

**STATISTICAL BULLETIN:**

**WOOL PRODUCTION  
AND  
UTILISATION**

**No. 18 1969-70**



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STATISTICAL BULLETIN : WOOL PRODUCTION AND UTILISATION, AUSTRALIA

NO. 18 : 1969-70

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SYMBOLS USED IN THIS BULLETIN

- n.a. Not available
- p. Preliminary. Subject to revision
- .. Nil or less than half the final digit shown, or not applicable

NOTE. Any discrepancies between totals and sums of components in tables are due to rounding.

FOREWORD

This bulletin contains statistics of wool production and utilisation for 1969-70, and comparisons with earlier years. Details of clean wool yields and conversion factors used in compiling the statistics are shown in Section IV. These yields and factors are currently being reviewed. More detailed statistics of wool production, including State data, numbers of sheep and lambs shorn and average fleece weights are shown in Tables 2 and 3. Particulars of wool selling brokers' receipts, disposals, and stocks of new season's wool are shown in Table 7. Tables have also been included showing world production and consumption of raw wool and exports of raw wool according to principal countries of consignment.

Attention is drawn especially to the two series of calculations on Australian wool consumption shown in tables throughout this bulletin. The first, Consumption of Raw Wool, measures consumption in terms of scoured wool used by mills (on the woollen and worsted systems) and for the manufacture of felt (including hats) (e.g., see Table 9); this series has been included mainly for the purpose of comparisons with similar data published for many overseas countries. The other series shown, Consumption of Processed Wool, is calculated from the usage of woollen and worsted yarn (including wool and other fibre mixtures) and scoured wool for felt manufacture (including hats) (e.g., see Table 11); it is considered to be a more satisfactory measure of Australian wool consumption, principally because allowance is made for significant quantities of wool tops exported. However, both series relate to "consumption" of wool by the wool textile industry, and should not be used as measures of consumption in terms of retail purchases. It has not been possible to estimate wool consumption at the retail level because of the impracticability of obtaining reliable data concerning the wool content of the multiplicity of woollen and worsted piece-goods and finished articles exported and imported and held as stocks by manufacturers, wholesalers and retailers.

To correspond with the two series relating to wool consumption, wool exports and imports also are expressed in total in two series, namely, Raw Wool and Total Wool (raw wool plus semi-processed wool). Wool exported on skins is included in raw wool exports.

For the purposes of this publication, unless otherwise stated, raw wool is greasy, slipe, scoured and/or carbonised wool. Semi-processed wool includes wool tops, woollen and worsted yarn and unprocessed felt. Wool processors include scourers, carbonisers, top makers, yarn spinners and fellmongers.

The statistics are shown, mainly in terms of "greasy basis" (greasy equivalent weight).

Provision in these statistics for the production and usage of the by-products of carding, combing and spinning (noils, fettlings and waste) presents a special problem and the method of treatment of these by-products is described under Section IV - Wool Yields and Conversion Factors, (1) General Notes.

Early in 1970, a survey was conducted to obtain estimates of the number of wool presses on rural holdings, by type and age at the 31 December 1969. Tables showing the results of the survey together with explanatory notes are contained in Section V.

## I. SUMMARY

The principal statistics of Australian wool production and utilisation for the years 1965-66 to 1969-70 are summarised in the following table. The differences between total production and the sum of exports and consumption are accounted for principally by changes in stocks and imports, particulars of which will be found in the detailed tables in Section II.

The estimates of wool consumption shown represent usage by the Australian wool textile industry, measured in the terms described by footnotes (d) and (e). As mentioned in the forward, the figures do not necessarily illustrate accurately trends in retail consumption of wool, principally because no allowance has been made for the wool content of changes in stocks, and of exports and imports of woollen and worsted piece-goods and finished articles. Imports of woollen and worsted piece-goods vary considerably from year to year.

TABLE 1. - SUMMARY OF STATISTICS OF WOOL PRODUCTION AND UTILISATION: AUSTRALIA

(million lb greasy basis)

Year ended 30 June	Total wool production (a)	Exports of wool (a)		Consumption of wool	
		Raw (b)	Total (c)	Raw (d)	Processed (e)
1966	1,662.8	1,601.5	1,645.1	128.1	79.8
1967	1,762.3	1,632.1	1,677.1	124.0	82.7
1968	1,769.5	1,683.0	1,727.1	130.9	80.0
1969	1,947.8	1,760.6	1,807.6	132.0	77.9
1970p	2,035.7	1,883.2	1,926.0	133.6	83.1

(a) Includes wool exported on skins. (b) Greasy, slip, scoured and carbonised wool. (c) Raw wool plus wool tops and woollen and worsted yarn. (d) Measured as scoured wool used on the woollen and worsted systems and for the manufacture of felt (including hats). (e) Measured as woollen and worsted yarn used for weaving and knitting and scoured wool used for manufacture of felt (including hats).

## II. DETAILED TABLES OF WOOL PRODUCTION AND UTILISATION

TABLE 2. - SHEEP AND LAMB SHORN, PRODUCTION OF SHORN WOOL AND AVERAGE FLEECE WEIGHT

Year ended 30 June	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australia		
	Sheep and lambs						Sheep	Lambs	Sheep and lambs
NUMBER SHORN ('000)									
1966	67,458	37,670	20,712	19,998	25,635	4,318	147,047	29,028	176,074
1967	64,454	37,158	20,229	20,191	28,681	4,517	144,710	30,811	175,522
1968	68,445	35,244	21,041	19,274	31,809	4,572	148,410	32,268	180,679
1969	68,513	34,879	22,002	19,393	35,842	4,632	153,627	31,899	185,526
1970p	72,874	39,612	18,141	21,954	35,530	4,792	157,091	36,074	193,165
SHORN WOOL (INCLUDING CRUTCHINGS) PRODUCED (million lb greasy basis)									
1966	533.5	307.3	173.5	215.4	234.9	36.9	1,415.6	87.8	1,503.5
1967	579.2	314.7	184.0	222.1	261.0	38.7	1,504.1	98.2	1,602.2
1968	603.5	274.8	202.3	202.2	286.3	33.7	1,505.5	99.6	1,605.1
1969	623.4	299.0	225.4	222.6	359.0	41.8	1,660.9	112.3	1,773.2
1970p	702.7	356.4	174.0	255.0	316.3	42.8	1,725.4	122.9	1,848.8
AVERAGE FLEECE WEIGHT (lb greasy weight)									
1966	7.91	8.16	8.38	10.77	9.16	8.56	9.63	3.03	8.54
1967	8.99	8.47	9.10	11.00	9.10	8.56	10.39	3.19	9.13
1968	8.82	7.80	9.62	10.49	9.00	7.37	10.14	3.09	8.88
1969	9.10	8.57	10.25	11.48	10.01	9.02	10.81	3.52	9.56
1970p	9.64	9.00	9.59	11.62	8.90	8.93	10.99	3.41	9.58

TABLE 3. - WOOL PRODUCTION

(million lb)

Year ended 30 June	Greasy basis						
	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Australia (a)
SHORN (INCLUDING CRUTCHINGS)							
1966	533.5	307.3	173.5	215.4	234.9	36.9	1,503.5
1967	579.2	314.7	184.0	222.1	261.0	38.7	1,602.2
1968	603.5	274.8	202.3	202.2	286.3	33.7	1,605.1
1969	623.4	299.0	225.4	222.6	359.0	41.8	1,773.2
1970p	702.7	356.4	174.0	255.0	316.3	42.8	1,849.8
DEAD AND FELLMONGERED							
1966	14.7	4.0	1.8	(b)	3.5	(b)	24.4
1967	14.7	5.3	1.8	(b)	2.9	(b)	24.8
1968	14.7	4.1	1.6	(b)	3.4	(b)	23.9
1969	14.7	5.2	1.8	(b)	3.3	(b)	25.2
1970p	12.7	3.7	1.7	(b)	3.8	(b)	22.2
ESTIMATED QUANTITY EXPORTED ON SKINS							
1966	31.3	55.6	17.4	(b)	9.2	(b)	135.0
1967	28.8	58.4	17.8	(b)	8.7	(b)	135.3
1968	32.2	53.5	22.9	(b)	10.6	(b)	140.5
1969	35.4	60.2	19.8	(b)	13.4	(b)	149.3
1970p	34.4	67.1	20.6	(b)	16.4	(b)	163.7
ESTIMATED TOTAL PRODUCTION							
1966	579.5	366.9	192.8	232.3	247.5	41.9	1,662.8
1967	622.7	378.5	203.7	239.2	272.6	43.2	1,762.3
1968	650.4	332.4	226.8	219.0	300.2	38.3	1,769.5
1969	673.5	364.3	247.0	238.1	375.7	47.0	1,947.8
1970p	749.8	427.2	196.4	275.0	336.5	48.2	2,035.7

(a) Includes Northern Territory and Australian Capital Territory. (b) Not available for publication.

TABLE 4. - EXPORTS OF RAW WOOL ACCORDING TO PRINCIPAL COUNTRIES OF CONSIGNMENT  
AUSTRALIA

Country of consignment	1965-66	1966-67	1967-68	1968-69	1969-70
	Million lb actual weight				
<b>GREASY AND SLIPE</b>					
Belgium - Luxembourg	88.8	98.5	95.9	84.6	85.5
China, Republic of (Taiwan)	10.3	7.0	11.9	22.4	27.2
France	130.9	106.2	120.6	130.8	133.2
Germany, Federal Republic of	91.0	71.2	100.8	96.9	101.6
India	9.2	29.6	21.6	34.0	42.2
Italy	137.4	151.7	123.1	130.7	135.7
Japan	467.6	492.5	498.1	530.4	569.3
Mexico	21.7	22.1	23.9	24.9	15.1
Netherlands	13.1	14.0	15.2	29.0	50.5
Poland	28.4	30.7	35.5	34.5	33.8
Turkey	18.9	20.9	15.6	20.7	14.8
U.S.S.R.	29.5	29.2	46.1	62.0	67.4
United Kingdom	133.7	145.8	143.6	115.9	138.1
United States of America	72.7	55.7	60.2	60.6	46.7
Yugoslavia	17.1	23.6	19.8	18.8	26.6
Other	53.9	69.2	62.5	74.8	83.7
<b>TOTAL</b>	1,324.3	1,367.9	1,394.4	1,471.0	1,571.4
<b>SCOURED AND CARBONISED</b>					
Canada	2.9	3.8	5.1	2.2	2.7
China, Republic of (Taiwan)	1.8	1.5	0.9	1.5	3.2
France	2.9	2.9	2.4	2.3	1.3
Germany, Federal Republic of	7.5	7.1	8.6	6.8	5.4
Greece	1.3	1.1	1.5	1.8	1.3
Hong Kong	2.4	2.8	2.7	4.5	4.3
Iran	4.7	4.7	4.7	4.1	4.9
Italy	7.9	8.0	8.7	7.4	7.7
Japan	5.6	4.2	4.0	3.6	3.5
Korea, Republic of	0.2	1.0	1.8	2.7	1.5
U.S.S.R.	..	2.5	3.7	7.7	15.4
United Kingdom	14.5	16.9	18.9	13.5	13.2
United States of America	27.7	16.2	18.4	19.1	13.9
Other	9.4	7.2	8.6	8.2	10.3
<b>TOTAL</b>	88.8	79.9	90.0	85.4	88.6
<b>TOPS</b>					
Belgium - Luxembourg	0.2	2.2	1.4	1.1	1.5
Canada	3.5	3.4	3.2	3.2	3.3
China, Republic of (Taiwan)	0.2	0.2	0.3	0.5	0.1
Greece	1.6	1.9	1.9	1.9	1.9
Hong Kong	6.9	6.1	7.2	7.8	5.9
Iran	0.6	1.2	0.6	1.4	1.5
New Zealand	2.2	1.7	0.8	0.8	0.6
Pakistan	0.5	0.7	0.8	0.7	0.6
United Kingdom	0.4	0.5	0.7	0.8	0.6
United States of America	5.5	4.6	4.1	2.2	2.4
Other	1.3	1.5	1.6	3.7	3.5
<b>TOTAL</b>	22.9	24.0	22.6	24.1	21.9

TABLE 5. - EXPORTS OF RAW AND SEMI-PROCESSED WOOL : AUSTRALIA

(million lb)

Year ended 30 June	Raw				Semi-processed		Total wool
	Greasy & slipe	Scoured & carbonised	Wool exported on skins	Total raw wool	Wool tops	Woollen & worsted yarn	
GREASY BASIS							
1966	1,324.8	141.8	135.0	1,601.5	43.1	0.5	1,645.1
1967	1,368.2	128.6	135.3	1,632.1	44.7	0.3	1,677.1
1968	1,395.4	147.1	140.5	1,683.0	43.9	0.2	1,727.1
1969	1,471.8	139.5	149.3	1,760.6	46.8	0.2	1,807.6
1970p	1,571.8	147.6	163.7	1,883.2	42.5	0.3	1,926.0

TABLE 6. - IMPORTS OF RAW AND SEMI-PROCESSED WOOL : AUSTRALIA

(million lb)

Year ended 30 June	Greasy basis			Clean equivalent		
	Raw (a)	Semi- processed (b)	Total wool	Raw (a)	Semi- processed (b)	Total wool
1966	14.4	1.6	16.0	7.7	0.9	8.6
1967	13.1	1.1	14.2	6.9	0.6	7.5
1968	15.0	1.3	16.3	7.7	0.7	8.4
1969	25.3	2.0	27.2	12.9	1.1	14.0
1970p	26.0	3.6	31.6	13.8	2.0	15.8

(a) Greasy, slipe, scoured and carbonised wool. (b) Wool tops and woollen and worsted yarn.

TABLE 7. - WOOL SELLING BROKERS' RECEIVALS, DISPOSALS AND

## STOCKS OF NEW SEASON'S WOOL : AUSTRALIA

('000 bales) (a)

(Source : National Council of Wool Selling Brokers of Australia)

Year ended 30 June	Receivals		Disposed of by		Awaiting disposal at end of year
	First hand	For re-sale (b)	Sale	Shipment (c)	
1966	4,509.7	80.5	4,389.6	4.8	195.8
1967	4,813.5	74.5	4,650.8	6.5	230.7
1968	4,841.9	85.6	4,736.4	5.9	185.2
1969	5,198.8	82.3	5,023.5	2.7	254.9
1970	5,438.9	79.2	2,864.2	1.1	170.1

(a) The weight of a bale of greasy wool is approximately 300 lb. The particulars shown include very small quantities of scoured wool, the bale weight of which is about 220 lb.  
 (b) New season's wool re-sold for any reason. (c) Shipped abroad for sale.

TABLE 8. - STOCKS OF RAW AND SEMI-PROCESSED WOOL (a) : AUSTRALIA

(million lb)

At 30 June	Raw wool				Total raw wool	Semi-processed wool held by wool processors		Total Wool
	Held by wool processors		Held by brokers (b)			Wool tops	Woollen & worsted yarn	
	Greasy & slips	Scoured & carbonised	Sold	Unsold				
GREASY BASIS								
1966	41.6	24.7	161.8	52.9	291.0	13.3	12.3	316.6
1967	42.4	24.6	160.0	74.1	301.1	13.6	12.6	327.4
1968	38.1	23.0	145.6	59.9	266.6	16.7	14.0	297.3
1969	36.9	21.6	188.8	82.4	329.8	12.5	14.8	357.1
1970p	48.4	25.4	231.8	50.8	356.4	14.0	14.9	385.3
CLEAN EQUIVALENT								
1966	23.4	11.8	91.3	35.5	161.9	7.7	7.0	176.6
1967	24.2	11.7	91.0	42.2	169.0	7.8	7.2	184.1
1968	21.4	10.9	81.7	33.6	147.6	9.3	8.0	164.9
1969	21.1	10.2	107.8	47.1	186.2	7.0	8.3	201.5
1970p	27.4	12.1	131.2	28.8	199.4	7.8	8.5	215.8

(a) Recorded stocks held in Australia. (b) Assumed to be all greasy.

TABLE 9. - CONSUMPTION OF RAW WOOL (a) : AUSTRALIA

(million lb)

Year ended 30 June	Greasy basis			Clean equivalent		
	Used on woollen & worsted systems	Used for felt manufacture (including hats)	Total	Used on woollen & worsted systems	Used for felt manufacture (including hats)	Total
1966	126.1	2.0	128.1	74.4	0.9	75.4
1967	121.8	2.2	124.0	71.4	1.1	72.5
1968	128.4	2.5	130.9	73.0	1.2	74.2
1969	129.5	2.5	132.0	73.6	1.2	74.8
1970p	131.1	2.5	133.6	74.6	1.2	75.8

(a) Measured as scoured wool used on the woollen and worsted systems and for felt manufacture (including hats).

TABLE 10. - SUPPLIES AND UTILISATION OF RAW WOOL : AUSTRALIA

(million lb)

Year ended 30 June	Estimated net change in stocks (a) (b)	Production (c)	Imports (a)	Total supplies	Exports (a) (c)	Consumption of raw wool (d)
GREASY BASIS						
1966	(-) 52.4	1,662.8	14.4	1,729.6	1,601.5	128.1
1967	(+) 19.3	1,762.3	13.1	1,756.1	1,632.1	124.0
1968	(-) 29.4	1,769.5	15.0	1,813.9	1,683.0	130.9
1969	(+) 80.5	1,947.8	25.3	1,892.6	1,760.6	132.0
1970p	(+) 46.9	2,035.7	28.0	2,016.8	1,883.2	133.6

(a) Greasy, slip, scoured and carbonised wool. (b) Balance figure. (c) Includes wool exported on skins. (d) Measured as scoured wool used on the woollen and worsted systems and for felt manufacture (including hats).

TABLE 11. - CONSUMPTION OF PROCESSED WOOL : AUSTRALIA

(million lb)

Year ended 30 June	Worsted yarns used (including hand knitting yarns)		Woollen yarns used		Scoured wool used for felt manufacture (including hats)	Total
	Pure yarns	Mixed yarns (a)	Pure yarns	Mixed yarns (a)		
GREASY BASIS						
1966	37.6	6.2	34.1		2.0	79.8
1967	35.4	6.4	38.6		2.2	82.7
1968	34.4	5.8	37.2		2.5	80.0
1969	33.7	5.1	36.5		2.5	77.9
1970p	34.1	6.4	40.0		2.5	83.1
CLEAN EQUIVALENT						
1966	21.8	3.6	20.8		0.9	47.2
1967	20.4	3.7	23.5		1.1	48.7
1968	19.2	3.2	22.7		1.2	46.3
1969	18.8	2.8	22.3		1.2	45.1
1970p	19.0	3.6	24.4		1.2	48.2

(a) Wool content of yarns containing a mixture of wool and other fibres. Revised (see Table 16).

TABLE 12. - SUPPLIES AND UTILISATION OF RAW AND SEMI-PROCESSED WOOL : AUSTRALIA

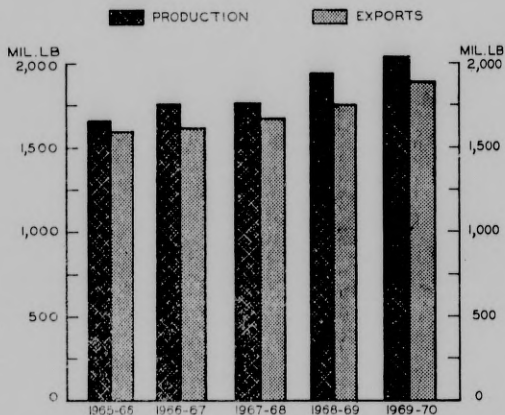
(million lb)

Year ended 30 June	Estimated net change in stocks (a) (b)	Production (c)	Imports (a)	Total supplies	Exports (a) (c)	Consump- tion of processed wool (d)
GREASY BASIS						
1966	(-) 46.1	1,662.8	16.0	1,724.9	1,645.1	79.8
1967	(+) 16.7	1,762.3	14.2	1,759.8	1,677.1	82.7
1968	(-) 21.3	1,769.5	16.3	1,807.1	1,727.1	80.0
1969	(+) 89.5	1,947.8	27.2	1,885.5	1,807.6	77.9
1970p	(+) 58.2	2,035.7	31.6	2,009.1	1,926.0	83.1

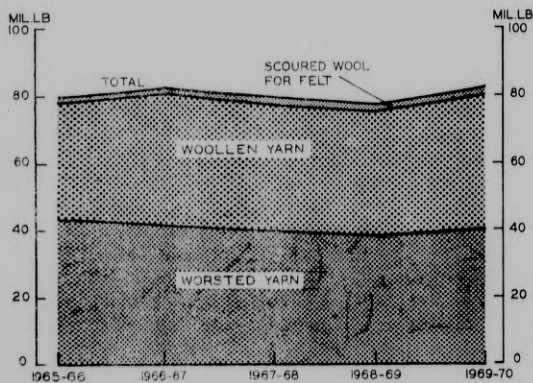
(a) Greasy, slip, scoured and carbonised wool, wool tops and woollen and worsted yarn (pure and mixed). (b) Balance figure. (c) Includes wool exported on skins.

(d) Measured as woollen and worsted yarn (pure and mixed) used for weaving and knitting and scoured wool used for felt manufacture (including hats).

## PRODUCTION AND EXPORTS OF RAW WOOL: AUSTRALIA (GREASY BASIS)



## CONSUMPTION OF PROCESSED WOOL: AUSTRALIA (GREASY BASIS)



III. WORLD PRODUCTION AND CONSUMPTION OF RAW WOOL

- NOTE. (i) Production figures in Table 13 are given according to the "Wool Seasons" in the countries concerned. These vary from one country to another. For example, in Australia, New Zealand and South Africa the season runs from July to June; in the United Kingdom, from April to March.
- (ii) Consumption figures in Table 14 normally relate to calendar years.

TABLE 13. - ESTIMATED WORLD PRODUCTION OF RAW WOOL

(Greasy basis)

(Source for countries other than Australia : Commonwealth Secretariat)

Country	1965-66	1966-67	1967-68	1968-69	1969-70	
	million lb					%
Australia	1,665	1,762	1,770	1,948	2,035	33.1
U.S.S.R.	787	818	870	915	860	14.0
New Zealand	695	709	728	732	740	12.0
Argentina	430	441	428	397	405	6.6
South Africa	329	292	304	317	331	5.4
United States of America	241	236	227	214	200	3.3
Uruguay	183	178	186	181	176	2.9
United Kingdom	129	132	127	119	114	1.9
Other (a)	1,272	1,284	1,289	1,286	1,287	20.9
<b>TOTAL</b>	<b>5,729</b>	<b>5,852</b>	<b>5,929</b>	<b>6,109</b>	<b>6,149</b>	<b>100.0</b>
Clean equivalent	3,289	3,388	3,429	3,529	3,554	..

(a) Includes estimates of production in mainland China and Outer Mongolia which totalled 170 mil. lb in the year 1965-66, and 175 mil. lb in each of the years 1966-67 to 1968-69.

TABLE 14. - ESTIMATED WORLD CONSUMPTION OF VIRGIN WOOL

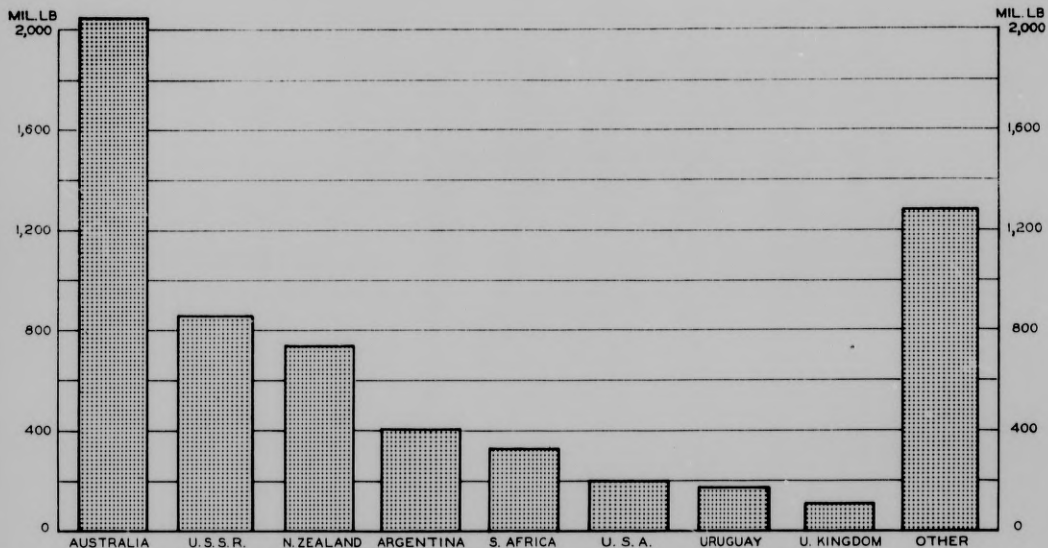
(Clean equivalent)

(Source: Commonwealth Secretariat)

Country	1965	1966	1967	1968	1969	
	million lb					%
Japan	326	367	354	371	395	11.2
United Kingdom	405	388	360	391	385	10.9
United States of America	374	360	303	318	305	8.6
France	237	263	217	239	268	7.6
Italy	189	242	218	211	237	6.7
Germany, Federal Republic of	146	151	123	149	158	4.5
Belgium	98	96	80	88	93	2.6
Australia	78	72	76	73	75	2.1
Turkey	55	60	59	58	60	1.7
U.S.S.R., China (mainland) and Eastern Europe	787	815	853	926	899	25.5
Other	588	590	604	625	656	18.6
<b>TOTAL</b>	<b>3,281</b>	<b>3,404</b>	<b>3,247</b>	<b>3,449</b>	<b>3,531</b>	<b>100.0</b>

ESTIMATED WORLD PRODUCTION OF RAW WOOL: 1969-70  
(GREASY BASIS)

TOTAL WORLD PRODUCTION - 6,149 MILLION LB



SOURCE: FOR COUNTRIES OTHER THAN AUSTRALIA, COMMONWEALTH SECRETARIAT

IV. WOOL YIELDS AND CONVERSION FACTORS. AUSTRALIA1. GENERAL NOTES

The wool yields and conversion factors set out below are in all cases Australian averages intended for use in preparing Australian tables on supply and utilisation of wool and for similar purposes. The factors have been adopted for uniform use in compiling Australian statistics, after consultation with the Bureau of Agricultural Economics, the Australian Wool Statistical Service and Statisticians in each of the States. They are not necessarily suitable for use with data for individual States.

Attention is drawn to the treatment of noils, fettlings and waste wool produced as by-products of carding, combing and spinning operations. These products are not taken into account directly, but allowance is made for them in the factors which are used for converting scoured wool and tops and yarn into greasy and clean equivalent (e.g. if 180 lb greasy wool produces 120 lb scoured wool which in turn produces 100 lb tops and 20 lb noils, a factor of 1.80 is used in converting tops exported or used to a greasy equivalent). This will result in some inaccuracy if the quantities of noils, fettlings and waste wools used and exported are disproportionate to the quantities of tops and yarns used and exported. It is not, however, practicable to take these items separately into account.

2. DEFINITIONS

Scoured weight. The weight of scoured wool, including moisture regain and such vegetable matter as remains in the wool after scouring (but before carbonising in the case of carbonising wools).

Clean weight. The weight of scoured or carbonised wool in a completely clean state (i.e. with all vegetable matter removed) including standard moisture regain.

Carbonised weight. The weight of carbonised wool after carbonising including moisture regain.

Scoured yield. Scoured weight as a percentage of original greasy weight.

Clean yield. Clean weight as a percentage of original greasy weight.

Clean yield from scoured. Clean weight as a percentage of scoured weight.

Carbonised yield from scoured. Carbonised weight as a percentage of scoured weight.

Standard moisture regain. Bradford standard regains are adopted (16 per cent for carding and carbonising wools; 19 per cent on tops for combing wools).

3. YIELDS AND CONVERSION FACTORS(a) Production.

(i) Shorn wool. The average clean yields for the whole clip for each season as assessed by the Wool Statistical Service have been used in converting from greasy to clean weight. These are shown in Table 15.

(ii) Skin wools. The assessed yields for the clip have also been used as the clean yield for skin wools, including wool exported on skins. Investigations have disclosed that the yield of Australian skin wools (in total) does not vary significantly from that of the clip.

(b) Imports.

- (i) Greasy wool. As most of this wool comes from New Zealand, a standard yield has been adopted based on the approximate clean yield of New Zealand greasy wool exported (taken as 69 per cent).
- (ii) Scoured and carbonised wool. Standard factors of 2.0 lb greasy = 1.0 lb scoured and 2.5 lb greasy = 1.0 lb carbonised have been adopted. For details of factors adopted concerning clean yield from scoured and carbonised see c(ii) below. The same standard factors have been used for exports of these classes of wool from Australia.
- (iii) Tops and yarn. Standard factors (subject to periodical review) of 2.00 lb greasy or 1.45 lb clean per lb of tops and 1.75 lb greasy or 1.00 lb clean per lb of yarn have been used.

(c) Exports.

- (i) Greasy wool. The clean yield of wool exported as greasy may be estimated on the basis of the assessed yield for the whole clip plus  $\frac{1}{2}$  points. This is to account for the low-yielding dirty wools scoured before export. The yields actually used are shown in Table 15.
- (ii) Scoured and carbonised wool. A standard factor of 93 per cent clean yield from scoured for Australian scoured wool (excluding carbonising wools) has been adopted. This allows for vegetable content and variation from standard moisture regain under Australian conditions in recorded weights of scoured wool. For carbonised wool it has been assumed for practical purposes that carbonised weight represents clean weight. From 1952-53 greasy yield factors have been calculated each year using statistical data obtained from Australian scourers, and taking into account yield factors used for scoured and carbonised wool consumed in Australia. These factors allow for the low-yielding wools exported.
- (iii) Wool exported on skins. See 3a (ii)
- (iv) Slip wool. Relatively small quantities of slip wool are exported and standard factors of 1.25 lb greasy or 0.70 lb clean = 1.00 lb slip have been adopted.
- (v) Tops. The factors used to convert to greasy and clean bases have been derived from statistics of operations of Australian mills and are shown in Table 16.
- (vi) Yarn. In view of the comparatively small quantities involved, standard factors for woollen and worsted yarn combined have been adopted on the basis of data from the operations of Australian mills for recent years. These are 1.75 lb greasy or 1.00 lb clean = 1.00 lb yarn. They will be reviewed periodically.

(a) Stocks.(i) Factory stocks.

Greasy and slipe. The average clean yields of the whole clip for the year ending on the date to which stocks relate have been used. No allowance has been made for the small quantities of slipe included.

Scoured and carbonised. Standard factors (subjected to periodical review) of 95 per cent clean yield from scoured and carbonised and 2.0 lb greasy = 1.0 lb scoured and carbonised (scoured and carbonised yield of 50 per cent) have been used.

Tops. See 3c(v)

Yarn. See 3c(vi)

- (ii) Brokers' stocks. For practical purposes, it has been assumed that wool in brokers' stores is all greasy wool. The assessed clean yield for the whole clip has been assumed to apply to these wools.

(e) Consumption.

- (i) Scoured and carbonised wool used on woollen and worsted systems. A standard factor of 95 per cent clean yield from scoured and carbonised has been adopted. The factors used to convert recorded usage of scoured and carbonised wool to greasy equivalent are derived from statistics of scouring operations by Australian mills on own account and are shown in Table 15.
- (ii) Scoured and carbonised wool used for felting. A standard factor of 95 per cent clean yield from scoured and carbonised has been adopted. A standard factor of 2.0 lb greasy = 1.0 lb scoured and carbonised has been used having regard to advice obtained from felt manufacturers as to type, condition, etc., of wools used.
- (iii) Woollen and worsted yarn used. The factors used to convert actual weights to clean and greasy equivalents are based on statistics of the operations of Australian wool textile mills (See Table 16). From 1953-54 to 1963-64 information was available separately on yarns containing a mixture of wool and other fibres and these were taken into account separately from pure yarns in calculating greasy and clean equivalent of processed wools used in Australia. From 1956-57 to 1962-63, information on mixed yarns containing wool was available only on those in which wool is the predominant fibre and, as a result, the factors used in the bulletin have had to be calculated from the quantity of wool tops or scoured wool used in all mixed yarns (whether wool predominates or not) in relation to the production of mixed yarns in which wool predominates. Any error resulting from this will, however, be largely offset by the fact that information on consumption of yarns is also confined to yarns in which wool predominates.

TABLE 15. - WOOL YIELDS AND CONVERSION FACTORS : AUSTRALIA

(i) Average clean yields for Australian clip as assessed by the Wool Statistical Service

<u>Year</u>	<u>Clean yield</u> %	<u>Year</u>	<u>Clean yield</u> %
1965-66	56.4	1968-69	57.1
1966-67	56.9	1969-70	56.6
1967-68	56.1		

(ii) Estimated average clean yields of exports of greasy wool, Australia

<u>Year</u>	<u>Clean yield</u> %	<u>Year</u>	<u>Clean yield</u> %
1965-66	57.9	1968-69	58.6
1966-67	58.4	1969-70	58.1
1967-68	57.6		

(NOTE. These represent the assessed clean yield for the whole clip plus approximately  $\frac{1}{2}$  points.)

(iii) Scoured and carbonised yield of all wool scoured by Australian Wool Textile Mills

<u>Year</u>	<u>Scoured and carbonised yield</u> %	<u>Year</u>	<u>Scoured and carbonised yield</u> %
1965-66	62.3	1968-69	60.0
1966-67	61.8	1969-70	60.0
1967-68	60.0		

(iv) Scoured and carbonised yield of wool exported as scoured and carbonised, Australia

<u>Year</u>	<u>Scoured and carbonised yield</u> %	<u>Year</u>	<u>Scoured and carbonised yield</u> %
1965-66	62.6	1968-69	61.2
1966-67	62.1	1969-70	61.2
1967-68	61.2		

TABLE 16. - FACTORS TO CONVERT TOPS AND YARN TO GREASY, SCOURED, AND CLEAN BASES

## AUSTRALIA

(Based on statistics of the operations of Australian Wool Textile Mills)

Year ended 30 June	Wool tops	Worsted yarn		Woollen yarn
LB GREASY PER LB OF PRODUCT				
		Pure	Mixed (a)	
1966	1.88	2.12	1.20	1.31
1967	1.85	2.13	1.24	1.20
1968	1.94	2.10	1.24	1.28
1969	1.94	2.10	1.21	1.28
1970p	1.94	2.10	1.43	1.28
LB SCOURED OR CARBONISED PER LB OF PRODUCT				
		Pure	Mixed (a)	
1966	1.17	1.32	0.75	0.81
1967	1.14	1.32	0.77	0.74
1968	1.16	1.26	0.74	0.80
1969	1.16	1.26	0.72	0.80
1970p	1.16	1.26	0.86	0.80
LB CLEAN PER LB OF PRODUCT				
	(b)	Pure (b)	Mixed (a)	(c)
1966	1.09	1.23	0.70	0.80
1967	1.06	1.23	0.71	0.73
1968	1.08	1.17	0.69	0.78
1969	1.08	1.17	0.67	0.78
1970p	1.08	1.17	0.80	0.78

(a) Yarns containing a mixture of wool and other fibres. From 1956-57 the factors are based on the total quantity of wool used in all mixed yarns in relation to the quantity of mixed yarns made predominantly from wool. (b) Standard clean yield from scoured of 93 per cent. (c) Standard clean yield from scoured or carbonised wool of 98 per cent.

V. WOOL PRESS SURVEY - 31 DECEMBER 1969

During the early part of 1970, the Bureau conducted a survey in each State to obtain information of the number, type and age of wool presses, as at the 31 December 1969, on those rural holdings which reported one or more shearing stands at the time of the 1969 Agricultural and Pastoral Census.

Survey results in the form of estimates of numbers by type and age of wool presses, are shown in Tables 17 to 20.

It should be noted that the estimates obtained are subject to sampling error because they were obtained from a survey and not a complete census. The interpretation and explanation of these sampling errors is given in the appendix following the tables.

TABLE 17. - ESTIMATED NUMBER OF WOOL PRESSES ON RURAL HOLDINGS AT 31 DECEMBER 1969 BY TYPE AND AGE : AUSTRALIA  
(1000)

Type	Less than 5 years	5 but less than 15 years	15 but less than 25 years	25 years and over
Manual	6.0	27.7	20.8	15.1
Power	6.1	1.7	0.4	0.5
Total	12.0	29.4	21.3	15.6
Single box	10.6	24.9	15.6	4.5
Double box	1.5	4.4	5.7	11.1
Total	12.0	29.4	21.3	15.6

TABLE 18. - ESTIMATED NUMBER OF WOOL PRESSES ON RURAL HOLDINGS AT 31 DECEMBER 1969, MANUAL AND POWER : STATES  
(1000)

State	Manual	Power	Total
New South Wales	25.9	2.1	28.0
Victoria	16.8	3.0	19.8
Queensland	4.5	0.2	4.6
South Australia	11.0	1.7	12.8
Western Australia	9.6	1.6	11.2
Tasmania	1.8	0.2	2.0
Australia	69.6	8.7	78.4

TABLE 19. - ESTIMATED NUMBER OF WOOL PRESSES ON RURAL HOLDINGS  
AT 31 DECEMBER 1969, SINGLE BOX AND DOUBLE BOX : STATES

('000)

State	Single Box	Double Box	Total
New South Wales	15.4	12.6	28.0
Victoria	15.3	4.5	19.8
Queensland	1.6	3.0	4.6
South Australia	11.6	1.2	12.8
Western Australia	10.0	1.2	11.2
Tasmania	1.7	0.4	2.0
Australia	55.6	22.8	78.4

TABLE 20. - ESTIMATED NUMBER OF WOOL PRESSES ON RURAL HOLDINGS  
AT 31 DECEMBER 1969 BY AGE IN YEARS : STATES

('000)

State	Less than 5 years	5 but less than 15 years	15 but less than 25 years	25 years and over
New South Wales	3.1	9.1	7.8	8.0
Victoria	3.1	7.8	5.5	3.4
Queensland	0.4	1.5	1.3	1.4
South Australia	2.4	5.7	3.5	1.2
Western Australia	2.7	4.4	2.9	1.1
Tasmania	0.4	0.9	0.4	0.4
Australia	12.0	29.4	21.3	15.6

Appendix : Interpretation of Estimates

Since the estimates set out in the tables are based on a sample they may differ from the figures that would have been obtained from a complete census which used the same questionnaires and procedures. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because only a sample, and not the whole population, was enumerated. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained from a comparable complete collection, and about nineteen chances in twenty that the difference will be less than two standard errors.

Tables of standard errors which are intended to be of general application are given below. Table A shows standard errors of estimates by size of estimate based on calculations for all types of wool presses covered by the survey. The figures therefore do not give a precise measure but only an indication of the magnitude of the standard error of any particular estimate.

Similarly differences between estimates are also subject to sampling variability. The standard error of the difference between two estimates will depend on the standard errors of the levels of the estimates rather than on the difference itself. Estimates of standard errors of differences have not been calculated but an indication of their magnitude is given in Table B, below.

TABLES OF STANDARD ERRORS

A. ESTIMATES

Survey estimates of number of wool presses	Approximate standard error	
	Number of wool presses	Percent of estimate
200	35	17.5
500	60	12.0
1,000	90	9.0
3,000	170	5.6
5,000	230	4.6
7,000	270	3.9
10,000	340	3.4
15,000	440	2.9
20,000	490	2.5
30,000	650	2.2

B. DIFFERENCES BETWEEN ESTIMATES

Approximate standard error of wool press estimates	Approximate standard error of difference between wool press estimates
30	40
50	70
100	150
200	300
300	450
400	600
500	700
800	1100

An example of the use of the Table A is as follows : The estimate of the number of manual wool presses in N.S.W. is 25,900. The standard error of this estimate is about 2.3 per cent, i.e. approximately 600, so that there are about two chances in three that a comparable complete collection would give a figure within the range 25,300 to 26,500 and about nineteen chances in twenty that the figure would be within the range 24,700 to 27,100.

An example of the use of Table B is as follows : The difference between the estimates from the survey of the number of manual wool presses in N.S.W. (25,900) and Victoria (16,800) is 9,100. Because the individual State estimates are subject to a sampling error of approximately 600 (from Table A), it can be seen from Table B that the difference of 9,100 has a standard error of approximately 800, so that there are about two chances in three that a comparable complete collection would yield a difference between the individual state estimates within the range 8,300 to 9,900 and about nineteen chances in twenty that the figure would be within the range of 7,500 to 10,700.

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS  
CANBERRA, A.C.T. 2600      14 SEPTEMBER 1971

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ACTING COMMONWEALTH STATISTICIAN

NOTE. Inquiries concerning these statistics may be made in Canberra by telephoning 490211 extension 382 or, in each State capital, by telephoning the office of the Bureau of Census and Statistics.