



**Australian  
Bureau of  
Statistics**

CATALOGUE NO. 8301.0

EMBARGOED UNTIL 11:30 A.M. 25 JANUARY 1994

## MANUFACTURING PRODUCTION, AUSTRALIA DECEMBER 1993, PRELIMINARY

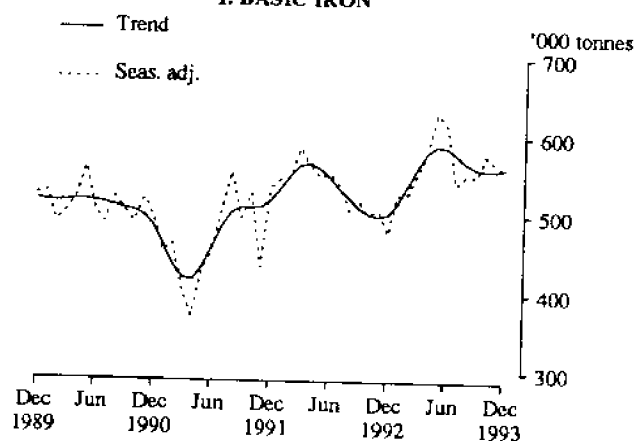
### NOTES

This publication presents preliminary monthly estimates for selected major indicators of manufacturing production for Australia. The statistics are collected from all the relevant manufacturing establishments other than single establishment manufacturing enterprises with fewer than four persons employed and are part of a much broader range of items published quarterly. For details of these see "Related publications", in the Explanatory Notes at the back of this publication.

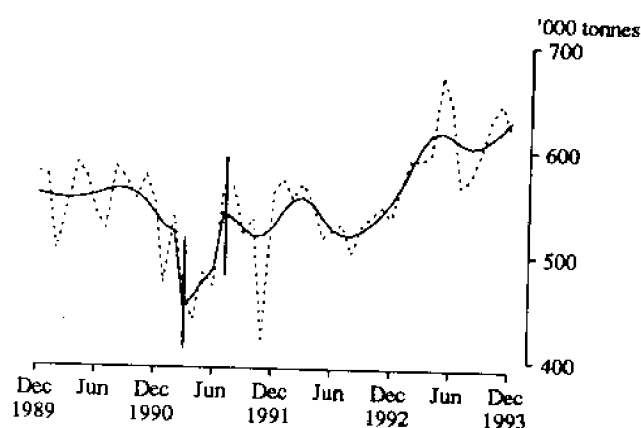
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Australian Statistician

### PRODUCTION STATISTICS, AUSTRALIA : TRENDS

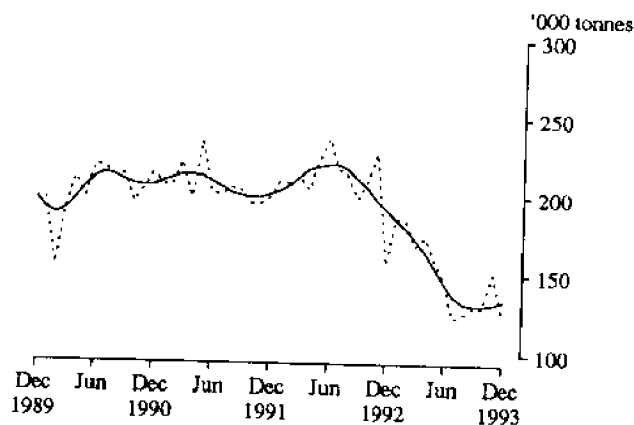
1. BASIC IRON



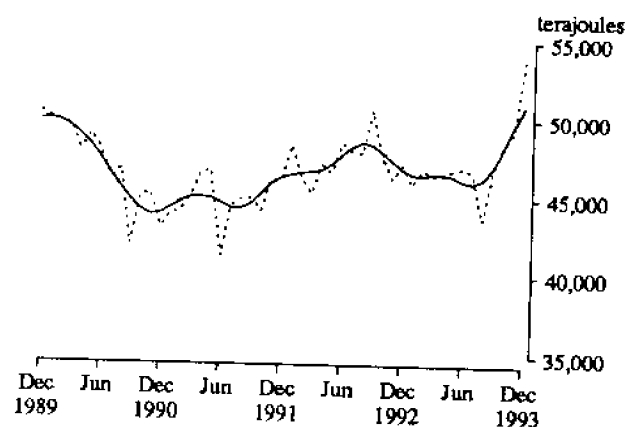
2. IRON AND STEEL IN PRIMARY FORMS(a)(b)



3. BLOOMS AND SLABS



4. GAS



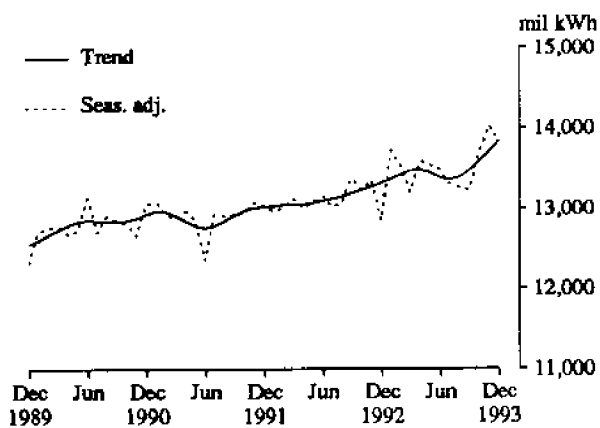
For footnotes see end of graph.

### INQUIRIES

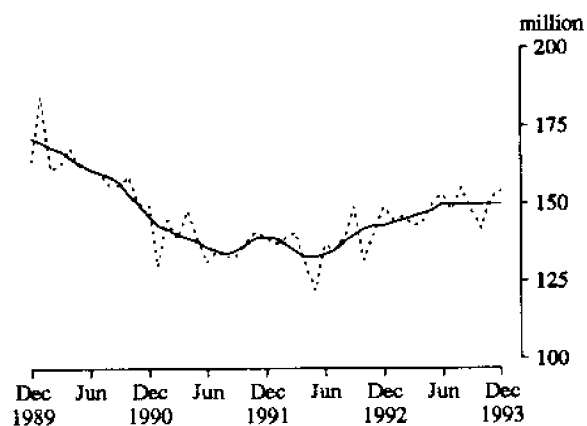
- for further information about statistics in this publication and the availability of related unpublished statistics, contact Rod Smith on Melbourne (03) 615 7635 or any ABS office.
- for information about other ABS statistics and services please refer to the back page of this publication.

## PRODUCTION STATISTICS, AUSTRALIA : TRENDS

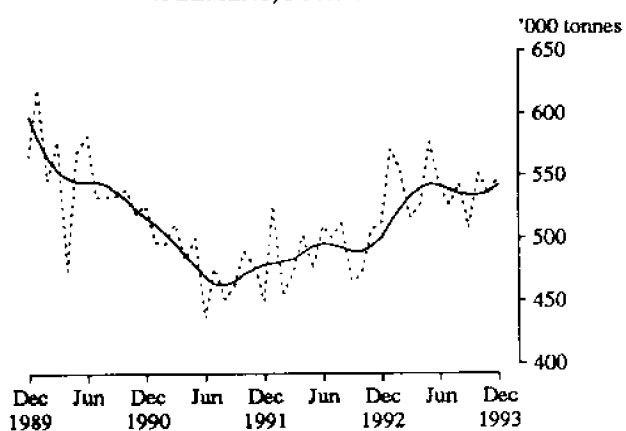
5. ELECTRICITY



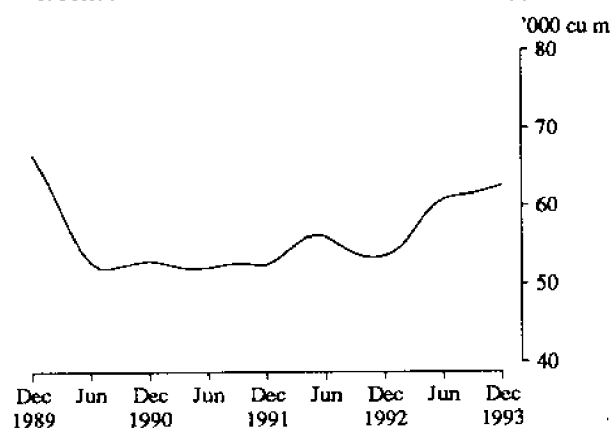
6. BRICKS, CLAY



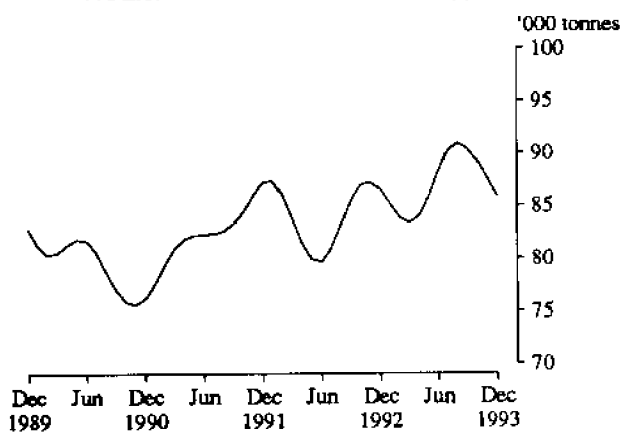
7. CEMENT, PORTLAND



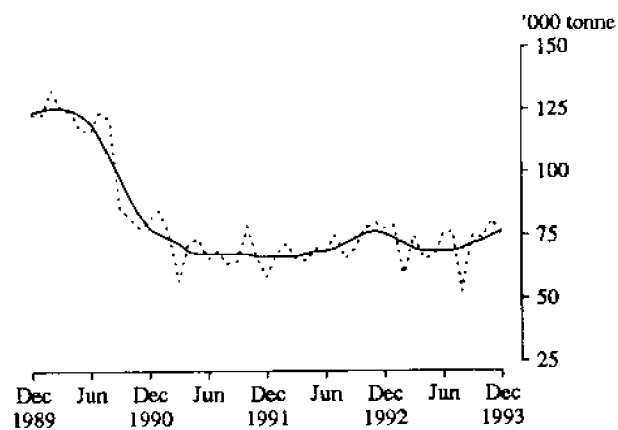
8. PARTICLE BOARD AND SIMILAR BOARD(c)



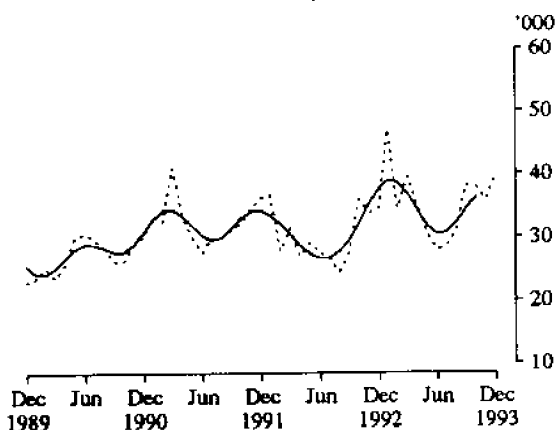
9. PLASTICS IN PRIMARY FORMS(c)



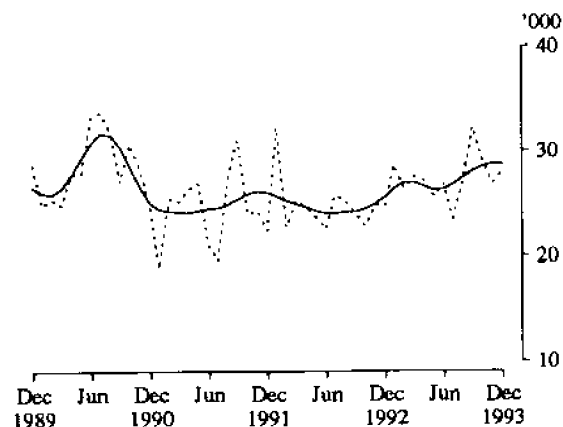
10. SULPHURIC ACID; OLEUM



11. REFRIGERATORS, DOMESTIC(d)

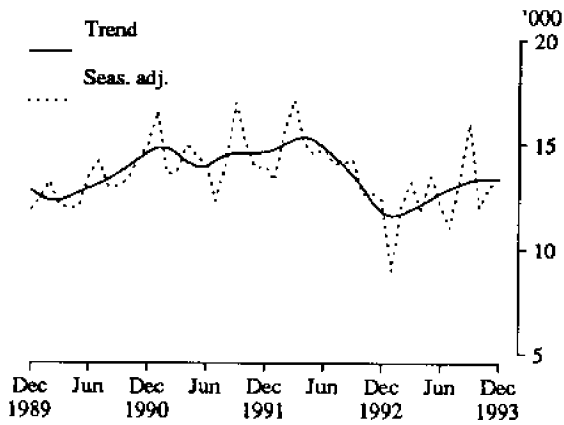


12. CLOTHES WASHING MACHINES, DOMESTIC

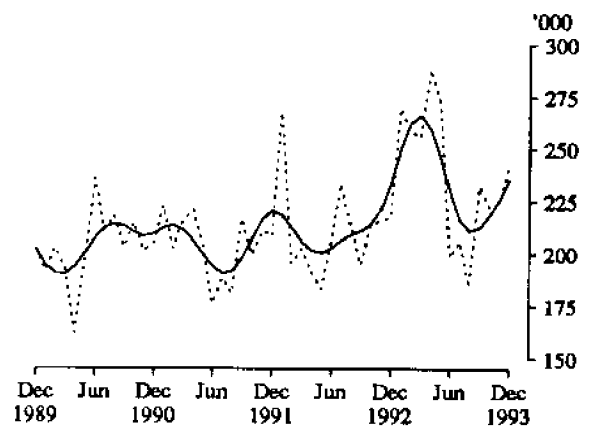


## PRODUCTION STATISTICS, AUSTRALIA : TRENDS

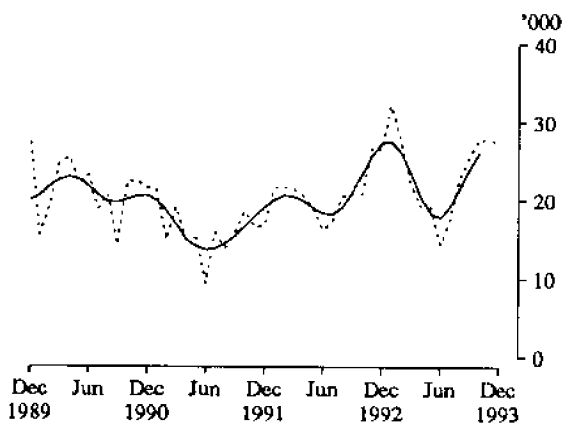
13. TELEVISION SETS



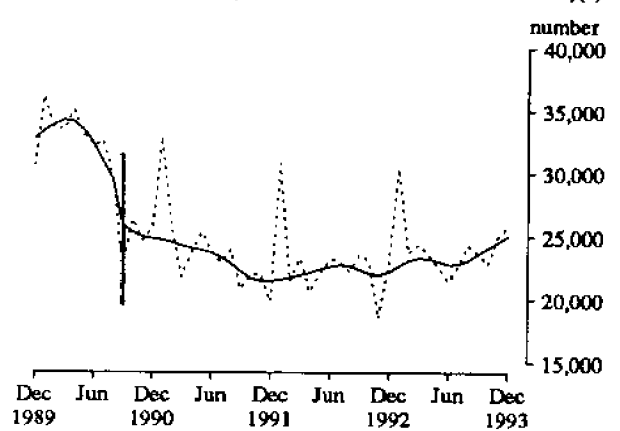
14. ELECTRIC MOTORS



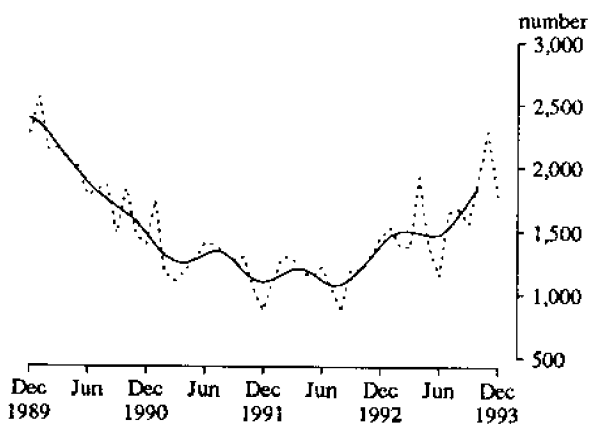
15. LAWN MOWERS, PETROL-ROTARY TYPE(d)



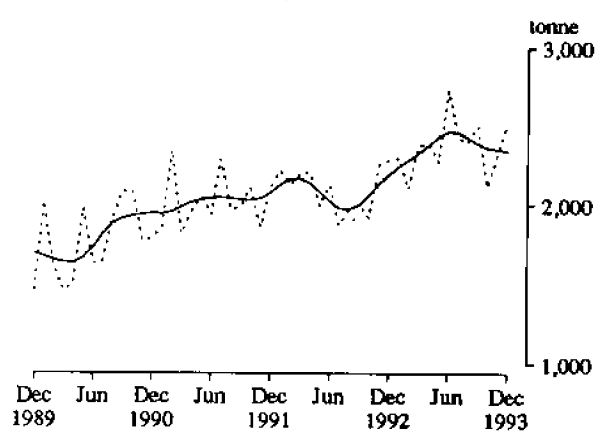
16. MOTOR VEHICLES (CARS AND STATION WAGONS)(e)



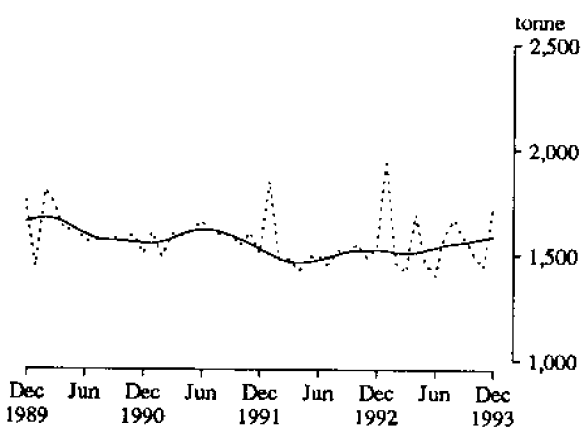
17. MOTOR VEHICLES FOR GOODS AND MATERIALS(d)



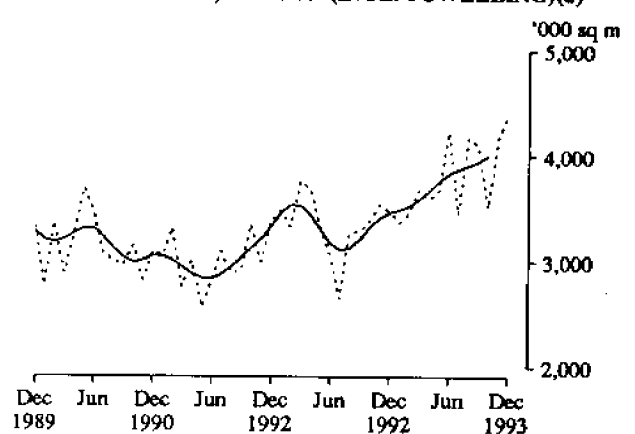
18. YARN, COTTON



19. YARN, WOOL

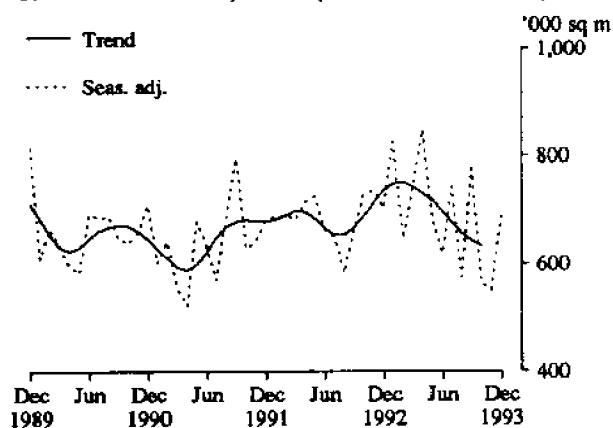


20. WOVEN FABRIC, COTTON (INCL. TOWELLING)(d)

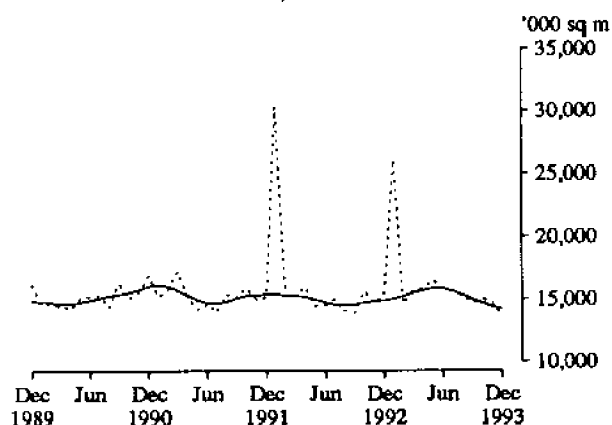


## PRODUCTION STATISTICS, AUSTRALIA : TRENDS

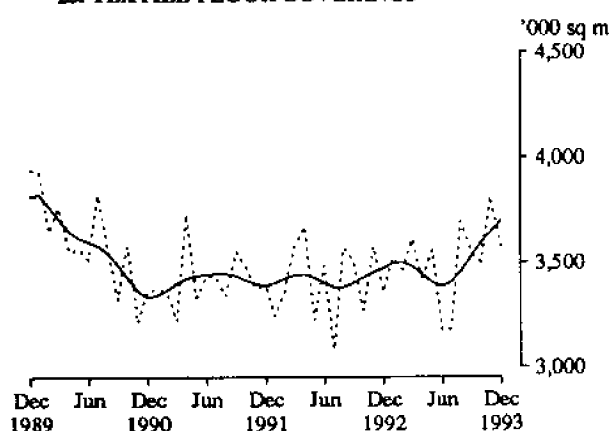
21. WOVEN FABRIC, WOOL(INCL. BLANKETING)



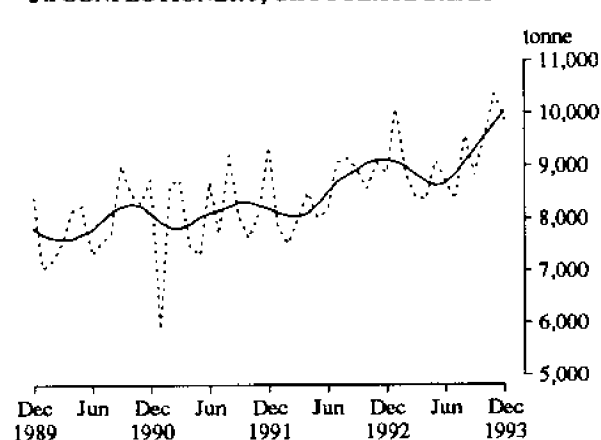
22. WOVEN FABRIC, MAN-MADE FIBRE



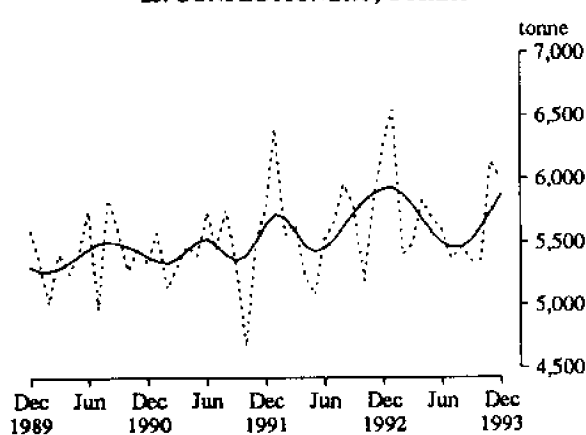
23. TEXTILE FLOOR COVERINGS



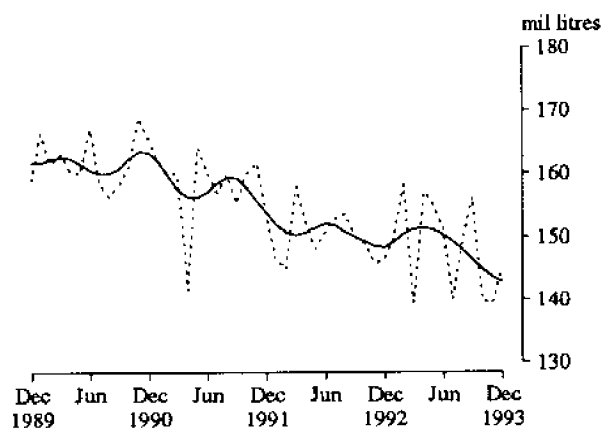
24. CONFECTIONERY, CHOCOLATE BASED



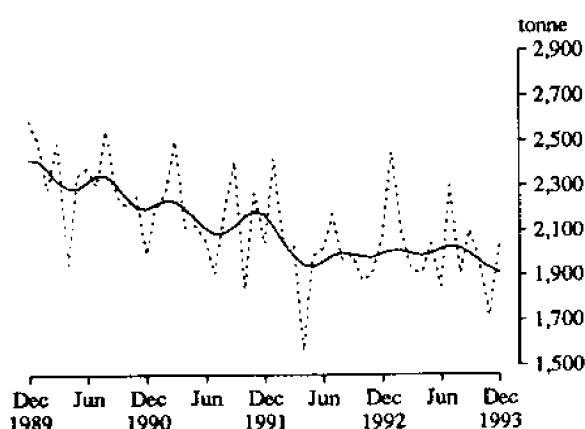
25. CONFECTIONERY, OTHER



26. BEER



27. TOBACCO AND CIGARETTES



(a) There is a drop in the level of the trend from March 1991 due to plant maintenance. (b) There is a break in the series as data after July 1991 excludes a small proportion of total production due to the withdrawal of consent for the ABS to release the information. (c) Seasonally adjusted estimates will not be published

## PRODUCTION STATISTICS, AUSTRALIA, DECEMBER 1993, PRELIMINARY

No. Item	Series	Unit	1993									Percentage changes between-	
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Nov. 93	Dec. 92
												and Dec. 93	and Dec. 93
1. Basic iron, spiegeleisen and sponge iron	Orig.	'000 tonnes	550	587	568	572	588	574	613	600	591	-1.5	18.2
	S. adj.	"	578	631	614	539	552	550	577	566	559	-1.2	17.4
	Trend r	"	580	589	587	577	567	561	558	558	561	0.5	11.8
2. Iron and steel in ingots or other primary forms(a)	Orig.	"	562	639	613	604	613	625	654	638	638	0.0	17.7
	S. adj.	"	597	672	641	566	574	597	628	645	620	-4.0	15.9
	Trend r	"	615	618	613	607	603	605	611	619	629	1.6	14.4
3. Blooms and slabs(b)	Orig.	"	171	150	143	133	138	139	137	137	126	-8.0	-21.3
	S. adj.	"	174	158	146	123	126	130	130	151	124	-18.3	-21.2
	Trend r	"	164	154	144	136	132	131	131	132	134	1.1	-29.8
4. Gas(c)	Orig.	terajoules	41,712	50,366	56,977	56,807	54,634	51,367	48,073	r 45,126	44,965	-0.4	13.5
	S. adj.	"	46,430	46,824	46,986	46,652	43,617	46,719	48,320	r 49,196	53,778	9.3	14.1
	Trend r	"	46,579	46,405	46,088	45,956	46,254	47,051	48,219	49,557	50,899	2.7	8.7
5. Electricity	Orig.	mil kWh	12,817	13,746	14,259	14,590	14,354	13,254	13,464	13,302	13,453	1.1	8.2
	S. adj.	"	13,589	13,534	13,479	13,303	13,252	13,216	13,657	14,028	13,811	-1.5	7.5
	Trend r	"	13,479	13,440	13,383	13,358	13,391	13,468	13,583	13,710	13,832	0.9	3.9
6. Bricks, clay	Orig.	million	141	159	162	154	166	156	147	r 161	142	-11.8	2.2
	S. adj.	"	144	150	153	148	155	148	142	r 152	154	1.3	3.6
	Trend r	"	147	148	150	150	150	150	150	150	150	0.3	4.7
7. Cement, Portland	Orig.	'000 tonnes	508	613	546	558	572	518	r 594	r 594	530	-10.8	6.4
	S. adj.	"	527	577	542	527	544	508	r 552	r 535	548	2.4	7.1
	Trend r	"	540	543	542	539	536	535	535	537	542	0.8	8.0
8. Particle board and similar boards(d)	Orig.	'000 cu m	58	59	62	61	68	67	68	69	54	-21.7	12.5
	S. adj.	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Trend r	"	59	60	61	61	61	61	62	62	63	0.5	16.8
9. Plastics in primary forms(e)	Orig.	'000 tonnes	79.3	85.9	87.5	94.8	94.8	95.7	95.2	r 90.0	79.6	-11.5	-4.6
	S. adj.	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Trend r	"	84.0	85.8	88.2	90.2	91.0	90.4	89.1	87.6	85.9	-1.9	-0.8
10. Sulphuric acid; oleum	Orig.	"	68	71	75	64	42	61	67	r 76	83	9.2	-5.7
	S. adj.	"	66	67	76	77	53	75	74	r 81	75	-7.3	-4.0
	Trend r	"	69	69	69	69	70	72	73	75	77	1.8	0.9
11. Refrigerators, domestic	Orig.	'000	31.5	31.9	26.5	29.9	32.5	41.8	38.8	41.6	37.2	-10.6	16.0
	S. adj.	"	34.9	30.5	28.0	28.6	30.8	38.2	38.0	35.8	39.8	11.3	15.2
	Trend r	"	34.1	31.8	30.4	30.7	32.3	34.3	36.3	(f)	(f)	n.a.	n.a.
12. Clothes washing machines, domestic	Orig.	"	25.7	25.1	27.4	27.8	32.3	34.5	29.6	29.9	25.0	-16.3	9.7
	S. adj.	"	27.3	25.7	27.0	23.6	26.8	32.3	29.1	27.0	28.0	3.8	13.3
	Trend r	"	26.7	26.3	26.4	26.8	27.5	28.1	28.6	28.8	28.8	0.0	12.1
13. Television sets(g)	Orig.	"	11.0	14.3	12.2	12.3	15.7	17.4	13.8	14.7	12.1	-17.4	9.2
	S. adj.	"	11.9	13.5	12.0	11.0	13.4	16.1	12.0	13.1	13.0	-0.3	5.5
	Trend r	"	12.2	12.4	12.7	12.9	13.1	13.3	13.4	13.3	13.4	0.1	13.7
14. Electric motors	Orig.	"	261	262	209	217	200	262	252	254	225	-11.5	10.7
	S. adj.	"	289	272	198	206	184	232	222	225	242	7.5	11.0
	Trend r	"	260	246	229	216	211	213	219	226	235	4.1	0.7

For footnotes see end of table

## PRODUCTION STATISTICS, AUSTRALIA, DECEMBER 1993, PRELIMINARY

No. Item	Series	Unit	1993									Percentage changes between	
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Nov. 93 and Dec. 93	Dec. 92 and Dec. 93
15. Lawn mowers petrol-rotary type	Orig.	'000	10.7	9.3	7.2	13.0	24.2	39.6	r 42.7	42.3	31.8	-24.9	-2.0
	S. adj.	"	19.3	19.1	14.4	17.1	22.9	25.6	r 27.8	27.6	27.4	-0.5	4.0
	Trend r	"	20.4	18.3	17.8	19.1	21.5	24.0	26.1	(f)	(f)	n.a.	n.a.
Motor vehicles—													
16. Cars and station wagons	Orig.	number	21,016	25,000	23,869	25,995	27,637	26,918	24,592	27,982	21,341	-23.7	8.5
	S. adj.	"	23,565	22,569	21,528	22,676	24,360	23,695	22,822	25,023	25,793	3.1	11.0
	Trend r	"	23,286	23,053	22,816	22,849	23,142	23,626	24,135	24,630	25,101	1.9	12.9
17. Vehicles for goods and materials(h)	Orig.	"	1,700	1,547	1,344	1,720	1,877	1,752	2,223	2,172	1,525	-29.8	25.7
	S. adj.	"	1,925	1,355	1,153	1,649	1,672	1,557	1,901	2,287	1,766	-22.8	21.8
	Trend r	"	1,488	1,467	1,474	1,526	1,619	1,734	1,850	(f)	(f)	n.a.	n.a.
Yarn(i)—													
18. Cotton	Orig.	tonne	2,334	2,202	3,109	2,744	2,539	2,743	2,478	2,357	2,264	-3.9	16.6
	S. adj.	"	2,392	2,268	2,734	2,423	2,398	2,499	2,116	2,332	2,521	8.1	10.4
	Trend r	"	2,381	2,434	2,465	2,459	2,425	2,387	2,362	2,352	2,338	-0.6	6.6
19. Wool	Orig.	"	1,485	1,502	1,601	1,694	1,819	1,796	1,632	r 1,684	1,495	-11.2	9.1
	S. adj.	"	1,696	1,462	1,404	1,594	1,672	1,579	1,497	r 1,444	1,731	19.9	12.8
	Trend r	"	1,510	1,523	1,537	1,549	1,555	1,560	1,568	1,580	1,592	0.7	4.6
Woven fabric(i)—													
20. Cotton (incl. towelling)	Orig.	'000 sq m	3,857	3,935	4,462	4,492	4,237	4,467	r 4,128	r 4,024	3,712	-7.8	34.4
	S. adj.	"	3,588	3,683	4,243	3,451	4,175	4,096	r 3,515	r 4,182	4,412	5.5	27.0
	Trend r	"	3,678	3,770	3,838	3,877	3,908	3,950	4,008	(f)	(f)	n.a.	n.a.
21. Wool (incl. blanketing)	Orig.	"	718	644	680	731	633	806	601	r 652	629	-3.5	-3.4
	S. adj.	"	849	679	620	744	576	777	562	r 552	692	25.4	-1.5
	Trend r	"	731	717	698	677	657	642	633	627	623	-0.6	-15.4
22. Man-made fibre	Orig.	"	15,509	17,199	17,461	17,195	16,156	15,884	r 15,990	r 16,228	13,468	-17.0	-9.3
	S. adj.	"	15,841	16,452	15,788	15,580	15,285	14,703	r 15,010	r 14,709	13,627	-7.4	-11.9
	Trend r	"	15,719	15,870	15,853	15,661	15,341	15,013	14,707	14,414	14,183	-1.6	-4.7
23. Textile floor coverings	Orig. r	"	2,962	3,753	3,314	3,456	4,036	3,978	3,793	r 4,353	3,482	-20.0	5.2
	S. adj.	"	3,408	3,564	3,176	3,183	3,700	3,549	3,500	r 3,815	3,580	-6.2	6.5
	Trend r	"	3,445	3,404	3,387	3,405	3,460	3,532	3,598	3,648	3,701	1.5	6.5
Confectionery—													
24. Chocolate base	Orig. r	tonne	8,173	9,193	9,211	8,713	10,643	9,304	10,379	10,504	9,564	-8.9	16.2
	S. adj. r	"	8,368	9,087	8,738	8,347	9,574	8,836	9,564	10,368	9,876	-4.7	11.3
	Trend r	"	8,711	8,635	8,675	8,840	9,075	9,319	9,574	9,810	10,039	2.3	10.2
25. Other	Orig.	"	4,811	5,687	5,865	5,734	6,295	6,070	6,216	r 6,990	5,540	-20.7	-2.9
	S. adj.	"	5,835	5,689	5,597	5,366	5,466	5,351	5,357	r 6,133	5,993	-2.3	-4.3
	Trend r	"	5,683	5,573	5,498	5,466	5,467	5,516	5,619	5,745	5,877	2.3	-0.8
26. Beer(j)	Orig.	mil litres	154	137	129	128	140	143	151	177	184	4.0	-2.1
	S. adj.	"	157	155	151	140	150	156	140	139	145	4.1	-1.0
	Trend r	"	151	151	150	149	148	146	145	144	143	-0.6	-3.7
27. Tobacco and cigarettes(k)	Orig.	tonne	1,808	2,304	1,924	2,453	2,082	2,035	1,810	1,988	1,877	-5.6	0.3
	S. adj.	"	1,907	2,043	1,849	2,300	1,908	2,105	1,963	1,718	2,035	18.5	-1.6
	Trend r	"	1,989	1,997	2,016	2,030	2,024	1,998	1,965	1,934	1,914	-1.0	-4.2

(a) Includes ingots, puddled bars, pilings, blocks or lumps and steel in the molten state. (b) From rolling and forging of iron and steel (primary mills output). (c) Available for issue through mains. Includes natural gas. (d) Particle boards and similar boards of wood or other ligneous material. Includes boards for subsequent conversion to other purposes. Excludes laminated. Seasonally adjusted estimates will not be published until a longer time span of data are available to provide more reliable seasonal factors. (e) Includes liquid, paste, powder, granules, flakes, blocks, irregular shapes, lumps and similar forms. Seasonally adjusted estimates will not be published until a longer time span of data are available to provide more reliable seasonal factors. (f) See paragraph 9 of Explanatory Notes. (g) Excludes combination with radio etc. (h) Includes utilities, panel vans and prime movers for semi-trailers. (i) Includes mixtures predominantly of the fibre named. (j) Includes ale and stout. Excludes beverages with alcohol content of less than 1.15 per cent. (k) Source: Australian Tobacco Marketing Advisory Committee.

## EXPLANATORY NOTES

**Introduction**

Preliminary estimates for December 1993 for certain major indicators of production are shown in the table on page 5. Production statistics for December 1993 for a more extensive range of commodities will be published later in the series of ten *Manufacturing Production Bulletins* (8357.0 to 8363.0 and 8367.0 to 8369.0).

**Scope and coverage**

2. Production statistics are not collected from single establishment manufacturing enterprises with fewer than four persons employed or from establishments predominantly engaged in non-manufacturing activities but which may carry out in a minor way some manufacturing. However, in general the contribution of these small producers to statistical aggregates is only marginal and data contained in this publication provide reliable information for the evaluation of movements in commodity production.

**Comparability with other estimates**

3. The ABS publishes quarterly estimates of constant price manufacturing production in the publication *Quarterly Indexes of Industrial Production, Australia* (8125.0). These estimates are shown as index numbers and are derived mainly from estimates of manufacturers' sales and stocks.

4. The production statistics published in the series of ten *Manufacturing Production Bulletins* (8357.0 to 8363.0 and 8367.0 to 8369.0) referred to in paragraph 1 account, in total, for less than half of the output of the manufacturing sector, so differences may occur between the general tendency (if there is one) in these items and changes in the quarterly indexes of industrial production. The comment applies with still greater force to the preliminary estimates for the major indicators of production shown in this publication.

**Seasonally adjusted and trend estimates**

5. Seasonally adjusted statistics are shown for all but two of the data items contained in this publication. In the seasonal adjustment, account has been taken not only of normal seasonal factors, but also where appropriate, of 'working day' effects (arising from the varying numbers of Sundays, Mondays, Tuesdays, etc. in the month) and the influence of Easter and Australia Day which may, in successive years, affect figures for different months. Details of the methods used in seasonally adjusting these series are available on request.

6. Seasonal adjustment procedures do not aim to remove the irregular or non-seasonal influences which may be present in any particular month, such as the effect of strikes, holiday shutdowns or other factors which vary with the prevailing demand for products. Irregular influences that are highly volatile can make it difficult to interpret the movement of the series even after seasonal adjustment.

7. The smoothing of seasonally adjusted series to create trend estimates is a means of reducing the impact of the irregular component of the series. The trend estimates have been derived by applying a 13-term Henderson weighted moving average to the seasonally adjusted series.

8. While this smoothing technique enables estimates of trend to be produced for the latest month, it does result in revisions to the estimates for the most recent months as data for subsequent months become available. Generally subsequent revisions become smaller and after 3 months

have little impact on the series. There will also be revisions as a result of revisions to the original estimates and annual reviews of seasonal and 'working day' factors.

9. Because of the highly irregular nature of some production series it is not possible to discern with reasonable confidence the current direction of the trend at the end of these series. For such highly irregular series the ABS does not provide the last two trend estimates.

10. Users may wish to refer to the ABS Information Papers *A Guide to Smoothing Time Series — Estimates of 'Trend'* (1316.0) and *Time Series Decomposition — An Overview* (1317.0) for more detailed information on smoothing of seasonally adjusted time series data.

**Related publications**

11. Other ABS publications which may be of interest are:

*Manufacturing Production, Australia, Household Appliances and Electrical Equipment* (8357.0) — issued quarterly

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*Manufacturing Production, Australia, Food, Drink, Tobacco, Stock and Poultry Food* (8359.0) — issued quarterly

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*Manufacturing Production, Australia, Wood and Wood Products* (8369.0) — issued quarterly

*Manufacturing Production, Australia: Principal Commodities Produced, 1989-90* (8365.0) — to be released shortly

Unpublished production data is also available from the ABS Sydney office. Please contact Colin Nicholson on (02) 268 4282.

12. Current publications produced by the ABS are listed in the *Catalogue of Publications and Products, Australia* (1101.0). The ABS also issues, on Tuesdays and Fridays, a *Publications Advice* (1105.0) which lists publications to be released in the next few days. The Catalogue and Publications Advice are available from any ABS office.

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