



Australian Government
Department of Agriculture,
Water and the Environment
ABARES

Disaggregating farm performance statistics by size, 2018–19

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Research by the Australian Bureau of Agricultural and Resource Economics and Sciences

Research Report 20.7

March 2020



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Cataloguing data

This publication (and any material sourced from it) should be attributed as: Boult, C 2020, *Disaggregating farm performance statistics by size, 2018–19*, ABARES research report, Canberra, March. CC BY 4.0. DOI: <https://doi.org/10.25814/5e4b732537b96>

ISBN 978-1-74323-471-6

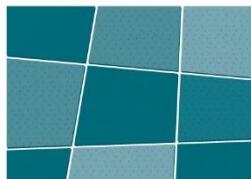
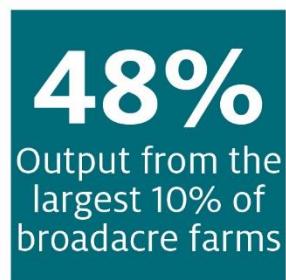
ISSN 1447-8358

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Disaggregating farm performance statistics by size, 2018–19

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Disaggregating farm performance by size

Farm performance varied significantly for farms of different sizes.

Overview

Size is an important determinant of farm business performance. Larger farms tend to be more profitable, invest more, and generate a higher rate of return on capital than smaller farms. Moreover, larger farms have more capacity to reduce their marginal costs through scale, and a greater ability to invest in productivity-enhancing capital additions. These factors have driven a trend in Australian agriculture in recent decades towards fewer, but larger farm businesses. An important consequence of this trend is that industry level farm performance is increasingly driven by the performance of the largest farms.

This article presents farm performance statistics for different farm business sizes based on farm revenue. Each category or ‘decile’ represents 10% of the farm population in each industry or region, ranked from smallest to largest based on farm revenue.

The statistics presented in the tables below include the following variables:

- Share of total output produced
- Total cash receipts
- Total cash costs
- Profit at full equity
- Total capital as at the beginning of the financial year
- Net capital additions
- Rate of return on capital, including capital appreciation
- Farm business equity ratio

The statistics in this article are intended to complement the publication of ABARES farm performance statistics. Farm survey definitions and methods used to produce these statistics are available on the [ABARES website](#). For further analysis and information about the design of these statistics see Boult and Jackson (2019).

This article provides statistics sourced from the following ABARES farm surveys:

- Australian Agricultural and Grazing Industries Survey (AAGIS)
- Australian Dairy Industry Survey (ADIS)
- Survey of Australian Vegetable Growing Farms

Farms in the broadacre, dairy and vegetable industries are separated into size deciles based on farm total cash receipts—a measure of total revenue received by the business in a given financial year. Statistics for the broadacre industry are further split into the sub-industries of wheat and other crops, beef, sheep, mixed cropping-livestock, and sheep-beef. The cropping industry is separated into the Grains Research and Development Corporation Western, Northern and Southern regions (Map 1) and the beef industry into the Meat & Livestock Australia Northern and Southern regions (Map 2). Data are presented in 13 tables according to classification by industry and region.

Farm performance varies significantly from year to year, reflecting volatility in seasonal conditions and commodity prices. Therefore, data are averaged over 2016–17 to 2018–19 to provide a more meaningful measure of farm performance than would be provided by a single year.

Key points for 2016–17 to 2018–19

- The largest 10% of broadacre farms produced 48% of total output, while the smallest 50% of farms produced 11% of total output.
- The average rate of return including capital appreciation by the largest 10% of broadacre farms was 8.3%, while the average for the smallest 10% of farms was –4.2%.
- The beef industry was the most concentrated broadacre industry, with the largest 10% of farms producing over half of total industry output in the 3 years to 2018–19. This is especially pronounced for beef farms in northern Australia, where farms in the top decile are over twice as large, and around 7 times as profitable as their counterparts in southern Australia.
- Farm size differences were largest in the vegetables industry. Those in the largest decile produced around 150 times more output than farms in the smallest decile.
- Output was most equally distributed in the dairy industry. Nonetheless, the largest 10% of farms used more than 5 times the capital to produce more than 13 times the output of the smallest 10% of farms.

Statistical Tables

Broadacre industries

Table 1 Broadacre farms, Australia, 2016–17 to 2018–19

Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	0.7	41,474	53,984	−65,427	1,345,251	3,944	−4.2	94.9
2	1.2	69,414	63,049	−52,180	2,227,478	24,492	−0.9	97.6
3	1.9	111,489	79,776	−38,450	2,773,894	−7,379	0.1	96.1
4	2.8	169,210	132,849	−36,257	2,843,207	3,773	1.8	94.1
5	4.0	238,198	168,327	−19,598	3,341,539	16,271	3.7	94.7
6	5.5	325,459	227,557	−12,227	4,354,915	40,664	4.1	92.9
7	7.5	448,517	307,088	32,695	5,310,450	96,698	3.2	89.7
8	11.1	663,221	442,646	107,018	6,819,593	95,817	5.9	89.4
9	17.7	1,059,733	709,906	257,352	9,865,974	153,512	7.8	86.8
10	47.7	2,852,116	1,922,877	770,777	18,056,829	399,011	8.3	81.3

Note: Per farm averages for each size decile

Source: ABARES Australian Agricultural and Grazing Industries Survey

Table 2 Wheat and other crops farms, Australia 2016–17 to 2018–19

Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	0.6	69,596	66,475	−53,678	1,479,797	116,450	−3.8	93.0
2	1.5	205,312	146,530	−24,316	2,641,397	−20,298	1.9	91.2
3	2.6	339,268	235,634	−15,006	3,689,472	−61,764	6.3	94.5
4	3.7	494,699	338,089	78,623	3,915,284	84,883	7.0	84.8
5	5.3	663,721	457,277	119,140	5,433,815	5,409	7.0	82.0
6	6.9	932,386	663,905	185,459	7,073,254	94,403	5.8	85.5
7	9.9	1,306,507	886,505	290,783	8,716,070	435,084	8.8	82.8
8	13.9	1,832,033	1,248,191	506,475	11,693,148	392,564	8.7	79.3
9	19.6	2,512,948	1,583,443	713,309	12,009,451	450,237	10.9	81.2
10	36.1	4,885,327	3,140,397	1,673,363	20,785,196	393,247	11.8	76.9

Note: Per farm averages for each size decile

Source: ABARES Australian Agricultural and Grazing Industries Survey

Table 3 Beef farms, Australia, 2016–17 to 2018–19

Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	1.1	34,107	48,893	-52,989	1,469,713	2,979	-2.8	93.9
2	1.3	52,152	62,270	-76,672	1,607,628	8,974	-3.4	99.7
3	1.8	67,545	46,543	-36,949	2,336,641	8,622	-0.7	98.8
4	2.3	87,455	69,262	-33,766	2,071,404	4,270	0.0	97.2
5	3.0	111,788	69,808	-32,114	3,568,983	4,001	0.4	98.9
6	4.2	151,912	127,401	-27,845	3,230,666	-14,009	1.3	93.8
7	6.0	226,689	171,667	-45,709	4,223,610	18,723	2.7	94.5
8	8.8	330,465	250,484	-40,649	5,470,164	52,070	2.0	92.8
9	14.5	537,209	370,297	58,939	8,177,284	69,643	3.6	90.8
10	57.1	2,121,126	1,462,713	511,798	20,668,604	388,879	5.4	86.2

Note: Per farm averages for each size decile

Source: ABARES Australian Agricultural and Grazing Industries Survey

Table 4 Sheep farms, Australia, 2016–17 to 2018–19

Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	1.3	44,380	64,168	-86,532	941,377	4,810	-11.2	88.2
2	2.3	90,151	72,684	-58,014	2,662,005	1,020	2.3	96.3
3	3.2	128,231	106,100	-57,634	2,003,969	13,965	-1.1	92.9
4	4.9	176,955	132,146	-11,009	2,533,979	12,479	2.6	90.8
5	6.4	236,121	155,380	19,426	2,691,745	27,215	9.4	94.6
6	6.8	274,326	175,259	10,853	3,318,720	37,724	3.3	94.4
7	9.8	345,695	224,241	13,961	3,863,741	83,225	7.0	93.4
8	11.2	454,704	298,017	38,964	5,715,266	162,444	2.9	91.4
9	17.4	651,962	420,314	84,718	5,690,127	61,216	5.8	92.9
10	36.7	1,392,205	875,683	382,963	12,385,841	104,977	8.7	88.3

Note: Per farm averages for each size decile

Source: ABARES Australian Agricultural and Grazing Industries Survey

Table 5 Mixed cropping–livestock farms, Australia, 2016–17 to 2018–19

Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	1.2	80,241	70,572	-48,763	1,597,070	28,765	-4.4	96.5
2	2.1	180,389	150,566	-55,029	2,501,783	-36,205	0.6	94.3
3	3.8	288,790	178,560	-5,947	3,767,752	45,955	4.3	91.5
4	4.7	376,479	258,099	5,656	4,183,873	93,098	2.8	88.1
5	7.3	487,290	315,319	81,141	5,541,597	47,251	5.0	91.5
6	7.0	644,527	428,408	97,688	4,325,892	277,606	6.6	83.2
7	10.5	792,742	517,185	160,366	7,062,572	69,312	6.9	88.2
8	13.3	1,008,348	669,010	216,221	8,205,207	209,050	7.1	86.4
9	17.4	1,397,180	917,785	388,603	10,176,931	138,141	8.9	85.5
10	32.8	2,556,760	1,797,437	630,895	17,272,730	360,575	9.2	79.8

Note: Per farm averages for each size decile

Source: ABARES Australian Agricultural and Grazing Industries Survey

Table 6 Sheep-beef farms, Australia, 2016–17 to 2018–19

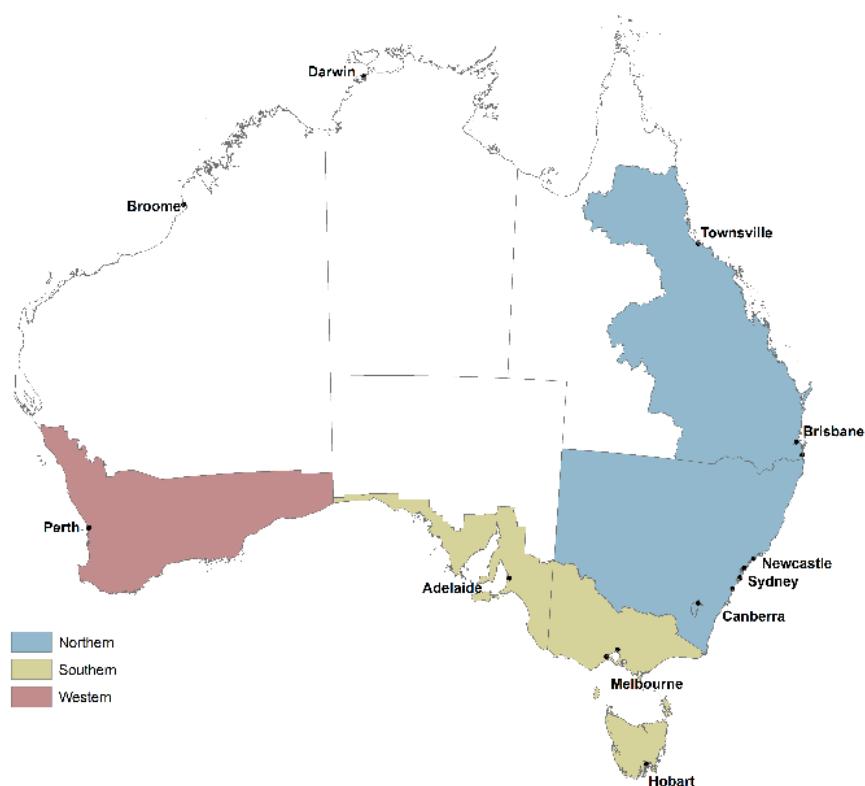
Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	2.1	116,393	92,116	−85,438	2,963,865	−121,094	0.6	99.3
2	4.3	182,929	142,526	−40,715	2,932,353	13,693	1.3	89.7
3	3.4	218,153	173,451	−68,835	3,371,114	18,780	0.7	96.5
4	3.8	248,584	157,573	−47,098	3,080,640	−30,165	2.0	98.0
5	5.1	292,165	226,781	−39,051	3,367,075	16,115	2.0	96.7
6	7.4	391,730	302,933	−35,275	3,863,384	126,861	1.8	91.2
7	8.2	484,368	325,505	67,798	6,541,049	17,033	4.8	91.2
8	12.0	660,919	437,799	60,271	7,208,928	23,228	6.4	90.5
9	16.9	918,519	669,926	169,804	11,646,646	252,698	9.2	88.0
10	36.8	2,131,436	1,687,119	304,607	19,884,019	−8,420	7.9	85.5

Note: Per farm averages for each size decile

Source: ABARES Australian Agricultural and Grazing Industries Survey

Broadacre regions

Map 1 Grains Research and Development Corporation regions, Australia



Source: Grains Research and Development Corporation

Table 7 Wheat and other crops farms, Western region, 2016–17 to 2018–19

Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	1.2	173,674	112,725	–25,343	1,584,709	7,308	0.8	99.6
2	2.5	354,451	232,016	69,507	4,508,313	94,830	3.7	90.3
3	4.1	493,741	301,467	130,585	3,780,123	6,078	5.1	94.5
4	3.4	631,289	408,964	76,949	4,251,844	–124,632	3.3	88.1
5	5.4	770,840	439,656	229,339	5,497,571	48,637	8.3	94.3
6	6.2	949,263	628,998	261,460	6,114,760	193,757	4.7	85.1
7	10.4	1,424,911	937,619	400,116	7,584,474	228,722	7.1	85.4
8	13.2	1,995,838	1,332,145	528,270	10,147,911	281,138	7.4	79.4
9	19.1	2,817,365	1,813,585	908,746	10,172,871	318,056	11.1	75.5
10	34.6	5,058,861	3,157,454	1,811,732	18,002,175	–146,263	14.3	77.6

Note: Per farm averages for each size decile

Source: ABARES Australian Agricultural and Grazing Industries Survey

Table 8 Wheat and other crops farms, Southern region, 2016–17 to 2018–19

Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	0.8	52,432	46,904	–59,888	1,397,062	18,818	–5.3	96.1
2	1.5	91,094	75,899	–51,622	2,413,050	7,697	1.6	97.7
3	2.7	169,122	138,044	–14,977	2,744,236	43,046	5.5	93.0
4	3.6	236,798	158,559	11,158	2,945,685	17,935	5.4	90.6
5	5.0	302,059	214,881	–7,709	3,899,345	38,690	2.7	91.1
6	6.2	400,535	270,313	49,028	4,687,147	139,650	4.8	93.7
7	9.0	571,741	370,502	120,409	6,188,108	141,938	4.9	89.8
8	13.4	841,866	568,652	177,164	8,708,919	157,749	5.4	89.5
9	19.3	1,210,025	821,769	352,850	10,100,886	171,399	10.1	85.4
10	38.4	2,428,266	1,565,148	823,694	17,403,253	627,952	10.0	84.8

Note: Per farm averages for each size decile

Source: ABARES Australian Agricultural and Grazing Industries Survey

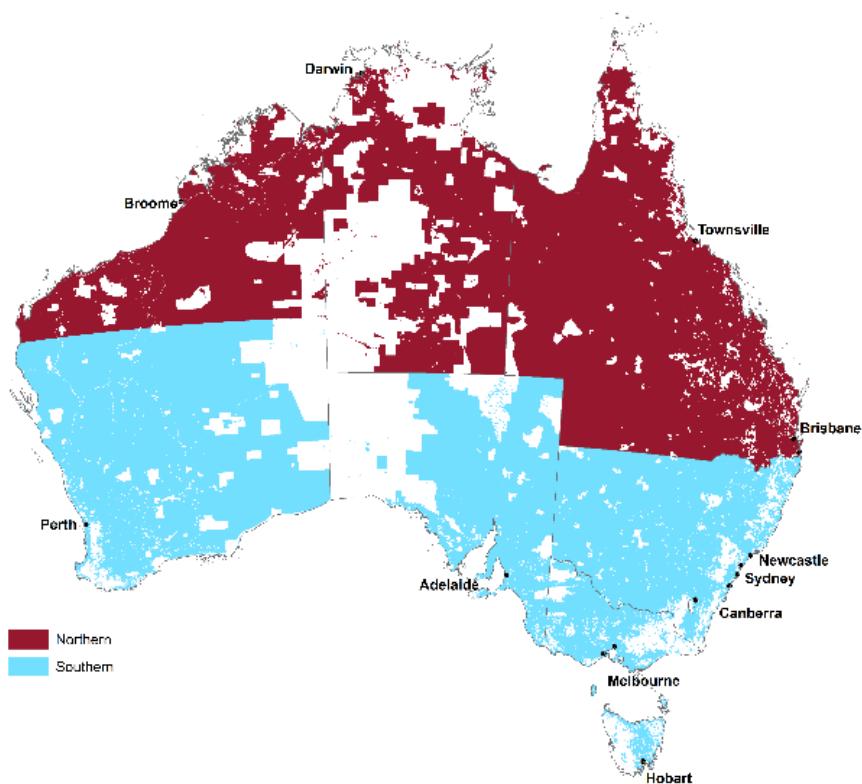
Table 9 Wheat and other crops farms, Northern region, 2016–17 to 2018–19

Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	0.9	62,046	102,137	–93,478	2,785,442	59,846	–1.3	92.9
2	2.1	147,606	120,295	–59,964	2,244,009	–20,477	–1.9	94.0
3	3.6	227,280	176,874	–59,233	3,293,782	1,739	1.9	93.4
4	4.1	288,389	219,254	–77,895	4,410,311	98,050	1.6	96.2
5	4.8	362,272	272,593	–52,695	4,686,092	–47,004	5.3	92.1
6	6.8	473,723	361,011	–31,351	5,770,516	90,439	3.1	85.6
7	8.9	627,341	435,092	32,461	6,182,205	53,815	6.3	86.7
8	11.9	809,944	581,462	101,782	8,729,216	182,763	6.6	86.4
9	16.9	1,220,150	901,726	178,594	11,791,985	220,849	8.4	85.0
10	40.0	2,800,975	2,088,446	467,262	21,109,585	460,827	7.5	77.5

Note: Per farm averages for each size decile

Source: ABARES Australian Agricultural and Grazing Industries Survey

Map 2 Australian beef cattle industry, Northern and Southern regions, Australia



Source: Meat & Livestock Australia

Table 10 Beef farms, Southern region, 2016–17 to 2018–19

Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	1.9	37,428	47,220	-44,578	1,518,494	4,159	-1.7	98.6
2	2.2	51,191	73,162	-85,597	1,421,835	8,178	-4.0	99.7
3	2.5	64,521	40,222	-34,079	2,390,953	1,481	-1.4	99.4
4	3.3	81,596	61,221	-30,044	1,963,651	278	1.6	97.9
5	4.3	99,466	73,832	-58,931	2,096,183	9,244	0.9	97.6
6	5.2	122,123	85,457	-14,503	4,212,307	-9,014	0.6	96.8
7	6.8	163,837	136,177	-45,533	3,432,564	-26,189	0.7	98.1
8	10.8	241,741	171,748	-7,095	3,948,126	23,924	3.8	95.8
9	15.3	375,041	308,052	-59,702	6,205,504	115,251	1.6	93.2
10	47.7	1,117,624	848,297	127,514	13,012,400	233,938	4.5	88.5

Note: Per farm averages for each size decile

Source: ABARES Australian Agricultural and Grazing Industries Survey

Table 11 Beef farms, Northern region, 2016–17 to 2018–19

Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	0.5	27,758	48,639	-67,678	1,338,484	6,937	-4.5	87.6
2	1.0	57,334	48,008	-48,097	2,239,823	24,437	-1.7	97.0
3	1.2	76,202	67,489	-43,825	1,937,572	8,358	-2.1	92.4
4	1.9	111,593	67,659	-11,540	3,195,114	-8,823	0.0	95.3
5	2.9	176,310	154,421	-52,948	4,048,341	24,828	1.9	91.6
6	4.4	258,829	169,547	-25,027	4,315,018	22,306	1.5	97.0
7	6.0	354,021	224,416	16,443	6,349,328	36,034	2.4	92.8
8	8.2	503,075	338,980	101,308	7,202,982	108,939	5.2	88.1
9	14.2	851,309	515,746	247,464	12,261,679	105,078	5.9	88.9
10	59.7	3,550,091	2,417,462	896,467	30,907,481	515,416	5.1	84.3

Note: Per farm averages for each size decile

Source: ABARES Australian Agricultural and Grazing Industries Survey

Dairy industry**Table 12 Dairy farms, 2016–17 to 2018–19**

Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	2.3	184,142	183,820	-133,305	2,084,285	-8,285	-4.1	97.7
2	3.1	274,789	284,182	-93,540	3,454,566	-72,950	1.7	93.4
3	4.9	419,218	346,805	3,777	3,346,730	21,406	1.8	90.5
4	5.9	508,605	467,498	17,151	3,147,667	20,783	3.1	75.1
5	7.6	570,117	479,727	41,849	3,716,880	81,810	1.5	83.6
6	7.5	727,226	559,854	103,865	4,548,485	194,206	5.0	82.9
7	10.2	867,044	732,062	88,888	5,725,415	69,680	1.9	78.2
8	12.3	1,056,987	858,568	187,113	5,549,562	88,788	5.3	75.5
9	17.1	1,426,463	1,189,595	233,210	7,864,532	86,639	5.8	76.7
10	29.1	2,519,687	2,169,585	386,611	11,583,563	351,437	5.0	74.6

Note: Per farm averages for each size decile

Source: ABARES Australian Dairy Industry Survey

Vegetables industry**Table 13 Vegetable farms, 2015–16 to 2017–18**

Size Decile	Output share (%)	Cash receipts (\$)	Cash costs (\$)	Farm business profit (\$)	Capital (\$)	Net capital additions (\$)	Rate of return (%)	Equity ratio (%)
1	0.5	64,071	80,560	–95,328	1,198,656	4,819	–7.4	93.2
2	0.6	95,362	106,030	–69,417	1,289,724	38,728	–2.4	89.8
3	1.1	158,296	118,739	–39,183	2,032,728	–781	–0.8	96.9
4	1.7	246,562	183,780	–20,591	2,339,961	23,137	–0.2	93.4
5	2.3	321,762	234,251	–1,171	2,646,265	427	1.1	97.4
6	3.1	439,615	313,209	32,014	3,198,893	1,814	3.4	94.0
7	4.4	632,196	444,415	79,274	3,806,635	79,468	3.2	92.1
8	6.3	911,922	652,899	158,359	4,896,331	53,595	6.9	89.9
9	12.7	1,825,947	1,390,915	307,550	8,224,979	101,468	6.9	85.7
10	67.3	9,607,401	7,859,748	1,653,799	16,073,224	295,140	12.1	81.6

Note: Per farm averages for each size decile

Source: ABARES Survey of Australian Vegetable Growing Farms

References

Boult, C & Jackson, T 2019, 'Disaggregating farm performance statistics by size, 2017–18', in [Agricultural Commodities: March quarter 2019](#), Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.