

SECTION VII.

PASTORAL PRODUCTION.

§ 1. Initiation and Growth of Pastoral Industry.

1. **Early Statistics.**—In previous issues of the Year Book will be found a brief review of the history of the pastoral industry in Australia up to the year 1860. (See Year Book No. 6, page 330.)

2. **Subsequent Statistics.**—The statistical records of live stock in Australia prior to the year 1860 are somewhat defective, but from that year onwards fairly complete particulars are available in most of the States. At the present time, statistics of live stock are collected annually in all the States, principally through the agency of the police, but in the years 1885 to 1888 inclusive, and 1893 to 1895 inclusive, no such particulars were collected in South Australia, and similar gaps occur in the Victorian records for the periods 1895 to 1899 inclusive, and 1901 to 1903. In order to obtain totals for the Commonwealth for these years the missing numbers have been supplied by interpolation. The results so obtained probably differ but slightly from the actual numbers for the respective years.

3. **Increase in Numbers.**—Particulars concerning the numbers of each of the principal kinds of live stock in the Commonwealth at quinquennial intervals from 1860 to 1910, and thence onwards in single years, are given in the following table, and are shewn continuously in the graphs as given hereinafter.

During the fifty-five years covered by the table the live stock of the Commonwealth increased considerably, horses by 451 per cent., cattle 151 per cent., sheep 244 per cent., and pigs 115 per cent. The average annual increases which these aggregates represent are as follows:—Horses, 3.15 per cent. per annum; cattle, 1.69 per cent.; sheep, 2.27 per cent.; and pigs, 1.40 per cent.

COMMONWEALTH LIVE STOCK, 1860 to 1915.

Year.	Horses.	Cattle.	Sheep.	Pigs.
1860	431,525	3,957,915	20,135,286	351,096
1865	566,574	3,724,813	29,539,928	345,704
1870	716,772	4,276,326	41,593,612	543,388
1875	835,393	6,389,610	53,124,209	549,808
1880	1,061,078	7,523,000	62,176,027	815,776
1885	1,143,064	7,397,847	67,491,976	748,908
1890	1,521,588	10,299,913	97,881,221	891,138
1895	1,680,419	11,767,488	90,689,727	822,750
1900	1,609,654	8,640,225	70,602,995	950,349
1905	1,674,790	8,528,331	74,540,916	1,014,977
1910	2,165,866	11,744,714	92,047,015	1,025,850
1911	2,279,027	11,828,954	93,003,521	1,110,721
1912	2,408,113	11,577,259	83,263,686	845,255
1913	2,522,776	11,483,882	85,057,402	800,505
1914	2,522,172	11,051,573	78,600,334	862,447
1915	2,377,920	9,931,416	69,257,189	753,693

4. **Fluctuations.**—The increases referred to, however, have not been continuous, marked fluctuations having taken place during the period, mainly on account of the droughts which have from time to time left their impress on the pastoral history of Australia. These were in evidence in 1869, 1877, 1884, 1895 and subsequent years, 1902, to some extent in 1908, and in a severer form during the earlier half of 1912, and again during 1914 and 1915. The falling-off in the number of sheep in 1915 was 9,343,145, of cattle 1,120,157, of horses 144,252, and of pigs 108,754, being 11.91, 10.14, 5.72 and 12.61 respectively. The number of horses during 1913 was the highest ever recorded in the Commonwealth. The winter of 1913 was dry over Southern Australia, though the crops subsequently recovered under the influence of fine spring rains, but in 1914 and 1915, very pronounced drought conditions developed—enveloping the whole of sub-tropical Australia (except the New South Wales coast) during 1914, and all the Central and North-eastern parts of the continent in 1915. Throughout many parts of Western Australia, South Australia, the Riverina, Victoria, and Tasmania, the year 1914 was the driest on record, and similarly throughout a large part of Queensland and North-eastern New South Wales, 1915 was the worst year ever experienced. The result was a general failure of the crops throughout the wheat belt in 1914, heavy stock losses, the failure of the sugar crops of the East Coast and of a large proportion of the cereal crops on the Downs in Queensland.

The extraordinary recuperative power of Australia is reflected in the large increases in the numbers of stock which occurred in the good seasons supervening on the various droughts. Thus, in the nine years from 1902 to 1911, horses increased by 754,426, cattle by 4,766,212, and sheep by 38,335,174, the corresponding increases per cent. per annum being horses 4.57 per cent., cattle 5.90 per cent., and sheep 6.30 per cent.

The years in which the numbers of live stock attained their maxima are as follows:—Horses, 1913, 2,522,776; cattle, 1894, 12,311,617; sheep, 1891, 106,421,068; and pigs, 1911, 1,110,721.

5. **Live Stock in Relation to Population.**—The number of each kind of live stock per head of the population of the Commonwealth has varied during the past fifty-five years in the manner shewn in the succeeding table:—

NUMBER OF LIVE STOCK PER HEAD OF POPULATION, 1860 to 1915.

Year.	Horses.	Cattle.	Sheep.	Pigs.	Year.	Horses.	Cattle.	Sheep.	Pigs.
1860	0.38	3.45	17.58	0.31	1900	0.43	2.29	18.75	0.25
1865	0.41	2.68	21.25	0.25	1905	0.42	2.11	18.48	0.25
1870	0.43	2.60	25.24	0.33	1910	0.49	2.65	20.80	0.23
1875	0.44	3.37	27.99	0.29	1911	0.50	2.59	20.36	0.24
1880	0.48	3.37	27.87	0.37	1912	0.51	2.45	17.59	0.18
1885	0.42	2.75	25.05	0.28	1913	0.52	2.36	17.46	0.16
1890	0.48	3.27	31.06	0.28	1914	0.51	2.24	15.91	0.17
1895	0.48	3.36	25.93	0.24	1915	0.48	2.01	14.04	0.15

Considered in relation to population, the live stock attained its maximum in the period 1890-5, and its minimum in the year 1902. During the period of fifty-five years under review, the number of horses varied but slightly in proportion to population, the range being from 0.38 to 0.52 per head. In the case of cattle, the limits of variation were 1.82 and 3.45; sheep, 13.85 and 31.06; and pigs, 0.15 and 0.37.

6. **Live Stock in Relation to Area.**—The numbers of live stock per square mile in the several States and Territories of the Commonwealth on 31st December, 1915, were as follows:—

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NUMBER OF LIVE STOCK PER SQUARE MILE, 31st DECEMBER, 1915.

States and Territories.	Horses.	Cattle.	Sheep.	Pigs.
New South Wales*	2.32	7.76	105.02	0.91
Victoria	5.62	11.87	119.99	2.18
Queensland	1.02	7.13	23.79	0.18
South Australia	0.67	0.60	9.67	0.17
Western Australia	0.17	0.84	4.92	0.06
Tasmania	1.58	6.47	61.97	1.44
Northern Territory	0.04	0.92	0.11	0.001
Federal Territory*	1.44	6.21	112.59	0.32
Commonwealth	0.80	3.34	23.28	0.25

* 30th June, 1916.

7. **Minor Classes of Live Stock.**—The numbers of minor classes of live stock returned as at 31st December, 1915, were as follows:—Goats, 223,033; camels, 12,389; mules and donkeys, 9663; and ostriches, 1245. Of these, goats were most numerous in Queensland, camels and donkeys in Western Australia, and mules and ostriches in South Australia. In the raising of goats, considerable attention has in recent years been devoted to the angora goat and its product—mohair, and over 20,000 angora goats are included in the total of 223,033 goats shewn above. Of these, 7191 were in New South Wales, and 4931 in Queensland, while the quantity of mohair produced in the latter State in 1915 was set down at 3864 lbs., and the number of skins placed on the market was returned as 691.

8. **Net Exports of Principal Pastoral Products.**—The quantities by which the exports of the principal pastoral products of the Commonwealth exceeded the imports for the years 1911 to 1915-16 are as follows:—

**QUANTITIES OF NET EXPORTS OF PRINCIPAL PASTORAL PRODUCTS
OF THE COMMONWEALTH, 1911 to 1915-16.**

Products.	Unit of Quantity.	1911.	1912.	1913.	1914-15. †	1915-16. †
Animals (living)—						
Cattle	No.	9,861	16,080	14,548	10,121	5,417
Horses	"	4,377	7,055	7,761	23,655	14,589
Sheep	"	18,965	31,210	33,322	10,749	728
Bones	cwt.	17,151	20,885	37,848	33,802	16,378
Glue Pieces and Sinews	"	29,211	33,033	38,297	30,689	23,222
Glycerine	lb.	*	*	*	*	*
Hair	"	287,957	152,369	279,108	206,602	554,971
Hoofs	cwt.	8,617	10,416	12,476	11,012	8,347
Horns	"	*	*	*	*	*
Meats—						
Frozen Beef	lb.	108,774,397	142,186,123	218,911,153	292,056,035	114,654,569
" Mutton and Lamb	"	129,567,812	115,365,547	204,919,042	193,263,877	38,332,651
" Rabbits and Hares	pair	8,362,994	6,494,259	9,366,290	10,290,016	11,367,538
" Other	lb.	4,025,715	4,797,512	7,685,149	13,107,560	3,004,290
Potted and Extract of Preserved in Tins, etc.	"	40,347,183	33,571,112	51,731,741	57,326,285	13,059,238
Other	"	1,062,233	2,957,745	1,154,580	298,019	130,672
Sausage Casings	"	*	*	*	*	*
Skins—						
Hides	No.	452,942	746,088	10,037,882	1,134,483	453,691
Sheep	"	9,748,630	10,650,834	10,397,373	10,396,937	7,254,642
Rabbit and Hare	cwt.	92,587	87,878	86,998	56,437	51,857
Other, including Undressed Furs	No.	*	*	*	*	*
Tallow	cwt.	1,343,046	1,068,341	1,435,156	1,106,023	250,519
Wool—Greasy	lb.	578,622,185	557,633,801	531,248,798	443,812,275	408,461,233
Scoured	"	69,223,301	60,232,936	60,873,478	60,846,240	74,880,215
Tops	"	2,515,106	3,018,050	3,561,722	4,095,966	4,981,975

* Quantity not available. † For year ended 30th June.

The values of the net exports for the same five years are furnished in the next table, and amount to no less a total than £185,399,403 for the period, or an average of £37,079,880 per annum, of which wool represents nearly 69 per cent. Meats, skins, and tallow rank next in order of importance.

**VALUE OF NET EXPORTS OF PRINCIPAL PASTORAL PRODUCTS OF THE
COMMONWEALTH, 1911 to 1915-16.**

Products.	1911.	1912.	1913.	1914-15.*	1915-16.*
Animals (living)—	£	£	£	£	£
Cattle	37,864	64,233	50,229	19,568	10,089
Horses	—128,022	—28,017	63,389	378,505	185,183
Sheep	12,732	61,879	46,565	14,204	—17,507
Bones	9,798	12,310	22,021	20,918	10,009
Glue Pieces and Sinews	13,645	18,139	23,328	17,641	12,815
Glycerine	15,926	13,621	13,769	13,900	16,078
Hair	24,987	29,950	28,160	26,445	26,684
Hoofs	3,169	4,922	6,178	4,156	2,361
Horns	25,673	30,339	30,444	15,300	6,379
Meats—					
Frozen Beef	1,101,914	1,630,306	2,652,144	4,989,810	2,175,343
.. Mutton and Lamb	1,633,597	1,592,302	2,896,292	3,413,843	769,434
.. Rabbits and Hares	407,034	320,887	497,568	531,920	744,624
.. Other	49,390	59,706	99,509	180,841	30,248
Potted and Extract of	57,356	60,779	203,412	347,471	31,467
Preserved in Tins, etc.	756,148	611,288	1,062,618	1,829,601	438,881
Other	13,010	12,944	17,677	4,375	3,195
Sausage Casings	37,129	8,735	32,133	25,872	—21,726
Skins—					
Hides	467,364	871,953	1,418,191	1,234,871	266,674
Sheep	1,603,718	1,988,122	2,480,900	1,743,209	1,242,358
Rabbit and Hare... ..	498,037	576,179	620,487	230,139	261,868
Other, including Undressed Furs	476,872	647,959	746,023	106,319	253,458
Tallow	1,984,009	1,545,033	2,157,610	1,566,907	436,225
Wool—Greasy	21,388,155	22,066,585	21,472,360	17,470,385	20,172,243
Scoured	4,398,126	3,957,792	4,380,184	4,113,951	5,841,054
Tops	275,406	323,299	415,670	511,021	680,656
Total Values	35,112,037	36,481,245	41,436,861	38,811,167	33,558,093

* For year ended 30th June. Note. — signifies net imports.

§ 2. Horses.

1. **Suitability of Australia for Horse-breeding.**—From the earliest times the suitability of the climate and pastures of Australia for the production of serviceable breeds of horses has been fully recognised. By the importation of high-class sires, and the careful selection of breeding mares, these natural advantages were utilised to the fullest extent, all classes of horses being bred. As a consequence of this combination of advantages, the Australian horse, whether of the heavy draught, medium weight, or light saddle and carriage variety, compares more than favourably with the product of other lands. The Australian horse has been found suitable for the army in India, and large numbers are obtained annually for remount purposes.

2. **Distribution throughout the Commonwealth.**—As regards numbers, the State of New South Wales, the earliest settled of the group, established a lead, which it retained up to the end of 1913. For some years past Queensland has made rapid progress in this regard, and in 1914 there were 743,059 horses in that State, in the same year there being 731,735 in New South Wales, and 552,053 in Victoria. The 1915 figures shew that New South Wales has regained the lead. The figures for the several States for a series of years are as follows:—

**NUMBER OF HORSES IN STATES, TERRITORIES, AND COMMONWEALTH,
1860 to 1915.**

Year.	N.S.W.	Victoria.	Q'sland.	S. Aust.	W. Aust.	Tas.	N. T.	Fed. Terr.	Commonwealth.
1860...	251,497	76,536	23,504	49,399	9,555	21,034	...	...	431,525
1865...	282,587	121,051	51,091	73,993	15,700	22,152	...	...	566,574
1870...	337,597	167,220	83,358	83,744	22,174	22,679	...	...	716,772
1875...	357,696	196,184	121,497	107,164	29,379	23,473	...	...	835,393
1880...	395,984	275,516	179,152	143,219	34,568	25,267	*2,372	...	1,061,078
1885...	344,697	304,098	260,207	164,753	34,392	38,610	6,307	...	1,143,064
1890...	444,163	436,459	365,812	187,686	44,384	31,165	11,919	...	1,521,588
1895...	499,943	424,995	468,743	181,839	58,506	31,580	14,813	...	1,680,419
1900...	481,417	392,237	456,788	166,790	68,253	31,607	12,562	...	1,609,654
1905...	506,884	385,513	430,565	197,099	97,397	37,101	20,231	...	1,674,790
1910...	650,636	472,080	593,813	249,326	134,114	41,388	24,509	...	2,165,866
1911...	687,242	507,813	618,954	259,719	140,277	41,853	21,407	1,762	2,279,027
1912...	714,952	530,494	674,573	276,539	147,629	44,039	18,382	1,505	2,408,113
1913...	744,458	562,331	707,265	283,641	156,636	43,941	22,792	1,712	2,522,776
1914...	†731,735	552,053	743,059	267,877	161,625	42,232	21,985	1,606	2,522,172
1915	†718,232	493,779	686,871	253,333	163,016	41,422	19,957	1,310	2,377,920

* Statistics not collected prior to 1880.

† 30th June year following.

3. **Proportion in the Several States and Territories.**—The percentages of the numbers of horses in the several States and Territories on the total for the Commonwealth for 1901 and the past five years are as follows:—

**PERCENTAGE OF HORSES IN EACH STATE AND TERRITORY ON THE TOTAL FOR
COMMONWEALTH, 1901 and 1911 to 1915.**

Year.	N.S.W.	Victoria.	Q'sland.	S. Aust.	W. Aust.	Tas.	North'n Terr.	Fed. Terr.	Commonwealth.
	%	%	%	%	%	%	%	%	%
1901...	30.03.	23.90	28.52	10.20	4.55	2.00	0.80	...	100.00
1911...	30.15	22.28	27.16	11.40	6.15	1.84	0.94	0.08	100.00
1912...	29.69	22.03	28.01	11.48	6.13	1.83	0.77	0.06	100.00
1913...	29.52	22.30	28.01	11.25	6.21	1.74	0.90	0.07	100.00
1914...	29.02	21.90	29.44	10.62	6.41	1.68	0.87	0.06	100.00
1915...	30.20	20.77	28.89	10.65	6.86	1.74	0.84	0.05	100.00

During the period under review, the proportion in Western Australia has increased, that in Victoria has diminished, while in the case of the other States the proportion in 1915 was practically identical with that in 1901.

4. **Oversea Export Trade in Horses.**—Australia's export trade in horses is a fairly considerable, though somewhat fluctuating, one. During the past five years it has varied in number between 8,562 for the year 1913 and 24,107 in 1914-15, and in value between £163,730 in the former and £459,978 during the latter year. The total number of horses exported during the five years amounted to 67,194, an average of 13,439 per annum. The total value of the exports for the period was £1,310,314, or £262,063 per annum. The average export value per head for the period was £19 10s. 0d. The numbers exported to the principal countries concerned in this trade are as follows:—

**NUMBER AND DESTINATION OF HORSES EXPORTED FROM THE COMMONWEALTH,
1911 to 1915-16.**

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 years.
	No.	No.	No.	No.	No.	No.
India	7,416	7,299	6,775	21,162	14,405	57,057
Java	880	584	799	65	280	2,608
Straits Settlements	481	410	436	24	174	1,525
Fiji	180	146	106	117	257	806
Philippine Islands	350	247	88	...	8	693
Ceylon	198	156	3	...	...	357
New Zealand	92	77	90	52	37	348
Mauritius	112	46	95	...	...	253
Japan	45	41	59	16	35	196
Papua	47	56	57	9	2	171
Siam	165	...	...	...	...	165
China	13	25	...	...	...	38
South African Union	12	13	8	3	...	36
Hong Kong	32	...	...	...	...	32
Other Countries	86	107	46	2,659	11	2,909
Total —	10,109	9,207	8,562	*24,107	*15,209	67,194

The corresponding particulars relative to the value of the horses exported are given in the next table:—

VALUE OF HORSES EXPORTED FROM THE COMMONWEALTH, 1911 to 1915-16.

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 years.
	£	£	£	£	£	£
India	135,840	129,186	107,925	387,046	250,710	1,010,707
Java	19,235	13,459	21,465	1,243	5,352	60,754
Straits Settlements	12,939	11,322	11,614	555	3,755	40,185
Fiji	4,788	3,642	3,215	3,337	6,653	21,635
Philippine Islands	7,795	5,449	2,061	...	1,200	16,505
Ceylon	3,622	3,403	840	...	...	7,865
New Zealand	17,322	11,435	5,319	9,765	7,232	51,073
Mauritius	2,371	1,358	3,229	...	...	6,958
Japan	2,115	2,650	2,836	875	1,900	10,376
Papua	920	899	1,271	171	65	3,326
Siam	7,298	...	...	...	...	7,298
China	390	625	...	...	...	1,015
South African Union	500	695	211	60	...	1,466
Hong Kong	800	...	...	...	...	800
Other Countries	4,016	5,421	3,744	56,926	244	70,351
Total	219,951	189,544	163,730	*459,978	*277,111	1,310,314

* Exclusive of shipment for military purposes.

Consequent on the greater demand for remounts for the Indian Army, a large increase took place in the number of horses exported to that country during 1914-15 and 1915-16. Of the 2659 horses exported to "Other Countries" during 1914-15—2270, valued at £50,075, were shipped to France. In addition to the exports shewn in the above tables, there were 36,816 horses, valued at £734,396, shipped from the Commonwealth for military purposes during the years 1914, 1915 and 1916.

The number of horses imported into the Commonwealth is comparatively small, consisting mainly of valuable animals introduced for breeding purposes, and imported principally from New Zealand and the United Kingdom. The average value per head of the horses imported during the last five years was £86 Os. 4d., as compared with £19 7s. 4d. per head for the exports for the same period. The average number imported per annum was, however, only 1951, and the average annual value £167,855. The following table furnishes a comparison of imports and exports of horses during 1901 and each of the five years 1911 to 1915-16:—

COMMONWEALTH IMPORTS AND EXPORTS OF HORSES, 1901 and 1911 to 1915-16.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1901 ...	246	19,601	32,474	438,248	32,229	418,647
1911 ...	5,732	347,973	10,109	219,951	4,377	128,022
1912 ...	2,152	217,561	9,207	189,544	7,055	28,017
1913 ...	801	100,341	8,562	163,730	7,761	63,389
1914-15...	452	81,473	24,107	459,978	23,655	378,505
1915-16...	620	91,928	15,209	277,111	14,589	185,183

Note. — signifies value of net imports.

5. Comparison with other Countries.—The numbers of horses in some of the leading horse-breeding countries of the world, according to the latest available returns, are as follows:—

NUMBER OF HORSES IN SOME OF THE LEADING HORSE-BREEDING COUNTRIES IN THE WORLD.

Country.	Date.	Number of Horses.	Country.	Date.	Number of Horses.
Russian Empire ³ ...	1914	34,973,000	Cuba ...	1914	673,439
Utd. States America ⁴ ...	1915	21,195,000	Sweden ...	1913	596,136
Argentine Republic ...	1915	9,700,000	Uruguay ...	1908	556,307
Austria-Hungary ¹ ...	1910-1913	4,379,884	Chile ² ...	1912-13	553,869
Germany ⁵ ...	1914	3,441,307	Denmark ...	1915	525,785
France ...	1914	3,230,700	Spain ...	1914	524,671
Canada ...	1914	2,968,784	Bulgaria ...	1910	477,733
Australia...	1915	2,377,920	New Zealand ...	1915	347,345
United Kingdom ...	1915	1,711,858	Netherlands ...	1913	334,445
British India ...	1913-14	1,643,374	Belgium...	1912	262,709
Japan ...	1913	1,582,125	Algeria ...	1912	221,140
Italy ...	1908	955,878	Norway ...	1915	187,048
Rumania ...	1900	864,324	Servia ...	1910	152,523
Mexico ...	1902	859,217	Switzerland ...	1911	144,128
Union of Sth. Africa	1911	719,414	Egypt ...	1913	47,911

1. Austria 1910, Hungary 1913, Croatia-Slavonia 1911, Bosnia-Herzegovina 1911. 2. Including mules and asses. 3. Including Poland, Caucasus, and Siberia. 4. Also 4,479,000 mules. 5. Exclusive of army horses.

6. **Relation to Population.**—In proportion to population, horses are much more numerous in the Northern Territory than in any other of the principal divisions of the Commonwealth. Queensland is next in order, while Tasmania has the smallest number of horses per head. In all cases the number of horses per head of population was somewhat higher in 1915 than in 1901. Particulars for 1901 and the past five years are as follows:—

NUMBER OF HORSES PER HEAD OF POPULATION, 1901 and 1911 to 1915.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Federal Terr.	C'wth.
1901	0.35	0.32	0.91	0.46	0.38	0.18	2.76	...	0.42
1911	0.41	0.37	0.99	0.62	0.48	0.22	6.59	0.92	0.50
1912	0.40	0.38	1.06	0.64	0.48	0.22	5.29	0.78	0.51
1913	0.41	0.40	1.07	0.64	0.49	0.22	6.21	0.86	0.52
1914	0.39	0.39	1.10	0.61	0.50	0.21	5.53	0.87	0.51
1915	0.39	0.35	1.01	0.58	0.51	0.21	4.37	0.53	0.48

§ 3. Cattle.

1. **Purposes for which Raised.**—In all the States of the Commonwealth, cattle-raising is carried out on a more or less extensive scale, the main object in certain districts being the production of stock suitable for slaughtering purposes, and in others the raising of profitable dairy herds. The great impetus which the development of the export trade in Australian butter gave to the dairying industry in the Commonwealth led to a considerable increase in numbers and improvement in quality of the dairy herds of Victoria, New South Wales, and Southern Queensland in particular, the sub-tropical portion of Australia being apparently the best adapted to this industry. On the other hand, by far the finest specimens of beef-producing cattle are those raised in the tropical districts of the Commonwealth, *i.e.*, in the northern parts of Queensland, in the Northern Territory, and in the Kimberley districts in the north of Western Australia.

2. **Distribution throughout Commonwealth.**—Until 1880 New South Wales occupied the leading position in the Commonwealth group as a cattle-raising State, but in that year Queensland forged ahead and obtained a lead which it has since maintained. The extent of this lead has, however, varied considerably, owing principally to the effects produced by the tick fever and droughts, from both of which causes the Queensland herds suffered more severely than those of the other States. In fact, during the period from 1894, when the number of cattle in Queensland attained its maximum of rather more than 7,000,000, to 1903, when the number recorded was less than 2,500,000, an uninterrupted decline was experienced. During the eleven years ended 1914, however, a rapid improvement took place, and the total reached on 31st December, 1914, was over 5,450,000. Owing to drought conditions the number at end of 1915 had fallen to 4,780,893.

The numbers of cattle in the several States and the Northern Territory at quinquennial intervals from 1860 to 1910 and for each subsequent year are as follows:—

**NUMBER OF CATTLE IN STATES, TERRITORIES, AND COMMONWEALTH,
1860 to 1915.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Fed. Ter.	C'wealth
1860	2,408,586	722,332	432,890	278,265	32,476	83,866	...	...	3,957,915
1865	1,961,905	621,337	848,346	158,057	45,148	90,020	...	...	3,724,813
1870	2,195,096	721,096	1,076,630	136,832	45,213	101,459	...	...	4,276,326
1875	3,134,086	1,054,598	1,812,576	219,240	50,416	118,694	...	...	6,389,610
1880	2,580,040	1,286,267	3,162,752	283,315	63,719	127,187	*19,720	...	7,523,000
1885	1,317,315	1,290,790	4,162,652	271,478	70,408	138,642	146,562	...	7,397,847
1890	2,091,229	1,782,978	5,558,264	359,938	130,970	162,440	214,094	...	10,299,913
1895	2,150,057	1,795,314	6,822,401	355,867	200,091	162,301	280,957	...	11,767,488
1900	1,983,116	1,602,384	4,078,191	214,761	338,590	165,516	257,667	...	8,640,225
1905	2,337,973	1,737,690	2,963,695	304,027	631,825	206,211	346,910	...	8,528,331
1910	3,140,307	1,647,569	5,131,699	384,862	825,040	201,854	513,388	...	11,744,714
1911	3,185,824	1,647,127	5,073,201	393,566	843,638	217,406	459,780	8,412	11,828,954
1912	3,033,726	1,508,089	5,210,891	383,418	806,294	222,181	405,552	7,108	11,577,259
1913	2,815,113	1,528,553	5,322,033	352,905	834,265	205,743	417,643	7,627	11,483,882
1914	2,472,631†	1,362,542	5,455,943	300,579	863,835	176,524	414,558	4,961	11,051,573
1915	2,400,104†	1,043,604	4,780,893	226,565	821,048	169,575	483,961	5,666	9,931,416

* Statistics not collected prior to 1880. † 30th June year following.

3. **Proportion in each State.**—During the period elapsing between 1901 and 1915 the proportion of cattle in the several States and the Northern Territory has varied considerably, as shewn hereunder :—

**PERCENTAGE OF CATTLE IN EACH STATE AND TERRITORY ON TOTAL FOR
COMMONWEALTH, 1901 and 1911 to 1915.**

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Federal Territory.	C'wealth.
	%	%	%	%	%	%	%	%	%
1901 ...	24.11	19.12	44.43	2.65	4.69	1.99	3.01	...	100.00
1911 ...	26.92	13.92	42.89	3.33	7.14	1.84	3.89	0.07	100.00
1912 ...	26.20	13.03	45.01	3.31	6.97	1.92	3.50	0.06	100.00
1913 ...	24.51	13.31	46.34	3.07	7.27	1.79	3.64	0.07	100.00
1914 ...	22.37	12.33	49.37	2.72	7.82	1.60	3.75	0.04	100.00
1915 ...	24.17	10.51	48.14	2.28	8.27	1.71	4.87	0.05	100.00

A comparison of the positions of the several States in 1901 and 1915 shews that, while Victoria's proportion of the Commonwealth herds suffered considerable diminution, and those for South Australia and Tasmania a falling off to a slight extent, fairly large increases have taken place in the other States, more especially in Western Australia and Queensland. New South Wales and the Northern Territory also shewed an upward tendency.

4. **Imports and Exports of Cattle.**—Although the various products of the cattle-raising industry bulk largely in the export trade of the Commonwealth, the export of live cattle from Australia has never been considerable. The number of cattle imported is also small, consisting, as in the case of horses, mainly of valuable animals for breeding. Details are as follows :—

COMMONWEALTH IMPORTS AND EXPORTS OF CATTLE, 1901 and 1911 to 1915-16.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1901 ...	114	3,591	2,413	22,088	2,299	18,497
1911 ...	103	7,806	9,964	45,670	9,861	37,864
1912 ...	33	1,502	16,083	65,735	16,050	64,233
1913 ...	57	5,572	14,605	55,801	14,548	50,229
1914-15 ...	221	21,090	10,342	40,648	10,121	19,558
1915-16 ...	440	19,169	5,857	29,258	5,417	10,089

The average value of the cattle imported into the Commonwealth during the last five years was £64 11s. 4d. per head, while the average value of the cattle exported during the same period was £4 3s. 5d. As stated previously, the imported cattle were principally for stud purposes.

The comparatively large exports for the years 1912 and 1913 were due to shipments to Java and Philippine Islands, valued at £42,290 and £61,766 respectively. The bulk of these cattle were exported from Western Australia.

5. **Cattle Slaughtered.**—Complete returns of the number of cattle slaughtered annually in the Commonwealth are not obtainable, as these particulars were collected in Tasmania prior to 1911 for Hobart and Launceston only, and were collected in South Australia for the first time in 1908 in respect of the year 1907. Estimates for these States have, however, been made, and the results are included in the following table:—

CATTLE (INCLUDING CALVES) SLAUGHTERED IN STATES, TERRITORIES AND COMMONWEALTH, 1901 and 1911 to 1915.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. †	N.T.	Fed. Ter.	C'wealth.
1901	335,823	251,477	377,433	*72,000	39,424	34,000	†	...	1,110,157
1911	548,651	347,926	444,264	87,293	58,049	38,000	\$4,061	269	1,528,513
1912	612,773	368,512	580,332	113,344	59,695	41,000	\$4,061	267	1,779,984
1913	679,901	410,694	703,367	116,282	62,613	30,038	\$4,061	276	2,007,232
1914	635,196	470,011	776,869	112,183	61,387	30,064	*4,000	142	2,089,852
1915	384,977	356,174	653,015	82,070	65,121	28,586	*4,000	55	1,573,998

* Estimated. † Partly estimated prior to 1913. ‡ Not available. § 1910 figures, those for 1911, 1912 and 1913 not available. ¶ For year ended 30th June of year following.

6. **Export of Beef Preserved by Cold Process.**—A large export trade in beef preserved by cold process is carried on by the Commonwealth, mainly with the United Kingdom, the Philippine Islands, and the South African Union. The quantities so exported during the five years 1911 to 1915-16 are as follows:—

**QUANTITY OF BEEF PRESERVED BY COLD PROCESS EXPORTED FROM THE
COMMONWEALTH, 1911 to 1915-16.**

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom	81,501,060	108,886,860	169,963,291	253,396,440	108,906,118	722,653,769
Philippine Islands	10,336,535	13,996,124	14,535,447	11,352,425	4,089,865	54,310,396
South African Union	7,337,652	9,228,546	5,656,346	194,583	...	22,417,132
United States ... ..	...	289	5,037,769	15,974,209	...	21,012,267
Egypt	1,905,595	2,084,806	3,990,804	4,281,049	109,969	12,372,223
Italy	2,509,466	2,127,876	6,356,514	170,159	...	11,164,015
Straits Settlements	1,646,590	1,781,817	2,053,514	2,260,587	1,411,876	9,154,384
Hawaiian Islands	272,559	1,198,140	2,356,115	1,538,997	...	5,365,811
Malta	1,526,389	1,090,044	1,142,092	1,338,439	...	5,096,964
Canada	239,653	904,832	3,352,675	60,540	...	4,657,700
Germany ... ..	...	97,491	1,813,799	...	...	1,911,290
Hong Kong... ..	618,688	551,012	423,659	216,350	38,859	1,848,568
Gibraltar	403,626	...	353,582	487,289	...	1,244,497
Ceylon	151,104	150,620	221,521	210,903	1,330	735,478
Japan	77,223	1,098	36,705	...	...	115,026
Other countries	260,277	110,521	1,674,773	584,514	118,087	2,698,172
Total	108,786,417	142,210,076	218,918,606	292,066,489	114,676,104	876,657,692

The value of the beef preserved by cold process exported from the Commonwealth during the same years is as follows:—

**VALUE OF BEEF PRESERVED BY COLD PROCESS EXPORTED FROM THE
COMMONWEALTH, 1911 to 1915-16.**

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 years.
	£	£	£	£	£	£
United Kingdom	813,393	1,245,536	2,037,978	4,430,370	2,065,045	10,582,322
Philippine Islands	114,989	162,555	183,047	169,327	86,011	715,929
South African Union	67,940	97,601	65,906	2,500	...	233,947
United States ... ..	...	5	66,938	209,938	...	276,781
Egypt	19,308	24,537	49,134	71,040	2,520	166,539
Italy	26,497	23,173	75,130	2,130	...	126,930
Straits Settlements	21,065	20,141	25,576	33,447	28,040	128,269
Hawaiian Islands	4,413	20,325	38,003	24,498	...	87,239
Malta	15,412	11,491	13,214	22,349	...	62,466
Canada	3,707	16,831	44,456	1,272	...	66,266
Germany ... ..	...	1,219	23,388	...	...	24,607
Hong Kong... ..	6,370	4,346	4,392	2,924	764	18,796
Gibraltar	3,751	...	3,595	6,691	...	14,037
Ceylon	1,315	1,367	2,643	3,003	25	8,353
Japan	694	13	350	...	...	1,057
Other countries	3,278	1,591	18,625	10,565	3,489	37,548
Total	1,102,132	1,630,731	2,652,275	4,990,054	2,175,894	12,551,066

During the five years under review, the largest of Australia's customers for beef preserved by cold process has been the United Kingdom, while the most consistent and the second largest customer has been the Philippine Islands; the South African Union and the United States ranked next in order of importance. The exporting States during 1915-16 were:—Queensland, 113,872,655 lbs., valued at £2,156,899; New South Wales, 784,000 lbs., valued at £18,509; and South Australia, 19,449 lbs., valued at £486.

7. Comparison with other Countries.—In the following comparison of the herds of Australia with those of some of the principal cattle-raising countries of the world, the latest available figures have been inserted in each case:—

NUMBER OF CATTLE IN VARIOUS COUNTRIES.

Country.	Date.	No. of Cattle.	Country.	Date.	No. of Cattle.
British India ¹ ...	1913-14	143,276,556	Rumania ¹ ...	1900	2,589,526
U. S. of America ...	1915	58,329,000	Denmark ...	1915	2,417,125
Russian Empire ³ ...	1914	52,052,000	New Zealand ...	1915	2,390,831
Argentine Republic...	1915	29,500,000	Netherlands ...	1913	2,096,599
Germany ...	1914	21,817,375	Chile ...	1912-13	2,083,997
Austria-Hungary ² ...	1910-13	17,648,787	Belgium ...	1912	1,830,747
France ...	1914	13,120,649	Bulgaria ...	1910	1,603,182
United Kingdom ...	1915	12,171,452	Ceylon ...	1914	1,484,453
Australia ...	1914	9,931,416	Switzerland ...	1911	1,443,483
Uruguay ...	1908	8,192,602	Japan ...	1913	1,388,708
Canada ...	1914	7,332,595	Norway ...	1915	1,122,934
Italy ...	1908	6,198,861	Algeria ...	1912	1,106,801
Union of South Africa	1911	5,796,949	Servia ...	1910	957,105
Mexico ...	1902	5,142,457	Portugal ...	1906	703,198
Cuba ...	1914	3,394,934	Egypt ...	1913	637,098
Spain ...	1914	2,742,663	Tunis ...	1913	217,304
Sweden ...	1913	2,720,741			

1. Including buffaloes. 2. Austria 1910, Hungary 1913, Croatia-Slavonia 1911, and Bosnia-Herzegovina 1911. 3. Including Poland, Caucasus and Siberia.

8. **Relation to Population.**—The number of cattle per head of population differs considerably in the several States, and is also subject to marked variation from year to year in the same State. Particulars for 1901 and the past five years are as follows:—

NUMBER OF CATTLE PER HEAD OF POPULATION, 1901 and 1911 to 1915.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Northern Territory.	Fed. Terr.	C'wealth.
1901 ...	1.49	1.34	7.44	0.63	2.06	0.96	54.68	...	2.22
1911 ...	1.88	1.23	8.15	0.94	2.87	1.12	141.56	4.38	2.59
1912 ...	1.71	1.09	8.19	0.89	2.63	1.13	116.71	3.66	2.45
1913 ...	1.54	1.08	8.06	0.82	2.60	1.02	113.74	3.84	2.36
1914 ...	1.33	0.95	8.06	0.68	2.67	0.88	104.34	3.57	2.24
1915 ...	1.29	0.74	7.04	0.52	2.58	0.84	106.06	2.30	2.01

For the Commonwealth as a whole the ratio of cattle to population is nearly 10 per cent. less for 1915 than for 1901. A continuous increase from 1902 to 1910 was exhibited, while the proportion for 1911 is approximately the same as for the previous year; 1912, 1913, 1914 and 1915 shew a slight decline. The excess of the 1915 figures over those for 1901 is in evidence only in the State of Western Australia and the Northern Territory, and is most marked in the case of the latter. In all the other States the ratios for 1915 are the lowest for the period under review.

§ 4. Sheep.

1. **The Founding of the Commonwealth Pastoral Industry.**—Fortunately for Australia, the suitability of its climate and general conditions for the production of a high class of wool was, at an early date in the history of its settlement, surmised and tested by Captain Macarthur, one of the pioneer sheep-breeders of New South Wales. To the energy of this enterprising pastoralist is due in large measure the rapid and extremely satisfactory development of Australia as a producer of fine wool, and though

it would appear that the introduction of the Merino sheep into Australia was not due to Macarthur, a great deal of the credit for having successfully established the pastoral industry in Australia must certainly be his.

2. Distribution throughout Commonwealth.—With the exception of a short period in the early sixties, when the flocks of Victoria outnumbered those of the mother State, New South Wales has maintained amongst the Commonwealth group the lead in sheep production which naturally attached to it as the portion of the Commonwealth in which settlement was first effected. From 1878 onwards, the number of sheep in New South Wales has, in every year except 1902, 1903, and the past six years represented more than half the total for the Commonwealth, and even in these years it fell but little short of that amount.

The number of sheep in the several States and Territories at quinquennial intervals from 1860 to 1910, and for each year onwards to 1915, is as follows:—

**NUMBER OF SHEEP IN STATES, TERRITORIES, AND COMMONWEALTH,
1860 to 1915.**

Year.	New South Wales.	Victoria.	Queensland.	South Aust.	Western Aust.	Tasmania.	Northern Territory	Federal Territory.	Total C'wealth.
1860	6,119,163	5,790,896	3,449,350	2,824,811	260,136	1,700,930	...	...	20,135,286
1865	8,132,511	8,835,380	6,594,966	3,779,308	445,044	1,752,719	...	...	29,539,928
1870	16,306,535	10,761,887	8,163,818	6,440,655	608,892	1,349,775	...	...	41,593,612
1875	25,353,924	11,749,532	7,227,774	6,179,305	881,861	1,731,733	...	...	53,174,209
1880	35,398,121	10,360,285	6,035,967	6,443,904	1,231,717	1,796,715	*9,318	...	63,174,027
1885	37,820,906	10,661,337	8,994,322	6,593,648	1,702,719	1,648,627	49,917	...	67,491,976
1890	55,986,431	12,692,843	18,007,234	7,004,642	2,524,913	1,619,256	45,902	...	97,881,921
1895	47,617,637	12,791,084	19,856,959	6,531,006	2,295,832	1,523,846	73,313	...	90,689,727
1900	40,020,506	10,841,790	10,339,185	5,235,220	2,434,311	1,683,956	48,027	...	70,692,995
1905	39,506,764	11,455,115	12,535,231	6,277,812	3,120,703	1,583,561	61,730	...	74,540,916
1910	45,560,969	12,882,665	20,331,833	6,267,477	5,158,516	1,788,310	57,240	...	92,047,015
1911	44,722,523	13,857,804	20,740,981	6,171,907	5,411,542	1,823,017	50,983	224,764	93,003,521
1912	38,855,861	11,892,224	20,310,036	5,481,489	4,596,958	1,862,669	75,808	188,641	83,263,686
1913	39,701,348	12,113,633	21,786,600	5,073,057	4,421,375	1,745,356	67,109	143,875	85,057,402
1914	†32,874,359	12,051,685	23,129,919	4,208,461	4,456,186	1,674,815	70,200	134,679	78,000,334
1915	†32,498,046	10,545,632	15,950,154	3,674,547	4,303,850	1,624,450	57,827	102,683	69,257,189

* Statistics not collected prior to 1880. † 30th June of year following.

3. Proportion in the Several States and Territories.—Particulars concerning the relative positions of the several States and Territories with respect to the total flocks of Australia during the years 1901 and 1911 to 1915, and the variations in such positions which have taken place during those years are as hereunder:—

**PERCENTAGE OF SHEEP IN EACH STATE AND TERRITORY ON TOTAL FOR
COMMONWEALTH, 1901 and 1911 to 1915.**

Year.	N.S.W.	Vic.	Q'sland.	S. Aust.	W. Aus.	Tas.	N.T.	Fed. Terr.	C'wealth.
	%	%	%	%	%	%	%	%	%
1901	...	58.10	14.82	13.92	6.95	3.65	2.49	0.07	...
1911	...	48.09	14.90	22.30	6.64	5.82	1.96	0.05	0.24
1912	...	46.67	14.28	24.39	6.58	5.52	2.24	0.09	0.23
1913	...	46.68	14.24	25.61	5.96	5.20	2.05	0.08	0.18
1914	...	41.83	15.33	29.43	5.35	5.67	2.13	0.09	0.17
1915	...	46.92	15.23	23.03	5.30	6.94	2.35	0.08	0.15

During the period, the proportion of total Commonwealth flocks declined considerably in the case of New South Wales, and in a less marked degree in South Australia and Tasmania, while in the case of Queensland a marked advance in proportion was experienced, and there were smaller advances in Victoria and Western Australia.

4. **Oversea Imports and Exports of Sheep.**—As in the case of cattle, the oversea exports of live sheep from Australia are of comparatively small importance. The principal countries to which such exports have been consigned during recent years are the South African Union, Straits Settlements, and Papua, Western Australia being the principal exporting State. The following are the particulars of the imports and exports for the years 1901 and 1911 to 1915-16 :—

COMMONWEALTH IMPORTS AND EXPORTS OF SHEEP, 1901 and 1911 to 1915-16.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1901	553	12,134	12,094	12,104	11,541	—30
1911.	5,254	25,997	24,219	38,729	18,965	12,732
1912	2,903	10,643	34,113	72,522	31,210	61,879
1913	8,448	28,508	41,770	75,073	33,322	46,565
1914-15... ..	6,140	23,622	16,889	37,826	10,749	14,204
1915-16... ..	6,597	36,511	7,325	19,004	728	—17,507

Note. — signifies net imports.

5. **Sheep Slaughtered.**—The numbers of sheep slaughtered in the several States during 1901 and from 1911 to 1915 are as follows :—

SHEEP (INCLUDING LAMBS) SLAUGHTERED, 1901 and 1911 to 1915.

Year.	N.S.W.	Victoria.	Q'land.	Sth. Aust.	W. Aust.	Tas.†	N.T.	Fed. Terr.	C'wealth.
1901	4,519,133	2,469,797	554,705	*678,000	428,534	322,000	...	...	8,972,169
1911	6,539,559	4,348,363	981,153	1,275,734	622,555	350,000	1516	7,366	14,125,246
1912	5,805,595	4,153,269	1,273,332	1,332,838	610,214	357,000	1516	6,587	13,539,351
1913	6,420,810	4,742,231	1,375,827	1,222,315	602,383	315,726	1516	4,765	14,684,573
1914	6,006,190	4,550,272	1,351,145	1,156,957	588,342	312,275	*500	4,351	13,970,032
1915	4,173,511	2,973,803	1,316,152	918,526	564,535	283,419	*500	3,376	10,238,822

* Estimated. † Partly estimated. ‡ Figures for 1910; those for 1911, 1912, and 1913 not available. § Year ended 30th June year following.

6. **Exports of Mutton and Lamb Preserved by Cold Process.**—Australia's export trade in mutton and lamb preserved by cold process has, in recent years, advanced rapidly. In 1903 the value of exports was £492,114, while seven years afterwards, in 1910, the value amounted to no less a sum than £2,161,513; the average for the two years, 1913 and 1914-15, was £3,155,190, while, consequent on the recent drought and war conditions, the value of the 1915-16 exports fell to £769,752. In all the States considerable attention is now being paid to the breeding of a class of sheep that will best meet the requirements of consumers. Crosses between the Merino and the Lincoln, or between the Merino and the Leicester breeds, have proved exceedingly valuable, as they furnish both a good quality of wool and also an excellent carcase for export purposes. The breeding of Shropshire and Southdown sheep with a view to combining meat production with that of wool is also on the increase. Special attention is being paid to the raising of lambs for the home markets, as it has become widely recognised that, with suitable breeds, the export trade in lambs is a very profitable one.

Australia's principal customer in this trade is the United Kingdom, which has absorbed 94.7 per cent. of the total quantity exported from the Commonwealth during the past

five years. The South African Union and Canada took 1.0 and 0.8 per cent. respectively, while the balance of 3.5 per cent. was principally absorbed by Germany in 1913, the Philippine Islands, Malta, Straits Settlements, and Egypt. The recent revision of the tariff of the United States of America will doubtless have the effect of eventually opening up a vast market in that country for Australian mutton and lamb and other meat products. The quantities exported to various countries are as follow:—

**QUANTITY OF MUTTON AND LAMB PRESERVED BY COLD PROCESS EXPORTED
FROM THE COMMONWEALTH, 1911 to 1915-16.**

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom	120,757,079	108,556,172	191,440,138	187,897,976	36,539,660	645,191,025
South African Union	2,657,853	1,910,196	1,550,257	387,006	...	6,505,312
Canada	2,077,802	1,320,718	1,662,910	413,013	...	5,474,443
Germany ... ..	...	133,429	5,144,062	...	...	5,277,491
Philippine Islands	859,022	677,076	778,693	370,296	132,134	2,817,221
Malta	699,514	266,035	1,059,183	798,996	...	2,823,728
Straits Settlements	845,079	992,831	928,783	1,068,164	749,883	4,584,740
Egypt	447,411	624,506	633,109	902,604	319,156	2,926,786
Hong Kong	417,316	328,330	401,380	256,068	194,209	1,597,303
Ceylon	332,011	293,523	365,065	304,115	302,839	1,597,553
Hawaiian Islands	102,361	83,770	91,085	30,802	...	306,018
United States ... ..	...	2,051	571,008	195,225	...	763,284
Gibraltar	99,501	...	...	463,106	...	562,607
Japan	19,885	...	39	...	...	19,924
Other Countries	254,461	183,344	306,071	176,506	105,747	1,026,129
Total	129,569,295	115,371,981	204,931,783	193,263,877	38,343,628	681,480,564

The corresponding particulars concerning the values of the exports are:—

**VALUES OF FROZEN MUTTON AND LAMB EXPORTED FROM THE COMMONWEALTH,
1911 to 1915-16.**

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 years.
	£	£	£	£	£	£
United Kingdom	1,529,633	1,499,648	2,712,682	3,321,045	725,255	9,788,263
South African Union	28,365	23,919	19,936	6,538	...	78,758
Canada	28,027	20,336	27,256	7,507	...	83,126
Germany ... ..	...	1,670	67,396	...	...	69,066
Philippine Islands	9,282	9,271	9,649	6,212	3,039	37,453
Malta	8,274	3,228	14,142	12,920	...	38,564
Straits Settlements	9,781	13,387	11,841	18,553	18,713	72,275
Egypt	6,248	8,282	9,435	16,577	7,719	48,261
Hong Kong	4,581	4,483	5,571	4,422	4,928	23,985
Ceylon	3,910	4,448	5,091	5,346	7,524	26,319
Hawaiian Islands	1,549	1,343	1,386	772	...	5,050
United States ... ..	...	35	7,793	3,066	...	10,894
Gibraltar	829	...	...	7,660	...	8,489
Japan	202	...	1	...	...	203
Other Countries	2,941	2,328	4,353	3,230	2,574	15,426
Total	1,633,622	1,592,378	2,896,532	3,413,848	769,752	10,306,132

7. Comparison with other Countries.—As regards the size of its flocks, and the quantity and quality of wool produced, for many years prior to the 1914 drought, Australia occupied the foremost position amongst the sheep-raising countries of the world. The National Association of Wool Manufacturers of America gives approximately the number of sheep in the world as 639,500,000, and of this total Australia contributes nearly a ninth. The following comparison gives the latest available figures relative to the number of sheep in the principal wool-producing countries:—

NUMBER OF SHEEP IN VARIOUS COUNTRIES.

Country.	Date.	No. of Sheep	Country.	Date.	No. of Sheep.
Argentine Republic ...	1915	80,000,000	Bulgaria ...	1910	8,632,380
Russian Empire ^{1, 2} ...	1914	72,273,000	Rumania ...	1900	5,655,444
Australia ...	1915	69,257,189	Germany ...	1914	5,451,570
United States of America	1915	49,956,000	Chile ...	1912 | 1913 |	4,567,194
Union of South Africa.	1913	35,710,843	Servia ...	1910	3,818,997
United Kingdom ...	1915	28,275,970	Mexico ...	1902	3,424,430
Ottoman Empire ...	1912	27,094,678	Portugal ...	1906	3,072,988
Uruguay ...	1908	26,286,296	Canada ...	1914	2,720,421.
New Zealand ...	1915	24,788,150	Norway ...	1915	1,335,870
British India ...	1913	23,091,955	Sweden ...	1913	988,163
	1914		Netherlands ...	1913	842,018
Spain ...	1914	16,128,039	Tunis ...	1913	728,540
France ...	1914	14,559,586	Iceland ...	1910	578,634
Austria-Hungary ³	1910	12,937,542	Denmark ...	1915	533,137
	1913		Belgium ...	1910	185,373
Italy ...	1908	11,162,926	Switzerland ...	1911	161,414
Algeria ...	1912	8,338,023			

1. Including goats. 2. Including Poland, Caucasus, and Siberia. 3. Austria 1910, Hungary 1913; Croatia-Slavonia 1911, Bosnia-Herzegovina 1911.

8. Relation to Population.—The relation of the flocks of the several States and Territories to the populations at the end of the year 1901 and from 1911 to 1915 is as follows:—

NUMBER OF SHEEP PER HEAD OF POPULATION, 1901 and 1911 to 1915.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Federal Ter.	C'wealth.
1901	30.43	8.82	19.80	13.95	13.56	10.23	10.34	...	18.83
1911	26.74	10.17	33.34	14.76	18.40	9.42	15.70	117.00	20.36
1912	21.86	8.61	31.91	12.74	15.02	9.45	21.82	97.24	17.59
1913	21.67	8.58	33.00	11.53	13.79	8.65	18.28	74.89	17.46
1914	17.66	8.42	34.18	9.53	13.79	8.32	17.66	69.42	15.91
1915	17.42	7.43	23.50	8.38	15.11	8.08	12.67	41.64	14.04

§ 5. Wool.

1. Importance of Wool Production.—The chief contributing factor to the pastoral wealth of Australia is the production of wool, the value of the output for the season ended 30th June, 1916, being about £26,899,000. The bulk of the wool produced in the Commonwealth is exported, but with the increased activity of the local woollen mills there has, in recent years, been an increasing quantity used in Australia, although even now the quantity so used represents less than 4 per cent. of the whole clip:

2. Greasy and Scoured Wool.—For the purpose of comparing the clips of the several States or of the Commonwealth as a whole for a series of years, it is convenient to have the total production expressed in terms of greasy wool.

The quantity of Australian wool scoured and washed before export is, on the average, about 20 per cent. of the total clip. The ratio of loss of weight in scouring varies largely with season, locality, breed, and condition. It seems preferable to express "scoured and washed" wool in terms of "greasy" rather than *vice versa*, since the absolute error arising from uncertainty as to average loss of weight has thus the less effect.

In the following tables, relative to the production of wool, "scoured and washed" has been converted into the estimated equivalent amount of "greasy" on the assumption that two pounds of "greasy" wool are on the average required to produce one pound of "scoured and washed" wool.

3. Total Production.—The estimated production of wool in the several States, formerly based on Customs returns, being no longer available from that source, an effort has been made to arrive at approximate figures from data collected by the State Statisticians from growers and fellmongers, etc. Particulars for years prior to 1910 will be found in former issues (see Year Book No. 6, page 346). The following table gives the estimates obtained in reference to the five seasons ended 30th June, 1912 to 1916:—

ESTIMATED QUANTITY OF WOOL AS IN THE GREASE, SHORN, FELLMONGERED, OR ON SKINS SHIPPED DURING THE SEASONS ENDED 30th JUNE, 1912 to 1916.

State.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales*	371,546,415	326,804,000	357,985,000	318,935,000	262,044,982
Victoria...	110,463,041	88,762,612	106,833,690	95,406,867	82,330,198
Queensland ...	142,382,269	136,878,270	154,183,114	155,478,740	130,783,277
South Australia ...	60,056,470	56,691,036	55,014,048	38,848,978	33,969,975
Western Australia	30,833,837	26,849,981	26,625,787	24,562,110	31,914,040
Tasmania ...	10,726,593	12,416,014	10,092,564	9,103,030	9,212,203
Northern Territory†	400,000	450,000	400,000	400,000	350,000
Commonwealth	726,408,625	648,851,913	711,134,203	642,734,725	550,604,675

* Including Federal Territory. † Approximate figures.

It is to be noted that a shortage has apparently occurred in the collection of these statistics, the estimates falling considerably below the approximate totals obtained from oversea shipments of wool and skins, together with quantity used in local manufactories. The Commonwealth total so obtained represented 785,753,099 lbs. for the season 1911-12, 668,667,078 lbs. for 1912-13, and 754,123,633 lbs. for 1913-14. The abnormal conditions of wool shipments obtaining during the two last seasons do not admit of any similar comparison with the estimated production.

4. Wool Locally Used.—The quantity of wool used in the manufactories of the several States of the Commonwealth during the past five calendar years was approximately as follows:—

LOCALLY USED WOOL, ESTIMATED AS "GREASY," COMMONWEALTH AND STATES,
1911 to 1915.

State.	1911.	1912.	1913.	1914.	1915.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales	2,401,920	2,420,000	2,484,446	*4,173,576	*4,173,576
Victoria	5,774,868	5,535,483	6,978,300	7,215,380	13,042,250
Queensland	536,486	583,892	406,823	356,553	377,535
South Australia	634,238	710,000	645,000	389,700	1,065,130
Western Australia ... ..	...	...	...	...	...
Tasmania	986,000	1,082,000	1,105,000	1,141,200	1,217,780
Commonwealth	10,133,512	10,331,375	11,619,575	13,276,409	19,876,274

* Year ended 30th June, 1915.

5. **Bounties on Combed Wool or Tops Exported.**—Under the Bounties Act 1907, bounties are payable on combed wool or tops exported from the Commonwealth, provided they were produced therein. The maximum amount to be paid may not exceed a total of £10,000 per annum; any unexpended sum may be carried forward and be available for the years following. For the three years commencing 1st January, 1909, the rate of bounty granted was 1½d. per lb., and for the two years commencing 1st January, 1912, 1d. per lb. was payable for all combed wool or tops produced; thenceforward to the end of 1915, 1d. per lb. is payable up to 1,000,000 lbs. to any one manufacturer during a year and ¾d. per lb. in excess of that quantity. During the year 1908-9, an amount of £326 was paid in bounties; in 1909-10, £4,933, in 1910-11, £8,522, in 1911-12, £16,898; in 1912-13, £13,061 in 1913-14, £12,706, in 1914-15, £7,727, and in 1915-16, £5,828. The quantities of wool on which these amounts were paid were 52,085, 789,216, 1,363,555, 3,122,244, 3,134,614, 3,068,170, 3,635,811 and 2,824,436 lbs. respectively.

Figures shewing the exports of wool tops for the years 1909 to 1915-16 inclusive will be found on the next page.

6. **Exports of Wool.**—About forty-six per cent. of the exports of wool from the Commonwealth during the past five years was despatched to the United Kingdom, the other leading consignees being France, the United States of America, Japan, and, prior to the war, Germany and Belgium. The following table shews for the years 1911 to 1915-16 the quantities of "greasy" wool exported from the Commonwealth and the principal countries to which consigned:—

COMMONWEALTH EXPORTS OF WOOL IN THE GREASE, 1911 to 1915-16.

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 Years.
	lbs.	lbs.	lbs.	lbs.	lbs.*	lbs.
United Kingdom	230,013,473	311,386,638	185,387,090	319,614,694	202,384,381	1,148,786,276
France	155,947,112	151,555,673	159,782,827	12,787,863	13,746,706	493,220,180
Germany	105,674,113	107,523,165	94,068,893	3,036,083	...	310,302,254
United States of America	10,154,171	8,686,125	14,666,551	61,731,511	115,112,628	210,350,986
Belgium	58,469,298	54,679,915	51,881,724	2,984,856	...	168,015,793
Japan	6,583,686	9,339,817	7,199,671	22,670,413	34,725,863	80,519,450
Italy	5,644,235	4,856,997	5,778,424	18,191,774	43,167,206	77,635,636
Austria-Hungary	5,836,922	7,908,480	11,731,333	829,746	...	26,307,151
India	478,353	390,536	501,327	443,451	198,228	2,012,395
Canada	52,299	126,517	83,916	951,452	453,950	1,673,134
New Zealand	154,193	147,794	101,104	541,513	11,059	955,663
Other Countries	415,698	1,231,082	247,918	170,474	1,452,965	3,518,117
Total... ..	578,823,623	557,832,718	531,436,878	443,953,830	411,252,986	2,523,300,03

Similar particulars concerning the exports of "scoured and washed" wool are as follows:—

COMMONWEALTH EXPORTS OF "SCOURED AND WASHED WOOL,"*

1911 to 1915-16.

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 Years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom	35,940,841	28,305,314	26,176,484	48,171,821	37,569,727	176,164,387
France	13,989,442	15,037,742	18,804,399	2,154,275	1,190,494	51,176,352
Germany	12,148,316	10,541,771	10,135,857	1,748,008	...	34,573,952
United States of America ... ..	...	49,849	124,301	4,557,800	27,933,634	32,665,584
Japan	1,602,747	2,750,614	3,564,433	6,141,036	7,499,571	21,568,401
Belgium	7,629,001	5,661,005	5,269,908	920,506	...	19,480,420
Italy	397,004	380,550	168,298	655,302	4,920,545	6,541,699
India	33,321	47,826	100,434	135,408	240,663	557,652
Austria-Hungary	16,734	89,036	62,932	147,864	...	316,566
New Zealand	2,934	42,927	11,042	1,879	104,864	163,646
Other Countries	10,300	347,472	11,998	315,392	426,553	1,111,715
Total... ..	71,770,640	63,254,106	64,450,086	64,949,291	79,886,051	344,310,174

* Including "tops." See next page.

The figures for "scoured and washed wool" for 1909 include for the first time an export of tops, amounting to 496,492 lbs. and valued at £58,638. In 1910 the corresponding export was 1,123,469 lbs., valued at £134,874; in 1911, 2,513,106 lbs., valued at £275,406; in 1912, 3,018,050 lbs., valued at £323,299; in 1913, 3,561,722 lbs., valued at £415,670; in 1914-15, 4,095,966 lbs., valued at £511,021; and in 1915-16, 4,981,975 lbs., valued at £680,656. In 1914-15, Japan took 4,052,965 lbs., valued at £506,161; and in 1915-16, 4,894,577 lbs., valued at £665,442.

The total value of the wool exported from the Commonwealth to the principal countries during the five years under review was:—

TOTAL VALUE OF WOOL EXPORTED FROM THE COMMONWEALTH, 1911 to 1915-16.

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 Years.
	£	£	£	£	£	£
United Kingdom	11,159,335	10,418,577	9,456,636	15,413,174	12,608,971	59,056,693
France	6,016,293	6,527,854	7,429,856	694,751	952,026	21,620,780
Germany	4,851,785	5,050,974	4,693,157	295,376	...	14,891,292
United States of America	500,015	460,275	745,354	3,110,301	8,381,302	13,197,247
Belgium	2,552,282	2,480,348	2,386,892	187,755	...	7,607,277
Japan	459,000	703,371	735,018	1,502,576	2,567,091	5,987,056
Italy	245,804	230,436	256,718	716,260	2,115,891	3,565,109
Austria-Hungary	242,461	360,125	519,477	50,436	...	1,172,499
India	21,290	18,739	30,586	30,739	32,442	133,796
Canada	2,824	7,155	5,404	50,063	53,316	118,762
New Zealand	6,199	8,844	5,199	19,962	4,931	45,135
Other Countries	13,905	87,865	12,765	30,789	118,121	263,445
Total	26,071,193	26,354,563	26,277,062	22,102,182	26,854,091	127,659,091

7. Care needed in Comparing Clips.—The Customs returns do not furnish a reliable indication of increase or decrease in successive clips, since in each case up to 1913 they relate to the year ended 31st December. Ordinarily, therefore, they include for any year imports and exports of wool belonging to two distinct clips. A further defect in the comparability of successive clips arises as follows:—Owing to climatic or other conditions, the time of shearing may be so far delayed that one clip may include almost thirteen months' growth of wool, while the succeeding one may include little more than eleven months' growth.

8. **Wool-producing Countries in Southern Hemisphere.**—The next table, compiled by one of the leading English wool-broking firms, furnishes interesting evidence of the relative importance of the three great wool-producing countries of the Southern Hemisphere. The figures given represent for the respective years the imports of wool into Europe and North America :—

IMPORTS OF WOOL INTO EUROPE AND NORTH AMERICA, 1901 and 1912 to 1916.

Year.	Commonwealth and New Zealand.	Cape Colony.	River Plate.	Total.	Average Value of Australian and Cape Bales.
	Bales.	Bales.	Bales.	Bales.	£
1901 ...	1,745,000	217,000	532,000	2,494,000	10.5
1912 ...	2,463,000	463,000	497,000	3,423,000	15.0
1913 ...	2,296,000	484,000	437,000	3,217,000	16.5
1914 ...	2,332,000	499,000	406,000	3,237,000	17.0
1915 ...	2,157,000	519,000	378,000	3,054,000	19.0
1916 ...	1,919,000	500,000	344,000	2,763,000	27.0

As the River Plate bale is much larger than the Australian or Cape bale, a comparison of the number of bales would be somewhat misleading. Allowing approximately for the difference in size of the several bales, it may be said that during the last five years the importations from Australia and the Dominion of New Zealand represent about 65 per cent. of the total.

9. **United Kingdom Importation of Wool.**—The quantity and value of wool imported into the United Kingdom during the year 1915 from the principal wool-producing countries, furnish evidence of the important position which the Commonwealth occupies in the supply of wool to the mother country. This is shewn in the following table :—

IMPORTS OF WOOL INTO THE UNITED KINGDOM, 1915.

Country from which Imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	lbs.	£		lbs.	£
Australia ...	426,163,648	19,477,337	China ...	1,155,549	53,634
New Zealand ...	200,031,839	11,075,927	Turkey ...	877,758	36,719
Union of Sth. Africa ...	136,565,278	5,158,503	Portugal ...	447,348	19,955
Argentine Republic ...	60,968,009	2,703,824	France ...	228,978	13,204
British India ...	65,432,255	2,099,491	Iceland & Greenland ...	271,161	12,901
Chile ...	15,278,094	560,785	Morocco ...	148,000	6,487
Egypt ...	6,526,462	209,973	Canada ...	1,300	35
U.S. of America ...	2,372,112	164,344	Other Countries ...	1,437,881	52,808
Peru ...	3,002,903	152,697			
Falkland Islands ...	3,044,924	117,270			
Persia ...	1,303,800	56,538	Total ...	926,380,036	42,027,335
Uruguay ...	1,122,737	54,898			

It will be seen that of the total importations of wool into the United Kingdom, Australian wool represented 46 per cent. of quantity and over 46 per cent. of value, and New Zealand nearly 22 per cent. of quantity and over 26 per cent. of value.

10. **The Wool Market.**—A résumé of Australian wool market conditions for the seasons 1907-8 to 1912-13 will be found in Year Book No. 7 (pages 296 and 297), and for the season 1913-14 in Year Book No. 8 (page 297).

The 1914-15 season opened in the midst of a dislocation of trade, consequent on the European War. The Bank of England rate rose to 10 per cent., Stock Exchanges in Europe and America closed, and moratoria were declared in several parts of the world. The wool market, always highly susceptible to European complications, at once felt the effects, and the outlook in August was unpromising, but the various Governments took immediate measures to preserve credit, and averted a crisis. An extraordinary demand, however, soon arose for crossbred wool, this gathered strength as the army orders became more extensive, and lasted throughout the season. Merino wool, on the other hand, met with small demand at the commencement of the season, the Continental countries, which had absorbed some 60 per cent. in the previous season, were, of course, non-purchasers, while the embargo on the export of wool to America caused a further restriction. Permission to ship merino wool to America early in 1915, together with a revival in the home trade, considerably improved the market, and values rose rapidly, until towards the end of the season prices were considerably above the high levels of November, 1899.

The season closed with values for all good and superior wools on a higher plane than for many years. On the other hand, burr-infested wools met with little or no demand, few carbonising plants being available for their treatment.

The early sales of the 1915-16 season shewed a tendency towards an easier tone in the demand for all kinds of wool except those of the very best description. The Yorkshire buyers especially, owing to comparatively large stocks on hand, shewed a disposition towards less spirited buying, and this, combined with the absence of the normal Continental competition, created a very critical position, which, however, was fortunately saved by the surprising vigor of American and Italian operations, the by no means inconsiderable buying on Japanese account, and the enhanced demand by local manufacturers. As the season advanced the market gained strength, and soon the previous records of prices were left far behind, the season towards its close exhibiting the highest level in the history of the Australian wool market. At the commencement of the season, the congested state of the London warehouses, the fact that users in the United Kingdom were over supplied with wool, combined with the increasing difficulties in securing freights, emphasized the necessity of regulating supplies. A mutual policy was formulated in New South Wales and Victoria whereby catalogues were limited, and such wools only as were in demand were included. Adelaide and Brisbane also brought forward reasonable offerings. Thereafter supplies were automatically increased as the demand widened, but at no time was the position imperilled by excessive offerings, neither was the season unduly protracted.

A brief epitome setting out the salient facts leading up to the inception and ultimate transactions of the Central Wool Committee in connection with the 1916-17 wool clip will be found in the Appendix, section VII.

The average values per lb. of Australian greasy wool according to the export returns for the past ten years have been as follows:—

EXPORT VALUE PER LB. OF AUSTRALIAN GREASY WOOL, 1906 to 1915-16.

Year	...	...	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914-15.	1915-16.
Average value	per	lb.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
			10.14	10.73	9.17	9.35	9.58	8.87	9.50	9.70	9.45	11.86

(i.) *Exports of Wool from each State, and Quantity sold Locally.* Over 89 per cent. of the wool grown in Australia was sold in the local markets prior to export from the Commonwealth during 1915-16. Under normal conditions buyers from the United Kingdom,

France, Germany, and other European countries, also from America, Japan, China, and India, attend the sales conducted in Sydney, Melbourne, Geelong, Brisbane, Adelaide, Fremantle, Hobart, and Launceston.

The following table shews the number of bales of wool exported oversea from each State during the season ended 30th June, 1916, and bales sold at the local sales for shipment, for use in local woollen mills and for scouring, etc. It must be noted that as considerable quantities of wool grown in some States are sold in or shipped from others, these figures therefore do not shew actual local production, but total oversea shipments and sales. The estimated quantity of wool produced in each State is given on page 306.

EXPORTS OF WOOL TO PLACES OUTSIDE THE COMMONWEALTH, AND THE QUANTITY SOLD LOCALLY IN THE SEVERAL STATES, DURING THE SEASON ENDED 30th JUNE, 1916.

State.	Overseas Exports.		Sold at Local Sales prior to Export. (a)		Ratio of Local Sales to total Exports from C'wealth.
	Bales.	%	Bales.	%	%
New South Wales	840,515	51.91	707,969	49.06	43.72
Victoria	342,476	21.15	349,984	24.25	21.61
Queensland	258,122	15.94	246,376	17.07	15.22
South Australia	92,654	5.72	115,314	7.99	7.12
Western Australia	73,564	4.54	1,459	0.10	0.09
Tasmania	11,928	0.74	22,016	1.53	1.36
Commonwealth	1,619,259	100.00	1,443,118	100.00	89.12

(a) Including 136,331 bales sold to Local Woollen Mills, Scourers and Speculators.

(ii.) *Exports of Wool from Commonwealth and Quantity sold Locally.* The number of bales of wool exported from the Commonwealth and sold at local sales prior to shipment, or taken for local use, during 1895, 1900, 1905, 1910, and the past six seasons is shewn in the following table:—

EXPORTS OF WOOL FROM THE COMMONWEALTH, AND THE QUANTITY SOLD LOCALLY. FROM 1895 to 1916.

Year ended 30th June.	Overseas Exports.	Sold prior to Export. (a)	Ratio of Wool sold to Exports.
	Bales.	Bales.	%
1895	1,595,652	817,933	51.22
1900	1,221,163	807,031	66.09
1905	1,218,969	926,940	76.04
1910	1,921,705	1,624,561	84.54
1911	1,975,378	1,642,555	83.15
1912	2,020,547	1,700,494	84.16
1913	1,718,486	1,518,650	88.37
1914	1,966,576	1,703,744	86.64
1915	1,575,688	1,222,872	77.61
1916	1,619,259	1,443,118	89.12

(a) Including wool sold to Local Woollen Mills, Scourers and Speculators.

The steady development of the Australian wool market is clearly shewn in this table. In the nineteen years ended 1914, the quantity sold more than doubled, and the ratio of wool sold to that exported increased from 51 per cent. in 1895 to over 86½ per cent. in the season ended 30th June, 1914. The abnormal conditions obtaining during the 1914-15 and 1915-16 seasons materially affected the ratios, which were 77.61 for the former and 89.12 for the latter season.

During the past season 1,443,118 bales of wool were sold in Australia, and 364,861 bales in New Zealand, representing the total value of £29,903,532. This enormous quantity far exceeds the sales of any other country in the world.

(iii.) *Distribution of Wool sold in Australian Markets.* The estimated approximate distribution of wool sold in the local markets during the season 1915-16 is shewn in the following table, and exhibits the world-wide representation of buyers at the Australian sales :—

ESTIMATED APPROXIMATE DISTRIBUTION OF WOOL SOLD LOCALLY IN THE SEVERAL STATES OF THE COMMONWEALTH, DURING THE SEASON ENDED 30th JUNE, 1916.

Destination.	N.S.W.	Victoria.	Q'land.	S. Aust. (a)	Tas.	C'wealth.
	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.
United Kingdom ...	234,266	140,096	74,565	42,743	3,403	495,073
France ...	29,840	8,216	3,790	1,444	60	43,350
Belgium, and Holland ...	...	...	...	...	...	...
Germany and Austria ...	...	...	...	...	...	...
Italy and Switzerland ...	93,308	24,596	43,963	4,480	569	166,916
Other European Countries ...	380	3,867	590	2,585	...	7,422
America ...	243,587	130,116	58,736	36,326	12,950	481,715
Japan, China, and India ...	70,709	5,420	36,010	88	84	112,311
Local Woollen Mills	35,879	37,673	28,722	29,107	4,950	136,331
Scourers and Speculators ...						
Total Sales ...	707,969	349,984	246,376	116,773	22,016	1,443,118

PERCENTAGE DISTRIBUTION.

	%	%	%	%	%	%
United Kingdom ...	33.09	40.03	30.26	36.60	15.46	34.31
France ...	4.21	2.35	1.54	1.24	0.27	3.00
Belgium, and Holland ...	...	...	...	...	...	...
Germany and Austria ...	...	...	...	...	...	...
Italy and Switzerland ...	13.18	7.02	17.84	3.84	2.59	11.57
Other European Countries ...	0.05	1.11	0.24	2.21	...	0.51
America ...	34.41	37.18	23.84	31.11	58.82	33.38
Japan, China, and India ...	9.99	1.55	14.62	0.08	0.38	7.78
Local Woollen Mills	5.07	10.76	11.66	24.92	22.48	9.45
Scourers and Speculators ...						
Total Sales ...	100.00	100.00	100.00	100.00	100.00	100.00

(a) Including 1459 Bales sold in Western Australia.

Of the total quantity sold, amounting to 1,443,118 bales, 495,073 or 34.31 per cent. were purchased for the United Kingdom, 481,715 or 33.38 per cent. for America, 166,916 or 11.57 per cent. for Italy and Switzerland, 112,311 or 7.78 per cent. for Japan and other Asiatic countries, and 136,331 or 9.45 per cent. by scourers and speculators and for consumption in the local woollen mills.

(iv.) *Quantities of Various Descriptions of Wool Sold in each State.* The quantities and ratios of the various descriptions of wool marketed in each State are shown in the following tables:—

PROPORTIONS OF THE VARIOUS DESCRIPTIONS OF WOOL SOLD LOCALLY IN THE SEVERAL STATES OF THE COMMONWEALTH DURING THE SEASON ENDED 30th JUNE, 1916.

Description of Wool.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Commonwealth.
	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.
Greasy ...	637,172	331,912	176,568	107,025	1,459	22,001	1,276,137
Scoured ...	70,797	18,072	69,808	8,289	...	15	166,981
Total ...	707,969	349,984	246,376	115,314	1,459	22,016	1,443,118
Fleece, etc. ...	679,650	331,940	236,610	111,334	1,459	21,302	1,382,295
Lambs ...	28,319	18,044	9,766	3,980	...	714	60,823
Total ...	707,969	349,984	246,376	115,314	1,459	22,016	1,443,118
Merino ...	608,853	168,860	240,301	104,936	1,459	7,265	1,131,674
Crossbred and all strong breeds ...	99,116	181,124	6,075	10,378	...	14,751	311,444
Total ...	707,969	349,984	246,376	115,314	1,459	22,016	1,443,118
	%	%	%	%	%	%	%
Greasy ...	90.00	94.84	71.67	92.81	100.00	99.93	88.43
Scoured ...	10.00	5.16	28.33	7.19	...	0.07	11.57
Total ...	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Fleece, etc. ...	96.00	94.84	96.04	96.55	100.00	96.76	95.79
Lambs ...	4.00	5.16	3.96	3.45	...	3.24	4.21
Total ...	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Merino ...	86.00	48.25	97.53	91.00	100.00	33.00	78.42
Crossbred and all strong breeds ...	14.00	51.75	2.47	9.00	...	67.00	21.58
Total ...	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Wool in the grease represented over 88 per cent. of total sales during the period under review. Of fleece and lambs wool, the former shows 95.79, and the latter 4.21 per cent. The class of wool produced is principally merino, which is almost exclusively grown in the northern and central parts of the continent, the bulk of the merino wool sold in Victoria coming from Riverina and other parts of New South Wales. Victoria, the southern parts of South Australia and of New South Wales, and Tasmania, produce nearly the whole of the crossbred and other strong bred wools.

(v.) *Percentages in each State of Various Descriptions of Wool Sold.* The following table gives the percentages of each description of wool sold in the several States during the season 1915-16:—

PERCENTAGE OF BALES OF EACH DESCRIPTION OF WOOL SOLD IN THE SEVERAL STATES TO THE TOTAL SOLD IN THE COMMONWEALTH, 1915-16.

Description of Wool.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Commonwealth.
	%	%	%	%	%	%	%
Greasy ...	49.93	26.01	13.84	8.39	0.11	1.72	100.00
Scoured ...	42.40	10.82	41.81	4.96	...	0.01	100.00
Fleece, etc. ...	49.17	24.01	17.12	8.05	0.11	1.54	100.00
Lambs ...	46.56	29.67	16.06	6.54	...	1.17	100.00
Merino ...	53.80	14.92	21.24	9.27	0.13	0.64	100.00
Crossbred and all strong breeds ...	31.82	58.16	1.95	3.33	...	4.74	100.00

§ 6. Hides and Sheepskins.

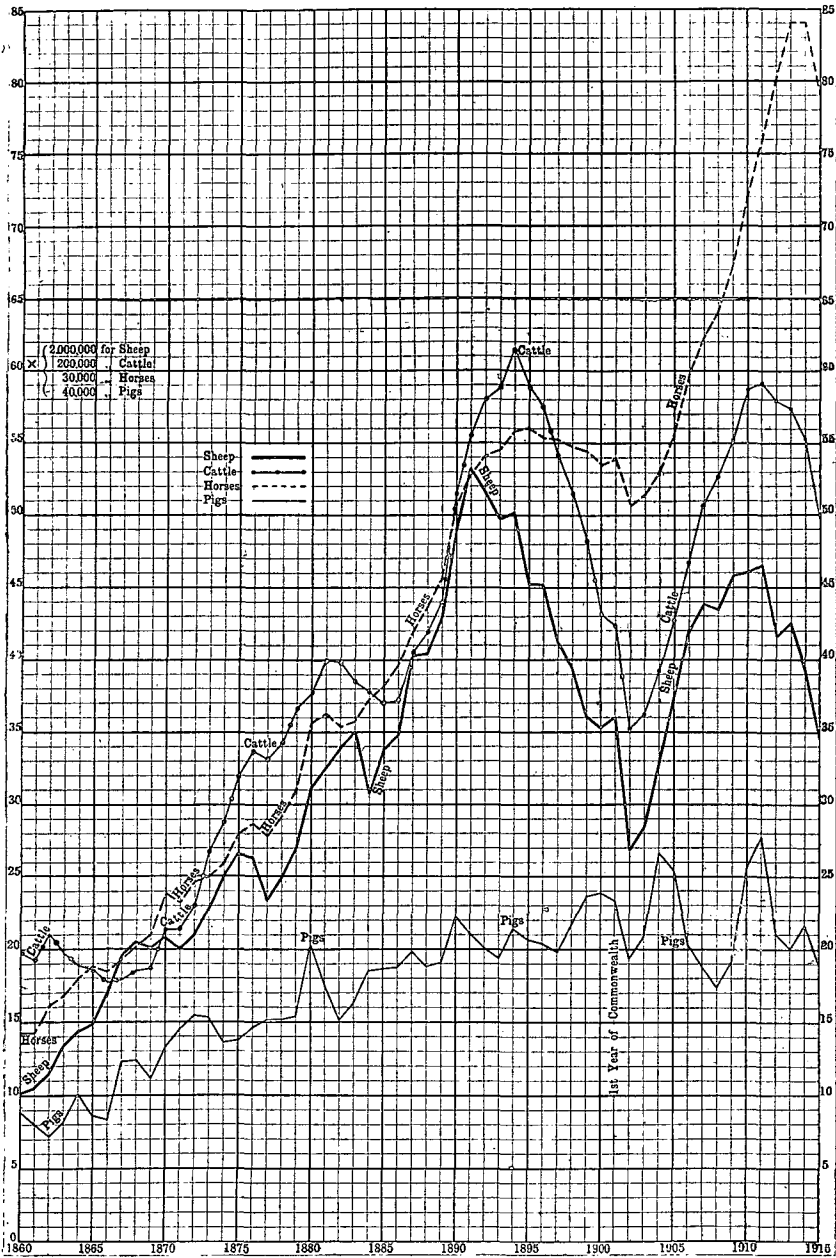
1. Extent of Trade.—In addition to the hides and sheepskins treated in the tanneries of the several States, a very considerable export trade is carried on, the total value of the hides and sheepskins exported from Australia during the five years 1911 to 1915-16 being no less a sum than £14,362,007, or an average of over £2,872,401 per annum.

2. Sheepskins with Wool.—By far the largest item included in the amount mentioned in the preceding paragraph arises from the value of sheepskins with wool exported, which are shipped principally to the United Kingdom and France. Details concerning the number so exported during the five years 1911 to 1915-16 are as follow:—

COMMONWEALTH EXPORT OF SHEEPSKINS WITH WOOL, 1911 to 1915-16.

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 Years.
	No.	No.	No.	No.	No.	No.
United Kingdom	3,306,567	3,707,050	3,861,161	5,844,442	3,506,365	20,225,585
France ...	4,322,505	5,297,141	5,932,257	2,227,714	1,863,904	19,643,521
Belgium ...	1,020,847	1,277,530	996,821	29,366	...	3,324,564
U.S. of America...	39,811	129,899	99,037	1,016,958	331,706	1,617,411
Canada ...	...	679	...	206,876	61,103	268,658
Germany ...	109,621	63,112	57,735	2,578	...	233,046
New Zealand ...	...	661	...	39,083	25,283	65,027
Italy ...	26,140	...	960	...	9,949	37,049
Other Countries ...	6,869	...	261	1,051	24	8,205
Total ...	8,832,360	10,476,072	10,948,232	9,368,068	5,798,334	45,423,066

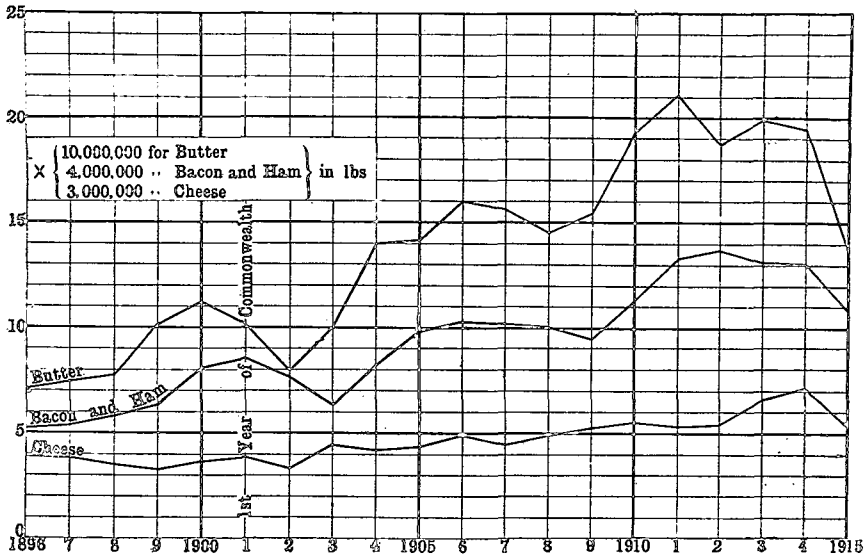
GRAPHS SHEWING NUMBER OF HORSES, CATTLE, SHEEP, AND PIGS IN THE COMMONWEALTH FROM 1860 to 1915.



(See pages 290 et seq.)

EXPLANATION OF GRAPH.—The base of each small square represents an interval of one year. The totals of the sheep, cattle, horses, and pigs for the Commonwealth are indicated by the several curves or graphs, the vertical side of a small square representing 2,000,000 in the case of sheep; 200,000 for cattle; 30,000 for horses; 40,000 for pigs.

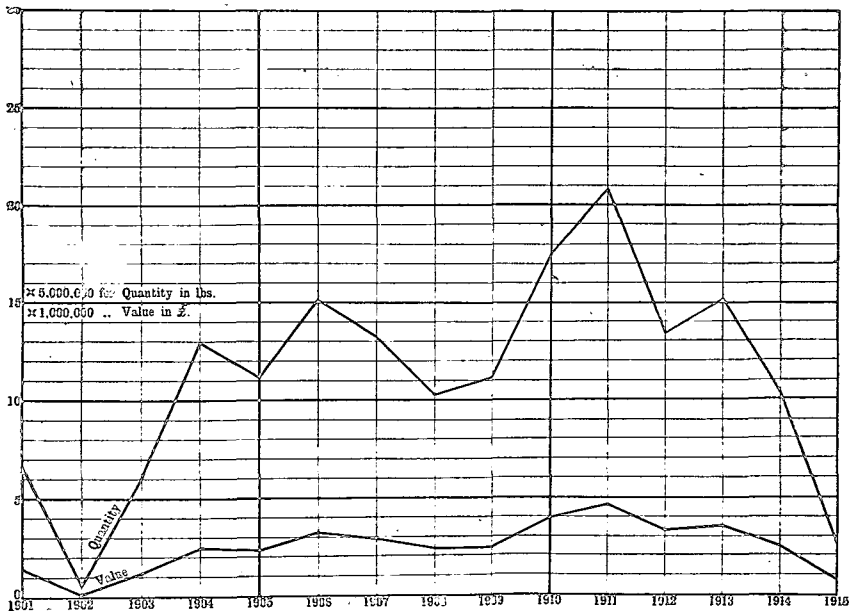
GRAPHS SHEWING THE PRODUCTION OF BUTTER AND CHEESE, AND BACON AND HAM, IN THE COMMONWEALTH, FROM 1896 to 1915.



(See pages 382, 383.)

EXPLANATION OF GRAPH.—The base of each small rectangle represents an interval of one year, and the vertical height of each small rectangle denotes in the case of butter 10,000,000 lbs.; in the case of bacon and ham, 4,000,000 lbs.; and in the case of cheese 3,000,000 lbs.

GRAPHS SHEWING THE QUANTITY AND VALUE OF NET EXPORTS OF BUTTER FROM THE COMMONWEALTH, FROM 1901 to 1915.



(See page 353.)

EXPLANATION OF GRAPH.—The base of each small rectangle represents an interval of one year, and the vertical height of each small rectangle represents 5,000,000 lbs. in weight, or £1,000,000 in value.

The next table furnishes corresponding particulars as to value:—

**VALUE OF SHEEPSKINS WITH WOOL EXPORTED FROM THE COMMONWEALTH,
1911 to 1915-16.**

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 Years.
	£	£	£	£	£	£
United Kingdom	568,618	666,962	804,432	1,021,432	779,615	3,841,059
France ...	735,259	980,298	1,315,156	387,692	283,293	3,701,698
Belgium ...	253,995	314,301	335,569	10,877	...	914,742
U.S. of America...	3,706	12,713	15,127	213,249	97,890	342,685
Canada...	...	66	...	46,374	12,553	58,993
Germany ...	13,195	10,576	11,620	812	...	36,203
New Zealand ...	...	113	...	9,748	6,268	16,129
Italy ...	4,075	...	100	...	875	5,050
Other Countries ...	697	...	55	468	5	1,225
Total ...	1,579,545	1,985,029	2,482,059	1,690,652	1,180,499	8,917,784

3. **Sheepskins without Wool.**—In the case of sheepskins without wool the principal countries to which export takes place are the United States of America and the United Kingdom. Particulars concerning the quantities exported are as follows:—

COMMONWEALTH EXPORTS OF SHEEPSKINS WITHOUT WOOL, 1911 to 1915-16.

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 Years.
	No.	No.	No.	No.	No.	No.
United States of America	590,582	271,028	21,760	640,302	1,815,725	3,339,397
United Kingdom ...	459,252	131,103	123,578	720,417	103,497	1,542,847
France ...	21,666	55,845	5,364	...	...	82,875
New Zealand ...	9,484	1,515	...	12	...	11,011
Canada ...	...	...	...	3,096	540	3,636
Japan ...	...	...	...	...	1,047	1,047
Belgium ...	331	167	...	...	...	498
Total ...	1,081,315	459,658	155,702	1,363,827	1,920,809	4,981,311

Corresponding details concerning value are given hereunder:—

**VALUE OF SHEEPSKINS WITHOUT WOOL EXPORTED FROM THE COMMONWEALTH
1911 to 1915-16.**

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 Years.
	£	£	£	£	£	£
United States of America	16,295	8,730	1,550	35,766	86,908	149,249
United Kingdom ...	17,138	3,854	5,130	37,875	5,243	69,240
France ...	1,225	5,948	382	...	...	7,555
New Zealand ...	196	27	...	2	...	225
Canada ...	...	...	...	233	39	272
Japan ...	...	...	...	...	83	83
Belgium ...	12	4	...	...	...	16
Total ...	34,866	18,563	7,062	73,876	92,273	226,640

4. **Hides.**—The Commonwealth trade in hides has now assumed considerable proportions, and during 1914-15 the total value of hides exported amounted to £1,380,886. The exports were principally to the United Kingdom, the United States of America, and Canada. Large quantities of hides are also imported into the Commonwealth, mainly from New Zealand and the Pacific Islands. The total value of hides imported during 1915-16 was £293,541.

Particulars concerning the export of hides during the past five years are as follows:—

COMMONWEALTH EXPORT OF HIDES, 1911 to 1915-16.

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 Years.
	No.	No.	No.	No.	No.	No.
United Kingdom	245,993	350,519	360,549	485,500	237,707	1,680,268
U.S. of America...	29,232	82,808	136,687	371,364	...	620,091
Canada	33,519	65,407	11,205	264,785	208,355	583,271
Belgium	80,453	108,455	244,394	40,211	...	473,513
Italy	68,991	117,352	85,984	9,830	131,894	414,051
Germany	64,536	78,059	206,588	18,773	...	367,956
France	15,790	15,151	16,208	8,873	1,129	57,151
Japan	6,436	5,025	155	6,863	4,063	22,542
Austria-Hungary	103	1,275	3,631	203	...	5,212
Sth. African Union	...	...	...	480	2,705	3,185
Other Countries ...	5,815	9,717	7,674	11,600	15,288	50,094
Total ...	550,868	833,768	1,073,075	1,218,482	601,141	4,277,334

In the next table are given particulars relative to the value of hides exported:—

VALUE OF HIDES EXPORTED FROM THE COMMONWEALTH, 1911 to 1915-16.

Country to which Exported.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 Years.
	£	£	£	£	£	£
United Kingdom	279,474	430,609	580,195	670,421	271,364	2,232,063
U.S. of America...	28,772	94,783	196,583	375,270	...	695,408
Belgium	91,110	139,188	385,627	52,647	...	668,572
Germany	79,530	103,081	339,605	30,259	...	552,475
Canada	35,320	74,273	16,622	198,421	130,157	454,793
Italy	62,047	125,744	102,834	12,299	128,906	431,830
France	17,988	19,865	20,078	13,933	1,780	73,644
Japan	11,060	8,378	335	13,063	8,524	41,360
Austria-Hungary	161	1,757	5,545	355	...	7,818
Sth. African Union	...	...	...	531	3,038	3,569
Other Countries ...	5,795	9,576	10,547	13,687	16,446	56,051
Total ...	611,257	1,007,254	1,657,971	1,380,886	560,215	5,217,583

The number and value of hides imported into the Commonwealth during the five years 1911 to 1915-16 are as follows:—

HIDES IMPORTED INTO THE COMMONWEALTH, 1911 to 1915-16.

Particulars.	1911.	1912.	1913.	1914-15.	1915-16.	Total for 5 Years.
No.	97,926	87,680	135,193	83,999	147,450	552,248
Value	£ 143,893	135,301	239,780	146,015	293,541	958,530

§ 7. Graphical Representation of Pastoral Production.

1. **General.**—As comparatively complete statistics relative to the number of horses, cattle, sheep and pigs are available from 1860, the graphical representation of the fluctuations in numbers for the Commonwealth as a whole, shewn on page 315, covers the period from 1860 to 1915.

2. **Horses.**—With relatively unimportant fluctuations the number of horses in the Commonwealth increased at a fairly consistent rate until 1895, when a decline set in, culminating in the losses of the drought of 1902. At this latter point the number was practically identical with that for 1890. From 1902 onwards a rapid improvement was experienced, the totals for 1913 and 1914 being the highest recorded. The disastrous drought of 1914-15 was responsible for heavy losses, the number recorded at the close of the latter year being considerably less than in 1912.

3. **Cattle.**—The graph for cattle furnishes evidence of rapid increase in number, interrupted by four marked periods of decline, of which the first extended from 1862 to 1866, the second from 1881 to 1885, the third from 1894 to 1902. So extensive was this last-mentioned decline that the number receded to that of 1879. From 1902 a rapid recovery took place, and the total for 1911 exceeded that existing at the end of the year 1895, though still short of the maximum attained in 1894. The fourth period of decline commenced in 1912, the figures from that year to 1914 shewing a slight decline, while those for 1915 shew a very serious falling off, the difference between the 1911 and 1915 returns amounting to over 16 per cent.

4. **Sheep.**—In the case of sheep the graph furnishes evidence of six periods in which the upward movement in number has been arrested or reversed. The first of these occurred between 1868 and 1871, the second between 1875 and 1877, the third during 1884, the fourth, by far the most serious, between 1891 and 1902, the fifth during 1912, and the sixth during 1914-15. From 1902 to 1907 a rapid increase took place, succeeded by a slight decline in 1908, and a rapid advance in 1909, 1910 and 1911, the point reached in the latter year being the highest since 1894. The return for 1912 shews a considerable decrease; this was followed by an increase in 1913, but there was a heavy falling off in 1914, amounting to $7\frac{1}{2}$ per cent., and a still heavier one in 1915, amounting to over $11\frac{1}{2}$ per cent., the total number of sheep in the latter year being the lowest since 1904.

5. **Pigs.**—The graph for pigs exhibits more numerous fluctuations than that for any of the other classes of live stock represented, and from 1904 to 1908 furnished evidence of a persistent decline. In 1909, however, an upward movement took place; and this was well maintained during the two succeeding years, the 1911 returns exceeding all previous records. There was a considerable decrease in 1912, and a smaller one during 1913. The 1914 returns, however, show an upward tendency, but there was a sharp decline during 1915.