

# **USE OF INFORMATION TECHNOLOGY ON FARMS**

**AUSTRALIA**

EMBARGO: 11.30AM (CANBERRA TIME) MON 28 NOV 2005

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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 Nicholas Deverson on Perth (08) 9360 5311.

# 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 2003–04 Agricultural Survey conducted by the Australian Bureau of Statistics (ABS). Information obtained was in respect of the year ended 30 June 2004. Comparative data from the 2002–03 Agricultural Survey have also been included.

**ABOUT THE SURVEY** The statistics in this publication relate to farms in scope of the 2003–04 Agricultural Survey, that is, farms with an estimated value of agricultural operations (EVAO) of \$5,000 or more. The 2003–04 survey consisted of a sample of approximately 28,000 farms (21% of all farms) operating in Australia at the end of June 2004.

**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 Nicholas Deverson, Innovation and Technology Branch, Australian Bureau of Statistics, GPO Box K881, Perth WA 6842, or phone Perth (08) 9360 5323.



- 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

Dennis Trewin  
Australian Statistician



# CHAPTER 1

## MAIN FINDINGS

### AUSTRALIA

In 2003–04, 55% (72,342) of the 130,526 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 2002–03. During 2003–04 an estimated 47% (61,082) of farms in Australia used the Internet as part of their business operations, also increasing by 1 percentage point from 2002–03.

### REGIONAL DATA

In 2003–04 Western Australia recorded the highest proportion of farms using a computer for business operations (68%) and the highest proportion using the Internet for business operations (59%). Victoria recorded both the lowest proportion of farms using a computer (51%) and the lowest proportion of farms using the Internet (41%). These rankings were a repeat of the situation in 2002–03. Tasmanian farms recorded the largest increase in the use of computers (3 percentage points) and the Internet (4 percentage points) in 2003–04.

Across Statistical Divisions of Australia, the proportion of farms using a computer ranged from 81% in Pilbara (Western Australia) to 40% in Mid-North Coast (New South Wales). The proportions of farms using the Internet ranged from 77% in North West (Queensland) to 33% in Ovens-Murray (Victoria).

### FARM INDUSTRY

Poultry farming recorded the highest proportion of farms using a computer (64%) in 2003–04. Grain, sheep and beef cattle farming recorded the lowest proportion (54%). The highest proportion of Internet use was recorded in the agricultural industries of Horticulture and fruit growing and Other livestock farming (52%), with the lowest use recorded in Grain, sheep and beef cattle farming and Dairy cattle farming (45%).

### FARM SIZE

There was a strong positive relationship between farm size, as measured by the estimated value of agricultural operations (EVAO), and the use of a computer and the Internet in 2003–04. The proportion of larger farms using a computer and the Internet for business purposes was significantly higher than for smaller farms.

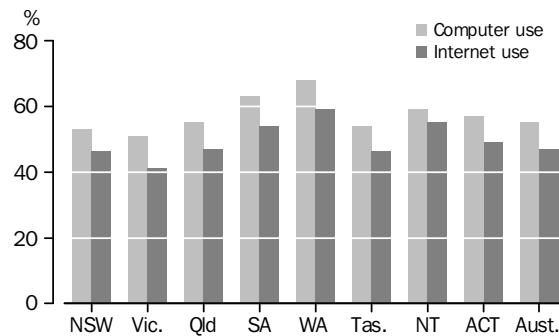
## CHAPTER 2

### FARM USE OF COMPUTERS AND THE INTERNET, SUMMARY

#### USE OF COMPUTERS AND THE INTERNET

During 2003–04, 55% of Australia's farms used a computer and 47% used the Internet as part of their business operations. The proportion of farms using a computer varied across the states and territories, from 68% in Western Australia to 51% in Victoria. This was mirrored in Internet use, with Western Australia the highest at 59% and Victoria the lowest at 41%. Of those Australian farms that used a computer as part of their business operations during 2003–04, 84% also used the Internet.

COMPUTER AND INTERNET USE ON FARMS, By state and territory: 2003–04



The percentage of Australian farms using a computer as part of their business operations increased marginally from 54% in 2002–03 to 55% in 2003–04. Tasmania (up 3 percentage points) recorded the largest increase in computer use over the period, followed by Victoria and the Northern Territory (both up 2 percentage points).

Reflecting the broader pattern of computer use, the proportion of Australian farms using the Internet for their business operations rose from 46% in 2002–03 to 47% in 2003–04. As it did with computer use, Tasmania (up 4 percentage points) recorded the largest increase in Internet use over the period.

#### COMPUTER AND INTERNET ACTIVITIES UNDERTAKEN AS PART OF BUSINESS OPERATIONS

In 2003–04 almost half of all Australian farms (48%) used a computer to manage their finances. The proportion of farms managing their finances on a computer ranged from 60% in Western Australia to 43% in Tasmania and the Australian Capital Territory. Record keeping was another major computer activity, with almost one third (32%) of all farms in Australia keeping their records on a computer. This proportion varied across the states and territories, from 41% in South Australia and Western Australia to 29% in Victoria.

COMPUTER AND INTERNET  
ACTIVITIES UNDERTAKEN  
AS PART OF BUSINESS  
OPERATIONS *continued*

The more common Internet activities undertaken by Australian farms in 2003–04 were email (39%), obtaining weather information (35%) and checking the availability or cost of goods or services (29%). Western Australia recorded the highest proportion of farms using the Internet for each of these activities – email (52%), obtaining weather information (50%) and checking the availability of goods or services (35%). Victoria recorded the lowest proportion for each Internet activity – 33%, 29% and 24% respectively.

**2.1** FARM USE OF COMPUTERS FOR BUSINESS OPERATIONS(a), By state and territory

	2002-03			2003-04		
	<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	41 093	21 207	52	40 827	21 751	53
Victoria	33 212	16 375	49	32 463	16 492	51
Queensland	27 688	14 853	54	26 785	14 737	55
South Australia	14 262	8 930	63	14 238	8 964	63
Western Australia	12 270	8 271	67	11 877	8 035	68
Tasmania	3 969	2 020	51	3 866	2 087	54
Northern Territory	397	226	57	382	227	59
Australian Capital Territory	91	54	59	88	50	57
<b>Australia</b>	<b>132 983</b>	<b>71 936</b>	<b>54</b>	<b>130 526</b>	<b>72 342</b>	<b>55</b>

(a) Percentages are of all farms.

**2.2** FARM USE OF THE INTERNET FOR BUSINESS OPERATIONS(a), By state and territory

	2002-03			2003-04		
	<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	41 093	17 950	44	40 827	18 627	46
Victoria	33 212	13 162	40	32 463	13 320	41
Queensland	27 688	12 545	45	26 785	12 478	47
South Australia	14 262	7 612	53	14 238	7 685	54
Western Australia	12 270	7 260	59	11 877	6 950	59
Tasmania	3 969	1 679	42	3 866	1 771	46
Northern Territory	397	206	52	382	209	55
Australian Capital Territory	91	46	51	88	43	49
<b>Australia</b>	<b>132 983</b>	<b>60 459</b>	<b>46</b>	<b>130 526</b>	<b>61 082</b>	<b>47</b>

(a) Percentages are of all farms.

**2.3****COMPUTER AND INTERNET ACTIVITIES FOR FARM BUSINESS OPERATIONS(a), By state and territory—2003–04**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	%	%	%	%	%	%	%	%	%
<b>Internet activity</b>									
Obtained weather information	35	29	35	42	50	30	42	28	35
Obtained market information	26	18	25	31	35	20	30	23	25
Availability or cost of goods or services	28	24	29	33	35	28	34	33	29
Purchased or ordered goods or services	14	11	13	16	19	14	20	19	14
Accessed government websites	21	16	22	25	27	18	31	32	21
Paid bills via the Internet	23	20	23	28	35	22	28	28	24
Email	38	33	40	47	52	38	50	44	39
<b>Computer only activity</b>									
Managed farm finances	45	44	46	57	60	43	46	43	48
Farm record keeping	31	29	30	41	41	35	38	33	32
<b>Other computer or Internet activity</b>									
Other	4	^3	^4	^4	^5	^4	8	2	4

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

(a) Percentages are of all farms.

## USE OF COMPUTERS

At the Statistical Division level, the proportion of farms using a computer for business operations in 2003–04 varied from 81% in the Pilbara region of Western Australia to 40% in the Mid-North Coast of New South Wales. Within each state and territory, the proportions ranged from:

- 61% (Far West, North Western) to 40% (Mid-North Coast) in New South Wales;
- 56% (Melbourne, Wimmera) to 45% (Central Highlands) in Victoria;
- 80% (North West) to 45% (Moreton) in Queensland;
- 74% (Yorke and Lower North) to 50% (Adelaide) in South Australia;
- 81% (Pilbara) to 58% (Perth) in Western Australia;
- 58% (Southern) to 47% (Greater Hobart) in Tasmania;
- 63% (Northern Territory – Balance) to 51% (Darwin) in the Northern Territory; and
- 75% (Australian Capital Territory – Balance) to 46% (Canberra) in the Australian Capital Territory.

## USE OF THE INTERNET

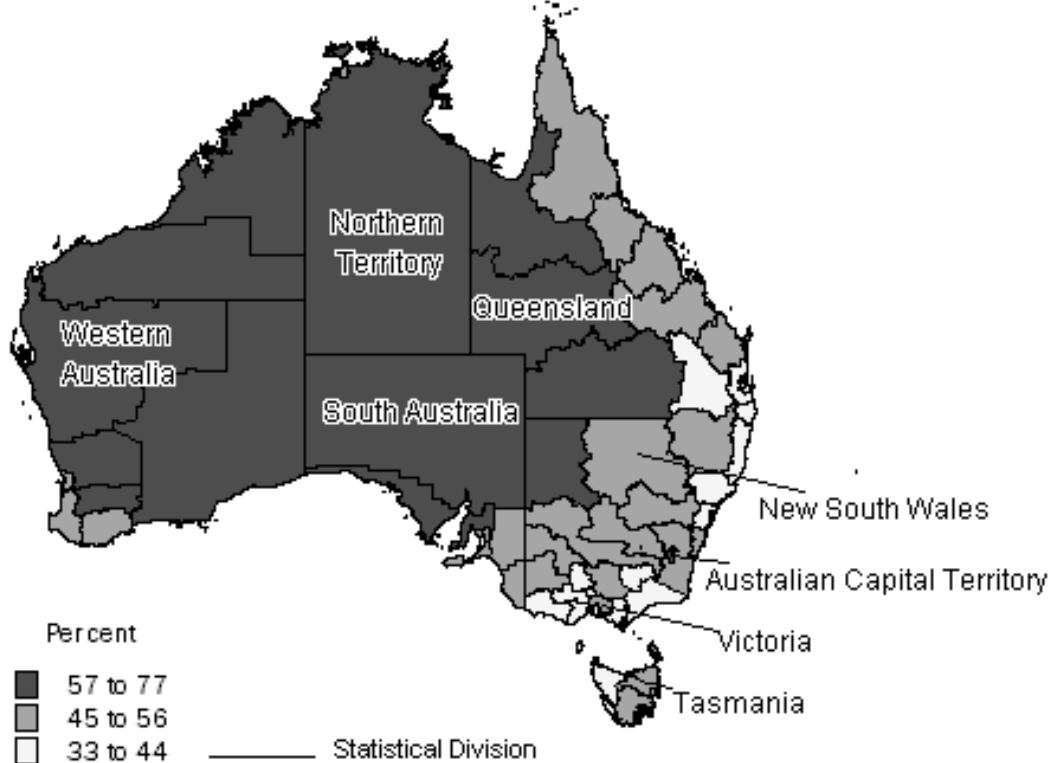
Generally, the more remote areas of Australia recorded higher proportions of farms using the Internet (as shown on the map below). Farms situated closer to Australia's capital cities tended to have lower Internet use.

Among Statistical Divisions, the proportion of farms reporting business use of the Internet in 2003–04 varied from 77% in the North West of Queensland to 33% in the Ovens-Murray region of Victoria. Within each state and territory, the proportions ranged from:

- 59% (Far West) to 35% (Mid-North Coast, Richmond-Tweed) in New South Wales;
- 48% (Wimmera) to 33% (Ovens-Murray) in Victoria;
- 77% (North West) to 36% (Moreton) in Queensland;
- 64% (Yorke and Lower North) to 42% (Adelaide) in South Australia;
- 72% (Pilbara) to 48% (Perth) in Western Australia;
- 52% (Southern) to 44% (Mersey-Lyell) in Tasmania;
- 59% (Northern Territory – Balance) to 45% (Darwin) in the Northern Territory; and
- 66% (Australian Capital Territory – Balance) to 39% (Canberra) in the Australian Capital Territory.



PROPORTION OF FARMS USING THE INTERNET, By Statistical Division—2003–04



REFERENCE MAP

For identification of individual Statistical Divisions, please see the Reference map on page 25 of this publication.

### 3.1 FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS(a), By Statistical Division—2003–04

	All farms	Farms using a computer		Farms using the Internet	
	no.	no.	%	no.	%
<b>New South Wales</b>					
Sydney	1 800	890	49	724	40
Hunter	2 961	1 397	47	1 199	41
Illawarra	942	^ 538	^ 57	^ 421	^ 45
Richmond-Tweed	2 981	1 317	44	1 052	35
Mid-North Coast	2 911	^ 1 165	^ 40	^ 1 016	^ 35
Northern	6 081	3 218	53	2 830	47
North Western	4 332	2 632	61	2 198	51
Central West	5 416	3 076	57	2 724	50
South Eastern	4 423	2 565	58	2 067	47
Murrumbidgee	4 672	2 416	52	2 119	45
Murray	3 996	2 347	59	2 094	52
Far West	311	^ 191	^ 61	^ 183	^ 59
<i>Total</i>	40 827	21 751	53	18 627	46
<b>Victoria</b>					
Melbourne	2 494	1 389	56	1 118	45
Barwon	1 753	802	46	656	37
Western District	4 271	2 158	51	1 603	38
Central Highlands	1 945	868	45	719	37
Wimmera	2 715	1 512	56	1 298	48
Mallee	3 941	1 982	50	1 825	46
Loddon	2 018	919	46	786	39
Goulburn	5 638	3 100	55	2 528	45
Ovens-Murray	2 140	994	46	711	^ 33
East Gippsland	2 317	1 155	50	813	^ 35
Gippsland	3 232	^ 1 614	^ 50	^ 1 263	^ 39
<i>Total</i>	32 463	16 492	51	13 320	41
<b>Queensland</b>					
Brisbane	861	438	51	367	43
Moreton	3 295	1 494	45	1 198	36
Wide Bay-Burnett	4 873	2 647	54	2 198	45
Darling Downs	5 916	3 198	54	2 613	44
South West	1 582	1 058	67	975	62
Fitzroy	2 693	^ 1 444	54	^ 1 258	^ 47
Central West	647	^ 400	^ 62	^ 393	^ 61
Mackay	1 961	1 079	55	^ 881	45
Northern	1 752	1 062	61	947	54
Far North	2 745	1 550	57	1 296	47
North West	460	366	80	353	77
<i>Total</i>	26 785	14 737	55	12 478	47
<b>South Australia</b>					
Adelaide	908	454	50	379	42
Outer Adelaide	2 707	1 609	60	1 363	50
Yorke and Lower North	2 019	1 500	74	1 293	64
Murray Lands	3 349	1 995	60	1 775	53
South East	2 567	1 590	62	1 333	52
Eyre	1 489	1 020	69	855	57
Northern	1 200	795	66	687	57
<i>Total</i>	14 238	8 964	63	7 685	54

^ 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—2003–04 *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	1 047	602	58	502	48
South West	2 406	1 462	61	1 167	49
Lower Great Southern	1 975	1 264	64	1 107	56
Upper Great Southern	1 590	1 184	75	1 018	64
Midlands	2 870	2 116	74	1 892	66
South Eastern	611	456	75	417	68
Central	1 182	812	69	719	61
Pilbara	57	^ 46	81	^ 41	^ 72
Kimberley	139	^ 94	67	^ 89	64
<i>Total</i>	<i>11 877</i>	<i>8 035</i>	<i>68</i>	<i>6 950</i>	<i>59</i>
<b>Tasmania</b>					
Greater Hobart	^ 231	^ 108	^ 47	^ 105	^ 46
Southern	763	444	58	396	52
Northern	1 422	778	55	636	45
Mersey-Lyell	1 452	757	52	634	44
<i>Total</i>	<i>3 866</i>	<i>2 087</i>	<i>54</i>	<i>1 771</i>	<i>46</i>
<b>Northern Territory</b>					
Darwin	119	61	51	54	45
Northern Territory - Balance	263	166	63	155	59
<i>Total</i>	<i>382</i>	<i>227</i>	<i>59</i>	<i>209</i>	<i>55</i>
<b>Australian Capital Territory</b>					
Canberra	56	26	46	22	39
Australian Capital Territory - Balance	32	24	75	21	66
<i>Total</i>	<i>88</i>	<i>50</i>	<i>57</i>	<i>43</i>	<i>49</i>
<b>Australia</b>	<b>130 526</b>	<b>72 342</b>	<b>55</b>	<b>61 082</b>	<b>47</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.

INDUSTRY COMPARISONS

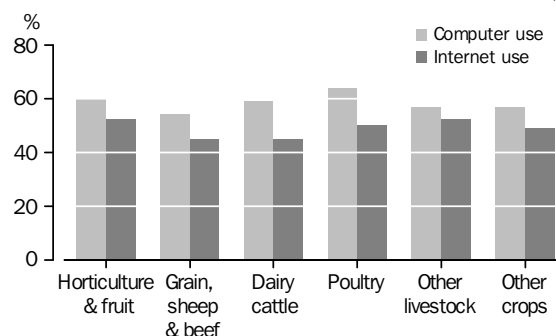
Farm use of computers and the Internet showed relatively limited variation across broad industry groups. There was, however, significantly greater variation at the more detailed industry level and between states and territories. The Northern Territory and the Australian Capital Territory were excluded from several comparisons due to the small number of farms in some of the broad industry groups.

COMPUTER USE

Across broad industries, the proportion of farms using a computer varied from 64% in Poultry farming to 54% in Grain, sheep and beef cattle farming in 2003–04. There was much greater variation at the detailed industry level, with the very small Kiwi fruit growing industry recording the highest proportion of farms using a computer (91%) and Beef cattle farming recording the lowest (44%). There was also considerable variation among industries within the following broad industry groups, with proportions ranging from:

- 91% (Kiwi fruit growing) to 52% (Stone fruit growing) in Horticulture and fruit growing;
- 84% (Cotton growing) to 47% (Crop and plant growing n.e.c.) in Other crop growing; and
- 70% (Grain growing) to 44% (Beef cattle farming) in Grain, sheep and beef cattle farming.

COMPUTER AND INTERNET USE ON FARMS, By industry: 2003-04



Despite the relative similarity at the Australian level, the pattern of computer use in broad industry groups varied considerably across states and territories. In 2003–04 the greatest variation in the proportion of farms using a computer occurred in Other livestock farming, with a difference of 48 percentage points between Western Australia (80%) and Tasmania (32%). The smallest variation was in Dairy cattle farming, for which there was a difference of 19 percentage points between Western Australia (70%) and New South Wales (51%).

## INTERNET USE

Farm use of the Internet varied less across broad industry groups than it did for computer use. In 2003–04 the agricultural industries of Horticulture and fruit growing and Other livestock farming showed the highest proportions of farms using the Internet (52%) and Grain, sheep and beef cattle farming and Dairy cattle farming recorded the lowest proportions (45%). Similar to computer use at the detailed industry level, Kiwi fruit growing (94%) recorded the highest use of the Internet and Beef cattle farming (35%) recorded the lowest.

Once again the broader pattern of computer use was reflected in the use of the Internet by broad industry groups across states and territories. The greatest variation was in Other livestock farming, with a difference of 45 percentage points between Western Australia (69%) and Tasmania (24%). The smallest variation was in Dairy cattle farming, for which the range was 21 percentage points between Western Australia (61%) and New South Wales (40%).

## 4.1 FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS(a), By industry—2003–04

	<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>					
Plant nurseries	1 648	1 242	75	1 044	63
Cut flower and flower seed growing	685	406	59	348	51
Vegetable growing	4 297	2 329	54	1 910	44
Grape growing	6 535	3 868	59	3 590	55
Apple and pear growing	971	^ 641	66	^ 565	58
Stone fruit growing	1 244	645	52	575	46
Kiwi fruit growing	*33	*30	91	*31	94
Fruit growing n.e.c.	4 875	2 917	60	2 556	52
<i>Total</i>	20 288	12 077	60	10 619	52
<b>Grain, sheep and beef cattle farming</b>					
Grain growing	14 614	10 255	70	9 173	63
Grain-sheep and grain-beef cattle farming	16 308	10 561	65	9 148	56
Sheep-beef cattle farming	8 542	4 387	51	3 670	43
Sheep farming	12 018	5 931	49	5 039	42
Beef cattle farming	35 494	15 525	44	12 337	35
<i>Total</i>	86 975	46 658	54	39 367	45
<b>Dairy cattle farming</b>					
<i>Total</i>	10 359	6 096	59	4 620	45
<b>Poultry farming</b>					
Poultry farming (meat)	781	^ 530	68	405	52
Poultry farming (eggs)	^ 474	^ 275	^ 58	^ 224	^ 47
<i>Total</i>	1 256	805	64	629	50
<b>Other livestock farming</b>					
Pig farming	870	568	65	456	52
Horse farming	1 764	^ 988	56	^ 936	53
Other	^ 808	^ 415	^ 52	^ 399	^ 50
<i>Total</i>	3 442	1 970	57	1 791	52
<b>Other crop growing</b>					
Sugar cane growing	4 560	2 590	57	2 219	49
Cotton growing	566	473	84	457	81
Crop and plant growing n.e.c.	1 710	^ 803	47	^ 651	38
<i>Total</i>	6 835	3 865	57	3 327	49
<b>Other(b)</b>					
<i>Total</i>	1 372	^ 870	63	^ 730	53
<b>Total</b>	<b>130 526</b>	<b>72 342</b>	<b>55</b>	<b>61 082</b>	<b>47</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

(a) Percentages are of all farms.

(b) Relates to establishments with an EVAO of \$5,000 or more but which are classified to a non-Agriculture ANZSIC Class.

## 4.2

FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS(a),  
By broad industry and state and territory—2003–04

	<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	5 180	2 843	55	2 506	48
Victoria	4 558	2 676	59	2 362	52
Queensland	3 970	2 496	63	2 119	53
South Australia	3 698	2 214	60	1 997	54
Western Australia	1 840	1 177	64	1 047	57
Tasmania	889	587	66	513	58
Northern Territory	146	78	53	69	47
Australian Capital Territory	8	7	88	7	88
<i>Australia</i>	20 288	12 077	60	10 619	52
<b>Grain, sheep and beef cattle farming</b>					
New South Wales	31 130	16 157	52	13 752	44
Victoria	19 518	8 956	46	7 369	38
Queensland	15 462	8 129	53	6 854	44
South Australia	9 356	6 053	65	5 065	54
Western Australia	9 086	6 206	68	5 350	59
Tasmania	2 141	983	46	817	38
Northern Territory	207	134	65	126	61
Australian Capital Territory	75	41	55	34	45
<i>Australia</i>	86 975	46 658	54	39 367	45
<b>Dairy cattle farming</b>					
New South Wales	1 439	727	51	^ 577	^ 40
Victoria	6 412	3 847	60	2 772	43
Queensland	1 120	^ 582	52	^ 456	^ 41
South Australia	503	317	63	284	56
Western Australia	342	^ 241	70	^ 210	61
Tasmania	542	381	70	322	59
Northern Territory	np	np	np	np	np
Australian Capital Territory	np	np	np	np	np
<i>Australia</i>	10 359	6 096	59	4 620	45
<b>Poultry farming</b>					
New South Wales	^ 484	^ 289	60	^ 245	^ 51
Victoria	^ 336	^ 222	^ 66	^ 147	^ 44
Queensland	185	119	64	102	55
South Australia	96	^ 70	73	^ 54	56
Western Australia	117	75	64	59	50
Tasmania	^ 33	^ 26	80	^ 22	^ 66
Northern Territory	np	np	np	np	np
Australian Capital Territory	np	np	np	np	np
<i>Australia</i>	1 256	805	64	629	50
<b>Other livestock farming</b>					
New South Wales	1 075	^ 688	64	^ 642	60
Victoria	^ 826	^ 365	^ 44	^ 351	^ 43
Queensland	^ 955	^ 542	^ 57	^ 472	^ 50
South Australia	^ 259	^ 171	66	^ 152	^ 59
Western Australia	^ 213	^ 170	80	^ 146	69
Tasmania	^ 104	^ 33	*32	^ 25	*24
Northern Territory	np	np	np	np	np
Australian Capital Territory	np	np	np	np	np
<i>Australia</i>	3 442	1 970	57	1 791	52

^ 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) Percentages are of all farms.

## 4.2 FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS(a), By broad industry and state and territory—2003–04 *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	985	^ 680	69	^ 599	61
Victoria	^ 575	^ 255	^ 44	^ 195	^ 34
Queensland	4 935	2 765	56	2 386	48
South Australia	^ 165	*61	*37	*57	*35
Western Australia	*94	*63	^ 67	*49	*52
Tasmania	^ 73	^ 39	^ 54	^ 38	^ 52
Northern Territory	np	np	np	np	np
Australian Capital Territory	np	np	np	np	np
<i>Australia</i>	6 835	3 865	57	3 327	49

^ 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) Percentages are of all farms.

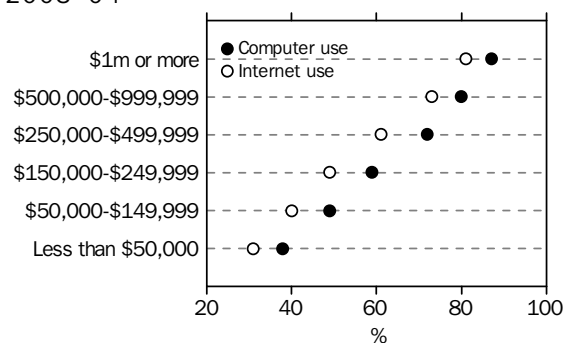


**FARM USE OF COMPUTERS AND THE INTERNET, BY FARM SIZE** .....

FARM SIZE AND USE OF INFORMATION TECHNOLOGY

In 2003–04 there was a strong positive 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 use was greatest among farms with an EVAO of \$1 million or more (87%), and progressively fell for each of the descending income categories, to 38% in the EVAO range of less than \$50,000. Similarly, Internet use was greatest among farms with an EVAO of \$1 million or more (81%) and fell progressively to 31% in the lowest EVAO range.

COMPUTER AND INTERNET USE ON FARMS, By farm size (EVAO): 2003–04



The relationship between the use of information technology and farm size was also evident at the broad industry level. The greatest variation in the proportion of farms using a computer between the highest (\$1 million or more) and lowest (less than \$50,000) EVAO ranges was recorded by Dairy cattle farming, from 98% to 24%. The same industry also recorded the largest variation in the proportion of farms using the Internet, with 81% in the highest EVAO range and 8% in the lowest. Poultry farming recorded the smallest variation in the proportion of farms using a computer across the EVAO ranges, from 80% to 56%. Other livestock farming recorded the smallest variation for Internet use, with 77% in the highest EVAO range and 44% in the lowest.

Across states of Australia, the proportion of farms using information technology was similar for each EVAO range. The proportion of farms using a computer in the highest EVAO range (\$1 million or more) varied from 90% in Victoria and Western Australia to 81% in New South Wales, while in the lowest EVAO range (less than \$50,000) it varied from 44% in Western Australia to 35% in Victoria.

**5.1** FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS (a),  
By broad industry and EVAO—2003–04

	<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	5 670	2 711	48	2 448	43
\$50,000–\$149,999	6 221	3 519	57	3 081	50
\$150,000–\$249,999	2 843	1 711	60	1 469	52
\$250,000–\$499,999	2 563	1 791	70	1 488	58
\$500,000–\$999,999	1 564	1 154	74	1 036	66
\$1m or more	1 428	1 191	83	1 096	77
<i>Total</i>	20 288	12 077	60	10 619	52
<b>Grain, sheep and beef cattle farming</b>					
Less than \$50,000	28 791	10 154	35	7 892	27
\$50,000–\$149,999	22 664	10 694	47	8 529	38
\$150,000–\$249,999	11 373	6 808	60	5 733	50
\$250,000–\$499,999	12 884	9 439	73	8 357	65
\$500,000–\$999,999	7 551	6 269	83	5 761	76
\$1m or more	3 711	3 294	89	3 094	83
<i>Total</i>	86 975	46 658	54	39 367	45
<b>Dairy cattle farming</b>					
Less than \$50,000	^ 410	*97	*24	*34	*8
\$50,000–\$149,999	^ 1 977	^ 785	^ 40	^ 496	^ 25
\$150,000–\$249,999	2 573	^ 1 350	53	^ 1 028	^ 40
\$250,000–\$499,999	3 666	2 508	68	1 940	53
\$500,000–\$999,999	1 436	1 067	74	^ 881	61
\$1m or more	^ 297	^ 290	98	^ 242	81
<i>Total</i>	10 359	6 096	59	4 620	45
<b>Poultry farming</b>					
Less than \$50,000	*250	*141	*56	**88	**35
\$50,000–\$149,999	^ 125	^ 74	^ 60	^ 61	^ 49
\$150,000–\$249,999	^ 96	^ 61	^ 64	^ 51	^ 53
\$250,000–\$499,999	211	^ 121	57	^ 80	^ 38
\$500,000–\$999,999	304	191	63	159	52
\$1m or more	270	216	80	191	71
<i>Total</i>	1 256	805	64	629	50
<b>Other livestock farming</b>					
Less than \$50,000	1 781	^ 835	^ 47	^ 777	^ 44
\$50,000–\$149,999	^ 802	^ 484	^ 60	^ 483	^ 60
\$150,000–\$249,999	^ 209	^ 122	^ 59	^ 91	^ 44
\$250,000–\$499,999	^ 334	^ 264	79	^ 208	62
\$500,000–\$999,999	^ 144	^ 111	77	^ 100	69
\$1m or more	171	154	90	132	77
<i>Total</i>	3 442	1 970	57	1 791	52
<b>Other crop growing</b>					
Less than \$50,000	^ 974	^ 378	^ 39	^ 344	^ 35
\$50,000–\$149,999	2 217	^ 1 038	47	^ 803	^ 36
\$150,000–\$249,999	1 283	^ 682	53	^ 583	^ 46
\$250,000–\$499,999	1 329	^ 907	68	^ 763	57
\$500,000–\$999,999	^ 660	^ 555	84	^ 530	80
\$1m or more	^ 373	^ 305	82	^ 304	82
<i>Total</i>	6 835	3 865	57	3 327	49

^ 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.

**5.1**

FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS(a),  
By broad industry and EVAO—2003–04 *continued*

	<i>All farms</i>	<i>Farms using a computer</i>		<i>Farms using the Internet</i>	
	no.	no.	%	no.	%
<b>Total industry(b)</b>					
Less than \$50,000	38 518	14 607	38	11 813	31
\$50,000–\$149,999	34 344	16 861	49	13 677	40
\$150,000–\$249,999	18 501	10 828	59	9 031	49
\$250,000–\$499,999	21 139	15 144	72	12 933	61
\$500,000–\$999,999	11 728	9 409	80	8 526	73
\$1m or more	6 297	5 494	87	5 102	81
<i>Total</i>	130 526	72 342	55	61 082	47

(a) Percentages are of all farms.

(b) Includes Other industries not separately listed in the table.

## 5.2 FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS(a), By state and territory and EVAO—2003–04

	<i>All farms</i>	<i>Farms using a computer</i>		<i>Farms using the Internet</i>	
	no.	no.	%	no.	%
<b>New South Wales</b>					
Less than \$50,000	14 490	5 348	37	4 446	31
\$50,000–\$149,999	11 329	5 928	52	4 856	43
\$150,000–\$249,999	5 879	3 577	61	3 067	52
\$250,000–\$499,999	5 425	3 910	72	3 458	64
\$500,000–\$999,999	2 626	2 117	81	1 965	75
\$1m or more	1 078	872	81	835	77
<i>Total</i>	40 827	21 751	53	18 627	46
<b>Victoria</b>					
Less than \$50,000	9 159	3 226	35	2 507	27
\$50,000–\$149,999	8 714	3 651	42	2 901	33
\$150,000–\$249,999	4 894	2 573	53	2 093	43
\$250,000–\$499,999	5 984	4 073	68	3 237	54
\$500,000–\$999,999	2 630	1 998	76	1 709	65
\$1m or more	1 082	972	90	874	81
<i>Total</i>	32 463	16 492	51	13 320	41
<b>Queensland</b>					
Less than \$50,000	8 015	3 236	40	2 632	33
\$50,000–\$149,999	7 606	3 625	48	2 941	39
\$150,000–\$249,999	3 749	2 296	61	1 910	51
\$250,000–\$499,999	4 051	2 890	71	2 473	61
\$500,000–\$999,999	1 993	1 518	76	1 431	72
\$1m or more	1 371	1 172	86	1 092	80
<i>Total</i>	26 785	14 737	55	12 478	47
<b>South Australia</b>					
Less than \$50,000	2 893	1 155	40	^ 897	^ 31
\$50,000–\$149,999	3 551	1 958	55	1 613	45
\$150,000–\$249,999	2 226	1 300	58	1 082	49
\$250,000–\$499,999	2 887	2 252	78	2 040	71
\$500,000–\$999,999	1 890	1 593	84	1 425	75
\$1m or more	790	706	89	628	79
<i>Total</i>	14 238	8 964	63	7 685	54
<b>Western Australia</b>					
Less than \$50,000	2 313	1 019	44	^ 844	37
\$50,000–\$149,999	2 229	1 254	56	1 004	45
\$150,000–\$249,999	1 206	747	62	^ 589	49
\$250,000–\$499,999	2 133	1 520	71	1 252	59
\$500,000–\$999,999	2 213	1 886	85	1 738	79
\$1m or more	1 783	1 609	90	1 524	86
<i>Total</i>	11 877	8 035	68	6 950	59
<b>Tasmania</b>					
Less than \$50,000	1 515	^ 559	37	^ 428	^ 28
\$50,000–\$149,999	818	^ 399	49	^ 322	39
\$150,000–\$249,999	507	315	62	^ 274	54
\$250,000–\$499,999	600	459	77	436	73
\$500,000–\$999,999	307	252	82	218	71
\$1m or more	120	103	86	92	77
<i>Total</i>	3 866	2 087	54	1 771	46

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

(a) Percentages are of all farms.

**5.2****FARM USE OF COMPUTERS AND THE INTERNET FOR BUSINESS OPERATIONS(a),  
By state and territory and EVAO—2003–04 *continued***

	<i>All farms</i>	<i>Farms using a computer</i>		<i>Farms using the Internet</i>	
	no.	no.	%	no.	%
<b>Northern Territory</b>					
Less than \$50,000	87	40	46	36	41
\$50,000–\$149,999	70	32	46	28	40
\$150,000–\$249,999	np	np	np	np	np
\$250,000–\$499,999	np	np	np	np	np
\$500,000–\$999,999	np	np	np	np	np
\$1m or more	np	np	np	np	np
<i>Total</i>	382	227	59	209	55
<b>Australian Capital Territory</b>					
Less than \$50,000	47	25	53	23	49
\$50,000–\$149,999	27	14	52	11	41
\$150,000–\$249,999	np	np	np	np	np
\$250,000–\$499,999	np	np	np	np	np
\$500,000–\$999,999	np	np	np	np	np
\$1m or more	np	np	np	np	np
<i>Total</i>	88	50	57	43	49
<b>Australia</b>					
Less than \$50,000	38 518	14 607	38	11 813	31
\$50,000–\$149,999	34 344	16 861	49	13 677	40
\$150,000–\$249,999	18 501	10 828	59	9 031	49
\$250,000–\$499,999	21 139	15 144	72	12 933	61
\$500,000–\$999,999	11 728	9 409	80	8 526	73
\$1m or more	6 297	5 494	87	5 102	81
<i>Total</i>	130 526	72 342	55	61 082	47

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

(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 2003–04 Agricultural Survey. Some comparable data from the 2002–03 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 2004. The scope of the 2003–04 Agricultural Survey was farms with an estimated value of agricultural operations (EVAO) of \$5,000 or more. The sample for the 2003–04 Agricultural Survey included the same 28,000 units selected for the 2002–03 survey, plus a further 3,000 units to cover sample loss due to units in the original selection having ceased farming.
- 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.
- SAMPLE ERROR**
- 4** 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.
- 5** 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 those with lower RSEs.
- 6** 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.

SAMPLE ERROR *continued*

## RELATIVE STANDARD ERRORS FOR SELECTED INDICATORS: 2003–04

	Farms using a computer	Farms using the internet
<b>State</b>		
New South Wales	2	2
Victoria	2	3
Queensland	2	3
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	2
Dairy cattle farming	4	5
Poultry farming	9	9
Other livestock	7	8
Other crop growing	5	5
<b>Farm size</b>		
Less than \$50,000	4	4
\$50,000–\$149,999	3	3
\$150,000–\$249,999	3	4
\$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)

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

**8** 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.

## ACKNOWLEDGEMENT

**9** 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

**10** Other recent ABS publications relating to the use and production of information technology and telecommunication goods and services in Australia include:

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*Government Technology, Australia, 2002–03* (cat. no. 8119.0)

*Household Use of Information Technology, Australia, 2002 and 2003* (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, 2002–03* (cat. no. 8150.0)

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**11** 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 Nicholas Deverson, Perth, on (08) 9360 5323 or the National Information Referral Service on 1300 135 070.









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