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OFFICIAL STATISTICS, COMMONWEALTH OF AUSTRALIA.

MANUFACTURING INDUSTRIES, 1936-37.

No. 19. FLOUR AND OTHER GRAIN MILLS.

PREPARED UNDER INSTRUCTIONS FROM
THE HONORABLE THE TREASURER,

BY

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P R E F A C E

As a result of the deliberations of the Conference of Commonwealth and State Statisticians held in March, 1937, the statistics of factory production in Australia have been considerably extended, and a much greater degree of uniformity has been attained than in previous years. In consequence a more comprehensive analysis of the manufacturing industries is now possible.

While continuing to publish these statistics in the Official Year Book and the Production Bulletin, it is proposed to publish the details for the more important industries as soon as they become available in a series of special reports.

This is the nineteenth of the series, and it refers to the operations of Flour and Other Grain Mills. Similar reports for other industries will follow as the tabulations are completed. A list of those already issued is given in the footnote hereunder while the complete list of the industries it is proposed to include in these Reports is given on the back cover.

The improvements in the scope and uniformity of the factory statistics have only been made possible by the ready co-operation and assistance of the manufacturers of Australia and the Statisticians of the several States.

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Canberra, A.C.T.
13th September, 1938.

NOTE:- Previously issued:
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.

FLOUR AND OTHER GRAIN MILLS.

The following table furnishes a summary of the principal statistics of the factories engaged in the Milling of Grain.

1. FLOUR AND OTHER GRAIN MILLS - AUSTRALIA, 1908 TO 1936-37.

Year	Number of Factories	Persons Employed (a)	Salaries and Wages Paid (b)	Power, Fuel and Light Used	Value of Other Materials Used	Value of Production	Value of Output
	No.	No.	£'000	£'000	£'000	£'000	£'000
1908	235	(c) 591	255	65	5,481	833	6,379
1913	222	(c) 2,930	382	80	6,747	1,209	8,036
1920-21	184	(c) 3,340	669	138	15,987	1,967	18,092
1928-29	169	(d) 3,221	862	204	14,223	2,043	16,470
1929-30	162	3,097	833	200	13,596	2,098	15,894
1930-31	155	3,148	798	202	9,454	2,063	11,719
1931-32	165	3,458	784	204	9,605	2,196	12,005
1932-33	168	3,555	775	207	10,086	2,348	12,641
1933-34	170	3,528	764	201	9,983	2,208	11,392
1934-35	167	3,774	826	216	10,267	2,229	12,712
1935-36	168	3,685	823	213	11,548	2,133	13,894
1936-37	166	3,580	802	201	14,621	2,028	16,850

(a) Including Working Proprietors. (b) Exclusive of amounts drawn by Working Proprietors. (c) Average over period worked by factory. (d) For 1928-29 and succeeding years, the employment figures have been averaged over the whole year.

In the following table particulars of the Industry are given for each State during the year 1936-37.

2. FLOUR AND OTHER GRAIN MILLS - STATES, 1936-37.

Particulars	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	AUSTRALIA
	No.	No.	No.	No.	No.	No.	No.
Number of Factories	49	38	10	39	20	10	166
Number Employed (a) -							
Males ..	1,139	1,077	325	378	377	110	3,406
Females ..	54	35	22	39	20	4	174
Total ..	1,193	1,112	347	417	397	114	3,580
Value of -	£.	£.	£.	£.	£.	£.	£.
Salaries and Wages Paid (b) ..	281,006	243,213	83,333	83,103	87,696	23,945	802,296
Fuel used ..	71,689	61,668	14,573	26,218	23,408	3,637	201,193
Materials used ..	5,220,035	5,000,744	1,123,843	1,436,435	1,544,299	295,932	14,621,288
Production ..	793,618	511,878	209,408	163,241	304,372	44,996	2,027,513
Output ..	6,085,342	5,574,290	1,347,624	1,625,894	1,872,079	344,565	16,849,994
Land and Buildings	807,409	546,587	193,787	167,581	242,641	70,241	2,028,346
Plant and Machinery	577,807	508,072	185,201	224,236	222,341	30,649	1,848,306
H.P. of Engines Ordinarily in use ..	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
	8,576	6,642	1,887	3,739	3,431	8	24,283

(a) Includes Working Proprietors. (b) Exclusive of amounts drawn by Working Proprietors.

Particulars of the average salary and wage paid together with the average values per employee of output and production are shown in the following table for each of the years indicated:-

/ 3. AVERAGE

**3. AVERAGE SALARIES AND WAGES PAID, OUTPUT ETC. PER EMPLOYEE -
AUSTRALIA, 1908 TO 1936-37.**

Year	Salaries and Wages per Employee (a)	Value of Output per Person Engaged (b)	Value of Production per Person Engaged (b)	Ratio per cent of Salaries and Wages to Value of Production
	£.	£.	£.	%
1908	105	2,462	321	30.66
1913	138	2,743	413	31.57
1920-21	207	5,417	589	34.01
1928-29	274	5,113	634	42.19
1929-30	276	5,132	678	39.71
1930-31	260	3,723	655	38.67
1931-32	232	3,472	635	35.71
1932-33	223	3,556	660	33.02
1933-34	221	3,229	626	34.58
1934-35	224	3,368	591	37.04
1935-36	228	3,771	579	38.59
1936-37	229	4,707	566	39.57

(a) Excludes Working Proprietors and amounts drawn by them. (b) Including Working Proprietors.

In the following table details are given of the quantities and values of materials used and articles produced in Flour and Other Grain Mills.

4. MATERIALS USED AND ARTICLES PRODUCED - AUSTRALIA, 1936-37.

Particulars	Unit of Quantity	Quantity	Value £.
Materials Used:			
Wheat	bushel	59,169,864	14,128,202
Maize	"	1,057,723	291,346
Oats	"	1,841,574	256,570
Barley	"	121,594	24,046
Rice	ton	35,053	412,256
Peas	tushel	88,169	24,414
Articles produced from:			
Wheat - Flour (2,000 lb.) ..	ton	1,228,479	13,194,866
Bran	"	265,813	1,630,991
Pollard	"	253,374	1,615,833
Sharps and Screenings ..	"	6,443	54,600
Wheatmeal	cwt.	381,637	219,705
Semolina	"	17,925	11,645
Breakfast Foods	"	239,493	633,372
Macaroni and Vermicelli ..	"	34,747	58,535
Maize - Bran (2,000 lb.) ..	ton	5,139	32,317
Breakfast Foods	cwt.	(a)	(a)
Cornflour	"	108,281	175,730
Meal	"	44,677	14,832
Oats - Oatmeal (including Rolled or Crushed Oats)	"	358,529	375,721
Rice - Rice	"	466,422	426,167
Flour	"	21,504	15,221
Meal	"	82,660	31,319
Rye - Flour	"	593	528
Meal	"	413	395
Pea Meal	"	753	495
Split Peas	"	6,920	5,131
Pearl Barley	"	34,597	26,414
Other Meals	"	1,493	624
Breakfast Foods, Other ..	"	50,316	166,919

(a) Not available for publication.

For comparative purposes, the following table sets out particulars of the quantities and values of wheat milled and flour produced in Australia for the years indicated. In addition the quantity of flour exported and the percentage it bears to total production are also shown.

5. WHEAT MILLED AND FLOUR PRODUCED - AUSTRALIA, 1908 TO 1937-38.

Year	Wheat Milled		Flour Produced			Flour Exported	
	Quantity '000 bus.	Value £'000	Quantity Tons	Value £.	Average Value per Ton £ s. d.	Quantity Tons	Percentage on Production %
1908	26,265	(a)	552,388	5,206,980	9. 8. 6	116,803	21.2
1913	37,262	(a)	760,613	6,309,562	8. 5.10	221,656	29.1
1920-21	38,327	(a)	801,511	14,845,904	18.10. 5	229,725	28.7
1928-29	55,768	(a)	1,171,759	12,964,802	11. 1. 2	563,803	48.1
1929-30	53,997	(a)	1,136,865	12,188,550	10.14. 5	465,733	40.9
1930-31	56,576	9,027	1,179,698	9,037,763	7.13. 2	524,243	44.4
1931-32	61,311	8,941	1,270,215	9,292,926	7. 6. 5	610,858	48.1
1932-33	63,140	9,407	1,319,250	9,747,770	7. 7.10	631,459	47.9
1933-34	60,169	8,380	1,238,568	8,713,474	7. 0.10	542,492	43.8
1934-35	65,784	9,456	1,358,787	9,691,297	7. 2. 7	697,971	51.4
1935-36	62,725	10,698	1,307,616	10,600,278	8. 2. 2	617,081	47.2
1936-37	59,170	14,128	1,228,779	13,194,866	10.14.10	564,776	46.0
1937-38	(b)	(b)	(b)	(b)	(b)	635,527	(b)

(a) Not available.

(b) Not yet available.

The following table furnishes details of the number of factories and the number employed in each State in the Industrial group Flour and Other Grain Mills. For statistical purposes a factory is defined as an industrial establishment in which four or more hands are employed, or in which power other than hand is used.

6. FACTORIES AND EMPLOYMENT - STATES, 1936-37.

State	Number of Factories	Number employed (Average over whole year)		
		Males	Females	Total
New South Wales ..	49	1,139	54	1,193
Victoria ..	38	1,077	35	1,112
Queensland ..	10	325	22	347
South Australia ..	39	378	39	417
Western Australia ..	20	377	20	397
Tasmania ..	10	110	4	114
TOTAL:	166	3,406	174	3,580

The number of employees in the previous table has been adjusted to represent the average employment over the whole year in those cases where short time was worked. In the following table the factories have been classified according to the average number employed during the actual period worked.

7. FACTORIES CLASSIFIED ACCORDING TO HANDS EMPLOYED - AUSTRALIA,
1908 TO 1936-37.

Number of Persons Employed in each Factory	1908		1913		1920-21		1928-29		1936-37	
	Number of Fac- tories	Number Em- ployed	Number of Fac- tories	Number Em- ployed	Number of Fac- tories	Number Em- ployed	Number of Fac- tories	Number Em- ployed	Number of Fac- tories	Number Em- ployed
Under 4	26	60	32	75	11	25	19	42	19	42
4	24	96	17	68	16	64	3	12	7	28
5 to 10	102	719	77	544	51	359	44	317	43	335
11 to 20	57	805	54	793	53	809	47	702	33	515
21 to 50	22	656	37	1,055	42	1,239	43	1,301	51	1,620
51 to 100	4	255	5	395	9	573	11	701	11	753
Over 100	-	-	-	-	2	271	2	309	2	347
TOTAL:	235	2,591	222	2,930	184	3,340	169	3,384	166	3,646
Average number employed per factory:	11		13		18		20		22	

/ Practically

Further details of employment in the industrial group - Flour and Other Grain Mills - are furnished in the next three tables. In the first the employees have been classified according to the nature of their employment.

8. PERSONS EMPLOYED CLASSIFIED ACCORDING TO GRADE OF OCCUPATION - AUSTRALIA, 1908 TO 1936-37.

Grade of Occupation	1908	1913	1920-21	1928-29	1936-37
	No.	No.	No.	No.	No.
Working Proprietors ..	151	156	112	81	76
Managers and Overseers ..	174	156	188	167	174
Clerical Staff ..	255	273	338	349	442
Engine Drivers and Firemen ..	312	324	306	172	168
Workers, Skilled and Unskilled	1,396	1,748	2,183	2,307	2,630
Other (Carters and Messengers)	303	273	213	145	90
TOTAL:	2,591	2,930	3,340	3,221	3,580

Information collected from factories was extended in 1936-37 to include details of the number employed (excluding Working Proprietors) on the pay-day nearest to the 15th of each month.

9. PERSONS EMPLOYED ON PAY-DAY NEAREST TO THE 15TH OF EACH MONTH - AUSTRALIA, 1936-37.
(Working Proprietors Excluded)

Month	Males	Females	Total	Month	Males	Females	Total
	No.	No.	No.		No.	No.	No.
1936 -				1937 -			
July ..	3,346	166	3,512	January	3,795	168	3,963
August ..	3,368	166	3,534	February	3,524	173	3,697
September	3,117	173	3,290	March ..	3,394	171	3,565
October..	3,213	166	3,379	April ..	3,384	171	3,555
November	3,284	164	3,448	May ..	3,204	171	3,375
December	3,534	166	3,700	June ..	3,116	171	3,287

A classification of the number of employees according to age on or about the 15th June, 1937 is shown in the next table:-

10. PERSONS EMPLOYED CLASSIFIED ACCORDING TO AGE - JUNE, 1937.

Sex	Under 16 years	16 and under 21 years	Adults	Total
	No.	No.	No.	No.
Males	23	290	2,803	3,116
Per Cent of Total	1%	9%	90%	100%
Females	4	43	124	171
Per Cent of Total	2%	25%	73%	100%
Persons	27	333	2,927	3,287
Per Cent of Total	1%	10%	89%	100%

Statistics of the power equipment of the factories included in this group are now obtained in more extensive detail than hitherto. On account of the change from average horsepower used to rated horsepower of engines installed, however, comparison with previous years cannot be made.

/ 11. POWER

11. POWER EMPLOYED TO DRIVE MACHINERY - AUSTRALIA, 1936-37.

Class of Engine	Rated H.P. Ordinarily in Use
Steam - Reciprocating ..	4,595
Turbine ..	-
Internal Combustion -	
Gas ..	3,786
Petrol or Other Light Oils ..	288
Heavy Oils ..	3,617
Water ..	-
Total Prime Movers	12,286
Motors driven by electricity -	
Purchased ..	11,997
Own Generation ..	2,396
Total Electricity ..	14,393
TOTAL POWER USED (a):	24,283

(a) Without Duplication.

Details of the quantities and values of the various items of power, fuel and light used in Flour and Other Grain Mills are shown in the following table:-

12. POWER, FUEL AND LIGHT, ETC. USED - AUSTRALIA, 1936-37.

Particulars	Unit of Quantity	Quantity	Value £.
Coal - Black ..	Ton	16,650	17,876
Brown ..	"	86	135
Coke ..	"	1,158	2,197
Wood ..	"	35,327	19,459
Fuel Oil ..	Gallon	845,677	21,308
Electricity ..	-	(a)	119,785
Gas ..	-	(a)	1,202
Other (Charcoal, etc.) ..	-	(a)	1,671
Water used ..	-	(a)	6,955
Lubricating Oil ..	-	(a)	10,605
TOTAL:		..	201,193

(a) Value only available.

Particulars of the book values of premises occupied and plant used in Flour and Other Grain Mills at the 30th June for each of the five years ended 1937 are shown in the next table. In addition, details of the values of additions and replacements made and depreciation allowed during the year 1936-37 are also shown. It should be noted that the amounts expended in Additions and Replacements refer to expenditure incurred by existing factories and do not include the cost of erecting and equipping new factories; these latter items, however, are included with the book values shown at 30th June. The amounts shown for Depreciation are those returned by factories. Changes in the number of factories operating affect comparison from year to year.

13. VALUE OF LAND AND BUILDINGS, PLANT AND MACHINERY - AUSTRALIA, 1936-37.

Particulars	Land and Buildings	Plant and Machinery
	£.	£.
Additions and Replacements made during year (a)	93,828	73,502
Depreciation allowed during year (a) ..	19,193	116,562
Book Value (a) as at 30th June -		
1937 ..	2,028,346	1,848,306
1936 ..	2,001,952	1,953,168
1935 ..	1,943,904	1,945,593
1934 ..	1,915,593	1,940,336
1933 ..	1,945,092	2,026,918

(a) See Note above.

Practically no wheat or flour is imported into Australia. In the following table particulars of the quantities of wheat and flour exported from Australia are shown together with the countries of recorded destination.

14. WHEAT AND FLOUR EXPORTED TO PRINCIPAL COUNTRIES (YEAR ENDED JUNE).

Country to which exported	1933-34	1934-35	1935-36	1936-37	1937-38(a)
WHEAT - IN BUSHELS OF 60 LB.					
	bushels	bushels	bushels	bushels	bushels
United Kingdom ..	45,532,226	41,198,989	46,776,048	44,244,213	28,414,228
Eire ..	3,959,524	2,622,904	4,744,435	5,698,955	822,461
Other British Countries	724,154	628,464	2,260,160	960,343	6,422,966
China ..	1,476,041	13,664,167	5,052,790	1,272,500	143,663
Egypt ..	203,764	1,605,800	562	30,045	477,430
Italy ..	699,239	18,839	1,736,663	10,166,855	-
Japan ..	7,720,256	15,530,646	11,043,610	2,507,306	2,863,595
Other Foreign Countries	1,284,556	691,400	5,378,865	6,622,461	12,650,992
For Orders (b) ..	-	-	-	275,342	42,749,971
TOTAL:	61,599,760	75,961,209	76,993,133	71,778,020	94,545,306
Exporting States:					
New South Wales ..	10,313,028	15,278,072	23,200,323	20,250,843	16,595,432
Victoria ..	9,884,731	11,234,463	16,227,157	20,975,867	27,311,104
Queensland ..	67,413	468	207	518	397
South Australia ..	17,639,212	24,512,924	22,669,076	16,770,810	26,805,591
Western Australia ..	23,695,376	24,935,282	14,696,370	13,779,832	21,780,586
Tasmania ..	-	-	-	-	52,196
TOTAL:	61,599,760	75,961,209	76,993,133	71,778,020	94,545,306
FLOUR - IN TONS OF 2,000 LB.					
	tons	tons	tons	tons	tons
United Kingdom ..	136,677	99,332	130,998	177,329	187,917
Ceylon ..	18,893	18,841	17,091	16,210	14,305
Hong Kong ..	27,663	50,616	44,381	40,503	66,466
Malaya (British) ..	50,834	61,926	55,592	66,596	65,414
Other British Countries	61,926	46,509	60,859	65,966	80,358
China ..	79,261	814	951	2,113	32,643
Egypt ..	27,766	26,864	23,722	35,005	18,673
Manchuria (c) ..	(d)	240,181	112,789	9,422	11,941
Netherlands East Indies	80,623	82,147	82,077	74,928	83,157
Philippine Islands ..	10,998	27,437	40,491	35,522	27,272
Other Foreign Countries	47,851	43,304	48,130	41,184	47,381
TOTAL:	542,492	697,971	617,081	564,778	635,527
Exporting States:					
New South Wales ..	208,361	272,486	230,413	186,776	205,153
Victoria ..	216,124	263,884	259,774	233,283	280,990
Queensland ..	5	18	13	26	3
South Australia ..	53,489	75,662	60,136	58,589	68,230
Western Australia ..	64,513	85,921	66,745	86,104	81,113
Tasmania ..	-	-	-	-	38
TOTAL:	542,492	697,971	617,081	564,778	635,527
TOTAL -					
In terms of Wheat (e)	26,039,616	33,502,608	29,619,888	27,109,344	30,505,296
Grand Total Exports of Wheat and Flour in Terms of Wheat (e)	87,639,376	109,463,817	106,613,021	98,887,364	125,050,602

(a) Subject to revision. (b) Particulars of final destination of Wheat shipped "For Orders" not yet available. (c) Including Kwantung Peninsula. (d) Included with China. (e) One ton of flour taken as equivalent to 48 bushels of Wheat.