

## CHAPTER XXIII.

## PASTORAL PRODUCTION.

NOTE.—All values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b., port of shipment, except where otherwise indicated. All export tables relate to exports of Australian produce only, but quantities and values quoted in the text sometimes include re-exports, the amounts involved, however, being generally small.

For greater detail on the subjects dealt with in this chapter, see the annual bulletins *Primary Industries, Part I.—Rural Industries*, and *Part II.—Non-Rural Industries and Value of Production* published by this Bureau. For advance information on these subjects, the following mimeograph statistical bulletins should be consulted—*Livestock Numbers* (annual), *Meat Industry* (monthly), *Value of Production and Indexes of Price and Quantum of Farm Production* (annual), *Wool Production* (annual), and *Wool Production and Utilization* (annual). The annual *Report on Food Production and the Apparent Consumption of Foodstuffs and Nutrients in Australia* contains details of the production, distribution and apparent consumption of foodstuffs obtained from the pastoral industry. Current information on meat and wool production is available in the *Monthly Review of Business Statistics* and the *Digest of Current Economic Statistics* (monthly).

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

1. *Livestock Numbers*.—A detailed account of the various enumerations of livestock in Australia made prior to 1860 was given in previous issues of the Year Book. Since 1860, annual enumerations have been made, based, with few exceptions, on actual collections made through the agency of the State police or by post. Particulars concerning the numbers of each of the principal kinds of livestock in Australia at decennial intervals from 1860 to 1950, and from 1957 onwards in single years, are given in the following table, and are shown continuously on the graph on page 979.

## LIVESTOCK : AUSTRALIA.

('000.)

Year.	Horses.	Cattle.	Sheep.	Pigs.	Year.	Horses.	Cattle.	Sheep.	Pigs.
1860 ..	432	3,958	20,135	351	1940 ..	1,699	13,080	119,305	1,455
1870 ..	717	4,276	41,594	543	1950 ..	1,057	14,640	112,891	1,123
1880 ..	1,069	7,527	62,184	816					
1890 ..	1,522	10,300	97,881	891	1957 ..	737	17,257	149,802	1,325
1900 ..	1,610	8,640	70,603	950	1958 ..	694	16,892	149,315	1,423
1910 ..	2,166	11,745	98,066	1,026	1959 ..	671	16,257	152,685	1,289
1920 ..	2,416	13,500	81,796	764	1960 ..	640	16,503	155,174	1,424
1930 ..	1,793	11,721	110,568	1,072	1961 ..	598	17,332	152,679	1,615

While livestock numbers (particularly sheep) have increased substantially since 1860, marked fluctuations have taken place during the period, mainly on account of droughts which have from time to time left their impression on the pastoral history of Australia. These occurred in 1868, 1877, 1883-4, 1892, 1893, 1895, 1901-2, 1912, 1914, 1918, 1919, 1922-23, 1925-26, 1927-28, 1929-30, 1940-41 and 1944-45 to 1946-47.

The years in which the numbers of livestock attained their maxima are as follows:—Horses, 1918 (2,527,000); cattle, 1961 (17,332,000); sheep, 1960 (155,174,000) and pigs, 1941 (1,797,000).

The distribution throughout Australia of beef cattle, dairy cattle, sheep and pigs as at 31st March, 1955, is shown in the maps on pages 909-12 of Official Year Book No. 43.

The numbers of horses, beef cattle and sheep in each State and Territory are shown later in this chapter; similar information for dairy cattle and pigs appears in Chapter XXIV.—*Farmyard, Dairy and Bee Products*.

2. **Carrying Capacity of Pastoral Holdings.**—The carrying capacity of pastoral holdings has been increased in recent years, owing in some measure to the succession of good seasons experienced since 1946 (with the exception of the 1957–58 season, when prevailing dry conditions caused a slight decline in cattle and sheep numbers). Other important factors contributing to the progressive increase over this period have been the increased attention to pasture improvement and the reduction of rabbit infestation.

There was a considerable decline in the number of rabbits following the introduction in 1950 of the disease myxomatosis, which spread rapidly. The number of rabbits has also been kept at a low level in recent years by the use of poison baits, etc.

Statistics of the area under sown grasses and clovers which have been collected on a uniform basis in all States since 1952–53 reveal that the area sown has been considerably increased. In 1960–61, the area under sown grasses and clovers (excluding native grasses) totalled 36.3 million acres, an increase of 3.0 million acres (9 per cent.) compared with 1959–60 and an increase of 15.6 million acres (75 per cent.) over 1952–53, the earliest year for which this comparison is available. In recent years, the sowing and top-dressing of pastures have been facilitated by the increasing use of aircraft in these operations, an area of 5.0 million acres being sown and/or top-dressed in the year ended March, 1961. This represents an increase of 2.4 million acres (94 per cent.) on the area treated in the previous year.

3. **Size Classification of Cattle Herds and Sheep Flocks.**—A special series of tabulations relating to rural holdings in Australia was compiled for 1959–60 and will be published in full detail in a series of bulletins, *Classification of Rural Holdings by Size and Type of Activity*, 1959–60. Tables in these bulletins relating to beef and dairy cattle and sheep will show classifications according to size of herd or flock, area of holding, area of wheat for grain, area of sown pastures, and type of activity.

4. **Value of Pastoral Production.**—(i) *Gross, Local and Net Values*, 1960–61. Values of pastoral production for each State are shown for 1960–61 in the following table. Further details of the source of the information and an explanation of the terms used in this compilation will be found in Chapter XXX.—Miscellaneous. Maintenance costs have not been computed in all States and depreciation has not been deducted; consequently the net values are inflated to the extent of these costs.

#### GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION, 1960-61.

(£'000.)

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Farm.	Value of Materials used in Process of Production.	Net Value of Production. (a)
New South Wales .. ..	196,544	16,968	179,576	(b)19,616	159,960
Victoria .. ..	139,414	13,701	125,713	9,532	116,181
Queensland .. ..	114,007	9,419	104,588	10,242	94,346
South Australia .. ..	47,225	3,220	44,005	7,886	36,119
Western Australia .. ..	50,525	3,799	46,726	6,748	39,978
Tasmania .. ..	11,509	825	10,684	4,281	6,403
Northern Territory .. ..	5,236	757	4,479	2	4,477
Australian Capital Territory ..	822	55	767	62	705
<b>Australia .. ..</b>	<b>565,282</b>	<b>48,744</b>	<b>516,538</b>	<b>58,369</b>	<b>458,169</b>

(a) No deduction has been made for depreciation and maintenance.  
made for costs of power, power kerosene, petrol and other oils.

(b) No allowance has been

(ii) *Net Values, 1956-57 to 1960-61.* The net value of pastoral production by States and the net value per head of population for the years 1956-57 to 1960-61 are shown below.

## NET VALUE OF PASTORAL PRODUCTION.(a)

Year.	N.S.W.(b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(c)
NET VALUE. (£'000.)							
1956-57 ..	231,674	129,883	112,566	62,093	47,343	(b)10,666	597,681
1957-58 ..	157,679	115,970	80,301	44,863	36,947	(b) 8,078	447,247
1958-59 ..	162,366	110,392	90,760	38,425	30,582	6,652	443,622
1959-60 ..	198,380	135,630	99,884	50,067	39,659	7,846	536,215
1960-61 ..	159,960	116,181	94,346	36,119	39,978	6,403	458,169

NET VALUE PER HEAD OF POPULATION.  
(£)

1956-57 ..	64.5	49.5	80.7	72.1	69.5	32.9	62.7
1957-58 ..	43.1	43.2	56.5	50.6	53.3	24.3	45.9
1958-59 ..	43.5	40.1	62.6	42.3	43.3	19.6	44.6
1959-60 ..	52.3	48.1	67.6	53.6	55.3	22.8	52.8
1960-61 ..	41.3	40.2	62.7	37.7	54.8	18.3	44.1

(a) No deduction has been made for depreciation and maintenance. Payments to woolgrowers of profits from the war-time wool disposal plan, which were virtually completed by 30th June, 1959, have been excluded. (b) No allowance has been made for costs of power, power kerosene, petrol and other oils. (c) Includes Northern Territory and Australian Capital Territory.

5. *Indexes of Quantum and Price of Pastoral Production, 1956-57 to 1960-61.*—The quantum indexes relate to gross output of farm products valued at constant prices. The quantities of each farm product produced each year have been re-valued at the unit gross value for the period 1936-37 to 1938-39. The price indexes relate to average "prices" of farm products realized in the principal markets of Australia. Average quantities of each product marketed in the period 1946-47 to 1950-51 have been used as fixed weights. For further details of the methods of calculating these indexes and of the weights used, see Chapter XXX.—Miscellaneous.

INDEXES OF QUANTUM(a) AND PRICE OF PASTORAL PRODUCTION:  
AUSTRALIA.

(Base: Average 3 years ended June, 1939 = 100.)

Particulars.	1956-57.	1957-58.	1958-59.	1959-60.	1960-61.
<i>Quantum(a) produced—</i>					
Wool .. .. .	164	148	164	172	165
Other products .. .. .	128	134	152	153	136
<i>Total Pastoral</i>	<i>148</i>	<i>142</i>	<i>159</i>	<i>163</i>	<i>152</i>
Total per Head of Population .. .. .	106	100	109	110	100
<i>Price—</i>					
Wool .. .. .	607	473	370	440	397
Other products .. .. .	427	377	435	500	513
<i>Total Pastoral</i> .. .. .	<i>536</i>	<i>435</i>	<i>396</i>	<i>464</i>	<i>443</i>

(a) Index of value at constant prices, i.e., quantities revalued at average unit values of base years, 1936-37 to 1938-39.

## § 2. Horses.

1. **Distribution throughout Australia.**—About 80 per cent. of the total number of horses in Australia are in the States of New South Wales, Victoria and Queensland. In the following table, figures are shown for each State and Territory for the years 1957 to 1961.

HORSES: NUMBER.  
(‘000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1957	235	108	255	41	45	14	38	1	737
1958	221	98	243	35	44	13	39	1	694
1959	214	91	240	33	41	12	39	1	671
1960	204	81	234	30	41	11	38	1	640
1961	192	65	224	27	40	9	40	1	598

The number of horses in Australia reached its maximum during 1918, when a total of 2,527,149 was recorded. The United States of America recorded its highest number in the same year and Canada in 1921. The number in Australia has declined considerably since 1918 owing to the mechanization of transport and farming. During the period 1918 to 1961, the decrease in numbers has averaged about 45,000 per annum.

A graph showing the number of horses in Australia from 1860 onwards appears on page 979.

The percentage distribution of the number of horses in each State and Territory for 1961 was:—New South Wales, 32; Victoria, 11; Queensland, 37; South Australia, 5; Western Australia, 7; Tasmania, 1; and Northern Territory, 7.

2. **Oversea Trade in Horses.**—The export of horses from Australia during the early years of this century was fairly considerable, averaging about 15,000 head per annum between 1901 and 1920, exclusive of those used for war purposes during the 1914–18 War, but has since declined. The 1960–61 exports amounted to 1,014 horses, valued at £507,994 (Australian produce 922 for £350,054; re-exports 92 for £157,940), made up of horses for breeding (208 valued at £126,262), horses for racing (291 valued at £300,261, shipped principally to Singapore) and horses for other purposes (515 valued at £81,471, shipped principally to Hong Kong and India).

The few horses imported into Australia are mainly stud animals from the United Kingdom and racehorses from New Zealand. The total number imported in 1960–61 was 579 valued at £649,047.

## § 3. Cattle.

1. **Objects of Cattle-raising.**—Cattle-raising is carried out in all the States, 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 led to a considerable increase in numbers and an improvement in quality of the dairy herds in the coastal districts of Victoria, New South Wales and southern Queensland, the portion of Australia in the temperate zone which is best adapted to this industry. On the other hand, beef cattle are more widely distributed, particularly in the eastern States, and are raised in areas unsuitable for dairy cattle, such as the tropical area of northern Queensland, the Northern Territory, and the Kimberley district in the north of Western Australia.

2. **Distribution throughout Australia.**—Until 1880, New South Wales was the principal cattle-raising State, but in that year Queensland took the leading position, which it has since maintained. There was a very rapid increase in the number of cattle in Australia up to the year 1894, when 12,312,000 head were depastured. The effects of droughts and the ravages of tick fever subsequently reduced the number to 7,063,000 in 1902. Following the disastrous drought which terminated in the latter year, the herds were gradually built up

and, despite recurring droughts, they continued to increase up to 14,441,000 in 1921. Numbers fluctuated in succeeding years, but from 1947 to 1957 there was a general upward movement to a peak of 17,257,000 in the latter year. Drought conditions together with a very high level of slaughtering in subsequent years resulted in a reduction in numbers, but some recovery was made in 1960, followed by a record level of 17,332,000 in 1961.

A graph showing the number of cattle in Australia from 1860 onwards appears on page 979.

The numbers of cattle (beef and dairy) in the several States and Territories in each year 1957 to 1961, compared with averages for the three-year periods ended 1939, 1949, and 1959 are shown below.

**CATTLE: NUMBER.**  
(\*000.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
<b>Average for three years ended—</b>									
1939 ..	3,040	1,861	6,002	324	767	260	882	8	13,144
1949 ..	3,122	2,153	5,971	443	830	244	1,006	9	13,778
1959 ..	3,770	2,722	7,177	598	985	367	1,173	10	16,802
<b>Year—</b>									
1957 ..	3,911	2,765	7,462	621	957	354	1,176	11	17,257
1958 ..	3,736	2,750	7,187	597	997	371	1,244	10	16,892
1959 ..	3,664	2,651	6,884	576	1,000	374	1,099	9	16,257
1960 ..	3,840	2,624	7,012	500	1,030	375	1,111	11	16,503
1961 ..	4,242	2,864	7,004	561	1,100	394	1,154	13	17,332

Although the proportion was not as high as it has been in some previous years, Queensland was carrying 40 per cent. of the cattle in Australia in 1961. The percentage in each State and Territory during that year was:—New South Wales, 25; Victoria, 17; Queensland, 40; South Australia, 3; Western Australia, 6; Tasmania, 2; and Northern Territory, 7.

Maps showing the distribution of beef and dairy cattle in Australia have been published in previous issues of the Official Year Book (*see* No. 43, pp. 909–10, for 1955; No. 39, pp. 905–6, for 1948; No. 34, pp. 453–4, for 1938–39; and No. 22, p. 660, for 1924–25).

3. Classification of Cattle According to Purpose.—Of the total number of cattle in Australia in 1961, 12,431,000 or 72 per cent. were classified as beef cattle. The numbers classified as beef cattle in the several States and Territories, during the years 1957 to 1961, compared with averages for the three-year periods ended 1949 and 1959, are shown in the following table.

**BEEF CATTLE: NUMBER.**  
(\*000.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
<b>Average for three years ended—</b>									
1949 ..	1,832	686	4,592	171	604	100	1,006	6	8,997
1959 ..	2,462	1,023	5,882	341	763	165	1,173	7	11,816
<b>Year—</b>									
1957 ..	2,577	1,044	6,087	356	733	158	1,176	8	12,139
1958 ..	2,429	1,026	5,917	338	771	167	1,244	6	11,898
1959 ..	2,382	998	5,643	328	784	171	1,099	6	11,411
1960 ..	2,562	946	5,757	260	814	168	1,111	8	11,626
1961 ..	2,961	1,147	5,790	313	876	180	1,155	9	12,431

Particulars relating to dairy cattle numbers will be found in Chapter XXIV.—Farm-yard, Dairy and Bee Products.

4. **Size Classification of Cattle Herds.**—See § 1, para. 3, page 960 for information available.

5. **Comparison with other Countries.**—The following table shows the number of cattle in Australia and in some of the principal cattle-raising countries of the world for the years 1936-40 and at the latest available date. The figures relate to areas embraced by post-war boundaries, but do not in all cases cover identical areas for the two periods.

#### CATTLE: NUMBER IN VARIOUS COUNTRIES.

(Sources: Publications of the United States Department of Agriculture and of the Food and Agriculture Organization of United Nations.)

(\*000.)

Country.	Average, 1936-40.(a)	Year and Month.	Number.(c)
India(b) .. .. .	180,000	1959 (May) ..	206,500
United States of America .. .. .	66,706	1962 (January) ..	99,500
U.S.S.R. .. .. .	59,800	1962 (January) ..	82,100
Brazil .. .. .	40,807	1961 (December) ..	75,293
China, Republic of (Mainland)(b) .. .. .	25,600	1959 (December) ..	65,400
Argentina .. .. .	33,762	1961 (June) ..	44,000
Pakistan(b) .. .. .	33,000	1961 (Estimate) ..	30,200
Mexico .. .. .	11,716	1962 (Spring) ..	22,500
Ethiopia .. .. .	18,000	1960 (Estimate) ..	22,250
France .. .. .	15,504	1961 (October) ..	20,008
Australia .. .. .	13,285	1962 (March) ..	18,067
Colombia .. .. .	8,010	1961 (October) ..	15,600
Turkey(b) .. .. .	8,611	1961 (November) ..	13,982
Germany, Federal Republic of .. .. .	12,114	1961 (December) ..	13,284
South Africa .. .. .	11,636	1959 (August) ..	11,300

(a) In some cases census for a single year, and in others an average for two to four years.  
(b) Includes buffaloes. (c) Subject to revision.

6. **Imports and Exports of Cattle.**—The products of the cattle-raising industry figure largely in the export trade of Australia, although until recently the export of live cattle has never been large. In 1959-60, most of the cattle exported were sent to Hong Kong for slaughter. However, in 1960-61, 4,654 head valued at £153,804 were exported to the Philippines, while 3,673 head, valued at £82,882, were exported to Hong Kong. The number of cattle imported is small and, as in the case of horses, consists mainly of valuable animals for stud purposes. Since June, 1958, an embargo has been imposed on the import of cattle in order to prevent the possible introduction of the disease blue-tongue. Details for the years 1956-57 to 1960-61 are shown in the following table.

#### CATTLE: IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.	
	No.	Value.	No.	Value.
		£'000.		£'000.
1956-57 .. .. .	145	123	18,360	754
1957-58 .. .. .	272	174	23,933	932
1958-59 .. .. .	37	62	13,900	493
1959-60 .. .. .	(a)	(a)	13,602	456
1960-61 .. .. .	(a)	(a)	10,159	404

(a) An embargo was placed on the import of cattle in June, 1958; see para. 6, above.

7. **Cattle Slaughtered.**—The numbers of cattle slaughtered during each of the years ended June, 1957 to 1961, compared with averages for the three-year periods ended June, 1939, 1949 and 1959, are shown in the following table.

**CATTLE (INCLUDING CALVES) SLAUGHTERED.**  
(’000.)

Period.	Slaughterings passed for Human Consumption.									Total Slaughterings including Boiled Down.
	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
<b>Average for three years ended—</b>										
1938-39 ..	1,169	881	1,178	163	131	49	5	3	3,579	3,628
1948-49 ..	1,094	759	1,119	168	146	42	14	4	3,346	3,378
1958-59 ..	1,745	1,313	1,689	274	216	116	24	11	5,388	5,463
<b>Year—</b>										
1956-57 ..	1,591	1,139	1,641	252	192	102	25	10	4,952	5,017
1957-58 ..	1,742	1,404	1,541	282	216	118	24	12	5,339	5,411
1958-59 ..	1,894	1,397	1,883	287	249	128	24	10	5,872	5,960
1959-60 ..	1,499	1,277	1,527	238	243	145	24	9	4,962	5,024
1960-61 ..	1,267	1,010	1,469	174	209	115	28	6	4,278	4,327

8. **Production of Beef and Veal.**—Details of the production of beef and veal during each of the years ended June, 1957 to 1961, compared with averages for the three-year periods ended June, 1939, 1949 and 1959 are shown in the following table.

**PRODUCTION OF BEEF AND VEAL (CARCASS WEIGHT).**  
(’000 tons.)

Period.	N.S.W.	Vic.	Qld.	S. Aust.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Average for three years ended—</b>									
1938-39..	181	123	199	26	28	10	1	1	569
1948-49..	160	106	206	27	30	9	3	1	542
1958-59..	248	176	305	41	41	19	5	2	837
<b>Year—</b>									
1956-57..	236	159	317	40	38	18	5	2	815
1957-58..	233	181	270	41	39	20	5	2	791
1958-59..	275	189	328	42	45	20	5	2	906
1959-60..	217	159	267	33	46	23	5	2	752
1960-61..	168	125	247	27	42	17	6	1	633

9. **Consumption of Beef and Veal.**—Since the 1939-45 War, consumption per head of beef and veal has been at a somewhat lower level than in the pre-war period (an average of 144 lb. carcass equivalent per head per annum for the three years ended 1938-39). For the three years 1946-47 to 1948-49, the average annual consumption per head was 112 5 lb. or 22 per cent. below the immediate pre-war level. There was a considerable recovery during the ensuing years to a post-war peak of 132 7 lb. per head in 1956-57. With the buoyant overseas market for beef and the high prices ruling in Australia during the following four years, consumption per head fell substantially and in 1960-61 amounted to only 88.3 lb. consisting of 85 3 lb. of carcass meat and 3 0 lb. (carcass equivalent) of canned meat. There was a marked substitution of mutton and lamb for beef in Australia during this period.

The figures quoted in the paragraph above include the consumption of canned beef and veal, and differ on that account from the figures shown in the last column of the next table.

In the following table, details of the production and disposal of beef and veal are shown for the years 1956-57 to 1960-61, compared with the averages for the three years ended 1938-39, 1948-49 and 1958-59.

**PRODUCTION AND DISPOSAL OF BEEF AND VEAL (CARCASS WEIGHT):  
AUSTRALIA.  
(‘000 tons.)**

Period.	Net Change in Stocks.	Production.	Exports. (a)	For Canning.	Apparent Consumption in Australia.	
					Total.	Per Head per Annum.
Average for three years ended—						lb.
1938-39 .. ..	(b)	569	121	18	430	140.3
1948-49 .. ..	+ 1	542	101	67	373	109.1
1958-59 .. ..	+ 5	837	209	85	538	123.8
Year—						
1956-57 .. ..	+ 4	815	177	85	549	129.0
1957-58 .. ..	+ 4	791	155	88	544	125.1
1958-59 .. ..	+ 8	906	296	80	522	117.6
1959-60 .. ..	- 11	752	266	55	442	97.5
1960-61 .. ..	+ 4	633	190	43	396	85.3

(a) Includes carcass equivalent of boneless beef exported and ships' stores. (b) Not available.

10. Exports of Frozen Beef and Veal.—The quantity and value of frozen beef and veal exported in each year 1956-57 to 1960-61 are shown in the following table. The figures in this table represent actual weight shipped, not carcass equivalent.

**EXPORTS OF FROZEN AND CHILLED BEEF AND VEAL: AUSTRALIA.**

Year.	Exports of Frozen and Chilled Beef.		Exports of Frozen Veal.	
	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£'000.	'000 lb.	£'000.
1956-57 .. ..	331,253	22,863	3,391	408
1957-58 .. ..	276,607	20,961	5,397	609
1958-59 .. ..	499,371	54,154	10,869	1,331
1959-60 .. ..	414,749	54,568	6,827	897
1960-61 .. ..	295,686	39,447	4,506	663

Prior to 1959-60, the largest purchaser of Australian beef and veal was the United Kingdom. Exports to the United States of America have been growing in recent years, and in 1959-60 and 1960-61 exceeded those to the United Kingdom. This was particularly evident in 1960-61 when the total value of beef and veal exports to these two countries was: United States of America, £25,542,000; United Kingdom, £9,622,000.

The export of frozen meat from Australia dates from about 1881, but because of the preference overseas for chilled beef, the Australian beef industry was at a serious disadvantage until investigations proved that beef could be successfully transported from Australia to the United Kingdom in a chilled condition. Trial shipments began in 1932-33 and exports in subsequent years increased to a maximum of 58,963,000 lb. in 1938-39. However, the 1939-45 War seriously affected the export trade in chilled beef, which declined to a negligible amount after 1939-40. In 1960-61, chilled beef exports were 1,213,000 lb. valued at £126,000, while frozen beef exports amounted to 294,472,811 lb. valued at £39,321,134.

While beef and veal were previously shipped largely in carcass form, there has been in recent years a substantial increase in the amount of boneless beef exported. From 1958-59 to 1960-61, the quantity of boneless beef shipped exceeded that exported in carcass form. The trade in boneless beef has been developed principally with the United States of America.



11. **Research.—Cattle and Beef Research Scheme.** In May, 1960, legislation was enacted to provide for a Commonwealth scheme for an expanded programme of research into the scientific, technical and economic problems connected with the Australian beef industry.

Funds are raised by a levy on all cattle weighing over 200 lb. dressed which are slaughtered for human consumption, and the Commonwealth provides a matching contribution on a £1 for £1 basis to meet expenditure on new research. The scheme is administered by the Australian Cattle and Beef Research Committee, whose main function is to formulate plans for projects on which the funds may be expended. The actual research work is undertaken by existing bodies such as the universities, C.S.I.R.O. and State Departments of Agriculture.

The Minister for Primary Industry has approved a research programme of £323,000 for 1962-63.

At its first meeting in June, 1960, the Committee agreed to recommend to the Minister for Primary Industry that the levy be fixed at the maximum provided in the Act, namely 2s. per head. The levy was operative from 1st July, 1960.

However, the levy was suspended in October, 1960, as a result of a High Court writ being issued by certain meat operators challenging the validity of the Act. Amending legislation was enacted in October, 1961, and the levy again became operative from the 14th October, 1961.

The three Acts covering the research arrangements and collection of the levy are the Cattle and Beef Research Act 1960-1961, the Cattle Slaughter Levy Collection Act 1960-1961, and the Cattle Slaughter Levy Act 1960.

The Cattle Slaughter Levy (Suspension) Act 1961 covers the suspension of levy from 14th October, 1960, to 13th October, 1961.

#### § 4. Sheep.

1. **Movement in Sheep Numbers in Australia.**—Fluctuations in the number of sheep recorded in Australia for each year from 1860 onwards may be seen from the graph on page 979. Up to 1945, there were five marked periods of decline, but the losses were made up rapidly. In each of the years 1925 to 1945, the sheep flocks exceeded 100 million, reaching 125.2 million in 1942. During the three years ended 1947, however, a sharp decline to 95.7 million occurred. This was largely attributable to the severe drought conditions experienced during 1944, 1945 and 1946. The passing of the drought and consequent re-stocking resulted in a steady increase in sheep numbers, and although dry seasonal conditions were responsible for a slight decline at 31st March, 1958, a record level of 155.2 million was reached at 31st March, 1960. The reduction in sheep numbers to 152.7 million during 1960-61 was due primarily to dry conditions in Queensland and northern New South Wales.

The following table shows the approximate movement in sheep numbers in Australia in each year 1956-57 to 1960-61.

#### SHEEP AND LAMBS : ANALYSIS OF MOVEMENT IN NUMBERS, AUSTRALIA.

(\*000.)

Season.	Lambs Marked.	Excess of Exports.	Sheep and Lambs Slaughtered.	Estimated Number of Deaths from Disease, Drought, etc.(a)	Number at 31st March.	Annual Net Increase (+) or Decrease (-)
1956-57.. ..	39,902	122	19,503	9,599	149,802	+ 10,678
1957-58.. ..	(b) 36,850	120	24,417	12,800	149,315	- 487
1958-59.. ..	38,748	136	26,963	8,279	152,685	+ 3,370
1959-60.. ..	44,150	(c) 226	32,084	9,351	155,174	+ 2,489
1960-61.. ..	39,794	(c) 148	32,210	10,612	152,679	- 2,495

(a) Balance figure. in this year.

(b) Excludes Northern Territory prior to 1957-58.

(c) No imports

2. **Distribution throughout Australia.**—With the exception of a short period in the early eighteen-sixties, when the flocks of Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising, depasturing nearly one-half of the sheep of Australia.

Maps showing the distribution of sheep in Australia have been published in previous issues of the Official Year Book (see No. 43, p. 911, for 1955; No. 39, p. 907, for 1948; No. 34, p. 432, for 1938–39; and No. 22, p. 659, for 1924–25).

The numbers of sheep in the several States and Territories at 31st March of each year 1957 to 1961 compared with average numbers for the three-year periods ended 1939, 1949 and 1959 are shown in the following table.

## SHEEP : NUMBER.

('000.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia.
Average for three years ended—									
1939 ..	51,202	17,845	21,889	8,916	8,972	2,460	23	251	111,558
1949 ..	46,525	17,900	16,442	8,793	10,368	2,060	24	227	102,339
1959 ..	67,006	26,615	22,537	15,285	15,609	3,259	25	265	150,601
Year—									
1957 ..	67,670	25,831	23,190	14,984	14,887	2,943	30	267	149,802
1958 ..	65,410	27,090	22,274	15,236	15,724	3,298	27	256	149,315
1959 ..	67,936	26,925	22,148	15,634	16,215	3,536	19	272	152,685
1960 ..	71,000	26,597	23,332	14,025	16,412	3,494	15	299	155,174
1961 ..	68,087	26,620	22,135	14,952	17,152	3,439	16	278	152,679

Except when affected by drought, the relative numbers of sheep in the different States have remained fairly constant in recent years. The percentage distribution in 1961 was:—New South Wales, 45; Victoria, 17; Queensland, 15; South Australia, 10; Western Australia, 11; and Tasmania, 2.

3. **Classification of Sheep According to Age, Sex and Breed.**—In the following table, numbers of sheep in Australia are classified according to age and sex at 31st March of the years 1957 to 1961.

## SHEEP : AGE AND SEX, AUSTRALIA.

('000.)

Description.	1957.	1958.	1959.	1960.	1961.
Rams, 1 year and over ..	1,830	1,883	1,919	1,898	1,934
Breeding ewes (including ewes intended for mating) ..	66,844	66,059	69,470	68,455	69,662
Other ewes, 1 year and over ..	8,447	9,795	8,295	9,276	8,951
Wethers, 1 year and over ..	41,573	43,688	43,578	43,046	42,912
Lambs and hoggets, under 1 year .. .. .	31,108	27,890	29,423	32,499	29,220
<b>Total, Sheep and Lambs</b>	<b>149,802</b>	<b>149,315</b>	<b>152,685</b>	<b>155,174</b>	<b>152,679</b>

Particulars relating to the principal breeds of sheep at 31st March, 1959, the latest date for which these data are available (details are collected on a triennial basis only), are shown in the following table.

## SHEEP : PRINCIPAL BREEDS, 31st MARCH, 1959.

('000.)

Breed.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Merino ..	52,467	11,410	21,725	13,112	14,921	325	19	245	114,224
Other recognized breeds ..	6,037	6,118	72	1,061	542	1,841	..	12	15,683
Merino come-backs(a) ..	3,408	3,422	70	312	146	466	..	2	7,826
Crossbreds(b) ..	6,024	5,975	281	1,149	606	904	..	13	14,952
Total ..	67,936	26,925	22,148	15,634	16,215	3,536	19	272	152,685

(a) Merino comeback is the progeny of a crossbred merino ewe and a merino ram, i.e., finer than half-bred.  
(b) Half-bred and coarser.

4. Numbers of Sheep on Rural Holdings.—See § 1, para. 3, page 960, for information available.

5. Comparison with other Countries.—Australia has long occupied a leading position amongst the sheep-raising countries of the world in respect of the size of its flocks and the quantity and quality of wool produced. In 1960–61, Australian flocks numbered 153 million sheep, compared with an estimate of 235 million for the U.S.S.R., China, and Eastern Europe combined, about 48 million in New Zealand, and about 46 million in Argentina. The total world sheep numbers were estimated at about 913 million in 1960–61. These figures relate to woolled sheep only, non-woolled sheep accounting for about 5 per cent. of the world total of all types of sheep. Further details of sheep numbers in the principal wool producing countries of the world for 1958–59 to 1960–61 are given in the table on page 976.

6. Imports and Exports of Sheep.—As in the case of cattle, the overseas exports of live sheep from Australia are of comparatively little importance. On 27th November, 1929, the export of stud merino sheep was prohibited, except with the approval of the Minister for Primary Industry. Exports of sheep are now principally for slaughter overseas. Consignments for this purpose in recent years were made chiefly from Western Australia, to Singapore. Since June, 1958, an embargo has been imposed on the import of sheep in order to prevent the possible introduction of the disease blue-tongue. The following table shows the imports and exports of all sheep for the years 1956–57 to 1960–61.

## SHEEP : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.	
	No.	Value.	No.	Value.
		£'000.		£'000.
1956–57 .. ..	7,445	212	129,480	482
1957–58 .. ..	2,256	90	122,628	466
1958–59 .. ..	5	1	135,720	393
1959–60 .. ..	..	..	225,757	805
1960–61 .. ..	..	..	147,592	461

7. **Sheep Slaughtered.**—The following table shows the numbers of sheep slaughtered in the several States during each of the years ended June, 1957 to 1961, compared with averages for the three-year periods ended June, 1939, 1949 and 1959.

**SHEEP (INCLUDING LAMBS) SLAUGHTERED.**

(’000.)

Period.	Slaughterings Passed for Human Consumption.									Total Slaughterings including Boiled Down.
	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
<b>Average for three years ended—</b>										
1938–39 ..	6,520	7,891	1,088	1,762	1,216	364	3	25	18,866	18,923
1948–49 ..	6,367	6,413	1,066	1,863	1,458	396	3	47	17,613	17,650
1958–59 ..	7,857	9,058	1,429	2,917	2,059	775	3	71	24,169	24,278
<b>Year—</b>										
1956–57 ..	6,951	7,038	1,270	2,329	1,907	684	2	66	20,247	20,310
1957–58 ..	7,761	9,624	1,378	3,278	1,856	734	4	74	24,709	24,878
1958–59 ..	8,861	10,514	1,633	3,145	2,415	909	4	71	27,552	27,646
1959–60 ..	10,753	12,511	2,113	3,899	2,650	1,166	5	76	33,173	33,373
1960–61 ..	11,718	11,363	2,924	2,784	2,658	1,076	4	77	32,604	32,697

8. **Production of Mutton and Lamb.**—Details of the production of mutton and lamb in each State and Territory in the years 1956–57 to 1960–61, compared with averages for the three-year periods ended June, 1939, 1949 and 1959, are shown in the following table.

**PRODUCTION OF MUTTON AND LAMB.**

(Tons.)

Period.	N.S.W.	Victoria.	Q’land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>Average for three years ended—</b>									
1938–39 ..	103,884	136,927	20,121	30,574	20,928	6,129	2	413	318,978
1948–49 ..	109,084	111,677	18,587	34,772	23,846	7,214	64	839	306,083
1958–59 ..	135,256	164,580	25,845	50,415	35,373	14,077	77	1,240	426,863
<b>Year—</b>									
1956–57 ..	121,947	131,253	23,866	42,563	33,303	12,607	49	1,198	366,786
1957–58 ..	127,800	169,107	24,381	53,681	31,942	13,221	90	1,254	421,476
1958–59 ..	156,020	193,379	29,286	55,001	40,875	16,403	93	1,269	492,326
1959–60 ..	184,600	223,519	35,886	62,760	44,385	20,780	111	1,292	573,333
1960–61 ..	196,417	210,245	48,529	52,242	46,560	18,925	98	1,292	574,308

9. **Consumption of Mutton and Lamb.**—Civilian consumption of mutton and lamb (in carcass equivalent weight, including canned mutton) rose substantially during the 1939–45 War, but fell again in 1946–47, and up to 1951–52 was lower than in pre-war years (an average of 74.8 lb. carcass equivalent per head per annum for the three years ended 1938–39). It rose during succeeding years to 78 lb. per head in 1952–53, and except for slight drops in 1955–56 and 1956–57, this level was maintained up to 1957–58. There was a sharp rise in 1958–59 to 89 lb. per head, and in 1959–60 a level of 105 lb. per head was reached. In 1959–60, consumption of mutton and lamb exceeded that of beef and veal for the first time on record. A small decline followed in 1960–61 when the amount of mutton and lamb consumed per head was estimated as 103 lb. Figures quoted in this paragraph include the consumption of canned mutton, and differ on that account from the figures in the last column of the table following.

The following table gives details of the production and disposal of mutton and lamb.

**PRODUCTION AND DISPOSAL OF MUTTON AND LAMB (CARCASS WEIGHT): AUSTRALIA.**  
(<sup>'000 tons.</sup>)

Period.	Changes in Stock.	Pro-duction.	Exports. (a)	For Canning and Dehydration.	Apparent Consumption in Australia.	
					Total.	Per Head per Annum. (lb.)
<b>MUTTON.</b>						
Average for three years ended—						
1938-39 .. .. .	..	201	17	..	184	60.0
1948-49 .. .. .	..	177	15	8	154	45.1
1958-59 .. .. .	..	268	27	19	222	51.0
Year—						
1956-57 .. .. .	+ 2	224	10	13	199	46.8
1957-58 .. .. .	+ 1	270	23	25	221	50.7
1958-59 .. .. .	- 3	310	49	19	245	55.1
1959-60 .. .. .	..	370	48	33	289	63.7
1960-61 .. .. .	+ 1	368	60	14	293	63.2
<b>LAMB.</b>						
Average for three years ended—						
1938-39 .. .. .	..	118	72	..	46	15.0
1948-49 .. .. .	- 1	130	45	..	86	25.2
1958-59 .. .. .	..	159	31	..	128	29.4
Year—						
1956-57 .. .. .	+ 1	143	24	..	118	27.7
1957-58 .. .. .	- 1	152	29	..	124	28.4
1958-59 .. .. .	- 1	182	41	..	142	31.9
1959-60 .. .. .	..	203	26	..	177	39.0
1960-61 .. .. .	+ 1	207	29	..	177	38.2

(a) Includes carcass equivalent of boneless mutton exported.

10. Exports of Frozen Mutton and Lamb.—The export trade in mutton and lamb preserved by cold process has not since attained the level of 205 million lb. shipped in 1913, although in 1942-43 it almost reached this level again. In earlier years, shipments consisted mainly of frozen mutton, but commencing with 1923-24 lamb has predominated in almost every year. The position has been reversed in 1959-60 and 1960-61 when exports of frozen mutton have been considerably in excess of shipments of frozen lamb.

The quantities and values of exports of frozen mutton and lamb in each year 1956-57 to 1960-61 are shown in the following table.

**EXPORTS OF FROZEN MUTTON AND LAMB: AUSTRALIA.**

Year.	Exports of Frozen Mutton.		Exports of Frozen Lamb.		Exports of Frozen Mutton and Lamb.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£'000.	'000 lb.	£'000.	'000 lb.	£'000.
1956-57 .. .. .	23,012	1,322	53,262	4,773	76,274	6,095
1957-58 .. .. .	42,270	2,253	64,352	6,132	106,622	8,385
1958-59 .. .. .	74,650	5,851	91,192	8,151	165,842	14,002
1959-60 .. .. .	71,763	4,719	59,264	4,389	131,027	9,108
1960-61 .. .. .	83,075	7,437	64,430	5,790	147,505	13,227

The principal customer for Australian frozen mutton and lamb was formerly the United Kingdom, although the United States of America has become a major buyer of mutton in recent years. In 1960-61, exports of mutton and lamb to the United Kingdom represented 21 per cent. and 69 per cent., respectively, of the total quantities exported. Forty-five per cent. of the mutton exported went to the United States of America, largely in the form of boneless meat, and the proportion of lamb exported to that country was nine per cent.

### § 5. Consumption and Marketing of Meat.

1. **Consumption of Meat.**—The apparent consumption per head of meat (including cured and canned meat) and edible offal in Australia is shown in the table below for the years 1956-57 to 1960-61 in comparison with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

#### MEAT (INCLUDING CURED AND CANNED) AND EDIBLE OFFAL AVAILABLE FOR CONSUMPTION: AUSTRALIA.

(lb. per head per year.)

Period.	Beef and Veal. (a)	Mutton. (a)	Lamb. (a)	Pork. (a)	Offal.	Canned Meat. (b)	Bacon and Ham. (c)	Carcass Equivalent of Meat and Meat Products. (d)
Average of three years ended—								
1938-39 ..	140.3	60.0	15.0	10.4	8.4	2.1	10.2	252.8
1948-49 ..	109.1	45.1	25.2	7.1	8.9	2.6	11.7	215.7
1958-59 ..	123.8	51.0	29.4	10.1	11.5	4.1	7.0	242.5
Year—								
1956-57 ..	129.0	46.8	27.7	8.7	10.4	3.1	6.8	237.4
1957-58 ..	125.1	50.7	28.4	10.9	11.8	4.5	7.0	244.6
1958-59 ..	117.6	55.1	31.9	10.7	12.1	4.7	7.1	245.0
1959-60 ..	97.5	63.7	39.0	10.4	11.6	4.1	7.0	237.7
1960-61 ..	85.3	63.2	38.2	11.5	10.9	4.2	6.8	224.2

(a) Carcass weight of fresh meat. (b) Canned weight. (c) Cured weight. (d) Includes offal.

2. **Marketing of Meat.**—(i) *General.* The Australian Meat Board, consisting of representatives of producers, processors, exporters and the Commonwealth Government, is responsible for the control of all exports of Australian meat and meat products. Further information on the powers, etc., conferred on the Board under the Meat Export Control Act 1935-1960 is given on page 801 of Official Year Book No. 40.

(ii) *United Kingdom Long-term Purchase Agreements.* Details of the long-term meat contracts with the United Kingdom Government from the outbreak of the 1939-45 War up to 30th June, 1952, and of the Fifteen Year Meat Agreement (1952-67) are given on page 710 of Official Year Book No. 41 and in earlier issues.

The Fifteen Year Meat Agreement (1952-67) between the United Kingdom and Australian Governments has as its objectives the promotion of meat production in Australia, enabling increased exports to be made to the United Kingdom, and the provision of a satisfactory market in the United Kingdom for such meat. It covers beef and veal, and mutton and lamb.

(iii) *Cessation of Bulk Purchasing.* Following the announcement in September, 1953 that the United Kingdom Ministry of Food would cease bulk purchasing of meat, arrangements were made between the Australian Meat Board and the Ministry for the reversion to private trading in the United Kingdom. The main features of the arrangements were given in previous issues of the Year Book (see No. 47, p. 960).

The agreed minimum prices (f.o.b. port of shipment), which operated until 30th September, 1955, were as follows:—Beef and veal, 13.18d. stg. per lb.; lamb, 13.61d. stg. per lb.; and mutton, 6.05d. stg. per lb. These minimum prices were reviewed for subsequent years.

In the event of market prices for the various classifications of meat averaging below the minimum, the Ministry is to make a payment to the Australian Government corresponding to the amount of the deficiency. So as to determine the extent of any deficiency, a procedure designed to measure as accurately as possible the weighted average level of wholesale prices of Australian meat on the United Kingdom market has been agreed upon.

(iv) *Private Trading.* As part of the negotiations which have taken place in Australia and the United Kingdom at various times since 1954, minimum prices have been reviewed periodically. The result has been a general reduction in minimum prices, and up to the 1960–61 season this had amounted to 5 per cent. in the case of beef and veal and lamb, and about 25 per cent. in the case of mutton, compared with 1954–55 minimum prices. At the same time, however, Australia has been permitted to export increasing quantities of all types of meat to destinations other than the United Kingdom and the Colonies. For the years 1957–58 to 1960–61, the beef export “free quota” was set at a maximum of 7,500 tons a year of 1st and 2nd quality beef, without restriction as to the quantity of lower grades that may be exported to these other destinations.

Minimum beef prices for the three years to 1963–64 were fixed during the 1958 negotiations at 9 per cent. below the 1960–61 level. Further price negotiations were held in August, 1961, at which beef prices to 1963–64, previously agreed upon, were revised upward to a level 4½ per cent. higher than those negotiated in 1958. The new price level for beef was further extended to cover the period 1964 to 1967. It was also agreed that the existing guaranteed minimum prices for lamb would continue until October, 1962, and from then until October, 1964, they would be 2½ per cent. lower. From October, 1961, there will be no minimum prices in respect of mutton because of the difficulty in determining them owing to the change in marketing from carcass to piece mutton. Also, from October, 1961, the “free quota” restrictions were removed and, under the Agreement, meat may now be exported to any destination free of quantitative restriction.

After eight months of open trading, the Australian Meat Board estimated that a deficiency payment would be received in respect of beef for the first year. In order to make arrangements for this anticipated payment to be passed on to the producer, the Meat Agreement (Deficiency Payments) Act was passed by the Commonwealth Government in May, 1955. Payments were to be made on the understanding that they were, or would be, reflected in the price paid to producers. To make provision for recoupment by the Board of any overpayment, the Meat Export (Additional Charge) Act was also passed in May, 1955.

Because of a rise in beef prices in the United Kingdom, the deficiency payments made by the Board during the year ended 30th September, 1955, exceeded the sum received from the United Kingdom for the same period. In an endeavour to recoup some of this overpayment, under the terms of the Meat Export (Additional Charge) Act, a levy of one-eighth of a penny per lb. was imposed on certain classes of beef exported to the United Kingdom out of stocks placed into store from 1st February to 16th April, 1956.

From 1st October, 1955, until April, 1958, beef prices in the United Kingdom were consistently below the level of the guarantee and consequently Australia “earned” deficiency payments which enabled the Australian Meat Board to make substantial bounty payments on beef exported to the United Kingdom. The rates of payment made during the 1954–55 and 1955–56 seasons are given on pages 888–9 of Official Year Book No. 43 and on pages 920–1 of Official Year Book No. 44 for 1956–57. No deficiency payments have been received for beef since 1956–57. A deficiency payment was earned on lamb for the first time during the 1960–61 season and as a result a bounty has been paid at the rate of 2s. per carcass and ¾d. per lb. for piece lamb entered into cold store for export to the United Kingdom during the period 1st August, 1961, to 28th April, 1962.

In 1958, a new “chiller” grade of export beef was introduced. Beef of the new grade, whether exported in the chilled or frozen form, received a bounty of 5d. per lb. The bounty on boneless piece beef was increased from 4d. to 5d. per lb., and that on certain classes of carcass piece beef from 3d. to 5d. per lb. The basic rate of 3d. per lb. was maintained for other 1st and 2nd quality quarter beef. The bounty payments were discontinued on 27th December, 1958, on account of the relatively high prices being obtained in the United Kingdom.

Prior to 1959 the heaviest volume of beef exports went to the United Kingdom. However, with the relaxation of the quota restrictions which operated to 1st October, 1958, Australian exporters were able to take advantage of the market for boneless manufacturing meat in the United States, and during 1959–60 and 1960–61 the United States market eclipsed the United Kingdom as the principal market for Australian beef exports.

## § 6. WOOL

1. **General.**—Australia is the leading wool-growing country in the world. With about one-sixth of the world's woolled sheep, Australia produces more than one-quarter of the world's wool and more than half of the world's fine-quality merino wool. The bulk of the production is exported, mainly as greasy wool, although substantial amounts of scoured and carbonized wool, wool on sheep skins and small quantities of semi-manufactured wool are also shipped. The remainder, which is used by Australian manufacturers, has amounted to only about 7 per cent. of the total production (greasy basis) in recent years.

The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the table on page 976.

2. **Clean Yield.**—Wool as shorn from the sheep contains an appreciable amount of grease, dirt and other extraneous matter, and is termed "greasy wool". The quantity of grease and other matter in a fleece differs, not only between countries, but between districts in the same country. It fluctuates with the vagaries of the season, and with the breed and the condition of the sheep.

To allow for this factor, the weight of greasy wool is sometimes given on a "clean" basis, i.e., minus the estimated amount of impurities. The net wool fibre content of greasy wool, expressed as a percentage, is termed "clean yield".

From 1946-47 to 1952-53, the Australian Wool Realization Commission, and from 1953-54, the Wool Statistical Service, have assessed annually the clean yield of the Australian wool clip. During the period of assessment, the clean yield has shown a continuous rise up to 1951-52, when it reached 57.5 per cent. It has since fluctuated between 55.8 per cent. and 57.7 per cent.

Wool scoured, washed and carbonized in Australia before export, however, has a clean yield somewhat lower than for the whole clip, because the grade of greasy wool treated locally for export as scoured, washed or carbonized includes a large proportion of dirty and low-grade wool. In recent years, it has approximated 54 per cent. The quantity of this wool exported during 1960-61 was about 13 per cent. of the total raw wool exports (excluding wool exported on skins) in terms of greasy.

For the clean yield of Australian scoured wools, a standard factor of 93 per cent. is taken.

3. **Production.**—The production of wool in the States and Territories varies broadly in accordance with the number of sheep depastured and with seasonal conditions which affect clip per head (*see* para. 4, p. 975). In general, however, South Australia obtains from its large-framed merinos a much heavier fleece per sheep than the Australian average, while Tasmania generally obtains from its predominantly non-merino flocks a lighter fleece per sheep. In addition, as a result of better management (improved pastures, fodder conservation, better breeding, control of diseases, etc.), the long-term trend has been towards higher fleece weights.

The following table shows details of total wool (i.e., shorn, dead and fellmongered, and exported on skins) produced by each of the States and Territories during the years 1956-57 to 1960-61 compared with averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

PRODUCTION OF WOOL (IN TERMS OF GREASY).  
(<sup>000</sup> lb.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average of three years ended—									
1938-39 ..	478,595	169,256	169,325	88,699	73,141	15,728	35	1,822	996,601
1948-49 ..	439,363	200,229	151,679	108,126	95,031	16,272	305	1,927	1,012,932
1958-59 ..	633,938	298,302	217,062	187,225	160,402	30,141	277	2,371	1,529,718
Year—									
1956-57 ..	660,343	299,572	227,664	188,808	156,402	28,663	346	2,457	1,564,255
1957-58 ..	557,287	296,490	204,375	185,843	158,281	29,154	291	2,133	1,433,854
1958-59 ..	684,184	298,844	219,148	186,842	166,522	32,605	195	2,522	1,590,862
1959-60 ..	715,445	322,999	236,196	198,289	170,442	33,565	165	2,899	1,680,000
1960-61 ..	664,276	322,011	235,590	177,413	191,353	31,834	157	2,472	1,625,106

The bulk of the Australian wool production (about 91 per cent. in recent years) is shorn from live sheep. The remainder is obtained by fellmongering (about 2 per cent.), or is exported on skins (about 7 per cent.). The following table shows details of total wool production according to method of obtaining wool, and also the gross value of wool produced. Gross value is based, for shorn wool, upon the average price realized for greasy wool sold at auction and, for skin wools, on prices recorded by fellmongers and skin exporters.



**QUANTITY (IN TERMS OF GREASY) AND VALUE OF WOOL PRODUCED:  
AUSTRALIA.**

Period.	Shorn (incl. Crutchings).	Dead and Fell- mongered.	Exported on Skins.	Total Production.	
				Quantity.	Value.
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	£'000.
Average of three years ended—					
1938-39.. .. .	889,338	49,280	57,983	996,601	53,425
1948-49.. .. .	902,007	50,660	60,265	1,012,932	152,536
1958-59.. .. .	1,411,424	36,804	81,490	1,529,718	394,145
Year—					
1956-57.. .. .	1,457,387	37,724	69,144	1,564,255	507,615
1957-58.. .. .	1,319,941	30,894	83,019	1,433,854	363,406
1958-59.. .. .	1,456,759	41,795	92,308	1,590,862	311,415
1959-60.. .. .	1,529,362	38,894	111,744	1,680,000	389,761
1960-61.. .. .	1,471,747	37,820	115,539	1,625,106	340,431

In comparing successive clips, allowance must be made for the circumstance that, owing to climatic or other conditions, the time of shearing may be so far delayed in some areas that one clip may include almost thirteen months' growth of wool, while the succeeding one may include little more than eleven months' growth.

4. Average Weights of Fleeces Shorn.—The average weights of sheep and lamb fleeces shorn in each of the States of Australia and in the Australian Capital Territory are shown in the following table for each season 1956-57 to 1960-61.

**AVERAGE WEIGHT OF FLEECES SHORN (SHEEP AND LAMBS).  
(lb.)**

State.	1956-57.	1957-58.	1958-59.	1959-60.	1960-61
<b>SHEEP.</b>					
New South Wales .. .. .	9.92	8.45	9.88	10.10	9.15
Victoria .. .. .	11.02	9.69	9.47	10.06	10.24
Queensland .. .. .	9.98	8.93	9.75	10.09	9.17
South Australia .. .. .	13.14	11.60	11.87	12.31	12.12
Western Australia .. .. .	10.73	10.54	10.49	10.32	11.02
Tasmania .. .. .	10.07	9.38	9.37	9.10	8.89
Australian Capital Territory ..	10.20	8.28	10.41	10.51	9.18
Australia(a) .. .. .	10.51	9.30	10.03	10.31	9.82
<b>LAMBS.</b>					
New South Wales .. .. .	3.30	2.75	3.08	3.22	3.31
Victoria .. .. .	3.11	2.71	2.59	2.73	2.96
Queensland .. .. .	4.09	3.76	3.84	3.95	3.84
South Australia .. .. .	4.11	3.37	3.52	3.39	3.55
Western Australia .. .. .	2.78	2.77	2.60	2.56	2.84
Tasmania .. .. .	2.46	2.40	2.31	2.13	2.30
Australian Capital Territory ..	1.52	1.19	1.45	1.56	1.56
Australia(a) .. .. .	3.37	2.91	3.03	3.10	3.22

(a) Excludes Northern Territory.

5. Wool classified according to Quality.—The following table provides a detailed analysis of wool sold at auction, according to quality, for the years 1956-57 to 1960-61. These data are compiled by the Wool Statistical Service on the basis of catalogues of auction sales. "Quality" ("64's, 60's, 58's," etc.) is a measure of the fineness and texture of wool for spinning purposes. Broadly, it means the maximum number of hanks of yarn, each of 560 yards length, which can be spun from 1 lb. of combed wool. For instance, wool of 64's quality is of a fineness and texture which will produce 64 hanks, each of 560 yards, from 1 lb. of tops (combed wool) of that particular wool.

**CLASSIFICATION OF GREASY WOOL SOLD AT AUCTION(a): AUSTRALIA.**  
(Bales of approximately 300 lb.)

Pre-dominating Quality.	1956-57.		1957-58.		1958-59.		1959-60.		1960-61.	
	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.
70's and finer	100,011	2.1	114,188	2.7	112,966	2.5	113,234	2.4	122,534	2.7
64/70's ..	527,264	11.1	609,897	14.3	442,019	9.5	453,823	9.5	462,764	10.0
64's ..	690,038	14.5	696,064	16.4	607,653	13.1	659,126	13.8	633,919	13.7
64/60's ..	478,418	10.1	392,933	9.2	477,054	10.3	506,001	10.6	451,905	9.8
60/64's ..	987,496	20.8	847,824	19.9	1,021,139	21.9	1,071,961	22.4	947,627	20.5
60's and 60/58's ..	804,363	16.9	645,119	15.2	837,338	17.9	839,919	17.6	829,601	18.0
<i>Total 60's and finer</i>	<i>3,587,590</i>	<i>75.5</i>	<i>3,306,025</i>	<i>77.7</i>	<i>3,498,169</i>	<i>75.2</i>	<i>3,644,064</i>	<i>76.3</i>	<i>3,448,370</i>	<i>74.7</i>
58's ..	502,566	10.6	435,436	10.2	519,238	11.2	491,277	10.3	555,237	12.0
56's ..	376,660	7.9	297,662	7.0	363,968	7.8	375,391	7.9	354,287	7.7
50's ..	162,533	3.4	116,329	2.7	149,356	3.2	152,056	3.2	140,457	3.0
Below 50's ..	50,055	1.0	38,514	0.9	44,292	1.0	46,429	0.9	43,552	1.0
Oddments ..	74,226	1.6	65,348	1.5	74,385	1.6	68,202	1.4	73,241	1.6
<b>Grand Total</b>	<b>4,753,630</b>	<b>100.0</b>	<b>4,259,314</b>	<b>100.0</b>	<b>4,649,408</b>	<b>100.0</b>	<b>4,777,419</b>	<b>100.0</b>	<b>4,615,125</b>	<b>100.0</b>

(a) All greasy wool sold at auction except "wool re-offered account buyer".

6. World Sheep Numbers and Wool Production.—The following table shows particulars of the woolled sheep numbers and total production of wool, in terms of greasy, in the principal wool-producing countries of the world, together with estimates of world production of merino, crossbred and carpet type wool for the latest available years.

In 1960-61, Australia produced 29 per cent. of the world total of all types of wool, the share of all British Commonwealth countries combined representing approximately 50 per cent. The principal wool producers, other than Australia, were New Zealand with 10 per cent. of the world total, Argentina, 8 per cent., United States of America, 6 per cent., and Republic of South Africa, 6 per cent. Production in the U.S.S.R., China and Eastern European countries together amounted to 20 per cent. World production of wool (all types) in 1960-61 exceeded the pre-war average for the years 1934 to 1938 by approximately 1,824 million lb. or 48 per cent.

Australia's wool clip is predominantly merino. New Zealand and Argentina produce mainly crossbred wool, while the clip of the U.S.S.R. is largely of the carpet type. World production of merino wool in 1960-61 was 44 per cent. above the average for the years 1934 to 1938, and the production of crossbred types has risen by about 64 per cent. Carpet wool production has risen by about 34 per cent.

**ESTIMATED WORLD WOOLLED SHEEP NUMBERS AND PRODUCTION OF WOOL.**

(Source: Reports published by Commonwealth Economic Committee.)

Country.	Sheep Numbers (million).			Wool Production (million lb.— in terms of greasy).		
	1958-59.	1959-60.	1960-61. (a)	1958-59.	1959-60.	1960-61. (a)
<i>British Commonwealth—</i>						
Australia .. ..	153	155	153	1,591	1,680	1,625
New Zealand .. ..	47	47	48	540	577	588
South Africa(b) .. ..	34	34	34	314	319	317
Other Commonwealth .. ..	81	83	82	254	261	261
<i>Total</i> .. ..	<i>315</i>	<i>319</i>	<i>317</i>	<i>2,699</i>	<i>2,837</i>	<i>2,791</i>
<i>Foreign—</i>						
U.S.S.R., China, Eastern Europe(c) .. ..	231	240	235	1,010	1,102	1,112
Argentina .. ..	48	49	46	421	423	431
United States of America .. ..	33	33	33	295	319	323
Uruguay .. ..	21	22	22	175	159	181
Other Foreign .. ..	255	254	260	2,656	773	774
<i>Total</i> .. ..	<i>588</i>	<i>598</i>	<i>596</i>	<i>5,355</i>	<i>2,776</i>	<i>2,821</i>
<b>Grand Total</b> .. ..	<b>903</b>	<b>917</b>	<b>913</b>	<b>5,355</b>	<b>5,613</b>	<b>5,612</b>
<i>Type of Wool—</i>						
Apparel type—						
Merino .. ..	..	..	..	2,172	2,316	2,270
Crossbred .. ..	..	..	..	1,973	2,033	2,073
Carpet type .. ..	..	..	..	1,210	1,264	1,269

(a) Provisional. (b) Basutoland and S.W. Africa Territory are excluded from sheep numbers but included in wool production. (c) Comprises Albania, Bulgaria, China and Dependencies, Czechoslovakia, Eastern Germany, Hungary, Mongolia, Poland, Romania, Tibet and U.S.S.R.

7. *Marketing of Wool.*—(i) *War-time Contracts.* Details of the contract entered into between the Governments of Australia and the United Kingdom for the purchase of the surplus wool clip of Australia for the duration of the war and one full clip thereafter (1939–40 to 1945–46) will be found in Official Year Book No. 36, page 1106.

Details of the war-time contract arrangements for the period April, 1940, to June, 1946, between the Australian and United Kingdom Governments for the purchase of Australia's exportable surplus of woolled sheepskins will be found in Official Year Book No. 37, page 875.

(ii) *Australian Wool Realization Commission.* Details relating to this Commission may be found in Official Year Book No. 47, page 967. Earlier references are also given on that page.

(iii) *Minimum Reserve Price Plan.* Details of the minimum reserve price plan which was completed by the Governments of Australia, New Zealand, South Africa and the United Kingdom in May, 1951, and which was rejected at a referendum of woolgrowers in Australia in August, 1951, will be found in Official Year Book No. 39, page 925.

(iv) *Subsidy on Woollen Goods, 1950–51.* Details of the subsidy paid on woollen goods manufactured for consumption in Australia from wool sold during the 1950–51 season will be found in Official Year Book No. 41, page 727.

(v) *Wool Marketing Committee of Enquiry.* At the request of woolgrower organizations, the Commonwealth Government, in January, 1961, appointed an independent committee to inquire into the marketing and promotion of Australian wool.

The Committee's terms of reference were:—

- (a) to inquire into the present systems of marketing and of promoting the sale of the Australian wool clip and matters relating thereto, and to report upon the efficacy of these systems;
- (b) to report upon the merits of any other systems or of modifications of the present systems which may be advocated to the committee of enquiry or which the committee itself considers would be of long-term benefit to the wool-growing industry and in the best interests of the nation.

After investigations extending over a period of about twelve months, the Committee presented its report to the Government in February, 1962. The report was tabled in both Houses of Parliament on 7th March, 1962, and released to the public.

8. *Australian Wool Bureau.*—(i) *Wool Promotion.* The Australian Wool Bureau is a statutory body which is responsible for the promotion of wool on behalf of Australian woolgrowers. It has been in existence since 1936, but prior to its reconstitution in 1953, it was called the Australian Wool Board.

The Bureau consists of seven members appointed by the Governor-General for a term of three years. Of the seven members, three represent the Australian Wool and Meat Producers' Federation, three the Australian Woolgrowers' and Graziers' Council and one member is nominated by the Commonwealth Government.

The present structure and functions of the Wool Bureau are laid down by the Wool Use Promotion Act 1953–1960. The principal function of the Bureau is the promotion, by publicity and other means, of the use of wool in Australia, and promotion of and research into wool in overseas countries. The Bureau is also empowered to perform other approved functions for the benefit of the wool industry in Australia.

The Bureau is associated with the New Zealand Wool Board and the South African Wool Board in maintaining the International Wool Secretariat, which was founded in 1937 to promote the use of wool throughout the world by publicity, education and research on behalf of the three bodies.

Finance for the Wool Bureau's activities is provided by woolgrowers through the wool promotion levy (see para. 9. below), and supplemented by income from wool stores under the Bureau's administration (see (iii) below).

(ii) *Wool Statistical Service.* In 1953, the Australian Wool Bureau took over the statistical division of the former Australian Wool Realization Commission. As the Wool Statistical Service of the Australian Wool Bureau, this unit publishes detailed statistical analyses by type and quality of wool sold at auction in Australia, and also publishes regularly wool price reports and other statistical data on the Australian wool clip.

A Statistical Service Committee consisting of representatives of the Australian Wool Bureau, the Commonwealth Statistician, wool buyers, woolgrowers and wool-selling brokers acts in an advisory capacity to the Australian Wool Bureau.

The Wool Statistical Service is financed out of the income received by the Wool Bureau from wool stores under its control and from an annual contribution by the Commonwealth Government.

(iii) *Wool Stores.* Some three hundred wool stores, formerly the property of the Joint Organization and purchased from it by the Commonwealth Government, were transferred to the ownership of the Australian Wool Bureau by virtue of the Wool Stores Act 1953. The Bureau formally assumed control of these stores on 11th January, 1954, and at the same time received a substantial sum of money representing accumulated rentals and receipts from sales which had come to hand while the stores were held by the Commonwealth Government. Under the Act, the Bureau may dispose of these stores only with the permission of the Minister for Primary Industry and, in the event of war, may be required to return the stores without compensation to the Commonwealth Government. The stores are let by the Wool Bureau as a commercial proposition. The rental income is used to meet the expenses of maintaining, managing and insuring the stores, to defray the cost of operating the Wool Statistical Service and to help finance the wool promotion activities of the Bureau.

9. *Wool Levy.*—In 1936, legislation was passed providing for the collection from wool-growers of a levy on all shorn wool produced in Australia (Wool Tax Act 1936 and Wool Tax Assessment Act 1936). The object of the levy was to finance a scheme for wool promotion and research, administered by the Australian Wool Board.

Initially, the rate of the levy was 6d. a bale. Legislation passed in 1945 raised the levy to 2s. a bale, and made other arrangements for the financing of wool research, so that the entire proceeds of the wool levy became available for wool promotion. Between 1946 and 1952, the wool levy was collected as part of a charge levied on woolgrowers to finance the post-war wool disposals scheme (under Wool (Contributory Charge) legislation). For details see Year Book No. 40, pages 675 and 819.

Following the termination of the disposals scheme, separate collection of the wool levy was resumed with the passage of the Wool Tax Acts (Nos. 1 and 2) 1952. These Acts provided for the rate of levy to be prescribed within the limits of 2s. and 5s. a bale. The operative rate of the levy was set at 4s. a bale, and this rate remained unaltered until 1960.

In 1957, new Wool Tax Acts were passed to provide for the collection from woolgrowers, as part of the wool levy, of a contribution for wool research. The wool levy thus became a composite charge consisting of the wool promotion levy (i.e., the amount collected for wool promotional purposes), which was left unchanged at 4s. a bale, and the wool research levy, which was fixed at 2s. a bale.

In 1960, the wool promotion levy was raised to 5s. a bale, and the following year amending legislation set the levy for 1961–62 at 10s. a bale. However, the operation of this rate was subsequently extended for the year 1962–63. The wool research levy has remained unchanged at 2s. a bale since 1957.

The imposition and collection of the wool levy is governed by three complementary Acts, the Wool Tax Acts (Nos. 1 and 2) 1957–1962 and the Wool Tax Assessment Act 1936–1962.

10. *Wool Research.*—When the Australian Wool Board came into being in 1936, it adopted the role of co-ordinating and fostering the work of the various Australian institutions engaged in research for the benefit of the wool industry. Annual grants were made by the Board to support this work.

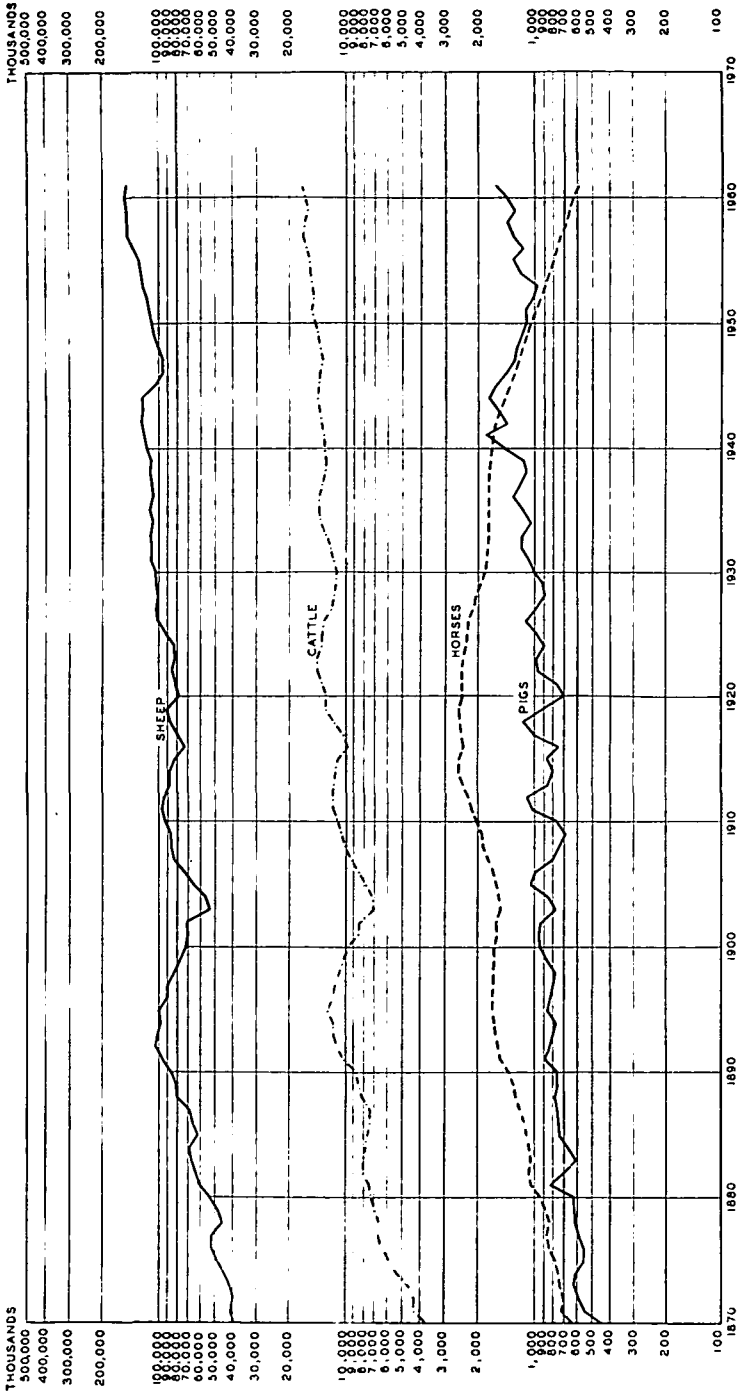
The Wool Use Promotion Act 1945 relieved the Australian Wool Board of its research responsibilities and established the Wool Research Trust Account, into which the Commonwealth Government paid annually a sum equivalent to 2s. for each bale of shorn wool on which Wool Tax had been collected. Subsequently, additional finance was made available for wool research through the Wool Industry Fund (a fund created in 1946 from certain war-time profits of the Central Wool Committee). The research funds were administered by an inter-departmental committee and, from 1955 onwards, the wool industry also had representatives on the Committee which then became known as the Wool Research Committee. The recommendations of the Committee were subject to the approval of a panel of Ministers.

The Wool Research Act 1957 and associated legislation altered the research arrangements as follows.

- (a) A wool research levy of 2s. a bale was imposed on woolgrowers.
- (b) The Government contribution to wool research was increased to 4s. a bale.
- (c) A single fund for wool research, known as the Wool Research Trust Fund, was established which amalgamated the Wool Research Trust Account and the Wool Industry Fund. The use of this fund is limited to sheep and wool research and associated matters.

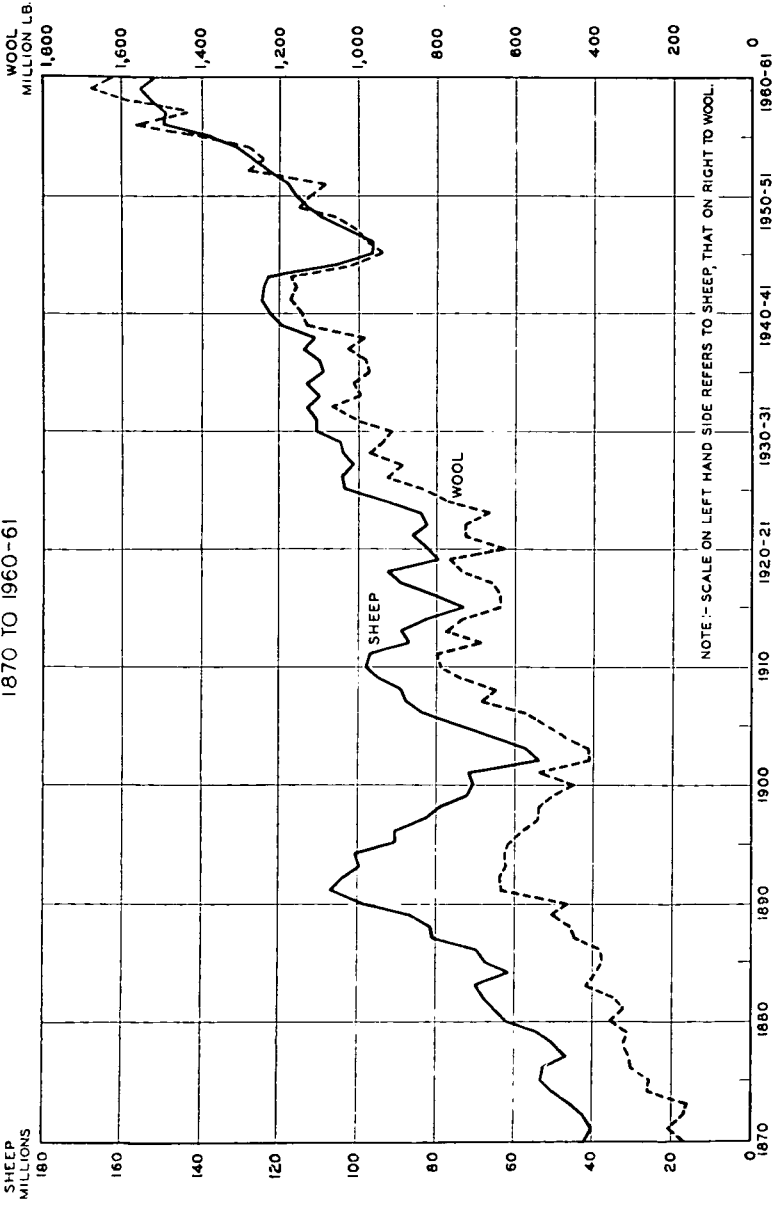
# LIVESTOCK: AUSTRALIA, 1870 to 1961

## RATIO GRAPH



NOTE:- VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE. ACTUAL NUMBERS ARE INDICATED BY SCALE.

# SHEEP NUMBERS AND WOOL PRODUCTION : AUSTRALIA 1870 TO 1960-61



(d) A statutory body known as the Wool Research Committee was set up to administer the Wool Research Trust Fund. The Committee consists of representatives of the Australian Woolgrowers' and Graziers' Council and the Australian Wool and Meat Producers' Federation, the Australian Wool Bureau, textile manufacturers, the C.S.I.R.O., Universities engaged in wool research and the Department of Primary Industry. There is also an observer representing the Australian Agricultural Council. The recommendations of the Committee are subject to the approval of the Minister for Primary Industry.

The greater part of the annual budget for wool research is allocated to the C.S.I.R.O. for biological and textile research in connexion with the wool industry. Allocations are also made to Universities to provide facilities for post-graduate training and research, and to State Departments of Agriculture for applied research and extension work. Funds are also provided for economic research relating to wool carried out by the Bureau of Agricultural Economics, a division of the Commonwealth Department of Primary Industry. The economic research work falls into two main categories, namely, farm production economics dealing with economics of wool growing and sheep-station management generally, and commodity research dealing with the economic aspects of the wool industry in Australia and of wool as a commodity in world trade.

11. **The Australian Wool Testing Authority.**—This body was established under the Australian Wool Testing Authority Act 1957. Its control is vested in seven members who represent wool buyers, wool selling brokers, wool processors, the Australian Wool Bureau, the C.S.I.R.O. and the Commonwealth Government (two members, of whom one is an officer of the Department of Primary Industry).

The Authority has laboratories in Melbourne, Sydney and Perth, and sampling centres in most Australian wool auction markets. Its services are used extensively by exporters of scoured and carbonized wool to determine accurately the moisture content of wool for invoicing purposes. Many wool traders also seek yield tests on greasy wool. Apart from these and other tests to measure the properties of wool which are of commercial importance, the Authority carries out various performance tests on wool textiles.

The initial capital of the Authority was provided by loans from the Commonwealth Government. However, the Authority is expected to meet its financial obligations from its revenue. This comes from charges made for tests performed and certificates issued.

The Authority is listed by the International Wool Textile Organization as a public testing body, and its certificates have world-wide acceptance.

12. **Consumption of Wool.**—(i) *Consumption of Raw Wool.* Statistics of raw wool consumption published in recent years for the purposes of broad international comparisons are based on the quantities of scoured or carbonized wool used on the woollen and worsted systems (mill consumption), plus quantities used in such processes as felting. Consumption estimates compiled on this basis have obvious defects, as they disregard oversea trade in semi-processed wool (e.g., tops and yarns) as well as woollen goods. Estimates of raw wool used on the woollen and worsted systems and by felt manufacturers in Australia are shown in the following table for the years 1956–57 to 1960–61.

ESTIMATED CONSUMPTION OF RAW WOOL IN AUSTRALIA.  
(<sup>000</sup> lb.)

Year.	Greasy Basis.			Clean Basis.		
	Used on Woollen and Worsted Systems.	Used for Felt Manufacture (including Hats).	Total.	Used on Woollen and Worsted Systems.	Used for Felt Manufacture (including Hats).	Total.
1956–57 .. ..	108,255	5,218	113,473	65,504	2,479	67,983
1957–58 .. ..	103,704	4,480	108,184	63,153	2,128	65,281
1958–59 .. ..	103,180	3,992	107,172	62,834	1,896	64,730
1959–60 .. ..	123,529	5,092	128,621	75,226	2,419	77,645
1960–61 .. ..	110,382	3,480	113,862	67,221	1,653	68,874

(ii) *Consumption of Locally Processed Wool.* As considerable quantities of tops, noils and yarn are exported from Australia, the series on raw wool consumption shown above is over-stated to this extent. The series entitled "Estimated Consumption of Locally Processed Wool in Australia" provides a more reliable indication of wool consumption in Australia, as allowance has been made for exports of wool in semi-processed form. This series is shown in the following table for the years 1956-57 to 1960-61. Briefly, the series measures consumption of wool in terms of yarn used in Australian mills and other factories to produce woollen cloth and other woollen goods, yarn used for hand knitting purposes, and scoured wool used for felt manufacture. No allowance has been made for oversea trade in woollen piece goods, clothing, etc., because of the obvious difficulties of estimating accurately the wool content of these products.

#### ESTIMATED CONSUMPTION OF LOCALLY PROCESSED WOOL IN AUSTRALIA.

('000 lb.)

Year.	Greasy Basis.				Clean Basis.			
	Worsted Yarn Used. (a)(b)	Woollen Yarn Used. (b)	Scoured Wool used for Felt Manufacture (including Hats).	Total.	Worsted Yarn Used. (a)(b)	Woollen Yarn Used. (b)	Scoured Wool used for Felt Manufacture (including Hats).	Total.
1956-57 ..	44,325	30,093	5,218	79,636	26,172	18,737	2,479	47,388
1957-58 ..	40,716	32,288	4,480	77,484	24,201	20,253	2,128	46,582
1958-59 ..	37,972	29,272	3,992	71,236	22,811	18,520	1,896	43,227
1959-60 ..	45,456	35,442	5,092	85,990	27,070	22,169	2,419	51,658
1960-61 ..	44,225	34,994	3,480	82,699	26,340	21,886	1,653	49,879

(a) Includes hand knitting yarns used.  
of wool and other fibres.

(b) Includes wool content of yarns containing a mixture

13. *Exports of Wool.*—(i) *Quantities.* (a) *Greasy.* Prior to the 1939-45 War, Australian greasy wool exported overseas was sent principally to the United Kingdom and other European countries. During the 1939-45 War, exports to the United States of America showed great expansion but have since dwindled to slightly more than 1 per cent. Of the total shipments in 1960-61, 33 per cent. went to Japan, 17 per cent. to the United Kingdom, 12 per cent. to France, 8 per cent. to Italy and 8 per cent. to Belgium-Luxembourg. The following table shows the quantities of greasy and slipe wool exported, and the principal countries of consignment.

#### EXPORTS OF GREASY AND SLIPE WOOL: AUSTRALIA.

('000 lb. actual weight.)

Country of Consignment.	1956-57.	1957-58.	1958-59.	1959-60.	1960-61.
United Kingdom .. ..	306,504	251,305	305,888	266,297	217,318
Other Commonwealth Countries .. ..	12,242	8,643	10,803	11,796	10,636
Japan .. ..	233,036	203,988	273,503	335,296	411,782
France .. ..	215,150	179,480	157,871	161,844	155,378
Italy .. ..	123,438	130,062	113,156	130,516	105,790
Belgium-Luxembourg .. ..	105,963	102,197	103,261	105,974	105,023
Germany, Fed. Rep. of .. ..	82,897	66,117	60,070	70,223	60,931
United States of America .. ..	37,454	21,235	28,299	24,323	17,234
Other Foreign Countries .. ..	92,509	119,279	134,138	188,081	175,048
<b>Total .. ..</b>	<b>1,209,193</b>	<b>1,082,306</b>	<b>1,186,989</b>	<b>1,294,350</b>	<b>1,259,140</b>

(b) *Scoured and Washed and Carbonized.* The exports of "scoured and washed" wool, whether carbonized or not, are shown in the following table according to principal countries of destination.



**EXPORTS OF WOOL—SCOURED AND WASHED AND CARBONIZED:  
AUSTRALIA.**

('000 lb. actual weight.)

Country of Consignment.	1956-57.	1957-58.	1958-59.	1959-60.	1960-61.
United Kingdom .. ..	24,298	19,525	24,597	24,661	20,234
Canada .. ..	3,220	3,901	4,803	5,375	5,339
Other Commonwealth Countries	1,538	1,857	1,941	2,318	2,193
United States of America ..	13,294	13,575	14,815	14,482	19,345
Germany, Fed. Rep. of ..	10,583	12,252	8,692	9,406	8,470
Italy .. ..	7,671	7,405	7,117	8,668	7,691
Japan .. ..	3,890	720	4,325	4,345	6,105
France .. ..	6,245	6,205	3,732	3,842	4,659
Belgium-Luxembourg ..	4,017	2,734	1,754	1,855	1,504
Other Foreign Countries ..	15,928	20,068	18,775	25,574	21,732
<b>Total .. ..</b>	<b>90,684</b>	<b>88,242</b>	<b>90,551</b>	<b>100,526</b>	<b>97,272</b>

(c) *Tops, Noils and Waste.* Particulars of the exports of tops, noils and waste are shown in the following table.

**EXPORTS OF WOOL TOPS, NOILS AND WASTE: AUSTRALIA.**

('000 lb. actual weight.)

Particulars.	1956-57.	1957-58.	1958-59.	1959-60.	1960-61.
Tops .. ..	14,949	16,921	20,203	22,743	16,694
Noils .. ..	4,578	3,298	4,355	4,017	4,372
Waste—Soft wool .. ..	14,668	3,484	7,742	5,607	2,322
Hard wool .. ..	4,428	3,195	4,388	3,193	3,089

(d) *Total Quantity of Exports.* The following table shows the estimated greasy and clean weights of exports of raw and semi-processed wool for the years 1956-57 to 1960-61. As the figures in the following table are in terms of "greasy" or "clean" basis, they differ from those in the preceding tables which represent actual weight shipped.

**EXPORTS OF WOOL—GREASY AND CLEAN BASES: AUSTRALIA.**

('000 lb.)

Particulars.	1956-57.	1957-58.	1958-59.	1959-60.	1960-61.
<b>GREASY BASIS.</b>					
<i>Raw Wool—</i>					
Greasy and Slips .. ..	1,209,840	1,082,724	1,187,399	1,294,598	1,259,448
Scoured and Washed and Carbonized .. ..	171,848	164,019	169,021	186,217	179,913
Exported on Skins .. ..	69,144	83,019	92,308	111,744	115,539
<b>Total .. ..</b>	<b>1,450,832</b>	<b>1,329,762</b>	<b>1,448,728</b>	<b>1,592,559</b>	<b>1,554,900</b>
<i>Semi-processed Wool—</i>					
Tops .. ..	27,058	30,627	36,365	41,620	30,550
Yarn .. ..	149	158	128	89	415
<b>Total .. ..</b>	<b>1,478,039</b>	<b>1,360,547</b>	<b>1,485,221</b>	<b>1,634,268</b>	<b>1,585,865</b>
<b>CLEAN BASIS.</b>					
<i>Raw Wool .. ..</i>	841,371	760,229	827,418	911,389	892,773
<i>Semi-processed Wool .. ..</i>	16,080	18,364	21,690	24,841	18,433
<b>Total .. ..</b>	<b>857,451</b>	<b>778,593</b>	<b>849,108</b>	<b>936,230</b>	<b>911,206</b>

(ii) *Total Value of Exports.* The value of wool (other than wool on sheepskins) exported from Australia during 1960-61 was 35 per cent. of the total value of exports of merchandise of Australian origin, while the proportion for the five years ended 1960-61 averaged 40 per cent. The value for the five years ended 1960-61, together with the principal countries to which wool was exported, is shown in the following table.

VALUE OF WOOL EXPORTS: AUSTRALIA.(a)  
(£'000.)

Country of Consignment.	1956-57.	1957-58.	1958-59.	1959-60.	1960-61.
United Kingdom .. .. .	117,372	79,582	73,102	75,947	55,559
Other Commonwealth Countries .. .. .	9,920	8,026	7,762	9,567	9,097
Japan .. .. .	103,770	74,301	68,923	95,626	105,918
France .. .. .	73,494	52,831	34,162	40,040	35,125
Italy .. .. .	47,905	41,709	28,181	38,556	27,097
Belgium-Luxembourg .. .. .	32,987	24,592	15,417	20,733	15,916
Germany (Federal Republic) .. .. .	29,608	22,130	16,479	19,774	18,343
United States of America .. .. .	20,705	12,864	11,270	12,436	10,708
Other Foreign Countries .. .. .	47,963	57,362	46,947	73,474	56,679
<b>Total .. .. .</b>	<b>483,724</b>	<b>373,397</b>	<b>302,243</b>	<b>386,153</b>	<b>334,442</b>

(a) Excludes wool exported on sheepskins.

14. *Stocks of Wool.*—Stocks of raw wool held in Australia at 30th June, 1961, amounted to 252.3 million lb. (greasy basis) of which 64.3 million lb. (40.7 million lb. as greasy and 23.6 million lb. as scoured and carbonized) were held by woollen mills, wool scourers and fellmongers, and 188.0 million lb., assumed to be all greasy, were held by brokers. Of the wool held by brokers, 62.8 million lb. were unsold wool and 125.2 million lb. were sold wool held awaiting shipment. These stocks exclude wool on skins, since this wool is not recorded as production until fellmongered in Australia or exported on skins.

15. *Price.*—Wool is the chief factor in the pastoral wealth of Australia, and the nation's prosperity is largely dependent upon its satisfactory sale. Auction sales are conducted at Sydney, Goulburn, Newcastle, Albury, Melbourne, Geelong, Ballarat, Brisbane, Adelaide, Perth, Albany, Hobart and Launceston, and are attended by buyers representing manufacturers and merchants in the United Kingdom, France, the United States of America, Japan, U.S.S.R. and many other countries. More than 95 per cent. of the Australian wool clip is now disposed of at auction in Australia. During the five years ended 1960-61, the price of greasy wool sold in the selling centres of Australia averaged 60.0d. per lb. compared with the average selling price of 11.5d. per lb. during the ten years ended 1938-39. The average for the nine years ended 1928-29 was 18d. per lb., and for the seven years ended 1913-14, 9d. per lb.

As indicated in para. 7 above, the price of wool during the 1939-45 War was determined by the British Government wool contract. With the return to auction sales since 1945-46, the average price of greasy wool sold rose rapidly from the contract price of 15.45d. per lb. applicable in 1945-46 to the unprecedented level of 144.19d. per lb. in 1950-51. This was followed by a sharp fall, and prices in the years 1951-52 to 1958-59 fluctuated in the range 49d. to 82d. The average price of greasy wool sold was 57.8d. in 1959-60 and 52.1d. in 1960-61.

The prices quoted above, except for United Kingdom contract prices, are as compiled by the National Council of Wool Selling Brokers and represent the average price realized for all greasy wool, of whatever type or quality, marketed during the years indicated.

16. *Value.*—Fluctuation in Australian wool prices has a marked effect on the nation's rural and national income. In 1945-46, the gross value of wool production was £58,597,000, representing 17.4 per cent. of the gross value of all rural industries, while in 1950-51, when prices reached a peak, wool was valued at £651,902,000 or 55.6 per cent. of the total for all rural industries. The value of wool production fell in subsequent years even though the quantity produced increased substantially, and in 1960-61 was £340,431,000. This figure represented 24.8 per cent. of the gross value of rural industries.

Details of the value of wool production for the years 1956-57 to 1960-61 are shown in the following table.

**ESTIMATED GROSS VALUE OF TOTAL WOOL PRODUCTION.(a)**  
(£'000.)

Season.	N.S.W.	Vic.	Qld.	S. Aust.	W.Aust.	Tas.	N.T.(b)	A.C.T.	Aust.
1956-57 ..	217,124	97,659	77,522	57,289	46,965	9,974	106	976	507,615
1957-58 ..	143,337	76,255	53,836	42,354	39,209	7,742	67	606	363,406
1958-59 ..	134,764	59,471	45,075	33,797	30,915	6,844	36	513	311,415
1959-60 ..	168,112	75,952	54,573	42,691	39,334	8,254	35	810	389,761
1960-61 ..	138,881	69,265	50,859	35,242	38,312	7,229	29	614	340,431

(a) Includes shorn, dead and fellmongered wool and wool exported on skins. Payments to woolgrowers of profits from the war-time wool disposal scheme, which were virtually completed by 30th June, 1959, have been excluded.  
(b) Estimated.

17. **United Kingdom Importation of Wool.**—The important position which Australia occupies in the supply of wool to the United Kingdom is indicated in the following statement of the quantities of wool imported into that country from the principal wool-producing countries during each year 1957 to 1961.

**WOOL(a): IMPORTS INTO UNITED KINGDOM.**

(Source: Board of Trade Accounts relating to Trade and Navigation of the United Kingdom.)

('000 lb.)

Country of Origin.	1957.	1958.	1959.	1960.	1961.
Australia .. .. .	315,310	292,407	333,565	265,252	223,204
India .. .. .	18,975	12,882	14,071	12,129	11,186
New Zealand .. .. .	166,050	168,241	170,882	161,035	161,176
Pakistan .. .. .	10,914	9,835	11,371	14,881	13,403
Other Commonwealth Countries .. .. .	11,410	9,671	10,544	10,050	11,790
Argentina .. .. .	32,484	29,088	55,022	54,587	57,466
Chile .. .. .	10,838	15,061	10,864	11,652	15,676
France .. .. .	16,657	18,727	23,689	12,143	11,826
Ireland, Republic of .. .. .	11,720	10,905	14,643	12,864	15,075
South Africa, Republic of .. .. .	45,563	52,594	64,883	48,405	45,630
Uruguay .. .. .	17,448	23,353	15,096	20,587	49,393
Other Foreign Countries .. .. .	17,978	15,825	27,050	21,925	21,195
<i>Total Quantity</i> .. .. .	<i>675,347</i>	<i>658,589</i>	<i>751,680</i>	<i>645,510</i>	<i>637,020</i>
Total Value (£'000 sterling) .. .. .	188,754	134,001	146,801	134,347	127,844

(a) Greasy, Slipe, Washed and Scoured, and Carbonized.

Australian wool represented 35 per cent. of the total quantity imported into the United Kingdom during 1961. New Zealand supplied 25 per cent., while the total quantity received from Commonwealth countries constituted 66 per cent. of all United Kingdom imports of wool.

18. **Principal Importing Countries and Sources of Supply.**—The following table, prepared from information published by the Commonwealth Economic Committee, furnishes, in respect of the principal importing countries, details of their production and imports of wool for 1960 together with the chief sources of supply. The quantities imported refer to the actual weight of wool, without distinguishing between greasy and scoured, except in the case of the United States of America, where estimated clean content of raw wool is quoted.

**WOOL: PRINCIPAL IMPORTING COUNTRIES AND SOURCES OF SUPPLY, 1960.**

(Source: Information published by Commonwealth Economic Committee.)  
(Million lb.)

Importing Country.	Pro- duction of Importing Country. (a)	Quantity Imported from— (b)					Total Imports.
		Australia.	New Zealand.	Republic of South Africa.	Argen- tina.	Other Countries.	
United Kingdom ..	121	265.3	161.0	48.4	54.6	116.2	645.5
Belgium .. ..	(c)	104.1	35.2	(c)	15.7	34.5	189.5
France .. ..	57	167.7	104.0	50.7	29.4	22.6	374.4
Germany (Federal Republic) ..	(c)	68.0	32.5	34.4	22.3	52.3	209.5
Italy .. ..	32	133.2	24.4	26.9	25.2	66.3	276.0
Japan .. ..	(c)	350.6	18.8	14.4	23.8	9.5	417.1
United States of America(d) ..	323	26.5	55.2	17.4	52.7	76.4	228.2

(a) Greasy basis, 1960-61. (b) Actual weight of greasy and scoured wool. (c) Not available. (d) Imports are in terms of estimated clean content of greasy and scoured wool. Actual weight of total United States of America imports was 309.4 million lb.

As a considerable transit trade exists between continental countries, it must not be assumed that the whole of the imports recorded by these countries is retained for their own consumption. The countries chiefly concerned with the transit trade are the United Kingdom (8 per cent. of total imports re-exported in 1960) and Belgium.

**§ 7. Oversea Trade in Hides and Skins.**

1. **Extent of Trade.**—In addition to the hides and skins treated locally, considerable quantities are exported. The value of cattle and horse hides, sheep and other skins, and skin pieces, sent overseas during 1960-61 amounted to £27,194,000, compared with a total of £31,779,000 in 1959-60 and £23,572,000 in 1958-59.

2. **Export of Sheepskins.**—(i) *With Wool.* Of the total exports of sheepskins with wool, amounting to 172,066,000 lb. valued at £21,429,000 during 1960-61, 120,946,000 lb. valued at £14,757,000 (69 per cent. of total value) were shipped to France, 16,497,000 lb. valued at £2,392,000 (11 per cent.) to Italy, and 15,448,000 lb. valued at £1,819,000 (8 per cent.) to the United Kingdom. In the previous year, France obtained about 73 per cent. (by value) of all sheepskins with wool exported, Italy 10 per cent. and the United Kingdom 8 per cent. The exports of sheepskins with wool during each of the years 1956-57 to 1960-61 were as follows.

**EXPORTS OF SHEEPSKINS WITH WOOL: AUSTRALIA.**

Particulars.	1956-57.	1957-58.	1958-59.	1959-60.	1960-61.
Number .. .. '000	14,239	19,441	20,180	25,560	26,883
Value .. .. £'000	19,438	20,219	14,768	23,238	21,429

(ii) *Without Wool.* Up to 1943-44, sheepskins without wool were exported chiefly to the United States of America. During 1943-44, that country accounted for 97 per cent. of the total shipments. In subsequent years, however, there has been a decline in the proportion shipped to the United States of America. In 1958-59, the United States received 66 per cent., but in 1959-60 and 1960-61 only 28 and 11 per cent. respectively. In the latter year, the United Kingdom was the main importer, taking 24 per cent. (value, £32,102), while Finland purchased 16 per cent (value, £21,604). In 1960-61, a total of 768,000 sheepskins without wool were exported, valued at £135,000. Since 1954-55, the number exported has exceeded two million only once (in 1958-59), and the value has fluctuated about £350,000.

3. **Hides.**—(i) *Exports.* The export trade in cattle hides and calfskins during 1960-61 was distributed amongst the main importing countries as follows:—Japan, £2,230,000; Italy, £260,000; the Netherlands, £200,700; and Germany (Federal Republic), £183,000. The total quantity exported was 43,985,150 lb., valued at £3,453,000.

(ii) *Imports.* The imports of cattle hides and calfskins are fairly substantial, the chief sources of supply being New Zealand and the Pacific Islands. The quantity of cattle hides, including calfskins, imported into Australia during the year 1960-61 amounted to 12,280,000 lb. valued at £1,208,000, the highest figures attained since 1953-54.

4. *Furred Skins.*—The exports of furred skins in 1960-61 were valued at £1,485,000, of which rabbit and hare skins constituted £957,000. This is considerably less than the highest total value of £2,013,000, recorded in 1955-56, when rabbit and hare skins accounted for £1,711,000. In 1959-60, they accounted for £1,156,000 out of a total of £1,755,000.

Skins were shipped principally to the United States of America, the United Kingdom, Belgium and Luxembourg, the values shipped to each in 1960-61 being:—United States of America, £944,900; United Kingdom, £269,800; and Belgium-Luxembourg, £111,800.

5. *Marketing of Hides and Skins.*—(i) *Sheepskins with Wool.* Details of the agreement between the United Kingdom and Commonwealth Governments for the purchase by acquisition of the "exportable surplus" of woolled sheepskins in Australia during the 1939-45 War were given in Official Year Book No. 37, page 886. The contract expired on 30th June, 1946, and sheepskins have since been marketed mostly at open auction.

(ii) *Sheep and Lamb Pelts.* Details of the marketing control of sheep and lamb pelts were given in Official Year Book No. 38, page 930. Pelts have since reverted to open marketing without export restrictions.

(iii) *Hides and Leather.* A hide acquisition and marketing scheme operated from November, 1939, to August, 1954. The Australian Hide and Leather Industries Board, which administered the scheme, acquired all cattle hides and yearling and calf skins produced in Australia at set prices and allocated them to tanners at these prices. Further details of the war-time operations of the scheme will be found in Official Year Book No. 37, page 887, and Official Year Book No. 38, pages 930-1.

Pre-war, about 40 to 45 per cent. of Australian production of cattle hides and calf skins was exported but, with the development of the local tanning industry, the proportion is now in the vicinity of 30 per cent.

(iv) *Rabbit Skins.* A marketing control scheme for rabbit skins was introduced under the National Security (Rabbit Skins) Regulations on 10th June, 1940, and terminated in April, 1949. Details of the scheme will be found in Official Year Book, No. 38, page 931.

## § 8. Tallow.

1. *Consumption of Tallow in Factories.*—Details of consumption are collected from the principal factories using tallow. Consumption of inedible tallow in these factories (soap and candle, chemical and woollscouring works) for the five years 1956-57 to 1960-61 was as follows:—1956-57, 1,207,578 cwt.; 1957-58, 1,280,984 cwt.; 1958-59, 1,216,668 cwt.; 1959-60, 1,277,542 cwt.; 1960-61, 1,161,504 cwt. These figures are, however, deficient to the extent that no allowance has been made for small unrecorded amounts used in other types of establishments. Details of edible tallow consumed in factories are not available.

2. *Exports of Tallow.*—Particulars of exports of edible and inedible tallow are shown in the following table for the five years 1956-57 to 1960-61.

TALLOW: EXPORTS, AUSTRALIA.  
(cwt.)

Particulars.	1956-57.	1957-58.	1958-59.	1959-60.	1960-61.
Edible .. .. .	120,194	116,986	74,053	118,848	50,436
Inedible .. .. .	936,951	878,060	1,022,844	1,533,734	968,535
<b>Total .. .. .</b>	<b>1,057,145</b>	<b>995,046</b>	<b>1,096,897</b>	<b>1,652,582</b>	<b>1,018,971</b>

3. *Marketing of Tallow.*—Reference is made in Official Year Book, No. 47, page 976, to the now inoperative contracts relating to the sale of tallow to the United Kingdom.

## § 9. Exports of Principal Pastoral Products of Australia.

The quantities and values of the principal pastoral products of Australia exported for the years 1958-59 to 1960-61 were as follows.

## EXPORTS OF PASTORAL PRODUCTS: AUSTRALIA.

Product.	Unit of Quantity.	Quantity.			Value (£'000.)		
		1958-59.	1959-60.	1960-61.	1958-59.	1959-60.	1960-61.
Animals (living)—							
Cattle .. .. .	No.	13,900	13,602	10,159	493	456	404
Horses .. .. .	"	300	1,927	922	161	487	350
Sheep .. .. .	"	135,720	225,757	147,592	393	805	461
Bones .. .. .	'000 cwt.	13	7	5	19	9	8
Gelatine (Edible) .. .. .	'000 lb.	1,280	1,329	1,739	239	237	325.
Glycerine .. .. .	"	2,850	690	1,995	210	58	125
Hair and Bristles .. .. .	cwt.	2,652	5,606	2,495	89	111	124
Hoofs .. .. .	"	9,072	5,447	1,903	15	9	4
Horns .. .. .	"	15,321	9,155	6,543	66	56	39
Meats—							
Frozen Beef and Veal(a) .. .. .	'000 lb.	510,239	421,576	300,192	55,486	55,464	40,110
" Mutton and Lamb .. .. .	"	165,842	131,027	147,505	14,002	9,108	13,227
" Rabbits and Hares .. .. .	Value only	..	..	..	3,047	2,822	2,778
" Other .. .. .	"	..	..	..	5,461	5,089	4,296
Preserved in Tins, etc. .. .. .	'000 lb.	127,049	107,649	67,978	15,434	13,319	9,356
Other (excluding Bacon and Ham) .. .. .	Value only	..	..	..	1,435	925	758
Sausage Casings .. .. .	"	..	..	..	2,223	1,768	1,646
Hides and Skins—							
Cattle and Calf .. .. .	'000 lb.	85,324	56,357	43,985	6,490	5,752	3,453
Horse .. .. .	"	1,595	1,723	1,834	99	173	121
Sheep and Lamb .. .. .	'000.	22,249	26,003	27,651	15,200	24,652	21,564
Rabbit and Hare .. .. .	'000 lb.	4,444	2,921	2,587	1,288	1,156	954
Tallow (Edible and Inedible) .. .. .	'000 cwt.	1,097	1,653	1,019	4,488	5,079	3,378
Wool—							
Greasy and Slips .. .. .	'000 lb.	1,186,989	1,294,350	1,259,140	264,490	337,394	296,541
Scoured, Tops, Noils, Waste .. .. .	"	127,240	136,086	123,749	37,753	48,759	37,901

(a) Includes chilled beef.