

**USE OF INFORMATION  
TECHNOLOGY ON FARMS**

AUSTRALIA

EMBARGO: 11.30AM (CANBERRA TIME) MON 28 AUG 2006

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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 or Tim Landrigan on Perth (08) 9360 5104.

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# NOTES

**ABOUT THIS PUBLICATION** This publication presents statistics on the use of computers and the Internet on farms in Australia. The data were obtained from questions included in the 2004–05 Agricultural Survey conducted by the Australian Bureau of Statistics (ABS). Information obtained was in respect of the year ended 30 June 2005. Comparative data from the 2003–04 Agricultural Survey have also been included.

**ABOUT THE SURVEY** The statistics in this publication relate to farms in scope of the 2004–05 Agricultural Survey, that is, farms with an estimated value of agricultural operations (EVAO) of \$5,000 or more. The 2004–05 survey consisted of a sample of approximately 30,500 farms (23% of all farms) operating in Australia at the end of June 2005.

**FUTURE RELEASES** The ABS has decided to only include the questions on computer and Internet usage in the Agricultural Survey every five years. The next scheduled release is 2009–10 then every five years after that. This decision is subject to ongoing review.

**OTHER ABS INFORMATION  
TECHNOLOGY STATISTICS** Details of other ABS activities in the field of information technology statistics are available from the Innovation, Science and Technology Statistics theme page on the ABS web site <<http://www.abs.gov.au>>. To access the theme page, select *Themes* from the menu on the home page and then *Innovation, Science and Technology* under the *Industry* heading. Details of other ABS publications relating to the use and production of information technologies in Australia can be found in paragraph 10 of the Explanatory notes.

**COMMENTS ON THIS  
PUBLICATION** The ABS welcomes comments and suggestions on data items for inclusion in future surveys. Please contact Tim Landrigan, Innovation and Technology Branch, Australian Bureau of Statistics, GPO Box K881, Perth WA 6842, or phone Perth (08) 9360 5104.



**ABBREVIATIONS**

- ABS Australian Bureau of Statistics
- ANZSIC Australian and New Zealand Standard Industrial Classification
- ASGC Australian Standard Geographical Classification
- EVAO Estimated Value of Agricultural Operations
- RSE relative standard error
- SD statistical division
- SE standard error

Susan Linacre  
Acting Australian Statistician



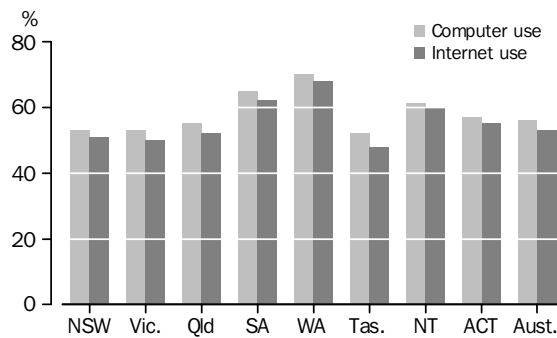
**AUSTRALIA**

In 2004–05, 56% (72,828) of the 129,934 Australian farms with an estimated value of agricultural operations (EVAO) of \$5,000 or more used a computer as part of their business operations. This was an increase of 1 percentage point since 2003–04. During 2004–05 an estimated 53% (69,362) of farms in Australia used the Internet as part of their business operations, an increase of 6 percentage points from 2003–04.

**REGIONAL DATA**

In 2004–05 Western Australia recorded the highest proportion of farms using a computer for business operations (70%) and the highest proportion using the Internet for business operations (68%). Tasmania recorded both the lowest proportion of farms using a computer (52%) and the lowest proportion of farms using the Internet (48%).

**COMPUTER AND INTERNET USE ON FARMS, By states and territories—2004–05**



**INTERNET CONNECTION**

12,287 Australian farms identified they used broadband to connect to the Internet for business operations, compared to 43,020 of Australian farms that identified they used dial-up. Satellite accounted for the highest level of broadband connection (5,694 farms), followed by DSL connection (4,381 farms).

**INDUSTRY**

Horticulture and fruit growing farms and Other crop growing farms showed the highest proportion of farms using a computer (62%). Horticulture and fruit growing farms also reported the highest proportion of farms using the internet (60%).

**FARM SIZE**

There was a strong relationship between farm size, as measured by the estimated value of agricultural operations (EVAO), and the use of a computer and the Internet in 2004–05. The proportion of larger farms using a computer and the Internet for business purposes was significantly higher than for smaller farms.

CHAPTER **2**

**FARM USE OF COMPUTERS AND THE INTERNET,  
SUMMARY** .....

USE OF THE INTERNET  
AND BROADBAND FOR  
BUSINESS OPERATIONS

For the first time in 2004–05 a question on the main type of internet connection used was asked on the Agriculture Survey. The majority of farms using the Internet and able to identify their type of connection identified they have a dial-up connection to the Internet (43,020 farms). 12,287 farms identified they have a broadband connection and 8,565 farms identified using ISDN. The highest broadband connection identified was satellite (5,694) then DSL (4,381).

COMPUTER AND INTERNET  
ACTIVITIES UNDERTAKEN  
AS PART OF BUSINESS  
OPERATIONS

In 2004–05, 44% of all Australian farms used a computer to manage their finances. The proportion of farms managing their finances on a computer ranged from 59% in Western Australia to 38% in Tasmania. Record keeping was another major computer activity, with almost one third (31%) of all farms in Australia keeping their records on a computer. This proportion varied across the states and territories, from 43% in Western Australia to 28% in New South Wales and Victoria.

The more common Internet activities undertaken by Australian farms in 2004–05 were email (42%), obtaining weather information (39%) and checking the availability or cost of goods or services (30%). Western Australia recorded the highest proportion of farms using the Internet for the majority of these activities – email (57%) and obtaining weather information (54%).

## 2.1 FARM USE OF COMPUTERS FOR BUSINESS OPERATIONS(a), By states and territories

	2003-04			2004-05		
	<i>All farms</i>	<i>Farms using a computer</i>		<i>All farms</i>	<i>Farms using a computer</i>	
	no.	no.	%	no.	no.	%
New South Wales	40 827	21 751	53	40 077	21 051	53
Victoria	32 463	16 492	51	32 357	17 122	53
Queensland	26 785	14 737	55	27 132	14 865	55
South Australia	14 238	8 964	63	14 111	9 122	65
Western Australia	11 877	8 035	68	11 915	8 389	70
Tasmania	3 866	2 087	54	3 877	1 999	52
Northern Territory	382	227	59	380	230	61
Australian Capital Territory	88	50	57	86	49	57
<b>Australia</b>	<b>130 526</b>	<b>72 342</b>	<b>55</b>	<b>129 934</b>	<b>72 828</b>	<b>56</b>

(a) Percentages are of all farms.

## 2.2 FARM USE OF THE INTERNET FOR BUSINESS OPERATIONS(a), By states and territories

	2003-04			2004-05		
	<i>All farms</i>	<i>Farms using the Internet</i>		<i>All farms</i>	<i>Farms using the Internet</i>	
	no.	no.	%	no.	no.	%
New South Wales	40 827	18 627	46	40 077	20 266	51
Victoria	32 463	13 320	41	32 357	16 077	50
Queensland	26 785	12 478	47	27 132	14 169	52
South Australia	14 238	7 685	54	14 111	8 686	62
Western Australia	11 877	6 950	59	11 915	8 044	68
Tasmania	3 866	1 771	46	3 877	1 848	48
Northern Territory	382	209	55	380	226	60
Australian Capital Territory	88	43	49	86	47	55
<b>Australia</b>	<b>130 526</b>	<b>61 082</b>	<b>47</b>	<b>129 934</b>	<b>69 362</b>	<b>53</b>

(a) Percentages are of all farms.

**2.3** FARM USE OF THE INTERNET FOR BUSINESS OPERATIONS, By states and territories and type of connection(a)

	<i>All farms</i>	<i>Dial-up connection(b)</i>		<i>ISDN connection(b)</i>		<i>Broadband connection(b)(c)</i>	
	no.	no.	%	no.	%	no.	%
New South Wales	40 077	12 764	32	2 278	6	3 786	9
Victoria	32 357	9 980	31	2 178	7	2 254	7
Queensland	27 132	8 252	30	1 662	6	3 048	11
South Australia	14 111	5 637	40	1 212	9	1 216	9
Western Australia	11 915	5 204	44	823	7	1 603	13
Tasmania	3 877	1 101	28	396	10	262	7
Northern Territory	380	56	15	9	2	111	29
Australian Capital Territory	86	26	30	6	7	7	8
<b>Australia</b>	<b>129 934</b>	<b>43 020</b>	<b>33</b>	<b>8 565</b>	<b>7</b>	<b>12 287</b>	<b>9</b>

- (a) Excludes farms using the Internet with other types of connections and farms unable to identify the type of connection.
- (b) Farms identified the main type of Internet connection used as at 30 June 2005.
- (c) Broadband connection includes DSL, cable, fixed and mobile wireless, satellite and other broadband.

**2.4** FARM USE OF THE INTERNET FOR BUSINESS OPERATIONS, By states and territories and detailed type of connection(a)(b)

BROADBAND

	<i>Dial-up</i>	<i>ISDN</i>	<i>DSL</i>	<i>Cable</i>	<i>Fixed Wireless</i>	<i>Mobile Wireless</i>	<i>Satellite</i>	<i>Other broadband</i>
	no.	no.	no.	no.	no.	no.	no.	no.
New South Wales	12 764	2 278	^ 1 480	^ 478	*46	*56	1 693	*32
Victoria	9 980	2 178	^ 1 043	^ 409	*204	*21	^ 515	**64
Queensland	8 252	1 662	^ 679	^ 170	*108	*32	2 009	*49
South Australia	5 637	1 212	^ 590	^ 103	**15	**8	471	*29
Western Australia	5 204	823	^ 430	^ 190	*21	**6	938	**17
Tasmania	1 101	396	^ 148	^ 37	*5	np	^ 69	np
Northern Territory	56	9	8	np	np	np	np	np
Australian Capital Territory	26	6	4	np	np	np	np	np
<b>Australia</b>	<b>43 020</b>	<b>8 565</b>	<b>4 381</b>	<b>1 388</b>	<b>^ 400</b>	<b>^ 124</b>	<b>5 694</b>	<b>^ 192</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
- \*\* 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) Farms identified the main type of Internet connection used as at 30 June 2005.
- (b) Excludes farms using the Internet with other types of connections and farms unable to identify the type of connection.

**2.5****COMPUTER AND INTERNET ACTIVITIES FOR FARM BUSINESS OPERATIONS(a), By states and territories—2004–05**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	%	%	%	%	%	%	%	%	%
<b>Internet activity</b>									
Obtained weather information	38	33	37	45	54	30	47	36	39
Obtained market information	27	20	26	31	37	20	35	24	26
Availability or cost of goods or services	30	26	30	35	37	28	37	38	30
Purchased or ordered goods or services	15	13	16	18	19	16	28	27	15
Accessed government websites	23	19	26	27	31	22	33	37	24
Paid bills via the Internet	25	23	25	32	39	22	28	35	27
Email	39	37	42	48	57	37	52	48	42
<b>Computer only activity</b>									
Managed farm finances	42	41	42	53	59	38	48	42	44
Farm record keeping	28	28	30	38	43	29	40	33	31
<b>Other computer or Internet activity</b>									
Other	^ 3	^ 2	^ 4	^ 3	^ 4	^ 3	^ 6	4	3

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

(a) Percentages are of all farms.

## CHAPTER 3

# FARM USE OF COMPUTERS AND THE INTERNET, BY REGION

### USE OF COMPUTERS

At the Statistical Division level, the proportion of farms using a computer for business operations in 2004–05 varied from 77% in the South Eastern region of Western Australia to 39% in the Mid-North Coast of New South Wales. Within each state and territory, the proportions ranged from:

- 60% (Murray) to 39% (Mid-North Coast) in New South Wales;
- 61% (Wimmera) to 43% (Loddon) in Victoria;
- 75% (North West) to 49% (Moreton, Wide Bay-Burnett) in Queensland;
- 74% (Eyre) to 56% (Adelaide) in South Australia;
- 77% (South Eastern) to 62% (Perth) in Western Australia;
- 55% (Northern) to 46% (Greater Hobart) in Tasmania;
- 66% (Northern Territory – Balance) to 50% (Darwin) in the Northern Territory; and
- 66% (Australian Capital Territory – Balance) to 52% (Canberra) in the Australian Capital Territory.

### USE OF THE INTERNET

Generally, the more remote areas of Australia recorded higher proportions of farms using the Internet. Farms situated closer to Australia's capital cities tended to have lower Internet use.

Among Statistical Divisions, the proportion of farms reporting business use of the Internet in 2004–05 varied from 79% in the South Eastern of Western Australia to 38% in the Mid-North Coast region of New South Wales. Within each state and territory, the proportions ranged from:

- 60% (Far West) to 38% (Mid-North Coast) in New South Wales;
- 58% (Wimmera) to 42% (Ovens-Murray) in Victoria;
- 75% (North West) to 46% (Moreton) in Queensland;
- 71% (Yorke and Lower North) to 51% (Adelaide) in South Australia;
- 79% (South Eastern) to 58% (Perth) in Western Australia;
- 50% (Southern, Northern) to 45% (Greater Hobart, Mersey-Lyell) in Tasmania;
- 66% (Northern Territory – Balance) to 46% (Darwin) in the Northern Territory; and
- 66% (Australian Capital Territory – Balance) to 48% (Canberra) in the Australian Capital Territory.

### TYPE OF INTERNET CONNECTION

Generally, a dial-up connection is the most common type of Internet connection for farms. At the Statistical Division level, the proportion of farms with a dial-up Internet connection ranged from 3% in the Central West of Queensland to 52% in the Midlands region of Western Australia. The proportion of farms with a broadband connection varied from 1% in the Gippsland area of Victoria to 62% in the Central West of Queensland.



**3.1****FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS(a),  
By Statistical Division—2004–05**

	<i>All farms</i>	<i>Farms using a computer</i>		<i>Farms using the Internet</i>	
	no.	no.	%	no.	%
<b>New South Wales</b>					
Sydney	1 623	790	49	688	42
Hunter	2 834	1 428	50	1 326	47
Illawarra	929	^ 461	^ 50	^ 470	^ 51
Richmond-Tweed	2 921	1 300	45	1 192	41
Mid-North Coast	2 751	^ 1 072	^ 39	^ 1 043	^ 38
Northern	6 172	3 579	58	3 595	58
North Western	4 241	2 328	55	2 220	52
Central West	5 538	3 033	55	2 924	53
South Eastern	4 368	2 105	48	2 056	47
Murrumbidgee	4 613	2 524	55	2 392	52
Murray	3 763	2 246	60	2 167	58
Far West	325	^ 188	^ 58	^ 195	^ 60
<i>Total</i>	40 077	21 051	53	20 266	51
<b>Victoria</b>					
Melbourne	2 360	1 237	52	1 213	51
Barwon	1 731	923	53	784	45
Western District	4 279	2 225	52	2 043	48
Central Highlands	1 931	979	51	914	47
Wimmera	2 684	1 632	61	1 548	58
Mallee	3 997	2 176	54	2 132	53
Loddon	1 950	841	43	828	43
Goulburn	5 623	3 318	59	3 140	56
Ovens-Murray	2 177	1 029	47	912	42
East Gippsland	2 262	1 189	53	1 041	46
Gippsland	3 364	^ 1 576	^ 47	^ 1 522	^ 45
<i>Total</i>	32 357	17 122	53	16 077	50
<b>Queensland</b>					
Brisbane	842	445	53	434	52
Moreton	3 306	1 605	49	1 523	46
Wide Bay-Burnett	4 875	2 372	49	2 268	47
Darling Downs	5 874	3 137	53	2 994	51
South West	1 625	1 097	68	1 049	65
Fitzroy	2 761	^ 1 398	^ 51	^ 1 322	^ 48
Central West	671	^ 426	^ 64	^ 421	^ 63
Mackay	2 067	1 082	52	996	48
Northern	1 790	1 221	68	1 158	65
Far North	2 852	1 729	61	1 651	58
North West	469	^ 353	75	353	75
<i>Total</i>	27 132	14 865	55	14 169	52
<b>South Australia</b>					
Adelaide	888	496	56	^ 454	51
Outer Adelaide	2 701	1 619	60	1 515	56
Yorke and Lower North	2 031	1 479	73	1 437	71
Murray Lands	3 323	1 969	59	1 920	58
South East	2 506	1 614	64	1 526	61
Eyre	1 481	1 092	74	1 014	69
Northern	1 181	852	72	819	69
<i>Total</i>	14 111	9 122	65	8 686	62

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

(a) Percentages are of all farms.

### 3.1 FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS(a), By Statistical Division—2004–05 *continued*

	<i>All farms</i>	<i>Farms using a computer</i>		<i>Farms using the Internet</i>	
	no.	no.	%	no.	%
<b>Western Australia</b>					
Perth	986	610	62	572	58
South West	2 450	1 564	64	1 491	61
Lower Great Southern	2 037	1 402	69	1 335	66
Upper Great Southern	1 605	1 212	76	1 181	74
Midlands	2 884	2 147	74	2 047	71
South Eastern	603	462	77	473	79
Central	1 151	849	74	803	70
Pilbara	61	^ 43	^ 71	^ 47	^ 78
Kimberley	140	^ 100	72	^ 95	^ 68
<i>Total</i>	<i>11 915</i>	<i>8 389</i>	<i>70</i>	<i>8 044</i>	<i>68</i>
<b>Tasmania</b>					
Greater Hobart	^ 214	^ 97	^ 46	^ 97	^ 45
Southern	778	394	51	387	50
Northern	1 418	776	55	710	50
Mersey-Lyell	1 467	732	50	655	45
<i>Total</i>	<i>3 877</i>	<i>1 999</i>	<i>52</i>	<i>1 848</i>	<i>48</i>
<b>Northern Territory</b>					
Darwin	119	59	50	55	46
Northern Territory - Balance	261	171	66	171	66
<i>Total</i>	<i>380</i>	<i>230</i>	<i>61</i>	<i>226</i>	<i>60</i>
<b>Australian Capital Territory</b>					
Canberra	54	28	52	26	48
Australian Capital Territory - Balance	32	21	66	21	66
<i>Total</i>	<i>86</i>	<i>49</i>	<i>57</i>	<i>47</i>	<i>55</i>
<b>Australia</b>	<b>129 934</b>	<b>72 828</b>	<b>56</b>	<b>69 362</b>	<b>53</b>

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

(a) Percentages are of all farms.

### 3.2 FARM USE OF THE INTERNET FOR BUSINESS OPERATIONS(a), By Statistical Division and type of connection (b)—2004–05

	All farms		Dial-up connection(c)		ISDN connection(c)		Broadband connection(c)(d)	
	no.		no.	%	no.	%	no.	%
<b>New South Wales</b>								
Sydney	1 623		^ 315	^ 19	^ 123	^ 8	^ 165	^ 10
Hunter	2 834		^ 896	^ 32	*176	*6	^ 197	^ 7
Illawarra	929		^ 276	^ 30	*51	*6	*122	*13
Richmond-Tweed	2 921		^ 776	^ 27	^ 91	^ 3	^ 178	^ 6
Mid-North Coast	2 751		^ 695	^ 25	*99	*4	*123	*4
Northern	6 172		2 314	37	^ 433	^ 7	^ 625	^ 10
North Western	4 241		1 195	28	^ 296	^ 7	^ 506	^ 12
Central West	5 538		1 983	36	^ 239	^ 4	^ 539	^ 10
South Eastern	4 368		^ 1 259	^ 29	*211	*5	*341	*8
Murrumbidgee	4 613		1 629	35	^ 296	^ 6	^ 415	^ 9
Murray	3 763		1 390	37	^ 256	^ 7	^ 412	^ 11
Far West	325		*36	*11	**8	**3	^ 164	^ 51
<i>Total</i>	40 077		12 764	32	2 278	6	3 786	9
<b>Victoria</b>								
Melbourne	2 360		^ 528	^ 22	^ 157	^ 7	^ 416	^ 18
Barwon	1 731		^ 528	^ 31	^ 117	^ 7	*90	*5
Western District	4 279		^ 1 369	32	^ 262	^ 6	*265	*6
Central Highlands	1 931		^ 577	^ 30	^ 102	^ 5	*157	*8
Wimmera	2 684		1 082	40	^ 222	^ 8	^ 146	^ 5
Mallee	3 997		1 291	32	^ 467	^ 12	^ 335	^ 8
Loddon	1 950		489	25	^ 126	^ 6	^ 71	*4
Goulburn	5 623		1 798	32	^ 343	^ 6	^ 502	^ 9
Ovens-Murray	2 177		^ 481	^ 22	^ 151	^ 7	*131	*6
East Gippsland	2 262		^ 702	^ 31	*93	*4	^ 103	*5
Gippsland	3 364		^ 1 134	^ 34	**137	**4	*38	*1
<i>Total</i>	32 357		9 980	31	2 178	7	2 254	7
<b>Queensland</b>								
Brisbane	842		^ 218	^ 26	*25	*3	^ 131	^ 16
Moreton	3 306		^ 945	^ 29	*287	*9	^ 164	^ 5
Wide Bay-Burnett	4 875		^ 1 612	^ 33	*224	*5	^ 169	^ 3
Darling Downs	5 874		1 951	33	^ 430	^ 7	^ 413	^ 7
South West	1 625		^ 329	^ 20	*100	*6	^ 554	^ 34
Fitzroy	2 761		^ 858	^ 31	*144	*5	^ 244	^ 9
Central West	671		*22	*3	—	—	^ 413	^ 62
Mackay	2 067		^ 531	^ 26	*103	*5	^ 257	^ 12
Northern	1 790		^ 646	^ 36	*151	*8	^ 197	^ 11
Far North	2 852		1 049	37	^ 187	^ 7	^ 258	^ 9
North West	469		*89	*19	**11	**2	^ 247	^ 53
<i>Total</i>	27 132		8 252	30	1 662	6	3 048	11
<b>South Australia</b>								
Adelaide	888		^ 201	^ 23	*64	*7	^ 170	^ 19
Outer Adelaide	2 701		975	36	^ 275	^ 10	^ 129	^ 5
Yorke and Lower North	2 031		1 017	50	^ 161	^ 8	^ 128	^ 6
Murray Lands	3 323		1 438	43	^ 158	^ 5	^ 202	^ 6
South East	2 506		895	36	^ 245	^ 10	^ 277	^ 11
Eyre	1 481		633	43	^ 184	^ 12	^ 131	^ 9
Northern	1 181		480	41	^ 124	^ 11	^ 180	^ 15
<i>Total</i>	14 111		5 637	40	1 212	9	1 216	9

^ 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

— nil or rounded to zero (including null cells)

(a) Percentages are of all farms.

(b) Excludes farms using the Internet with other types of connections and farms unable to identify the type of connection.

(c) Farms identified the main type of Internet connection used as at 30 June 2005.

(d) Broadband connection includes DSL, cable, fixed and mobile wireless, satellite and other broadband.

### 3.2 FARM USE OF THE INTERNET FOR BUSINESS OPERATIONS(a), By Statistical Division and type of connection (b)—2004–05 *continued*

	<i>All farms</i>		<i>Dial-up connection(c)</i>		<i>ISDN connection(c)</i>		<i>Broadband connection(c)(d)</i>	
	no.		no.	%	no.	%	no.	%
<b>Western Australia</b>								
Perth	986		364	37	^ 37	^ 4	^ 117	^ 12
South West	2 450		^ 923	^ 38	^ 157	^ 6	^ 316	^ 13
Lower Great Southern	2 037		917	45	^ 144	^ 7	^ 186	^ 9
Upper Great Southern	1 605		770	48	^ 108	^ 7	^ 243	^ 15
Midlands	2 884		1 493	52	^ 223	^ 8	^ 255	^ 9
South Eastern	603		267	44	^ 49	^ 8	^ 139	^ 23
Central	1 151		424	37	^ 95	^ 8	^ 266	^ 23
Pilbara	61		^ 6	**10	**4	**7	^ 29	^ 48
Kimberley	140		^ 38	^ 27	**6	**4	*52	^ 37
<i>Total</i>	11 915		5 204	44	823	7	1 603	13
<b>Tasmania</b>								
Greater Hobart	214		^ 54	^ 25	*18	*8	^ 17	^ 8
Southern	778		^ 230	^ 30	^ 74	^ 9	^ 75	^ 10
Northern	1 418		399	28	^ 145	^ 10	^ 106	^ 7
Mersey-Lyell	1 467		419	29	^ 159	^ 11	^ 65	^ 4
<i>Total</i>	3 877		1 101	28	396	10	^ 262	^ 7
<b>Northern Territory</b>								
Darwin	119		26	22	3	3	12	10
Northern Territory - Balance	261		30	11	6	2	99	38
<i>Total</i>	380		56	15	9	2	111	29
<b>Australian Capital Territory</b>								
Canberra	54		12	22	np	np	np	np
Australian Capital Territory - Balance	32		14	44	np	np	np	np
<i>Total</i>	86		26	30	np	np	np	np
<b>Australia</b>	<b>129 934</b>		<b>43 020</b>	<b>33</b>	<b>8 565</b>	<b>7</b>	<b>12 287</b>	<b>9</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

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

(a) Percentages are of all farms.

(b) Excludes farms using the Internet with other types of connections and farms unable to identify the type of connection.

(c) Farms identified the main type of Internet connection used as at 30 June 2005.

(d) Broadband connection includes DSL, cable, fixed and mobile wireless, satellite and other broadband.

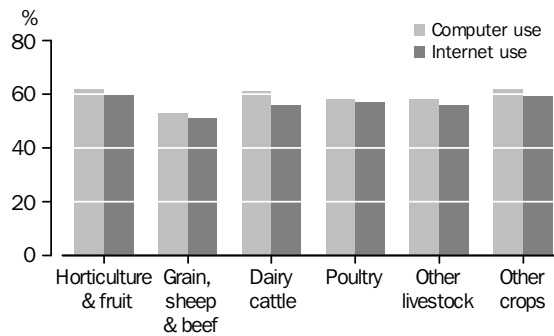
CHAPTER **4**

**FARM USE OF COMPUTERS AND THE INTERNET,  
BY INDUSTRY AND FARM SIZE** .....

INDUSTRY COMPARISONS

At the industry level, the proportion of farms using a computer varied from 62% in Horticulture and fruit growing farming to 53% in Grain, sheep and beef cattle farming in 2004–05. Horticulture and fruit growing farming showed the highest proportion of farms using the Internet (60%) and Grain, sheep and beef cattle farming recorded the lowest proportions (51%)

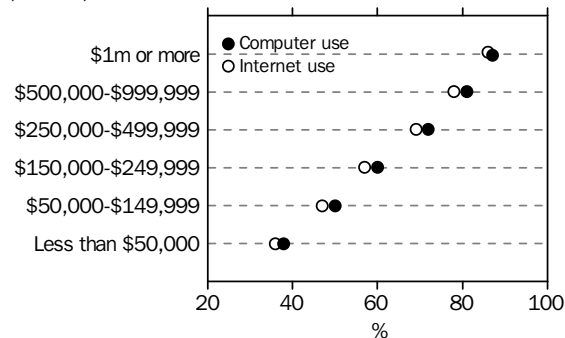
COMPUTER AND INTERNET USE ON FARMS, By industry—2004–05



FARM SIZE COMPARISONS

In 2004–05 there was a strong relationship between farm use of information technology and farm size. As the graph below shows, the proportion of farms using a computer and the Internet was greater in the higher estimated value of agricultural operations (EVAO) ranges.

COMPUTER AND INTERNET USE ON FARMS, By farm size (EVAO)—2004–05



## 4.1 FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS(a), By broad industry and states and territories—2004–05

	<i>All farms</i>	<i>Farms using a computer</i>		<i>Farms using the Internet</i>	
	no.	no.	%	no.	%
<b>Horticulture and fruit growing</b>					
New South Wales	4 991	2 783	56	2 765	55
Victoria	4 485	2 801	62	2 724	61
Queensland	4 050	2 611	65	2 554	63
South Australia	3 614	2 256	62	2 192	61
Western Australia	1 911	1 282	67	1 237	65
Tasmania	880	595	68	571	65
Northern Territory	148	81	55	76	51
Australian Capital Territory	9	8	89	8	89
<i>Australia</i>	20 088	12 416	62	12 126	60
<b>Grain, sheep and beef cattle farming</b>					
New South Wales	30 500	15 408	51	14 699	48
Victoria	19 829	9 420	48	8 857	45
Queensland	15 902	8 027	51	7 647	48
South Australia	9 417	6 114	65	5 762	61
Western Australia	9 103	6 515	72	6 258	69
Tasmania	2 129	923	43	816	38
Northern Territory	205	134	65	136	66
Australian Capital Territory	72	38	53	36	50
<i>Australia</i>	87 158	46 580	53	44 210	51
<b>Dairy cattle farming</b>					
New South Wales	1 468	940	64	915	62
Victoria	6 199	3 790	61	3 383	55
Queensland	956	^ 472	^ 49	^ 427	^ 45
South Australia	409	^ 274	67	^ 274	67
Western Australia	296	^ 192	65	^ 169	^ 57
Tasmania	553	341	62	334	60
Northern Territory	—	—	—	—	—
Australian Capital Territory	—	—	—	—	—
<i>Australia</i>	9 881	6 008	61	5 500	56
<b>Poultry farming</b>					
New South Wales	401	195	49	179	45
Victoria	^ 290	174	^ 60	^ 205	71
Queensland	169	97	57	92	55
South Australia	86	^ 63	73	57	66
Western Australia	109	73	67	^ 67	61
Tasmania	^ 30	^ 23	^ 79	^ 21	^ 72
Northern Territory	np	np	np	np	np
Australian Capital Territory	np	np	np	np	np
<i>Australia</i>	1 089	628	58	624	57
<b>Other livestock farming</b>					
New South Wales	^ 1 162	^ 645	^ 56	^ 630	^ 54
Victoria	^ 685	^ 395	^ 58	^ 388	^ 57
Queensland	^ 963	^ 520	^ 54	^ 519	^ 54
South Australia	^ 258	^ 182	71	^ 179	69
Western Australia	^ 215	^ 173	80	^ 158	74
Tasmania	^ 104	^ 35	*34	^ 30	*29
Northern Territory	5	np	np	np	np
Australian Capital Territory	3	np	np	np	np
<i>Australia</i>	3 396	1 953	58	1 907	56

^ 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)

(a) Percentages are of all farms.

**4.1**

FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS(a),

By broad industry and states and territories—2004–05 *continued* .....

	<i>All farms</i>	<i>Farms using a computer</i> .....		<i>Farms using the Internet</i> .....	
	no.	no.	%	no.	%
<b>Other crop growing</b>					
New South Wales	1 064	^ 734	69	^ 732	69
Victoria	^ 561	^ 332	^ 59	^ 309	^ 55
Queensland	4 916	3 007	61	2 815	57
South Australia	^ 148	*119	81	*108	^ 73
Western Australia	*111	*34	**31	*34	**31
Tasmania	^ 96	^ 58	^ 60	^ 51	^ 53
Northern Territory	9	np	np	np	np
Australian Capital Territory	—	np	np	np	np
<i>Australia</i>	6 905	4 287	62	4 051	59

- ^ 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
- nil or rounded to zero (including null cells)
- (a) Percentages are of all farms.

**4.2** FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS (a),  
By broad industry and EVAO—2004–05

	<i>All farms</i>	<i>Farms using a computer</i>		<i>Farms using the Internet</i>	
	no.	no.	%	no.	%
<b>Horticulture and fruit growing</b>					
Less than \$50,000	5 393	2 730	51	2 691	50
\$50,000–\$149,999	5 821	3 495	60	3 441	59
\$150,000–\$249,999	2 842	1 663	59	1 607	57
\$250,000–\$499,999	2 675	1 934	72	1 860	70
\$500,000–\$999,999	1 765	1 295	73	1 235	70
\$1m or more	1 592	1 300	82	1 292	81
<i>Total</i>	20 088	12 416	62	12 126	60
<b>Grain, sheep and beef cattle farming</b>					
Less than \$50,000	28 964	10 012	35	9 294	32
\$50,000–\$149,999	22 809	10 675	47	9 835	43
\$150,000–\$249,999	11 566	7 096	61	6 785	59
\$250,000–\$499,999	13 020	9 570	74	9 215	71
\$500,000–\$999,999	7 254	6 049	83	5 935	82
\$1m or more	3 544	3 178	90	3 146	89
<i>Total</i>	87 158	46 580	53	44 210	51
<b>Dairy cattle farming</b>					
Less than \$50,000	*385	*123	*32	*107	*28
\$50,000–\$149,999	^ 1 639	^ 782	^ 48	^ 674	^ 41
\$150,000–\$249,999	2 158	^ 1 039	^ 48	^ 928	^ 43
\$250,000–\$499,999	3 832	2 571	67	2 384	62
\$500,000–\$999,999	1 501	1 173	78	1 098	73
\$1m or more	^ 367	^ 320	87	^ 309	84
<i>Total</i>	9 881	6 008	61	5 500	56
<b>Poultry farming</b>					
Less than \$50,000	*151	*29	*19	**68	*45
\$50,000–\$149,999	^ 108	^ 49	^ 46	^ 44	^ 41
\$150,000–\$249,999	^ 79	^ 38	^ 49	^ 38	^ 49
\$250,000–\$499,999	200	^ 126	63	^ 110	55
\$500,000–\$999,999	276	165	60	157	57
\$1m or more	276	221	80	206	75
<i>Total</i>	1 089	628	58	624	57
<b>Other livestock farming</b>					
Less than \$50,000	^ 1 785	^ 868	^ 49	^ 862	^ 48
\$50,000–\$149,999	^ 755	^ 416	^ 55	^ 413	^ 55
\$150,000–\$249,999	^ 260	^ 165	*64	^ 163	*63
\$250,000–\$499,999	^ 257	^ 203	79	^ 187	73
\$500,000–\$999,999	^ 149	^ 127	85	^ 115	77
\$1m or more	190	174	91	168	88
<i>Total</i>	3 396	1 953	58	1 907	56
<b>Other crop growing</b>					
Less than \$50,000	^ 1 011	^ 446	^ 44	^ 380	^ 38
\$50,000–\$149,999	2 082	^ 1 167	56	^ 1 092	53
\$150,000–\$249,999	1 378	^ 850	62	^ 807	59
\$250,000–\$499,999	1 248	845	68	805	65
\$500,000–\$999,999	^ 718	^ 590	82	^ 571	80
\$1m or more	^ 468	^ 389	83	^ 396	85
<i>Total</i>	6 905	4 287	62	4 051	59

^ 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  
 (a) Percentages are of all farms.



**4.2**

FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS(a),

By broad industry and EVAO—2004–05 *continued*

	<i>All farms</i>	<i>Farms using a computer</i>		<i>Farms using the Internet</i>	
	no.	no.	%	no.	%
<b>Total industry</b>					
Less than \$50,000	38 260	14 493	38	13 713	36
\$50,000–\$149,999	33 659	16 929	50	15 816	47
\$150,000–\$249,999	18 400	10 941	60	10 418	57
\$250,000–\$499,999	21 382	15 358	72	14 669	69
\$500,000–\$999,999	11 742	9 471	81	9 174	78
\$1m or more	6 491	5 636	87	5 572	86
<i>Total</i>	129 934	72 828	56	69 362	53

(a) Percentages are of all farms.

## EXPLANATORY NOTES .....

- INTRODUCTION**
- 1** This publication contains final estimates for the computer and Internet use indicators collected in the 2004–05 Agricultural Survey. Some comparable data from the 2003–04 Agricultural Survey have also been included.
- SCOPE AND COVERAGE**
- 2** The estimates are based on information obtained from the Agricultural Survey for the year ended 30 June 2005. The scope of the 2004–05 Agricultural Survey was farms with an estimated value of agricultural operations (EVAO) of \$5,000 or more. The sample for the 2004–05 Agricultural Survey included the same 30,500 units selected for the 2003–04 survey, which represents 23% of all farms.
- GEOGRAPHICAL, INDUSTRY AND SIZE CLASSIFICATIONS**
- 3** The data contained in this publication have, where appropriate, been classified on a geographical, industry and farm size basis by classifying farms:
- to Statistical Divisions (SD) within states and territories as set out in the *Australian Standard Geographical Classification (ASGC)* (cat. no. 1216.0);
  - to industry according to the methodology described in the *Australian and New Zealand Standard Industry Classification (ANZSIC)* (cat. no. 1292.0); and
  - to EVAO ranges according to the estimated value of agricultural operations (or activity) undertaken by a farm. These are recalculated each year, so farms may move between EVAO size ranges.
- SAMPLING AND NON-SAMPLING ERRORS**
- 4** When interpreting the results of a survey it is important to take into account factors that may affect the reliability of the estimates. Estimates in this publication are subject to both sampling and non-sampling errors.
- SAMPLING ERROR**
- 5** The estimates in this publication are based on information obtained from a sample drawn from the total farm population in scope of the collection. Because the entire population is not surveyed, the published estimates are subject to sampling variability and may differ from the figures that would have been produced if all farms had been included in the Agricultural Survey. The most common way of quantifying sampling error is to calculate the standard error (SE) for the published estimate or statistic. There are about two chances in three (67%) that the survey estimate is within one SE of the 'true' value of the estimate, and about nineteen chances in twenty (95%) that it is within two SEs. The 'true' value in this case is the result that would have been obtained if all farms were included in the survey.
- 6** In this publication, 'sampling' variability is measured by the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate. It is used to compare the accuracy between different estimates. Estimates with higher RSEs are considered less reliable than those with lower RSEs.
- 7** Most estimates in this publication have RSEs of less than 5%. Estimates that have an estimated relative standard error between 10% and 25% are annotated with the symbol '^'. These estimates should be used with caution as they are subject to sampling variability too high for some purposes. Estimates with an RSE between 25% and 50% are annotated with a symbol '\*', indicating that the estimate should be used with caution as it is subject to sampling variability too high for most practical purposes. Estimates with an RSE greater than 50% are annotated with a symbol '\*\*', indicating that the sampling variability causes an estimate to be considered too unreliable for general use.

SAMPLING ERROR *continued*

## RELATIVE STANDARD ERRORS FOR SELECTED INDICATORS—2004–05

	<i>Farms using a computer</i>	<i>Farms using the internet</i>
	%	%
<b>State</b>		
New South Wales	2	2
Victoria	2	3
Queensland	2	2
South Australia	2	2
Western Australia	2	2
Tasmania	3	4
Northern Territory	—	—
Australian Capital Territory	—	—
Australia	1	1
<b>Industry</b>		
Horticulture & fruit growing	2	2
Grain, sheep and beef cattle farming	1	1
Dairy cattle farming	4	4
Poultry farming	4	7
Other livestock	7	8
Other crop growing	4	4
<b>Farm size</b>		
Less than \$50,000	4	4
\$50,000–\$149,999	3	3
\$150,000–\$249,999	3	3
\$250,000–\$499,999	2	2
\$500,000–\$999,999	2	2
\$1 million or more	2	2

— nil or rounded to zero (including null cells)

**8** Note that the RSEs shown in this table may be considerably lower than the RSEs which result when these indicators are cross classified (e.g. state by industry, industry by farm size, etc.) in tables of this publication.

**9** Proportions formed from the ratio of two estimates are also subject to sampling error. The size of the error depends on the accuracy of both the numerator and the denominator. As a result, the RSE of the ratio may differ from the RSEs of the numerator and denominator.

## NON-SAMPLING ERRORS

**10** Non-sampling errors may arise as a result of errors in the reporting, recording or processing of the data and can occur even if there is a complete enumeration of the population. These errors can be introduced through inadequacies in the questionnaire, treatment of non-response, inaccurate reporting by respondents, errors in the application of survey procedures, incorrect recording of answers and errors in data capture and processing.

**11** The extent to which non-sampling error affects the results of the survey is difficult to measure. Every effort is made to reduce non-sampling error by careful design and testing of the questionnaire, efficient operating procedures and systems, and the use of appropriate methodology.

**12** In the 2004–05 Agricultural Survey, 5,597 (4%) farms reported using the Internet during 2004–05 but were unable to specify the type of connection at 30 June 2005. There has been no attempt to impute connection type for these farms in tables showing detailed breakup.

ACKNOWLEDGEMENT

**13** ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Without their continued, and much appreciated, support 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

**14** Other recent ABS publications relating to the use and production of information technology and telecommunication goods and services in Australia include:  
*Business Use of Information Technology, Australia, 2004–05* (cat. no. 8129.0)  
*Government Technology, Australia, 2002–03* (cat. no. 8119.0)  
*Household Use of Information Technology, Australia, 2004 and 2005* (cat. no. 8146.0)  
*Information and Communication Technology, Australia, 2002–03* (cat. no. 8126.0)  
*Innovation in Australian Business, 2003* (cat. no. 8158.0)  
*Internet Activity, Australia, March quarter 2005* (cat. no. 8153.0)  
*Use of Information Technology on Farms, Australia, 2003–04* (cat. no. 8150.0)

ABS DATA AVAILABLE ON REQUEST

**15** In addition to the statistics included in this and related publications, the ABS may have other relevant data available on request. Inquiries should be made to Tim Landrigan, Perth, on (08) 9360 5104 or the National Information Referral Service on 1300 135 070.



## GLOSSARY

<b>Broadband</b>	Defined by the ABS as an 'always on' Internet connection with an access speed equal to or greater than 256kbps.
<b>Cable</b>	Describes those technologies including coaxial cable, fibre optic cable and hybrid fibre coaxial cable which are capable of transmitting data at speeds of up to 2Gbps.
<b>Dial-up (analog)</b>	Connection to the Internet via modem and dial-up software utilising the public switched telecommunications network.
<b>DSL (Digital Subscriber Line)</b>	More properly referred to as xDSL as this covers several digital technologies (e.g. Asymmetric DSL or ADSL and Symmetric DSL or SDSL) for fast two-way data connections over the public switched telecommunications network.
<b>Fixed Wireless Internet access</b>	Point to point microwave link, generally building to building or tower to building which allows subscribers within the receiving building to access the Internet. Sender and receiver must be within line of sight and no more than 22 kilometres apart.
<b>ISDN (Integrated Services Digital Network)</b>	A digital access technique for both voice and data. Digital alternative to an analog public switched telephone service and carries data or voltages consisting of discrete steps or levels, as opposed to continuously variable analog data. ISDN enables digital transmission over the public switched telecommunications network.
<b>Mobile Wireless Internet access</b>	Mobile Internet access via 'hotspots' using a microwave connection often referred to as WiFi. Most commonly utilised by laptop users although it is also becoming increasingly popular within homes and businesses with multiple PCs.
<b>Satellite/communications satellite</b>	A satellite stationed in geosynchronous orbit that acts as a microwave relay station, receiving signals sent from a ground based station, amplifying them, and retransmitting them on a different frequency to another ground-based station. Satellites can be used for high-speed transmission of computer data.



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