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# **WATER USE ON AUSTRALIAN FARMS**

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## **I N Q U I R I E S**

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070.

# NOTES

## BACKGROUND

The agriculture industry is a major consumer of water in the Australian economy. The *Water Account, Australia 2004–05* (cat. no. 4610.0) showed agriculture to account for 65% of all water consumed in 2004–05.

This publication presents final estimates of agricultural water use, pastures and crops irrigated, and sources of water used for agriculture at a national, state/territory and regional level, with the Murray–Darling Basin treated as a distinct geographical region for the first time. This issue updates and expands on data released in *Water Use on Australian Farms Preliminary* (4618.0) on 14 August 2007. The estimates are compiled from data collected as part of the Agricultural Census for the year ended 30 June 2006. Estimates for 2002–03, 2003–04 and 2004–05 are also included in this publication.

Climatic conditions affect both the availability of water for irrigation and the need to irrigate in order to supplement rainfall. Information from the Bureau of Meteorology outlining climatic conditions over key agricultural areas between July 2005 and June 2006 are presented as an appendix.

## CHANGES IN THIS ISSUE

### *New geographies*

For the first time, estimates are presented for key irrigated pastures and crops for the Murray–Darling Basin. Irrigation data are also presented for Drainage Divisions and Natural Resource Management Regions.

## ACKNOWLEDGEMENTS

The provision of estimates for a range of regions is made possible by funding provided by the National Water Commission through Raising National Water Standards, and through natural resource management programs administered by the Departments of Agriculture, Fisheries and Forestry and Environment, Water, Heritage and the Arts.

Brian Pink  
Australian Statistician

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AGRICULTURAL WATER  
USE  
*Australia*

In 2005–06, Australian agricultural businesses used 11,689 gigalitres of water for agricultural production. Of this, 10,737 gigalitres (91.9%) was used for the irrigation of pastures and crops, and 951 gigalitres (8.1%) used for other agricultural purposes such as stock watering and the cleaning of dairies and piggeries.

**1.1** AGRICULTURAL WATER USE, By State—2005–06  
.....

	WATER USE .....			
	<i>Agricultural businesses</i>	<i>Irrigation</i>	<i>Other agricultural uses</i>	<i>Total water use</i>
	no.	ML	ML	ML
NSW	48 838	4 533 324	261 925	4 795 250
Vic.	37 146	2 448 485	192 653	2 641 138
Qld	32 212	2 325 003	255 633	2 580 636
SA	16 455	897 197	78 378	975 575
WA	14 526	306 284	121 241	427 525
Tas.	4 745	203 931	25 789	229 720
NT	659	22 356	15 369	37 724
ACT	99	^ 784	439	^ 1 224
<b>Aust.</b>	<b>154 681</b>	<b>10 737 364</b>	<b>951 428</b>	<b>11 688 792</b>

.....  
^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

*State/territory*

Agricultural businesses in New South Wales used 4,795 gigalitres of water for all agricultural purposes (41.1% of the national total). Victoria with 2,641 gigalitres (22.6% of the national total), and Queensland with 2,581 gigalitres (22.1% of the national total) were the next highest users of water for agricultural purposes.

Irrigation was the major use of water for agricultural purposes in all states/territories, accounting for 94.5% of all water used for agricultural purposes in NSW (4,533 gigalitres), 92.7% of water used for agricultural purposes in Victoria (2,448 gigalitres), and 90.0% of water used for agricultural purposes in Queensland (2,325 gigalitres).

Water use for other agricultural purposes such as stock watering and the cleaning of dairies and piggeries accounted for a larger proportion of total water used for agricultural purposes in the Northern Territory (40.7%) and Western Australia (28.4%).

## IRRIGATION WATER USE

*Australia*

Nationally, 29.0% of agricultural businesses (44,826) reported using water for irrigation. Across Australia, 2,546,000 hectares of agricultural land was irrigated at an average application rate of 4.2 ML/ha, which was the same rate as 2004–05.

**1.2** IRRIGATION ACTIVITY, By State—2002–03 to 2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area of agricultural holding</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>AUSTRALIA</b>						
<b>Old basis(a)</b>						
2002–03	132 983	43 774	439 531	2 378	10 403 759	4.4
2003–04	130 526	40 400	440 110	2 402	10 441 515	4.3
2004–05	129 934	35 244	445 149	2 405	10 084 596	4.2
<b>New basis(b)</b>						
2005–06	154 681	44 826	434 925	2 546	10 737 364	4.2
<b>2005–06</b>						
<b>New basis(b)</b>						
NSW	48 838	11 587	62 119	994	4 533 325	4.6
Vic.	37 146	11 621	12 314	648	2 448 485	3.8
Qld	32 212	9 861	145 519	539	2 325 003	4.3
SA	16 455	6 298	55 408	217	897 197	4.1
WA	14 526	3 173	98 653	60	306 284	5.1
Tas.	4 745	1 919	1 739	81	203 931	2.5
NT	659	351	59 127	7	22 356	3.1
ACT	99	17	45	^—	^ 784	^ 3.1

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

— nil or rounded to zero (including null cells)

(a) Derived using old ABS-maintained frame. See Technical Note for detail.

(b) Derived using new ABR-based frame. See Technical Note for detail.

*State/territory*

Victoria had the largest number of agricultural businesses irrigating (11,621 or 25.9% of the national total), followed by NSW (11,587 or 25.8% of the national total) and Queensland (9,861 or 22.0% of the national total). The Northern Territory had the highest proportion of agricultural businesses irrigating (53.3% of agricultural businesses in the territory), followed by Tasmania with 40.4%.

Agricultural businesses in New South Wales, Victoria and Queensland continued to be the major users of water for irrigation nationally, accounting for 86.7% (9,307 gigalitres) of all water used for irrigation purposes. New South Wales used 42.2% (4,533 gigalitres), followed by Victoria, 22.8% (2,448 gigalitres) and Queensland, 21.7% (2,325 gigalitres).

Western Australia had the highest application rate of irrigation water (5.1 ML/ha), followed by New South Wales (4.6 ML/ha) and Queensland (4.3 ML/ha). Tasmania had the lowest application rate at 2.5 ML/ha.

In New South Wales, 994,000 hectares, or 1.6% of agricultural land in the state was irrigated. This represents 39.0% of irrigated agricultural land nationally. In Victoria, 648,000 hectares, or 5.2% of agricultural land in the state was irrigated. This represents 25.5% of irrigated agricultural land nationally.

*Murray-Darling Basin*

Nationally, 41.6% of all irrigating agricultural businesses were found in the Murray-Darling Basin (18,634 agricultural businesses). Of irrigating agricultural businesses in the Murray-Darling Basin, 42.5% (7,915) were in Victoria, 35.7% (6,651) in New South Wales, and the remainder in Queensland, South Australia and the Australian Capital Territory.

Agricultural businesses in the Murray-Darling Basin used 68.6% of all water used for irrigation purposes nationally, and accounted for 65.0% of all irrigated agricultural land nationally.

### **1.3** IRRIGATION ACTIVITY, By Drainage Division—2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area of agricultural holding</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
Bulloo-Bancannia	138	—	10 389	—	—	—
Gulf of						
Carpentaria	1 022	259	41 799	11	47 061	4.3
Indian Ocean	1 043	261	36 715	np	12 789	np
Lake Eyre	1 280	31	88 442	^ 1	^ 4 978	^ 3.3
Murray Darling						
MDB in NSW	29 803	6 651	51 214	914	4 293 445	4.7
MDB in Vic.	18 496	7 915	7 593	522	2 055 487	3.9
MDB in Qld	7 881	1 536	23 421	147	611 817	4.2
MDB in SA	4 753	2 514	6 555	71	408 273	5.7
MDB in ACT	99	17	45	^ —	^ 784	^ 3.1
<i>Total</i>	61 033	18 634	88 828	1 654	7 369 807	4.5
North-East Coast	22 339	8 056	36 777	381	1 664 324	4.4
South Australian						
Gulf	7 441	2 590	7 962	45	89 191	2.0
South-East Coast	40 593	9 820	12 001	305	1 030 204	3.4
South-West Coast	13 047	2 793	21 569	45	186 528	4.2
Tasmania	4 745	1 919	1 739	81	203 931	2.5
Timor Sea	693	437	29 093	16	^ 124 838	^ 7.7
Western Plateau	1 307	26	59 611	np	3 714	np
<b>Australia</b>	<b>154 681</b>	<b>44 826</b>	<b>434 925</b>	<b>2 546</b>	<b>10 737 364</b>	<b>4.2</b>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

— nil or rounded to zero (including null cells)

np not available for publication but included in totals where applicable, unless otherwise indicated

PASTURES AND CROPS  
IRRIGATED

*Australia*

Nationally, the major crop by volume of irrigation water applied remained pasture for grazing, using 2,888 gigalitres with an average application rate of 3.5 ML/ha. This was followed by cotton (1,735 gigalitres at an application rate of 6.4 ML/ha), rice (1,253 gigalitres at an application rate of 12.3 ML/ha), and sugar cane (1,057 gigalitres at an application rate of 5.0 ML/ha). Pasture for grazing accounted for 26.9% of all irrigation water used nationally, followed by cotton (16.2%), rice (11.7%) and sugar cane (9.8%).

*State/territory*

Rice and cotton continued to be the major users of irrigation water in New South Wales, with the irrigation of rice using 27.4% of irrigation water in the state, while irrigation of cotton used 24.9% of irrigation water in New South Wales.

Pasture for grazing remained the major user of irrigation water in Victoria, using 1,579 gigalitres, or 64.5% of the state total. Pasture for grazing was also the major user of irrigation water in South Australia (260 gigalitres), Western Australia (79 gigalitres) and Tasmania (117 gigalitres).

In Queensland, sugar cane remained the major user of irrigation water, using 988 gigalitres, or 42.5% of the state total.

The irrigation of fruit trees, nut trees, plantation or berry fruits was the major consumer of irrigation water in the Northern Territory, accounting for 68.2% of the territory total.

*Murray-Darling Basin*

The irrigation of pasture for grazing, cotton and rice were the major users of irrigation water in the Murray-Darling Basin. In this region, the irrigation of pasture for grazing was the major use of irrigation water, using 1,981 gigalitres of water, or 26.9% of all water used for irrigation in the region. The irrigation of cotton used 1,574 gigalitres of water (21.4% of all water used for irrigation in the Murray-Darling Basin). The irrigation of rice used 1,252 gigalitres of water (17.0% of all water used for irrigation in the Murray-Darling Basin).

## 2.1 PASTURES AND CROPS IRRIGATED, Australia—2002–03 to 2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area under pasture or crop</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>TOTAL</b>						
<b>Old basis(a)</b>						
2002–03	132 983	43 774	439 531	2 378	10 403 759	4.4
2003–04	130 526	40 400	440 110	2 402	10 441 515	4.3
2004–05	129 934	35 244	445 149	2 405	10 084 596	4.2
<b>New basis(b)</b>						
2005–06(c)	(d)154 681	(d)44 826	(e)434 925	2 546	10 737 364	4.2
<b>2005–06</b>						
<b>New basis(b)</b>						
Pasture for grazing	118 557	14 229	384 737	814	2 887 837	3.5
Pasture for seed production	na	704	na	39	139 619	3.6
Pasture for hay and silage	na	6 412	na	217	799 397	3.7
Cereal crops cut for hay	na	1 309	na	61	139 013	2.3
Cereal crops for grain or seed(f)	38 322	2 107	19 234	286	695 365	2.4
Cereal crops not for grain or seed	11 746	1 072	930	28	59 382	2.1
Rice	1 056	1 056	102	102	1 253 227	12.3
Sugar cane	4 634	2 145	491	210	1 056 598	5.0
Cotton	832	715	327	270	1 734 951	6.4
Other broadacre crops(g)	16 442	901	2 932	55	166 673	3.0
Fruit trees, nut trees, plantation or berry fruits(h)	12 139	7 823	188	139	629 639	4.5
Vegetables for human consumption	6 852	5 982	131	109	416 875	3.8
Vegetables for seed	817	457	7	5	14 542	3.2
Nurseries, cutflowers or cultivated turf	4 065	3 645	19	15	81 666	5.3
Grapevines	9 433	8 277	203	183	633 183	3.5

na not available

(a) Derived using old ABS-maintained frame. See Technical Note for detail.

(b) Derived using new ABR-based register. See Technical Note for detail.

(c) Totals include other pastures or crops not elsewhere classified.

(d) Total does not equal the sum as many establishments grow or irrigate more than one crop or pasture.

(e) Total includes area of all agricultural land. This does not equal the sum of area under pasture or crop as not all land on agricultural holdings is under pasture or crop.

(f) Excludes rice.

(g) Excludes sugar cane and cotton.

(h) Excludes grapevines.

## 2.2 PASTURES AND CROPS IRRIGATED, New South Wales—2002–03 to 2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area under pasture or crop</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>TOTAL</b>						
<b>Old basis(a)</b>						
2002–03	41 184	11 230	65 175	939	4 272 705	4.5
2003–04	40 915	9 998	63 631	892	3 953 125	4.4
2004–05	40 163	8 606	64 404	910	3 716 557	4.1
<b>New basis(b)</b>						
2005–06 NSW/ACT	48 937	11 604	62 164	994	4 534 109	4.6
2005–06 ACT	99	17	45	^—	^ 784	^ 3.1
2005–06 NSW(c)	(d)48 838	(d)11 587	(e)62 119	994	4 533 325	4.6
<b>2005–06</b>						
<b>New basis(b)(f)</b>						
Pasture for grazing	39 426	3 756	49 993	258	704 866	2.7
Pasture for seed production	na	132	na	5	14 302	2.7
Pasture for hay and silage	na	2 053	na	77	289 622	3.8
Cereal crops cut for hay	na	507	na	34	78 665	2.3
Cereal crops for grain or seed(g)	13 264	1 181	5 615	207	518 750	2.5
Cereal crops not for grain or seed	4 965	423	372	14	29 027	2.0
Rice	1 042	1 042	101	101	1 240 626	12.3
Sugar cane	505	16	34	^ -	1 501	3.4
Cotton	406	373	197	169	1 127 730	6.7
Other broadacre crops(h)	3 598	323	495	29	95 887	3.3
Fruit trees, nut trees, plantation or berry fruits(i)	3 664	1 746	52	30	138 815	4.7
Vegetables for human consumption	1 645	1 366	20	17	71 771	4.3
Vegetables for seed	169	78	1	1	^ 2 532	4.0
Nurseries, cutflowers or cultivated turf	1 309	1 207	5	5	24 776	5.3
Grapevines	1 921	1 698	49	44	185 320	4.3

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

— nil or rounded to zero (including null cells)

(a) Derived using old ABS-maintained frame. See Technical Note for detail.

(b) Derived using new ABR-based frame. See Technical Note for detail.

(c) Totals include other pastures or crops not elsewhere classified.

(d) Total does not equal the sum as many businesses grow or irrigate more than one crop or pasture.

(e) Total includes area of all agricultural land. This does not equal the sum of area under pasture or crop as not all land on agricultural holdings is under pasture or crop.

(f) Pasture and crop totals do not include ACT.

(g) Excludes rice.

(h) Excludes sugar cane and cotton.

(i) Excludes grapevines.

## 2.3 PASTURES AND CROPS IRRIGATED, Victoria—2002–03 to 2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area under pasture or crop</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>TOTAL</b>						
<b>Old basis(a)</b>						
2002–03	33 212	12 005	13 413	593	2 464 357	4.2
2003–04	32 463	10 844	13 619	619	2 559 385	4.1
2004–05	32 357	9 829	13 920	636	2 363 764	3.7
<b>New basis(b)</b>						
2005–06(c)	(d) 37 146	(d) 11 621	(e) 12 314	648	2 448 485	3.8
<b>2005–06</b>						
<b>New basis(b)</b>						
Pasture for grazing	29 191	5 846	7 431	401	1 578 899	3.9
Pasture for seed production	na	137	na	10	23 896	2.3
Pasture for hay and silage	na	1 983	na	82	262 094	3.2
Cereal crops cut for hay	na	313	na	13	27 810	2.2
Cereal crops for grain or seed(f)	7 933	315	2 484	25	52 261	2.1
Cereal crops not for grain or seed	1 875	178	81	4	8 897	2.4
Rice	14	14	1	1	12 600	11.9
Other broadacre crops(g)	3 894	117	563	6	13 808	2.4
Fruit trees, nut trees, plantation or berry fruits(h)	1 859	1 386	41	36	172 859	4.9
Vegetables for human consumption	1 100	952	32	24	86 467	3.6
Vegetables for seed	228	165	2	2	4 587	2.3
Nurseries, cutflowers or cultivated turf	889	785	5	3	11 216	3.7
Grapevines	2 733	2 383	42	37	185 620	5.0

na not available

(a) Derived using old ABS-maintained frame. See Technical Note for detail.

(b) Derived using new ABR-based frame. See Technical Note for detail.

(c) Totals include other pastures or crops not elsewhere classified.

(d) Total does not equal the sum as many businesses grow or irrigate more than one crop or pasture.

(e) Total includes area of all agricultural land. This does not equal the sum of area under pasture or crop as not all land on agricultural holdings is under pasture or crop.

(f) Excludes rice.

(g) Excludes sugar cane and cotton.

(h) Excludes grapevines.

## 2.4 PASTURES AND CROPS IRRIGATED, Queensland—2002–03 to 2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area under pasture or crop</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>TOTAL</b>						
<b>Old basis(a)</b>						
2002–03	27 688	10 278	139 042	525	2 229 009	4.2
2003–04	26 785	9 520	144 288	561	2 420 048	4.3
2004–05	27 132	8 258	143 797	542	2 613 404	4.8
<b>New basis(b)</b>						
2005–06(c)	(d)32 212	(d)9 861	(e)145 519	539	2 325 003	4.3
<b>2005–06</b>						
<b>New basis(b)</b>						
Pasture for grazing	23 402	1 914	135 563	50	148 353	3.0
Pasture for seed production	na	np	na	np	4 395	np
Pasture for hay and silage	na	1 537	na	34	145 809	4.3
Cereal crops cut for hay	na	398	na	11	26 522	2.4
Cereal crops for grain or seed(f)	3 764	463	1 417	40	96 076	2.4
Cereal crops not for grain or seed	2 588	368	295	8	16 685	2.1
Sugar cane	4 112	2 113	452	205	988 643	4.8
Cotton	425	342	130	101	606 761	6.0
Other broadacre crops(g)	1 307	212	109	10	29 022	2.9
Fruit trees, nut trees, plantation or berry fruits(h)	3 082	1 858	54	37	125 564	3.4
Vegetables for human consumption	1 854	1 598	38	31	90 523	2.9
Vegetables for seed	87	28	—	^—	233	^3.7
Nurseries, cutflowers or cultivated turf	956	886	5	4	23 664	5.5
Grapevines	238	192	3	3	15 107	4.9

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

— nil or rounded to zero (including null cells)

na not available

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Derived using old ABS-maintained frame. See Technical Note for detail.

(b) Derived using new ABR-based frame. See Technical Note for detail.

(c) Totals include other pastures or crops not elsewhere classified.

(d) Total does not equal the sum as many businesses grow or irrigate more than one crop or pasture.

(e) Total includes area of all agricultural land. This does not equal the sum of area under pasture or crop as not all land on agricultural holdings is under pasture or crop.

(f) Excludes rice.

(g) Excludes sugar cane and cotton.

(h) Excludes grapevines.

## 2.5 PASTURES AND CROPS IRRIGATED, South Australia—2002–03 to 2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area under pasture or crop</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>TOTAL</b>						
<b>Old basis(a)</b>						
2002–03	14 262	5 471	54 139	183	899 530	4.9
2003–04	14 238	5 494	52 520	185	957 163	5.2
2004–05	14 111	4 739	54 107	184	877 818	4.8
<b>New basis(b)</b>						
2005–06(c)	(d)16 455	(d)6 298	(e)55 408	217	897 197	4.1
<b>2005–06</b>						
<b>New basis(b)</b>						
Pasture for grazing	10 654	1 339	48 886	51	259 728	5.1
Pasture for seed production	na	251	na	19	92 751	4.8
Pasture for hay and silage	na	544	na	16	77 646	4.8
Cereal crops cut for hay	na	68	na	3	5 545	1.9
Cereal crops for grain or seed(f)	6 606	48	3 421	5	8 182	1.6
Cereal crops not for grain or seed	1 190	36	95	1	^ 1 726	^ 2.8
Other broadacre crops(g)	3 398	48	522	np	5 743	np
Fruit trees, nut trees, plantation or berry fruits(h)	1 558	1 275	21	19	131 923	7.0
Vegetables for human consumption	717	676	15	14	76 626	5.4
Vegetables for seed	83	52	1	1	^ 2 803	^ 4.2
Nurseries, cutflowers or cultivated turf	301	262	1	1	5 201	5.0
Grapevines	3 335	3 037	92	85	227 885	2.7

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

na not available

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Derived using old ABS-maintained frame. See Technical Note for detail.

(b) Derived using new ABR-based frame. See Technical Note for detail.

(c) Totals include other pastures or crops not elsewhere classified.

(d) Total does not equal the sum as many businesses grow or irrigate more than one crop or pasture.

(e) Total includes area of all agricultural land. This does not equal the sum of area under pasture or crop as not all land on agricultural holdings is under pasture or crop.

(f) Excludes rice.

(g) Excludes sugar cane and cotton.

(h) Excludes grapevines.

## 2.6 PASTURES AND CROPS IRRIGATED, Western Australia—2002–03 to 2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area under pasture or crop</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>TOTAL</b>						
<b>Old basis(a)</b>						
2002–03	12 270	2 731	102 728	48	313 248	6.5
2003–04	11 877	2 459	101 184	54	308 254	5.7
2004–05	11 915	2 049	104 646	45	267 098	6.0
<b>New basis(b)</b>						
2005–06(c)	(d) 14 526	(d) 3 173	(e) 98 653	60	306 284	5.1
<b>2005–06</b>						
<b>New basis(b)</b>						
Pasture for grazing	11 407	528	84 764	13	79 315	6.3
Pasture for seed production	na	^ np	na	np	np	np
Pasture for hay and silage	na	62	na	^ 2	^ 10 718	^ 4.3
Cereal crops cut for hay	na	^ np	na	^ np	^ np	^ np
Cereal crops for grain or seed(f)	6 153	np	6 273	^ np	* 12 408	* np
Cereal crops not for grain or seed	857	^ 13	80	^ —	^ 1 436	^ 6.8
Sugar cane	16	16	^ 5	^ 5	^ 66 455	^ 13.9
Other broadacre crops(g)	3 588	20	1 226	np	^ 11 685	^ np
Fruit trees, nut trees, plantation or berry fruits(h)	1 322	1 033	12	10	40 239	4.2
Vegetables for human consumption	739	688	9	8	49 170	6.2
Vegetables for seed	71	^ 21	—	^ —	^ 1 034	^ 5.8
Nurseries, cutflowers or cultivated turf	433	365	2	2	14 556	7.5
Grapevines	1 023	827	15	12	16 386	1.3

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

\* estimate has a relative standard error of 25% to 50% and should be used with caution

— nil or rounded to zero (including null cells)

na not available

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Derived using old ABS-maintained frame. See Technical Note for detail.

(b) Derived using new ABR-based frame. See Technical Note for detail.

(c) Totals include other pastures or crops not elsewhere classified.

(d) Total does not equal the sum as many businesses grow or irrigate more than one crop or pasture.

(e) Total includes area of all agricultural land. This does not equal the sum of area under pasture or crop as not all land on agricultural holdings is under pasture or crop.

(f) Excludes rice.

(g) Excludes sugar cane and cotton.

(h) Excludes grapevines.

## 2.7 PASTURES AND CROPS IRRIGATED, Tasmania—2002–03 to 2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area under pasture or crop</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>TOTAL</b>						
<b>Old basis(a)</b>						
2002–03	3 969	1 923	1 771	87	208 956	2.4
2003–04	3 866	1 939	1 745	87	229 355	2.6
2004–05	3 877	1 654	1 803	86	231 758	2.7
<b>New basis(b)</b>						
2005–06(c)	(d) 4 745	(d) 1 919	(e) 1 739	81	203 931	2.5
<b>2005–06</b>						
<b>New basis(b)</b>						
Pasture for grazing	4 104	841	1 251	42	116 655	2.8
Pasture for seed production	na	99	na	3	np	np
Pasture for hay and silage	na	229	na	5	10 917	2.3
Cereal crops cut for hay	na	19	na	—	np	np
Cereal crops for grain or seed(f)	589	81	23	5	np	np
Cereal crops not for grain or seed	262	55	6	1	1 612	1.2
Other broadacre crops(g)	647	181	16	5	10 528	2.1
Fruit trees, nut trees, plantation or berry fruits(h)	337	251	3	3	4 950	1.7
Vegetables for human consumption	710	623	16	14	39 578	2.8
Vegetables for seed	177	114	1	1	^ 3 353	^ 3.3
Nurseries, cutflowers or cultivated turf	129	95	—	—	1 543	3.9
Grapevines	171	132	2	1	1 167	1.1

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

— nil or rounded to zero (including null cells)

na not available

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Derived using old ABS-maintained frame. See Technical Note for detail.

(b) Derived using new ABR-based frame. See Technical Note for detail.

(c) Totals include other pastures or crops not elsewhere classified.

(d) Total does not equal the sum as many businesses grow or irrigate more than one crop or pasture.

(e) Total includes area of all agricultural land. This does not equal the sum of area under pasture or crop as not all land on agricultural holdings is under pasture or crop.

(f) Excludes rice.

(g) Excludes sugar cane and cotton.

(h) Excludes grapevines.

## 2.8 PASTURES AND CROPS IRRIGATED, Northern Territory—2002–03 to 2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area under pasture or crop</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>TOTAL</b>						
<b>Old basis(a)</b>						
2002–03	397	136	63 263	3	15 953	4.7
2003–04	382	145	63 124	4	14 186	3.7
2004–05	380	110	62 473	4	14 198	4.0
<b>New basis(b)</b>						
2005–06(c)	(d) 659	(d) 351	(e) 59 127	7	22 356	3.1
<b>2005–06</b>						
<b>New basis(b)</b>						
Pasture for grazing	296	^ np	56 812	^ np	* np	* np
Pasture for hay and silage	na	^ np	na	* np	* np	* np
Cereal crops cut for hay	na	np	na	np	np	np
Cereal crops for grain or seed(f)	^ 8	—	^ 1	—	—	—
Cereal crops not for grain or seed	^ 2	—	* —	—	—	—
Other broadacre crops(g)	^ 11	—	^ —	—	—	—
Fruit trees, nut trees, plantation or berry fruits(h)	314	271	6	6	15 257	2.6
Vegetables for human consumption	85	np	1	np	np	np
Vegetables for seed	1	—	—	—	—	—
Nurseries, cutflowers or cultivated turf	39	38	—	—	531	5.7
Grapevines	^ 10	^ np	—	np	np	np

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

\* estimate has a relative standard error of 25% to 50% and should be used with caution

— nil or rounded to zero (including null cells)

na not available

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Derived using old ABS-maintained frame. See Technical Note for detail.

(b) Derived using new ABR-based frame. See Technical Note for detail.

(c) Totals include other pastures or crops not elsewhere classified.

(d) Total does not equal the sum as many businesses grow or irrigate more than one crop or pasture.

(e) Total includes area of all agricultural land. This does not equal the sum of area under pasture or crop as not all land on agricultural holdings is under pasture or crop.

(f) Excludes rice.

(g) Excludes sugar cane and cotton.

(h) Excludes grapevines.

## 2.9 PASTURES AND CROPS IRRIGATED, Murray-Darling Basin(a)—2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area under pasture or crop</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate(b)</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>Total(c)</b>	<b>(d) 61 033</b>	<b>(d) 18 634</b>	<b>(e) 88 828</b>	<b>1 654</b>	<b>7 369 807</b>	<b>4.5</b>
Pasture for grazing	47 710	7 299	68 953	558	1 981 044	3.6
Pasture for seed production	na	228	na	10	25 215	2.4
Pasture for hay and silage	na	3 595	na	149	531 117	3.6
Cereal crops cut for hay	na	909	na	51	117 645	2.3
Cereal crops for grain or seed(f)	22 551	1 714	9 649	258	623 678	2.4
Cereal crops not for grain or seed	7 123	599	631	19	41 151	2.1
Rice	1 055	1 055	102	102	1 251 881	12.3
Cotton	752	638	303	247	1 574 435	6.4
Other broadacre crops(g)	6 675	490	1 028	38	117 654	3.1
Fruit trees, nut trees, plantation or berry fruits(h)	4 069	3 116	88	75	412 653	5.5
Vegetables for human consumption	1 156	996	34	31	146 595	4.7
Vegetables for seed	185	123	2	1	5 408	4.4
Nurseries, cutflowers or cultivated turf	523	426	4	2	12 166	5.0
Grapevines	5 207	4 845	114	106	514 819	4.9

na not available

(a) See Appendix 2.

(b) Averaged across all pastures and crops.

(c) Totals include other pastures or crops not elsewhere classified.

(d) Total does not equal the sum as many businesses grow or irrigate more than one crop or pasture.

(e) Total includes area of all agricultural land. This does not equal the sum of area under pasture or crop as not all land on agricultural holdings is under pasture or crop.

(f) Excludes rice.

(g) Excludes sugar cane and cotton.

(h) Excludes grapevines.

**2.10** IRRIGATION ACTIVITY, By NRM Region(a)—2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area of agricultural holding</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate(b)</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>New South Wales</b>						
Border Rivers-Gwydir	3 161	331	4 299	93	526 254	5.7
Central West	6 126	724	7 243	45	209 274	4.7
Hawkesbury-Nepean	3 457	1 601	458	12	39 100	3.2
Hunter-Central Rivers	4 635	1 469	1 639	40	124 340	3.1
Lachlan	5 860	628	7 331	60	221 952	3.7
Lower Murray Darling	677	485	5 573	18	109 252	6.1
Murray	3 490	1 715	3 075	307	1 192 592	3.9
Murrumbidgee	6 252	2 025	5 802	281	1 499 684	5.3
Namoi	3 502	701	3 329	94	434 137	4.6
Northern Rivers	8 485	np	2 301	np	45 812	np
Southern Rivers	2 248	348	835	9	27 943	3.1
Sydney Metro	131	np	^ 5	np	1 438	np
Western	814	44	20 230	17	101 548	6.0
<i>Total</i>	<i>48 838</i>	<i>11 587</i>	<i>62 119</i>	<i>994</i>	<i>4 533 325</i>	<i>4.6</i>
<b>Victoria</b>						
Corangamite	3 456	452	772	9	22 978	2.5
East Gippsland	964	203	383	7	16 025	2.4
Glenelg Hopkins	4 507	402	1 795	16	56 988	3.6
Goulburn Broken	5 829	3 073	1 321	223	897 804	4.0
Mallee	2 922	1 650	2 146	44	263 886	6.0
North Central	5 176	2 369	2 195	237	836 063	3.5
North East (VIC)	2 674	743	639	16	54 904	3.4
Port Phillip and Westernport	4 877	1 522	434	20	55 802	2.8
West Gippsland	4 335	1 063	681	65	214 594	3.3
Wimmera	2 405	146	1 947	11	29 440	2.6
<i>Total</i>	<i>37 146</i>	<i>11 621</i>	<i>12 314</i>	<i>648</i>	<i>2 448 485</i>	<i>3.8</i>
<b>Queensland</b>						
Border Rivers	1 454	439	3 326	49	251 382	5.1
Burdekin	1 838	961	13 183	95	731 210	7.7
Burnett Mary	5 972	2 213	4 097	91	284 727	3.1
Cape York	78	^ np	3 538	^ np	np	^ np
Cape York - Northern Gulf	^ 27	*np	^ 2 343	*np	**np	*np
Condamine	4 349	956	2 189	69	192 781	2.8
Desert Channels	937	18	44 657	^ 1	^ 3 197	^ 3.5
Fitzroy	4 016	620	14 565	52	255 398	4.9
Mackay Whitsunday	1 662	914	659	74	144 367	1.9
Maranoa Balonne	1 519	117	6 180	27	161 148	6.1
Northern Gulf	507	231	12 108	8	36 629	4.4
South East (QLD)	5 597	2 325	1 196	41	136 062	3.4
South West (QLD)	635	24	17 801	2	6 515	3.9
Southern Gulf	433	24	18 127	^ 3	^ 12 847	^ 4.5
Wet Tropics	3 189	995	1 552	26	105 869	4.1
<i>Total</i>	<i>32 212</i>	<i>9 861</i>	<i>145 519</i>	<i>539</i>	<i>2 325 003</i>	<i>4.3</i>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

\* estimate has a relative standard error of 25% to 50% and should be used with caution

\*\* estimate has a relative standard error greater than 50% and is considered too unreliable for general use

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) See Appendix 2.

(b) Averaged across all pastures and crops.

**2.10** IRRIGATION ACTIVITY, By NRM Region(a)—2005–06 *continued*

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area of agricultural holding</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate(b)</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>South Australia</b>						
Alinytjara Wilurara	^ 7	^ —	1 043	—	—	—
Eyre Peninsula	1 532	36	4 084	^ 1	^ 3 137	^ 2.3
Kangaroo Island	317	np	215	^ np	*np	^ np
Adelaide and Mount Lofty Ranges	3 304	2 216	300	34	74 851	2.2
Northern and Yorke	3 433	328	3 436	10	9 818	1.0
SA Arid Lands	165	*np	39 470	*np	*np	*np
SA Murray Darling Basin	4 659	2 504	4 742	71	409 062	5.7
South East (SA)	3 038	1 183	2 120	100	398 076	4.0
<i>Total</i>	<i>16 455</i>	<i>6 298</i>	<i>55 408</i>	<i>217</i>	<i>897 197</i>	<i>4.1</i>
<b>Western Australia</b>						
Avon	2 998	67	7 995	^ 1	2 397	^ 2.6
Northern Agricultural	1 565	98	6 186	5	^ 9 087	^ 1.7
Rangelands (WA)	719	308	77 651	12	^ 115 655	^ 9.9
South Coast	2 462	212	3 310	5	5 291	1.1
South West	4 928	1 460	3 022	28	118 535	4.2
Swan	1 855	1 027	488	10	55 319	5.8
<i>Total</i>	<i>14 526</i>	<i>3 173</i>	<i>98 653</i>	<i>60</i>	<i>306 284</i>	<i>5.1</i>
<b>Tasmania</b>						
North (TAS)	1 717	636	800	37	101 084	2.8
North West (TAS)	1 739	727	291	26	61 081	2.3
South (TAS)	1 290	555	649	18	41 767	2.3
<i>Total</i>	<i>4 745</i>	<i>1 919</i>	<i>1 739</i>	<i>81</i>	<i>203 931</i>	<i>2.5</i>
<b>Northern Territory</b>						
<i>Total</i>	<i>659</i>	<i>351</i>	<i>59 127</i>	<i>7</i>	<i>22 356</i>	<i>3.1</i>
<b>Australian Capital Territory</b>						
<i>Total</i>	<i>99</i>	<i>17</i>	<i>45</i>	<i>^ —</i>	<i>^ 784</i>	<i>^ 3.1</i>
<b>Australia</b>	<b>154 681</b>	<b>44 826</b>	<b>434 925</b>	<b>2 546</b>	<b>10 737 364</b>	<b>4.2</b>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

\* estimate has a relative standard error of 25% to 50% and should be used with caution

— nil or rounded to zero (including null cells)

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) See Appendix 2.

(b) Averaged across all pastures and crops.

**2.11** IRRIGATION ACTIVITY, By Statistical Division(a)—2005–06

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area of agricultural holding</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate(b)</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>New South Wales</b>						
Sydney	2 611	1 623	104	11	37 337	3.5
Hunter	3 643	1 214	1 366	35	113 332	3.2
Illawarra	1 212	251	133	np	8 166	np
Richmond-Tweed	3 855	678	519	8	19 998	2.4
Mid-North Coast	3 909	842	905	11	np	np
Northern	7 748	1 051	7 711	176	883 615	5.0
North Western	4 894	553	16 769	69	377 327	5.5
Central West	6 349	703	5 017	39	109 404	2.8
South Eastern	5 068	542	2 767	14	39 986	2.8
Murrumbidgee	5 017	1 766	5 687	266	1 416 076	5.3
Murray	4 222	2 344	7 809	356	1 474 117	4.1
Far West	311	19	13 332	np	np	np
<i>Total</i>	<i>48 838</i>	<i>11 587</i>	<i>62 119</i>	<i>994</i>	<i>4 533 325</i>	<i>4.6</i>
<b>Victoria</b>						
Melbourne	3 382	1 338	230	18	49 741	2.8
Barwon	2 098	287	466	4	9 807	2.2
Western District	4 690	452	1 574	18	61 170	3.5
Central Highlands	2 089	343	769	8	20 041	2.6
Wimmera	2 845	120	2 485	11	30 260	2.7
Mallee	4 054	2 495	2 487	143	624 831	4.4
Loddon	2 394	795	963	77	220 780	2.9
Goulburn	6 752	3 709	1 559	281	1 144 486	4.1
Ovens-Murray	2 576	732	548	16	54 491	3.4
East Gippsland	2 521	950	782	63	214 305	3.4
Gippsland	3 745	402	452	9	18 574	2.0
<i>Total</i>	<i>37 146</i>	<i>11 621</i>	<i>12 314</i>	<i>648</i>	<i>2 448 485</i>	<i>3.8</i>
<b>Queensland</b>						
Brisbane	1 503	689	125	6	19 460	3.1
Gold Coast	430	175	45	1	7 235	5.2
Sunshine Coast	1 107	485	94	4	14 656	3.5
West Moreton	2 485	1 031	848	29	99 824	3.4
Wide Bay-Burnett	5 592	2 097	3 743	90	277 976	3.1
Darling Downs	7 101	1 480	7 871	120	433 491	3.6
South West	1 898	128	29 745	28	182 120	6.5
Fitzroy	3 189	582	11 513	49	246 381	5.0
Central West	769	19	32 381	^1	^5 505	^5.5
Mackay	2 472	1 075	8 528	84	172 770	2.1
Northern	1 897	860	6 908	89	711 492	8.0
Far North	3 185	1 212	16 051	34	140 882	4.2
North West	583	28	27 667	^3	^13 213	^4.1
<i>Total</i>	<i>32 212</i>	<i>9 861</i>	<i>145 519</i>	<i>539</i>	<i>2 325 003</i>	<i>4.3</i>
<b>South Australia</b>						
Adelaide	1 368	1 123	39	12	25 547	2.1
Outer Adelaide	3 551	1 674	743	39	93 688	2.4
Yorke and Lower North	2 289	240	2 022	9	7 938	0.9
Murray Lands	3 653	2 035	3 198	64	395 884	6.2
South East	2 763	1 126	1 745	91	368 840	4.0
Eyre	1 539	35	4 462	^1	^2 969	^2.2
Northern	1 293	64	43 200	1	2 332	2.8
<i>Total</i>	<i>16 455</i>	<i>6 298</i>	<i>55 408</i>	<i>217</i>	<i>897 197</i>	<i>4.1</i>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) See Appendix 2.

(b) Averaged across all pastures and crops.

np not available for publication but included in totals where applicable, unless otherwise indicated

**2.11** IRRIGATION ACTIVITY, By Statistical Division(a)—2005–06 *continued*

	<i>Agricultural businesses</i>	<i>Agricultural businesses irrigating</i>	<i>Area of agricultural holding</i>	<i>Area irrigated</i>	<i>Volume applied</i>	<i>Application rate(b)</i>
	no.	no.	'000 ha	'000 ha	ML	ML/ha
<b>Western Australia</b>						
Perth	1 363	888	79	6	32 749	5.9
South West	3 342	1 325	755	27	111 151	4.1
Lower Great Southern	2 425	216	2 692	5	6 056	1.3
Upper Great Southern	1 714	37	3 466	np	^ np	^ np
Midlands	3 277	312	7 544	7	32 992	4.9
South Eastern	706	^ 7	13 742	^ np	^ np	^ np
Central	1 435	273	35 289	6	13 634	2.4
Pilbara	61	—	15 065	—	—	—
Kimberley	204	114	20 022	10	^ 106 914	^ 10.6
<i>Total</i>	14 526	3 173	98 653	60	306 284	5.1
<b>Tasmania</b>						
Greater Hobart	308	176	47	3	5 109	1.9
Southern	982	380	601	15	36 861	2.4
Northern	1 718	636	801	37	101 063	2.8
Mersey-Lyell	1 738	726	290	26	60 898	2.3
<i>Total</i>	4 745	1 919	1 739	81	203 931	2.5
<b>Northern Territory</b>						
Darwin	277	226	^ 197	4	8 119	2.2
Northern Territory - Bal	382	125	58 930	4	14 237	4.0
<i>Total</i>	659	351	59 127	7	22 356	3.1
<b>Australian Capital Territory</b>						
Canberra	69	17	21	^ —	^ 784	^ 3.1
Australian Capital Territory - Bal	30	—	24	—	—	—
<i>Total</i>	99	17	45	^ —	^ 784	^ 3.1
<b>Australia</b>	<b>154 681</b>	<b>44 826</b>	<b>434 925</b>	<b>2 546</b>	<b>10 737 364</b>	<b>4.2</b>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

— nil or rounded to zero (including null cells)

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) See Appendix 2.

(b) Averaged across all pastures and crops.

WATER SOURCES

*Australia*

Across most of Australia, surface water remained the major source of water used for agricultural purposes, totalling 8,997 gegalitres or 77.0% of all water used for agricultural purposes. Groundwater accounted for 20.5% of water used for agricultural purposes (2,392 gegalitres), followed by Town or country reticulated mains supply (126 gegalitres, 1.1%) and Recycled or re-used water from off farm sources (115 gegalitres, 1.0%).

**3.1** SOURCES OF AGRICULTURAL WATER(a), By State—2005–06 .....

	Surface water	Groundwater	Town or country reticulated mains supply	Recycled or re-used water from off farm sources	Other	Total all sources
	ML	ML	ML	ML	ML	ML
<b>Aust.</b>	<b>8 996 546</b>	<b>2 391 845</b>	<b>125 667</b>	<b>114 702</b>	<b>60 032</b>	<b>11 688 792</b>
NSW	3 920 648	810 080	23 684	23 470	17 367	4 795 250
Vic.	2 254 259	297 090	29 954	40 849	18 986	2 641 138
Qld	1 853 386	673 633	8 094	36 789	8 734	2 580 636
SA	448 227	459 253	45 150	11 713	11 233	975 575
WA	297 643	111 964	15 009	436	2 473	427 525
Tas.	208 823	14 838	3 540	np	np	229 720
NT	12 501	24 949	^ 221	*np	*np	37 724
ACT	^ 1 059	^ 37	^ 15	np	np	^ 1 224

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

\* estimate has a relative standard error of 25% to 50% and should be used with caution

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Includes water used for irrigation and other agricultural purposes.

*State/territory*

In South Australia and the Northern Territory, groundwater remained the major source of water used for agricultural purposes, representing 47.1% and 66.1% of the state/territory totals respectively. Surface water remained the major source of water used for agricultural purposes in all other states/territories.

*Murray-Darling Basin*

The major source of water used for agricultural purposes in the Murray-Darling Basin was surface water, totalling 6,499 gegalitres, or 84.2% of water used for agricultural purposes in the region. This represents 72.2% of all surface water used for agricultural purposes nationally.

Groundwater accounted for 13.8% of water used for agricultural purposes in the region (1069 gegalitres), followed by Town or country reticulated mains supply (59 gegalitres, 0.8%) and Recycled or re-used from off farm sources (56 gegalitres, 0.7%).

*Murray-Darling Basin  
continued*

Agricultural businesses in the Murray-Darling Basin used 44.7% of the groundwater used nationally for agricultural purposes, 47.1% of Town or country reticulated mains supply, and 48.5% of Recycled or re-used water from off farm sources.

**3.2** SOURCES OF AGRICULTURAL WATER(a), Murray Darling Basin—2005–06

	Surface water	Groundwater	Town or country reticulated mains supply	Recycled or re-used water from off farm sources	Other	Total all sources
	ML	ML	ML	ML	ML	ML
<b>Australia</b>	<b>8 996 546</b>	<b>2 391 845</b>	<b>125 667</b>	<b>114 702</b>	<b>60 032</b>	<b>11 688 792</b>
MDB total	6 498 912	1 068 889	59 163	55 638	37 339	7 719 940
MDB in NSW	3 679 869	762 052	12 396	17 710	13 903	4 485 930
MDB in Vic.	1 923 123	150 588	19 166	27 532	15 479	2 135 887
MDB in Qld	550 275	108 781	*1 461	8 552	^ 1 764	670 834
MDB in SA	344 586	47 431	26 125	^ np	np	426 066
MDB in ACT	^ 1 059	^ 37	^ 15	np	np	^ 1 224
Non-MDB	2 497 634	1 322 956	66 505	59 064	22 693	3 968 852

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

\* estimate has a relative standard error of 25% to 50% and should be used with caution

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Includes water used for irrigation and other agricultural purposes.

## EXPLANATORY NOTES .....

### INTRODUCTION

**1** This publication presents final estimates from the 2005–06 Agricultural Census, and replaces preliminary estimates released on the 14th August 2007. It contains detailed statistics at the national and state/territory level on agricultural water use, pastures and crops irrigated, and sources of water used for agriculture.

**2** The ABR-based register has been used for the first time to conduct the 2005–06 Agricultural Census. The key implication of this strategy is that census data will not be directly comparable with historical time series. This is because, in addition to the change in register, there have been changes in methodologies used for determining whether agricultural businesses are 'in-scope' of the collection, and in some of the ways the data are compiled. These changes include improved estimation and imputation techniques. Implications of these changes are discussed in the Technical Note at the end of this publication. For these reasons, care should be taken in comparing the results from 2005–06 with those of earlier years.

**3** Historical time series estimates presented here for 2002–03 were derived from the Water Survey - Agriculture 2002–03, while estimates for 2003–04 and 2004–05 were derived from the Agricultural Surveys. Due to differences in collection methodologies between these surveys, care should also be taken in comparing the 2002–03 results with those of later years.

### NEW FRAME

**4** The ABR-based register (Inteframe) used by the Agricultural Census contains approximately 155,000 business units flagged as having both agricultural activity and an estimated value of agricultural operations of \$5,000 plus, or a Standardised BAS Total Sales (SBTS) of \$5,000 plus. SBTS is an 'EVAO equivalent' and is calculated by applying ANZSIC based standardisation factors to BAS Total sales.

**5** ABNs identified through ABS frame maintenance activities as not operating an agricultural property are excluded from scope. The number identified on the ABR-based register (approximately 155,000) excludes known duplicate/multiple ABNs from related entity units (a related entity unit is a group of ABNs which could all report the same activity on the same parcels of land leading to duplication of reporting) and also ABNs identified through ABS frame maintenance activities as not operating an agricultural property.

### NEW GEOGRAPHIES

**6** For the 2005–06 Agricultural Census, the location of agricultural businesses was geocoded (latitude and longitude) to provide estimates for additional regions, such as Natural Resource Management (NRM) regions, River Basins and Drainage Divisions (including the Murray-Darling Basin). Estimates for other regions, including national and state/territory estimates, are based on the Australian Standard Geographic Classification (ASGC) in which agricultural businesses are assigned to particular Statistical Local Areas (SLAs). Some minor differences can occur in certain regional estimates because of these different geographies.

### SCOPE AND COVERAGE

**7** The scope of the 2005–06 Agricultural Census was establishments undertaking agricultural activity with an estimated value of agricultural operations (EVAO) of \$5,000 or more, or a Standardised BAS Total Sales (SBTS) of \$5,000 plus. While the new ABR-based register used for the Agricultural Census does not contain all agricultural businesses in Australia, it provides better coverage than the old ABS-maintained

Agricultural Survey frame since most businesses and organisations in Australia need to obtain an Australian Business Number (ABN) from the ATO for their business operations. The ABR-based register used for the Agricultural Census is also more up-to-date as it excludes agricultural businesses with cancelled ABNs and incorporates regularly updated information on agricultural businesses from the ATO.

**8** The 2005–06 Agricultural Census included a total in-scope population of approximately 155,000 agricultural businesses compared to approximately 130,000 establishments on the old ABS-maintained frame.

#### OTHER WATER USE

**9** Due to a low response to the question on water use for agricultural purposes other than irrigation, a high level of imputation was required to produce estimates for this item. Industry information and feedback from respondents on stock drinking rates was used, where possible, to impute. Estimates of water used for agricultural purposes other than irrigation should be used with caution.

#### APPLICATION RATE

**10** The Australian and state/territory totals for application rate of water applied for irrigation are calculated by dividing total area irrigated by total volume applied averaged across all pastures and crops.

#### COMPARABILITY WITH AGRICULTURAL COMMODITIES AUSTRALIA

**11** The estimates of agricultural businesses and area under pasture or crop for 2002–03 and 2003–04 in this publication have been drawn from *Agricultural Commodities, Australia* (ABS cat. no. 7121.0). These estimates were compiled from the annual Agricultural Survey and Supplementary Collections (i.e. Apples and Pears Collection and Vineyards Collection). The estimates of agricultural establishments and area under pasture or crop for 2005–06 in this publication differ from *Agriculture Commodities, Australia 2005–06*, in that the estimates for grapevines in this publication are derived from the Agricultural Census rather than the Vineyards Collection.

#### COMPARABILITY WITH WATER ACCOUNT AUSTRALIA

**12** The ABS published data on water use by the agriculture sector in both *Water Use on Australian Farms, 2004–05* in July 2006, and *Water Account, Australia 2004–2005* in November 2006. While both contained estimates of Agricultural water use, small differences exist between the two due to different data sources and compilation methodologies. The Water Account used data from a number of sources to calculate the volume of water used by the agriculture industry. These included data on water use, irrigated area and livestock numbers from the ABS 2004–05 Agricultural Survey, information collected from irrigation authorities, and additional information available from State and Territory agricultural departments and research institutions. *Water Use on Australian Farms, 2004–05* presented more spatial and crop detail on water use in the context of irrigation management and practices reported by the agricultural industry that was obtained entirely from the 2004–05 Agricultural Survey.

#### RESPONSE RATE

**13** The response rate for the Agricultural Census 2005–06 was 93.2%.

#### RELIABILITY OF DATA

**14** The estimates in this publication are subject to sampling and non-sampling errors.

#### SAMPLING ERRORS

**15** The estimates in this publication are based on information obtained from respondents to the Agricultural Census for the year ended 30 June 2006. Since not all selected units responded, the estimates may differ from those that would have been produced if all farms had responded. One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate might vary by chance when not all units have responded, i.e. when a 'sample' of responses only is obtained. There are about two chances in three that a 'sample' estimate will differ by less than one SE from the figure that would have been obtained if all units had responded, and about nineteen chances in twenty that the difference will be less than two SEs.

SAMPLING ERRORS *continued*

**16** In this publication, 'sampling' variability of the estimates is measured by the relative standard error (RSE) which is obtained by expressing the SE as a percentage of the estimates to which it refers.

**17** Most published estimates have RSEs less than 5%. For some states/territories with limited irrigation of certain commodities or limited numbers of units reporting a particular source of agricultural water, RSEs are greater than 10%. Where the RSE of an estimate included in this publication falls in the range of 10% to less than 25%, it has been annotated with the symbol '^' indicating that the estimate should be used with caution as it is subject to sampling variability too high for some purposes. Where the RSE of an estimate is 25% to 50%, it has been annotated with the symbol '\*', indicating that the estimate should be used with caution as it is subject to sampling variability too high for most practical purposes. Where the RSE of an estimate exceeds 50%, it has been annotated with the symbol '\*\*', indicating that the sampling variability causes the estimate to be considered too unreliable for general use. Separate indication of the RSEs of all estimates is available on request.

**18** The following table contains estimates of RSEs for a selection of the statistics presented in this publication.

RELATIVE STANDARD ERRORS OF SELECTED ESTIMATES, By State (a) — 2005–06

	Aust.	NSW	Vic.	Qld	SA	WA	Tas.	NT
	%	%	%	%	%	%	%	%
Total area irrigated (ha)	0.4	0.8	0.4	0.7	2.1	1.9	1.1	4.4
Total volume applied (ML)	0.5	0.9	0.4	0.9	1.2	4.4	1.3	5.3
Pasture for grazing - area irrigated (ha)	0.4	1.0	0.5	1.7	1.3	2.4	1.4	15.8
Pasture for grazing - volume applied (ML)	0.4	1.1	0.4	1.8	1.5	2.4	1.8	25.4
Rice - area irrigated (ha)	1.3	1.3	4.2	—	—	—	—	—
Rice - volume applied (ML)	1.3	1.3	3.9	—	—	—	—	—
Sugar cane - area irrigated (ha)	0.9	11.0	—	0.9	—	10.7	—	—
Sugar cane - volume applied (ML)	1.4	9.1	—	1.1	—	15.2	—	—
Sources of agricultural water - groundwater (ML)	0.6	1.3	0.9	1.0	1.7	2.3	3.2	4.7
Sources of agricultural water - surface water (ML)	0.5	0.9	0.4	1.0	1.3	4.4	1.3	2.7

— nil or rounded to zero (including null cells)

(a) Excludes ACT.

NON-SAMPLING ERRORS

**19** Errors other than those due to sampling may occur because of deficiencies in the list of units from which the sample was selected, non-response, and errors in reporting by providers. Inaccuracies of this kind are referred to as non-sampling error, which may occur in any collection, whether it be a census or a sample. Every effort has been made to reduce non-sampling error to a minimum by careful design and testing of questionnaires, operating procedures and systems used to compile the statistics.

ABS DATA AVAILABLE ON REQUEST

**20** As well as the statistics included in this and related publications, the ABS may have other relevant data available on request. Inquiries should be made to the National Information and Referral Service on 1300 135 070.

RELATED PUBLICATIONS

**21** A range of environmental and agricultural publications is produced by the ABS, including:

- *Agricultural Commodities, Australia (cat. no. 7121.0)*
- *Environmental Issues: People's Views and Practices (cat. no. 4602.0)*
- *Natural Resource Management on Australian Farms (cat. no. 4620.0)*
- *Selected Agricultural Commodities, Australia, Preliminary (cat. no. 7112.0)*
- *Water Access Entitlements, Allocations and Trading (cat. no. 4610.0.55.003)*

## RELATED PUBLICATIONS

*continued*■ *Water Account, Australia (cat. no. 4610.0)*

**22** Current publications and other products released by the ABS are listed in the *Catalogue of Publications and Products (cat. no. 1101.0)*. The Catalogue is available from any ABS office or the ABS web site <<http://www.abs.gov.au>>. The ABS also issues a daily Release Advice on the web site which details products to be released in the week ahead. All ABS publications are available free of charge from the ABS website.

## ACKNOWLEDGMENT

**23** 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. The Bureau of Meteorology's contribution of the Climate Conditions Appendix in this publication is especially acknowledged.

ABBREVIATIONS

'000	thousand
ACT	Australian Capital Territory
Aust.	Australia
EVAO	Estimated Value of Agricultural Operations
ha	hectare
mm	millimetre
MDB	Murray-Darling Basin
ML	megalitre
ML/ha	megalitres per hectare
no.	number
NRM	natural resource management
NSW	New South Wales
NT	Northern Territory
Qld	Queensland
RSE	relative standard error
SA	South Australia
SE	standard error
Tas.	Tasmania
Vic.	Victoria
WA	Western Australia
°C	degrees Celsius

AUSTRALIAN CLIMATE IN  
2005-06

Over Australia as a whole, 2005-06 was a relatively wet period. The all-Australian rainfall was 20% above normal, making it the 11th wettest (financial) year since 1900-01. The largest contributor to this high rainfall total was a very active tropical wet season, which saw well above normal rainfall in most of the northern tropics, as well as much of the interior of Western Australia. Tropical cyclones (or their remnants) played a major role, particularly in Western Australia. It was the 6th wettest year on record for northern Australia (north of 26°S), as well as for the Northern Territory and Western Australia, and a number of regions (notably in the Pilbara, the Gulf country around the Queensland/NT border, and the Nullarbor around Eucla) had their wettest year on record.

In most of eastern Australia outside the tropics, the winter and spring of 2005 were wet, with dry conditions then becoming established from December 2005 onwards. Averaged over eastern agricultural areas as a whole the year saw near-normal rainfall, but with some regional variations. In most South Australian cropping areas, as well as in parts of Tasmania, the winter-spring of 2005 was particularly wet and annual totals remained somewhat above average; conversely, in western Victoria and southern Queensland, the rain early in the period was not sufficient to make up for the dry finish. Most other eastern cropping areas had near-normal rainfall for the year.

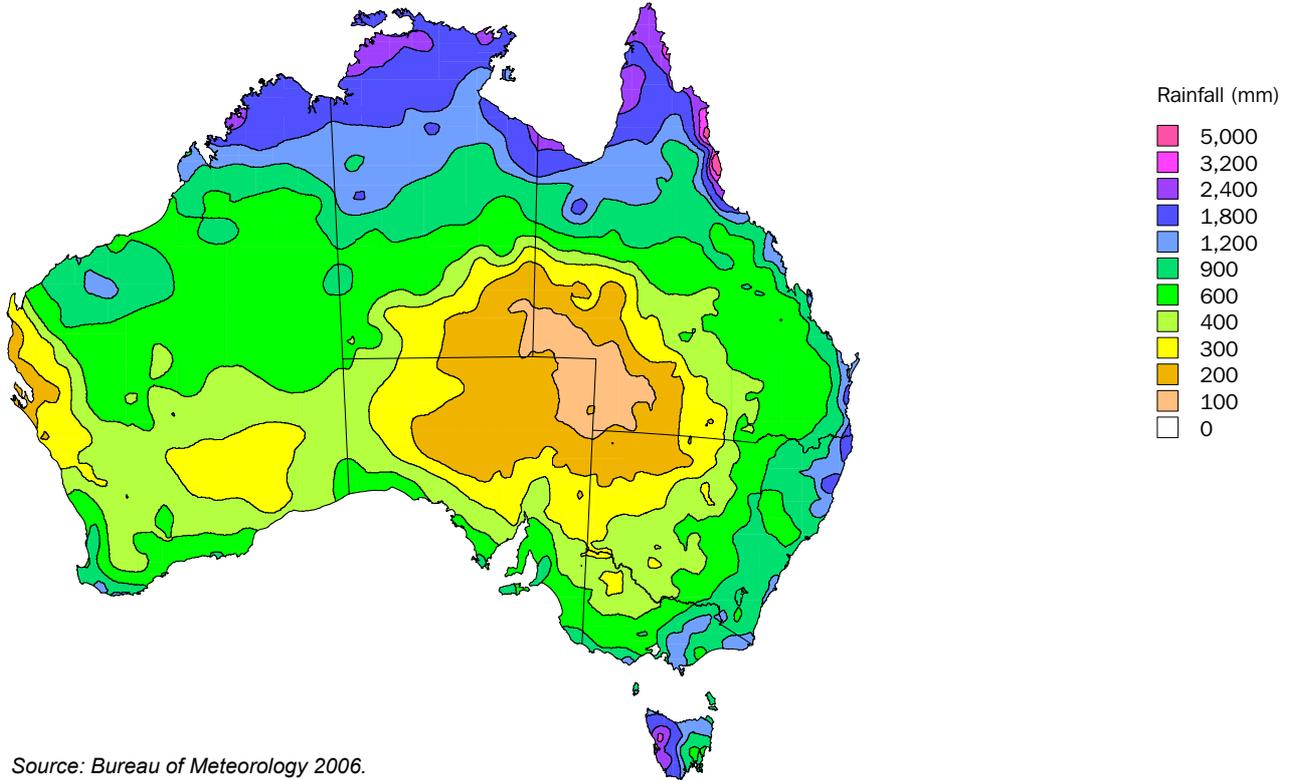
In the south-west of Western Australia, winter and spring 2005 saw generally near-normal rainfall, whilst the remnants of Tropical Cyclone Clare brought very heavy rain to the eastern wheatbelt in January. It was very dry thereafter throughout the agricultural areas, with April-June widely the driest on record. Over the full 12-month period, rainfall ranged from above normal in eastern wheatbelt areas favoured by Clare, to well below normal along the coast, with record low totals in the Perth-Bunbury area.

Temperatures were slightly above normal over the period, with maximum temperatures 0.28°C above normal (18th highest on record) and minimum temperatures 0.36°C above normal. 2005 and early 2006 were warm, the culmination of Australia's warmest calendar year on record in 2005. However, it turned cooler in early 2006. The active tropical wet season saw below-normal temperatures in most of northern and western Australia in the early months of 2006, and below-normal temperatures then extended to most of the continent from April onwards.

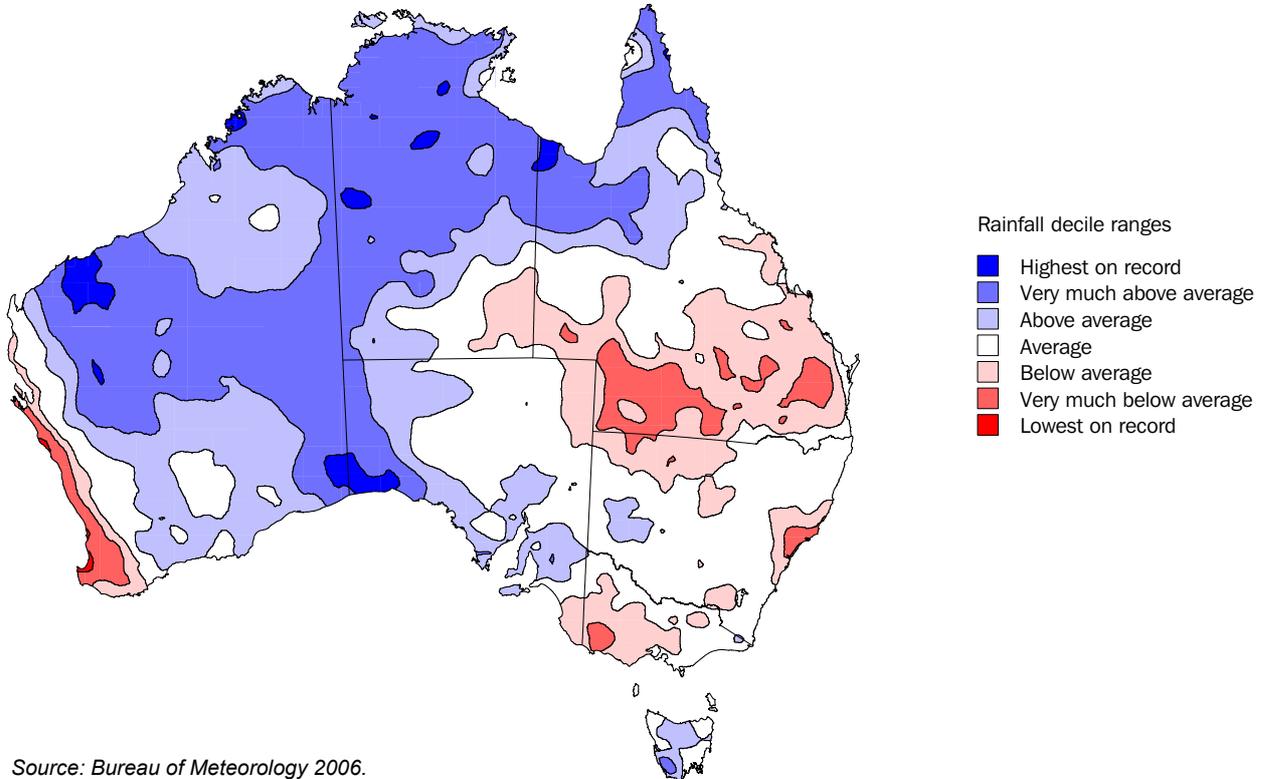
It was a very hot summer (the hottest on record in many places) over much of inland eastern Australia, particularly inland New South Wales and southern Queensland. Conversely, there were widespread severe frosts through both southeast and southwest Australia in May and June. Mid-June was particularly cold with a number of locations in south-western Western Australia, South Australia and northern Victoria breaking or approaching all-time records.

Over the year as a whole, the strongest warm anomalies occurred in southern inland Queensland, with maximum temperatures generally 1.5-2.5°C above normal. Conversely, southern Western Australia was rather cool, particularly at night, with minima 1-2°C below normal and maxima around 0.5°C below normal.

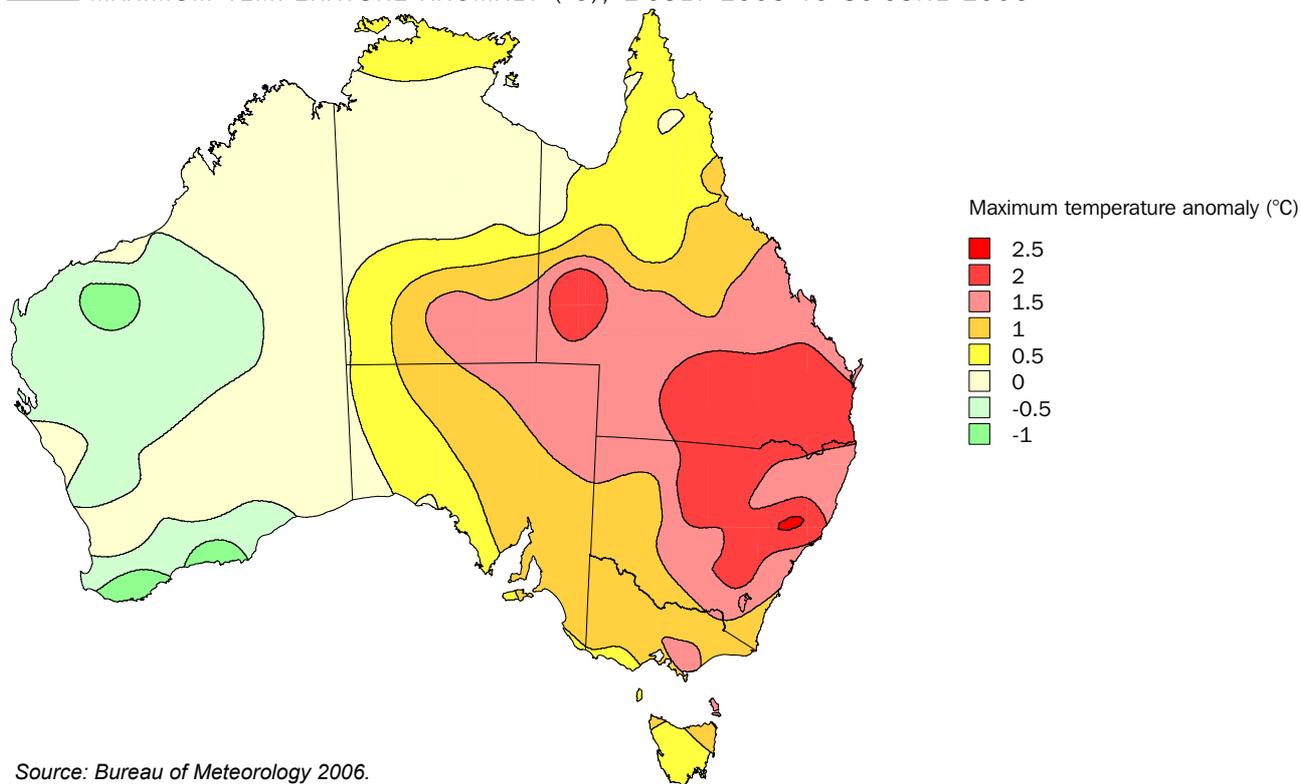
**A1.1** AUSTRALIAN RAINFALL ANALYSIS, 1 JULY 2005 TO 30 JUNE 2006



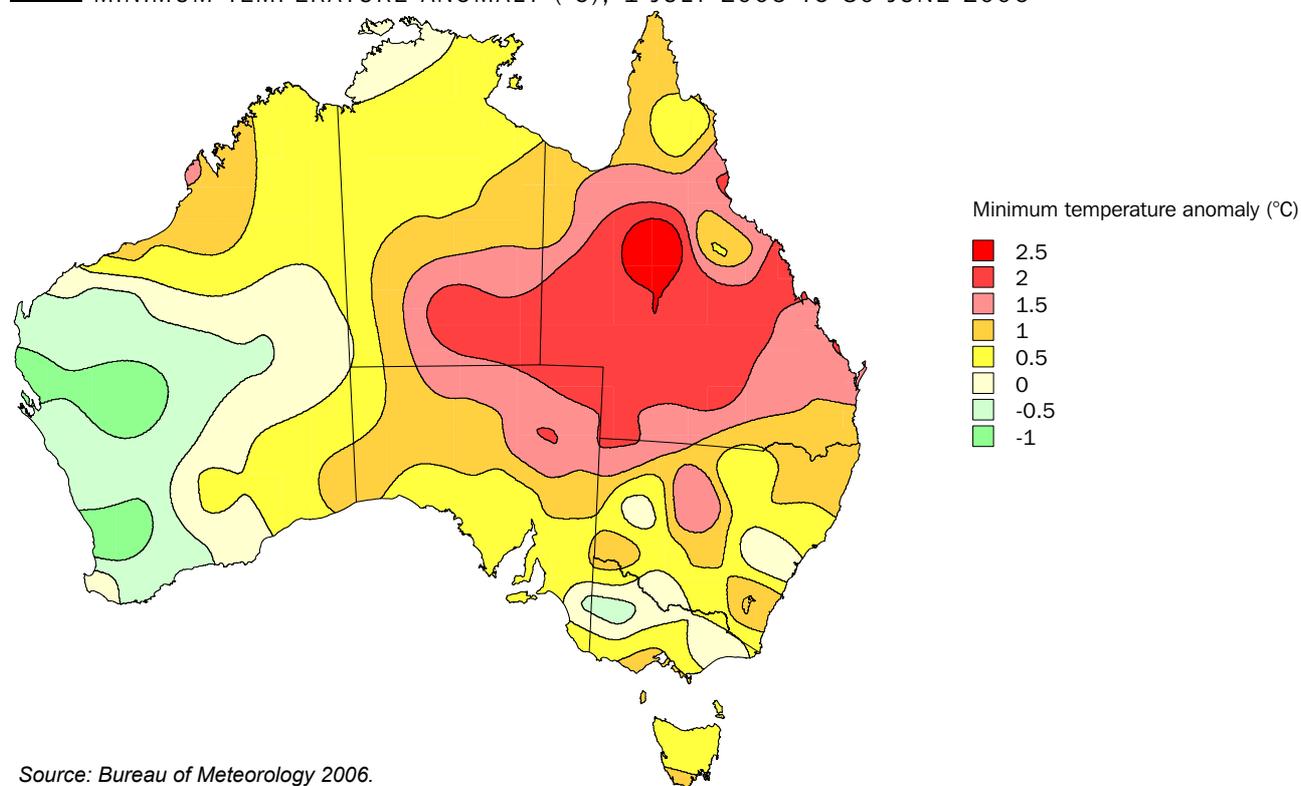
**A1.2** AUSTRALIAN RAINFALL DECILES, 1 JULY 2005 TO 30 JUNE 2006



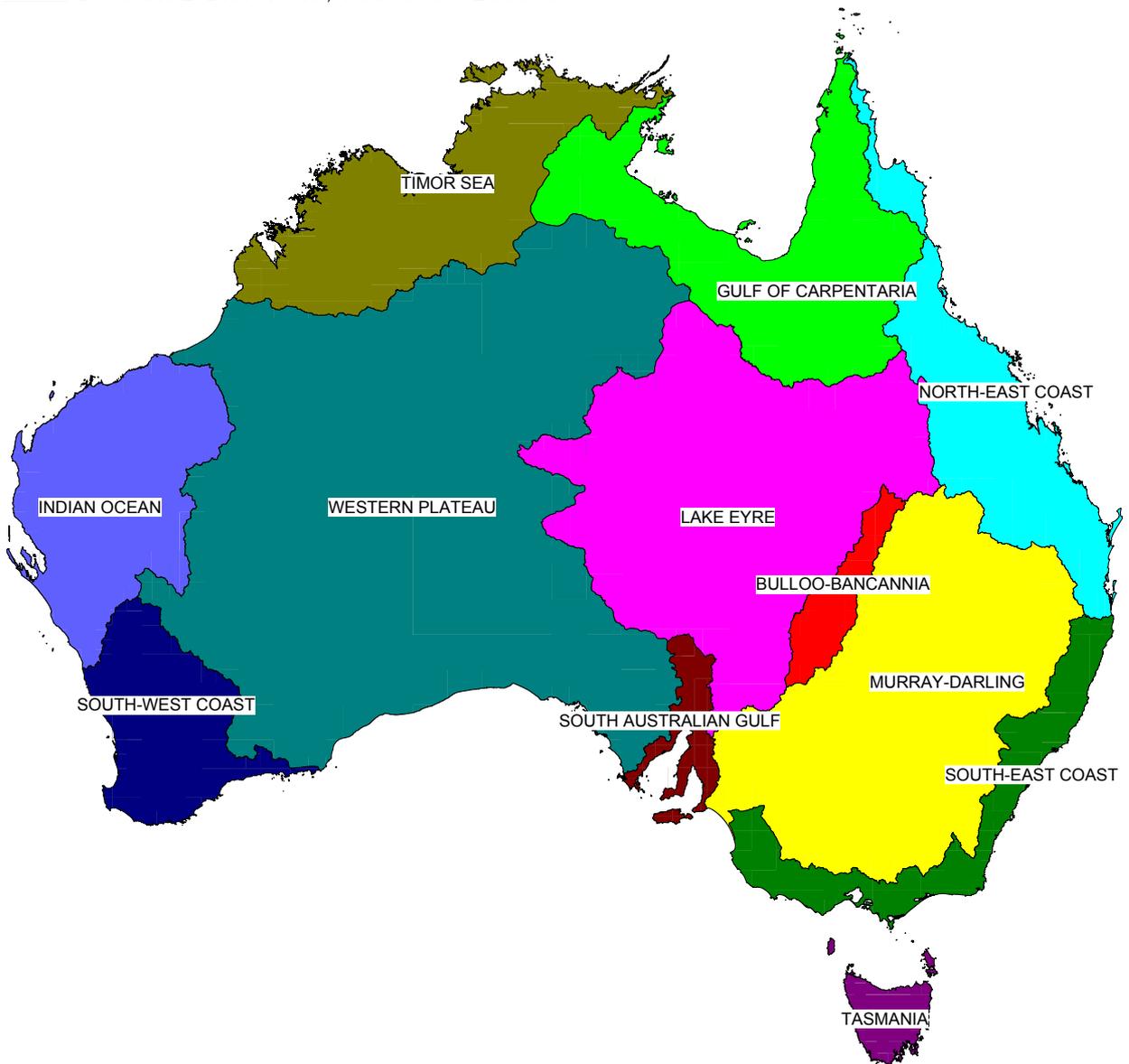
**A1.3** MAXIMUM TEMPERATURE ANOMALY (°C), 1 JULY 2005 TO 30 JUNE 2006



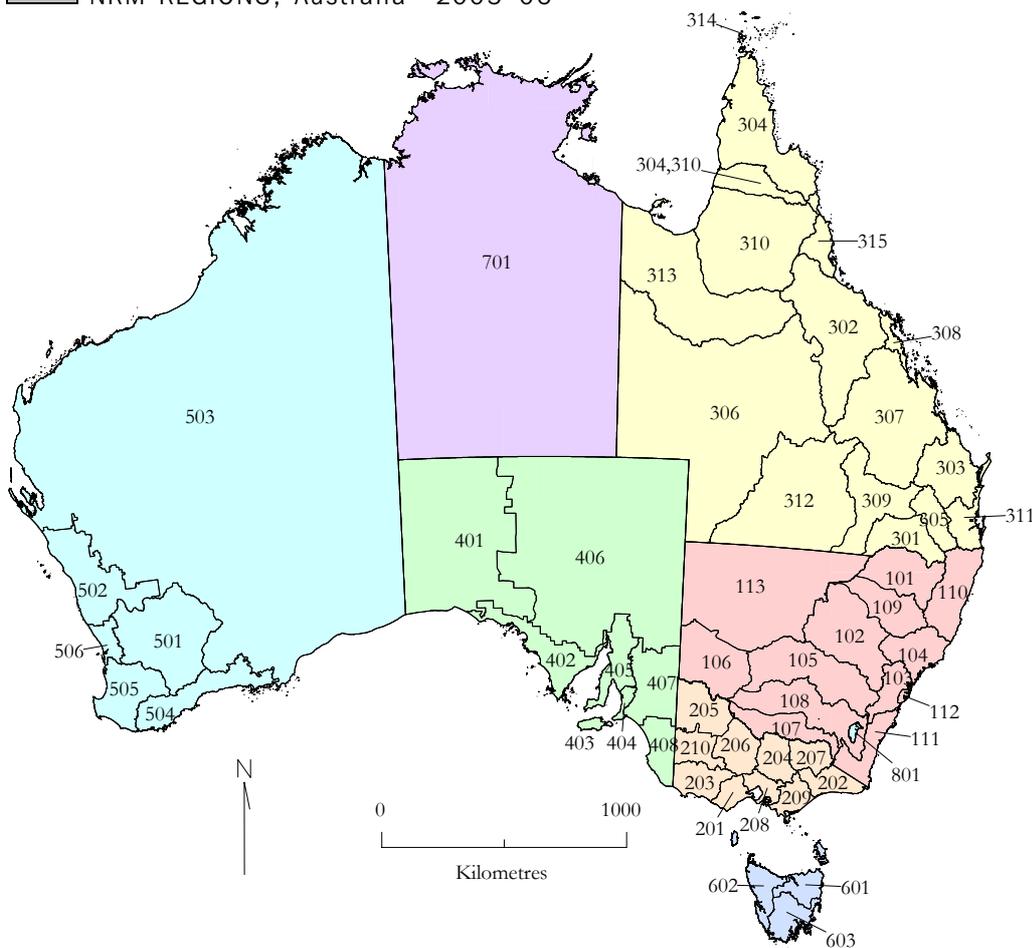
**A1.4** MINIMUM TEMPERATURE ANOMALY (°C), 1 JULY 2005 TO 30 JUNE 2006



**A2.1** DRAINAGE DIVISIONS, Australia—2005-06



**A2.2** NRM REGIONS, Australia—2005–06



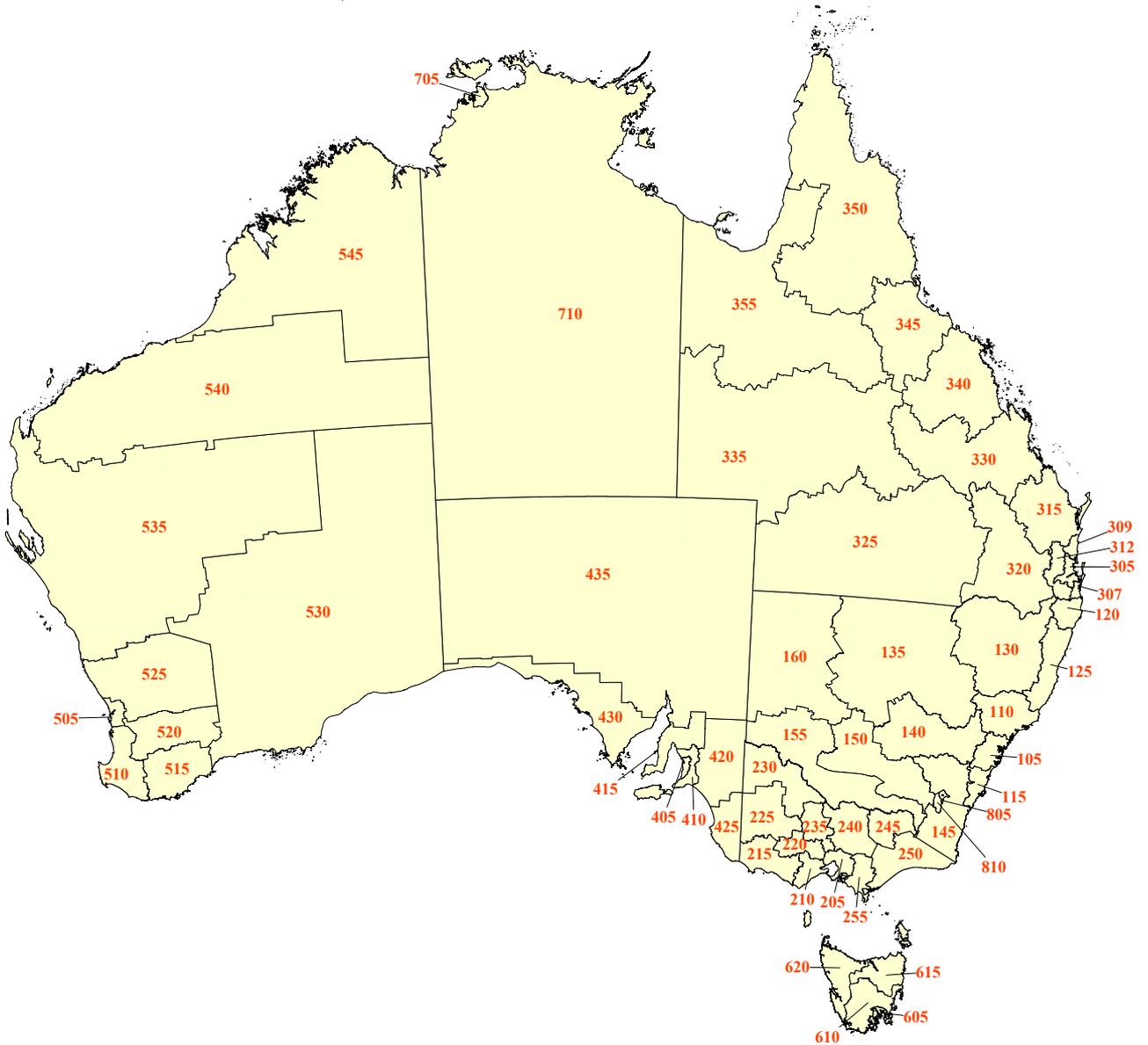
NRM Region \*

- |   |  |   |  |  |  |   |   |
|---|--|---|--|--|--|---|---|
| <ul style="list-style-type: none"> <li>NSW</li> <li>101: Border Rivers-Gwydir</li> <li>102: Central West</li> <li>103: Hawkesbury-Nepean</li> <li>104: Hunter-Central Rivers</li> <li>105: Lachlan</li> <li>106: Lower Murray-Darling</li> <li>107: Murray</li> <li>108: Murrumbidgee</li> <li>109: Namoi</li> <li>110: Northern Rivers</li> <li>111: Southern Rivers</li> <li>112: Sydney Metro</li> <li>113: Western</li> </ul> | <ul style="list-style-type: none"> <li>VIC</li> <li>201: Corangamite</li> <li>202: East Gippsland</li> <li>203: Glenelg Hopkins</li> <li>204: Goulburn Broken</li> <li>205: Mallee</li> <li>206: North Central</li> <li>207: North East (VIC)</li> </ul> | <ul style="list-style-type: none"> <li>QLD</li> <li>301: Border Rivers</li> <li>302: Burdekin</li> <li>303: Burnett Mary</li> <li>304: Cape York</li> <li>304,310: Cape York-Northern Gulf</li> <li>305: Condamine</li> <li>306: Desert Channels</li> <li>307: Fitzroy</li> <li>308: Mackay Whitsunday</li> <li>309: Maranoa Balonne</li> <li>310: Northern Gulf</li> <li>311: South East (QLD)</li> <li>312: South West (QLD)</li> <li>313: Southern Gulf</li> <li>314: Torres Strait</li> <li>315: Wet Tropics</li> </ul> | <ul style="list-style-type: none"> <li>SA</li> <li>401: Alinytjara Wilurara</li> <li>208: Port Phillip and Westernport</li> <li>209: West Gippsland</li> <li>210: Wimmera</li> <li>402: Eyre Peninsula</li> <li>403: Kangaroo Island</li> <li>404: Adelaide and Mount Lofty Ranges</li> <li>405: Northern and Yorke</li> <li>406: SA Arid Lands</li> <li>407: SA Murray Darling Basin</li> <li>408: South East (SA)</li> </ul> | <ul style="list-style-type: none"> <li>WA</li> <li>501: Avon</li> <li>502: Northern Agricultural Region</li> <li>503: Rangelands (WA)</li> <li>504: South Coast Region</li> <li>505: South West Region</li> <li>506: Swan</li> </ul> | <ul style="list-style-type: none"> <li>TAS</li> <li>601: North (TAS)</li> <li>602: North West (TAS)</li> <li>603: South (TAS)</li> </ul> | <ul style="list-style-type: none"> <li>NT</li> <li>701: Northern Territory</li> </ul> | <ul style="list-style-type: none"> <li>ACT</li> <li>801: ACT</li> </ul> |
|---|--|---|--|--|--|---|---|

\*Numbers used are NRM codes.

Source: Department of the Environment and Heritage - 2006.

**A2.3** STATISTICAL DIVISIONS, Australia—2005-06



**A2.4** STATISTICAL DIVISIONS, Australia—2005–06**New South Wales**

105 Sydney  
 110 Hunter  
 115 Illawarra  
 120 Richmond-Tweed  
 125 Mid-North Coast  
 130 Northern  
 135 North Western  
 140 Central West  
 145 South Eastern  
 150 Murrumbidgee  
 155 Murray  
 160 Far West

**Victoria**

205 Melbourne  
 210 Barwon  
 215 Western District  
 220 Central Highlands  
 225 Wimmera  
 230 Mallee  
 235 Loddon  
 240 Goulburn  
 245 Ovens-Murray  
 250 East Gippsland  
 255 Gippsland

**Queensland**

305 Brisbane  
 307 Gold Coast  
 309 Sunshine Coast  
 312 West Moreton  
 315 Wide Bay-Burnett  
 320 Darling Downs  
 325 South West  
 330 Fitzroy  
 335 Central West

**Queensland cont.**

340 Mackay  
 345 Northern  
 350 Far North  
 355 North West

**South Australia**

405 Adelaide  
 410 Outer Adelaide  
 415 Yorke and Lower North  
 420 Murray Lands  
 425 South East  
 430 Eyre  
 435 Northern

**Western Australia**

505 Perth  
 510 South West  
 515 Lower Great Southern  
 520 Upper Great Southern  
 525 Midlands  
 530 South Eastern  
 535 Central  
 540 Pilbara  
 545 Kimberley

**Tasmania**

605 Greater Hobart  
 610 Southern  
 615 Northern  
 620 Mersey-Lyell

**Northern Territory**

705 Darwin  
 710 Northern Territory - Bal

**Australian Capital Territory**

805 Canberra  
 810 Australian Capital Territory - Bal

OLD BASIS ESTIMATES

**1** Prior to running the 2005–06 Agricultural Census, the ABS had maintained its own register of agricultural establishments. However, it was increasingly difficult to maintain this list, and users were questioning the accuracy of some data.

**2** The ABS investigated a number of alternatives for maintaining an agricultural business register and discussed these with key users of agriculture statistics. As a result of this, it was agreed that the ABS should move to a new frame sourced from the Australian Taxation Office's Australian Business Register (ABR) for the 2005–06 Agricultural Census.

**3** The ABR-based register consists of all businesses on the ABR coded to an 'agricultural' industry, as well as businesses which have indicated they undertake agricultural activities. All businesses with a turnover of \$50,000 or more are required to register on the ABR. Many agricultural businesses with a turnover of less than \$50,000 have also chosen to register on the ABR.

**4** Moving to the ABR-based register required changes to many of the methodologies used for compiling agriculture commodity and water statistics. These included changes to the methods used for determining whether agricultural businesses were 'in-scope' of the collection, and also to ways the data were compiled (please see paragraphs 6–7 of the Explanatory Notes for more information about the changes in scope and coverage).

IMPLICATIONS FOR USERS

**5** The key implication of the move to the new register is that the Census data will not be directly comparable with the historical time series of agricultural water data. To provide users with a way of comparing ('bridging') water data from the 2005–06 Agricultural Census with the historical time series, the ABS has prepared two sets of estimates (see paragraph 12).

**6** 'New-basis' estimates have been prepared for 2005–06 using the new ABR-based register and its associated statistical methodologies. These methodologies have been subjected to rigorous analysis and testing, with the resulting 'new basis' water estimates representing the start of the new series.

**7** 'Old-basis' estimates have also been prepared for 2005–06. These estimates are a best judgement approximation to what the 2005–06 water estimates may have been if the ABS had continued to use the previous ABS-maintained list of establishments (with its associated statistical methodologies) to conduct the 2005–06 Agricultural Census.

BRIDGING METHODOLOGY

**8** The need for a bridging strategy for the Agriculture Census was outlined in Information Paper: *Agriculture Census: ABS Views on Content & Procedures, 2005–06* (cat. no. 7103.0) and was discussed extensively with key users in March 2006.

**9** Key considerations of the bridging strategy have included:

- a) known movements between 2004–05 and 2005–06 for those units common to both the old and new frame;
- b) the contribution to 'old-basis' estimates of those units common to both the old and new frame; and
- c) the contribution to 'old-basis' estimates of uncommon units (i.e. those old frame units which were out-of-scope of the new business register or old frame units which the ABS was not able to link to corresponding units on the new frame).

INTERPRETING THE BRIDGED

**10** Users should exercise a degree of caution in interpreting the tables as both the

DATA

'old-basis' and the 'new-basis' estimates are subject to sampling and non-sampling variability.

**11** The non-sampling variability in the 'old-basis' 2005–06 estimates in particular, is expected to be significant due to difficulties in collecting, processing and estimating 'old basis' data from a 'new basis' framework. For this reason, the 2005–06 'old-basis' estimates should be used with considerable caution and movements between 2004–05 and 2005–06 considered as indicative only. For more information, see the Technical Note in *Selected Agricultural Commodities, Australia, Preliminary 2005–06 (cat. no. 7112.0)*.

**12** The following tables allow users to compare 2004–2005 and 2005–2006 'old-basis' and 'new-basis' estimates subject to the caveats mentioned.

KEY PASTURES AND CROPS IRRIGATED, Australia—Old basis and New basis estimates

	OLD BASIS (a)		NEW BASIS (b)
	2004-05	2005-06	2005-06
<b>Agricultural water use</b>			
Irrigation (ML)	10 084 596	10 381 934	10 737 364
Other agricultural uses (ML)	1 061 906	977 150	951 428
Total water use (ML)	11 146 502	11 359 083	11 688 792
<b>Key pastures and crops irrigated</b>			
Pasture for grazing (ML)	2 896 543	2 734 564	2 887 837
Rice (ML)	618 964	1 161 893	1 253 227
Sugar cane (ML)	1 171 933	1 168 569	1 056 598
Cotton (ML)	1 819 316	1 874 497	1 734 951
Fruit trees, nut trees, plantation or berry fruits (ML)(c)	608 138	547 688	629 639
Vegetables for human consumption (ML)	419 249	373 954	416 875

- (a) Derived using old ABS-maintained frame.
- (b) Derived using new ABR-based frame.
- (c) Excludes grapevines.

AGRICULTURAL WATER USE, By State—Old basis and New basis estimates

	<i>Aust.</i>	<i>NSW(a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>
<b>WATER USE</b>								
<b>Irrigation (ML)</b>								
Old basis(b)								
2004–05	10 084 596	3 716 557	2 363 764	2 613 404	877 818	267 098	231 758	14 198
2005–06	10 381 934	4 277 208	2 318 185	2 437 670	880 627	278 357	178 210	11 678
New basis(c)								
2005–06	10 737 364	4 534 109	2 448 485	2 325 003	897 197	306 284	203 931	22 356
<b>Other agricultural uses (ML)</b>								
Old basis(b)								
2004–05	1 061 906	259 551	206 456	251 486	127 010	162 274	23 690	31 440
2005–06	977 150	244 058	199 305	268 750	97 457	129 567	25 275	12 737
New basis(c)								
2005–06	951 428	262 364	192 653	255 633	78 378	121 241	25 789	15 369
<b>Total (ML)</b>								
Old basis(b)								
2004–05	11 146 502	3 976 108	2 570 219	2 864 889	1 004 828	429 372	255 448	45 638
2005–06	11 359 083	4 521 265	2 517 490	2 706 420	978 085	407 924	203 485	24 414
New basis(c)								
2005–06	11 688 792	4 796 474	2 641 138	2 580 636	975 575	427 525	229 720	37 724

(a) Includes ACT.

(c) Derived using new ABR-based register.

(b) Derived using old ABS-maintained frame.

## GLOSSARY .....

<b>Agricultural business</b>	A business which is engaged mainly in agricultural activities.
<b>Application rate</b>	Rate at which water is applied to an area or crop, measured in megalitres per hectare.
<b>Area of holding</b>	Includes all occupied and maintained land owned, leased or rented, land worked by sharefarmers and all road permits by a particular agricultural establishment. Excludes land leased or rented to others.
<b>Estimated value of agricultural operations (EVAO)</b>	An estimation of the value of agricultural activity undertaken by an agricultural establishment. Three-year average weighted prices are applied to livestock turnoff and livestock numbers on the farm, and to area and production data for crops. The resultant aggregation of these commodity values is the EVAO. It is not an indicator of the value of receipts of individual farms but rather an indicator of the extent of agricultural activity.
<b>Gigalitre</b>	One thousand million litres.
<b>Groundwater</b>	Water occurring below the ground's surface.
<b>Megalitre</b>	One million litres.
<b>Recycled or re-used water (off-farm)</b>	Waste water, that may have been treated to some extent, that is used again without first being discharged to the environment e.g. sewage water brought onto a property for the purpose of irrigation.
<b>Surface water</b>	Water flowing or held in streams, rivers and other wetlands in the landscape.
<b>Town or country reticulated mains supply</b>	Water supplied, often through a non-natural network, where an economic transaction has occurred for the exchange of this water.

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