Sheep Producers Intentions Survey
PULSE – FEBRUARY 2023

March 2023

Table of contents

Producer
Update on
Lamb
Sales
Estimates

About the Sheep Producer Intentions Survey

The Sheep Producer Intentions Survey, undertaken by MLA and AWI, is used to help industry determine wool and lamb production forecasts and to understand the breed composition of the Australian flock on a national, state and regional basis. It is used by processors for budgeting purposes and allows import markets to ascertain short-term supply estimates.

The research has three primary objectives, namely to:

- ✓ Measure and report on flock population, demographics, sheepmeat and wool supply information and producer production intentions.
- ✓ Ensure estimates are reliable and based on sufficiently large sample sizes to ensure the robustness and accuracy of estimates. The sample should be representative or weighted to be representative of the producer population structure.
- ✓ Provide capacity to explore and investigate results at a smaller area and segment level. This will include – among other things – across states and MLA reporting regions.

The following report provides an overview of results for the FEBRUARY 2023 – PULSE survey.

The February 2023 - PULSE survey

Feedback for the PULSE survey was sought from producers over the period 31st January – 21st February 2023. Producers were invited to complete the online survey if they had completed the October 2022 survey and opted-in to be contacted regarding the February 2023 survey.

A total of 466 producers from across Australia responded to the survey invitation. The feedback was then weighted using the latest available ABS data, to produce industry estimates. This weighting was also the same weighting used in the October 2022 survey to ensure consistency across the time periods.

A breakdown of the sample make-up by State plus a description of the ABS data used and the weighting approach is included as an attachment to this report.

Details of the aims of the February PULSE survey are outlined next.

An overview of the research design

Three separate but integrated surveys will be conducted across the calendar year. Each survey will have a specific focus and purpose and provide the required flock and producer intention estimates required.

October	February	May
FULL SURVEY Provides an estimate of the total flock size, a profile of the lamb flock and measures of producer intentions for lambs and breeding ewes	*PULSE SURVEY* Provides a quick update on producers' reported lamb sales to date and forecasts for future sales.	*FULL SURVEY* Provides an estimate of the total flock size, a profile of the breeding ewes flock and measures of producer intentions for lambs and breeding ewes

A recap of the October 2022 lamb sales estimates

The revamped Sheep Producers Intentions Survey was re-launched in October 2022 to measure and report on flock population, demographics, sheepmeat and wool supply information and producer production intentions.

Data was collected across a number of topics, however the focus of the October 2022 survey was specifically on the lamb flock of producers and their intentions for the remainder of the spring flush and onward to June 2023.

The October 2022 research reported on an estimate of the reported, planned and forecast lamb sales covering three time periods:

- Reported sales: sales of lambs that had been made up to the point of the producer completing the October survey – that is sometime between 29th September to 24th October 2022;
- Planned sales: this was a producer estimate of the sales to be made in the remaining spring flush and the period up to 31 December 2022; and
- Forecast sales: this was a producer forecast of their lamb sales across the first half of 2023 (January to June).

These estimates derived from the producer feedback provided from the October 2022 research are shown on the right.

Clearly on-farm, market and climate factors may have impacted producers' behaviours since their participation in the October survey.

The February PULSE survey was designed to provide a quick update on these October estimates. An outline of the aims of the February PULSE survey now follows.

Total reported and expected sales

22.01 million

Reported sales already made this spring

2.93 million

↓

Planned sales to be made in the remaining spring flush and the period up to 31 December 2022

8.91 million

↓

Forecast sales of lambs in the first half of 2023 (January to June)

10.17 million

11.84 million

The aim of the February 2023 survey

The aim of the February 2023 PULSE research is to provide updated estimates of the October 2022 producer lamb sales estimates. Specifically the February PULSE survey was designed to confirm:

- Producer-reported sales in the period up to 31 December 2022. This will confirm the total sales made in the second half of 2022 with analysis exploring if this revised figure was different to that planned and reported in October and the reasons behind any changes in lamb sales last year.

- Producer forecast sales for the first half of 2023 (January to June). Analysis will explore whether this revised forecast is different to that provided in October; and

- Producer sales channels intentions. The February PULSE survey explored what sales channels producers were planning to use and if this varied from what was identified in the October survey.

The survey will then aim to update the estimate of 2022 sales and re-estimate forecast sales for 2023.

The February PULSE methodology involved:

- Taking the reported 2022 sales figures and updating these. As part of this analysis, the February PULSE survey explored what reasons were behind producers selling more or less lambs than they had planned in October.

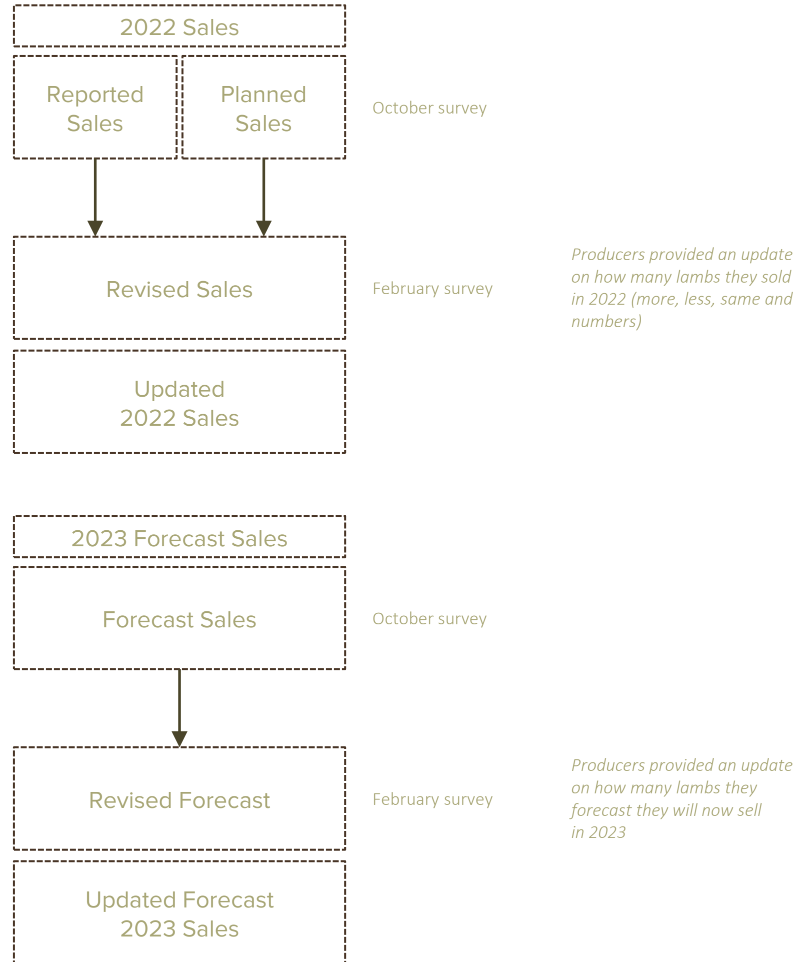
- With a new position now available, producers were asked to forecast their lamb sales for the first half of 2022. Analysis will again focus on the differences in forecasts between October and February surveys,

The February PULSE survey will report on producer level results (how many producers sold more, less or the same lambs as they indicated in October) and an estimate of the revised total lamb sales (acknowledging producers hold different lamb stock levels).

Of note is that there were outliers that needed to be considered, namely those who experienced a severe change in estimate upward (e.g. estimating very little or no sales in October 2022 and then a large amount of reported/expected sales in February 2023). These outliers were removed to ensure the average change within each cells remains within a reasonable limit.

Details of the research design for the February PULSE survey are described in the attachments.

Methodology undertaken for the revision of lamb sales estimates



Insights and results

The feedback from producers in the February PULSE survey has indicated that:

The majority of producers made some change to their planned 2022 sales volumes:

- 51% sold fewer lambs than expected in this period; whilst
- 13% reported they sold more lambs than expected; and
- the remaining 36% sold the number of lambs they planned.

Behind the one in two (51%) of producers reporting they sold fewer lambs, the reasons were varied but can be attributed to four key explanations:

- weather conditions impacting the ability to achieve the targeted lamb performance;
- lamb prices were below expectations;
- fewer lambs than expected available; and
- other on-farm priorities overtaking the lamb sales processes.

When then taking account of the lamb flock sizes, the analysis indicates that the 2022 lamb sales was closer to 8.75M than the planned 11.84M. At the producer level, this was a 29% decline in the average proportional change in lamb sales, underscoring the impact the above factors have had on producer behaviours.

The results also highlight the somewhat agile approach producers are taking to their lamb sales, adjusting their position based on other intervening factors.

When asked about their forecasts for lamb sales in 2023, the feedback suggests that the majority of unsold lambs in 2022 are planned to be sent to market in 2023. Clearly this intention will be subject to the impact (positively or negatively) of these and other intervening factors.

The detailed results from the February PULSE survey now follow.

	2022 Sales		2023 Forecast Sales
October survey	Reported Sales	Planned Sales	Forecast Sales
	11.84 million		10.17 million

	2022 Sales	2023 Forecast Sales
February survey	Updated Sales	Updated Forecast Sales
	8.75 million	13.44 million

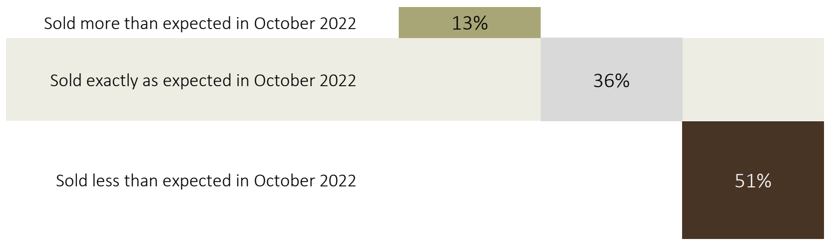
Results from the February PULSE survey

Lamb flock – change in reported/planned sales from October 2022

Q1. When we spoke to you in October, you indicated that you had sold or were planning to sell a total of [ANSWER FROM OCT 2022 SURVEY] lambs up to 31 December 2022.

How many lambs did you actually end up selling through spring and the period up to 31 December 2022?

Base: All respondents, n = 466



Note: these results are producer level results and do not reflect the total lamb sales.

The results provide an indication of the producer experience.

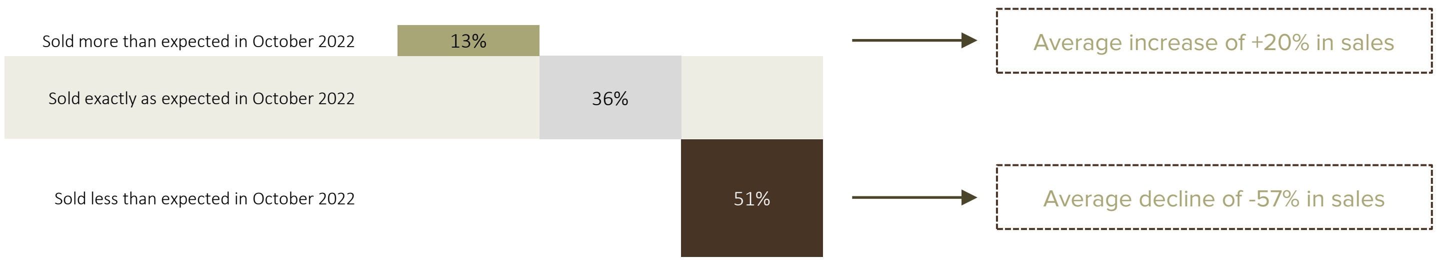
	State						Total Flock Size (sheep and lambs)							
	NSW	QLD	SA	TAS	VIC	WA	Less than 500	500 – < 1,000	1,000 – < 2,000	2,000 – < 3,000	3,000 – < 5,000	5,000 – < 10,000	10,000 – < 20,000	20,000 or more
Base:	*137*	*18*	*91*	*14*	*122*	*83*	*64*	*48*	*74*	*68*	*81*	*91*	*30*	*10*
Sold more than expected in October 2022	14%	11%	16%	1%	14%	13%	9%	22%	16%	16%	13%	16%	18%	0%
Sold exactly as expected in October 2022	48%	12%	31%	57%	30%	22%	40%	38%	33%	32%	30%	31%	14%	18%
Sold less than expected in October 2022	39%	77%	53%	43%	56%	65%	51%	40%	51%	52%	57%	53%	68%	82%

Lamb flock – change in reported/planned sales from October 2022

Q1. When we spoke to you in October, you indicated that you had sold or were planning to sell a total of [ANSWER FROM OCT 2022 SURVEY] lambs up to 31 December 2022.

How many lambs did you actually end up selling through spring and the period up to 31 December 2022?

Base: All respondents, n = 466



Lamb flock – re-estimate of sales through to 31 December 2022

Q1. When we spoke to you in October, you indicated that you had sold or were planning to sell a total of [ANSWER FROM OCT 2022 SURVEY] lambs up to 31 December 2022.

How many lambs did you actually end up selling through spring and the period up to 31 December 2022?

Base: All respondents, n = 466

October 2022 estimate of lamb sales up to 31 December 2022

11.84 million

2.93 million

Reported sales already made this spring

8.91 million

Expected sales to be made in the remaining spring flush and the period up to 31 December 2022

✖

Average producer-reported proportional change in expected sales (Oct-22 result) to reported sales (Feb-23 result)

-29%

=

February 2023 estimate of lamb sales up to 31 December 2022

8.75 million

	State						Total Flock Size (sheep and lambs)							
	NSW	QLD	SA	TAS	VIC	WA	Less than 500	500 – < 1,000	1,000 – < 2,000	2,000 – < 3,000	3,000 – < 5,000	5,000 – < 10,000	10,000 – < 20,000	20,000 or more
Base of Oct-22 estimate:	*626*	*61*	*316*	*64*	*444*	*318*	*290*	*183*	*308*	*268*	*318*	*293*	*121*	*51*
October 2022 estimate	4.24M	0.22M	2.39M	0.15M	2.92M	1.92M	0.73M	0.73M	1.71M	1.52M	2.06M	2.69M	1.53M	0.87M
Base of Feb-22 estimate of change:	*126*	*15*	*88*	*13*	*114*	*78*	*61*	*43*	*72*	*62*	*76*	*83*	*28*	*10*
Average producer-reported change	-25%	-38%	-26%	-38%	-30%	-36%	-32%	-25%	-26%	-27%	-26%	-25%	-27%	-25%
February 2023 estimate	3.10M	0.14M	1.92M	0.13M	1.92M	1.54M	0.50M	0.55M	1.26M	1.14M	1.53M	2.02M	1.09M	0.67M

Reasons for the decline in lamb sales against expectation

51% of producers reported they sold LESS lambs up to 31 December 2022 than planned

We asked these producers what were the reasons behind the difference between the expected sales and what actually happened…

Q2. Why did you end up selling fewer lambs last year than you expected back in October? Please select all the reasons that explain why.
Base: All respondents who reported selling less lambs than expected, n = 248

43%	Weather impacted lamb performance last year
25%	Prices were not strong enough at the time
13%	Less lambs than expected in 2022
12%	Busy with harvest or other farm operations
10%	* Lambs did not make weight
9%	Retaining lambs due to forecast prices for 2023 look to be stronger
9%	Personal issues impacted our plans to sell
6%	Processor availability issues
3%	Had troubles accessing transport
3%	* Had surplus feed, kept the lambs longer
2%	* Lambs lost or not up to quality (non-weight related e.g. worms, fly)
2%	* Delayed shearing
1%	* Flooding-related
7%	Other (please describe)
6%	No real reason

* Response has been coded from open-ended feedback via "Other (please describe)".

Reasons for the increase in lamb sales against expectation

13% of producers reported they sold MORE lambs during the spring and the period up to 31 December 2022 than planned

We asked these producers what were the reasons behind the difference between the expected sales and what actually happened…

Q3. Why did you end up selling more lambs last year than you expected back in October? Please select all the reasons that explain why.
Base: All respondents who reported selling more lambs than expected, n = 68

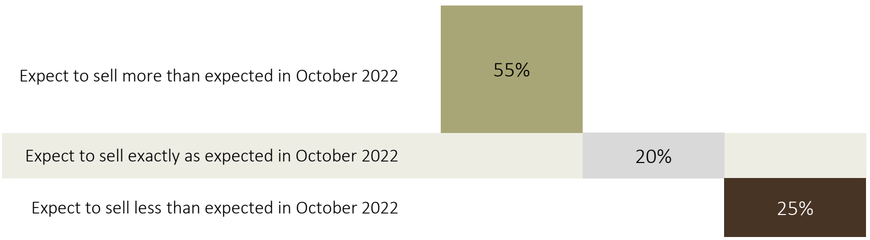
Reason	%
More lambs than expected in 2022	42%
We needed additional cash flow	20%
Favourable weather accelerated lamb performance	17%
Downsizing flock due to forecast prices for 2023 look to be declining	9%
Forecast weather conditions indicated it would be better to sell sooner	7%
Prices were stronger last year than we expected	6%
* Processor-related	4%
* Future breeder prices were strong	3%
* Early sale due to flooding	2%
Other (please describe)	14%
No real reason	6%

* Response has been coded from open-ended feedback via "Other (please describe)".

Lamb flock – change in forecast sales through Jan-Jun 2023

Q4. How many lambs have you sold and/or are expecting to sell in the first half of 2023 (January to June)?

Please do not include sales made up to 31 December 2022.
Base: All respondents, n = 466



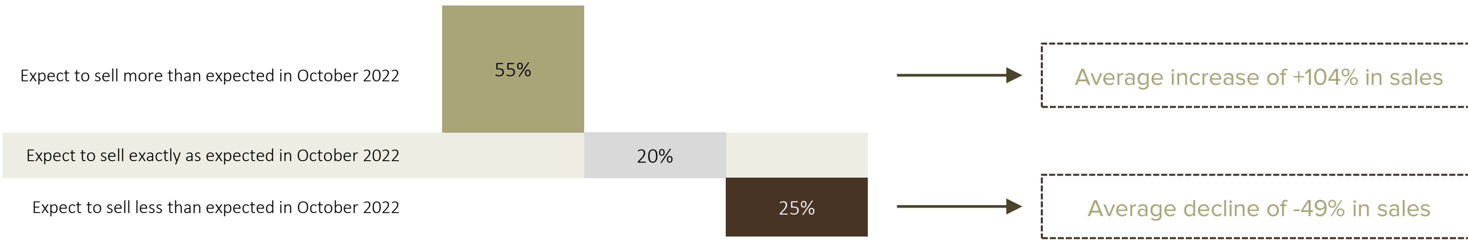
	State						Total Flock Size (sheep and lambs)							
	NSW	QLD	SA	TAS	VIC	WA	Less than 500	500 – < 1,000	1,000 – < 2,000	2,000 – < 3,000	3,000 – < 5,000	5,000 – < 10,000	10,000 – < 20,000	20,000 or more
Base:	*137*	*18*	*91*	*14*	*122*	*83*	*64*	*48*	*74*	*68*	*81*	*91*	*30*	*10*
Sold more than expected in October 2022	55%	9%	51%	55%	61%	64%	52%	69%	52%	57%	58%	50%	49%	30%
Sold exactly as expected in October 2022	24%	9%	26%	1%	18%	14%	23%	9%	29%	11%	13%	18%	9%	57%
Sold less than expected in October 2022	21%	82%	24%	44%	21%	23%	25%	22%	19%	32%	29%	31%	42%	13%

Lamb flock – change in forecast sales through Jan-Jun 2023

Q4. How many lambs have you sold and/or are expecting to sell in the first half of 2023 (January to June)?

Please do not include sales made up to 31 December 2022.

Base: All respondents, n = 466



Lamb flock – re-estimate of expected sales through Jan-Jun 2023

Q4. How many lambs have you sold and/or are expecting to sell in the first half of 2023 (January to June)?

Please do not include sales made up to 31 December 2022.
Base: All respondents, n = 466

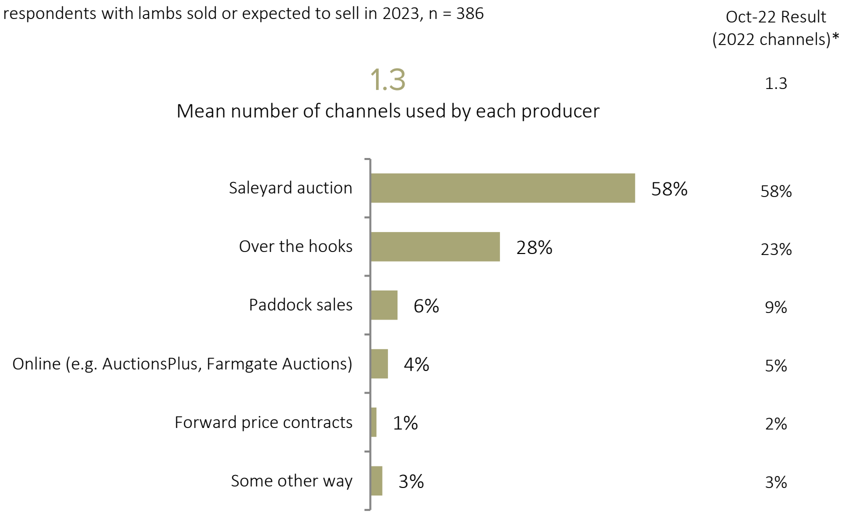
October 2022 estimate of lamb sales during January-June 2023 period		Average producer-reported proportional change in expected sales (Oct-22 result) to expected sales (Feb-23 result)		February 2023 estimate of lamb sales during January-June 2023 period
10.17 million	✖	+28%	=	13.44 million

	State						Total Flock Size (sheep and lambs)							
	NSW	QLD	SA	TAS	VIC	WA	Less than 500	500 – < 1,000	1,000 – < 2,000	2,000 – < 3,000	3,000 – < 5,000	5,000 – < 10,000	10,000 – < 20,000	20,000 or more
Base of Oct-22 estimate:	*626*	*61*	*316*	*64*	*444*	*318*	*290*	*183*	*308*	*268*	*318*	*293*	*121*	*51*
October 2022 estimate	3.42M	0.25M	1.57M	0.61M	2.40M	1.91M	0.66M	0.49M	1.22M	1.57M	1.68M	2.60M	1.19M	0.75M
Base of Feb-22 estimate of change:	*106*	*17*	*73*	*12*	*98*	*69*	*45*	*34*	*61*	*59*	*67*	*73*	*27*	*10*
Average producer-reported change	+38%	-23%	+10%	+14%	+40%	+22%	+17%	+48%	+43%	+23%	+32%	+26%	+15%	+105%
February 2023 estimate	4.17M	0.27M	1.82M	0.68M	4.20M	2.31M	0.77M	0.73M	1.76M	1.92M	2.16M	3.18M	1.39M	1.53M

Lamb flock – expected sales channels through Jan-Jun 2023

Q5. Of the sales (actual and expected) to be made in the first half of 2023, what proportion will be made through the following sales channels?
Base: All respondents with lambs sold or expected to sell in 2023, n = 386

1.3
Mean number of channels used by each producer



Producers responding to both the October 2022 survey and the February 2023 survey indicated minimal change between the number of channels used and also the preferred channels, with at most a 5% difference between channels for expected sales in 2022 and in 2023 (Over the hooks – 2022: 23%; 2023: 28%).

	State						Total Flock Size (sheep and lambs)							
	NSW	QLD	SA	TAS	VIC	WA	Less than 500	500 – < 1,000	1,000 – < 2,000	2,000 – < 3,000	3,000 – < 5,000	5,000 – < 10,000	10,000 – < 20,000	20,000 or more
Base:	*106*	*10*	*77*	*12*	*104*	*76*	*50*	*41*	*55*	*58*	*69*	*78*	*28*	*7*
Mean number of channels used	1.3	1.5	1.3	1.3	1.4	1.2	1.2	1.2	1.3	1.4	1.5	1.6	1.7	1.5
Saleyard auction	71%	1%	48%	63%	64%	38%	68%	60%	59%	55%	38%	32%	10%	43%
Over the hooks	16%	45%	38%	15%	29%	45%	21%	30%	31%	33%	40%	33%	57%	30%
Paddock sales	1%	40%	6%	15%	1%	16%	4%	7%	2%	6%	10%	17%	18%	23%
Online	7%	4%	3%	4%	2%	0%	3%	3%	1%	3%	8%	13%	4%	5%
Forward price contracts	2%	0%	2%	2%	1%	0%	0%	0%	2%	3%	3%	2%	11%	0%
Some other way	3%	9%	2%	0%	3%	1%	4%	0%	5%	0%	1%	1%	0%	0%

* Question asked in October 2022 survey: Q17. Of the expected lamb sales to be made in 2022, what proportion will be made through the following sales channels?

Attachments

Comparison of October 2022 and February 2023 sample

October 2022 Survey completes (count)

	ALL FLOCK SIZES	Less than 500	500 – < 1,000	1,000 – < 2,000	2,000 – < 3,000	3,000 – < 5,000	5,000 – < 10,000	10,000 – < 20,000	20,000 or more
AUSTRALIA	**1,963**	**355**	**205**	**324**	**275**	**333**	**297**	**122**	**52**
NSW	**696**	146	69	105	96	121	99	43	17
VIC	**469**	82	63	78	65	73	61	27	20
QLD	**73**	18	6	5	8	13	16	5	2
SA	**325**	46	32	82	53	58	34	17	3
WA	**324**	38	25	39	47	65	78	25	7
TAS	**72**	25	9	12	6	3	9	5	3
NT	**0**	0	0	0	0	0	0	0	0
ACT	**4**	0	1	3	0	0	0	0	0

October 2022 Survey completes (proportion of total)

	ALL FLOCK SIZES	Less than 500	500 – < 1,000	1,000 – < 2,000	2,000 – < 3,000	3,000 – < 5,000	5,000 – < 10,000	10,000 – < 20,000	20,000 or more
AUSTRALIA	**100%**	**18%**	**10%**	**17%**	**14%**	**17%**	**15%**	**6%**	**3%**
NSW	**35%**	7%	4%	5%	5%	6%	5%	2%	1%
VIC	**24%**	4%	3%	4%	3%	4%	3%	1%	1%
QLD	**4%**	1%	<1%	<1%	<1%	1%	1%	<1%	<1%
SA	**17%**	2%	2%	4%	3%	3%	2%	1%	<1%
WA	**17%**	2%	1%	2%	2%	3%	4%	1%	<1%
TAS	**4%**	1%	<1%	1%	<1%	<1%	<1%	<1%	<1%
NT	**0%**	0%	0%	0%	0%	0%	0%	0%	0%
ACT	**<1%**	0%	<1%	<1%	0%	0%	0%	0%	0%

February 2023 Survey completes (count)

	ALL FLOCK SIZES	Less than 500	500 – < 1,000	1,000 – < 2,000	2,000 – < 3,000	3,000 – < 5,000	5,000 – < 10,000	10,000 – < 20,000	20,000 or more
AUSTRALIA	466	**64**	**48**	**74**	**68**	**81**	**91**	**30**	**10**
NSW	**137**	21	14	17	19	27	33	5	1
VIC	**122**	27	14	24	15	17	17	6	2
QLD	**18**	2	1	2	1	4	4	2	2
SA	**91**	5	12	17	20	18	15	4	0
WA	**83**	7	4	11	13	14	20	10	4
TAS	**14**	2	3	2	0	1	2	3	1
NT	**0**	0	0	0	0	0	0	0	0
ACT	**1**	0	0	1	0	0	0	0	0

February 2023 Survey completes (proportion of total)

	ALL FLOCK SIZES	Less than 500	500 – < 1,000	1,000 – < 2,000	2,000 – < 3,000	3,000 – < 5,000	5,000 – < 10,000	10,000 – < 20,000	20,000 or more
AUSTRALIA	100%	**14%**	**10%**	**16%**	**15%**	**17%**	**20%**	**6%**	**2%**
NSW	**29%**	5%	3%	4%	4%	6%	7%	1%	<1%
VIC	**26%**	6%	3%	5%	3%	4%	4%	1%	<1%
QLD	**4%**	<1%	<1%	<1%	<1%	1%	1%	<1%	<1%
SA	**20%**	1%	3%	4%	4%	4%	3%	1%	0%
WA	**18%**	2%	1%	2%	3%	3%	4%	2%	1%
TAS	**3%**	<1%	1%	<1%	0%	<1%	<1%	1%	<1%
NT	**0%**	0%	0%	0%	0%	0%	0%	0%	0%
ACT	**0%**	0%	0%	<1%	0%	0%	0%	0%	0%

Research design

Survey Program

The Sheep Producers Intentions Survey, undertaken by MLA and AWI, is used to help industry determine wool and lamb production forecasts, and to understand the breed composition of the Australian flock on a national, state and regional basis. The results are used by processors for budgeting purposes and allows import markets to ascertain short-term supply estimates.

Methodology

The February 2023 survey utilised a wholly online methodology of producers who responded to the October 2022 survey and opted-in to receive the February 2023 survey with a valid email address, as per the diagram below. Producers were contacted up to four times via email invitation to complete the February 2023 PULSE survey.

Producers who completed the October 2022 survey	→	*Proportion who opted-in and provided a valid email address*	→	*Producers who are contactable for the February 2023 survey*
n = 1,963	→	47%	→	n = 927

Sample lists

The list of producers was originally provided for the October 2022 survey by MLA and AWI separately, These lists were merged, de-duped and producers who had requested not to be contacted for market research removed.

Questionnaire

A 5-minute questionnaire was used to collected the required information. The survey questionnaire covered the following topic areas:

- What was the actual reported sales through spring and the period up to 31 December 2022, and was this different to their expectation;
  - If different, what was the reason (or reasons) behind selling more or less lambs than they expected;
- What do they now expect to sell in the first half of 2023 (January to June), and is this different to their expectation back in October 2022; and
- Which sales channels do they expect to use during the first half of 2023 (January to June), and is this different to the channels they expected to use for their 2022 sales back in October 2022.

Sample size

A total of n = 466 responses were provided by producers, representing a 50% response rate of the n = 927 producers who opted-in and provided a valid email address for contact. The survey respondent breakdown via State was as follows:

	Overall	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
# of surveys	**n = 466**	n = 1	n = 137	n = 0	n = 18	n = 91	n = 14	n = 122	n = 83

Timing

The interviewing was undertaken between the 31st January – 21st February 2023.

Weighting

The survey results were weighted. A description of the weighting process used for the February 2023 Sheep Producers Intentions Survey follows next.

Weighting of survey data

Survey data is often weighted to ensure estimates provide a representative match of the population being estimated and the estimates deliver statistical reliable measures.

For the Sheep Producers Intentions Survey, data has been weighted to ensure the sample provides a strong representation of the population of producers as possible. For this survey, it was considered important to weight the survey data to ensure we have:

- Coverage across the various regions as producers will have different operating conditions. For our purposes, a region is a state – so we need to weight so that our final sample is representative of the distribution of producers across states.

- Coverage across farm businesses of different sizes – obviously, the larger businesses have larger flocks so ensuring we have an appropriate mix of small, medium, large and very large producers is vital for the estimation process.

There may be other variables that help describe the possible differences across producers, but these two variables (state and flock size) will more than likely account for the likely differences that exist in the population of all producers.

For the October 2022 survey, ABS data was used as the population structure that guided the weighting approach. Data at a state and flock size segment was requested from the ABS. This data and its source are shown opposite. The weighting approach involved:

- Using the estimate of the total number of agricultural businesses with sheep and lambs produced by the ABS as the population estimates.

- Adjust this number to reflect that the ABS survey does not include estimates of producers with an EVAO (Estimated Value of Agricultural Operations) of less than $40,000.

This final weighting matrix was then used to weight the October 2022 Sheep Producers Intentions survey data. The same weighting matrix was also used to weight the February 2023 Sheep Producers Intentions survey data to ensure consistency across the time periods.

Total number of agricultural businesses with sheep and lambs (ABS 2020-21) *

	ALL FLOCK SIZES	Less than 500	500 – < 1,000	1,000 – < 2,000	2,000 – < 3,000	3,000 – < 5,000	5,000 – < 10,000	10,000 – < 20,000	20,000 or more
AUSTRALIA	**40,949**	**19,200**	**4,813**	**6,197**	**3,787**	**3,573**	**2,513**	**709**	**157**
NSW	**14,981**	6,768	1,876	2,414	1,431	1,341	851	239	61
VIC	**11,445**	6,067	1,390	1,561	963	766	539	127	30
QLD	**1,881**	1,350	93	124	85	97	96	29	7
SA	**5,980**	2,305	829	1,192	627	556	346	102	24
WA	**5,107**	1,736	473	770	611	735	590	171	20
TAS	**1,522**	950	148	135	70	76	90	40	15
NT	**1**	1	0	0	0	0	0	0	0
ACT	**32**	23	4	1	0	1	1	1	0

* Based on Australian Bureau of Statistics data (ABS, Customised report, 2022)

Confidence intervals for survey estimates

Reliability of the Estimates

The estimates in this report are based on information obtained from a sample survey. Any data collection may encounter factors, known as non-sampling error, which can impact on the reliability of the resulting statistics. In addition, the reliability of estimates based on sample surveys are also subject to sampling variability. That is, the estimates may differ from those that would have been produced had all persons in the population been included in the survey.

Non-sampling error

Non-sampling error may occur in any collection, whether it is based on a sample or a full count such as a census. Sources of non-sampling error include non-response, errors in reporting by respondents or recording of answers by interviewers and errors in coding and processing data. Every effort is made to reduce non-sampling error by careful design of survey questionnaires and quality control procedures at all stages of data processing.

Sampling error

One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of persons was included. There are about two chances in three (67%) that a sample estimate will differ by less than one SE from the number that would have been obtained if all persons had been surveyed, and about 19 chances in 20 (95%) that the difference will be less than two SEs.

Calculation of Confidence Interval

If 50% of all the people in a population of 20,000 people drink coffee in the morning, and if you were repeat the survey of 377 people ("Did you drink coffee this morning?") many times, then 95% of the time, your survey would find that between 45% and 55% of the people in your sample answered "Yes".

The remaining 5% of the time, or for 1 in 20 survey questions, you would expect the survey response to more than the margin of error away from the true answer.

When you survey a sample of the population, you don't know that you've found the correct answer, but you do know that there's a 95% chance that you're within the margin of error of the correct answer.

In terms of the numbers selected above, the margin of error *MoE* is given by:

$$MoE = z * \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$$

where *n* is the sample size, $\hat{p}$ is the fraction of responses that you are interested in, and *z* is the critical value for the 95% confidence level (in this case, 1.96).

This calculation is based on the Normal distribution and assumes you have more than about 30 samples.

Margin of Error for a given sample size and survey estimate		Sample Sizes by State								
		Australia	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
		n = 466	n = 137	n = 122	n = 18	n = 91	n = 83	n = 14	n = 0	n = 1
Survey Estimate	50%	**± 4.54%**	± 8.37%	± 8.87%	n/a	± 10.27%	± 10.76%	± 26.19%	n/a	n/a

Note. Margin of Errors are provided at the 95% confidence level on the assumption of a normal distribution and the finite population correction is applied where applicable (n/N > 5%).
Results labelled “n/a” are due to the assumption of the normal distribution not being upheld ($n\hat{p} < 10$ or $n(1-\hat{p}) < 10$).

Sheep Producers Intentions Survey PULSE – February 2023

This research was conducted by Intuitive Solutions on behalf of MLA and AWI. For more information, please contact:

Michael Sparks
Intuitive Solutions
Phone: 0412 868 918
Email: msparks@intuitivesolutions.com.au

Jenny Lim
Meat and Livestock Australia
Phone: (07) 3620 5274
Email: jlim@mla.com.au

Intuitive Solutions is an independent market research supplier and member of The Research Society (formerly the Australian Market & Social Research Society or AMSRS). This research was conducted under The Research Society Code of Conduct.

www.intuitivesolutions.com.au