



MANUFACTURING PRODUCTION

AUSTRALIA

EMBARGO: 11:30AM (CANBERRA TIME) FRI 9 AUG 2002

C O N T E N T S

Page

Notes	2
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TABLES

1 Quarterly commodity production	3
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ADDITIONAL INFORMATION

Explanatory notes	5
Appendix: Clarification of terms	9

- For further information about these and related statistics, contact Denis Linney on Sydney 02 9268 4219 or the National Information and Referral Service on 1300 135 070.

NOTES

FORTHCOMING ISSUES

ISSUE	RELEASE DATE
September quarter 2002	11 November 2002
December quarter 2002	11 February 2003
March quarter 2003	12 May 2003

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IN THIS ISSUE

This publication presents quarterly estimates of selected major indicators of manufacturing production for Australia.

More detailed and other commodity items are collected by the Australian Bureau of Statistics (ABS) and are available to users on request and for a charge, as are monthly series for a limited number of data items. These data items are listed in paragraph 20 of the Explanatory Notes on page 7.

Annual series published in the issues of June and September quarters 2001 will be included in the next issue of this publication.

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EFFECTS OF ROUNDING

Estimates of change shown in this publication have been calculated using unrounded estimates and may be different from, but are more accurate than, movements obtained from the rounded estimates.

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ABBREVIATIONS AND SYMBOLS

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
ADC	Australian Dairy Corporation
DITR	Department of Industry, Tourism and Resources
n.a.	not available
n.p.	not publishable
n.y.a.	not yet available
p	preliminary
r	figure or series revised since previous issue
—	nil or rounded to zero

Dennis Trewin
Australian Statistician

QUARTERLY COMMODITY PRODUCTION: **All series**(a)

2000.....2001..... 2002.....											Percentage changes between latest quarter shown and....	
No.	Item and unit/Series	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	prev. quarter	same quarter prev. year
1	Red meat ('000 tonnes)											
	Original r	780	804	802	780	814	799	748	717	811	13.1	-0.3
	Seasonally adjusted r	777	798	799	792	810	795	745	730	806	10.4	-0.5
	Trend	774	789	798	804	801	780	759	756	770	1.9	-3.9
2	Chicken meat ('000 tonnes)											
	Original	152	152	162	151	155	156	166	168	176	4.7	13.9
	Seasonally adjusted	154	155	157	151	157	158	161	170	179	5.2	13.9
	Trend	154	155	155	154	155	158	163	170	177	4.1	13.8
3	Cheese (tonnes)											
	Original r	74 887	76 285	114 312	90 775	79 777	95 521	130 059	113 389	n.y.a.	-12.8	24.9
	Seasonally adjusted r	96 530	89 160	85 667	87 889	102 397	111 737	97 572	109 800	n.y.a.	12.5	24.9
	Trend	93 624	86 853	86 853	91 897	99 955	104 750	105 985	105 845	n.y.a.	-0.1	15.2
4	Butter (tonnes)											
	Original	28 020	36 525	56 685	36 982	29 409	r35 802	r57 637	41 470	n.y.a.	-28.0	12.1
	Seasonally adjusted	43 337	42 349	37 333	38 138	45 102	r41 427	r38 034	42 821	n.y.a.	12.6	12.3
	Trend	42 239	40 664	39 398	40 088	41 401	41 571	40 834	40 420	n.y.a.	-1.0	0.8
5	Beer (megalitres)											
	Original	402	414	500	451	380	416	492	428	408	-4.6	7.4
	Seasonally adjusted	449	440	429	451	426	448	417	433	458	5.7	7.5
	Trend	436	440	439	438	438	432	430	437	444	1.8	1.5
6	Tobacco and cigarettes (tonnes)											
	Original	4 860	5 185	4 763	4 217	4 959	5 196	4 522	3 843	4 806	25.1	-3.1
	Seasonally adjusted	4 745	4 836	4 892	4 592	4 851	4 772	4 698	4 127	4 706	14.0	-3.0
	Trend	5 079	4 802	4 745	4 766	4 789	4 722	4 581	4 465	4 456	-0.2	-6.9
7	Newsprint ('000 tonnes)											
	Original	96	100	97	100	94	95	99	104	100	-3.6	6.3
	Seasonally adjusted	97	99	100	100	95	93	100	104	101	-3.3	6.4
	Trend	98	99	100	98	95	96	99	102	103	0.8	7.7
8	Wood pulp ('000 tonnes)											
	Original	216	226	227	220	222	198	212	211	222	5.4	-0.2
	Seasonally adjusted	215	228	225	221	221	199	210	212	221	4.0	-0.2
	Trend	221	224	226	222	215	208	208	213	218	2.7	1.8
9	Undressed sawn timber ('000 m³)											
	Original	r1 019	r1 021	853	805	846	819	906	n.y.a.	n.y.a.	10.6	6.2
	Seasonally adjusted	r1 003	r964	894	828	835	774	951	n.y.a.	n.y.a.	22.9	6.4
	Trend	1 003	957	897	837	818	840	886	n.y.a.	n.y.a.	5.5	-1.3
10	Hardwood woodchips ('000 tonnes)											
	Original	1 671	1 717	1 674	1 434	1 576	1 388	1 340	1 494	1 690	13.1	7.2
	Seasonally adjusted	1 614	1 684	1 712	1 483	1 524	1 362	1 370	1 544	1 634	5.8	7.2
	Trend	1 639	1 674	1 648	1 566	1 456	1 393	1 425	1 508	1 617	7.2	11.1
11	Automotive gasoline (megalitres)											
	Original	4 607	4 524	4 398	4 321	4 644	4 714	4 251	4 433	n.y.a.	4.3	2.6
	Seasonally adjusted	4 477	4 487	4 441	4 475	4 512	4 636	4 327	4 554	n.y.a.	5.3	1.8
	Trend	4 480	4 453	4 455	4 494	4 521	4 513	4 487	4 474	n.y.a.	-0.3	-0.5
12	Fuel oil (megalitres)											
	Original	464	475	527	505	444	492	396	424	n.y.a.	7.3	-16.0
	Seasonally adjusted	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.y.a.	n.p.	n.p.
	Trend	505	494	490	498	486	455	423	402	n.y.a.	-5.0	-19.2
13	Aviation turbine fuel (megalitres)(b)											
	Original	1 376	1 418	1 463	1 509	1 446	1 517	1 290	1 321	n.y.a.	2.4	-12.5
	Seasonally adjusted	1 438	1 411	1 428	1 493	1 503	1 509	1 261	1 308	n.y.a.	3.8	-12.4
	Trend	1 410	1 423	1 445	1 490	1 500	1 438	1 351	1 291	n.y.a.	-4.5	-13.4
14	Automotive diesel oil (megalitres)											
	Original	3 021	3 052	3 471	3 288	3 401	3 405	3 213	3 241	n.y.a.	0.9	-1.4
	Seasonally adjusted	3 016	3 162	3 315	3 372	3 394	3 488	3 109	3 277	n.y.a.	5.4	-2.8
	Trend	3 056	3 153	3 279	3 392	3 414	3 354	3 273	3 219	n.y.a.	-1.6	-5.1

(a) The most recent trend estimates published in this release are likely to be improved (revised) when next quarter's seasonally adjusted estimates become available. For more information, users should refer to paragraphs 12–15 of the Explanatory Notes.

(b) The recent large downward movement in this series has caused some uncertainty in the trend estimates from December quarter 2001. A larger span of data is required before the effects of the changes in the aviation fuel industry, and hence the final trend for this series, can be determined.

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents quarterly estimates of production of selected major manufacturing commodities for Australia.

SCOPE AND COVERAGE

2 Data presented in this publication are collected from a number of different sources. The prime source is the ABS surveys of manufacturing production. Data are also obtained from surveys undertaken by the Department of Industry, Tourism and Resources (DITR), the Australian Bureau of Agricultural and Resource Economics (ABARE), the Australian Dairy Corporation (ADC) and from ABS agriculture collections. Scope and coverage varies slightly depending on the source of the information.

3 Production statistics sourced from ABS manufacturing production surveys are not collected from single establishment manufacturing businesses with fewer than four persons employed, nor from establishments predominantly engaged in non-manufacturing activities but which may carry out some manufacturing in a minor way. 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.

4 The statistics of meat production include data collected from abattoirs and other major slaughtering establishments, plus estimates of animals slaughtered for human consumption on farms and by country butchers and other small slaughtering establishments. Further information about this series, including more detail, is available in the monthly publication *Livestock and Meat, Australia* (Cat. no. 7218.0) and in the quarterly publication *Livestock Products, Australia* (Cat. no. 7215.0).

5 The statistics on chicken meat have been collected from commercial poultry slaughtering establishments. Many very small producers and Tasmanian producers are excluded from the collection; however, the statistics represent a high level of coverage. Further information about this series, including more detail, is available in the quarterly publication *Livestock Products, Australia* (Cat. no. 7215.0).

6 Data on the production of base metals and sawn timber are obtained from the ABARE publications *Mineral Statistics* and *Australian Forest Products Statistics*.

7 Data on the production of fuels are obtained from the DITR Petroleum and International Energy Division publication *Australian Petroleum Statistics*.

8 Data on the production of cheese and butter are obtained from the ADC as unpublished data.

COMPARABILITY WITH OTHER ESTIMATES

9 The quarterly production statistics presented in this publication account, in total, for less than one-fifth of the output of the manufacturing sector. For information on general trends in the manufacturing sector, refer to the publications shown in paragraphs 10, 11 and 18.

10 Details of the value of manufacturers' sales and inventories are published quarterly in *Business Indicators, Australia* (Cat. no. 5676.0) (which has replaced *Inventories and Sales, Selected Industries, Australia* (Cat. no. 5629.0)). Information about the manufacturing sector's contribution to the Australian economy is published quarterly in *Australian National Accounts: National Income, Expenditure and Product* (Cat. no. 5206.0).

COMPARABILITY WITH OTHER ESTIMATES *continued*

11 Details from the annual manufacturing collection are published in *Manufacturing Industry, Australia* (Cat. no. 8221.0) and corresponding State publications.

SEASONALLY ADJUSTED AND TREND ESTIMATES

12 In the seasonal adjustment process, 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 quarter) which may, in successive years, affect figures for different quarters. Details of the methods used in seasonally adjusting these series are available on request.

13 Seasonal adjustment procedures do not aim to remove the irregular or non-seasonal influences which may be present in any particular quarter, such as the non-systematic effect of strikes, holiday shutdowns, providers' inconsistent reporting periods (where, for example, a 'quarter' may variously represent 13 or 14 weeks production), 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. Seasonally adjusted estimates of production for the series 20 Silver, 21 Copper, and 22 Lead are more volatile than other series. Seasonally adjusted estimates for 19 Zinc and 23 Tin are not sufficiently reliable to be published, while those for 12 Fuel Oil and 24 Gold do not exhibit sufficient seasonal behaviour to be published.

14 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 7-term moving average to the quarterly seasonally adjusted series. The 7-term Henderson averages (like all Henderson averages) are symmetric but, as the end of a time series is approached, asymmetric forms of the average are applied. Unlike the weights of the standard 7-term Henderson moving average, the surrogate weights employed with the quarterly data have been tailored to suit the particular characteristics of individual series.

15 While the asymmetric weights enable trend estimates for recent quarters to be produced, it does result in revisions to the estimates for the most recent quarters as additional observations become available. Generally, subsequent revisions become smaller and after two quarters have little impact on the series. There will also be revisions as a result of changes to the original estimates and annual reviews of seasonal and 'working day' factors.

16 More detailed up-to-date information on smoothing of seasonally adjusted time series data is available in unpublished form. Interested users should contact the ABS's Time Series Analysis section, on Canberra 02 6252 6345 or by email through the internet to timeseries@abs.gov.au.

ACKNOWLEDGEMENT

17 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the *Census and Statistics Act 1905*.

RELATED PUBLICATIONS

- 18** Other ABS publications which may be of interest are:
- *Australian National Accounts: National Income, Expenditure and Product* (Cat. no. 5206.0) issued quarterly
 - *Business Indicators, Australia* (Cat. no. 5676.0) issued quarterly
 - *Electricity, Gas, Water and Sewerage Industries, Australia, 1999–2000* (Cat. no. 8208.0), released on 28 August 2001
 - *Experimental Estimates, Australian Industry, a State Perspective* (Cat. no. 8156.0) released on 21 March 2002
 - *Information Paper: Availability of Statistics Related to Manufacturing, 1997* (Cat. no. 8205.0), released on 16 January 1998
 - *Livestock and Meat, Australia* (Cat. no. 7218.0) issued monthly
 - *Livestock Products, Australia* (Cat. no. 7215.0) issued quarterly
 - *Manufacturing, Australia, 2001* (Cat. no. 8225.0) released on 8 March 2002
 - *Manufacturing Industry, Australia, 1999–2000* (Cat. no. 8221.0) released on 24 October 2001
 - *Manufacturing Industry, Australia, Preliminary, 2000–01* (Cat. no. 8201.0) released on 27 March 2002
 - *Mining Operations, Australia, 1999–2000* (Cat. no. 8415.0) released on 29 August 2001

OTHER PUBLISHED STATISTICS

- 19** Some annual manufacturing production series which mainly relate to textiles, clothing and footwear are now published in the September quarter issues of this publication. Selected annual food series (which are now collected less frequently) were last published in the September quarter 2000 issue.

ABS DATA AVAILABLE ON REQUEST

- 20** More detailed and other commodity items are collected by the ABS and are available to users on request and for a charge, as are monthly series for a limited number of the data items contained in this publication. Items for which additional production data are available are:

beer
cars and station wagons
clay bricks (for structural purposes)
clay bricks (for other than structural purposes)
commercial office furniture
concrete bricks, blocks and pavers
cotton broadwoven fabric
hosiery
knitted sweatshirts and sloppy-joes
knitted underwear
malt
man-made fibre broadwoven fabric
men's and boys' long trousers
men's and boys' shirts
men's and boys' woven coats
mowers
other clothing (excluding those listed here)
plasterboard
Portland cement and cement clinkers
ready mixed concrete

ABS DATA AVAILABLE ON REQUEST *continued*

- roofing tiles
- semi-trailers
- synthetic fibre yarn
- textile floor coverings
- water heaters
- women's knitted briefs and panties
- women's shirts and blouses
- women's footwear
- wool broadwoven fabric
- wool yarn

For further information, please contact Denis Linney on Sydney 02 9268 4219.

21 The value of sales for commodities produced (classified in accordance with the Manufacturing Input-Output Commodity Classification) is collected in the annual manufacturing industry survey, and is available to users on request and for a charge. For further information, please contact John Ridley on Sydney 02 9268 4541.

CURRENT PUBLICATIONS

22 Current publications and other products produced by the ABS are listed in the *Catalogue of Publications and Products* (Cat. no. 1101.0). The ABS also issues, on Tuesdays and Fridays, a *Release Advice* (Cat. no. 1105.0) which lists products to be released in the next few days. The Catalogue and Release Advice are available from any ABS office or by subscription, and can also be accessed through the ABS web site www.abs.gov.au.

APPENDIX CLARIFICATION OF TERMS

1 Red meat	Includes veal, pork and buffalo.
2 Chicken meat	Expressed in the dressed weight of whole birds, pieces and giblets.
3 Cheese	Includes fresh cheeses such as ricotta, cottage, cream and quark.
4 Butter	Includes direct butter oil.
5 Beer	Includes ale, stout and porter; excludes low alcohol beer containing less than 1.15% but more than 0.5%, by volume of alcohol.
6 Tobacco and cigarettes	Includes those containing tobacco substitutes.
7 Newsprint	Excludes directory paper, mechanical and printing paper.
8 Wood pulp	Expressed as air-dried weight.
9 Undressed sawn timber	Expressed in terms of green off saw volumes.
10 Hardwood woodchips	Expressed as greenweight; excludes chips which are not sold or are used in own works.
11 Automotive gasoline	Produced by Australian refineries from imported and indigenous petroleum.
12 Fuel oil	Oils derived from the distillation of petroleum which are generally used for domestic heating or fuelling furnaces; produced by Australian refineries from imported and indigenous petroleum.
13 Aviation turbine fuel	Produced by Australian refineries from imported and indigenous petroleum.
14 Automotive diesel oil	Produced by Australian refineries from imported and indigenous petroleum.
15 Portland cement	Includes blended Portland cement. Excludes both Portland cement clinker and Portland cement used to make blended Portland cement in-house.
16 Clay bricks	Saleable bricks (of all sizes) removed from kiln; excludes firebricks and bricks for other than structural purposes.
17 Ready mixed concrete	Excludes production used or for use within the same business.
18 Alumina	Aluminium oxide.
19 Zinc	Primary origin only.
20 Silver	Refined.
21 Copper	Primary origin only.
22 Lead	Includes lead content of lead from primary sources.
23 Tin	Primary origin only.
24 Gold	From primary and secondary sources.
25 Electricity	Excludes purchases or transfers in of electricity.
26 Gas	Gas (including natural gas) available for issue through mains, including gas production for distribution via natural gas pipelines which service a single user.

FOR MORE INFORMATION...

<i>INTERNET</i>	www.abs.gov.au the ABS web site is the best place to start for access to summary data from our latest publications, information about the ABS, advice about upcoming releases, our catalogue, and Australia Now—a statistical profile.
<i>LIBRARY</i>	A range of ABS publications is available from public and tertiary libraries Australia-wide. Contact your nearest library to determine whether it has the ABS statistics you require, or visit our web site for a list of libraries.
<i>CPI INFOLINE</i>	For current and historical Consumer Price Index data, call 1902 981 074 (call cost 77c per minute).
<i>DIAL-A-STATISTIC</i>	For the latest figures for National Accounts, Balance of Payments, Labour Force, Average Weekly Earnings, Estimated Resident Population and the Consumer Price Index call 1900 986 400 (call cost 77c per minute).

INFORMATION SERVICE

Data which have been published and can be provided within five minutes are free of charge. Our information consultants can also help you to access the full range of ABS information—ABS user-pays services can be tailored to your needs, time frame and budget. Publications may be purchased. Specialists are on hand to help you with analytical or methodological advice.

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