

## SECTION VII.

## PASTORAL PRODUCTION.

## § 1. Initiation and Growth of Pastoral Industry.

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

2. **Subsequent Statistics.**—While the statistical records of live stock in Australia prior to the year 1860 are somewhat defective, from that year onwards fairly complete particulars are available for 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, these particulars were not 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 decennial intervals from 1860 to 1910, and from 1915 onwards in single years, are given in the following table, and are shewn continuously in the graphs hereinafter.

During the fifty-nine years covered by the table the live stock of the Commonwealth increased considerably, horses 461 per cent., cattle 221 per cent., sheep 275 per cent., and pigs 98 per cent. The average annual increases which these aggregates represent are as follows:—Horses, 2.97 per cent.; cattle, 2.00 per cent.; sheep, 2.27 per cent.; and pigs, 1.27 per cent.

## COMMONWEALTH LIVE STOCK, 1860 TO 1919.

Year.				Horses.	Cattle.	Sheep.	Pigs.
1860	..	..	..	431,525	3,957,915	20,135,286	351,096
1870	..	..	..	716,772	4,276,326	41,593,612	543,388
1880	..	..	..	1,061,078	7,523,000	62,176,027	815,776
1890	..	..	..	1,521,588	10,299,913	97,881,221	891,138
1900	..	..	..	1,609,654	8,640,225	70,602,995	950,349
1910	..	..	..	2,165,866	11,744,714	92,047,015	1,025,850
1915	..	..	..	2,377,047	9,931,416	69,257,189	753,693
1916	..	..	..	2,436,148	10,459,237	76,668,604	1,006,763
1917	..	..	..	2,497,903	11,829,138	84,965,012	1,169,365
1918	..	..	..	2,527,149	12,738,852	87,086,236	913,902
1919	..	..	..	2,421,201	12,711,067	75,554,082	695,968

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. Thus, at the commencement of hostilities, Australia was settling down to a disastrous drought, and the termination of the war likewise marked the beginning of a protracted dry spell which was not broken until the winter of 1920. Though the whole of Australia was visited by drought in this latter instance the visitation was not concurrent in all parts of the Commonwealth, and much country suitable for agistment purposes was available at intervals, which fact probably accounted for the slight losses of cattle recorded during 1919. The number of sheep however decreased by 11,532,154, and the wheat crop was practically a failure.

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 39,335,174, 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, 1918, 2,527,149; cattle, 1918, 12,738,852; sheep, 1891, 106,421,068; and pigs, 1917, 1,169,365.

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-eight years in the manner shewn in the succeeding table:—

NUMBER OF AUSTRALIAN LIVE STOCK PER HEAD OF POPULATION, 1860  
TO 1919.

Year.	Horses.	Cattle.	Sheep.	Pigs.	Year.	Horses.	Cattle.	Sheep.	Pigs.
1860 ..	0.38	3.45	17.58	0.31	1914 ..	0.51	2.24	15.91	0.17
1870 ..	0.43	2.60	25.24	0.33	1915 ..	0.48	2.01	14.04	0.15
1880 ..	0.48	3.37	27.87	0.37	1916 ..	0.50	2.14	15.68	0.21
1890 ..	0.48	3.27	31.06	0.28	1917 ..	0.50	2.39	17.13	0.24
1900 ..	0.43	2.29	18.75	0.25	1918 ..	0.50	2.51	17.16	0.18
1910 ..	0.49	2.65	20.80	0.23	1919 ..	0.46	2.41	14.32	0.13

Considered in relation to population, the live stock attained its maximum for the period 1860–1919 in the quinquennium 1890–4, and its minimum in the year 1902. During the period under review, the number of horses varied but slightly in proportion to population, the range for the years shewn above being from 0.38 to 0.51 per head. In the case of cattle, the corresponding limits of variation were 2.01 and 3.45; sheep, 14.04 and 31.06; and pigs, 0.13 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 are given in the following table:—

NUMBER OF LIVE STOCK PER SQUARE MILE.

States and Territories.	Date.	Horses.	Cattle.	Sheep.	Pigs.
New South Wales ..	30th June, 1920 ..	2.14	9.94	93.97	0.82
Victoria ..	1st March, 1920 ..	5.84	18.56	164.11	2.13
Queensland ..	31st Dec., 1919 ..	1.09	8.86	25.92	0.15
South Australia ..	30th June, 1920 ..	0.70	0.92	15.82	0.16
Western Australia ..	31st Dec., 1919 ..	0.18	0.90	6.86	0.06
Tasmania ..	1st March, 1920 ..	1.50	8.18	67.95	1.36
Northern Territory ..	31st Dec., 1919 ..	0.07	1.17	0.02	..
Federal Territory ..	30th June, 1920 ..	1.51	8.91	182.70	0.61
Commonwealth ..	1919-20 ..	0.81	4.27	25.40	0.23

7. Minor Classes of Live Stock.—The numbers of minor classes of live stock returned for 1919-20 were as follows:—Goats, 218,218; camels, 10,953; mules and donkeys, 13,129; and ostriches, 949. Of these, goats were most numerous in Queensland; camels, mules, and donkeys in Western Australia; 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 about 15,000 angora goats are included in the total of 218,218 goats shewn above. Of these, 4,733 were in New South Wales, 2,400 in Western Australia, and 3,682 in Queensland, while the quantity of mohair produced in the latter State in 1919 was set down at 2,181 lbs., and the number of skins placed on the market was returned as 477.

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 1915-16 to 1919-20 are as follows:—

QUANTITIES OF NET EXPORTS OF PRINCIPAL PASTORAL PRODUCTS OF THE COMMONWEALTH, 1915-16 TO 1919-20.

Products.	Unit of Quantity.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
Animals (living)—						
Cattle .. ..	No.	5,417	2,743	1,117	644	3,133
Horses .. ..	"	14,589	14,228	23,876	8,686	5,787
Sheep .. ..	"	728	3,198	9,080	18,001	21,601
Bones .. ..	cwt.	16,378	26,884	20,363	25,669	29,198
Glue Pieces and Sinews ..	"	23,222	26,972	11,015	3,878	8,158
Glycerine .. ..	lb.	(a)	(a)	(a)	1,633,510	—21,745
Hair .. ..	"	554,971	514,752	324,523	402,869	600,595
Hoofs .. ..	cwt.	8,347	10,497	8,618	10,000	11,382
Horns .. ..	"	(a)	(a)	(a)	(a)	(a)
Meats—						
Frozen Beef .. ..	lb.	114,654,569	242,040,115	180,222,185	119,938,442	120,939,750
Frozen Mutton and Lamb ..	"	38,332,651	66,811,263	19,174,231	59,672,405	246,957,427
Frozen Rabbits and Hares ..	pair	11,367,538	12,674,472	13,164,307	5,132,983	9,622,150
Frozen, Other .. ..	lb.	3,004,290	10,773,154	8,286,035	12,329,539	11,397,792
Potted and Extract of .. ..	"	(a)	(a)	(a)	(a)	(a)
Preserved in Tins, &c. ..	"	13,059,238	21,922,630	43,036,310	65,118,256	47,550,045
Other (excluding Bacon and Ham) .. ..	"	130,672	35,833	261,301	424,777	755,141
Sausage Casings .. ..	"	(a)	(a)	(a)	(a)	(a)
Skins—						
Hides .. ..	No.	453,691	98,124	15,873	26,619	540,415
Sheep .. ..	"	7,254,642	4,753,464	2,907,431	6,663,978	10,143,952
Rabbit and Hare .. ..	cwt.	51,857	48,403	71,990	117,569	127,452
Other, including Undressed Furs .. ..	No.	(a)	(a)	(a)	(a)	(a)
Tallow .. ..	cwt.	250,519	555,427	345,849	870,950	712,307
Wool—Greasy .. ..	lb.	408,461,233	331,776,079	243,784,651	457,995,701	552,307,700
Scoured .. ..	"	74,880,215	51,727,629	62,865,373	106,313,411	84,900,446
Tops .. ..	"	4,981,975	4,869,452	4,571,357	2,822,578	6,148,118

NOTE.—The minus sign (—) signifies net imports. (a) 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 £243,769,208 for the period, or an average of £48,753,842 per annum, of which wool represents 67 per cent. Meats, skins, and tallow rank next in order of importance.

VALUES OF NET EXPORTS OF PRINCIPAL PASTORAL PRODUCTS OF THE COMMONWEALTH, 1915-16 TO 1919-20.

Products.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
	£	£	£	£	£
Animals (living)—					
Cattle .. .. .	10,089	4,582	—10,993	3,567	—23,855
Horses .. .. .	185,183	308,200	453,616	161,533	117,739
Sheep .. .. .	—17,507	8,474	15,049	35,007	57,854
Bones .. .. .	10,009	20,783	21,806	27,156	31,534
Glue Pieces and Sinews	12,815	21,416	15,196	6,904	15,340
Glycerine .. .. .	16,078	26,459	41,256	58,073	1,351
Hair .. .. .	26,684	26,802	21,243	29,335	66,943
Hoofs .. .. .	2,361	6,363	7,848	11,091	14,526
Horns .. .. .	6,379	4,191	13,309	18,474	62,383
Meats—					
Frozen Beef .. .. .	2,175,343	4,945,716	3,697,957	2,471,136	2,474,904
Frozen Mutton and Lamb	769,434	1,540,546	452,627	1,298,086	5,482,263
Frozen Rabbits and Hares	724,624	913,142	985,190	308,965	762,936
Frozen, Other .. .. .	30,248	195,846	199,847	381,780	305,948
Potted and Extract of .. .. .	81,467	65,471	224,464	328,233	99,599
Preserved in Tins, &c. .. .. .	438,881	952,369	2,308,989	3,771,373	2,778,503
Other (excluding Bacon and Ham)	3,195	1,151	7,655	15,380	37,845
Sausage Casings .. .. .	—21,726	1,210	—29,089	101,490	212,427
Skins—					
Hides .. .. .	266,674	184,262	211,449	156,084	1,089,731
Sheep .. .. .	1,242,358	1,137,832	808,782	1,921,411	2,585,171
Rabbit and Hare .. .. .	261,868	433,546	1,155,824	1,314,366	3,670,791
Other, including Undressed Furs	253,458	183,738	276,537	313,472	2,268,748
Tallow .. .. .	436,225	1,241,219	886,128	2,167,728	2,855,602
Wool—Greasy .. .. .	20,172,243	21,870,119	16,981,347	31,477,707	38,414,608
Scoured .. .. .	5,841,054	5,394,259	6,094,040	10,351,553	9,189,285
Tops .. .. .	680,656	1,204,570	1,510,799	935,212	2,957,679
Total Values .. .. .	33,558,093	40,695,265	36,350,876	57,665,116	75,499,858

NOTE.—The minus sign (—) 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 are 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. During the last war Australian horses were found to be well adapted for all purposes, especially in Palestine.

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 742,159 horses in that State, as compared with 731,735 in New South Wales, and 552,053 in Victoria. New South Wales regained the lead during the next three seasons, but was again replaced by Queensland in 1918. Particulars for the several States for a series of years are as follows :—

**NUMBER OF HORSES IN STATES, TERRITORIES, AND COMMONWEALTH,  
1860 TO 1919.**

Year.	N.S.W.	Vic. (a)	Q'land.	S. Aust.	W. Aust.	Tas. (a)	N.T.	F.T.	C'wealth.
1860 ..	251,497	76,536	23,504	49,399	9,555	21,034	..	..	431,525
1870 ..	337,597	167,220	83,358	83,744	22,174	22,679	..	..	716,772
1880 ..	395,984	275,516	179,152	148,219	34,568	25,267	c2,372	..	1,061,078
1890 ..	444,163	436,459	365,812	187,686	44,384	31,165	11,919	..	1,521,588
1900 ..	481,417	392,237	456,788	166,790	68,253	31,607	12,562	..	1,609,654
1910 ..	650,636	472,080	593,813	249,326	134,114	41,388	24,509	..	2,165,866
1915 ..	b718,232	493,779	685,998	253,333	163,016	41,422	19,957	b1,310	2,377,047
1916 ..	b732,334	514,403	696,508	b257,422	169,736	42,620	21,674	b1,457	2,436,148
1917 ..	b740,806	514,061	731,977	b262,840	178,151	42,396	26,231	b1,441	2,497,903
1918 ..	b721,302	523,788	758,632	b269,255	180,094	41,221	31,436	b1,421	2,527,149
1919 ..	b660,751	513,500	730,326	b264,901	174,919	39,452	35,839	b1,513	2,421,201

(a) 1st March year following. (b) 30th June year following. (c) Statistics not collected prior to 1880.

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

**PERCENTAGE OF HORSES IN EACH STATE AND TERRITORY ON THE TOTAL  
FOR COMMONWEALTH, 1915 TO 1919.**

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	F.T.	C'wealth.
	%	%	%	%	%	%	%	%	%
1915 ..	30.20	20.77	28.89	10.65	6.86	1.74	0.84	0.05	100.00
1916 ..	30.05	21.11	28.62	10.56	6.96	1.75	0.89	0.06	100.00
1917 ..	29.64	20.57	29.33	10.52	7.13	1.70	1.05	0.06	100.00
1918 ..	28.53	20.72	30.05	10.65	7.12	1.63	1.24	0.06	100.00
1919 ..	27.29	21.21	30.16	10.94	7.23	1.63	1.48	0.06	100.00

During the period under review the principal increase has occurred in Queensland, while New South Wales shewed the largest decrease. The position of the remaining States has practically remained stationary.

4. Oversea Export Trade in Horses.—Australia's export trade in horses is fairly considerable, though somewhat fluctuating. During the past five years it has varied in number between 5,939 for the year 1919–20 and 24,172 in 1917–18, and in value between £166,817 in the former and £502,557 during the latter year. The total number of horses exported during the five years, exclusive of those shipped for military purposes, amounted to 70,665, an average of 14,133 per annum. The total value of the exports for the period

was £1,478,736, or £295,747 per annum. The average export value per head for the period was £20 18s. 6d. The numbers exported to the principal countries concerned in this trade are as follows :—

**NUMBER AND DESTINATION OF HORSES EXPORTED FROM THE  
COMMONWEALTH, 1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	No.	No.	No.	No.	No.	No.
India .. ..	14,405	15,744	23,890	7,522	4,119	65,680
New Zealand .. ..	37	40	26	11	95	209
Java .. ..	280	148	..	633	609	1,670
Straits Settlements .. ..	174	224	21	89	457	965
Fiji .. ..	257	223	150	111	223	964
Philippine Islands .. ..	8	5	20	215	153	406
Japan .. ..	35	16	15	27	40	133
Mauritius .. ..	..	..	..	150	60	210
Papua .. ..	2	35	30	20	1	88
Other Countries .. ..	11	78	20	54	177	340
<b>Total .. ..</b>	<b>15,209<sup>a</sup></b>	<b>16,513<sup>a</sup></b>	<b>24,172<sup>a</sup></b>	<b>8,832<sup>a</sup></b>	<b>5,939<sup>a</sup></b>	<b>70,665<sup>a</sup></b>

(a) Exclusive of shipments for military purposes.

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

**VALUE OF HORSES EXPORTED FROM THE COMMONWEALTH,  
1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	£	£.	£	£	£	£
India .. ..	250,710	312,271	479,520	146,758	84,651	1,273,910
New Zealand .. ..	7,232	11,190	16,360	4,600	35,725	75,107
Java .. ..	5,352	3,818	..	18,336	14,464	41,970
Straits Settlements .. ..	3,755	6,427	900	5,915	15,192	32,189
Fiji .. ..	6,653	5,814	3,765	2,176	5,548	23,956
Philippine Islands .. ..	1,200	60	200	3,800	3,330	8,590
Japan .. ..	1,900	850	750	1,350	1,770	6,620
Mauritius .. ..	..	..	..	4,334	1,200	5,534
Papua .. ..	65	663	538	817	10	2,093
Other Countries .. ..	244	1,804	524	1,268	4,927	8,767
<b>Total .. ..</b>	<b>277,111<sup>a</sup></b>	<b>342,897<sup>a</sup></b>	<b>502,557<sup>a</sup></b>	<b>189,354<sup>a</sup></b>	<b>166,817<sup>a</sup></b>	<b>1,478,736<sup>a</sup></b>

(a) Exclusive of shipments 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 the four years ended 30th June, 1918. In addition to the exports shewn in the above tables, there were 39,348 horses, valued at £815,300, shipped from the Commonwealth for military purposes from the commencement of the war to 30th June, 1918.

The number of horses imported into the Commonwealth is comparatively small, consisting mainly of valuable animals introduced for breeding purposes, and coming principally from New Zealand and the United Kingdom. The average value per head of the horses imported during the last five years was £170 4s. 3d., as compared with £20 18s. 6d. per head for the exports for the same period. The average number imported per annum was, however, only 300, and the average annual value £50,893. The following table furnishes a comparison of imports and exports of horses during each of the five years 1915-16 to 1919-20 :—

**COMMONWEALTH IMPORTS AND EXPORTS OF HORSES,  
1915-16 TO 1919-20.**

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1915-16 .. ..	620	91,928	15,209	277,111	14,589	185,183
1916-17 .. ..	285	36,697	16,513	342,897	16,228	306,200
1917-18 .. ..	296	48,941	24,172	502,557	23,876	453,616
1918-19 .. ..	146	27,821	8,832	189,354	8,686	161,533
1919-20 .. ..	152	49,078	5,939	166,817	5,787	117,739

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 OF THE WORLD.**

Country.	Date.	Number of Horses. (,000 omitted.)	Country.	Date.	Number of Horses. (,000 omitted.)
Russian Empire (a) ..	1915-16	33,090	Sweden .. ..	1918	715
U.S. of America ..	1919	21,482	Uruguay .. ..	1916	555
Argentine Republic ..	1914	8,324	Columbia .. ..	1915	526
Brazil .. ..	1916	6,065	Denmark .. ..	1918	511
Austria-Hungary (b) ..	1910-13	4,380	Spain .. ..	1916	489
Canada .. ..	1918	3,609	Bulgaria .. ..	1910	478
Germany (c) ..	1915	3,342	Paraguay .. ..	1915	478
Australia .. ..	1919	2,421	Chile .. ..	1914	458
France (d) ..	1917	2,283	Netherlands ..	1919	362
United Kingdom ..	1919	1,915	Finland .. ..	1910	361
British India ..	1917	1,681	New Zealand ..	1920	346
Japan .. ..	1917	1,560	Belgium .. ..	1913	267
Rumania .. ..	1916	1,219	Philippine Islands ..	1915	223
Mexico .. ..	1902	859	Norway .. ..	1918	221
Italy .. ..	1918	804	Algeria .. ..	1914	203
Cuba .. ..	1916	750	Serbia .. ..	1910	153
Union of S. Africa ..	1918	781	Switzerland ..	1918	129

(a) Including Caucasus and Siberia. (b) Austria 1910. Hungary 1913, Croatia-Slavonia 1911, Bosnia-Herzegovina 1910. (c) Inclusive of army horses. (d) Exclusive of invaded area.

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 several of the States, *i.e.*, New South Wales, Victoria, South Australia and Tasmania, the number of horses per head of population was somewhat lower in 1919 than in 1915. Particulars for the past five years are as follows:—

NUMBER OF HORSES PER HEAD OF POPULATION,  
1915 TO 1919.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	F. Terr.	C'wealth.
1915 ..	0.39	0.35	1.01	0.58	0.51	0.21	4.37	0.53	0.48
1916 ..	0.39	0.37	1.04	0.60	0.55	0.21	4.55	0.66	0.50
1917 ..	0.39	0.36	1.08	0.60	0.58	0.21	5.34	0.58	0.50
1918 ..	0.37	0.37	1.09	0.59	0.57	0.20	6.58	0.60	0.50
1919 ..	0.33	0.34	1.01	0.56	0.53	0.18	7.62	0.68	0.46

### § 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 portion of Australia in the temperate zone being 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 next sixteen years, however, despite recurring droughts, a rapid improvement took place, and the total reached on 31st December, 1919, was 5,940,433, the highest number recorded since 1897.

Considerable increases have been in evidence in all the States during the three years following the 1914-15 drought, with the result that the Commonwealth total of 12,738,852 for 1918 represents the greatest number of cattle ever depastured in Australia.



Despite the protracted nature of the recent drought the decrease in the number of cattle amounted to only 27,785 in 1919.

The numbers of cattle in the several States and Territories at decennial intervals from 1860 to 1910 and for each of the last five years are as follows:—

**NUMBER OF CATTLE IN STATES, TERRITORIES, AND COMMONWEALTH,  
1860 TO 1919.**

Year.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Nor. Ter.	Fed. Ter.	C'wealth.
1860	2,408,588	722,332	432,890	278,265	32,476	83,366	..	..	3,957,915
1870	2,195,096	721,096	1,076,630	136,832	45,213	101,459	..	..	4,276,326
1880	2,580,040	1,286,267	3,162,752	283,315	63,719	127,187	619,720	..	7,523,000
1890	2,091,229	1,782,978	5,558,264	359,938	130,970	162,440	214,094	..	10,299,913
1900	1,983,116	1,602,384	4,078,191	214,761	338,590	165,516	257,667	..	8,640,225
1910	3,140,307	1,547,569	5,131,699	384,862	825,040	201,854	513,383	..	11,744,714
1915	2,400,104 <i>b</i>	1,043,604	4,780,893	226,565	821,048	169,575	483,961	5,666 <i>b</i>	9,931,416
1916	2,757,713 <i>b</i>	1,175,098	4,765,657	288,887 <i>b</i>	863,930	179,360	420,362	8,230 <i>b</i>	10,459,237
1917	3,148,309 <i>b</i>	1,371,049	5,316,558	313,245 <i>b</i>	927,086	197,938	541,545	13,408 <i>b</i>	11,829,138
1918	3,271,782 <i>b</i>	1,590,544	5,786,744	342,788 <i>b</i>	943,847	218,234	570,039	8,894 <i>b</i>	12,738,852
1919	3,075,954 <i>b</i>	1,631,120	5,940,433	349,562 <i>b</i>	880,644	214,442	610,534	8,378 <i>b</i>	12,711,067

(a) 1st March year following. (b) 30th June year following. (c) Statistics not collected prior to 1880.

**3. Proportion in each State.**—Particulars concerning the relative importance of the various cattle-breeding States during the years 1915 to 1919 are as under:—

**PERCENTAGE OF CATTLE IN EACH STATE AND TERRITORY ON TOTAL FOR  
COMMONWEALTH, 1915 TO 1919.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Ter.	C'wealth.
	%	%	%	%	%	%	%	%	%
1915 ..	24.17	10.51	48.14	2.28	8.27	1.71	4.87	0.05	100.00
1916 ..	26.37	11.24	45.56	2.76	8.26	1.71	4.02	0.08	100.00
1917 ..	26.62	11.59	44.94	2.65	7.84	1.67	4.58	0.11	100.00
1918 ..	25.68	12.53	45.43	2.69	7.41	1.71	4.48	0.07	100.00
1919 ..	24.20	12.83	46.73	2.75	6.93	1.69	4.80	0.07	100.00

During the past five years the percentages of cattle in the various States on the Commonwealth total have suffered little change. Victoria has shewn the largest gain, while the principal decreases occurred in Queensland and Western Australia.

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,  
1915-16 TO 1919-20.**

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1915-16 ..	440	19,169	5,857	29,258	5,417	10,089
1916-17 ..	234	14,254	2,977	18,836	2,743	4,582
1917-18 ..	222	23,570	1,339	12,577	1,117	- 10,993
1918-19 ..	66	3,373	710	6,940	644	3,567
1919-20 ..	337	55,656	3,470	31,801	3,133	- 23,855

NOTE.—The minus sign (—) signifies net imports.

The average value of the cattle imported into the Commonwealth during the last five years was £89 6s. 4d. per head, while the average value of the cattle exported during the same period was £6 18s. 6d. As stated previously, the imported cattle were principally for stud purposes.

5. Cattle Slaughtered.—The numbers of cattle slaughtered in the several States and Territories of the Commonwealth during the years 1915 to 1919 are as follows :—

**CATTLE (INCLUDING CALVES) SLAUGHTERED IN STATES, TERRITORIES, AND  
COMMONWEALTH, 1915 TO 1919.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	F. Ter.	C'wealth.
1915	6384,947	356,174	653,015	82,070	65,138	28,586	a4,000	b 55	1,573,985
1916	6393,400	247,781	578,202	663,167	59,072	26,972	a4,000	b122	1,372,716
1917	6377,936	217,480	582,954	669,789	50,781	23,521	22,911	b 87	1,345,459
1918	6437,046	223,340	498,737	673,148	48,707	22,419	31,511	b141	1,335,049
1919	6593,859	362,475	461,197	685,978	55,056	15,753	23,286	b138	1,597,742

(a) Estimated.

(b) 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 in normal times, mainly with the United Kingdom, Egypt, and the Philippine Islands. The quantities so exported during the five years 1915-16 to 1919-20 are as follows :—

**QUANTITY OF BEEF PRESERVED BY COLD PROCESS EXPORTED FROM THE COMMONWEALTH, 1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	108,906,118	239,384,893	145,300,631	47,056,554	105,725,679	646,373,876
Egypt ..	109,969		30,359,072	68,681,034	6,616,637	105,766,712
Philippine Islands ..	4,089,865	548,398	1,368,713	1,994,336	2,928,722	10,930,034
Straits Settlements ..	1,411,876	1,691,256	1,535,005	1,480,201	2,366,035	8,484,373
Hawaiian Islands ..		200,396	502,067	489,640	2,104,769	3,296,872
Ceylon ..	1,330	83,752	203,823	60,854	405,347	755,106
Hong Kong ..	38,859	90,000	98,053	75,791	467,974	770,682
Bismarck Archipelago ..	105,857	67,272	97,155	88,900	94,976	454,160
United States ..				40,086	301,673	341,759
Other Countries ..	12,230	15,719	784,777	22,121	67,099	901,946
Total ..	114,676,104	242,081,686	180,249,301	119,989,517	121,078,911	778,075,519

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, 1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	£	£	£	£	£	£
United Kingdom ..	2,055,045	4,890,927	2,976,301	958,164	2,130,527	13,010,964
Egypt ..	2,520		616,627	1,415,713	133,583	2,168,443
Philippine Islands ..	86,011	11,139	31,449	44,225	65,331	238,155
Straits Settlements ..	28,040	34,397	31,819	33,284	53,363	180,903
Hawaiian Islands ..		4,358	17,968	14,058	62,818	99,202
Ceylon ..	25	2,352	4,582	2,130	11,539	20,628
Hong Kong ..	764	1,850	2,032	1,704	10,426	16,776
Bismarck Archipelago ..	3,026	1,448	1,451	1,752	2,401	10,078
United States ..				1,023	7,422	8,445
Other Countries ..	463	599	16,464	733	1,838	20,097
Total ..	2,175,894	4,947,070	3,698,693	2,472,786	2,479,248	15,773,691

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 second largest customer has been Egypt; the Philippine Islands, the Straits Settlements, and the Hawaiian Islands ranked next in order of importance. The exporting States and Territories during 1919-20 were:—Queensland, 101,065,300 lbs., valued at £2,031,934; Northern Territory, 10,360,502 lbs., valued at £227,815; New South Wales, 6,211,564 lbs., valued at £147,554; Victoria, 2,252,509 lbs., valued at £44,532; Western Australia, 661,965 lbs., valued at £16,431; and South Australia, 527,071 lbs., valued at £10,982.

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. ( <sup>000</sup> omitted.)	Country.	Date.	No. of Cattle. ( <sup>000</sup> omitted.)
British India (a) ..	1918	129,872	Colombia .. ..	1915	3,035
U.S. of America ..	1919	68,560	Rumania (c) ..	1916	2,938
Russian Empire (b) ..	1915-16	53,145	Sweden .. ..	1918	2,584
Brazil (c) .. ..	1916	28,962	Turkish Empire ..	1913	2,398
Argentine Republic ..	1914	25,867	Siam .. ..	1915	2,337
Austria-Hungary (d) ..	1910-13	17,648	Denmark .. ..	1918	2,142
Germany .. ..	1919	16,424	Chile .. ..	1917	2,030
France (e) .. ..	1918	13,315	Venezuela .. ..	1912	2,004
Australia .. ..	1919	12,711	Netherlands ..	1919	1,969
United Kingdom ..	1919	12,491	Belgium .. ..	1913	1,849
Canada .. ..	1918	10,051	Finland .. ..	1910	1,604
Uruguay .. ..	1916	7,802	Bulgaria .. ..	1910	1,603
Union of South Africa	1918	6,852	Switzerland ..	1918	1,530
Madagascar .. ..	1917	6,676	Ceylon (c) .. ..	1918	1,451
Italy .. ..	1918	6,240	Korea .. ..	1915	1,354
Paraguay .. ..	1915	5,249	Japan .. ..	1917	1,304
Mexico .. ..	1902	5,142	Rhodesia .. ..	1918	1,211
Cuba .. ..	1916	3,962	Algeria .. ..	1914	1,093
Java .. ..	1915	3,243	Norway .. ..	1918	1,054
New Zealand .. ..	1920	3,102	British East Africa ..	1916	1,000
Spain .. ..	1916	3,071			

(a) Including buffalo calves. (b) Including Caucasus and Siberia. (c) Including buffaloes. (d) Austria 1910, Hungary 1913, Croatia-Slavonia 1911, and Bosnia-Herzegovina 1911. (e) Exclusive of invaded area.

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 the past five years are as follows :—

#### NUMBER OF CATTLE PER HEAD OF POPULATION, 1915 TO 1919.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	F. Terr.	C'wealth.
1915 ..	1.29	0.74	7.04	0.52	2.58	0.84	106.06	2.30	2.01
1916 ..	1.47	0.84	7.12	0.67	2.80	0.90	88.18	3.70	2.14
1917 ..	1.65	0.97	7.84	0.71	3.09	0.97	110.34	5.42	2.39
1918 ..	1.67	1.12	8.33	0.75	3.01	1.04	119.23	3.77	2.51
1919 ..	1.52	1.09	8.19	0.74	2.66	0.99	129.74	3.77	2.41

For the Commonwealth as a whole the ratio of cattle to population has increased substantially since 1915, and the increase has been in evidence in all the States.

### § 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 to 1901, the number of sheep in New South Wales represented more than half the total for the Commonwealth, but in recent years the proportion has fallen away considerably.

The number of sheep in the several States and Territories at decennial intervals from 1860 to 1910, and for each year from 1915 to 1919, is as follows :—

**NUMBER OF SHEEP IN STATES, TERRITORIES, AND COMMONWEALTH,  
1860 TO 1919.**

Year.	New South Wales.	Victoria. (a)	Queens- land.	South Australia.	Western Australia.	Tasmania. (a)	Nor. Terr.	Fed. Terr.	Total C'wealth.
1860	6,119,163	5,780,896	3,449,350	2,824,811	280,136	1,700,930	..	..	20,135,286
1870	16,308,585	10,761,887	8,163,818	4,400,855	608,892	1,349,775	..	..	41,593,612
1880	35,398,121	10,360,285	6,935,967	6,443,904	1,231,717	1,796,715	29,318	..	62,176,927
1890	55,986,431	12,692,843	18,007,234	7,004,642	2,524,913	1,619,256	45,902	..	97,881,221
1900	40,020,508	10,841,790	10,339,185	5,235,220	2,434,311	1,683,958	48,027	..	70,602,995
1910	45,560,989	12,832,665	20,331,838	6,267,477	5,158,516	1,788,310	57,240	..	92,047,015
1915	532,498,046	10,545,632	15,950,154	3,674,547	4,803,850	1,624,450	57,827	6102,683	69,257,189
1916	538,086,241	12,576,587	15,524,293	65,091,282	5,529,060	1,702,579	47,520	6110,142	76,668,604
1917	538,482,465	14,760,013	17,204,268	66,229,519	6,384,191	1,711,118	54,709	6138,731	84,965,012
1918	537,243,770	15,773,002	18,220,985	66,625,144	7,143,747	1,841,924	58,620	6133,104	87,036,236
1919	629,077,514	14,422,745	17,379,332	66,014,565	6,697,951	1,731,425	8,811	6171,739	75,554,082

(a) 1st March year following. (b) 30th June of year following. (c) Statistics not collected prior to 1880.

During the year 1919 the Avon Downs Pastoral Company in the Northern Territory disposed of the whole of their flock numbering about 50,000, and this property is now stocked with cattle only.

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 1915 to 1919 are as hereunder :—

**PERCENTAGE OF SHEEP IN EACH STATE AND TERRITORY ON TOTAL FOR  
COMMONWEALTH, 1915 TO 1919.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	F. Terr.	C'wealth.
	%	%	%	%	%	%	%	%	%
1915 ..	46.92	15.23	23.03	5.30	6.94	2.35	0.08	0.15	100.00
1916 ..	47.07	16.41	20.25	6.64	7.21	2.22	0.06	0.14	100.00
1917 ..	45.29	17.37	20.25	7.33	7.52	2.01	0.07	0.16	100.00
1918 ..	42.77	18.11	20.92	7.61	8.25	2.11	0.07	0.16	100.00
1919 ..	38.49	19.09	23.00	7.96	8.86	2.36	0.01	0.23	100.00

During the period, the percentage on the total Commonwealth flocks declined considerably in the case of New South Wales, while in the cases of Victoria, Western Australia, and South Australia substantial advances were experienced.

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. During the past five years the principal consignments of ordinary sheep have been made to the Straits Settlements from the State of Western Australia. The purchases made by South African and Japanese buyers at the Australian Stud Sheep Sales during recent years have opened up a regular export trade with these two countries in stud sheep, the bulk of which have been secured from the leading flocks of New South Wales, Victoria and South Australia. The following are particulars of the imports and exports for the years 1915-16 to 1919-20 :—

**COMMONWEALTH IMPORTS AND EXPORTS OF SHEEP, 1915-16 TO 1919-20.**

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1915-16 ..	6,597	36,511	7,325	19,004	728	-17,507
1916-17 ..	3,809	24,470	7,007	32,944	3,198	8,474
1917-18 ..	1,719	9,850	10,799	24,899	9,080	15,049
1918-19 ..	607	4,776	18,608	39,783	18,001	35,007
1919-20 ..	269	6,258	21,870	64,112	21,601	57,854

NOTE.—The minus sign (—) signifies net imports.

5. **Sheep Slaughtered.**—The numbers of sheep slaughtered in the several States during each of the years from 1915 to 1919 are as follows :—

**SHEEP (INCLUDING LAMBS) SLAUGHTERED, 1915 TO 1919.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania. (a)	Nor. Tcr.	Fed. Ter.	C'wealth.
1915	64,173,511	2,973,803	1,316,152	918,526	564,535	288,419	c500	63,376	10,238,822
1916	63,756,477	2,647,200	909,615	668,112	547,041	283,313	c500	62,075	8,833,233
1917	63,198,445	2,499,002	689,905	680,914	590,244	259,287	c500	63,713	8,050,030
1918	64,271,396	3,581,460	542,479	61,137,578	630,117	295,844	c500	63,334	10,462,708
1919	65,533,484	6,324,490	717,191	61,478,557	800,252	332,977	(d)	63,800	15,190,751

(a) Partly estimated. (b) Year ended 30th June year following. (c) Estimated.  
(d) 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 eleven years afterwards in 1914-15, the value amounted to no less a sum than £3,413,848. During the next four years, consequent on drought and war conditions, the value of the exports fell considerably, averaging for the period only £1,015,351 per annum. With the release of shipping and the high prices ruling in England the trade rapidly recovered, and during 1919-20 the record shipment of 246,471,346 lbs., valued at £5,482,564, was made. 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 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, as it has become widely recognised that with suitable breeds the export trade in lambs is very profitable.

As in the case of frozen beef, Australia's principal customer in this trade is the United Kingdom, which has absorbed 93 per cent. of the total quantity exported from the Commonwealth during the past five years, while the balance was shipped mainly to Egypt and the Straits Settlements.

**QUANTITY OF MUTTON AND LAMB PRESERVED BY COLD PROCESS EXPORTED FROM THE COMMONWEALTH, 1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	36,539,660	65,140,182	9,532,577	49,784,705	239,154,276	400,151,400
Egypt ..	319,156	..	8,071,709	8,464,515	..	16,855,380
Straits Settlements ..	749,883	964,335	824,406	754,089	1,102,658	4,395,371
Sweden ..	..	..	..	..	2,119,602	2,119,602
Ceylon ..	302,839	284,130	252,716	189,875	393,518	1,413,078
Union of South Africa ..	..	..	..	..	1,578,839	1,578,839
Hong Kong ..	194,209	272,450	144,789	195,881	376,315	1,183,644
Philippine Islands ..	132,134	35,608	122,963	194,843	505,312	1,080,860
Canada ..	..	..	109,092	..	273,047	472,139
United States ..	..	..	..	..	148,304	148,304
Other Countries ..	105,747	116,104	27,058	103,547	1,239,475	1,591,931
<b>Total ..</b>	<b>38,343,628</b>	<b>66,812,809</b>	<b>19,175,310</b>	<b>59,687,455</b>	<b>246,971,346</b>	<b>430,990,548</b>

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

**VALUES OF FROZEN MUTTON AND LAMB EXPORTED FROM THE COMMONWEALTH, 1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	£	£	£	£	£	£
United Kingdom ..	725,255	1,496,658	213,710	1,082,646	5,292,542	8,810,811
Egypt ..	7,719	..	194,199	176,551	..	378,469
Straits Settlements ..	18,713	25,534	23,885	20,796	30,593	119,527
Sweden ..	..	..	..	..	49,303	49,303
Ceylon ..	7,524	7,250	7,103	5,058	10,401	37,336
Union of South Africa ..	..	..	..	..	34,788	34,788
Hong Kong ..	4,928	7,210	4,072	5,399	10,201	31,810
Philippine Islands ..	3,039	965	3,425	5,395	14,709	27,533
Canada ..	..	..	5,471	..	8,675	14,146
United States ..	..	..	..	..	3,603	3,603
Other Countries ..	2,574	2,955	782	2,586	27,743	36,640
<b>Total ..</b>	<b>769,752</b>	<b>1,540,572</b>	<b>452,647</b>	<b>1,298,431</b>	<b>5,482,564</b>	<b>9,543,966</b>

7. Comparison with other Countries.—As regards the size of its flocks, and the quantity and quality of wool produced, Australia has long occupied a leading position amongst the sheep-raising countries of the world. From estimates published in the Year Book of the United States Department of Agriculture it would appear that the

approximate number of sheep in the world is in the neighbourhood of 550,000,000, to which total Australia contributes nearly 14 per cent. The following comparison taken mainly from the same source 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. (,000 omitted.)	Country.	Date.	No. of Sheep. (,000 omitted.)
Australia .. ..	1919	75,554	Brazil .. ..	1916	7,205
Russian Empire (a) ..	1914	72,273	British East Africa ..	1916	6,565
U. S. of America .. ..	1919	47,114	German East Africa ..	1913	6,440
Argentine Republic ..	1915	43,677	Germany .. ..	1919	5,824
Union of South Africa ..	1918	29,914	Greece .. ..	1917	5,548
Ottoman Empire .. ..	1912	27,095	Morocco .. ..	1916-18	4,857
United Kingdom .. ..	1919	25,119	Chile .. ..	1917	4,183
New Zealand .. ..	1920	23,915	Serbia .. ..	1910	3,819
British India .. ..	1918	22,895	Mexico .. ..	1902	3,424
Spain .. ..	1917	17,227	Portugal .. ..	1906	3,073
Austria-Hungary (b) ..	{ 1910 } { 1913 }	12,337	Canada .. ..	1918	3,053
Italy .. ..	1918	11,752	Upper Senegal and		
Uruguay .. ..	1916	11,473	Niger .. ..	1918	2,161
France (c) .. ..	1918	9,496	Sweden .. ..	1918	1,409
Algeria .. ..	1914	9,140	Basutoland .. ..	1911	1,369
Bulgaria .. ..	1910	8,632	Finland .. ..	1910	1,309
Rumania .. ..	1916	7,811	Norway .. ..	1918	1,185
			Tunis .. ..	1916	1,148

(a) Including Poland, Caucasus, and Siberia. (b) Austria, Croatia-Slavonia and Bosnia-Herzegovina 1910; Hungary 1913. (c) Exclusive of invaded area.

8. Relation to Population.—The relation of the flocks of the several States and Territories to the population at the end of each year from 1915 to 1919 is as follows :—

### NUMBER OF SHEEP PER HEAD OF POPULATION, 1915 TO 1919.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	F.T.	C'wealth.
1915 ..	17.42	7.43	23.50	8.38	15.11	8.08	12.67	41.64	14.04
1916 ..	19.24	8.99	23.19	11.77	17.91	8.52	9.97	49.55	15.68
1917 ..	20.14	10.46	25.38	14.18	20.63	8.42	11.15	56.10	17.13
1918 ..	18.97	11.02	26.24	14.53	22.92	8.82	12.26	58.59	17.16
1919 ..	14.33	9.64	23.96	12.73	20.20	8.22	1.87	77.29	14.32

A comparison of the ratios of sheep to population for 1919 with those for 1915 discloses increases in all the States excepting New South Wales and the Northern Territory, where the proportions have diminished considerably.

## § 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, 1920, being about £42,835,000. The bulk of the wool produced in the Commonwealth is exported, but with the greater 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 only about 3 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 during recent years has been on the average about 20 per cent. of the total clip. The 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" wool has been converted into the estimated equivalent amount of "greasy" wool, 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 the 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, fellmongers, &c. Particulars for years prior to 1915-16 will be found in earlier issues (see Year Book No. 6, page 346, and No. 9, page 296). The following table gives the estimates obtained in reference to the five seasons ended 30th June, 1916 to 1920:—

**ESTIMATED QUANTITY OF WOOL AS IN THE GREASE, SHORN, FELLMONGERED OR ON SKINS SHIPPED DURING THE SEASONS ENDED 30th JUNE, 1916 TO 1920.**

State.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales (a)	262,045,000	270,525,000	284,188,000	305,613,000	296,641,000
Victoria ..	82,330,198	94,845,024	105,424,682	126,647,061	132,847,167
Queensland ..	130,783,277	102,220,125	87,425,558	113,777,272	118,035,461
South Australia ..	33,969,975	35,050,865	46,339,339	55,947,108	58,306,918
Western Australia ..	31,887,888	34,199,682	39,701,357	45,317,271	46,299,381
Tasmania ..	9,212,203	10,441,978	10,284,316	10,279,998	11,069,237
Northern Territory (b)	350,000	350,000	330,000	330,000	50,000
Commonwealth ..	550,578,541	547,632,674	573,693,252	657,911,710	663,249,164

(a) Including Federal Territory. (b) 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 the quantity used in local manufactories. For the three seasons ended 30th June, 1914, this average annual shortage amounted to nearly 46,000,000 lbs. of wool. The abnormal conditions of wool shipment obtaining during the last five seasons do not admit of any similar comparisons being made. The appraisement figures of the Central Wool Committee, however, furnish further evidence of shortage in the figures supplied by the State Statisticians for the past three seasons. During these years the total appraisements amounted to 2,094,261,297 lbs., thus revealing an average annual deficit of 66,469,037 lbs. in the estimated production for those seasons based on the State Statisticians' returns.

The weight and value of wool per sheep shorn in the past five seasons is shewn in the following table :—

**ESTIMATED WEIGHT AND VALUE OF WOOL PER SHEEP SHORN FOR THE SEASONS ENDED 30th JUNE, 1916 TO 1920.**

Season ended 30th June.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
<b>WEIGHT.</b>							
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1916 .. ..	7.09	5.79	6.37	7.65	6.16	5.29	6.63
1917 .. ..	7.39	6.26	7.00	7.47	5.82	5.79	6.96
1918 .. ..	7.08	6.19	6.91	7.52	6.17	5.38	6.80
1919 .. ..	7.13	6.21	6.30	7.41	6.09	5.09	6.68
1920 .. ..	7.03	6.38	6.59	7.89	5.71	5.32	6.73
<b>VALUE.</b>							
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1916 .. ..	6 8	6 9	6 1	6 10	5 5	7 2	6 6
1917 .. ..	9 8	8 8	9 2	9 0	6 11	9 3	9 2
1918 .. ..	8 9	8 6	9 7	9 1	7 11	8 5	8 9
1919 .. ..	8 11	8 3	8 10	9 0	7 4	7 9	8 7
1920 .. ..	8 10	8 4	9 3	9 3	7 1	8 3	8 9

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

**LOCALLY USED WOOL (Estimated as "Greasy"), 1916 TO 1919-20.**

State.	1916.	1917.	1918.	1918-19.	1919-20.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales .. ..	66,467,800	66,556,988	66,118,000	6,769,284	7,054,962
Victoria .. ..	11,052,250	8,869,460	67,344,035	7,823,050	11,300,400
Queensland .. ..	358,504	304,091	268,917	268,917	634,376
South Australia .. ..	1,065,130	695,164	673,723	654,758	693,297
Western Australia .. ..					
Tasmania .. ..	1,244,844	1,172,000	1,301,006	1,301,006	997,542
Commonwealth .. ..	20,188,528	17,697,703	15,766,681	16,817,015	20,680,577

(a) Previous year's figures. (b) Year ended 30th June.

5. **Bounties on Combed Wool or Tops Exported.**—Under the Bounties Act 1907, bounties were payable on combed wool or tops exported from the Commonwealth, provided they were produced therein. The maximum amount to be paid might not exceed a total of £10,000 per annum; any unexpended sum might 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. was payable up to 1,000,000 lbs., to any one manufacturer during a year, and ¾d. per lb. in excess of that quantity. No bounties have been paid on combed wool or tops since 1915. 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 1915-16 to 1919-20 inclusive will be found on the next page.

6. Exports of Wool.—During the two calendar years prior to the war, about 38 per cent. of the exports of wool from the Commonwealth was despatched to the United Kingdom, whereas the shipments for the same destination during the past five years have averaged 69 per cent. The other leading consignees for the last five years were the United States of America, Italy, Japan, France, and, prior to the war, Germany and Belgium. The following table shews for the years 1915-16 to 1919-20 the quantities of "greasy" wool exported from the Commonwealth and the principal countries to which consigned :—

#### COMMONWEALTH EXPORTS OF WOOL IN THE GREASE, 1915-16 TO 1919-20.

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	202,384,381	283,446,361	139,113,437	352,282,663	397,688,435	1,374,915,277
United States of America ..	115,112,628	16,174	57,425,217	71,776,334	28,326,008	272,656,361
Italy ..	43,167,206	25,608,163	17,641,985	10,036,918	44,597,155	141,051,427
Japan ..	34,725,883	16,839,727	2,910,477	5,319,577	8,928,971	68,733,615
France ..	13,746,706	12,254,213	5,675,577	3,719,125	32,243,017	67,638,638
Belgium ..	..	..	..	..	39,189,760	39,189,760
Egypt ..	..	..	15,522,281	10,950,893	..	26,473,174
Canada ..	453,950	727,923	4,726,317	3,152,424	..	9,060,614
India ..	198,223	297,218	778,286	795,792	..	2,069,524
New Zealand ..	11,059	..	..	..	..	11,059
Other Countries ..	1,452,965	32,471	..	..	1,360,782	2,846,218
<b>Total ..</b>	<b>411,252,986</b>	<b>339,222,250</b>	<b>243,802,577</b>	<b>458,033,726</b>	<b>552,334,123</b>	<b>2,004,645,667</b>

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

#### COMMONWEALTH EXPORTS OF "SCOURED AND WASHED" WOOL (a), 1915-16 TO 1919-20.

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	37,569,727	46,917,307	59,247,374	103,261,254	70,454,411	317,450,073
United States of America ..	27,933,634	154,172	1,446,501	1,460,294	2,600,657	33,595,258
Japan ..	7,499,571	5,081,183	4,779,081	3,447,825	3,676,467	24,484,127
Belgium ..	..	..	..	..	13,931,527	13,931,527
Italy ..	4,920,545	2,651,922	475,914	..	..	8,048,381
France ..	1,190,404	1,016,397	62,148	27,239	105,177	2,401,455
Egypt ..	..	..	1,074,558	35,780	..	1,110,338
India ..	240,663	299,060	51,664	216,326	..	807,713
New Zealand ..	104,884	..	..	..	..	104,884
Other Countries ..	426,553	567,059	299,490	687,271	282,537	2,262,910
<b>Total ..</b>	<b>79,886,051</b>	<b>56,687,100</b>	<b>67,436,730</b>	<b>109,135,989</b>	<b>91,050,776</b>	<b>404,196,646</b>

(a) Including "tops."

The figures for "scoured and washed wool" include tops, amounting in 1915-16 to 4,981,975 lbs., valued at £680,656; in 1916-17, 4,869,452 lbs., valued at £1,204,570; in 1917-18, 4,571,357 lbs., valued at £1,510,799; in 1918-19, 2,822,578 lbs., valued at £935,212; and in 1919-20, 6,148,118 lbs., valued at £2,957,679. The total exports of

wool tops during the last five years amounted to 23,393,490 lbs., valued at £7,288,916, of which 20,069,394 lbs., or nearly 86 per cent., were shipped to Japan.

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,  
1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	£	£	£	£	£	£
United Kingdom ..	12,608,971	23,431,942	15,648,660	34,563,566	37,256,915	123,510,054
United States of America ..	8,381,302	13,513	4,389,755	4,982,056	2,516,142	20,282,768
Japan ..	2,587,091	2,470,114	1,796,089	1,400,192	2,010,733	10,264,518
Italy ..	2,115,891	1,845,861	1,005,058	548,142	2,832,951	8,347,903
France ..	952,026	963,097	372,453	304,410	2,352,749	4,944,735
Belgium ..	..	..	..	..	3,356,349	3,356,349
Egypt ..	..	..	939,149	613,814	..	1,552,963
Canada ..	53,316	77,267	338,087	238,924	63,520	771,114
India ..	32,442	87,860	66,780	78,336	..	26,418
New Zealand ..	4,931	..	..	..	..	4,931
Other Countries ..	118,121	63,384	30,833	37,315	154,445	404,098
<b>Total ..</b>	<b>26,854,091</b>	<b>28,953,338</b>	<b>24,586,864</b>	<b>42,766,755</b>	<b>50,543,803</b>	<b>173,704,851</b>

7. Care Needed in Comparing Clips.—The Customs returns prior to 1914-15 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, and include imports and exports of wool belonging to two distinct clips. A further defect in the comparability of successive clips is due to the circumstance that 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 areas of the Southern Hemisphere. The figures given are the latest available, and represent for the respective years the imports of wool into Europe and North America :—

**IMPORTS OF WOOL INTO EUROPE AND NORTH AMERICA,  
1912 TO 1916.**

Year.	Australia and New Zealand.	Cape Colony.	River Plate.	Total.	Average Value of Australasian and Cape Bales.
	Bales.	Bales.	Bales.	Bales.	£
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 Australasian or Cape bale, a comparison of the number of bales is somewhat misleading. Allowing approximately for the difference in size of the several bales, it may be said that during the five years shewn above the importations from Australia and New Zealand represented 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 1919 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, 1919.

Country from which Imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	lbs.	£		lbs.	£
Australia ..	587,557,420	57,522,055	Uruguay ..	1,012,702	116,582
New Zealand ..	254,196,274	21,898,528	Portugal ..	1,169,940	87,581
Union of S. Africa	80,552,564	7,525,501	China ..	1,156,961	86,732
British India ..	63,005,908	4,285,043	Russia ..	1,324,820	86,007
Argentine Re-			U.S. of America	695,095	63,319
public ..	22,123,433	2,348,606	British Posses-		
Chile ..	8,590,723	837,487	sions, n.e.i.	638,559	57,069
Egypt ..	5,036,375	492,376	Foreign Coun-		
Turkey ..	6,177,296	443,330	tries, n.e.i.	2,277,699	230,861
Peru ..	2,519,785	333,031			
Falkland Islands	2,943,332	289,112			
Canada ..	1,920,278	185,610	Total ..	1,042,899,164	96,888,830

It will be seen that of the total importations of wool into the United Kingdom, Australian wool represented 56 per cent. of quantity and 59 per cent. of value, and New Zealand 24 per cent. of quantity and 22½ per cent. of value. It is interesting to note that a total of 995,850,710 lbs., valued at £92,255,294 was received from British Possessions, being 95·5 per cent. of the total weight imported, and 95·2 per cent. of the total value.

10. **The Wool Market.**—(i) *General.* 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), for the season 1913–14 in Year Book No. 8 (page 297), and for the seasons 1914–15 and 1915–16 in Year Book No. 10 (page 310).

(ii) *Purchase by British Government.* The purchase by the Imperial Government of the balance of the Australian wool clip, for the season 1916–17, was brought about as a result of war conditions. Owing to the demand for wool for British and Allied military clothing, it was decided to acquire the Australian clip at the flat rate of 15½d. per pound greasy—an increase of 55 per cent. on the prices ruling in the season immediately preceding the war, viz., 1913–14. The control of the scheme was placed in the hands of a body called the Central Wool Committee, assisted by a committee in each State. These committees consisted of representatives of the wool growers, wool sellers, wool buyers, manufacturers, and scourers or fellmongers. In addition the Central Wool Committee had a Government nominee, who acted as chairman. The broad policy laid down was that existing trade conditions were not to be disturbed; this meant that

the carrying out of the details of the scheme was left to the trade itself. The wool was prepared, catalogued and shewn in the usual way, but instead of being sold by public auction, it was valued by duly appointed Government Wool Appraisers, according to a table of limits prepared by a body of experts acting as an Advisory Board to the Central Wool Committee. On appraisal, the wool became the property of the Imperial Government, and was shipped as freight space became available, the allotment of freight being on the basis of the quantity of wool appraised in each State.

The Central Wool Committee, at the request of the Imperial Government, undertook to scour and re-class as much wool as would keep the local industries going to their full capacity.

(iii) *Financial.* Funds received from the Imperial Government were used to effect a payment of 90 per cent. of the appraised price to wool brokers for distribution to the growers within fourteen days from the final date of each series of appraisements. The balance of 10 per cent. was withheld for possible adjustments. The money so retained was placed at interest, the earnings being added to the amount available for final distribution. The average appraised price per pound having worked out less than the purchase price of 15½d., the money retained, amounting to £2,313,461, was paid over on the 14th August, 1917. A dividend—the first—of 10 per cent. was paid on 23rd October, 1917, amounting to £2,312,608. This represents slightly more than the payment in full of the flat rate of 15½d. per pound. A small dividend will follow as soon as final adjustments can be made.

(iv) *Quantity and Value of Wool Appraised, 1916-17.* The quantity of wool appraised under the Imperial Government's purchase of a portion of the clip for the season 1916-17 amounted to 323,752,519 lbs. greasy, and 34,307,991 lbs. scoured, equivalent to 392,368,501 lbs. of wool in the grease. The average appraised price per pound of wool in the grease was 14.72d., the average for scoured wool was 22.86d. per pound, and the average of all wool—greasy, and scoured calculated as greasy—appraised under the scheme was 14.15d. per pound, the difference between this average and the 15½d. basis being equal to 9.5 per cent. on the average appraised price.

(v) *Purchase of 1917-18 Clip.* The organisation for the carrying out of the Imperial Government's purchase of the Australian wool clip 1917-18 was the same as for the balance of the season 1916-17.

With the exception of a few modifications necessary for the better working of the scheme, no alteration was made in the method of appraisal.

Ninety per cent. of the appraised value was paid to wool growers through the wool selling brokers fourteen days after the completion of each series of appraisements, 10 per cent. again being withheld for possible adjustments.

The total quantity of greasy wool appraised was 569,629,520 lbs., and scoured wool 47,340,403 lbs., a total of 616,969,923 lbs., equal to 664,310,326 lbs. greasy.

The average appraised price of the greasy wool was 14.98d. per lb., and of the scoured wool 25.62d. per lb. The average appraised price on the greasy basis works out at 14.68d. per lb. The difference between this and the flat rate of 15½d. is equal to 5.59 per cent. of the appraised price.

The 10 per cent. retention money, together with a dividend of 5 per cent., was distributed in all centres on the 21st August, 1918, involving a sum of approximately £6,094,713. A small further dividend will be payable when outstanding accounts are finally adjusted.

### PARTICULARS OF PURCHASE OF 1917-18 AUSTRALIAN WOOL CLIP.

Purchased by—	—	Quantity of Wool Appraised.				Values.			
		Bales.	Fadges.	Sacks.	Weight in lbs.	Appraised Value.		Based on Flat Rate Value.	
						£	s. d.	£	s. d.
British Govern- ment ..	Greasy	1,627,360	18,136	190,587	553,713,279	34,619,564	19 9	36,555,476	4 11
	Scoured	197,246	697	745	46,196,661	4,956,855	0 7	5,234,040	4 10
	Total	1,824,606	18,833	191,332	599,909,940	39,576,420	0 4	41,789,516	9 9
Woollen Manu- facturers ..	Greasy	37,187	493	15,682	13,185,745	715,302	10 3	755,301	18 6
	Scoured	4,632	16	23	1,132,587	95,444	17 0	100,782	1 8
	Total	41,819	509	15,705	14,318,332	810,747	7 3	856,084	0 2
Wool Top Manu- facturers ..	Greasy	7,936	1	..	2,730,496	242,287	10 4	255,836	2 9
	Scoured	46	..	..	11,155	1,835	18 7	1,938	11 9
	Total	7,982	1	..	2,741,651	244,123	8 11	257,774	14 6
Total Purchased	Greasy	1,672,483	18,630	206,269	569,829,520	35,577,155	0 4	37,566,614	6 2
	Scoured	201,924	713	768	47,340,403	5,054,135	16 2	5,336,760	18 3
	Total	1,874,407	19,343	207,037	616,969,923	40,631,290	16 6	42,903,375	4 5
Grand total in terms of Greasy	..	..	..	..	664,310,326	..	..	42,903,375	4 5

NOTE.—Woollen manufacturers obtained their supplies at the appraised price, but wool top manufacturers were required to pay the flat rate value for all their purchases.

(vi) *Purchase of 1918-19 Clip.* The purchase of the 1918-19 clip and appraisement thereof were virtually carried out on the same lines as for the clip of 1917-18.

The total wool appraised during the 1918-19 season consisted of 599,447,103 lbs. greasy and 52,662,569 lbs. scoured wool, or an equivalent of 704,772,241 lbs. in terms of greasy.

The total greasy wool appraised represented a value of £38,310,763, the average price being 15.34d. per lb., while the scoured value was £5,670,405, or an average per lb. of 25.84d.

Reducing all appraised wool to a greasy basis the average price would be 14.98d. per lb.

The difference between the appraised price and the flat rate of 15½d. was 3.49 per cent. of the appraisement.

A dividend of 3½ per cent., together with the 10 per cent. retained, or a total of 13½ per cent., was accordingly made payable on the 26th August, 1919.

## PARTICULARS OF PURCHASE OF 1918-19 AUSTRALIAN WOOL CLIP.

Purchased by—	—	Quantity of Wool Appraised.				Values.	
		Bales.	Fadges.	Sacks.	Weight in lbs.	Appraised Value.	Based on Flat Rate Value.
						£	£
British Government	Greasy	1,700,290	22,878	235,423	579,168,627	38,975,793	..
	Scoured	217,092	872	668	51,121,844	5,504,575	..
	Total	1,917,382	23,750	236,091	630,290,471	42,480,368	43,963,348
Woollen Manufacturers .. ..	Greasy	37,507	300	10,862	13,189,300	..	..
	Scoured	4,542	10	1	1,108,427	..	..
	Total	42,049	310	10,863	14,297,727	839,756	869,072
Wool Top Manufacturers .. ..	Greasy	21,257	4	..	7,089,176	..	..
	Scoured	1,896	..	..	432,298	..	..
	Total	23,153	4	..	7,521,474	661,044	684,120
Total Purchased ..	Greasy	1,759,054	23,182	246,285	599,447,103	38,310,763	38,714,292
	Scoured	223,530	882	669	52,662,569	5,670,405	6,802,248
	Total	1,982,584	24,064	246,954	652,109,672	43,981,168	45,516,540
Grand total in terms of Greasy ..	..	..	..	..	704,772,241	..	45,516,540

NOTE.—Woollen manufacturers again purchased at appraised price, while the wool tops companies paid the flat rate, and have contracted to pay, in addition, a percentage increase equal to that of the final dividend on the whole clip, when determined.

(vii) *Purchase of 1919-20 Clip.* Arrangements having been concluded for the purchase by the Imperial Government of the Australian wool clip for the currency of the war and for one full wool year thereafter, the agreement embraced the 1919-20 season's production, the conditions being on the same lines as for previous seasons.

The total wool appraised during the 1919-20 season consisted of 586,576,318 lbs. greasy and 69,315,732 lbs. scoured wool, or an equivalent of 725,207,782 lbs. in terms of greasy.

The total greasy wool appraised represented a value of £38,231,129, the average price being 15.64d. per lb., while the scoured value was £7,769,373, or an average per lb. of 26.90d. Reducing all appraised wool to a greasy basis the average price would be 15.22d. per lb.

The difference between the appraised price and the flat rate of 15½d. was 1.817 per cent. of the appraisement. The Central Wool Committee decided to increase the percentage adjustment from 1.817 to 2.0 per cent.

A payment of £906,423, representing an adjustment between appraised price and flat rate, also the retention money, £4,532,118, making a total of £5,438,541, equal to 12 per cent. of appraised value, was distributed in all centres on the 22nd September, 1920.



## PARTICULARS OF PURCHASE OF 1919-20 AUSTRALIAN WOOL CLIP.

Purchased by—	—	Quantity of Wool Appraised.				Values.	
		Bales.	Fadges.	Sacks.	Weight in lbs.	Appraised Value.	Based on Flat Rate Value.
						£	£
British Government	Greasy	1,634,759	23,658	237,652	555,165,045	35,841,624	36,492,842
	Scoured	292,444	1,205	784	68,155,430	7,655,482	7,794,577
	Total	1,927,203	24,863	238,436	623,320,475	43,497,106	44,287,419
Woollen Manufacturers .. ..	Greasy	61,968	423	13,760	20,999,310	1,376,294	1,401,300
	Scoured	4,351	5	6	1,047,875	95,086	96,813
	Total	66,319	428	13,766	22,047,185	1,471,380	1,498,113
Wool Top Manufacturers .. ..	Greasy	32,806	11	..	10,411,963	1,013,211	1,031,620
	Scoured	548	..	..	112,427	18,805	19,147
	Total	33,354	11	..	10,524,390	1,032,016	1,050,767
Total Purchased ..	Greasy	1,729,533	24,092	251,412	586,576,318	38,231,129	38,925,762
	Scoured	297,343	1,210	790	69,315,732	7,769,373	7,910,537
	Total	2,026,876	25,302	252,202	655,892,050	46,000,502	46,836,299
Grand total in terms of greasy ..	..	..	..	..	725,207,782	..	46,836,299

NOTE.—Woollen manufacturers purchased at appraised price sufficient wool to maintain their normal output to 30th June, 1920. After that date they had the option of purchase at prices determined by the Central Wool Committee on parity with London auction prices. The wool tops companies again paid the flat rate, and have contracted to pay in addition a percentage increase equal to that of the final dividend on the whole clip when determined.

Fifty per cent. of the profits resulting from the resale of wool by the Imperial Government and credited to Australian woolgrowers up to 31st March, 1919, amounted to £6,486,992. The amount of profits, distinct and additional to the 50 per cent. of profits from the resale of wool by the Imperial Government, earned by the Central Wool Committee since the inception of the scheme, is estimated at £1,667,469.

The Central Wool Committee distributed an interim dividend on the 27th October, 1920, comprising the full amount of profits earned by the Imperial Government up to 31st March, 1919, and an additional sum of £1,166,300 from the Central Wool Committee's administration profits, making a total of £7,653,292, which is equal to 5 per cent. on all wool appraised during the past four seasons.

As very high prices for wool ruled for practically the whole of the year ending 31st March, 1920, further substantial profits may reasonably be expected. It must not, however, be overlooked that a considerable portion of the 2,000,000 bales of carry-over Australian wools is not at present readily saleable, and it is more than probable that the lower grade crossbred wools will not return Australian appraised prices plus charges, consequently debits from this source may seriously reduce the profits earned on the fine grade wools.

The quantity of appraised wool in the Commonwealth awaiting shipment overseas on the 30th June, 1920, was 7,520 bales of the 1917-18 season, 164,377 bales of the 1918-19 season, and 989,926 bales of the 1919-20 season, or a total of 1,161,823 bales, representing a value of approximately £25,075,000.

(viii) *Wool Realization Scheme.* The 30th June, 1920, marked the termination of the contract with the Imperial Government for the purchase of the Australian wool clips at a flat rate of 15½d. per lb. greasy, and the return to the Australian woolgrowers of 50 per cent. of the profits realized from the resale of surplus wool. This meant that the wool trade was free to return, as far as was possible under existing conditions, to the methods of disposal followed prior to the commencement of the contract. Owing, however, to the unsettled state of the world's markets, and the unsatisfactory exchange rates ruling on the Continent and elsewhere, the sales both in England and in Australia have been disappointing, withdrawals being very heavy, and prices, except in a few instances, far from satisfactory.

Towards the end of 1920, steps were taken to bring about some arrangement whereby the enormous stocks of carry-over wool held by the British Imperial Government, both in England and in Australia, could be handled in such a way that the disposal of the 1920-1 clip would not be seriously menaced. After various proposals had received consideration, it was decided to form a company to be known as the "British Australian Wool Realisation Association, Limited." This company, of which the Australian woolgrowers are the shareholders, will deal with the disposal of surplus stocks of Australian and New Zealand wools from the Imperial Government Purchase Scheme.

In order that there will be no clashing of interests, action has been taken to put into effect a scheme whereby the offerings of wool by the Association and by wool selling brokers in Australia and in London will be apportioned according to stocks held, and to the market demands.

(ix) *Average Export Value.* The average values per lb. of Australian greasy wool according to the export returns for the past five years have been as follows:—

**EXPORT VALUE PER LB. OF AUSTRALIAN GREASY WOOL, 1915-16 TO 1919-20.**

Year .. .. .	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
Average value per lb. ..	d. 11.86	d. 15.81	d. 16.71	d. 16.49	d. 16.69

(x) *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. Under normal conditions prior to the war buyers from the United Kingdom, France, Germany, and other European countries, also from America, Japan, China, and India, attended 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, 1920, and bales appraised or sold for shipment, for use in local woollen mills, 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 do not shew actual local production, but total overseas shipments and sales. The estimated quantity of wool produced in each State is given on page 228.

**EXPORTS OF WOOL TO PLACES OUTSIDE THE COMMONWEALTH, AND THE QUANTITY APPRAISED OR SOLD IN THE SEVERAL STATES, DURING THE SEASON ENDED 30th JUNE, 1920.**

State.	Overseas Exports.		Sales or Appraisements.	
	Bales.	%	Bales.	%
New South Wales .. ..	733,920	36.02	744,170	36.37
Victoria .. ..	516,320	25.34	607,717	29.70
Queensland .. ..	352,840	17.31	319,922	15.64
South Australia .. ..	215,934	10.60	213,754	10.45
Western Australia .. ..	174,347	8.55	122,341	5.98
Tasmania .. ..	44,384	2.18	38,008	1.86
Commonwealth .. ..	2,037,745	100.00	2,045,912	100.00

(xi) *Exports of Wool from Commonwealth and Quantity sold Locally.* The number of bales of wool exported from the Commonwealth and the number sold at local sales prior to shipment, or taken for local use, during 1895, 1900, 1905, 1910, and the succeeding four 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.				Overseas Exports.	Local Sales.(a)	Ratio of Wool sold locally to Exports.
				Bales.	Bales.	%
1895	..	..	..	1,595,652	817,333	51.22
1900	..	..	..	1,221,163	807,031	66.09
1905	..	..	..	1,213,969	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

(a) Including wool absorbed by local woollen mills and wool-scouring establishments.

The steady development of the Australian wool market is clearly shewn in this table. In the nineteen years ended 1914, the quantity sold locally more than doubled, and the ratio of wool sold locally 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 since the outbreak of war have materially affected the ratios, which in consequence are no longer serviceable as a measure of growth of the local market.

(xii) *Quantities of Various Descriptions of Wool Sold or Appraised in each State.*  
The quantities and ratios of the various descriptions of wool marketed in each State are shewn in the following table:—

**PROPORTIONS OF THE VARIOUS DESCRIPTIONS OF WOOL SOLD OR APPRAISED  
LOCALLY IN THE SEVERAL STATES OF THE COMMONWEALTH DURING THE  
SEASON ENDED 30th JUNE, 1920.**

Description of Wool.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Common-wealth.
	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.
Greasy .. ..	628,917	523,665	245,793	205,903	116,004	37,932	1,758,214
Scoured .. ..	115,253	84,052	74,129	7,851	6,337	76	287,698
Total .. ..	744,170	607,717	319,922	213,754	122,341	38,008	2,045,912
Fleece, etc. ..	721,622	563,203	309,685	196,817	112,749	36,661	1,940,737
Lambs' .. ..	22,548	44,514	10,237	16,937	9,592	1,347	105,175
Total .. ..	744,170	607,717	319,922	213,754	122,341	38,008	2,045,912
Merino .. ..	516,975	214,241	309,365	191,797	108,689	11,422	1,352,489
Crossbred and all strong breeds ..	227,195	393,476	10,557	21,957	13,652	26,586	693,423
Total .. ..	744,170	607,717	319,922	213,754	122,341	38,008	2,045,912
	%	%	%	%	%	%	%
Greasy .. ..	84.51	86.17	76.83	96.33	94.82	99.80	85.94
Scoured .. ..	15.49	13.83	23.17	3.67	5.18	0.20	14.06
Total .. ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Fleece, etc. ..	96.97	92.68	96.80	92.08	92.16	96.46	94.86
Lambs' .. ..	3.03	7.32	3.20	7.92	7.84	3.54	5.14
Total .. ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Merino .. ..	69.47	35.25	96.70	89.73	88.84	30.05	66.11
Crossbred and all strong breeds ..	30.53	64.75	3.30	10.27	11.16	69.95	33.89
Total .. ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Wool in the grease represented nearly 86 per cent. of the total marketed during 1919-20. Of fleece and lambs' wool, the former represents 94.86, and the latter 5.14 per cent. The class of wool produced is largely merino, which is almost exclusively grown in the northern, western, and central parts of the continent, the bulk of the merino wool dealt with in Victoria coming from Riverina and other parts of New South Wales. The development of the frozen mutton and lamb export trade and the resultant raising of a type of sheep suitable for both mutton and wool have led to a

considerable increase in the production of crossbred wool throughout Australia during recent years. The proportion of such wool sold in Australia to the total sales amounted to 18.6 per cent. in 1912, whereas, eight years later, in 1919-20, the proportion had increased to 33.9 per cent. The whole of the crossbred and other strong bred wools are grown in Victoria and Tasmania and in the southern parts of New South Wales, South Australia and Western Australia.

(xiii) *Percentages in each State of Various Descriptions of Wool Sold or Appraised.* The following table gives the percentages of each description of wool sold or appraised in the several States during the season 1919-20 :—

**PERCENTAGE OF BALES OF EACH DESCRIPTION OF WOOL SOLD OR APPRAISED IN THE SEVERAL STATES ON THE TOTAL SOLD OR APPRAISED IN THE COMMONWEALTH, 1919-20.**

Description of Wool.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Commonwealth.
	%	%	%	%	%	%	%
Greasy ..	35.77	29.78	13.98	11.71	6.60	2.16	100.00
Scoured ..	40.06	29.22	25.76	2.73	2.20	0.03	100.00
Fleece, etc. ..	37.18	29.02	15.96	10.14	5.81	1.89	100.00
Lambs' ..	21.44	42.33	9.73	16.10	9.12	1.28	100.00
Merino ..	38.22	15.84	22.87	14.18	8.04	0.85	100.00
Crossbred and all strong breeds ..	32.76	56.75	1.52	3.17	1.97	3.83	100.00

### § 6. Hides and Sheepskins.

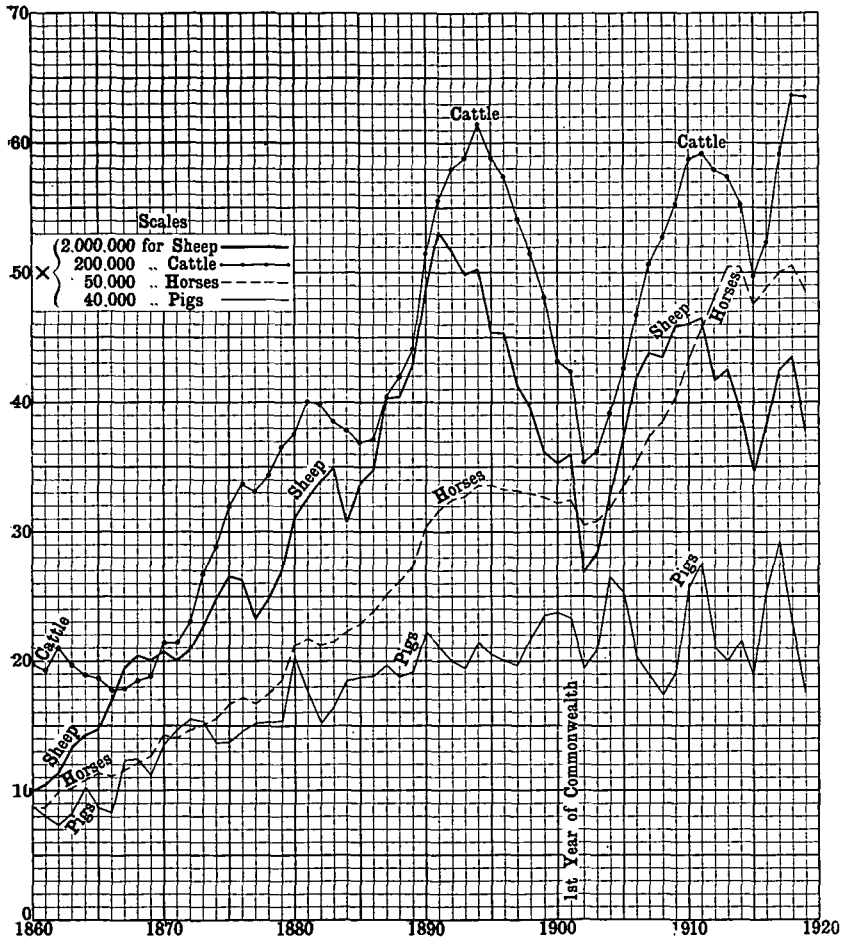
1. *Extent of Trade.*—In addition to the hides and sheepskins treated in the tanneries of the several States, a very considerable export trade is carried on, the total value of cattle hides and sheepskins exported from Australia during the five years 1915-16 to 1919-20 being no less than £11,077,948, or an average of £2,215,590 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 1915-16 to 1919-20 are as follows :—

**COMMONWEALTH EXPORTS OF SHEEPSKINS WITH WOOL, 1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 Years.
	No.	No.	No.	No.	No.	No.
United Kingdom	3,506,365	2,152,016	2,172,176	6,005,229	5,866,862	19,702,648
France ..	1,863,904	753,530	..	..	..	2,617,434
U.S. of America	331,706	..	..	..	179,260	510,966
Canada ..	61,103	46,668	..	..	..	107,771
New Zealand ..	25,283	..	..	..	..	25,283
Italy ..	9,949	..	..	..	..	9,949
Other Countries	24	..	..	62	..	86
Total ..	5,798,334	2,952,214	2,172,176	6,005,291	6,046,122	22,974,137

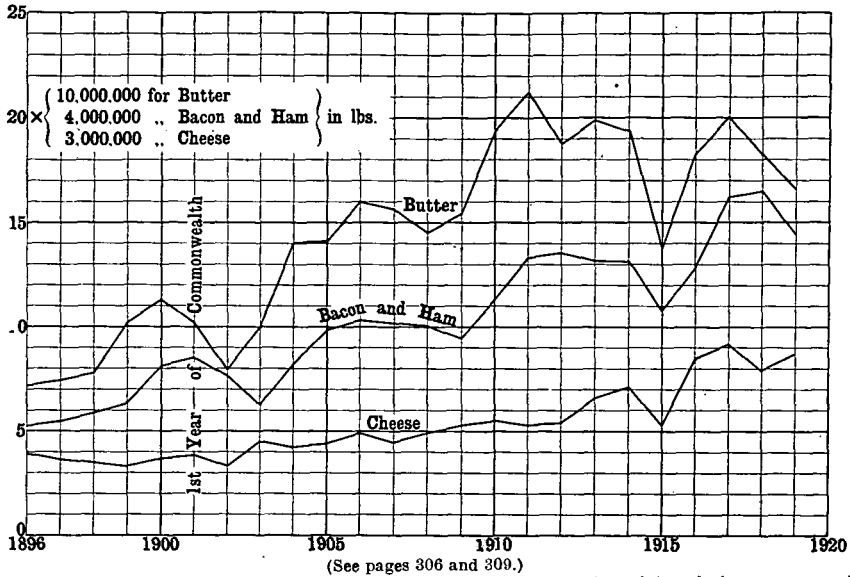
GRAPHS SHEWING NUMBER OF HORSES, CATTLE, SHEEP, AND PIGS IN THE COMMONWEALTH FROM 1860 TO 1919.



(See page 212.)

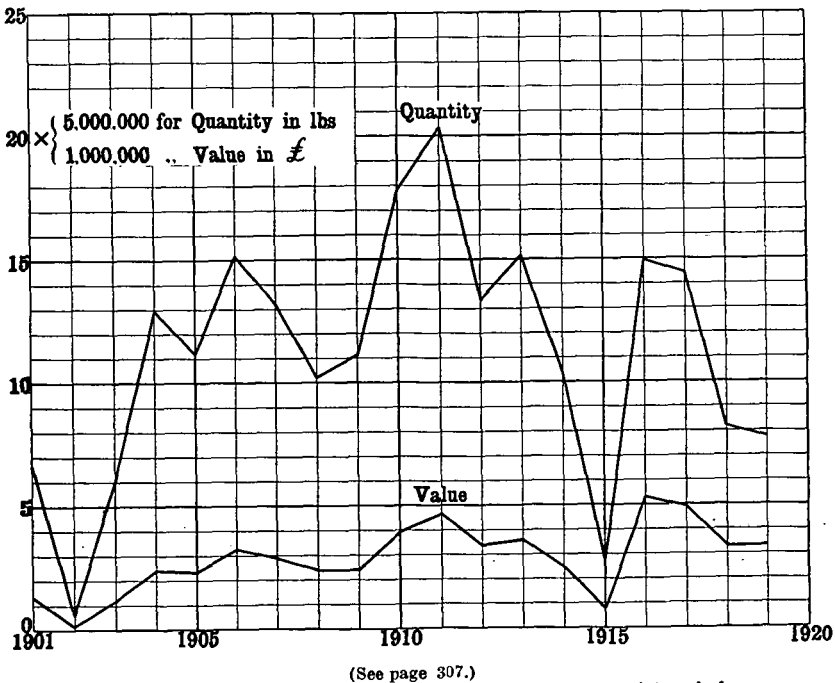
EXPLANATION OF GRAPHS.—The base of each small square represents an interval of one year. The totals of the horses, cattle, sheep, and pigs for the Commonwealth are indicated by the several curves or graphs, the vertical side of a small square representing 2,000,000 in the case of sheep; 200,000 for cattle; 50,000 for horses; 40,000 for pigs.

GRAPHS SHEWING THE PRODUCTION OF BUTTER AND CHEESE, AND BACON AND HAM  
IN THE COMMONWEALTH, FROM 1896 TO 1919.



EXPLANATION OF GRAPHS.—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 1919.



EXPLANATION OF GRAPHS.—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,  
1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	£	£	£	£	£	£
United Kingdom	779,615	738,483	732,030	1,845,036	1,940,088	6,035,252
France ..	283,293	250,783	..	..	..	534,076
U.S. of America	97,890	..	..	..	27,266	125,156
Canada ..	12,553	10,869	..	..	..	23,422
New Zealand ..	6,268	..	..	..	..	6,268
Italy ..	875	..	..	..	..	875
Other Countries	5	..	..	21	..	26
<b>Total ..</b>	<b>1,180,499</b>	<b>1,000,135</b>	<b>732,030</b>	<b>1,845,057</b>	<b>1,967,354</b>	<b>6,725,075</b>

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,  
1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	No.	No.	No.	No.	No.	No.
U.S. of America	1,815,725	1,618,517	749,570	181,461	3,066,531	7,431,804
United Kingdom	103,497	155,189	66,996	444,943	729,903	1,500,528
Canada ..	540	184,460	74,710	162,477	306,592	728,779
Belgium ..	..	..	..	..	40,872	40,872
Japan ..	1,047	2,949	7,368	216	10,932	22,512
France ..	..	1,098	..	..	18,060	19,158
New Zealand ..	..	24	..	4,968	3,024	8,016
Other Countries	..	..	..	..	1,170	1,170
<b>Total ..</b>	<b>1,920,809</b>	<b>1,962,237</b>	<b>898,644</b>	<b>794,065</b>	<b>4,177,084</b>	<b>9,752,839</b>

Corresponding details concerning value are given hereunder :—

**VALUE OF SHEEPSKINS WITHOUT WOOL EXPORTED FROM THE  
COMMONWEALTH, 1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	£	£	£	£	£	£
U.S. of America	86,908	126,612	74,693	21,802	473,257	783,272
United Kingdom	5,243	12,019	9,656	54,669	115,524	197,111
Canada ..	39	13,750	10,335	19,282	35,764	79,170
Belgium ..	..	..	..	..	4,055	4,055
Japan ..	83	337	685	24	1,486	2,615
France ..	..	89	..	..	787	876
New Zealand ..	..	2	..	279	367	648
Other Countries	..	..	..	..	205	205
<b>Total ..</b>	<b>92,273</b>	<b>152,809</b>	<b>95,369</b>	<b>96,056</b>	<b>631,445</b>	<b>1,067,952</b>



4. **Hides.**—The Commonwealth trade in cattle hides has now assumed considerable proportions, and during 1914-15 the total value of such hides exported amounted to £1,303,201. The exports were principally to the United Kingdom and the United States of America. The disastrous drought of 1914-15, coupled with the increased demand for leather, more especially for military purposes, resulted in a considerable falling-off in the quantity of hides available for export during the war period. The 1919-20 figures, however, shew that much of the former trade has been regained, whilst the enhanced prices make the total value of the exportation equal to any pre-war shipment. Large quantities of hides are imported into the Commonwealth, mainly from New Zealand and the Pacific Islands.

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

**COMMONWEALTH EXPORTS OF CATTLE HIDES, 1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	No.	No.	No.	No.	No.	No.
United Kingdom ..	209,219	147,408	136,425	245,517	171,982	910,551
U.S. of America ..	..	2,783	4,943	2,734	336,092	346,552
Italy ..	97,038	2,334	..	..	21,185	120,557
Canada ..	66,890	19,210	3,338	1,302	2,525	93,265
Belgium ..	..	..	..	..	26,189	26,189
Japan ..	4,006	..	3,300	5,883	6,399	19,588
New Zealand ..	14,582	11,526	1,218	3,950	10	31,286
France ..	1,129	3,733	..	..	1,500	6,362
Denmark ..	..	..	..	..	2,370	2,370
Union of South Africa ..	2,705	..	..	..	..	2,705
Hong Kong ..	..	..	..	..	1,208	1,208
Other Countries ..	..	..	..	..	5	5
<b>Total ..</b>	<b>395,569</b>	<b>186,994</b>	<b>149,224</b>	<b>259,386</b>	<b>569,465</b>	<b>1,560,638</b>

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

**VALUE OF CATTLE HIDES EXPORTED FROM THE COMMONWEALTH, 1915-16 TO 1919-20.**

Country to which Exported.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
	£	£	£	£	£	£
United Kingdom ..	264,517	270,718	335,562	538,012	396,767	1,805,576
U.S. of America ..	..	5,217	10,638	2,078	931,660	949,593
Italy ..	113,924	3,772	..	..	56,072	173,768
Canada ..	97,950	33,243	5,812	2,823	7,013	146,841
Belgium ..	..	..	..	..	77,739	77,739
Japan ..	8,479	..	8,929	15,479	22,471	55,358
New Zealand ..	15,740	24,158	3,456	8,328	42	51,724
France ..	1,780	7,152	..	..	4,040	12,972
Denmark ..	..	..	..	..	5,841	5,841
Union of South Africa ..	3,038	..	..	..	..	3,038
Hong Kong ..	..	..	..	..	2,450	2,450
Other Countries ..	..	..	..	..	21	21
<b>Total ..</b>	<b>505,428</b>	<b>344,260</b>	<b>364,397</b>	<b>566,720</b>	<b>1,504,116</b>	<b>3,284,921</b>

The number and value of cattle hides, including calfskins imported into the Commonwealth during the five years 1915-16 to 1919-20 are as follows:—

**CATTLE HIDES IMPORTED INTO THE COMMONWEALTH, 1915-16 TO 1919-20.**

Particulars.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	Total for 5 years.
No. .. ..	146,657	94,065	132,218	260,237	205,662	838,839
Value .. .. £	293,052	161,380	151,531	424,339	579,915	1,610,217

During the past five years the exports of calfskins amounted to 416,053, valued at £235,967, and of horse hides, 6,128, valued at £8,848; the imports of horse hides during the same period amounting to 9,058, valued at £11,319.

**§ 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 241, covers the period from 1860 to 1919.

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 total for 1913 being the highest then recorded. The disastrous drought of 1914-15 was responsible for heavy losses, but subsequent annual increases made the total number of horses in 1918 the greatest ever recorded. As the result of the prolonged drought recently experienced throughout Australia the number of horses declined by 105,948 during 1919.

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 12,311,617 cattle recorded 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. In 1916 the number of cattle commenced to ascend, and, assisted by considerable increases during the next two seasons, reached its highest point in 1918. The decrease in the number of cattle during 1919, i.e., 27,785, was remarkably small, considering the protracted nature of the drought of 1918-20.

4. **Sheep.**—In the case of sheep the graph shews that the upward movement in number is subject to periodic reversals.

The greatest of these occurred between 1891 and 1902, when the number of sheep declined by one-half, or nearly 53,000,000.

So great are the recuperative powers of Australia that at the end of 1911, nine years later, the number had increased by 40,000,000.

The second great period of decline set in in 1912, and at the end of the severe drought of 1914-15 the number of sheep had decreased by 24,000,000 as compared with 1911.

During the recent drought of 1918-20 the number declined by 11,532,154 in 1919, the greatest decline in any one year save the disastrous drought year of 1902 when the decrease amounted to 18,371,864.

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. The position fluctuated considerably during subsequent years, first descending then ascending, until in 1917 the number of pigs attained its maximum. During the next two years considerable decreases occurred, the numbers of pigs in 1919 being the lowest recorded since 1908.