	340	6,203	1,898	3,222	10,448	3,316	61,759	19,392	30,773
Egypt ..	2,171	6,890	402	(b)	(b)	14,472	55,800	4,696	(b)	(b)
Hong Kong ..	272	395	462	334	2,969	4,954	6,580	3,883	8,883	..
India ..	467	10,220	9,161	2,672	12,588	3,500	88,650	91,358	28,468	125,865
Malaya (British)	..	..	2	176	..	..	..	24	5,045	..
Mauritius ..	458	1,834	3,706	2,367	2,835	2,342	22,014	50,591	24,546	29,849
New Zealand ..	12,431	25,354	23,874	24,845	36,349	170,730	459,597	358,960	824,052	610,035
Pacific Islands—										
Fiji ..	742	1,011	845	664	1,130	11,224	17,238	12,604	10,307	17,407
Territory of New Guinea	226	158	95	157	213	4,254	4,254	2,401	2,883	4,572
Other Islands	665	896	586	474	535	13,763	20,684	12,597	8,339	10,558
Papua ..	140	189	99	217	316	3,155	10,990	2,391	3,811	5,347
South African Union ..	32,434	34,935	37,261	42,370	24,681	234,657	353,424	395,026	472,564	273,713
Belgium ..	1	2,597	1,766	595	716	27	24,897	18,790	5,949	7,157
China ..	760	3,420	1,939	3,149	3,695	5,996	39,682	19,796	27,418	36,951
Egypt ..	..	..	(c) 1,981	5,341	..	..	..	(c) 19,963	55,666	..
Japan ..	355	625	128	173	116	6,921	8,380	2,478	2,169	2,100
Pacific Islands—										
New Caledonia	155	55	51	32	57	3,081	1,600	1,234	538	1,034
Other Islands	85	140	62	63	87	1,689	3,648	1,426	1,329	1,658
U.S. of America	275	668	489	439	399	6,588	17,466	12,550	11,196	9,318
Other Foreign Countries ..	5	380	303	122	276	43	6,126	4,417	1,865	3,587
Total ..	53,643	108,217	96,394	88,500	106,908	502,881	1,325,083	1,178,725	1,050,142	1,271,948

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

(b) Now recorded as a Foreign Country.

(c) Previously recorded as a British Country.

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 1923-24 are given in the next table :—

TIMBER, VARIETIES IMPORTED AND EXPORTED.—QUANTITIES, AUSTRALIA, 1923-24.

Description.	Unit of Quantity.	Imports.	Exports.	Excess of Imports over Exports.
Dressed	sup. ft.	97,657,796	1,520,164	96,137,632
Undressed, including logs	"	343,979,380	106,907,957	237,071,423
Architraves, mouldings, etc.	lin. ft.	225	221,300	- 221,075
Plywood, veneered or otherwise	sq. ft.	4,794,538	(b)	(b)
Palings	No.	..	291,058	- 291,058
Pickets	"	69,383	20,000	49,383
Shingles	"	3,286,709	6,400	3,280,309
Staves—				
Dressed, etc.	"	9,052	6,656	2,396
Undressed	"	531,975	2,811	529,164
Laths—				
For blinds	"	(a)	(a)	(a)
Other	"	45,148,208	10,000	45,138,208
Doors	"	25,563	(a)	(a)
Wood pulp	ton.	7,471	(b)	(b)
Veneers	—	(a)	(b)	(b)
Spokes, rims, felloes, etc.	—	(a)	(a)	(a)
Other	—	(a)	(a)	(a)

(a) Quantity not available.

(b) Exports not recorded separately.

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

Similar particulars relative to the values of imports and exports during the year 1923-24 are shown hereunder :—

TIMBER, VARIETIES IMPORTED AND EXPORTED.—VALUES, AUSTRALIA, 1923-24.

Description.	Imports.	Exports.	Excess of Imports over Exports.
	£	£	£
Dressed	1,318,393	24,453	1,293,940
Undressed, including logs	4,076,056	1,271,948	2,804,108
Architraves, mouldings, etc.	4	1,436	- 1,432
Plywood, veneered or otherwise	92,781	(b)	(b) 92,781
Palings .. .. .	..	3,600	- 3,600
Pickets	665	146	519
Shingles	8,550	27	8,523
Staves—			
Dressed, etc.	1,197	466	731
Undressed	12,122	119	12,003
Laths—			
For blinds	28	321	- 293
Other	91,249	10	91,239
Doors	22,793	599	22,194
Wood pulp	128,108	(b)	(b) 128,108
Veneers	16,574	(b)	(b) 16,574
Spokes, rims, felloes, etc.	14,404	9,239	5,165
Other	3,359	..	3,359
Total	5,786,283	1,312,364	4,473,919

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

(b) Exports not recorded separately.

(ii) *Sandalwood*. A considerable amount of sandalwood is annually exported, principally from Western Australia to China, where it is highly prized, and largely used for artistic and ceremonial purposes. Particulars for the past five years are as follows :—

SANDALWOOD.—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Country to which Exported.	Quantity.					Value.				
	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	ton.	ton.	ton.	ton.	ton.	£	£	£	£	£
United Kingdom..	20	1	4	..	..	385	110	267	2	..
Hong Kong ..	9,363	6,495	8,334	4,657	8,894	174,659	111,730	57,714	66,460	222,300
India ..	98	424	333	469	239	1,860	7,736	6,144	8,131	6,192
Malaya (British) ..	4,081	1,793	228	352	1,404	71,522	35,191	3,935	5,322	45,118
Other British Countries ..	..	..	2	2	..	..	..	36	30	..
China ..	1,300	2,419	575	2,419	3,754	18,307	39,798	7,611	30,876	88,415
Other Foreign Countries ..	..	..	..	..	..	..	..	..	..	..
	35	7	6	..	..	626	136	128	3	..
Total ..	14,897	11,139	4,482	7,899	14,291	267,359	194,701	75,830	110,824	357,025

(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, 1919-20 TO 1923-24.

Country to which Exported.	Quantity.					Value.				
	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	cwt.	cwt.	cwt.	cwt.	cwt.	£	£	£	£	£
United Kingdom..	3,700	360	1	12	..	2,561	202	1	3	..
New Zealand ..	60,900	56,360	17,047	12,718	5,278	37,616	39,356	11,927	8,299	3,268
Other British Possessions ..	..	100	..	309	..	..	88	..	194	..
Foreign Countries	7,780	8,400	822	4,490	12,323	4,050	7,084	534	2,220	7,155
Total ..	72,380	65,220	17,870	17,529	17,601	44,227	46,730	12,462	10,716	10,418

(a) Includes Germany, 9,905 cwt., value £4,983.

Prior to the war there was a fairly considerable export of tan bark to Germany and also to Belgium. The exports westward naturally dwindled away during the war years, and New Zealand received the largest share of the available export, while there was also some trade with Japan, China, and Java. In the year 1923-4, Germany again appears as a customer, the export returns showing that 9,005 cwt., valued at £4,983, were shipped thereto.

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, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	cwt.	cwt.	cwt.	cwt.	cwt.
QUANTITIES—					
Imports	78,800	48,100	34,328	93,769	73,941
Exports	72,380	65,220	17,870	17,529	17,601
Excess of exports over imports ..	— 6,420	17,120	— 16,458	— 76,240	— 56,340
VALUES—	£	£	£	£	£
Imports	33,733	20,002	15,954	37,349	28,672
Exports	44,227	46,730	12,462	10,716	10,418
Excess of exports over imports ..	10,494	26,728	— 3,492	— 26,633	— 18,254

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.