

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-three years covered by the table the live stock of the Commonwealth increased considerably, horses by 484 per cent., cattle 190 per cent., sheep 322 per cent., and pigs 128 per cent. The average annual increases which these aggregates represent are as follows:—Horses, 3.39 per cent. per annum; cattle, 2.03 per cent.; sheep, 2.76 per cent.; and pigs, 1.57 per cent.

COMMONWEALTH LIVE STOCK, 1860 to 1913.

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	2,521,983	11,483,892	85,057,402	800,505

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. The want of rain had commenced to be seriously felt in the latter year, when an opportune general downfall in June materially relieved the situation, not however before much loss of stock had resulted, the poor lambing being the principal contributing factor. The drought of 1902 was one of the most severe experienced in Australia, the number of sheep in the Commonwealth diminishing under its influence from 72,040,211 on 31st December, 1901, to 53,668,347 at the same date in 1902—a decrease of more than 25 per cent. The falling off in the number of sheep in 1912 was 9,739,835, of cattle 251,695, and of pigs 265,466, being 10.47, 2.13 and 23.9 respectively. The number of horses during 1913 was the highest ever recorded in the Commonwealth, shewing an increase of 242,956, or 10.66 per cent., over the 1911 figures.

The extraordinary recuperative power of Australia is evidenced by the large increases in the numbers of stock which the good seasons, supervening on the various droughts, have witnessed. 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, 2,521,983; 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-three years in the manner shewn in the succeeding table:—

NUMBER OF LIVE STOCK PER HEAD OF POPULATION, 1860 to 1913.

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

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-three 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, 0.16 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, 1913, were as follows:—

NUMBER OF LIVE STOCK PER SQUARE MILE, 31st DECEMBER, 1913.

States and Territories.	Horses.	Cattle.	Sheep.	Pigs.
New South Wales	2.41	9.10	128.29	0.93
Victoria	6.40	17.39	137.84	2.52
Queensland	1.05	7.94	32.49	0.21
South Australia	0.75	0.93	13.35	0.17
Western Australia	0.16	0.85	4.53	0.05
Tasmania	1.68	7.85	66.58	1.45
Northern Territory	0.04	0.80	0.13	0.002
Federal Territory	1.88	8.36	163.24	0.21
Commonwealth	0.85	3.86	28.59	0.27

7. **Minor Classes of Live Stock.**—The numbers of minor classes of live stock returned as at 31st December, 1913, were as follows:—Goats, 262,272; camels, 10,822; mules and donkeys, 8215; and ostriches, 1908. 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 262,272 goats shewn above. Of these, 7925 were in Queensland, while the quantity of mohair produced in that State in 1912 was set down at 6935 lbs., and the number of skins placed on the market was returned as 1063.

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 1909 to 1913 are as follows:—

QUANTITIES OF NET EXPORTS OF PRINCIPAL PASTORAL PRODUCTS

OF THE COMMONWEALTH, 1909 to 1913.

Products.	Unit of Quantity.	1909.	1910.	1911.	1912.	1913.
Animals (living)—						
Cattle	No.	894	3,641	9,861	16,050	14,548
Horses	"	6,335	6,619	4,377	7,055	7,761
Sheep	"	2,540	10,281	18,965	31,210	33,322
Bones	cwt.	13,070	14,145	17,151	20,885	37,848
Glue Pieces and Sinews	"	20,199	20,570	29,211	33,033	38,297
Glycerine	lb.	*	*	*	*	*
Hair	"	190,052	304,006	287,957	152,369	279,108
Hoofs	cwt.	4,666	7,677	8,617	10,416	12,476
Horns	"	*	*	*	*	*
Meats—						
Frozen Beef	lb.	71,130,972	109,421,146	108,774,397	142,166,123	218,911,159
" Mutton and Lamb	"	116,914,965	190,228,396	129,567,812	115,365,547	204,919,042
" Rabbits and Hares	pair	9,181,312	9,652,127	8,362,994	6,494,259	9,366,290
" Other	lb.	1,114,536	2,640,275	4,025,715	4,797,512	7,685,149
Potted and Extract of	"	*	*	*	*	*
Preserved in Tins, etc.	"	22,877,569	33,556,048	40,347,183	33,571,112	51,731,741
Other	"	235,479	591,196	1,062,233	2,957,745	1,154,580
Sausage Casings	"	*	*	*	*	*
Skins—						
Hides	No.	286,973	286,639	452,942	746,088	1,037,882
Sheep	"	10,658,776	11,119,338	9,748,630	10,650,834	10,997,873
Rabbit and Hare	cwt.	62,180	86,930	92,587	87,878	86,998
Other, including Undressed Furs	No.	*	*	*	*	*
Tallow	cwt.	929,157	1,256,661	1,343,046	1,058,341	1,435,156
Wool—Greasy	lb.	528,388,349	586,883,111	578,622,185	557,683,801	531,248,798
Scoured	"	73,569,380	77,042,042	69,223,301	60,232,936	60,873,478
Tops	"	496,492	1,123,469	2,515,106	3,018,050	3,561,722

* Quantity not available.

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 £184,709,994 for the period, or an average of £36,941,999 per annum, of which wool represents nearly 72 per cent. Meats, skins, and tallow rank next in order of importance.

**VALUE OF NET EXPORTS OF PRINCIPAL PASTORAL PRODUCTS OF THE
COMMONWEALTH, 1909 to 1913.**

Products.	1909.	1910.	1911.	1912.	1913.
Animals (living)—	£	£	£	£	£
Cattle	3,876	11,516	37,864	64,233	50,229
Horses	84,695	—51,267	—128,032	—38,017	63,389
Sheep	6,030	16,448	12,732	61,879	46,565
Bones	6,041	7,366	9,798	12,310	22,021
Glue Pieces and Sinews	11,800	11,037	13,645	18,139	23,328
Glycerine	2,316	10,169	15,926	13,621	13,769
Hair	22,584	25,879	24,987	29,950	28,160
Hoofs	1,622	2,804	3,169	4,923	6,178
Horns	18,729	25,532	25,673	30,339	30,444
Meats—					
Frozen Beef	735,028	1,179,060	1,101,914	1,630,306	2,652,144
" Mutton and Lamb	1,231,027	2,161,495	1,633,597	1,592,302	2,896,292
" Rabbits and Hares	423,679	486,592	407,034	320,887	497,568
" Other	18,027	40,816	48,390	59,706	99,509
Potted and Extract of	57,061	70,504	57,356	60,779	203,412
Preserved in Tins, etc.	401,606	602,880	756,148	611,288	1,062,618
Other	1,663	8,173	13,010	12,944	17,677
Sausage Casings	52,132	38,204	37,129	8,735	32,133
Skins—					
Hides	239,539	286,274	467,364	871,953	1,418,191
Sheep	1,736,464	2,003,810	1,603,718	1,988,122	2,480,900
Rabbit and Hare	347,244	566,739	498,037	576,179	620,487
Other, including Undressed Furs	607,158	822,095	476,872	647,959	746,023
Tallow	1,229,541	1,888,796	1,934,009	1,545,033	2,157,610
Wool—Greasy	20,580,783	23,431,947	21,388,155	22,066,585	21,472,360
Scoured	4,820,092	5,202,683	4,398,126	3,957,792	4,380,184
Tops	58,638	134,874	275,406	323,299	415,670
Total Values	32,695,425	38,984,426	35,112,037	36,481,245	41,436,861

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 has ever since retained. For some years past Queensland has made rapid progress in this regard, and in 1913 there were 706,472 horses in that State, in the same year there being 744,485 in New South Wales, and 562,331 in Victoria. The figures for the several States or a series of years are as follows:—

**NUMBER OF HORSES IN STATES, TERRITORIES, AND COMMONWEALTH,
1860 to 1913.**

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	23,610	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	706,472	283,641	156,636	43,941	22,792	1,712	2,521,933

* Statistics not collected prior to 1880.

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 1909 to 1913.**

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
1909 ...	29.90	21.89	27.47	11.39	6.19	2.00	1.16	...	100.00
1910 ...	30.04	21.80	27.42	11.51	6.19	1.91	1.13	...	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

During the period under review, the proportions in South Australia and Western Australia have increased, that in Victoria has diminished, while in the case of New South Wales, Queensland, Tasmania, and the Northern Territory the proportion in 1913 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 12,161 for the year 1910 and 7807 in 1909, and in value between £256,104 in the former year and £163,730 during 1913. The total number of horses exported during the five years amounted to 47,846, an average of 9569 per annum. The total value of the exports for the period was £1,002,341, or £200,468 per annum.

The average export value per head for the period was £20 19s. 0d. The numbers exported to the principal countries concerned in this trade are as follows:—

NUMBER AND DESTINATION OF HORSES EXPORTED FROM THE COMMONWEALTH, 1909 to 1913.

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 years.
	No.	No.	No.	No.	No.	No.
India	6,136	9,187	7,416	7,299	6,775	36,813
Java	594	450	880	584	799	3,807
Straits Settlements	353	605	481	410	436	2,285
Philippine Islands	315	727	350	247	88	1,727
Ceylon	97	265	198	156	3	719
Mauritius	70	403	112	46	95	726
Fiji	114	190	180	146	106	736
New Zealand	31	122	92	77	90	412
Japan	1	43	45	41	59	189
Papua	17	110	47	56	57	287
Siam ... ..	...	...	165	...	...	165
China	19	1	13	25	...	58
Hong Kong	29	...	32	...	...	61
South African Union	3	1	12	13	8	37
Other Countries	28	57	86	107	46	324
Total	7,807	12,161	10,109	9,207	8,562	47,846

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

VALUE OF HORSES EXPORTED FROM THE COMMONWEALTH, 1909 to 1913.

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 years.
	£	£	£	£	£	£
India	126,686	171,862	135,840	129,186	107,925	671,499
Java	19,598	10,424	19,235	13,459	21,465	84,181
Straits Settlements	10,339	21,185	12,939	11,322	11,614	67,399
Philippine Islands	5,303	14,971	7,795	5,449	2,061	35,579
Ceylon	2,201	7,486	3,622	3,403	840	17,552
Mauritius	480	7,191	2,371	1,358	3,229	14,629
Fiji	2,982	4,566	4,788	3,642	3,215	19,193
New Zealand	2,847	12,403	17,322	11,435	5,319	49,326
Japan	60	1,860	2,115	2,650	2,836	9,521
Papua	936	2,055	920	899	1,271	6,081
Siam ... ..	...	...	7,298	...	...	7,298
China	295	60	390	625	...	1,370
Hong Kong	888	...	800	...	...	1,688
South African Union	180	25	500	695	211	1,611
Other Countries	217	2,016	4,016	5,421	3,744	15,414
Total	173,012	256,104	219,951	189,544	163,730	1,002,341

It will be seen from the foregoing tables that the export trade in horses with India, the Straits Settlements, and Java has been fairly uniform throughout the five years under review, but that the particulars for some of the other countries specified exhibit marked fluctuations.

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 five years was £67 12s. 8d., as compared with £20 18s. 6d. per head for the exports for the same period. The average number imported per annum was, however, only 3134, and the average annual value £212,313. The following table furnishes a comparison of imports and exports of horses during the five years 1909 to 1913:—

COMMONWEALTH IMPORTS AND EXPORTS OF HORSES, 1909 to 1913.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
1909	1,472	£ 88,317	7,807	£ 173,012	6,335	£ 84,695
1910	5,542	307,371	12,161	256,104	6,619	— 51,267
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
Total for 5 years	15,699	1,061,563	47,846	1,002,341	32,147	— 59,222

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 ...	1912	33,169,706	Sweden	1911	588,485
Utd. States America	1912	20,509,000	Cuba	1912	560,580
Argentine Republic	1911	8,894,031	Uruguay	1908	556,307
Germany	1912	4,523,059	Bulgaria	1905	538,271
Austria-Hungary ¹ ...	1910 & 1911	4,154,329	Denmark	1909	535,018
France	1912	3,222,140	Spain	1912	525,853
Australia	1913	2,521,983	Chile	1911	420,786
Canada ²	1912	2,378,204	New Zealand ⁵ ...	1911	404,688
United Kingdom ³ ...	1912	1,994,607	Netherlands ...	1910	327,377
Japan	1911	1,576,146	Belgium	1912	262,709
British India ⁴ ...	1910	1,564,985	Algeria	1911	226,764
Italy	1908	906,820	Norway	1907	172,468
Rumania	1900	864,324	Servia	1910	152,617
Mexico	1902	859,217	Switzerland ...	1911	144,128
Union of Sth. Africa	1911	719,414	Egypt	1912	47,427

1. Austria 1910, Hungary 1911. 2. Exclusive of British Columbia. 3. Agricultural horses, unbroken horses, and breeding mares only. 4. Exclusive of Eastern Bengal. 5. Including mules and asses.

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 1913 than in 1901. Particulars for 1901 and the past five years are as follows:—

NUMBER OF HORSES PER HEAD OF POPULATION, 1901 and 1909 to 1913.

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
1909 ...	0.37	0.35	0.96	0.59	0.47	0.21	6.70	...	0.47
1910 ...	0.40	0.36	0.99	0.61	0.48	0.21	7.42	...	0.49
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

§ 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 ten years ended 1913, however, a rapid improvement took place, and the total reached on 31st December, 1913, was over 5,300,000.

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 1913.**

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	83,366	...	...	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	162,801	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	...	8,523,331
1910	3,140,307	1,547,569	5,131,699	384,862	325,040	201,854	513,383	...	11,744,714
1911	3,185,824	1,647,127	5,073,201	393,566	343,638	217,406	459,780	8,412	11,828,954
1912	3,033,726	1,508,089	5,210,891	383,418	306,294	222,181	405,552	7,108	11,577,259
1913	2,815,113	1,528,553	5,322,033	352,905	334,265	205,743	417,643	7,627	11,483,882

* Statistics not collected prior to 1880.

3. Proportion in each State.—During the period elapsing between 1901 and 1913 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 1909 to 1913.**

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
1909 ...	27.42	14.04	42.68	3.12	7.18	1.81	3.75	...	100.00
1910 ...	26.74	13.18	43.69	3.28	7.02	1.72	4.37	...	100.00
1911 ...	26.93	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

A comparison of the positions of the several States in 1901 and 1913 shews that, while Victoria's proportion of the Commonwealth herds suffered considerable diminution, and that for Tasmania a falling off to a slight extent, fairly large increases are in evidence in the other States, more especially in Western Australia, the Northern Territory also shewing 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 1909 to 1913.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1901 ...	114	3,591	2,413	22,088	2,299	18,497
1909 ...	81	5,710	975	9,586	894	3,876
1910 ...	104	8,665	3,745	20,181	3,641	11,516
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

The average value of the cattle imported into the Commonwealth during the last five years was £77 7s. 11d. per head, while the average value of the cattle exported during the same period was £4 6s. 10d. The imported cattle were principally for stud purposes.

The comparatively large exports for the last two years 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 the missing data for these States have, however, been made, as shown in the following table:—

CATTLE (INCLUDING CALVES) SLAUGHTERED IN STATES, TERRITORIES AND COMMONWEALTH, 1901 and 1909 to 1913.

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
1909	412,066	287,548	305,026	82,460	49,716	37,000	3,975	...	1,177,791
1910	483,947	319,665	378,514	84,164	55,723	37,000	4,061	...	1,363,074
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

* Estimated. † Partly estimated prior to 1913. ‡ Not available. § 1910 figures, those for 1911, 1912 and 1913 not available.

For Hobart and Launceston only, the figures for the years 1901, 1909, and 1910 were, respectively, 8815, 10,059 and 11,569.

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 1909 to 1913 are as follows:—

**QUANTITY OF BEEF PRESERVED BY COLD PROCESS EXPORTED FROM THE
COMMONWEALTH, 1909 to 1913.**

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom	52,777,113	91,250,736	81,501,060	108,886,860	169,963,291	504,379,060
Philippine Islands	11,260,779	10,020,181	10,336,535	13,996,124	14,535,447	60,149,066
South African Union	1,698,046	3,784,637	7,337,652	9,228,546	5,656,346	27,705,227
Egypt	2,525,097	1,362,686	1,905,595	2,084,806	3,990,804	11,868,988
Straits Settlements	1,092,263	1,073,889	1,646,590	1,781,817	2,053,514	7,648,073
United States ... ..	...	...	...	289	5,037,769	5,038,058
Malta	856,599	862,148	1,526,389	1,090,044	1,142,092	5,477,272
Italy	90,609	327,056	2,509,466	2,127,876	6,356,514	11,411,521
Hong Kong... ..	220,919	385,895	618,688	551,012	423,659	2,200,173
Germany ... ..	...	...	...	97,491	1,813,799	1,911,390
Canada ... ..	...	...	239,653	904,832	3,352,675	4,497,160
Gibraltar	130,703	70,908	403,626	...	353,582	968,819
Japan	102,723	22,119	77,223	1,098	36,705	239,868
Ceylon	56,509	99,564	151,104	150,620	221,521	679,318
Hawaiian Islands	105,403	71,606	272,559	1,198,140	2,356,115	4,003,823
Other countries	225,532	96,103	260,277	110,521	1,624,773	2,317,206
Total	71,142,295	109,427,528	108,786,417	142,210,076	218,918,606	650,484,922

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, 1909 to 1913.**

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 years.
	£	£	£	£	£	£
United Kingdom	533,044	967,662	813,393	1,245,536	2,037,978	5,597,613
Philippine Islands	125,052	126,719	114,989	162,555	183,047	712,362
South African Union	18,251	36,559	67,940	97,601	65,906	286,257
Egypt	26,747	14,582	19,308	24,537	49,134	134,308
Straits Settlements	11,899	12,452	21,065	20,141	25,576	91,133
United States ... ..	...	...	...	5	66,838	66,843
Malta	8,690	9,790	15,412	11,491	13,214	53,597
Italy	1,002	3,866	26,497	23,173	75,130	129,668
Hong Kong... ..	2,144	3,826	6,370	4,346	4,392	21,078
Germany ... ..	...	...	...	1,219	23,388	24,607
Canada ... ..	...	...	3,707	16,831	44,456	64,994
Gibraltar	1,157	517	3,751	...	3,595	9,020
Japan	1,139	205	694	13	350	2,401
Ceylon	601	1,035	1,315	1,367	2,643	6,961
Hawaiian Islands	1,067	690	4,413	20,325	38,003	64,498
Other countries	2,417	1,243	3,278	1,591	18,625	27,154
Total	733,210	1,179,146	1,102,132	1,630,731	2,652,275	7,297,494

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 Egypt ranked next in order of importance. The exporting States during 1913 were: Queensland, 188,538,120 lbs., valued at £2,231,972; New South Wales, 18,172,575 lbs., valued at £247,934; Victoria, 10,022,248 lbs., valued at £146,106; and South Australia, 2,185,663 lbs., valued at £26,263.

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 atest 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 ...	1910	72,669,279	Spain ...	1912	2,561,894
U. S. of America ...	1912	57,959,000	Denmark ...	1909	2,253,982
Russian Empire ...	1912	48,896,236	Netherlands ...	1910	2,026,943
Argentine Republic...	1911	28,786,168	New Zealand ...	1911	2,020,171
Germany ...	1912	20,182,021	Belgium ...	1912	1,830,747
Austria-Hungary ² ...	1910 & 11	16,479,130	Chile ...	1911	1,760,272
France ...	1912	14,705,900	Bulgaria ...	1905	1,695,533
United Kingdom ...	1912	11,914,635	Switzerland ...	1911	1,443,483
Australia ...	1913	11,483,882	Japan ...	1911	1,405,026
Uruguay ...	1908	8,192,602	Algeria ...	1911	1,113,952
Canada ³ ...	1912	6,596,860	Norway ...	1907	1,094,101
Italy ...	1908	6,198,861	Ceylon ...	1911	1,003,627
Union of South Africa	1911	5,796,949	Servia ...	1910	957,918
Mexico ...	1902	5,142,457	Portugal ...	1906	703,198
Cuba ...	1912	2,829,553	Egypt ...	1912	619,540
Sweden ...	1911	2,689,609	Tunis ...	1912	224,514
Rumania ...	1900	2,588,526 ⁴			

1. Exclusive of Eastern Bengal.

2. Austria, 1910, Hungary 1911.

3. Exclusive of British

Columbia. 4. Including buffaloes.

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 1909 to 1913.

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
1909 ...	1.88	1.21	8.15	0.88	2.99	1.04	117.03	...	2.55
1910 ...	1.91	1.21	8.57	0.95	2.98	1.04	150.86	...	2.65
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

For the Commonwealth as a whole the ratio of cattle to population is 6 per cent. greater for 1913 than for 1901, and exhibits a continuous increase from 1902 to 1910, while the proportion for 1911 is approximately the same as for the previous year; 1912 and 1913 shew a slight decline. The excess of the 1913 figures over those for 1901 is in evidence in all the States except Victoria, and is most marked in the case of the Northern Territory. In Victoria the ratios for the last two years 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 four 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 1913, is as follows:—

**NUMBER OF SHEEP IN STATES, TERRITORIES, AND COMMONWEALTH,
1860 to 1913.**

Year.	New South Wales.	Victoria.	Queensland.	South Aust.	Western Aust.	Tasmania.	Northern Territory	Federal Territory.	Total C'wealth.
1860	6,119,163	5,780,896	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	16,306,585	10,761,897	8,163,818	4,400,655	608,892	1,349,775	...	...	41,593,612
1875	25,353,924	11,749,532	7,227,774	6,179,395	881,861	1,731,723	...	...	53,124,209
1880	35,398,121	10,360,285	6,935,967	6,443,904	1,231,717	1,796,715	*9,318	...	62,176,027
1885	37,820,906	10,681,837	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	...	97,881,221
1895	47,617,687	12,791,084	19,856,959	6,531,006	2,295,832	1,523,846	73,713	...	90,689,727
1900	40,020,506	10,841,790	10,339,185	5,235,220	2,434,311	1,683,956	48,027	...	70,602,995
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	20,331,838	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	12,113,682	21,786,600	5,073,057	4,421,375	1,745,356	67,109	148,875	85,057,402

* Statistics not collected prior to 1880.

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 1909 to 1913, 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 1909 to 1913.**

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	...	100.00
1909	...	50.40	14.11	21.37	7.02	5.16	1.89	0.05	...	100.00
1910	...	49.50	14.00	22.09	6.81	5.60	1.94	0.06	...	100.00
1911	...	48.09	14.90	22.30	6.64	5.82	1.96	0.05	0.24	100.00
1912	...	46.67	14.28	24.39	6.58	5.52	2.24	0.09	0.23	100.00
1913	...	46.68	14.24	25.61	5.96	5.20	2.05	0.08	0.18	100.00

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 Victoria,

South Australia and Tasmania, while in the case of Queensland a marked advance in proportion was experienced, and in Western Australia to a minor extent.

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 1909 to 1913 :—

COMMONWEALTH IMPORTS AND EXPORTS OF SHEEP, 1901 and 1909 to 1913.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1901	553	12,134	12,094	12,104	11,541	—30
1909	2,775	14,213	5,315	20,243	2,540	6,030
1910	2,863	14,008	13,144	30,456	10,281	16,448
1911	5,254	25,997	24,219	38,729	18,965	12,732
1912	2,908	10,643	34,113	72,522	31,210	61,879
1913	8,448	28,508	41,770	75,073	33,322	46,565

Note. — signifies net imports.

5. Sheep Slaughtered.—The numbers of sheep slaughtered in the several States during 1901 and from 1909 to 1913 are as follows :—

SHEEP (INCLUDING LAMBS) SLAUGHTERED, 1901 and 1909 to 1913.

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
1909	6,430,486	3,708,512	1,076,718	1,335,514	491,103	344,000	523	...	13,386,856
1910	7,470,002	4,245,881	1,751,151	1,316,388	549,977	346,000	516	...	15,679,915
1911	6,539,559	4,348,363	981,153	1,275,734	622,555	350,000	‡516	7,366	14,125,246
1912	5,805,595	4,153,269	1,273,332	1,332,838	610,214	357,000	‡516	6,587	13,539,351
1913	6,420,810	4,742,231	1,375,827	1,222,315	602,383	315,726	‡516	4,765	14,684,573

* Estimated. † Partly estimated. ‡ Figures for 1910; those for 1911, 1912, and 1913 not available.

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 past two years, 1912 and 1913, was £2,244,455. 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 is becoming very 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 94.1 per cent. of the total quantity exported from the Commonwealth during the past

five years. The South African Union and Canada took 1.5 and 1.1 per cent. respectively, while the balance of 3.3 per cent. was principally absorbed by 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, 1909 to 1913.

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ...	110,138,905	181,556,597	120,757,079	108,556,172	191,440,138	712,448,891
South African Union ...	2,458,029	2,720,584	2,657,853	1,910,196	1,550,257	11,296,919
Canada ...	1,138,974	2,309,441	2,077,802	1,320,718	1,662,910	8,509,845
Germany ...	...	...	...	133,429	5,144,062	5,277,491
Philippine Islands ...	682,116	788,577	859,022	677,076	778,693	3,785,484
Malta ...	630,313	838,871	699,514	266,035	1,059,183	3,493,916
Straits Settlements ...	568,684	713,836	845,079	992,831	928,783	4,049,213
Egypt ...	455,599	369,611	447,411	624,506	633,109	2,530,236
Hong Kong ...	323,113	318,590	417,316	328,330	401,380	1,788,729
Ceylon ...	117,141	254,212	332,011	293,523	365,065	1,361,952
Hawaiian Islands...	255,051	145,246	102,361	83,770	91,085	677,513
United States ...	...	...	...	2,051	571,008	573,059
Gibraltar ...	67,190	52,590	99,501	...	...	219,281
Japan ...	22,789	18,681	19,885	...	39	61,394
Other Countries ...	57,735	142,494	254,461	183,344	306,071	944,105
Total ...	116,915,639	190,229,330	129,569,295	115,371,981	204,931,783	757,018,028

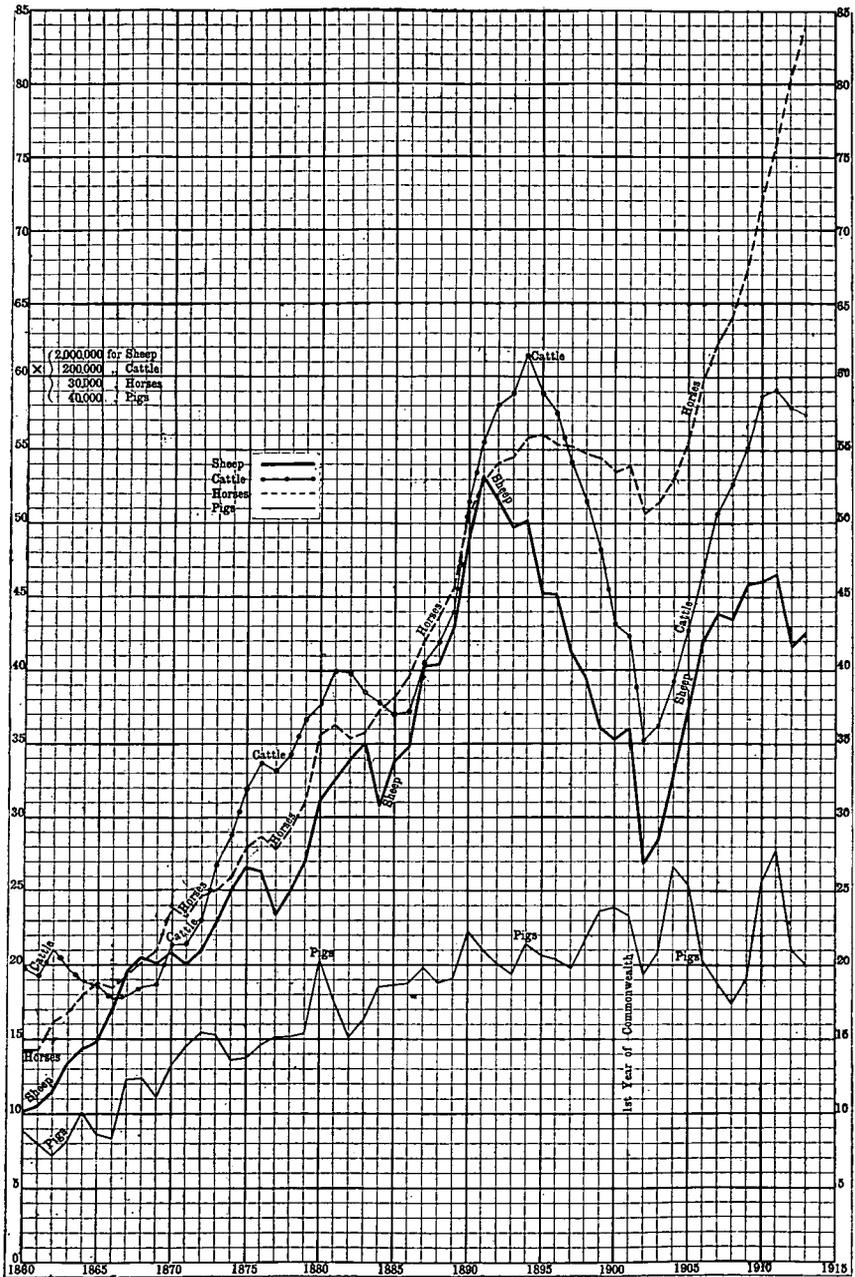
The corresponding particulars concerning the values of the exports are:—

VALUES OF FROZEN MUTTON AND LAMB EXPORTED FROM THE COMMONWEALTH, 1909 to 1913.

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 years.
	£	£	£	£	£	£
United Kingdom ...	1,161,475	2,069,932	1,529,633	1,499,648	2,712,682	8,973,370
South African Union ...	23,578	28,935	28,365	23,919	19,936	124,733
Canada ...	14,646	23,132	28,027	20,336	27,256	113,397
Germany ...	...	...	...	1,670	67,396	69,066
Philippine Islands ...	6,059	7,878	9,282	9,271	9,649	42,139
Malta ...	6,262	10,140	8,274	3,228	14,142	42,046
Straits Settlements ...	5,488	7,407	9,781	13,387	11,841	47,904
Egypt ...	4,987	4,385	6,248	8,282	9,435	33,337
Hong Kong ...	2,997	3,288	4,581	4,483	5,571	20,920
Ceylon ...	1,096	2,649	3,910	4,448	5,091	17,194
Hawaiian Islands ...	2,994	1,783	1,549	1,343	1,386	9,055
United States ...	...	...	...	35	7,793	7,828
Gibraltar ...	700	329	329	...	...	1,858
Japan ...	195	240	202	...	1	638
Other Countries ...	558	1,415	2,941	2,328	4,353	11,595
Total ...	1,281,035	2,161,513	1,633,622	1,592,378	2,896,532	9,515,080

7. Comparison with other Countries.—As regards the size of its flocks and the quantity and quality of wool produced, Australia occupies the foremost position amongst the sheep-raising countries of the world. The following comparison gives the latest available figures relative to the number of sheep in the principal wool-producing countries:—

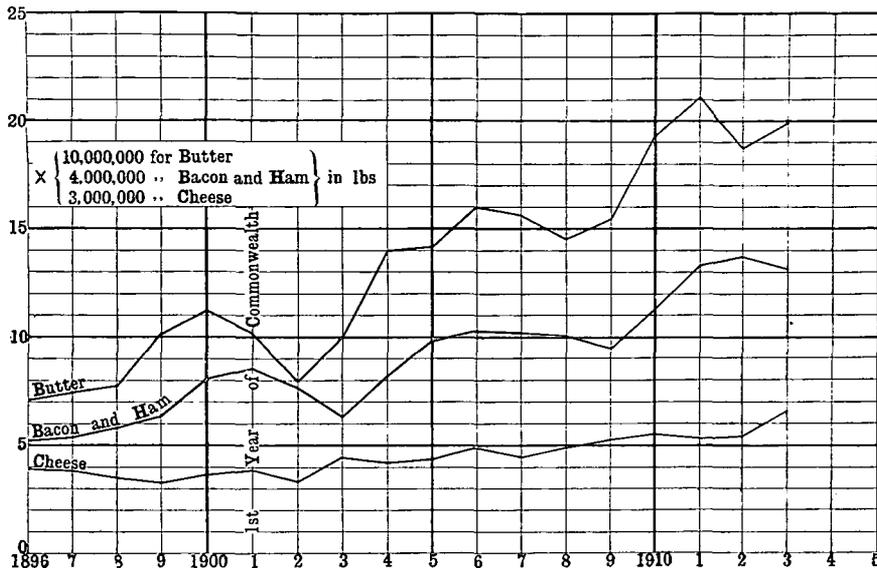
GRAPHS SHEWING NUMBER OF HORSES, CATTLE, SHEEP, AND PIGS IN THE
COMMONWEALTH FROM 1860 TO 1913.



(See pages 276 *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.

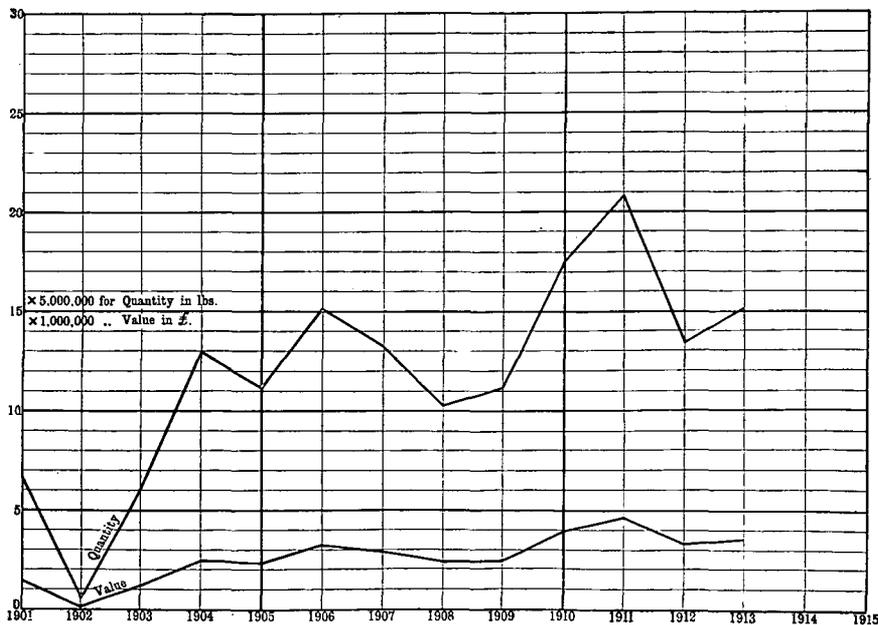
GRAPHS SHEWING THE PRODUCTION OF BUTTER AND CHEESE, AND BACON AND HAM, IN THE COMMONWEALTH, FROM 1896 TO 1913.



(See pages 367, 370.)

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 1913.



(See page 368.)

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.

NUMBER OF SHEEP IN VARIOUS COUNTRIES.

Country.	Date.	No. of Sheep	Country.	Date.	No. of Sheep.
Australia ...	1913	85,057,402	Bulgaria ...	1905	8,130,997
Argentine Republic ...	1911	80,401,486	Germany ...	1912	5,803,445
Russian Empire ¹ ...	1912	74,066,167	Rumania ...	1900	5,655,444
United States of America ...	1912	52,362,000	Chile ...	1911	4,168,572
Ottoman Empire ...	1908	40,000,000	Servia ...	1910	3,808,815
Union of South Africa ...	1911	30,656,659	Mexico ...	1902	3,424,430
United Kingdom ...	1912	28,967,495	Portugal ...	1906	3,072,988
Uruguay ...	1908	26,286,296	Canada ⁴ ...	1912	2,084,594
New Zealand ...	1913	24,191,810	Norway ...	1907	1,393,488
British India ² ...	1910	23,280,662	Sweden ...	1911	945,709
France ...	1912	16,467,700	Netherlands ...	1910	889,036
Spain ...	1912	15,829,954	Tunis ...	1911	766,848
Italy ...	1908	11,162,926	Denmark ...	1909	726,879
Austria-Hungary ³ ...	{ 1910 }	10,976,305	Iceland ...	1910	578,634
Algeria ...	1911	8,523,610	Belgium ...	1895	235,722
			Switzerland ...	1911	161,414

1. Including goats. 2. Exclusive of Eastern Bengal. 3. Austria 1910, Hungary 1911.
4. Exclusive of British Columbia.

8. **Relation to Population.**—The relation of the flocks of the several States and Territories to the populations at the end of each year 1901 and 1909 to 1913 is as follows:—

NUMBER OF SHEEP PER HEAD OF POPULATION, 1901 and 1909 to 1913.

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
1909	28.63	10.13	33.91	16.37	17.81	8.98	12.39	...	21.20
1910	27.72	9.90	33.94	15.40	18.63	9.23	17.34	...	20.80
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

§ 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, 1914, being about £28,588,000. 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 little more than 1½ 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 any uncertainty as to the 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 four seasons ended 30th June, 1911, 1912, 1913, and 1914:—

ESTIMATED QUANTITY OF WOOL AS IN THE GREASE, SHORN, FELLMONGERED, OR ON SKINS SHIPPED DURING THE SEASONS ENDED 30th JUNE, 1911, 1912, 1913, and 1914.

State.	1910-11.	1911-12.	1912-13.	1913-14.
	lbs.	lbs.	lbs.	lbs.
New South Wales* ...	374,907,068	371,546,415	326,804,000	357,985,000
Victoria ...	101,803,644	110,463,041	88,762,612	106,833,690
Queensland ...	139,250,802	142,382,269	136,878,270	154,183,114
South Australia ...	63,613,781	60,056,470	56,691,036	55,014,048
Western Australia ...	29,984,453	30,833,837	26,849,981	26,625,787
Tasmania ...	11,338,540	10,726,593	12,416,014	10,092,564
Northern Territory ...	400,000	400,000	450,000	400,000
Commonwealth ...	721,298,288	726,408,625	648,851,913	711,184,203

* Including Federal Territory.

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 758,090,676 lbs. for the season 1910-11, 785,753,099 lbs. for 1911-12, 668,667,078 lbs. for 1912-13, and 754,123,633 lbs. for 1913-14.

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, 1909 to 1913.

State.	1909.	1910.	1911.	1912.	1913.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales ...	1,095,136	1,594,712	2,401,920	2,420,000	2,484,446
Victoria ...	5,239,806	5,309,730	5,774,863	5,535,483	6,978,300
Queensland ...	301,078	270,246	336,486	583,892	406,829
South Australia ...	634,250	564,432	634,238	710,000	645,000
Western Australia ...	...	...	...	...	...
Tasmania ...	991,388	1,087,400	986,000	1,082,000	552,500
Commonwealth ...	8,261,658	9,826,520	10,133,512	10,331,375	11,067,075

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; and 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, £3,522, in 1911-12, £16,898, in 1912-13, £13,061, and in 1913-14, £12,706. The quantities of wool on which these amounts were paid were 52,085, 789,216, 1,363,555, 3,122,244, 3,134,614 and 3,068,470 lbs. respectively.

Figures shewing the exports of wool tops for the calendar years 1909 to 1913 inclusive will be found at the head of the next page.

6. **Exports of Wool.**—About thirty-nine per cent. of the exports of wool from the Commonwealth is despatched to the United Kingdom, the other leading consignees being France, Germany, Belgium, the United States of America and Japan. The following table shews for the years 1909 to 1913 the quantities of "greasy" wool exported from the Commonwealth and the principal countries to which consigned:—

COMMONWEALTH EXPORTS OF WOOL IN THE GREASE, 1909 to 1913.

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 Years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom	210,353,060	222,880,179	230,013,473	211,386,638	185,387,090	1,060,020,440
France	128,402,229	154,091,890	155,347,112	151,555,673	159,782,827	749,179,730
Germany	102,160,121	122,297,188	105,674,113	107,523,165	94,068,893	531,723,480
Belgium	47,381,739	63,305,855	58,469,298	54,679,915	51,881,724	275,718,531
United States of America	32,846,145	11,079,242	10,154,171	8,686,125	14,666,551	77,432,234
Japan	5,320,455	7,869,785	6,583,686	9,339,817	7,199,671	36,313,414
Italy	1,915,544	3,710,785	5,644,235	4,856,997	5,778,424	21,905,985
Austria-Hungary	22,030	...	5,836,992	7,908,480	11,731,933	25,499,435
India	271,030	485,990	478,353	390,536	501,827	2,127,736
New Zealand	135,954	1,122,446	154,193	147,794	101,104	1,661,491
Canada	157,263	208,269	52,299	126,517	88,916	633,264
Other Countries	54,643	41,640	415,698	1,231,062	247,918	1,990,961
Total... ..	529,020,213	587,093,269	578,823,623	557,832,718	531,436,878	2,784,206,701

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

COMMONWEALTH EXPORTS OF "SCOURED AND WASHED WOOL,"* 1909 to 1913.

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 Years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom	34,168,844	35,571,404	35,940,841	28,305,314	26,176,484	160,162,887
France	16,651,577	15,861,390	13,989,442	15,037,742	18,804,399	80,344,550
Germany	14,589,296	14,145,596	12,148,316	10,541,771	10,135,857	61,554,836
Belgium	7,661,482	11,418,895	7,629,001	5,661,005	5,269,908	37,640,291
Japan	635,722	887,292	1,602,747	2,750,614	3,564,433	9,440,808
Italy	148,695	212,661	397,004	380,550	188,298	1,327,208
India	74,876	41,962	33,321	47,626	100,434	298,419
United States of America	151,309	5,319	...	49,849	124,301	330,778
New Zealand	3,972	32,488	2,934	42,927	11,042	93,363
Austria-Hungary ... ..	...	1,113	16,734	89,036	62,932	169,815
Other Countries	2,646	180	10,300	347,472	11,998	372,596
Total... ..	74,082,419	78,178,300	71,770,640	63,254,106	64,450,086	351,735,551

* 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; and in 1913, 3,561,722 lbs. valued at £415,670. In the latter year Japan took 3,435,456 lbs., valued at £402,071.

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, 1909 to 1913.

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 Years.
	£	£	£	£	£	£
United Kingdom	10,562,929	11,447,359	11,159,335	10,418,577	9,456,636	53,044,836
France	5,594,983	6,905,177	6,016,293	6,527,854	7,429,856	32,474,163
Germany	5,006,623	6,053,873	4,851,785	5,050,974	4,693,157	25,656,412
Belgium	2,230,206	3,084,847	2,552,282	2,480,348	2,386,892	12,734,575
United States of America	1,691,389	579,605	500,015	460,275	745,354	3,976,638
Japan	264,630	420,622	459,000	703,371	735,018	2,582,641
Italy	97,756	181,457	245,804	230,436	256,718	1,012,171
Austria-Hungary	1,025	55	242,461	360,125	519,477	1,123,143
India	16,657	24,268	21,290	18,739	30,586	111,540
New Zealand	6,637	67,219	6,199	8,844	5,199	94,098
Canada	7,748	10,695	2,824	7,155	5,404	33,826
Other Countries	2,527	2,106	13,905	87,865	12,765	119,168
Total	25,483,110	28,777,283	26,071,193	26,354,563	26,277,062	132,963,211

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 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 the firm of Messrs. Helmuth Schwartz and Co., the English wool brokers, 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 1909 to 1914.

Year.	Commonwealth and New Zealand.	Cape Colony.	River Plate.	Total.
	Bales.	Bales.	Bales.	Bales.
1901	1,745,000	217,000	532,000	2,494,000
1909	2,296,000	380,000	571,000	3,247,000
1910	2,411,000	377,000	461,000	3,249,000
1911	2,524,000	376,000	499,000	3,399,000
1912	2,463,000	463,000	497,000	3,423,000
1913	2,296,000	484,000	437,000	3,217,000
1914	2,332,000	499,000	406,000	3,237,000

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 1913 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, 1913.

Country from which Imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	lbs.	£		lbs.	£
Australia ...	265,078,480	12,301,380	Egypt ...	4,112,081	119,079
New Zealand ...	181,181,381	8,165,408	China ...	2,316,400	88,259
Union of Sth. Africa	133,224,202	5,095,818	Italy ...	1,237,712	68,302
Argentine Republic	55,455,562	2,140,647	Persia ...	1,864,720	51,517
France ...	24,492,772	1,691,611	Portugal ...	1,421,086	48,346
British India ...	54,946,318	1,659,117	Canada ...	724,019	25,684
Chile ...	24,286,912	783,962	Iceland&Greenland	432,847	18,097
Uruguay ...	9,657,762	397,028	Netherlands ...	345,861	12,495
Russia ...	7,144,338	325,337	Morocco ...	292,549	9,174
Turkey ...	9,423,448	274,071	Denmark ...	201,618	8,803
Peru ...	5,281,190	212,300	Spain ...	100,523	3,277
Germany ...	4,717,683	210,903	Other Countries ...	814,555	30,134
Falkland Islands	6,150,514	205,424			
Belgium ...	3,088,406	142,770			
U.S. of America ...	2,582,876	132,160	Total ...	800,580,815	34,226,103

It will be seen that of the total importations of wool into the United Kingdom, Australian wool represented over 33 per cent. of quantity and nearly 36 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).

The 1913-14 season results were satisfactory. Brisk selling proved the rule throughout at prices a shade lower, on the average, than those in force during the previous season, but these were, nevertheless, productive of payable returns to wool-growers. The output shewed a marked increase in volume as compared with the preceding clip, being particularly well grown, sound, and of good average value.

Continental buyers were well represented throughout the season, France particularly having bought freely and continuously. America participated largely, and was a potent factor in maintaining values, its purchases in the aggregate having covered some 5.3 per cent. of all wool sold during the season, as against 1.3 per cent. during 1912-13. Although during the first series of sales Yorkshire bidding was dull, there was increased operation from the opening of the second series to the close of the season, the result being an upward course of the market from January to June.

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, 1904 to 1913.

Year ...	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Average value per lb. ...	d. 9.30	d. 9.83	d. 10.14	d. 10.73	d. 9.17	d. 9.35	d. 9.58	d. 8.87	d. 9.50	d. 9.70

(i.) *Exports of Wool from each State, and Quantity sold Locally.* Over 86½ per cent. of the wool grown in Australia was sold in the local markets prior to export from the Commonwealth during 1913-14. 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 shows the number of bales of wool exported oversea from each State during the season ended 30th June, 1914, and the proportion sold at the local sales prior to shipment. 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 294.

EXPORTS OF WOOL TO PLACES OUTSIDE THE COMMONWEALTH, AND THE QUANTITY SOLD LOCALLY IN THE SEVERAL STATES, DURING THE SEASON ENDED 30th JUNE, 1914.

State.	Oversea Exports.		Sold at Local Sales prior to Export.		Ratio of Local Sales to	
					Oversea Exports from each State.	Total Exports from C'wealth.
	Bales.	%	Bales.	%	%	%
New South Wales ...	853,104	43.38	775,443	45.51	90.90	39.43
Victoria ...	486,976	24.76	463,381	27.20	95.15	23.57
Queensland ...	387,277	19.69	292,875	17.19	75.62	14.89
South Australia ...	152,930	7.78	141,642	8.31	92.62	7.20
Western Australia ...	64,921	3.30	3,860	0.23	5.95	0.20
Tasmania... ..	21,368	1.09	26,543	1.56	124.22	1.35
Commonwealth ...	1,966,576	100.00	1,703,744	100.00	...	86.64

It will be seen that in regard to the ratio of local sales to oversea exports, Victoria's sales represent over 95 per cent. of her exports, New South Wales about 91, South Australia 92½, and Queensland 75½ per cent. In Tasmania some of the wool sold locally was subsequently shipped to interstate ports. Of the total quantity sold in the Commonwealth, New South Wales and Victoria disposed of 45.51 and 27.20 per cent. respectively; Queensland, South Australia, Tasmania, and Western Australia following in the order named.

During the season under review 1,966,576 bales of wool were shipped from the Commonwealth, of which 86.64 per cent. was sold in the Australian markets. Of this percentage New South Wales and Victoria are represented by 63, Queensland and South Australia 22, while Tasmania and Western Australia account for the balance.

(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 during 1895, 1900, 1905, and the past five seasons is shewn in the following table:—

EXPORTS OF WOOL FROM THE COMMONWEALTH, AND THE QUANTITY SOLD LOCALLY, FROM 1895 to 1914.

Year ended 30th June.				Oversea Exports.	Sold prior to Export.	Ratio of Wool sold to Exports.
				Bales.	Bales.	%
1895	...	...	...	1,595,652	817,333	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

The steady development of the Australian wool market is clearly shewn in this table. In nineteen years the quantity sold has more than doubled, and the ratio of wool sold to that exported has increased from 51 per cent. in 1895 to over 86½ per cent. in the season ended 30th June, 1914.

During the past season 1,703,744 bales of wool were sold in Australia and 264,834 bales in New Zealand, representing the total value of £26,079,536. 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 1913-14 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, 1914.

Destination.	N.S.W.	Victoria.	Q'land.	S. Aust. (a)	Tas.	C'wealth.
	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.
United Kingdom	77,930	157,028	34,779	34,947	13,977	318,661
France, Belgium, and Holland	321,526	144,839	137,486	60,873	4,298	669,022
Germany	256,738	73,028	77,066	15,322	3,121	425,275
Austria, Italy and other Euro- pean Countries	51,041	21,759	6,277	11,157	...	90,234
America	26,050	47,942	13,690	745	1,838	90,265
Japan, China, and India	14,658	1,610	4,232	...	...	20,500
Local Woollen Mills	27,500	17,175	19,345	22,458	3,309	32,434
Scourers and Speculators						57,353
Total Sales	775,443	463,381	292,875	145,502	26,543	1,703,744

PERCENTAGE DISTRIBUTION.

	%	%	%	%	%	%
United Kingdom	10.05	33.89	11.88	24.02	52.66	18.70
France, Belgium, and Holland	41.46	31.26	46.94	41.84	16.19	39.27
Germany	33.11	15.76	26.31	10.53	11.76	24.96
Austria, Italy and other Euro- pean Countries	6.58	4.69	2.14	7.67	...	5.30
America	3.36	10.35	4.67	0.51	6.92	5.30
Japan, China, and India	1.89	0.35	1.45	...	...	1.20
Local Woollen Mills	3.55	3.70	6.61	15.43	12.47	1.90
Scourers and Speculators						3.37
Total Sales	100.00	100.00	100.00	100.00	100.00	100.00

(a) Including Western Australia, 3860 bales.

Of the total quantity sold, amounting to 1,703,744 bales, 1,184,531 were purchased for the Continent of Europe, 318,661 for the United Kingdom, 90,265 for America, 20,500 for Asiatic countries, 57,353 by scourers and speculators, while 32,434 bales went for consumption in the local woollen mills. Of the Continental purchases 56.5 per cent. went to France, Belgium and Holland, nearly 35.9 per cent. to Germany, and 7.6 per cent. to Austria, Italy and other European countries.

(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, 1914.

Description of Wool.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Commonwealth.
Greasy ...	Bales. 681,927	Bales. 450,878	Bales. 227,927	Bales. 140,310	Bales. 3,830	Bales. 26,543	Bales. 1,531,415
Scoured ...	93,516	12,503	64,948	1,332	30	...	172,329
Total	775,443	463,381	292,875	141,642	3,860	26,543	1,703,744
Fleece, etc.	734,469	432,011	274,837	133,485	3,666	25,446	1,603,914
Lambs ...	40,974	31,370	18,038	8,157	194	1,097	99,830
Total	775,443	463,381	292,875	141,642	3,860	26,543	1,703,744
Merino ...	698,699	227,057	287,743	124,645	2,895	10,617	1,351,656
Crossbred and all strong breeds	76,744	236,324	5,132	16,997	965	15,926	352,088
Total	775,443	463,381	292,875	141,642	3,860	26,543	1,703,744
Greasy ...	% 87.94	% 97.30	% 77.82	% 99.06	% 99.22	% 100.00	% 89.89
Scoured ...	12.06	2.70	22.18	0.94	0.78	...	10.11
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Fleece, etc.	94.72	93.23	93.84	94.24	94.97	95.87	94.14
Lambs ...	5.28	6.77	6.16	5.76	5.03	4.13	5.86
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Merino ...	90.10	49.00	98.25	88.00	75.00	40.00	79.33
Crossbred and all strong breeds	9.90	51.00	1.75	12.00	25.00	60.00	20.67
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Wool in the grease represented 90 per cent. of total sales during the period under review. Of fleece and lambs, the former shows about 94.1, and the latter 5.9 per cent. The good lambing in 1913 resulted in the increase of lamb's wool from 3.6 per cent. in 1912-13 to 5.9 in 1913-14. 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 1913-14 :—

PERCENTAGE OF BALES OF EACH DESCRIPTION OF WOOL SOLD IN THE SEVERAL STATES TO THE TOTAL SOLD IN THE COMMONWEALTH, 1913-14.

Description of Wool.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Commonwealth.
	%	%	%	%	%	%	%
Greasy ...	44.53	29.44	14.89	9.16	0.25	1.73	100.00
Scoured ...	54.27	7.25	37.69	0.77	0.02	...	100.00
Fleece, etc. ...	45.79	26.93	17.14	8.32	0.23	1.59	100.00
Lambs ...	41.05	31.42	18.07	8.17	0.19	1.10	100.00
Merino ...	51.69	16.80	21.29	9.22	0.21	0.79	100.00
Crossbred and all strong breeds ...	21.80	67.12	1.46	4.83	0.27	4.52	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 1909 to 1913 being no less a sum than £14,290,287, or an average of £2,858,057 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 France and the United Kingdom. Details concerning the number so exported during the five years 1909 to 1913 are as follow :—

COMMONWEALTH EXPORTS OF SHEEPSKINS WITH WOOL, 1909 to 1913.

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 Years
	No.	No.	No.	No.	No.	No.
France ...	3,140,764	4,325,337	4,322,505	5,297,141	5,932,257	23,018,004
United Kingdom ...	3,968,494	3,763,002	3,306,567	3,707,050	3,861,161	18,606,274
Belgium ...	1,100,023	1,282,942	1,020,847	1,277,530	996,821	5,678,163
Germany ...	57,041	106,534	109,621	63,112	57,735	394,043
U.S. of America ...	86,664	155,782	39,811	129,899	99,037	511,193
Italy ...	27,565	29,575	26,140	...	960	84,240
Canada ...	...	10,446	...	679	...	11,125
New Zealand ...	...	100	...	661	...	761
Other Countries ...	234	...	6,869	...	261	7,364
Total ...	8,380,785	9,673,718	8,832,360	10,476,072	10,948,232	48,311,167

The next table furnishes corresponding particulars as to value :—

**VALUE OF SHEEPSKINS WITH WOOL EXPORTED FROM THE COMMONWEALTH,
1909 to 1913.**

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 Years.
	£	£	£	£	£	£
France ...	598,172	884,450	735,259	980,298	1,315,156	4,513,335.
United Kingdom ...	737,592	710,229	568,618	666,962	804,432	3,487,833
Belgium ...	274,823	316,958	253,995	314,301	335,569	1,495,646
Germany ...	9,566	16,720	13,195	10,576	11,620	61,677.
U.S. of America...	9,836	16,978	3,706	12,713	15,127	58,360
Italy ...	10,244	9,630	4,075	...	100	24,049
Canada...	...	1,071	...	66	...	1,137.
New Zealand ...	...	25	...	113	...	138
Other Countries ...	63	...	697	...	55	815
Total ...	1,640,296	1,956,061	1,579,545	1,985,029	2,482,059	9,642,990.

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

COMMONWEALTH EXPORTS OF SHEEPSKINS WITHOUT WOOL, 1909 to 1913.

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 Years.
	No.	No.	No.	No.	No.	No.
United Kingdom ...	1,140,338	875,994	459,252	131,103	128,578	2,735,265.
United States of America ...	1,285,946	710,001	590,582	271,028	21,760	2,879,317
France ...	3,315	23,863	21,666	55,845	5,364	110,053.
New Zealand ...	9,840	15,552	9,484	1,515	...	36,391
Germany ...	...	14,447	...	...	...	14,447
Belgium ...	...	8,428	331	167	...	8,926.
Canada ...	1,068	1,956	...	...	...	3,024.
Italy ...	...	...	...	...	...	...
Other Countries ...	...	...	...	...	...	...
Total ...	2,440,507	1,650,241	1,081,315	459,658	155,702	5,787,423.

Corresponding details concerning value are given hereunder :—

**VALUE OF SHEEPSKINS WITHOUT WOOL EXPORTED FROM THE
COMMONWEALTH, 1909 to 1913.**

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 Years.
	£	£	£	£	£	£
United Kingdom ...	50,077	37,015	17,138	3,854	5,130	113,214
United States of America ...	57,795	22,544	16,295	8,730	1,550	106,914
France ...	312	1,711	1,225	5,948	382	9,578.
New Zealand ...	422	514	196	27	...	1,159.
Germany ...	...	538	...	...	...	538
Belgium ...	...	396	12	4	...	412
Canada ...	50	115	...	...	...	165.
Italy ...	...	...	...	...	...	...
Other Countries ...	...	...	...	...	...	...
Total ...	108,656	62,833	34,866	18,563	7,062	231,980

4. **Hides.**—The Commonwealth trade in hides has now assumed considerable proportions, and during 1913 the total value of hides exported amounted to £1,657,971. The exports took place principally to the United Kingdom, Belgium, Germany, Italy, and the United States of America. 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 1913 was £239,780.

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

COMMONWEALTH EXPORTS OF HIDES, 1909 to 1913.

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 Years.
	No.	No.	No.	No.	No.	No.
United Kingdom	196,827	253,442	245,993	350,519	360,549	1,407,330
Belgium	79,977	41,326	80,453	108,455	244,394	554,605
Germany	47,335	21,810	64,536	78,059	206,588	418,328
Italy	11,316	45,541	68,991	117,352	85,984	329,184
U.S. of America...	56,131	21,318	29,232	82,808	136,687	326,176
France	20,546	11,938	15,790	15,151	16,208	79,633
Canada	3,737	4,000	33,519	65,407	11,205	117,868
Japan	6,593	4,697	6,436	5,025	155	22,911
Austria-Hungary	515	...	103	1,275	3,631	5,524
Sth. African Union	200	...	...	...	...	200
Other Countries ...	166	1,975	5,815	9,717	7,674	25,347
Total ...	423,348	406,047	550,868	833,768	1,073,075	3,287,106

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

VALUE OF HIDES EXPORTED FROM THE COMMONWEALTH, 1909 to 1913.

Country to which Exported.	1909.	1910.	1911.	1912.	1913.	Total for 5 Years.
	£	£	£	£	£	£
United Kingdom	177,738	294,702	279,474	430,609	580,195	1,762,718
Belgium	89,547	48,343	91,110	189,188	385,627	753,815
Germany	42,710	23,947	79,530	103,081	339,605	588,873
Italy	8,333	41,983	62,047	125,744	102,834	340,941
U.S. of America...	56,639	21,988	28,772	94,783	196,583	398,765
France	22,805	11,073	17,988	19,865	20,078	91,809
Canada	3,591	4,049	35,320	74,273	16,622	133,855
Japan	10,315	7,873	11,060	8,378	335	37,961
Austria-Hungary	627	...	161	1,757	5,545	8,090
Sth. African Union	260	...	...	...	...	260
Other Countries ...	225	2,087	5,795	9,576	10,547	28,230
Total ...	412,790	456,045	611,257	1,007,254	1,657,971	4,145,317

The number and value of hides imported into the Commonwealth during the five years 1909 to 1913 are as follows:—

HIDES IMPORTED INTO THE COMMONWEALTH, 1909 to 1913.

Particulars.	1909.	1910.	1911.	1912.	1913.	Total for 5 Years.
No.	136,375	119,408	97,926	87,680	135,193	576,582
Value	£ 173,251	169,771	143,893	135,301	239,780	861,996

§ 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 increase in numbers for the Commonwealth as a whole, shewn on page 291, covers the period from 1860 to 1913.

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 disastrous drought of 1902. At this latter point the number was practically identical with that for 1890. From 1902 onwards a rapid improvement has been experienced, the total for 1913 being the highest recorded.

3. **Cattle.**—The graph for cattle furnishes evidence of rapid increase in number, interrupted by three marked periods of decline, of which the first extended from 1862 to 1866, the second from 1881 to 1885, and 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 1912 and 1913 figures shew a slight decline, those for the latter year shewing a falling off of slightly under 3 per cent. on the 1911 returns.

4. **Sheep.**—In the case of sheep the graph furnishes evidence of five 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, and the fifth during 1912. 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 then reached in the latter year being the highest since 1894. The return for 1912, however, shews a considerable decrease, but this was followed by an increase in 1913.

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, however, a considerable decrease in 1912, and a smaller one during 1913.