

# MLA and AWI Wool and Sheepmeat Survey Report - Sheepmeat

April, 2017

Prepared by Kynetec

# Contents



<b>Executive Summary</b>	<b>3</b>
<b>Background and Purpose</b>	<b>4</b>
<b>Methodology</b>	<b>5</b>
<b>Survey Respondents</b>	<b>7</b>
<b>MLA Sheep Producing Regions</b>	<b>11</b>
<b>National Results</b>	<b>12</b>
<b>Results by State</b>	<b>17</b>
<b>Results by MLA Reporting Region</b>	<b>22</b>
<b>Regional Snapshots</b>	<b>32</b>

# Executive Summary – Lamb Production

## Number and type of sheep producers

43,825 producers are involved in sheep production (ABS Census 2011)  
 36% of producers run both Merino and other/non-Merino sheep flocks  
 33% of producers run only non-Merino flocks  
 31% of producers run only Merino flocks

## Number of breeding ewes on hand

38,488,221 total breeding ewes on hand  
 26,742,072 total Merino breeding ewe flock, 69% of total breeding flock  
 11,746,149 total non-Merino breeding ewes on hand, 31% of total breeding flock  
 Within the Merino flock, 67% for Merino lamb production and 33% for other lamb production (Merino other)

## Number of lambs on hand

23,158,467 total lambs on hand  
 13,233,296 total Merino lambs, 57% of total lamb flock  
 9,925,171 total non-Merino lambs, 43% of total lamb flock

## Expected lamb sales in the next four months (1 Mar – 30 Jun)

8,527,868 total lamb sales in the next four months  
 2,292,861 total Merino sales (27% of total lamb sales)  
 1,928,874 total Pure meat sales (23% of total lamb sales)  
 2,141,977 total First cross sales (25% of total lamb sales)  
 2,164,157 total other breed sales (25% of total lamb sales)

## Number of lambs marked in the past four months (1 Nov – 28 Feb)

3,792,154 total lambs marked in the past four months  
 1,866,796 total Merino lambs marked (49% of total markings)  
 1,925,358 total non-Merino lambs marked (51% of total markings)

## Number of ewes joined to produce those lambs

4,816,934 total number of ewes joined to produce those lambs  
 2,409,311 total Merino lambs joined (50%)  
 2,407,623 total non-Merino lambs joined (50%)

## Marking rates

77% National Merino marking rate  
 80% National non-Merino marking rate

## Ewe flock intentions for next 12 months

34% increase  
 59% maintain  
 6% decrease  
 1% not applicable

## Intended method for achieving flock increase

54% Retain more replacement ewes than normal  
 46% Retain more older ewes than normal  
 35% Purchase more additional ewes than normal

# Background and Purpose

## Survey Background

The current Sheepmeat and Wool survey has been running in various formats for the past 16 years. The survey has been running in its current format since June 2010, following discussions with MLA's Lamb Forecasting Advisory Committee (LFAC), where MLA decided that they needed to use a more vigorous methodology going forward.

Due to the success of the survey in June, a management agreement between MLA and AWI was negotiated and AWI signed on for the next wave in October 2010.

Since October 2010, MLA, AWI and the LFAC have worked closely to further develop the model, sample and breed code frame for the now combined Sheepmeat and Wool survey.

Kynetec took over from Axiom in October 2016 and have been working closely with MLA to increase the number of respondents and the amount of data collected by streamlining the online and mail-out surveys.

## Purpose of the research

The project provides MLA and AWI with an accurate representation of flock population, demographics, sheepmeat and wool supply information and producer production intentions during key production periods throughout the year.

The survey enables MLA and AWI to provide the Lamb Forecasting Advisory Committee (LFAC) and the Australian Wool Production Forecasting Committee (AWPFC), with solid forward looking information to assist industry projections.

Although information gathered has been extremely useful in flock and production forecasts, MLA and AWI are looking to add further value to the study by increasing responses, better aligning the sample collected with industry production structure and making better use of the results in various internal and external publications.

# Methodology [1/2]

## Sampling

The MLA and AWI Wool and Sheepmeat survey for February 2017 was built around the collection of an industry representative sample of sheep producers across all sheep growing regions of Australia. In order to achieve a representative sample, sheep producers were sampled with strong representation within each MLA defined sheep production region. A total number of 2,295 survey responses were achieved in February 2017, up from 1,896 in February 2016. Given many large producers have multiple properties in different states and their possible impact on weighting, we reported the results based on number of properties rather than respondents. As a result, 3,552 properties were included in the survey.

Three survey methodologies were adopted in order to collect the target sample:

1. **Online web based survey:** This methodology was presented to potential respondents using two different communication tools (email survey links and website survey links).
  - I. **Website survey links:** Two survey links were given to MLA and AWI to place on their website and to include in selected external communications with producer stakeholders e.g. Friday Feedback and Feedback magazine. Copies of these links were also sent to members of the Lamb Forecasting Advisory Committee (LFAC) to include in their email signatures and place on their websites during October. A total of 146 respondents completed the survey via this method (6% of the total sample).
  - II. **Email survey links:** A link to the survey was created for email purposes so Kynetec could track the number of completes and partial completes throughout the survey period (1 February to 28 February, 2017) and send reminder emails accordingly. A total of 13,025 emails were sent to MLA and AWI members via the email addresses provided by MLA and AWI databases. Of those 447 emails bounced, giving a total emails delivered of 12,578. A total of five reminder emails were sent to non-respondents with a significant number of completes achieved after each reminder. The email survey link returned a total of 1,493 completed responses (65% of the sample).
2. **Mail-out survey:** A hard copy questionnaire and a reply paid envelope was sent to a random sample of 5,000 producers from the FARM database (Fairfax Agricultural Research and Marketing). This methodology was supported by CATI reminder calls to producers in specific regions (Tasmania, Murrumbidgee and western NSW) in order to boost response rates. A total of 651 producers responded by this methodology (28% of total sample).
3. **Telephone surveys:** In an attempt to boost the sample of very large sheepmeat and wool producers for the study, approximately 100 calls were made to MLA's top 50 sheep levy payers in order to do the survey over the phone. As a result, 10 calls were successful combining with 16 other large producers who completed the online survey to achieve a sample of 26 very large producers (Ewe flock size >20,000 hd).

# Methodology [2/2]

## Weighting

In order to be consistent with previous waves in the study, the population and production bases used to weight the results were based on ABS Census 2011 data and represent the number of flock types by size by region based on ewes mated to Merino rams and other rams (population) and the number of ewes on hand by region and flock type (production). The sample was weighted to both production and population and run parallel to each other to view any significant differences in the weightings. As a result of large disparities in the two different types of weighting and in order to remain consistent with previous waves, the October 2016 results were weighted by population. It is also our belief that this is the most reliable form of weighting at this stage of the project.

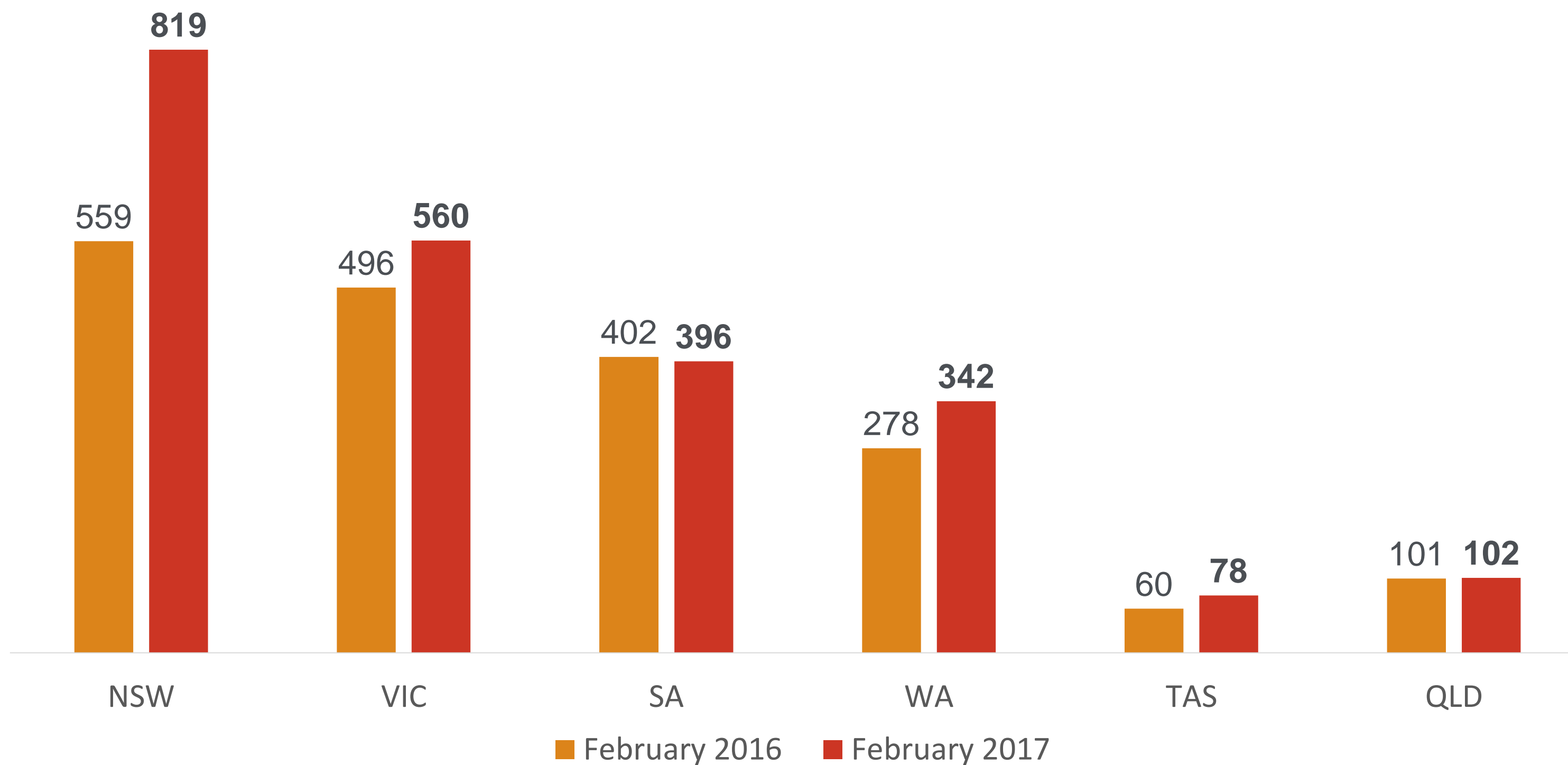
## Statistical significance

The total research sample of 2,295 will give the results of this study a margin of error of  $\pm 1.99\%$  at a 95% confidence level based on 43,825 sheep producers in Australia (ABS 2011 Census). This is basically saying that if you conducted the same survey 100 times, 95 out of the 100 sheep producers should yield results within  $\pm 1.99\%$  of the published number or percentage. However, the % of error increases as the sample size decreases (e.g. at the state and regional level).

# Survey Responses [1/4]

The total number of respondents (n=2,295) represented national industry distribution of sheep producers (43,825 as reported in the ABS Census 2011), with the proportion of respondents in each state being similar to that of the ABS 2014-15 Survey producer distribution. The ABS perform a substantial yearly survey of 35,000 agricultural businesses between Census years in order to continually track agricultural production and producer population. Although it is a survey, it is still indicative of the industry structure and sheep producer distribution.

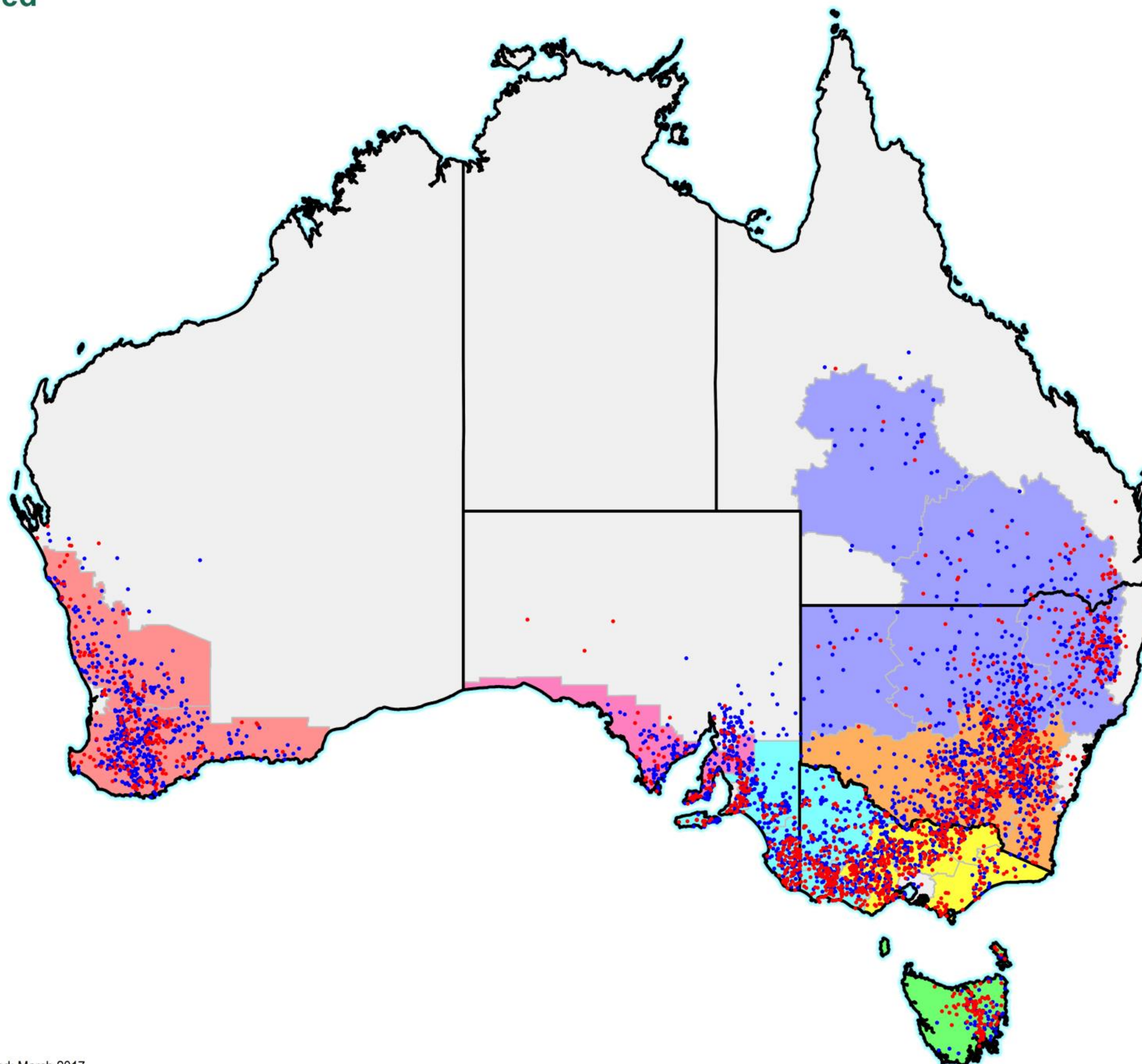
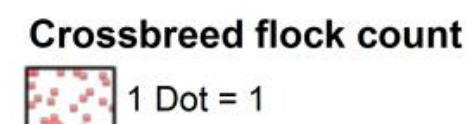
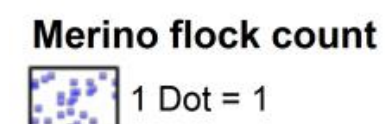
Total Respondents = 2,295



State	ABS (2014-15) Distribution	MLA and AWI Wool and Sheepmeat survey Distribution (February 2017)
NSW	38%	36%
VIC	26%	24%
QLD	0%	4%
SA	15%	17%
WA	13%	15%
TAS	4%	3%

# Survey Responses [2/4]

Merino & crossbreed  
flock count  
by Postcode



Total number of properties: n = 3,552  
Merino properties: n = 2,501  
All other properties: n = 1,730



# Survey Responses [3/4]

## Merino flock count by Postcode

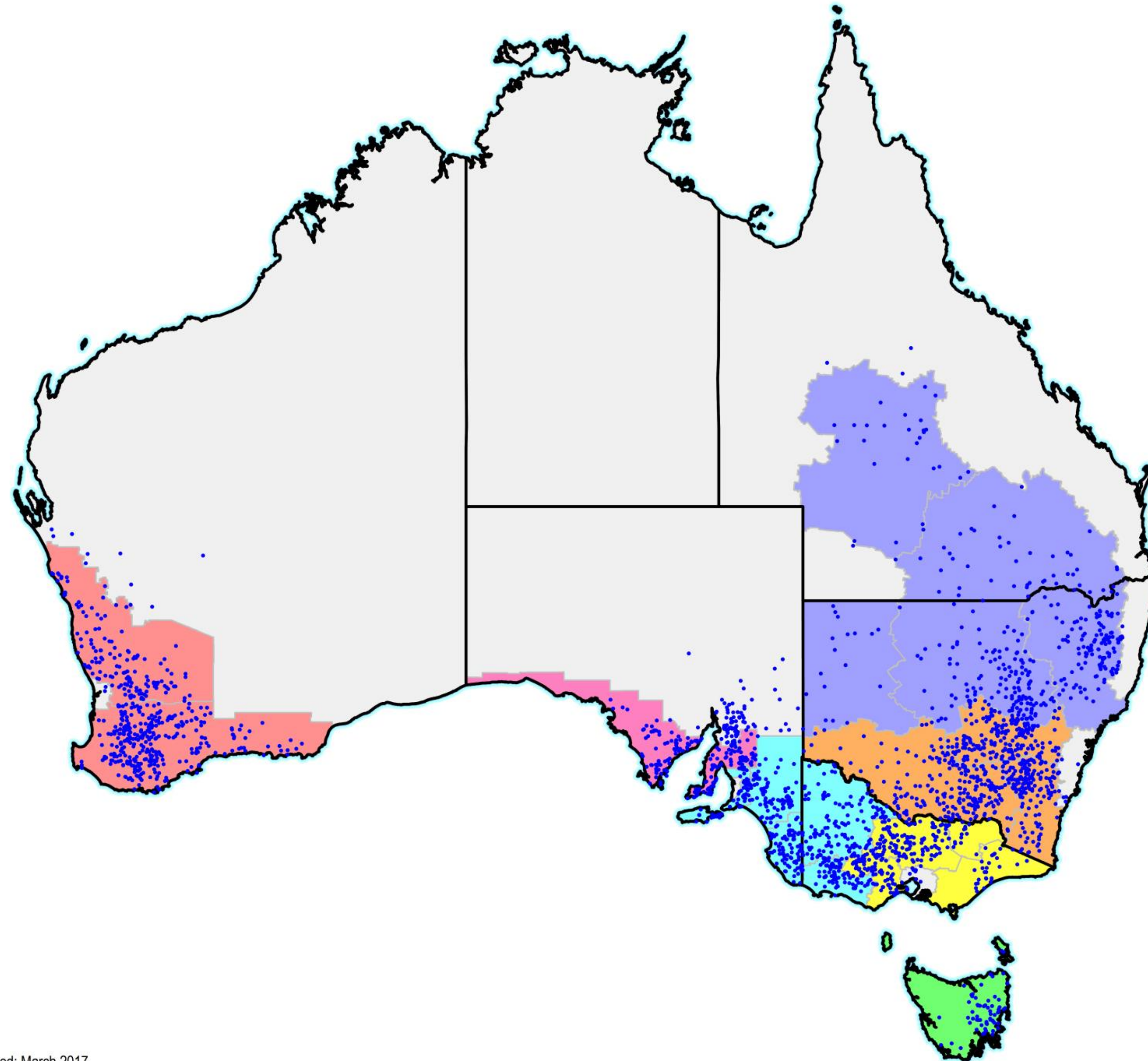
Merino properties: n = 2,501

### MLA Reporting Regions

- Central NSW
- East Vic
- Northern NSW/Qld
- SA Peninsula
- Tasmania
- Western Australia
- Wimmera Mallee Murray

### Merino flock count

1 Dot = 1

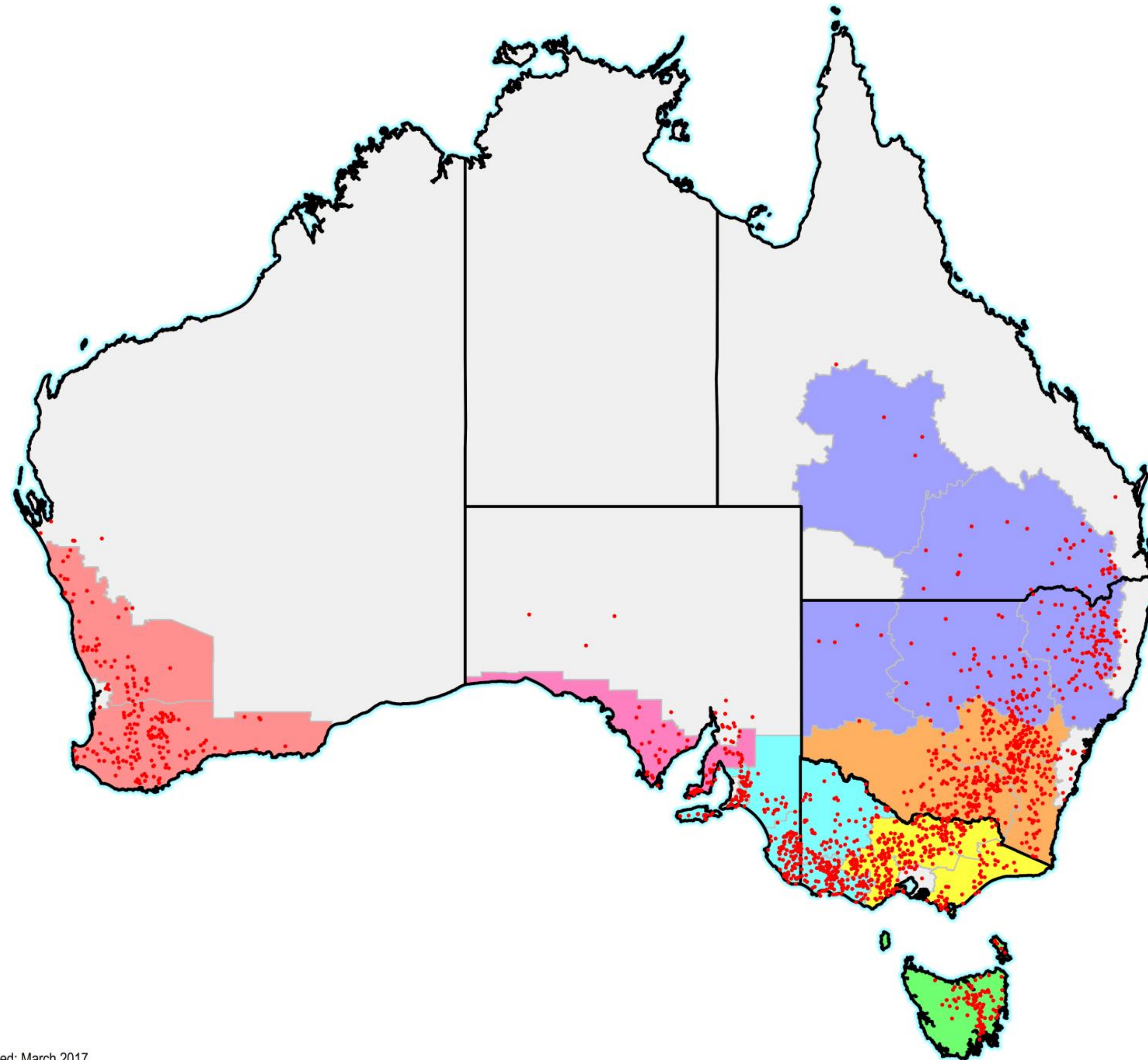


# Survey Responses [4/4]

## Crossbreed flock count by Postcode

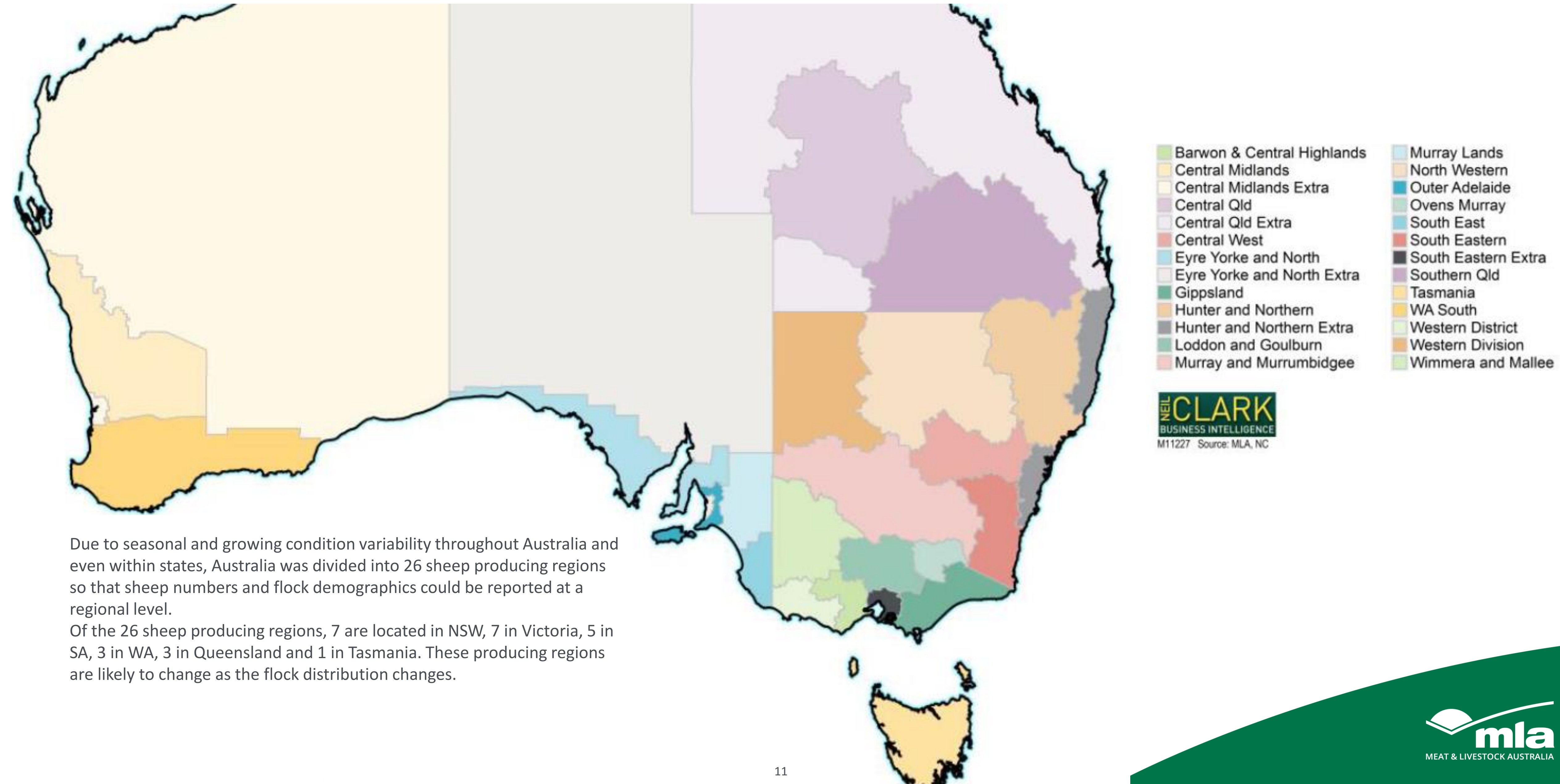
- MLA Reporting Regions**
- Central NSW
  - East Vic
  - Northern NSW/Qld
  - SA Peninsula
  - Tasmania
  - Western Australia
  - Wimmera Mallee Murray

**Crossbreed flock count**  
1 Dot = 1



All other properties: n = 1,730

# MLA sheep producing regions



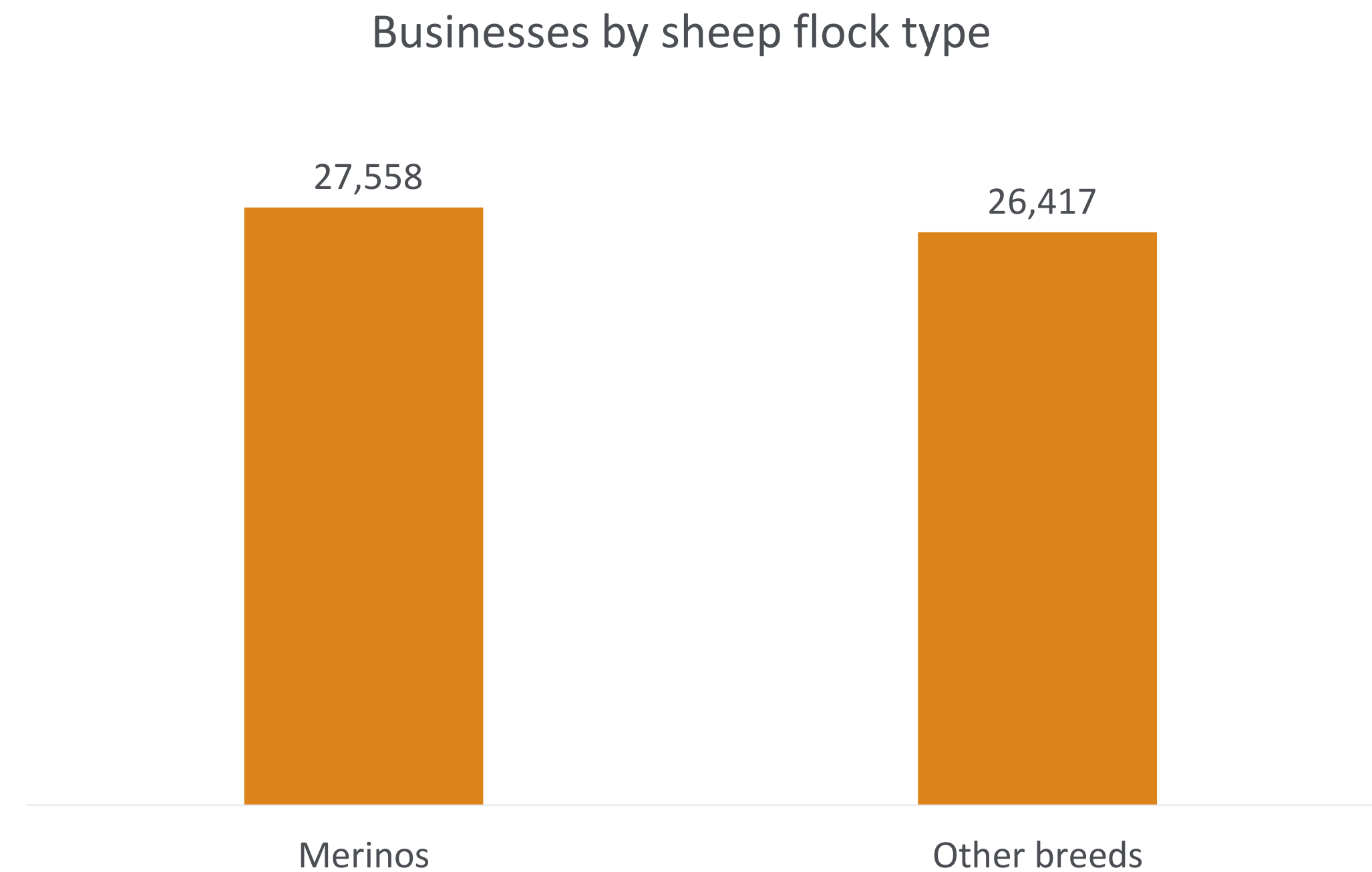
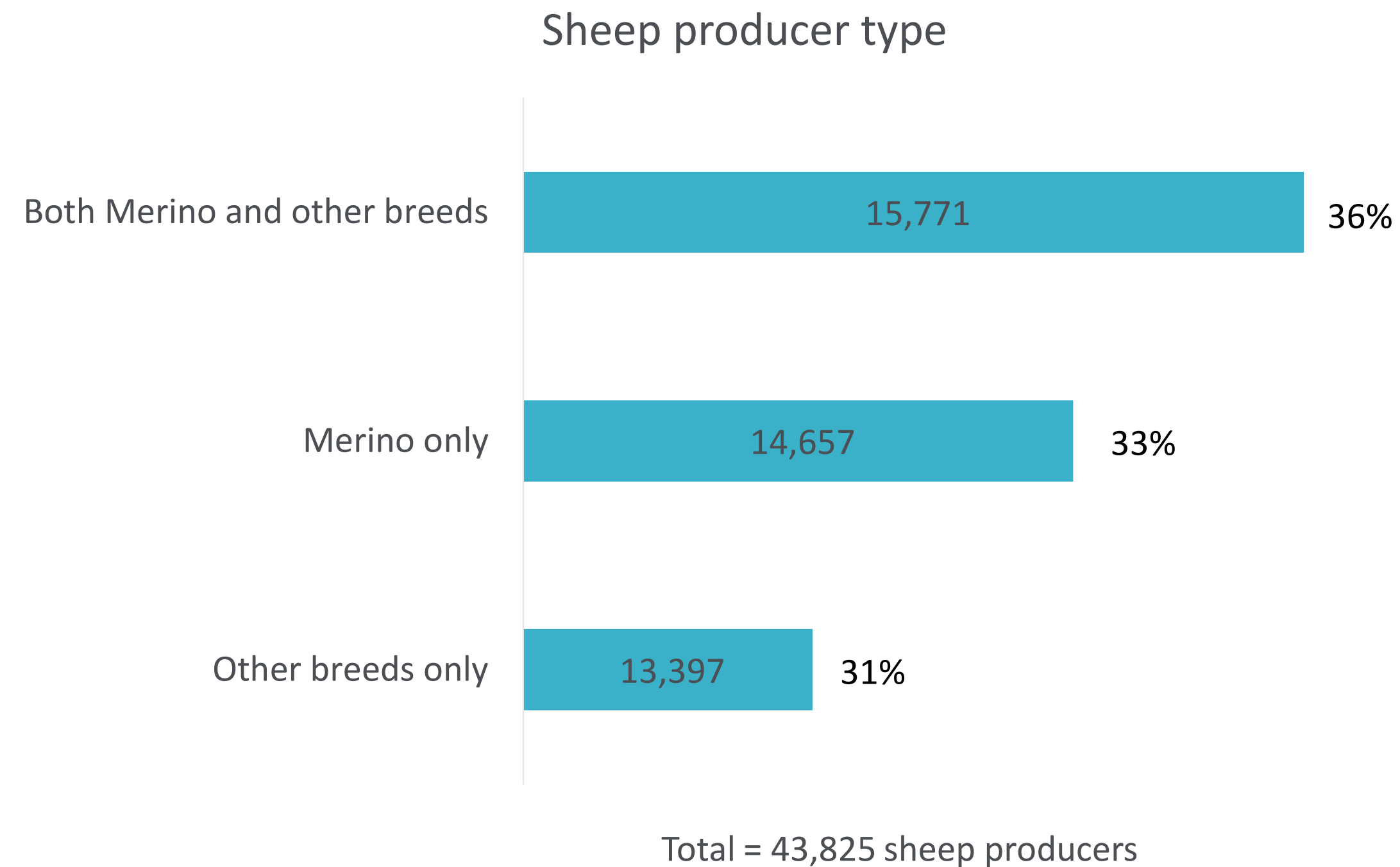
Due to seasonal and growing condition variability throughout Australia and even within states, Australia was divided into 26 sheep producing regions so that sheep numbers and flock demographics could be reported at a regional level.

Of the 26 sheep producing regions, 7 are located in NSW, 7 in Victoria, 5 in SA, 3 in WA, 3 in Queensland and 1 in Tasmania. These producing regions are likely to change as the flock distribution changes.

# National Results

# Producer farm type - Australia

These two charts are representative of the 43,825 producers involved in sheep production within Australia as reported in the ABS Census 2011. The total sheep producer population can be divided into Merino only producers, Other breed only producers and dual flock producers who operate Merino and other breed production systems. Most producers have both Merino and other breeds in their production systems, making up 36% of the sheep producer population. Although there are 27,558 pure bred Merino flocks in Australia, around 52% of Merino producers also produce other breeds. Similarly, there are 26,417 non-Merino sheep flocks in Australia, with around 54% of producers growing non-Merino sheep also grow Merinos

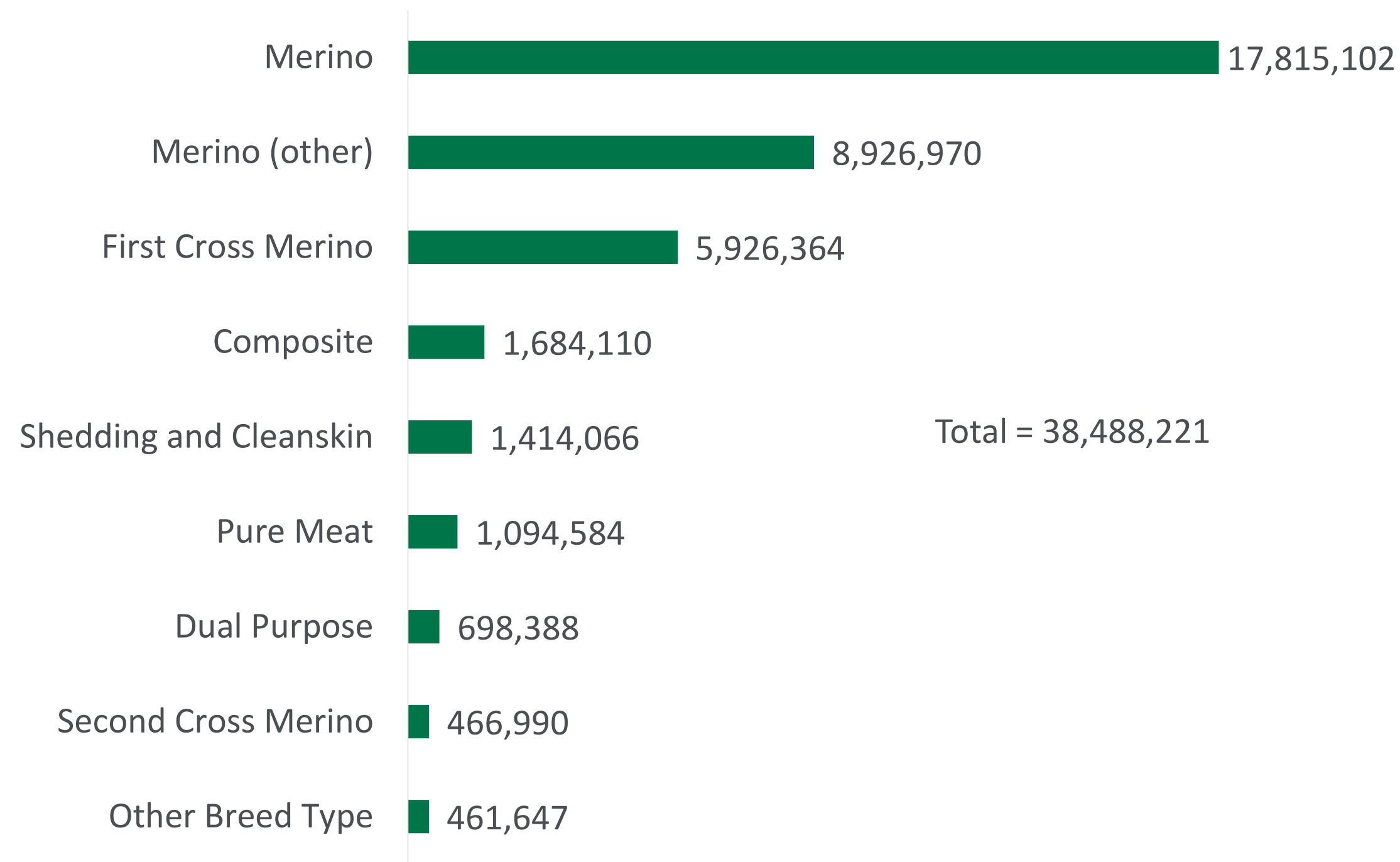


# Ewes on hand and Lambs on hand - Australia

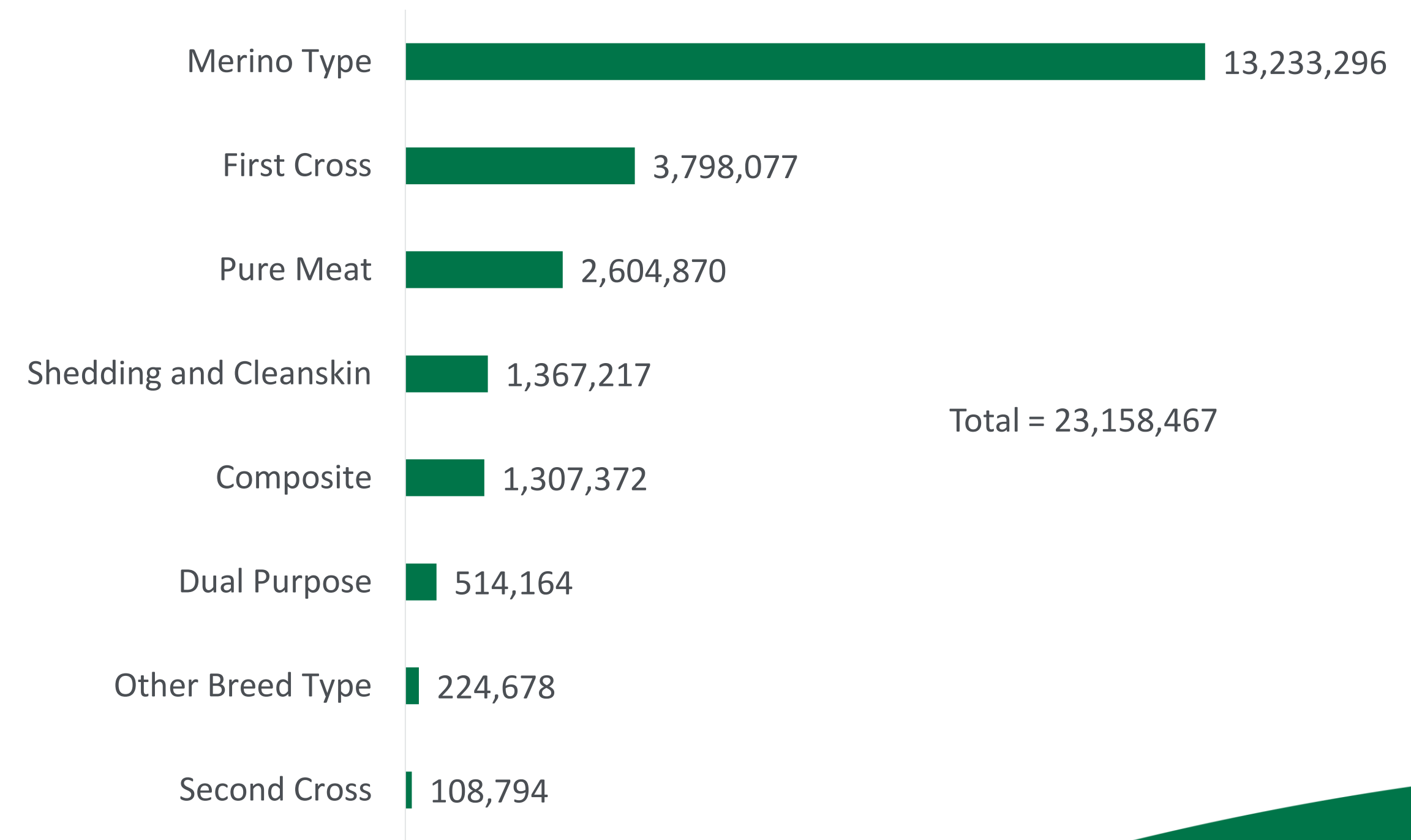
Merino's accounted for 69% of the total breeding ewe flock at 26.7 million head. Merino breeding ewes were further divided into Merino ewes for pure bred Merino production and Merino ewes for crossbred production, accounting for 67% and 33% of the merino flock, respectively.

There were 23.2 million lambs on hand at 28 February, 2017. Similarly to the ewe flock, Merino's made up 57% of the total lamb flock, at 13.2 million head, followed by first cross and pure meat lambs accounting for 16% and 11% of the national lamb flock, respectively.

Number of ewes on hand



Number of lambs on hand



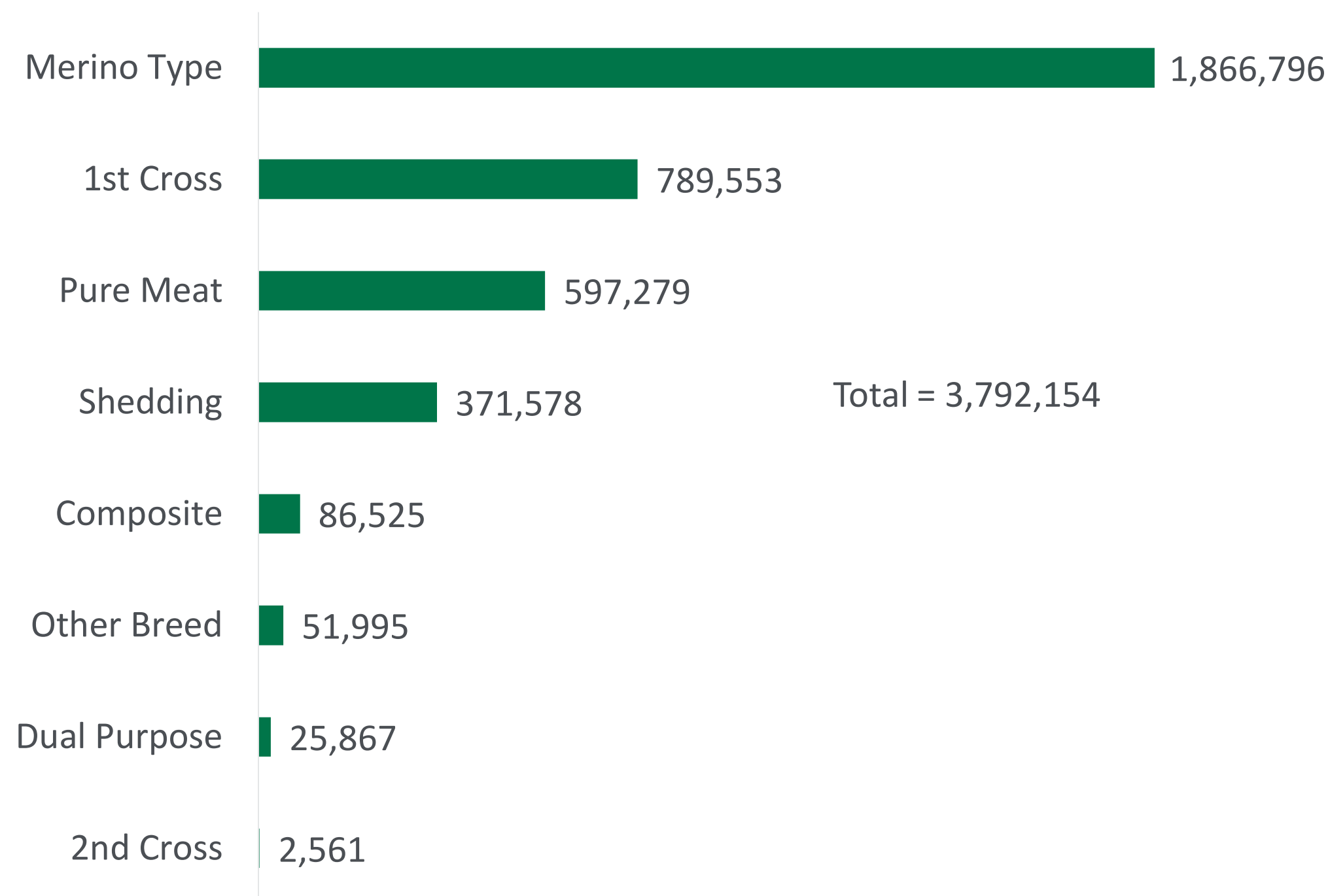
# Lambs marked in the past four months (1 Nov – 28 Feb) and Ewes joined to produce those lambs - Australia



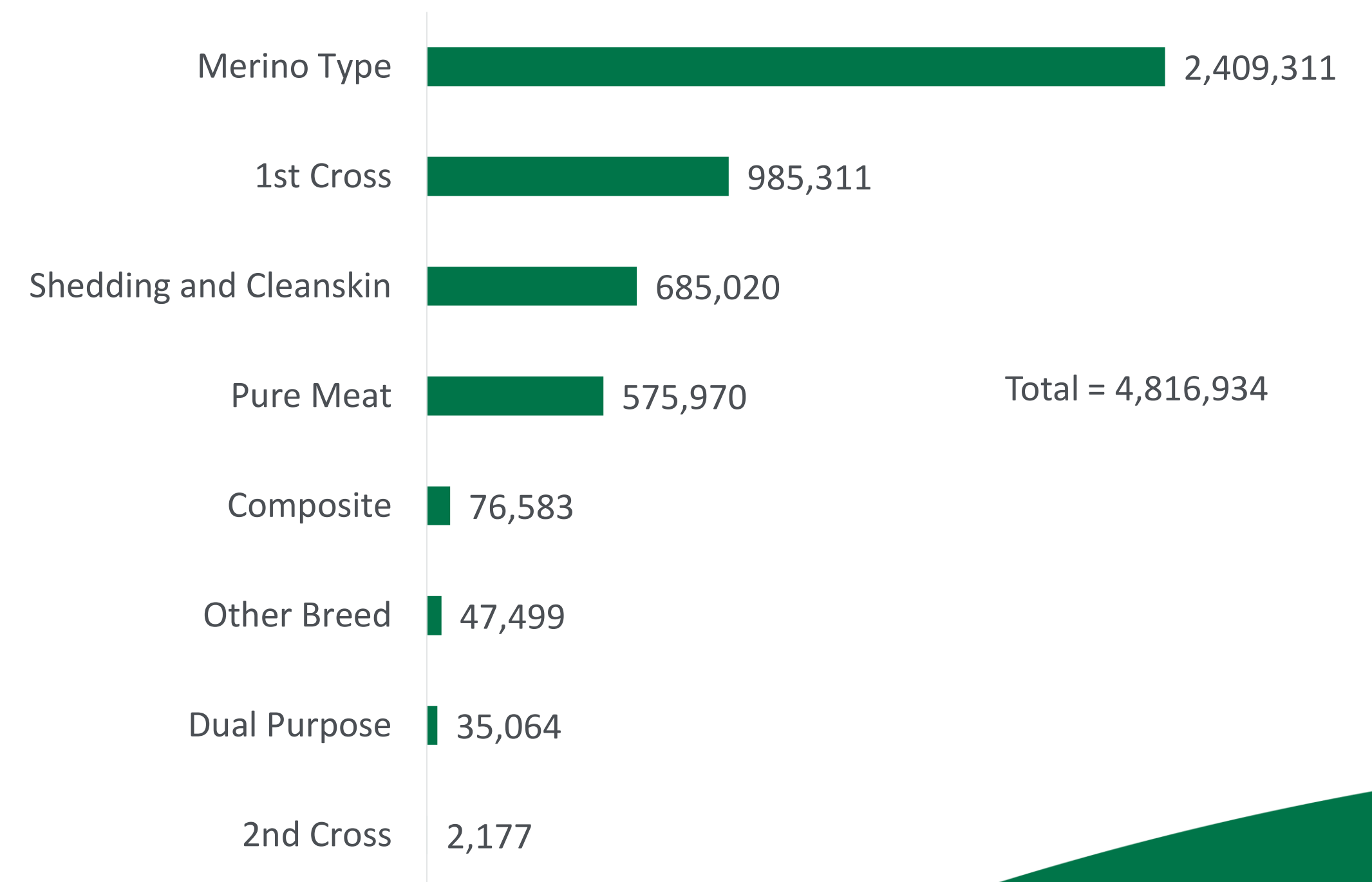
There were a total of 3.8 million lambs marked in the four months (from 1 November 2016 to 28 February 2017). In line with the total number of lambs on hand, Merino's accounted for the largest proportion of lambs marked in the past four months at 49%, with First Cross and pure meat breeds accounting for 21% and 16%, respectively.

A total number of 4.8 million ewes were joined to produce the lambs that were marked in the past four months, with out of season Merino marking rates being very similar to those of other breeds, at 77% and 80%, respectively.

Lambs marked in the past 4 months (Nov 1 to 28 Feb)



Ewes joined to produce marked lambs

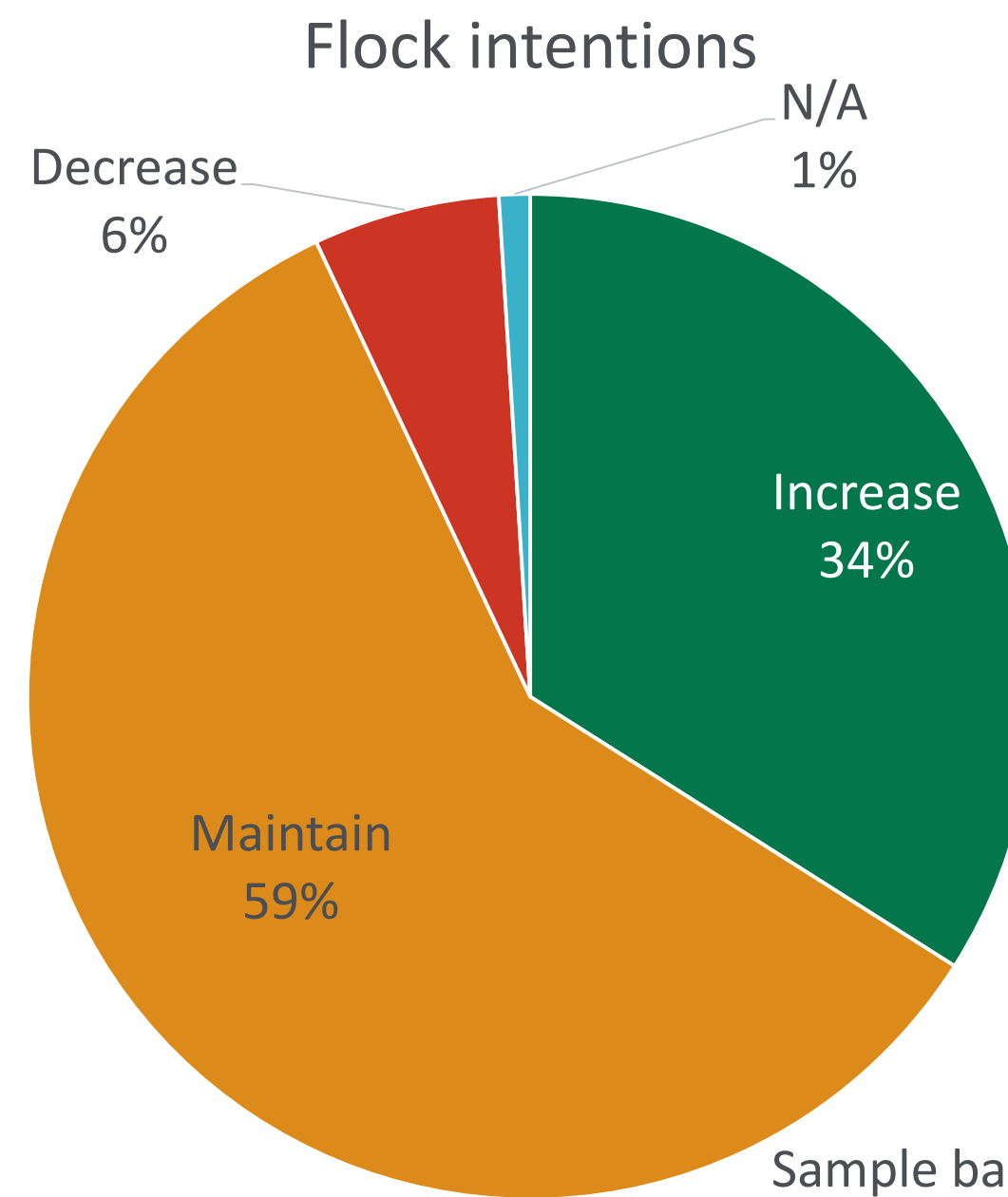
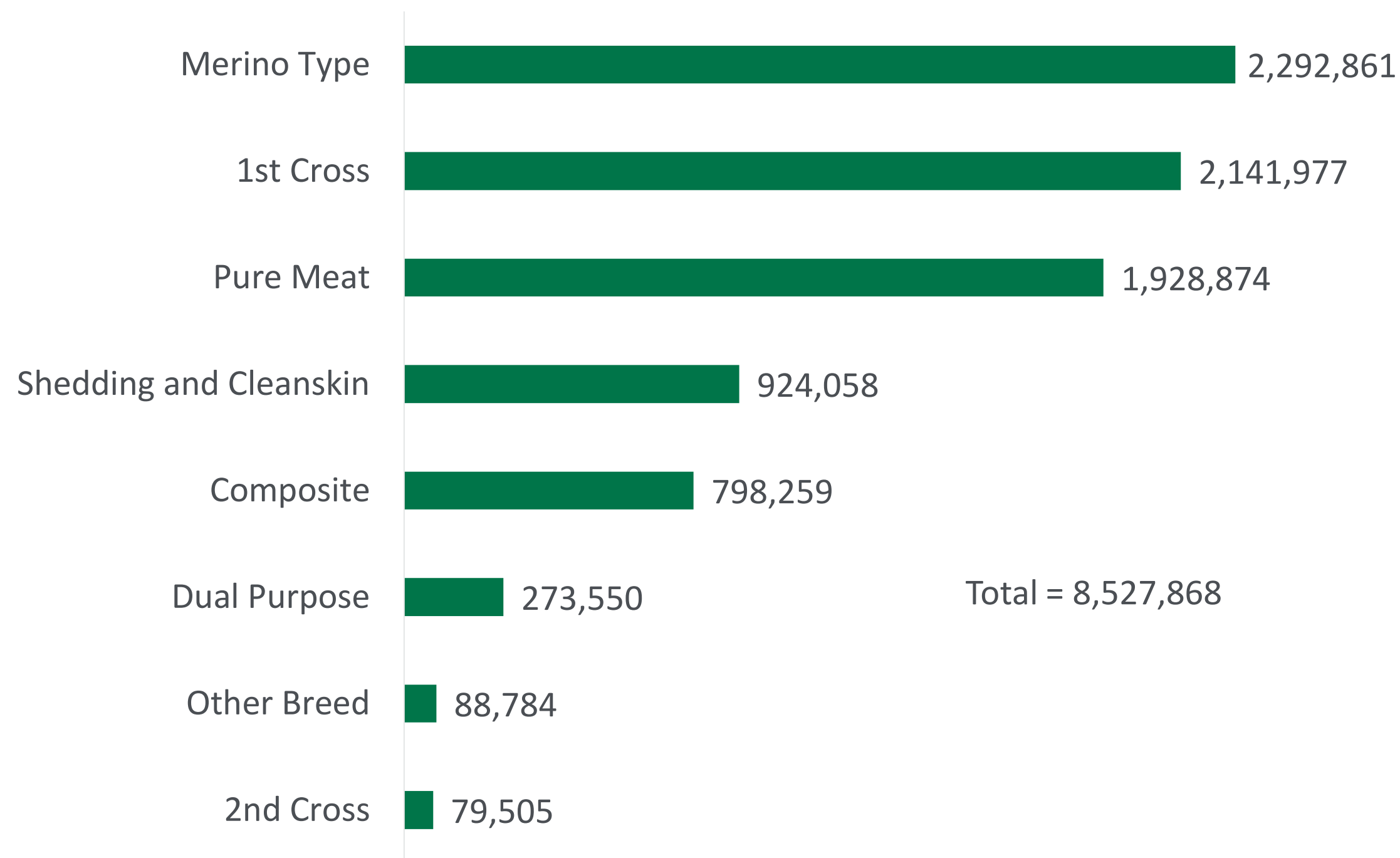


# Expected lamb sales in the next 4 months - Australia

A total number of 8.5 million lambs are expected to be sold in the next four months (1 March 2017 to 30 June 2017), approximately 37% of the total number of lambs on hand. Of these: Merino's, 1<sup>st</sup> Crosses and Pure Meat breeds are expected to account for 27%, 25% and 23% of lamb sales, respectively.

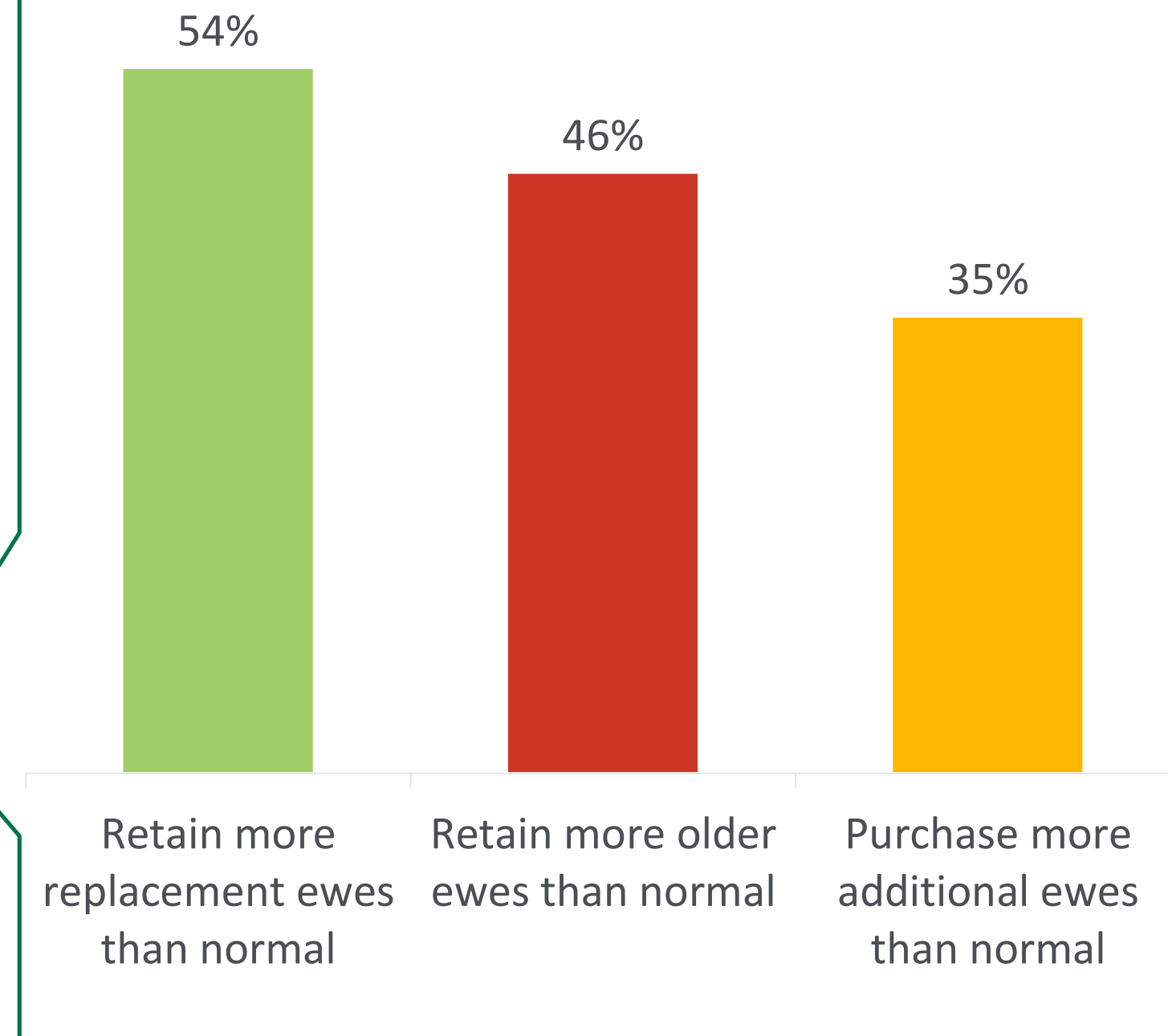
These results are consistent with producer ewe flock intentions for the next 12 months and method of achievement, with 34% looking to increase their ewe flocks and 54% of them looking to retain more replacement ewes than normal in order to achieve this increase.

Expected sales in the next 4 months



Sample base (respondents) n=2,295

How to achieve increase

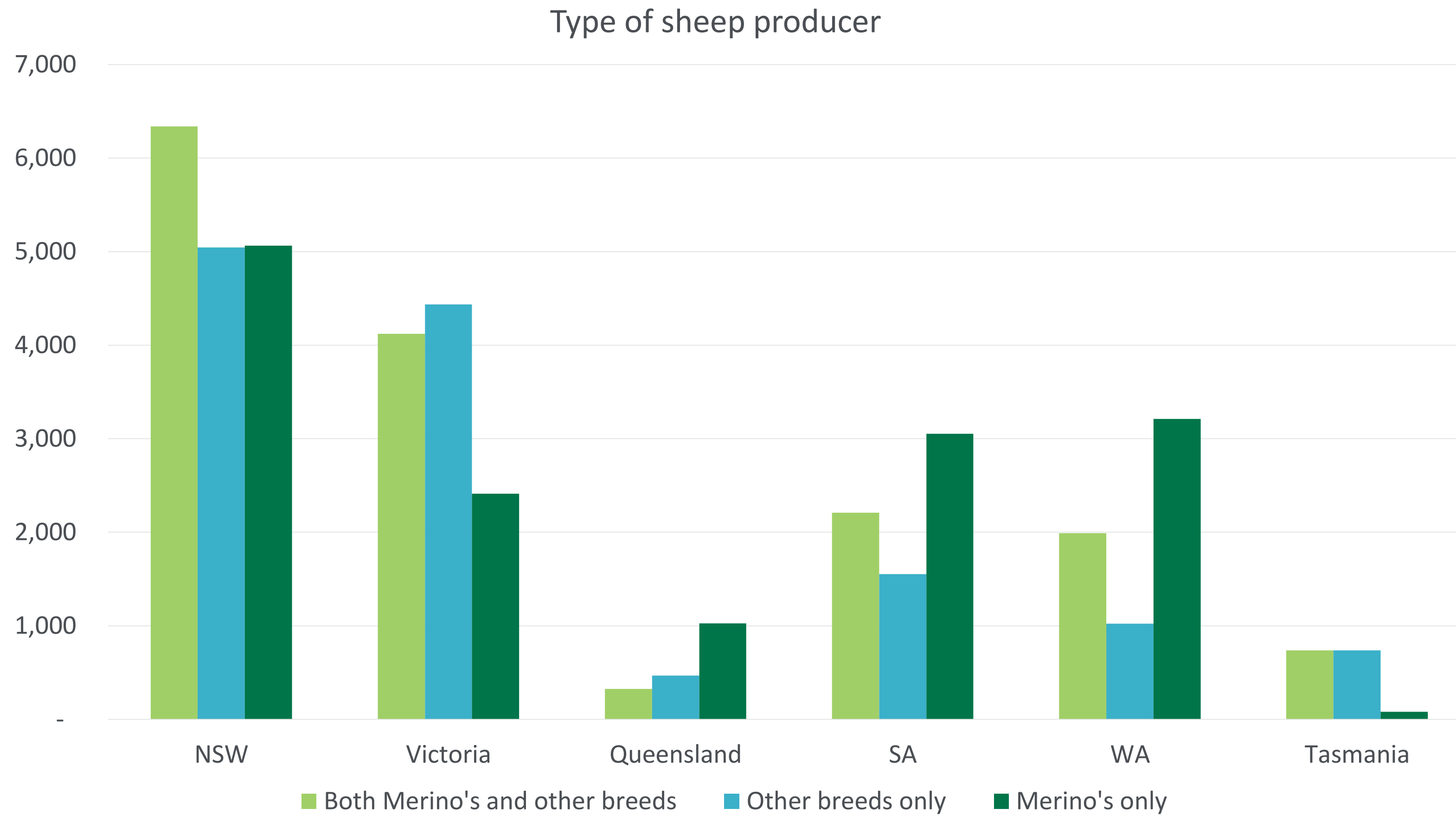


Sample base (properties) n=3,552



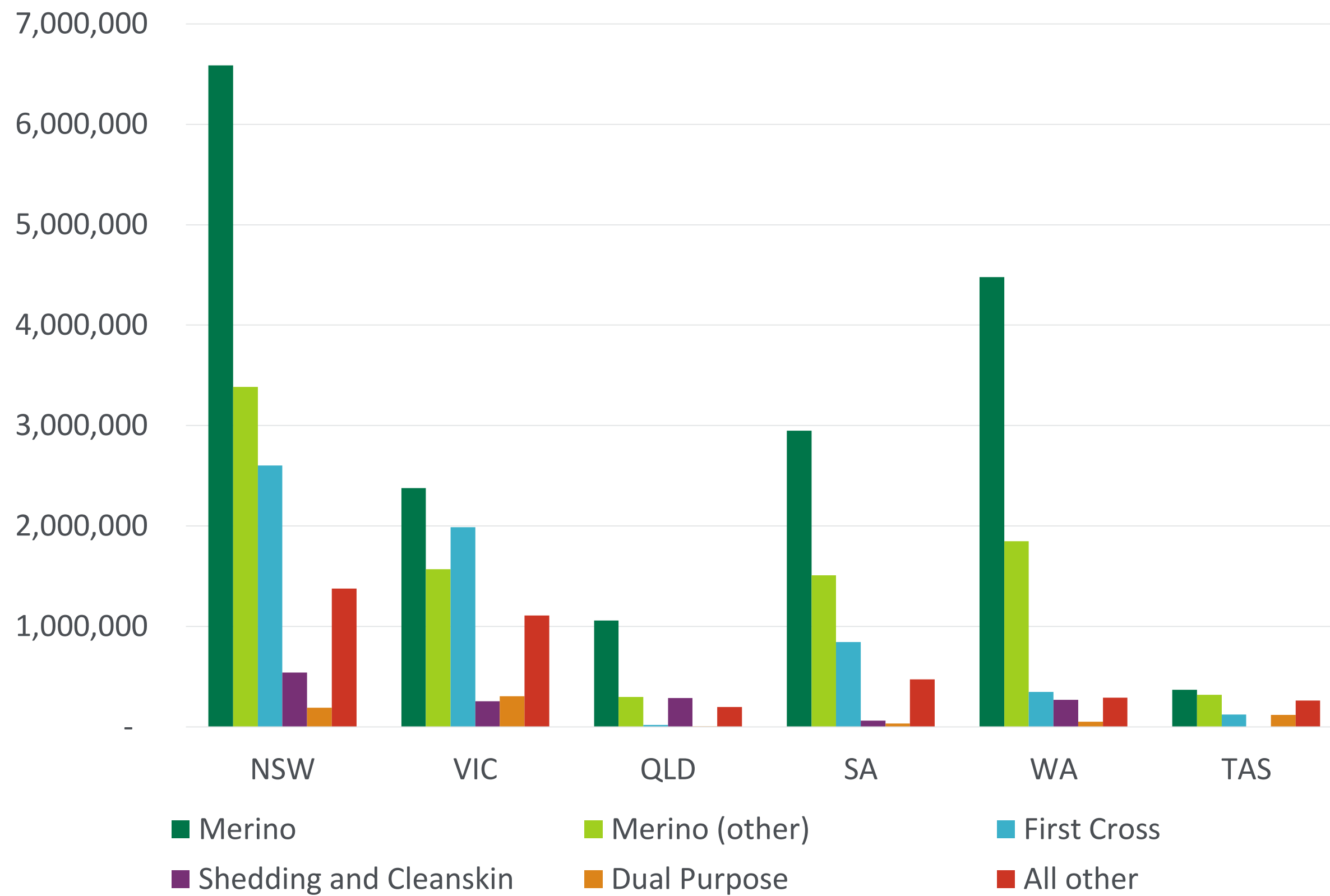
# Results by State

# Type of producer - State

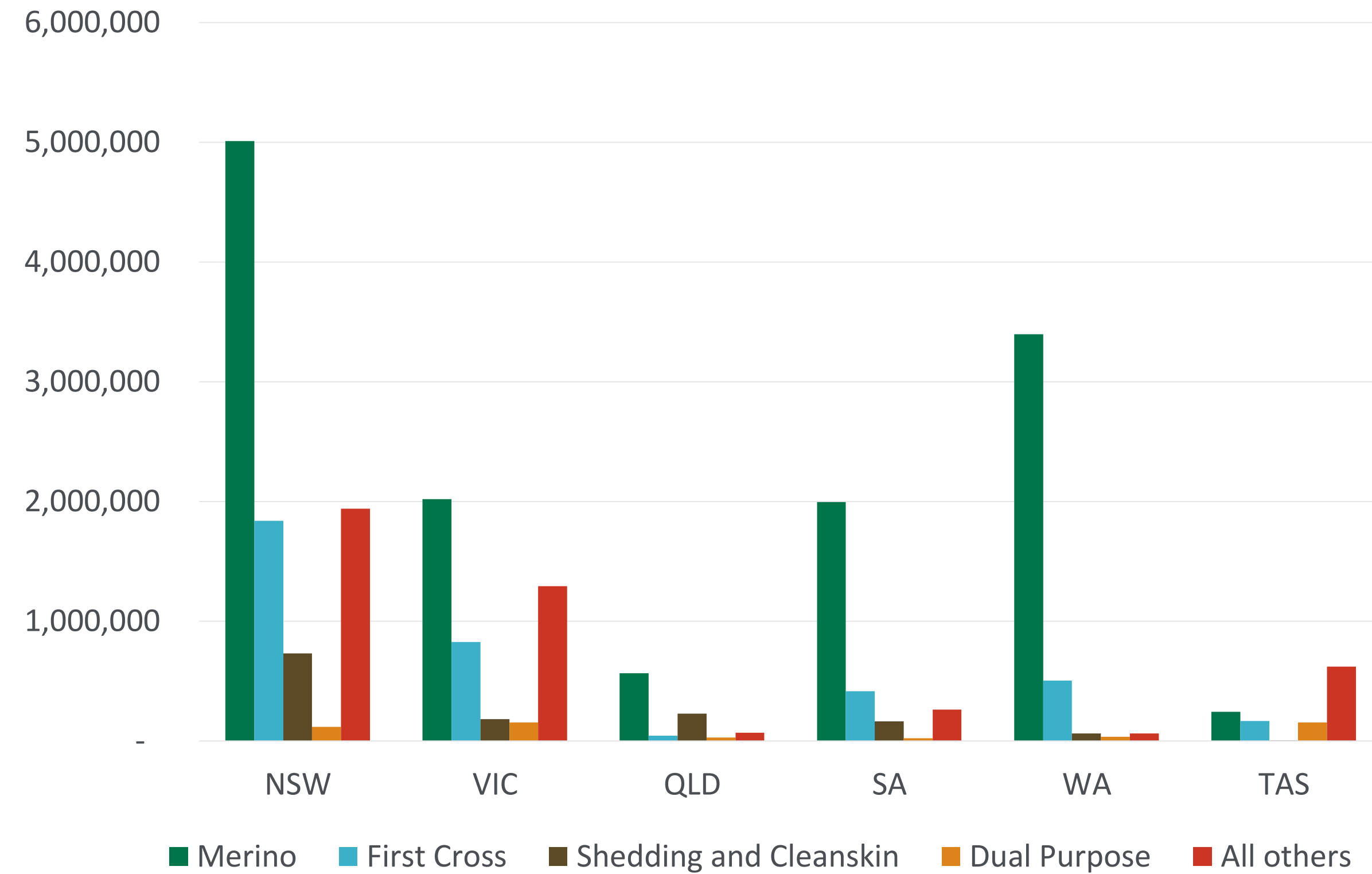


# Ewes on hand and lambs on hand - State

Ewes on hand

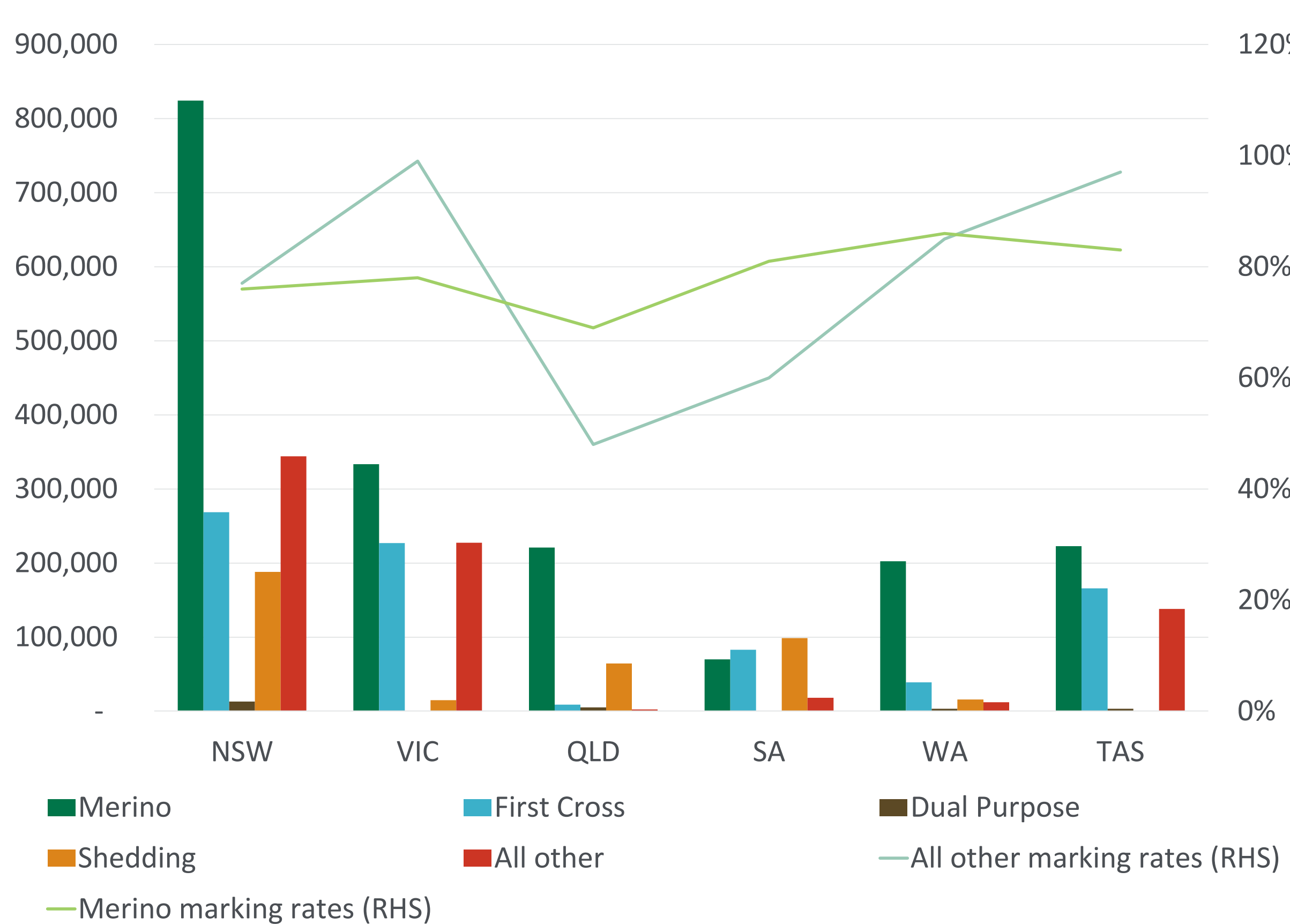


Lambs on hand



# Lambs marked in the past four months and Ewes joined to produce those lambs - State

Lambs marked in the past 4 months (1 Nov – 28 Feb)



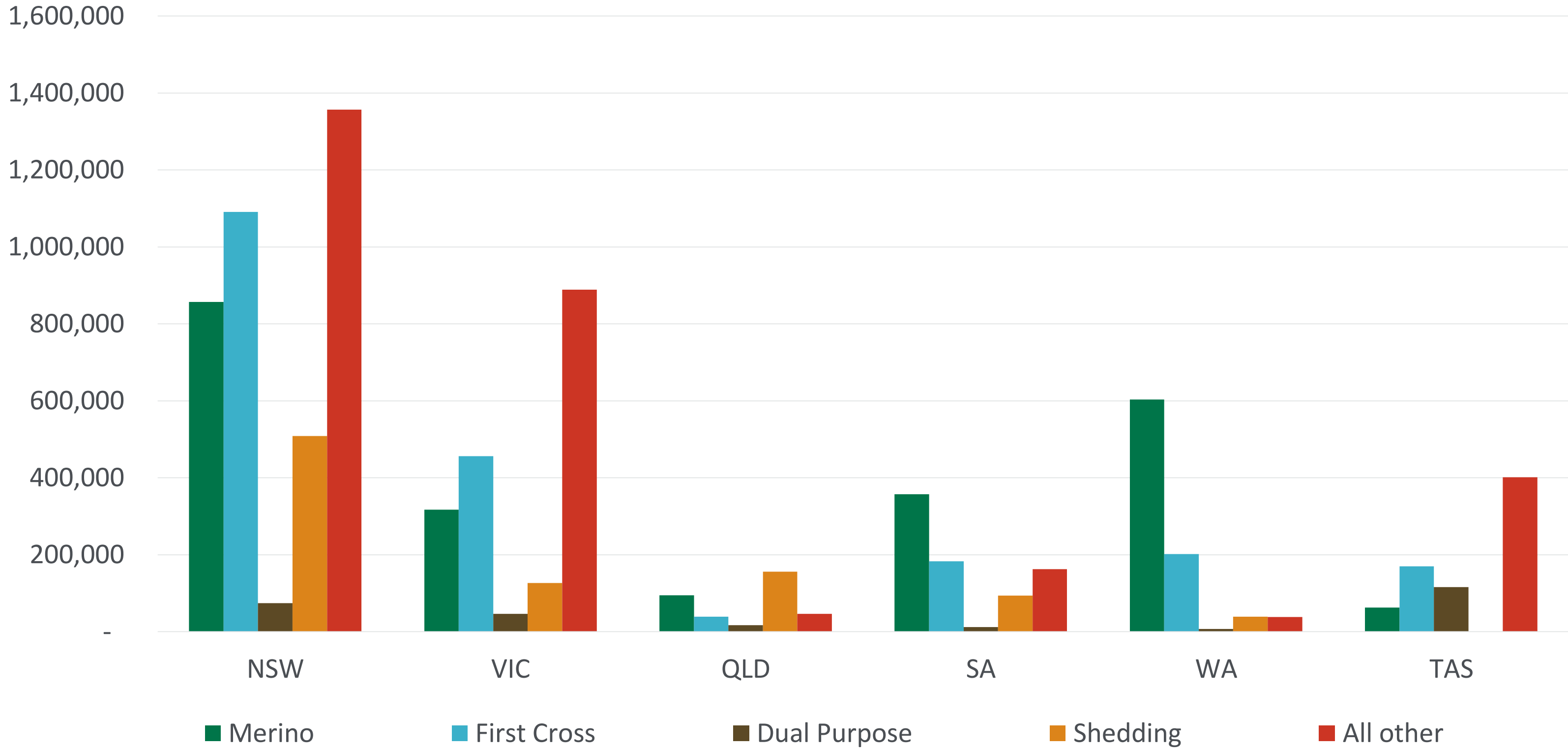
Ewes joined to produce those lambs



# Expected lamb sales in the next four months - State



Expected lamb sales in the next 4 months (1 Mar – 30 June)

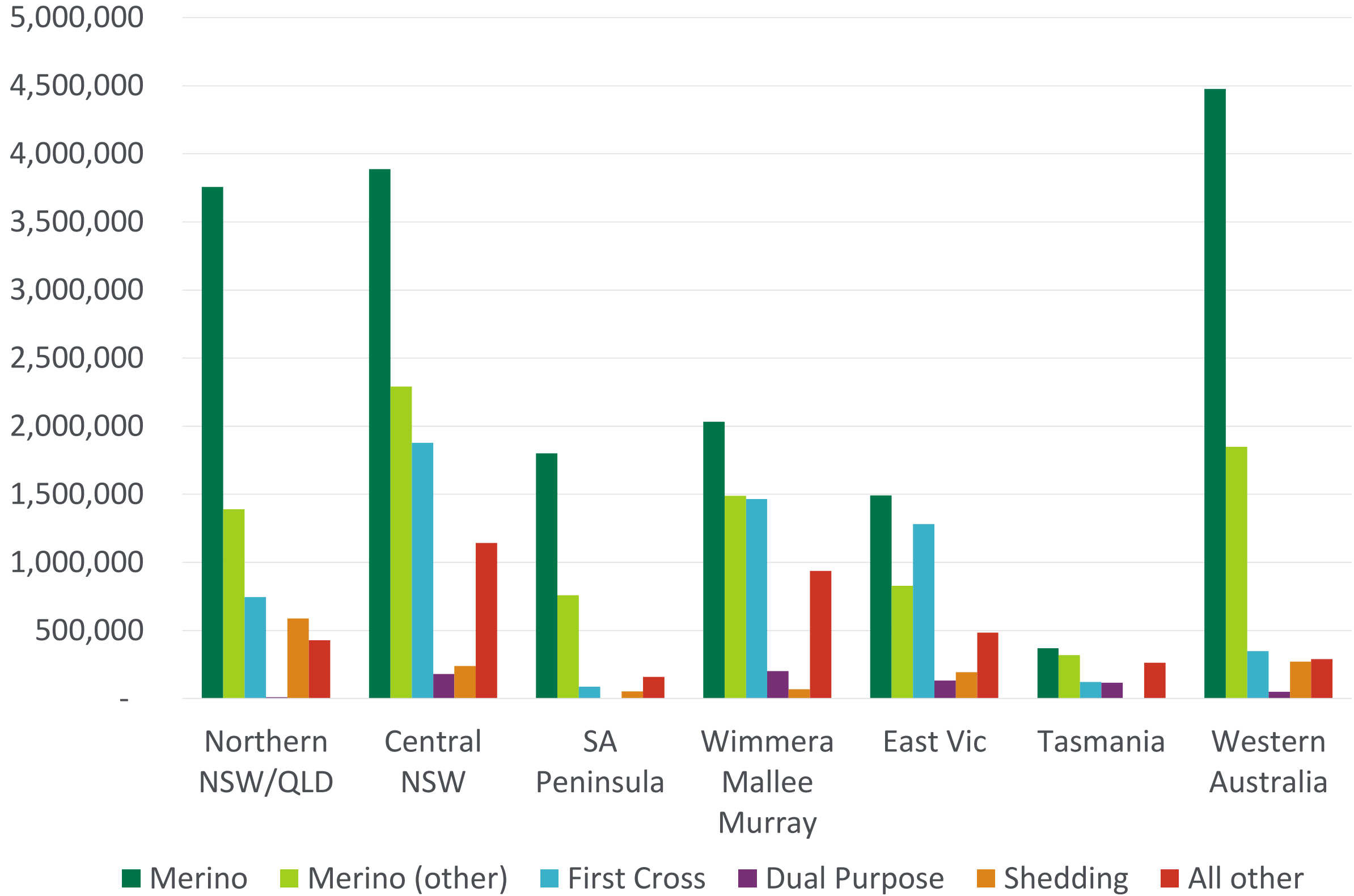


# Results by MLA Reporting Region

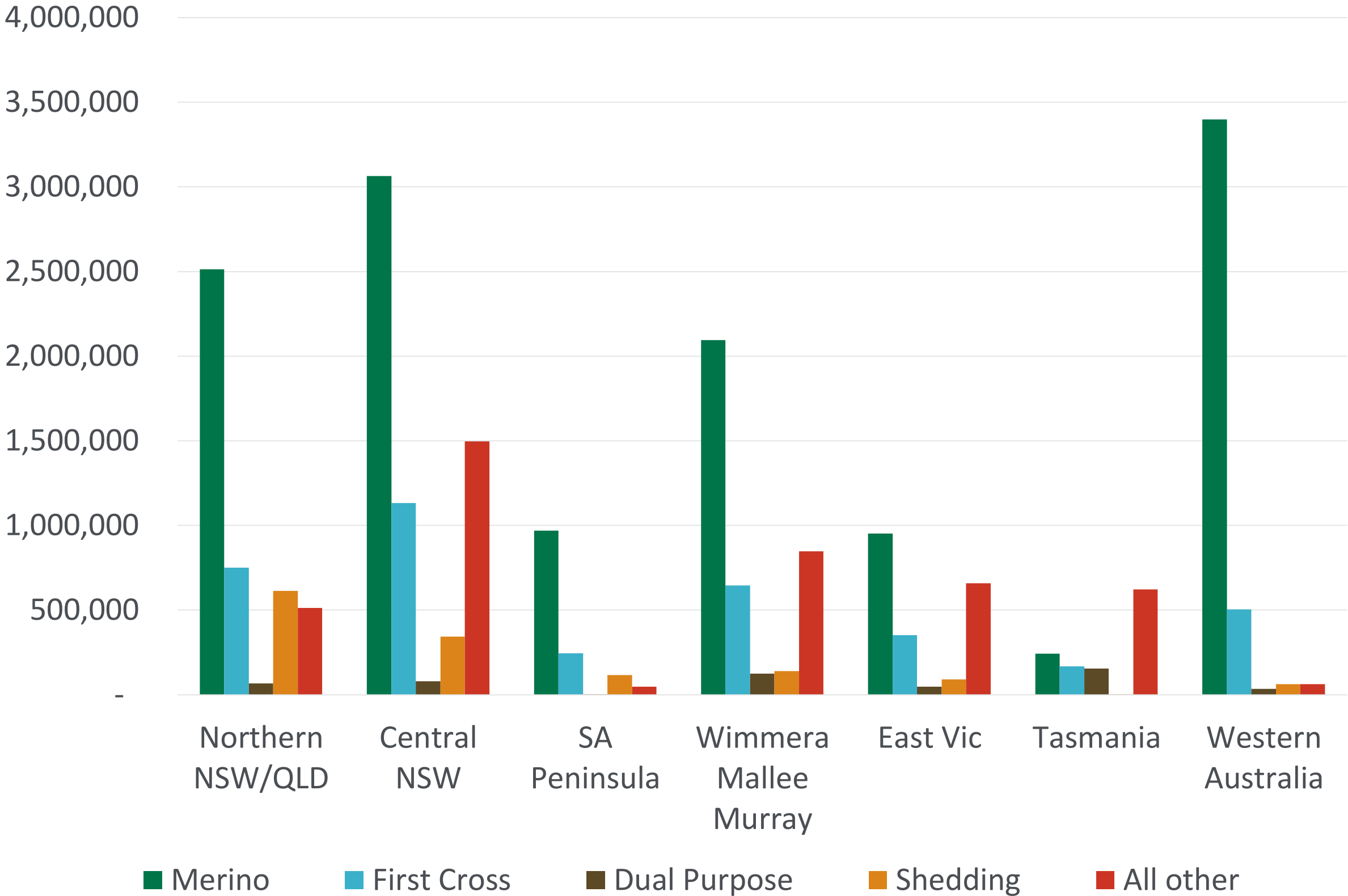
# Ewes on hand and lambs on hand 28 Feb – MLA reporting regions



Ewes on hand

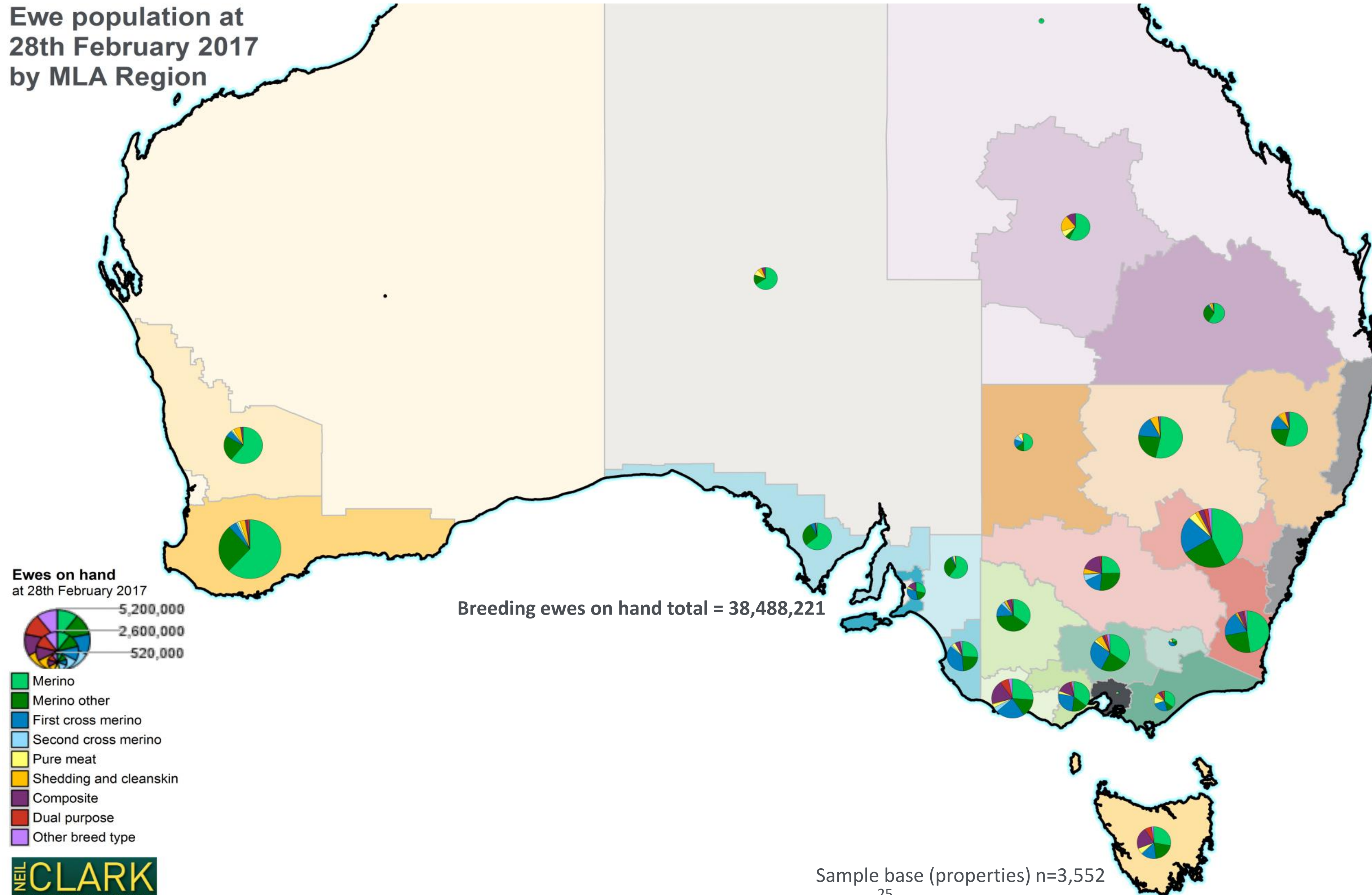


Lambs on hand



# Ewes on hand – MLA reporting regions

Ewe population at 28th February 2017 by MLA Region



The breeding ewe population was largest in southern WA and the central western region NSW, with around 5.0 million and 4.8 million head, respectively.

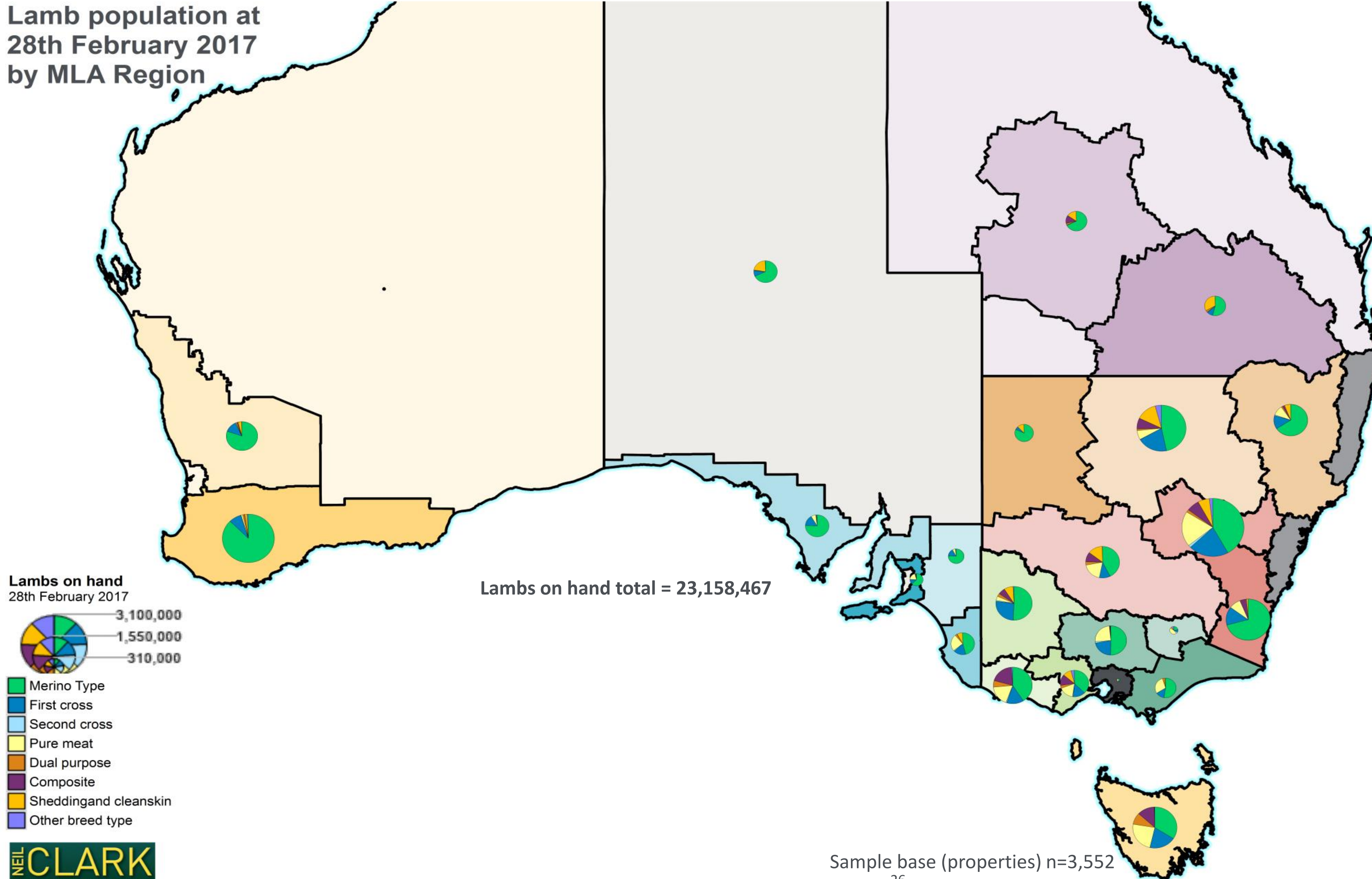
Although the largest ewe flock was recorded in NSW, with the North western, Central west and South eastern regions of the state each recording numbers greater than two million head, WA had the largest proportion of Merinos in their flock, at 87%.

Conversely, the largest percentage of non-Merino ewes was in Victoria, with all non-Merino breeds combining to account for 48% of Victoria's breeding ewe population.



# Lambs on hand – MLA reporting regions

Lamb population at 28th February 2017 by MLA Region



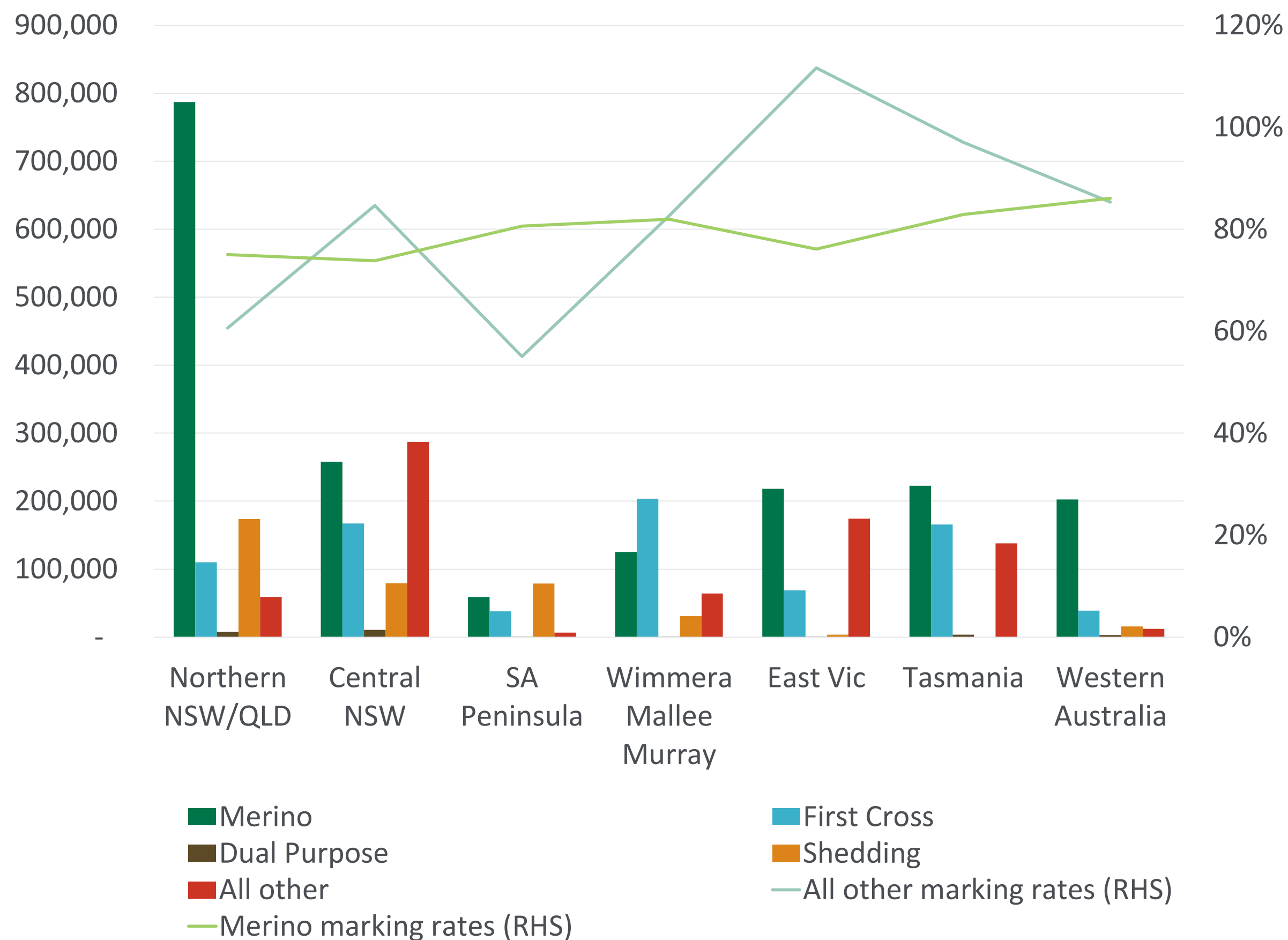
In line with a larger ewe flock population, the number of lambs on hand on 28 February was greatest in the central western region of NSW, at around 3.3 million head. This was followed by Southern WA, recording around 2.7 million head.

Although the proportion of pure meat breeds of lamb reduced significantly across most regions during the past four months (generally due to Merino flock rebuilding), the proportion of pure meat breeds remained relatively high in Tasmania at 34%.

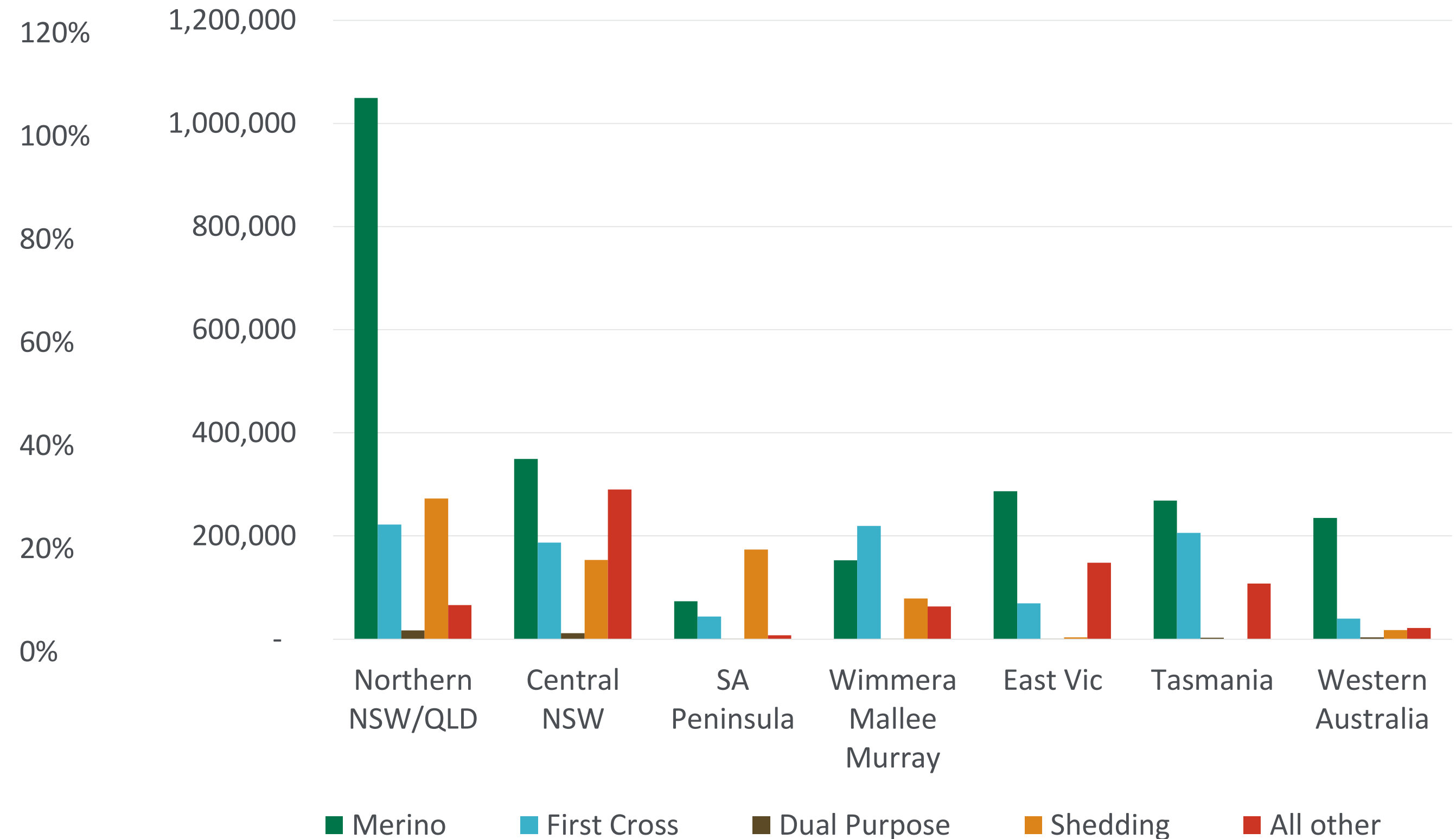
While NSW had the largest Merino lamb flock nationally at around 5 million head, Merinos accounted for 84% of the WA lamb flock at 3.4 million head. This was underpinned a significant number of Merino lambs in Southern WA with around 2.2 million head on hand.

# Lambs marked in the past 4 months and Ewes joined to produce those lambs – MLA reporting regions

Lambs marked in the past 4 months 1 Nov – 28 Feb

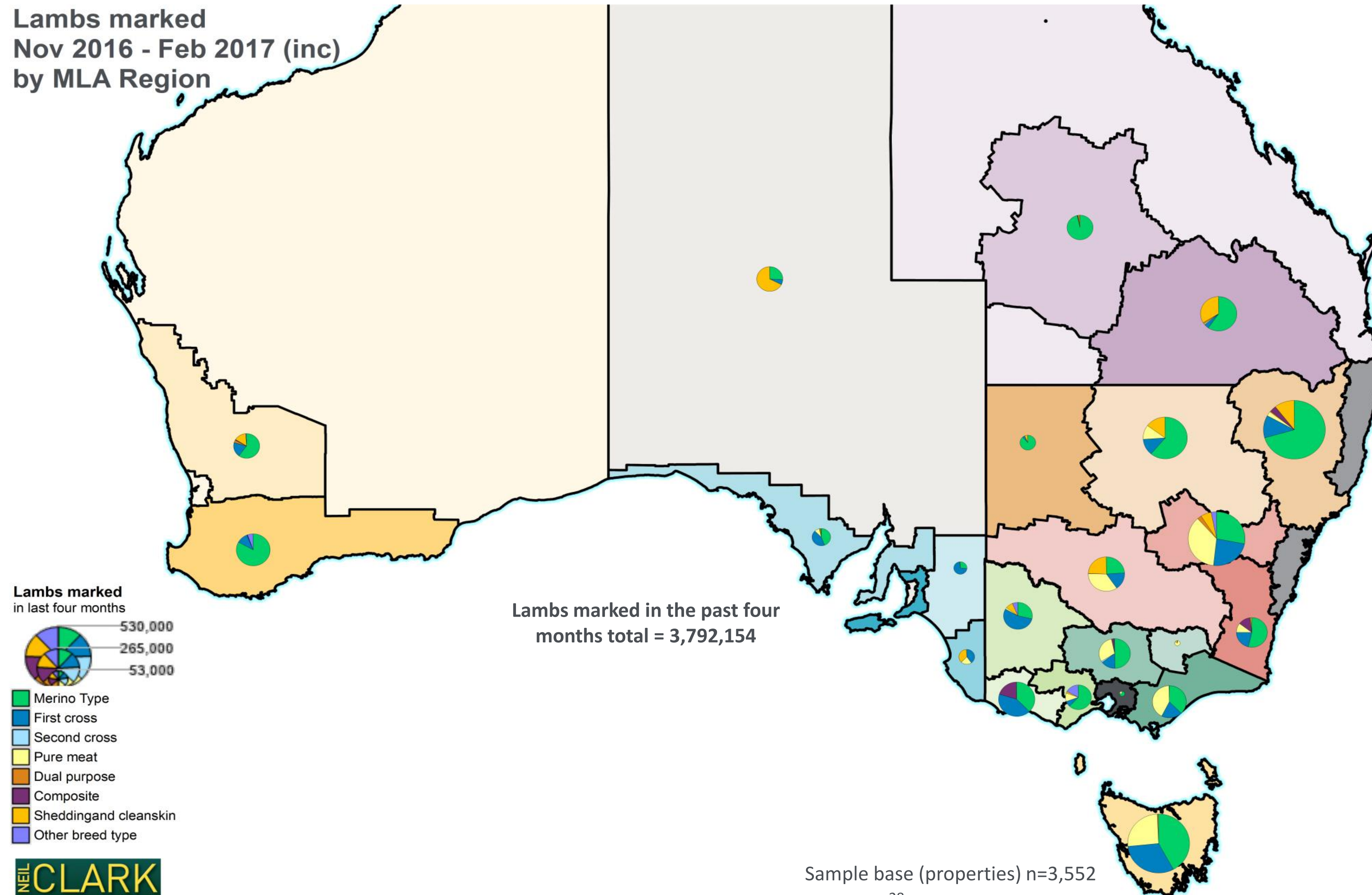


Ewes joined to produce those lambs



# Lambs marked in the past four months

Lambs marked  
Nov 2016 - Feb 2017 (inc)  
by MLA Region

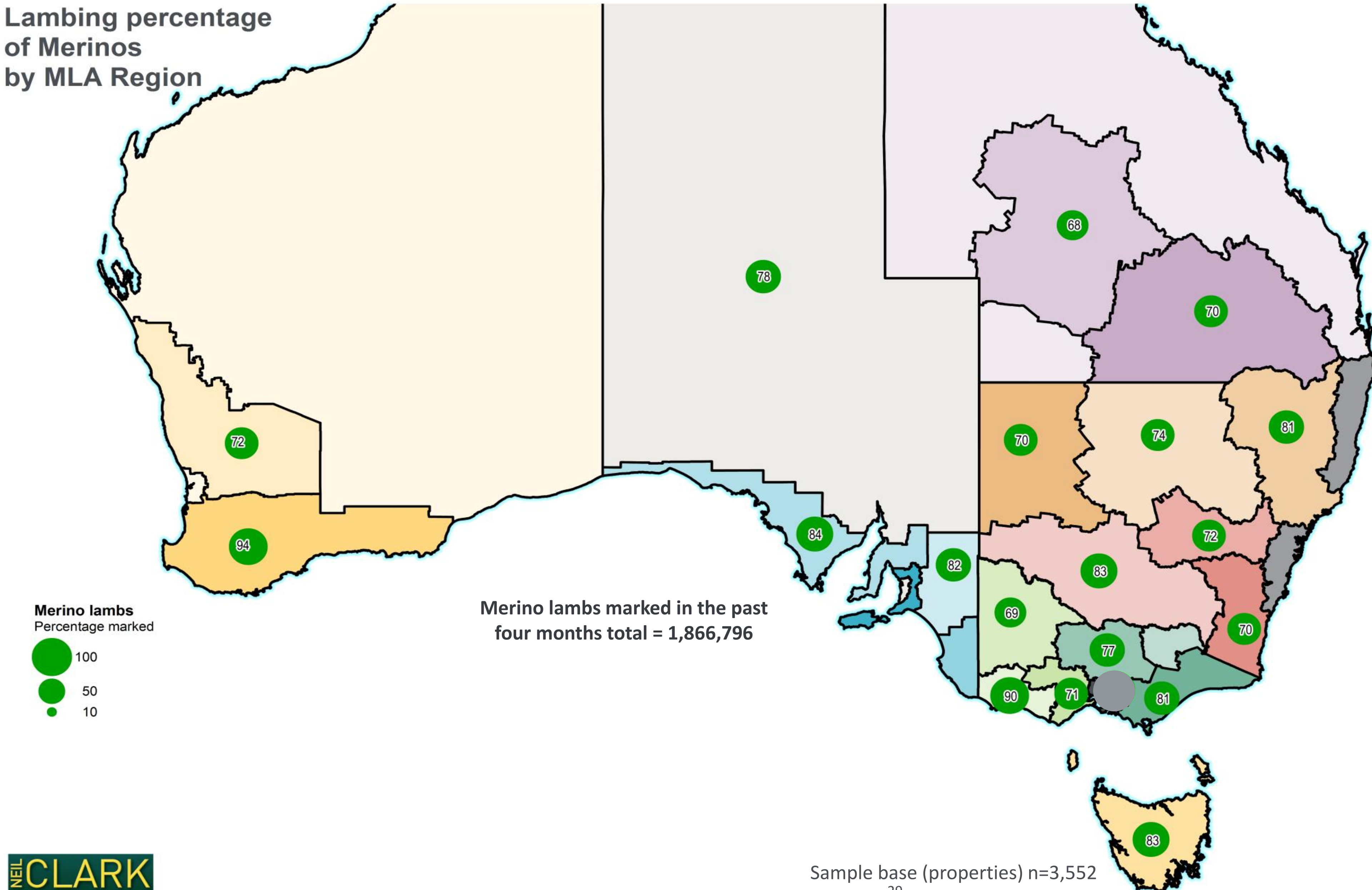


Around 3.8 million late season lambs were marked over the past four months. Tasmania, Central west and Northern & Hunter accounted for a large proportion of the new lambs, with markings of 500,000, 435,000 and 495,000 head respectively.

On the other hand, a great growing season in SA saw very few lambs marked over the past four months, with most dropping before October.

# Merino marking rates - MLA reporting regions

Lambing percentage of Merinos by MLA Region



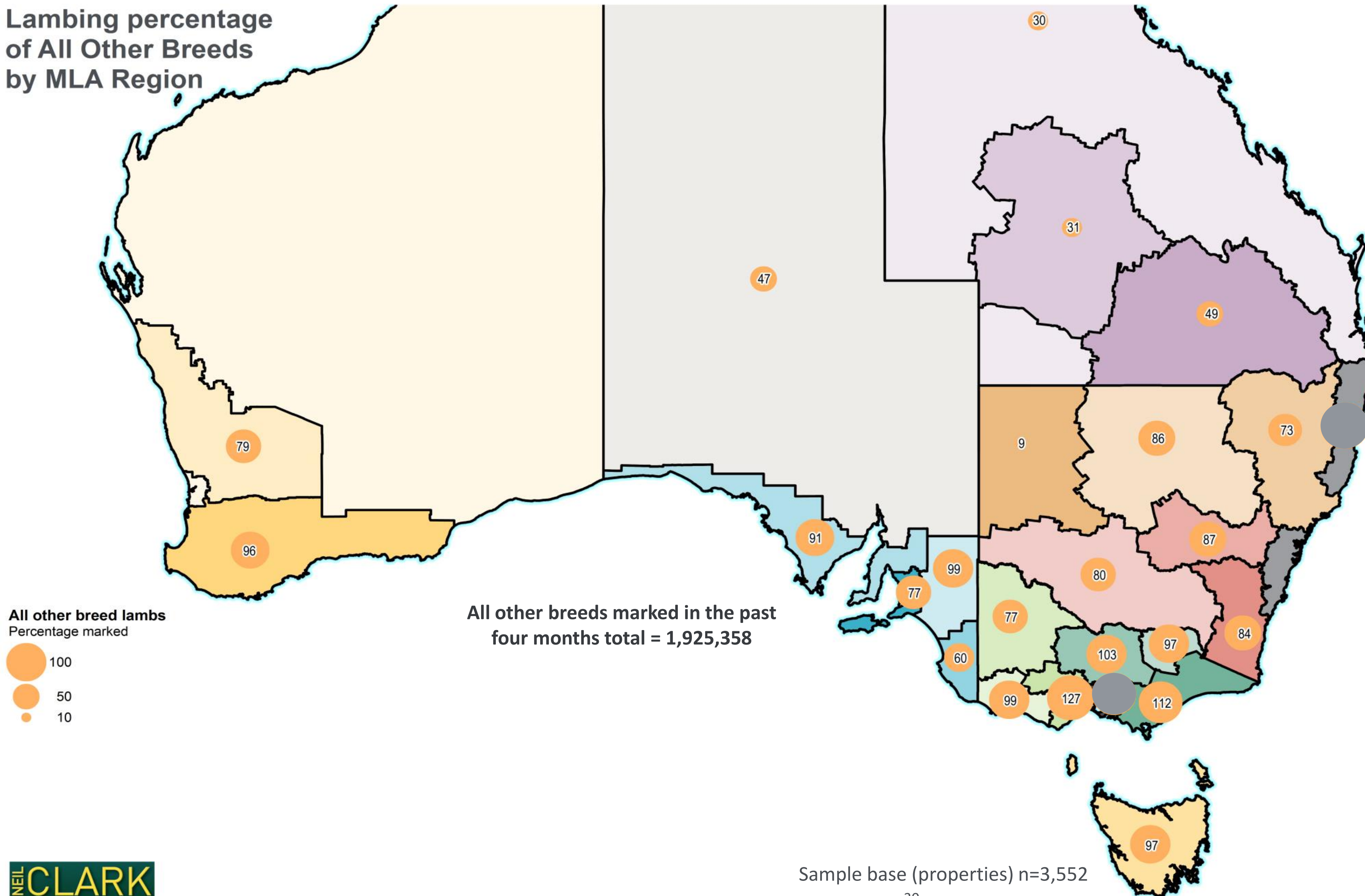
The highest Merino marking rate was recorded in the southern WA region (94%), followed by 90% in the Western Districts of Victoria. Conversely, the lowest marking rates were recorded in Central Queensland and Wimmera & Mallee with 68% and 69%, respectively.

On a state basis, WA and Tasmania had the highest marking rates at 86% and 83%, while Queensland recorded the lowest Merino marking rate of 69%.

**Note:** These marking rates are for the period between 1 November 2016 and 28 February 2017. As this is outside the peak marking period, these are not representations of the average annual marking rates.

# All other breed marking rates - MLA reporting regions

Lambing percentage of All Other Breeds by MLA Region



The Barwon & Central Highlands and Gippsland regions of Victoria recorded the highest marking rates for non-Merino lambs, at 127% and 112%, respectively. These are significantly high marking rates for summer dropped lambs.

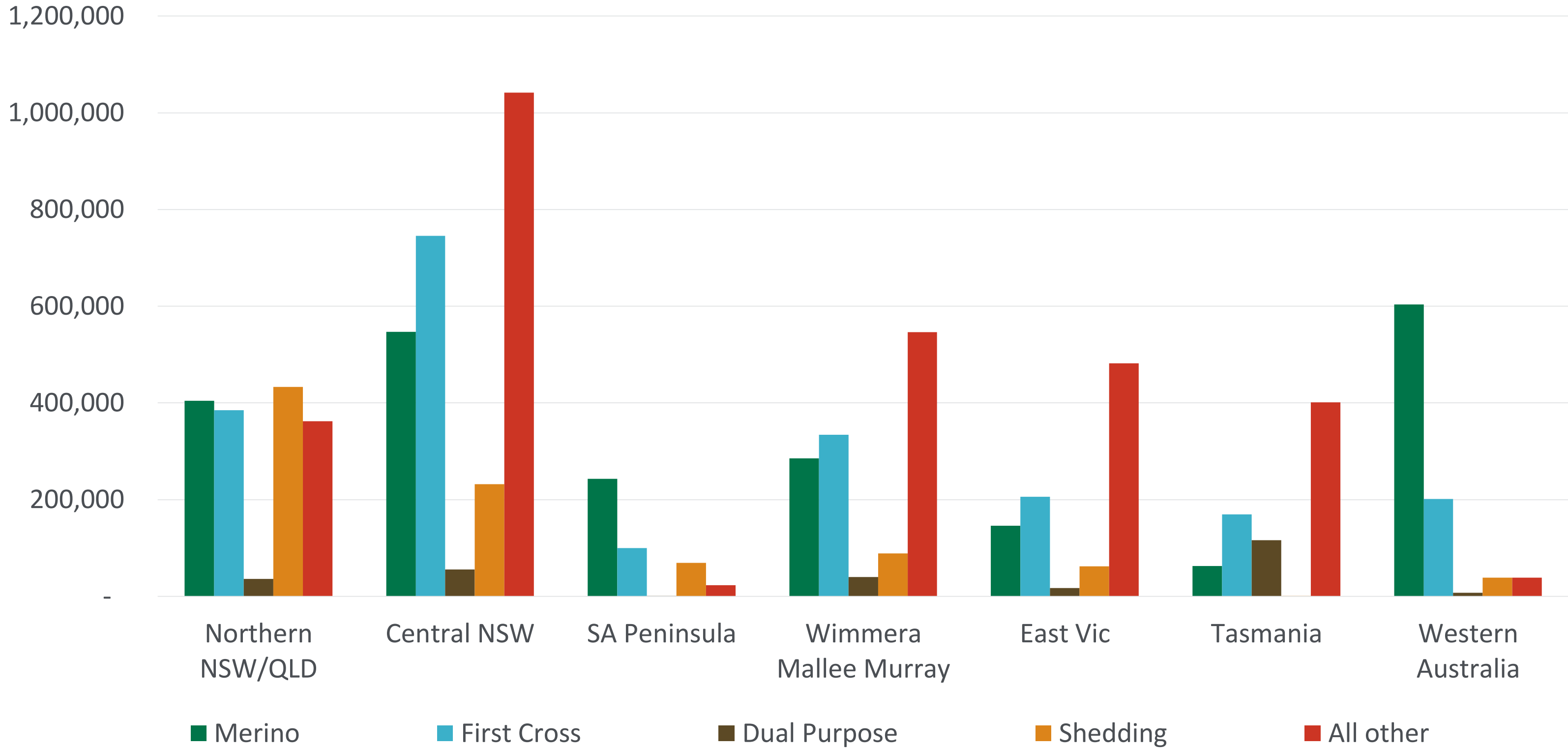
Although strong seasonal conditions in Tasmania saw the average non-Merino marking rate over the past four months reach 97%, Victoria recorded the largest average marking rate of 99%. In comparison, the average non-Merino marking rate in Queensland was 48%, driven by a 31% marking rate in Central Queensland.

**Note:** These marking rates are for the period between 1 November 2016 and 28 February 2017. As this is outside the peak marking period, these are not representations of the average annual marking rates.

# Expected lamb sales in next four months 1 Mar – 30 June – MLA reporting regions

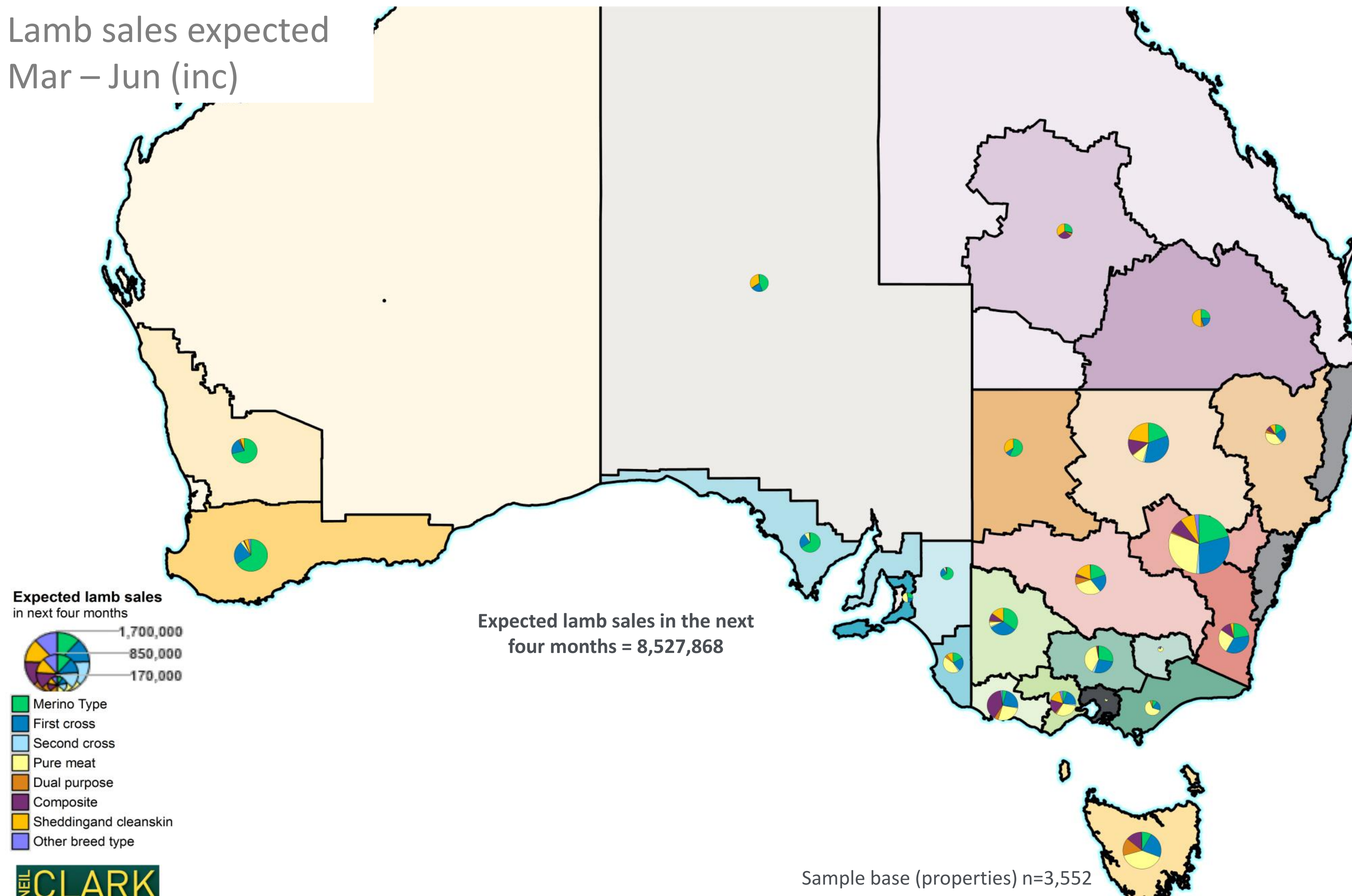


Expected lamb sales in the next 4 months



# Expected lamb sales in next four months

Lamb sales expected  
Mar – Jun (inc)



Over the next four months (1 March 2017 to 30 June 2017), most lamb sales are expected to occur in the central west region of NSW, with the sale of Pure meat and first cross lambs combining to account for more than half (58%) of the lamb sales in the region.

Similarly, Pure meat breeds are expected to account for a large proportion of total lamb sales, especially in the southern regions, with Pure meat lamb sales likely to account for just under half of the total sales in most regions of Victoria and Tasmania over the next four months.

NSW is expected to account for 46% of total lamb sales over the next four months. This is followed by Victoria, accounting for 22% of total lamb sales. In addition, NSW producers are expected to sell the most Merino lambs from March to June, at around 850,000 head.

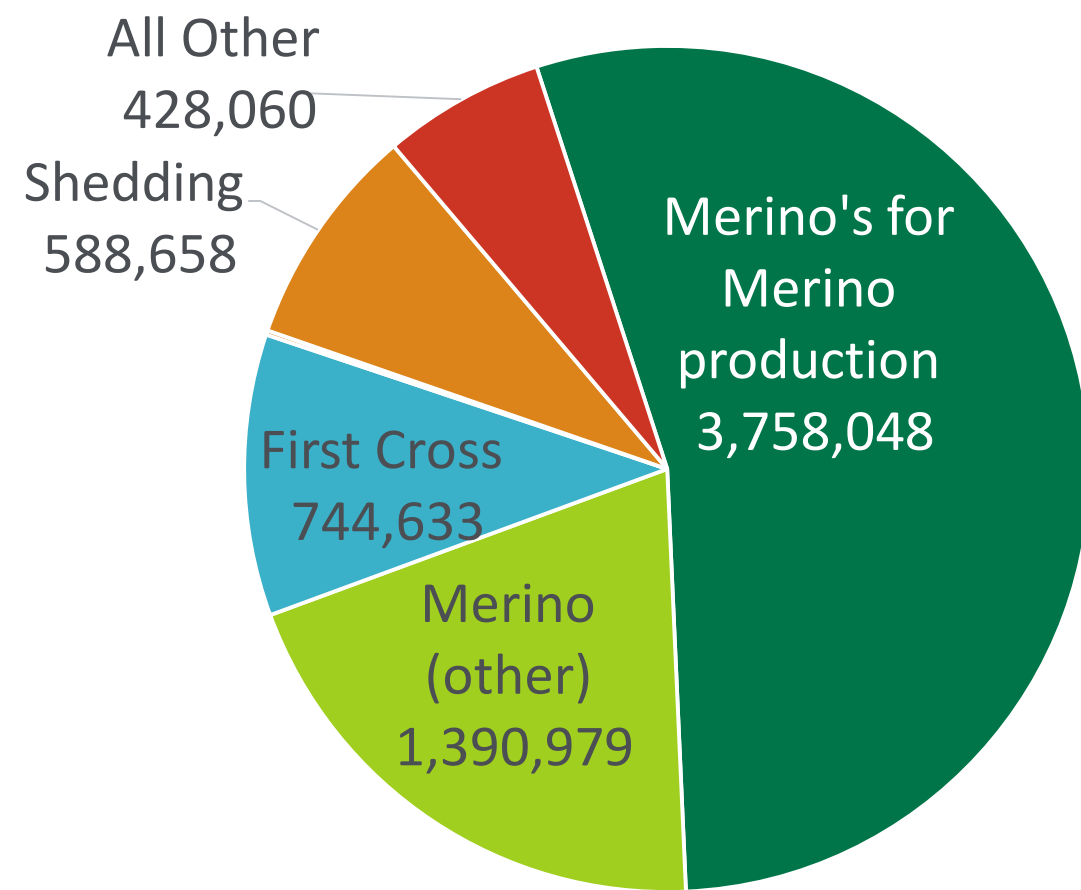
Sample base (properties) n=3,552

# Regional Snapshots

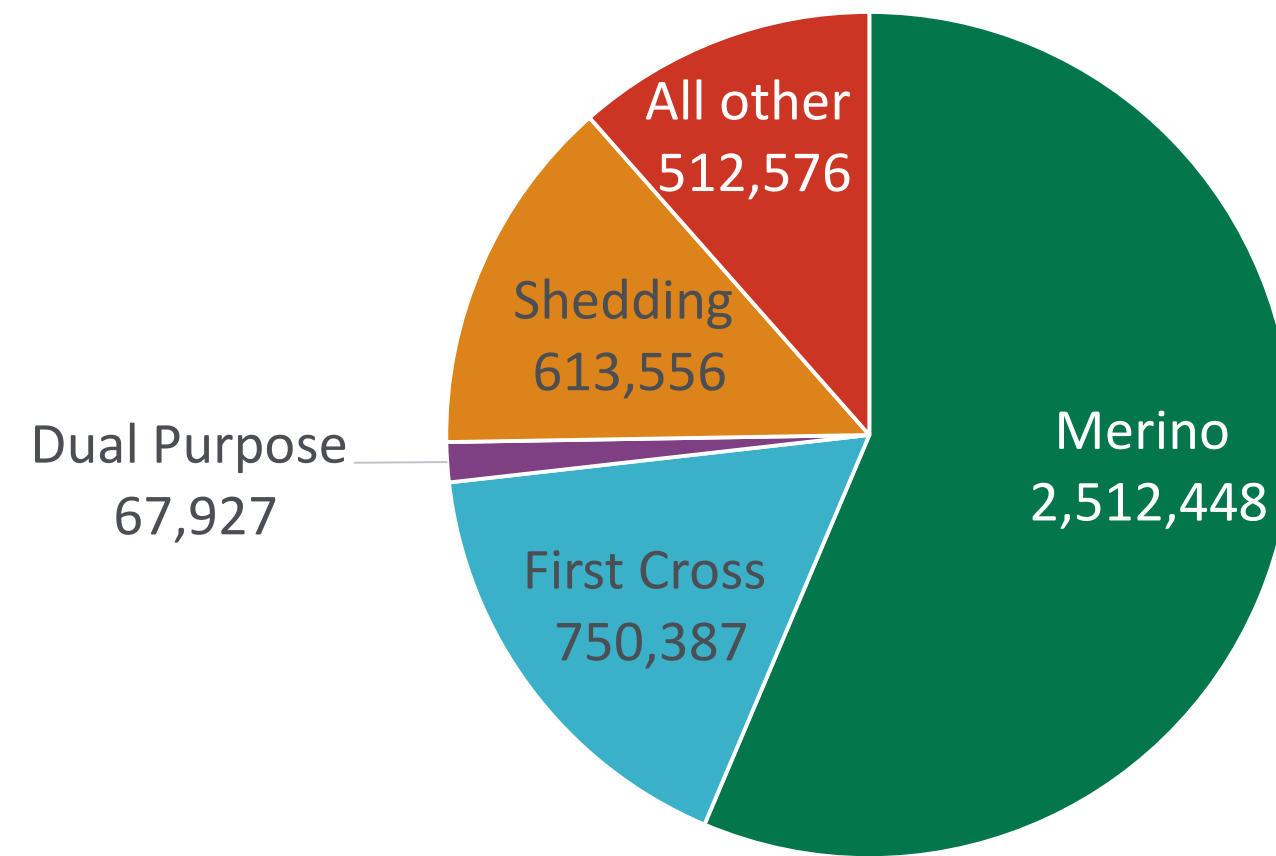


# Northern NSW/QLD

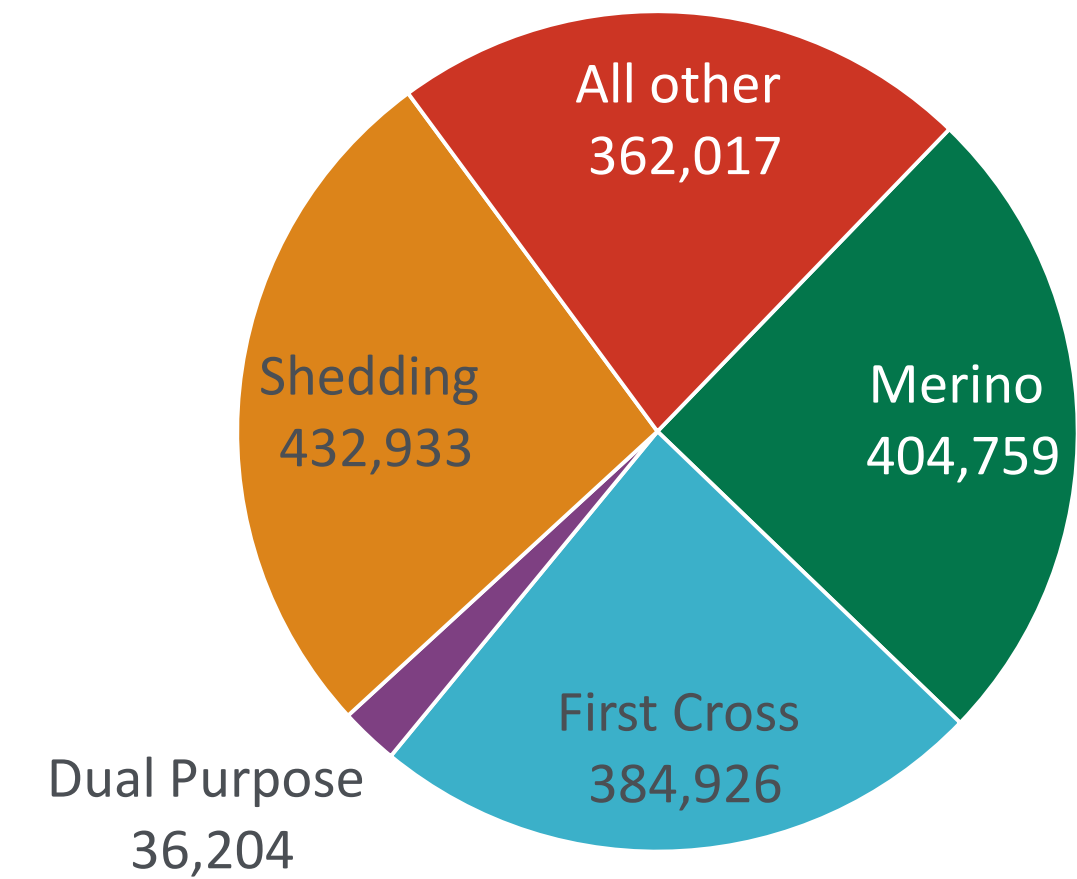
Breeding ewes on hand



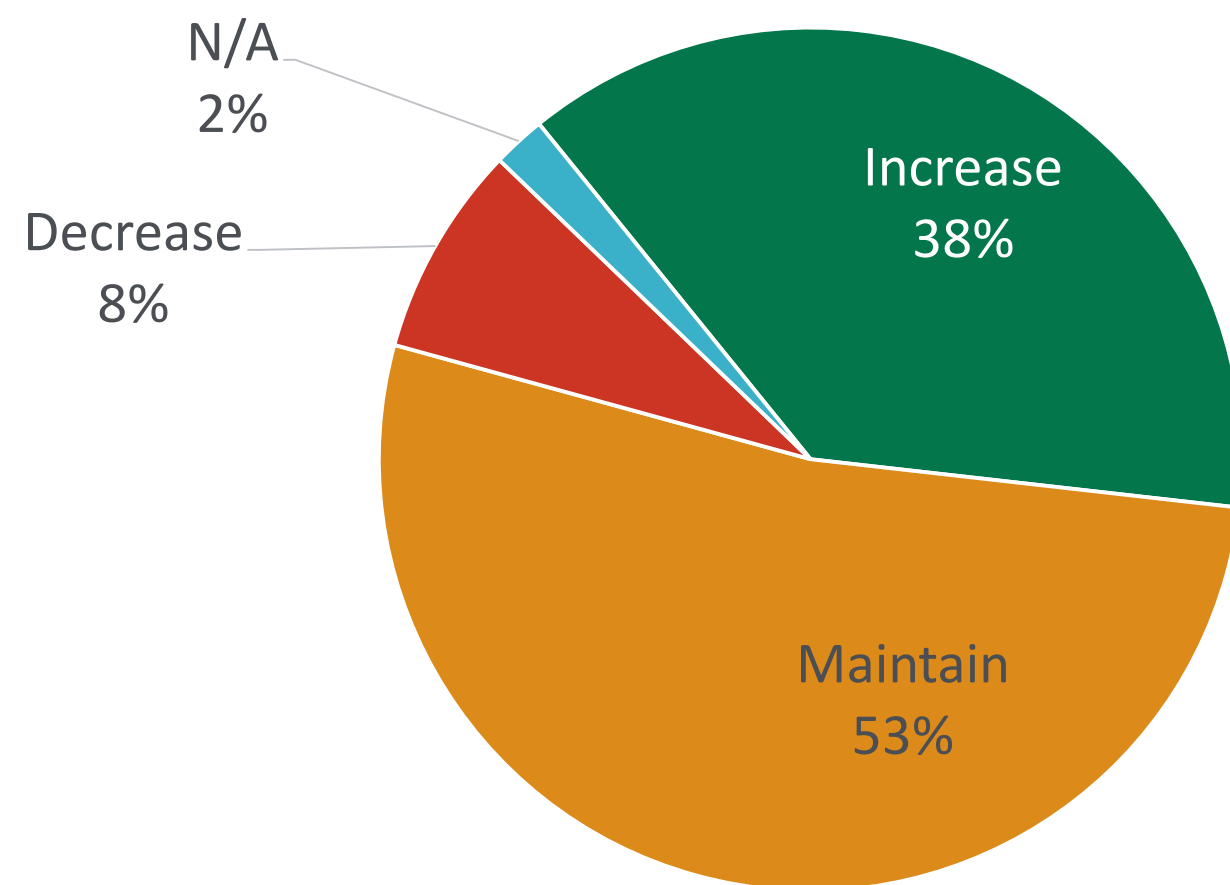
Lambs on hand



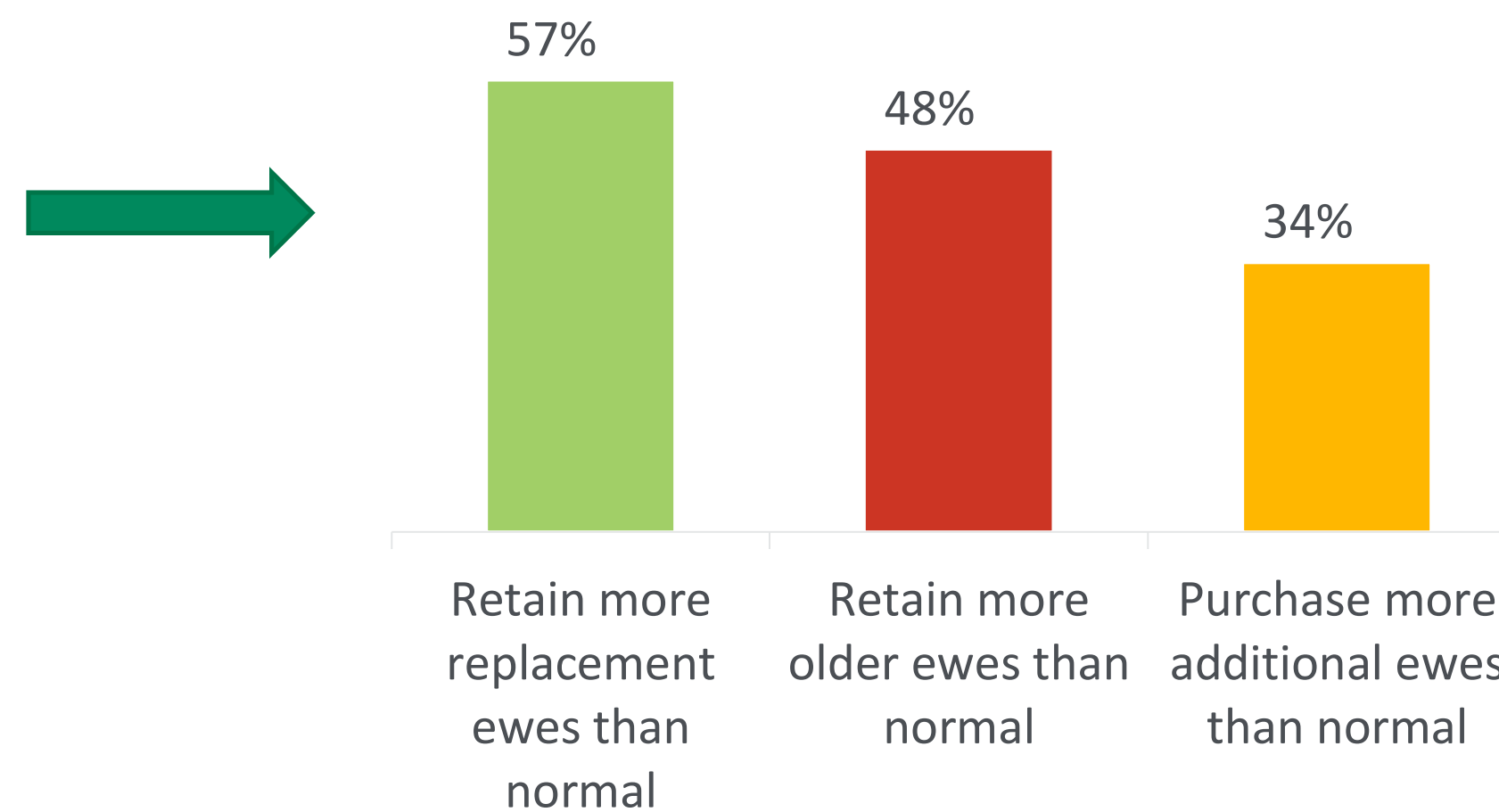
Lamb sales in next 4 months



Flock intentions



How to achieve increase

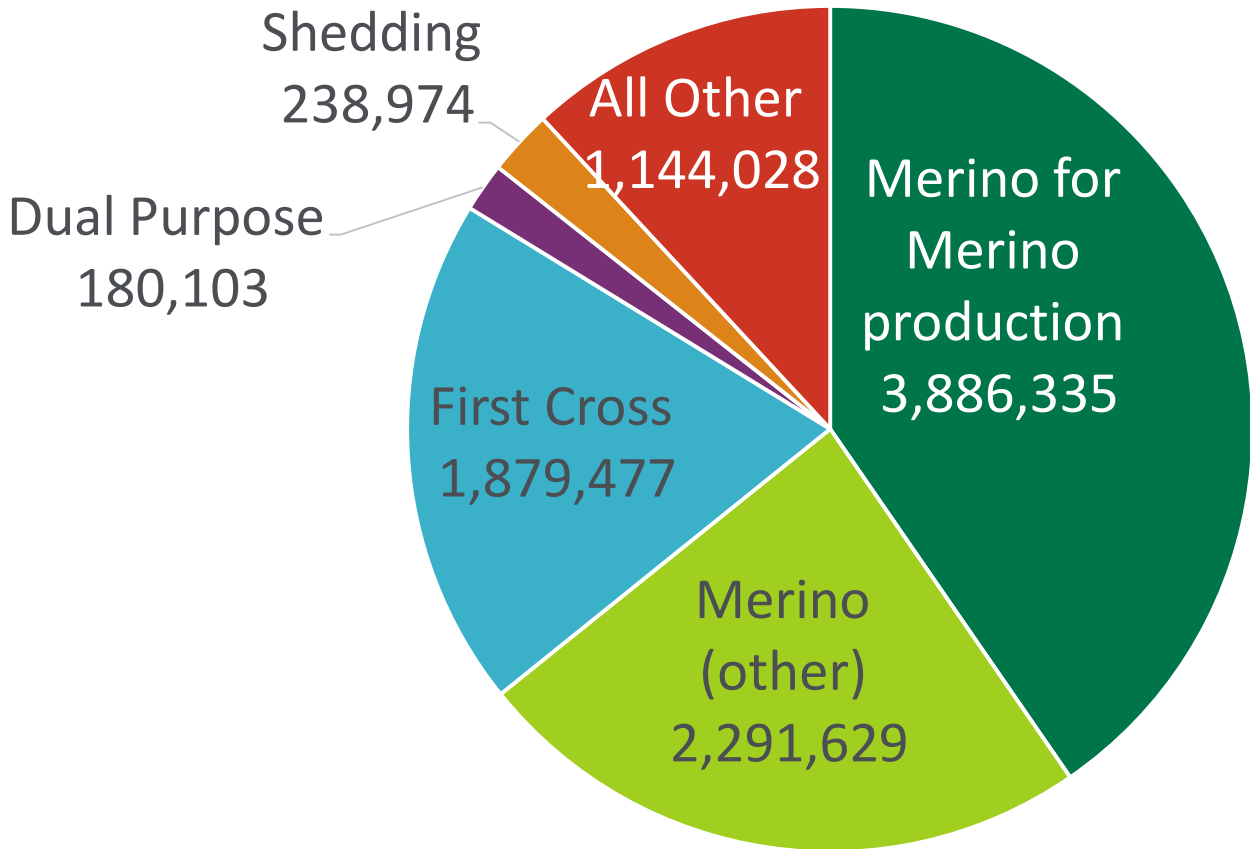


Totals

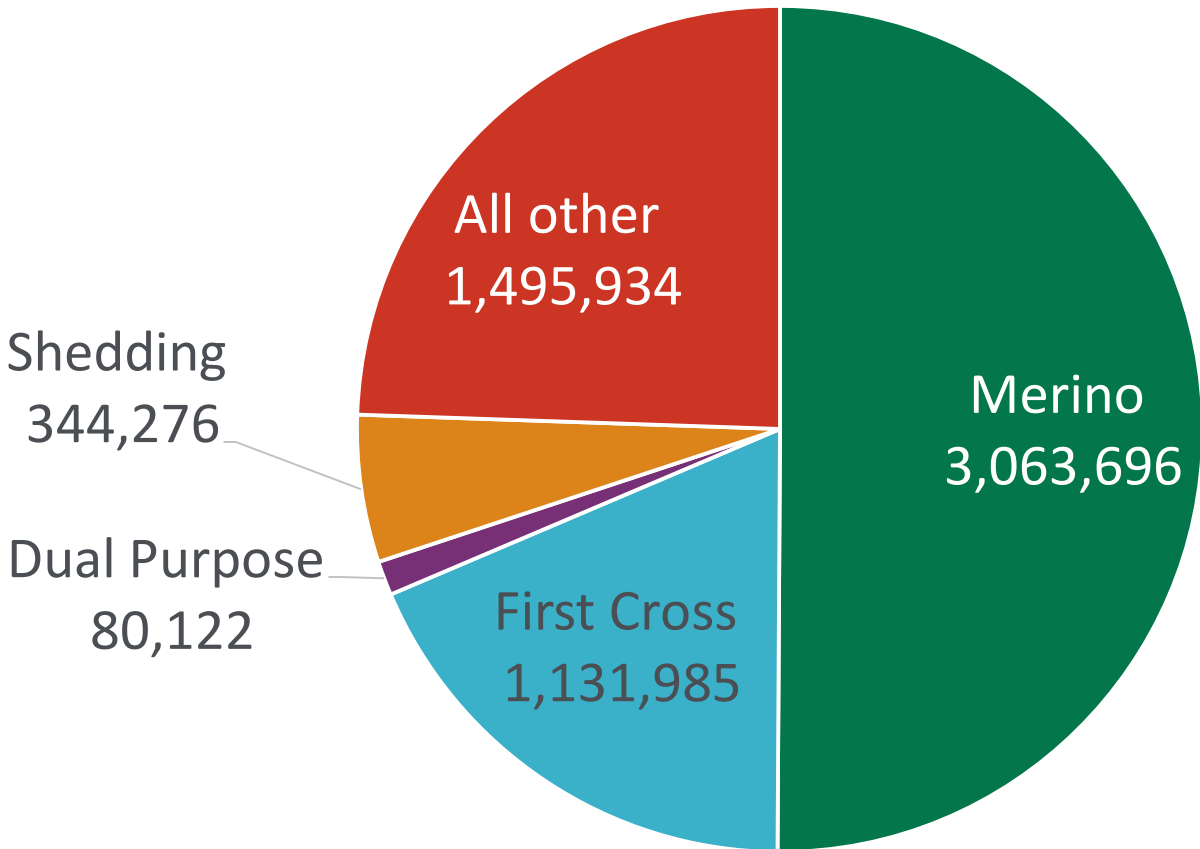
Breeding ewes on hand	6,921,902
Lambs on hand	4,456,895
Expected lamb sales in the next 4 months	1,620,839
Lambs marked in the past 4 months (1 Nov – 28 Feb)	1,137,654
Number of ewes joined to produce marked lambs	1,627,458

# Central NSW

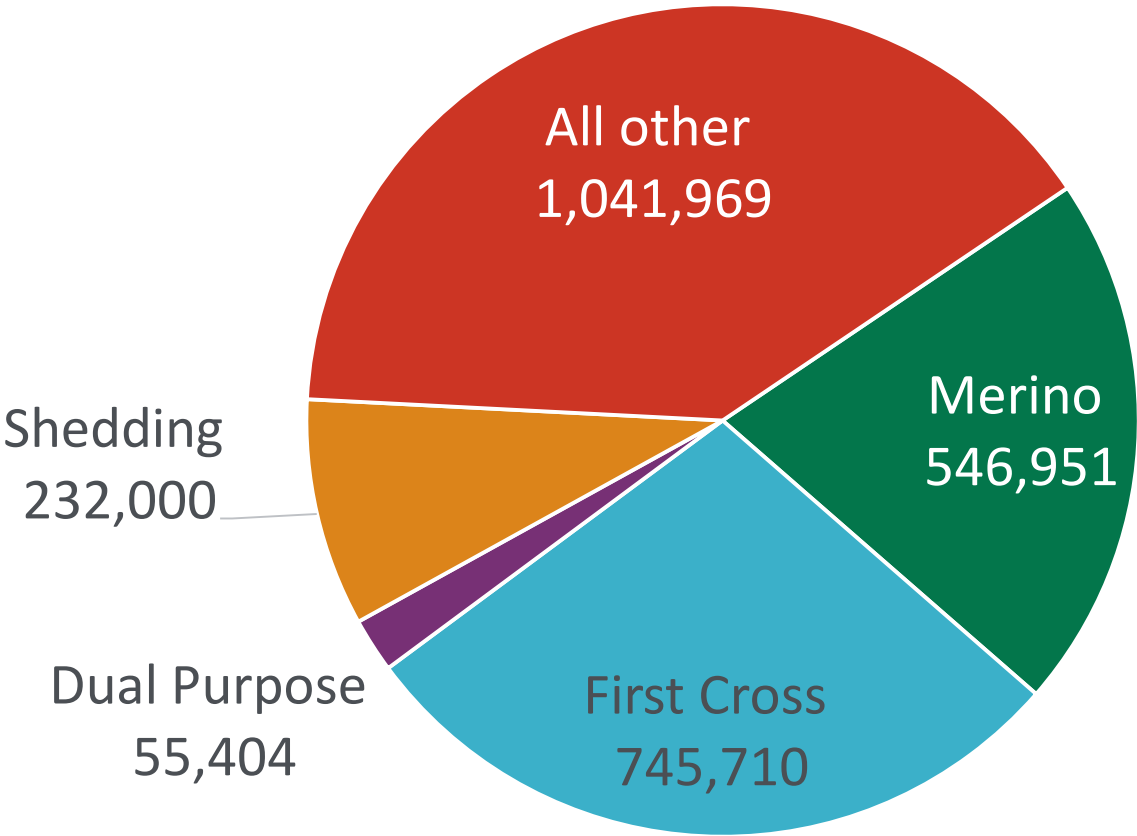
Breeding ewes on hand



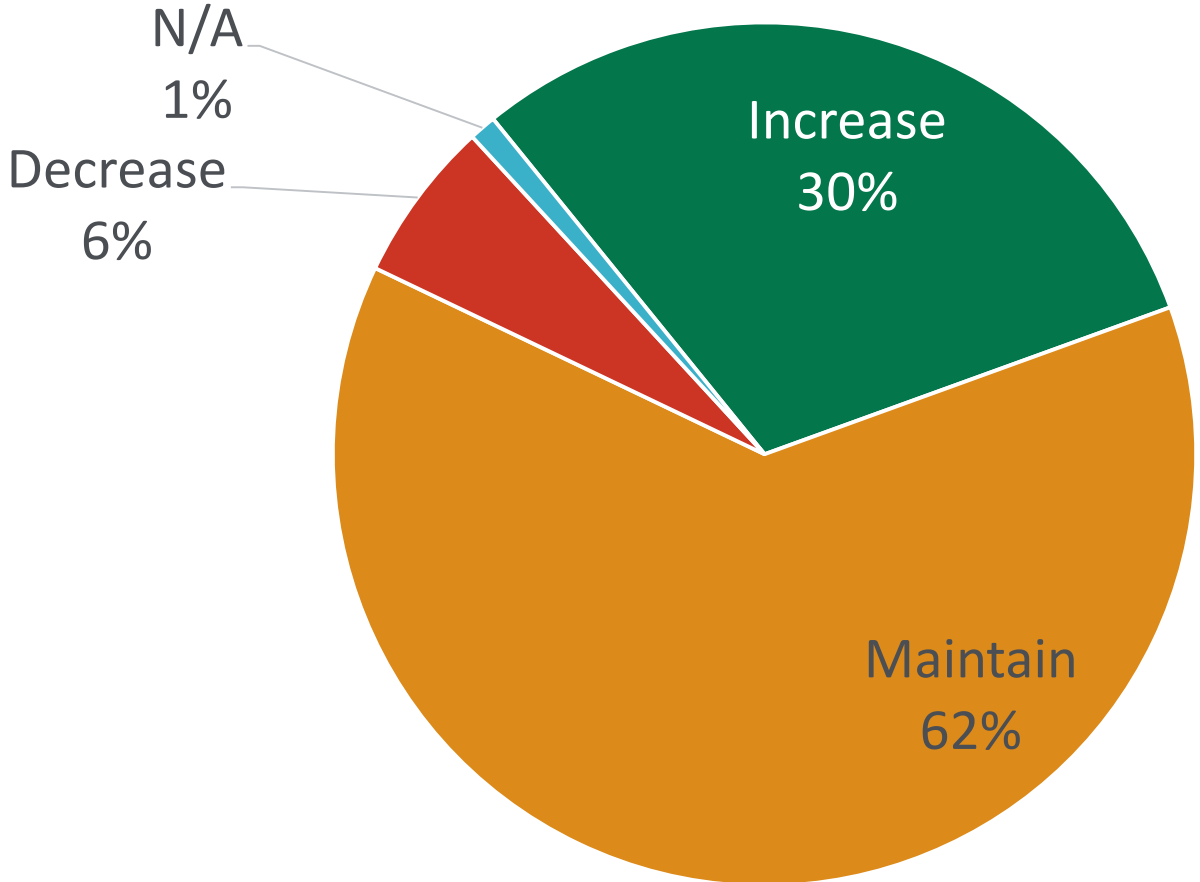
Lambs on hand



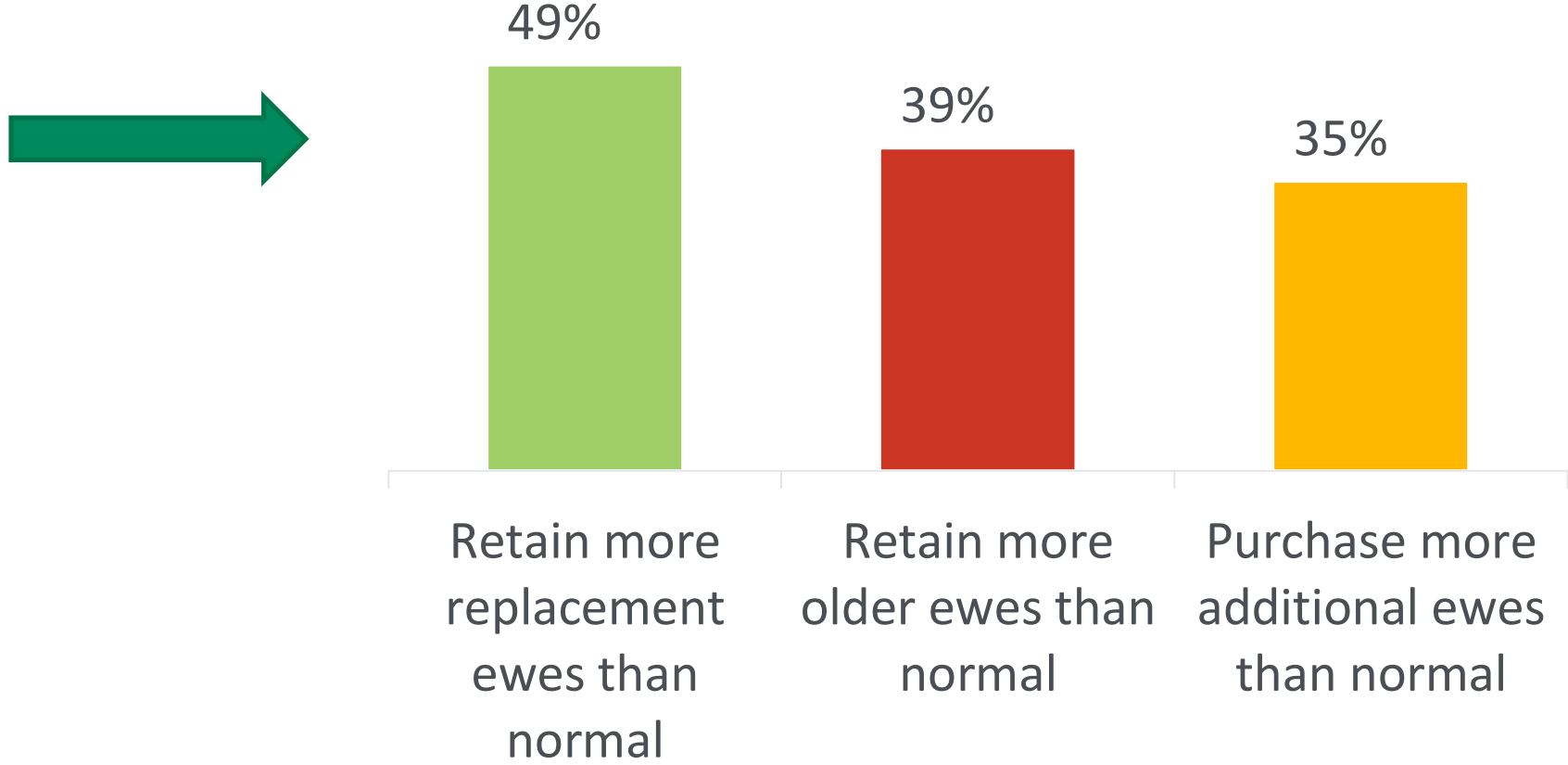
Lamb sales in next 4 months



Flock intentions



How to achieve increase

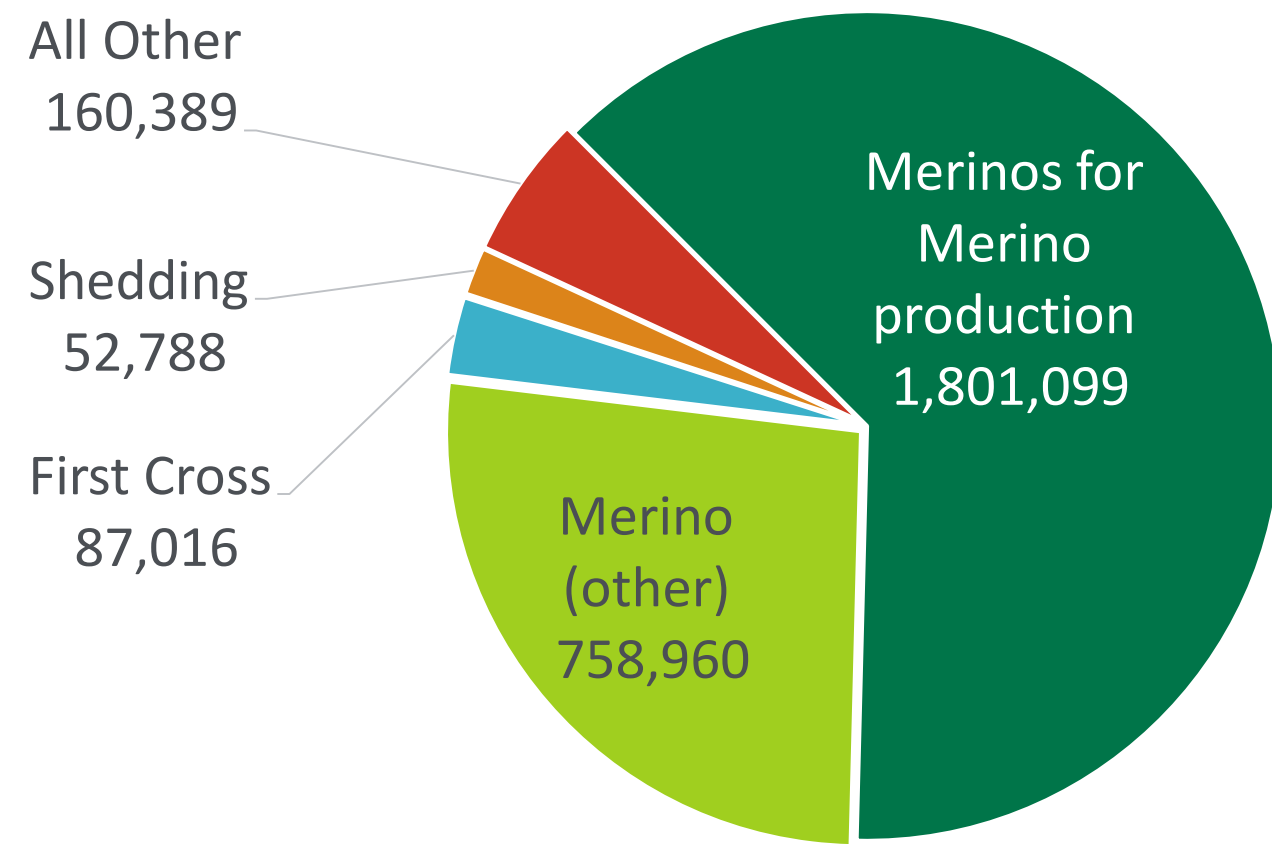


Totals

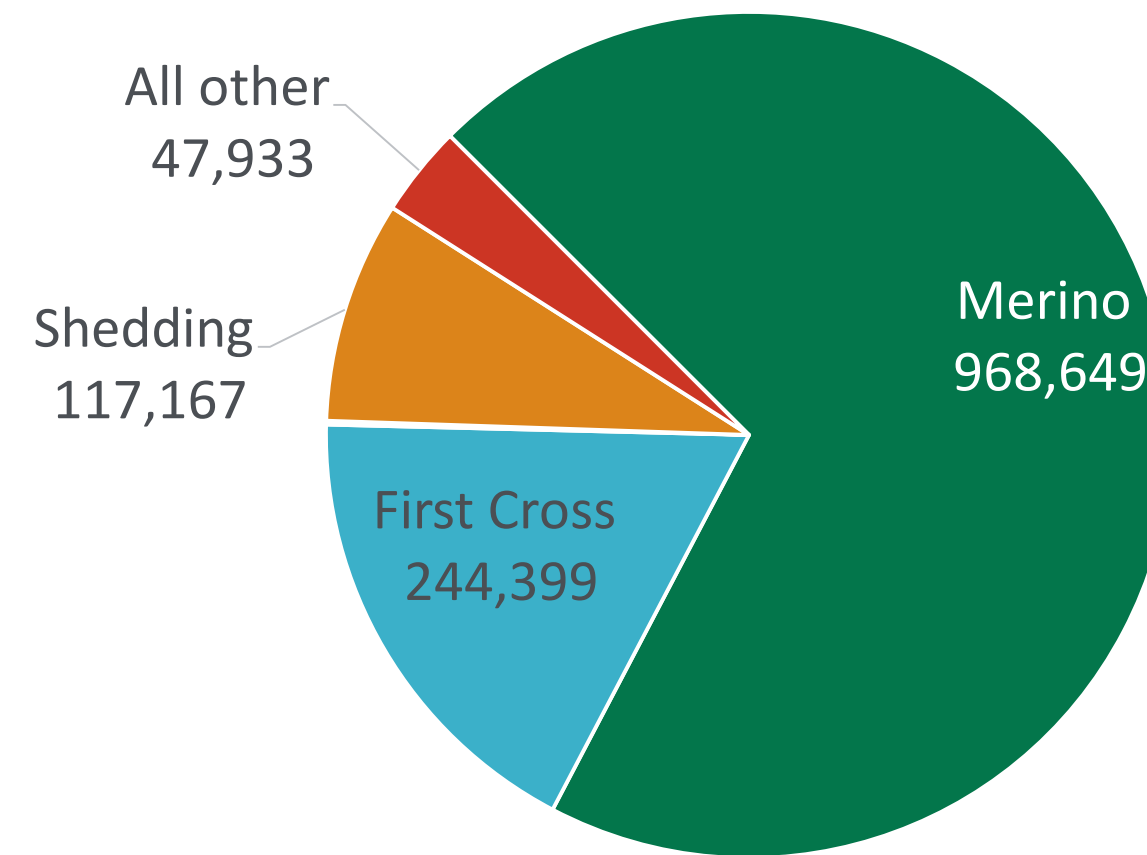
Breeding ewes on hand	9,620,545
Lambs on hand	1,495,934
Expected lamb sales in the next 4 months	2,622,033
Lambs marked in the past 4 months (1 Nov – 28 Feb)	802,007
Number of ewes joined to produce marked lambs	991,943

# SA Peninsula

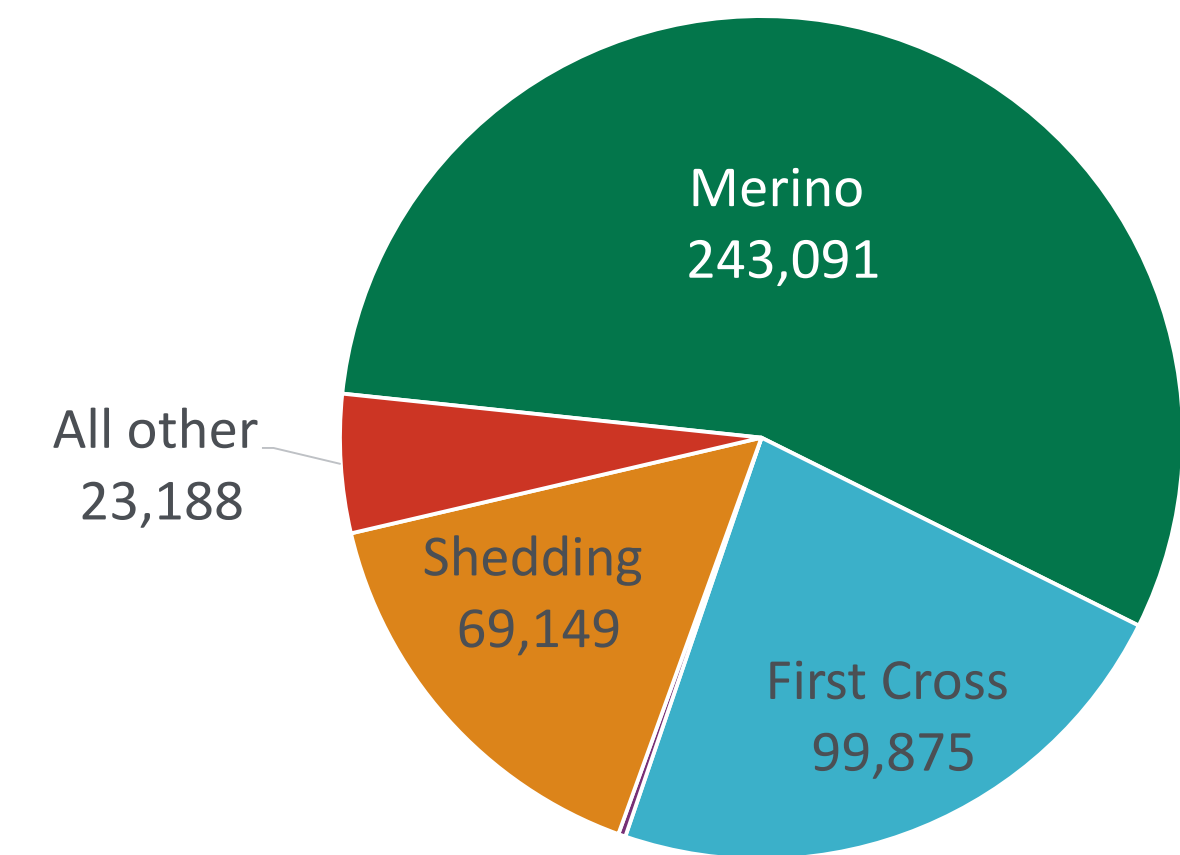
Breeding ewes on hand



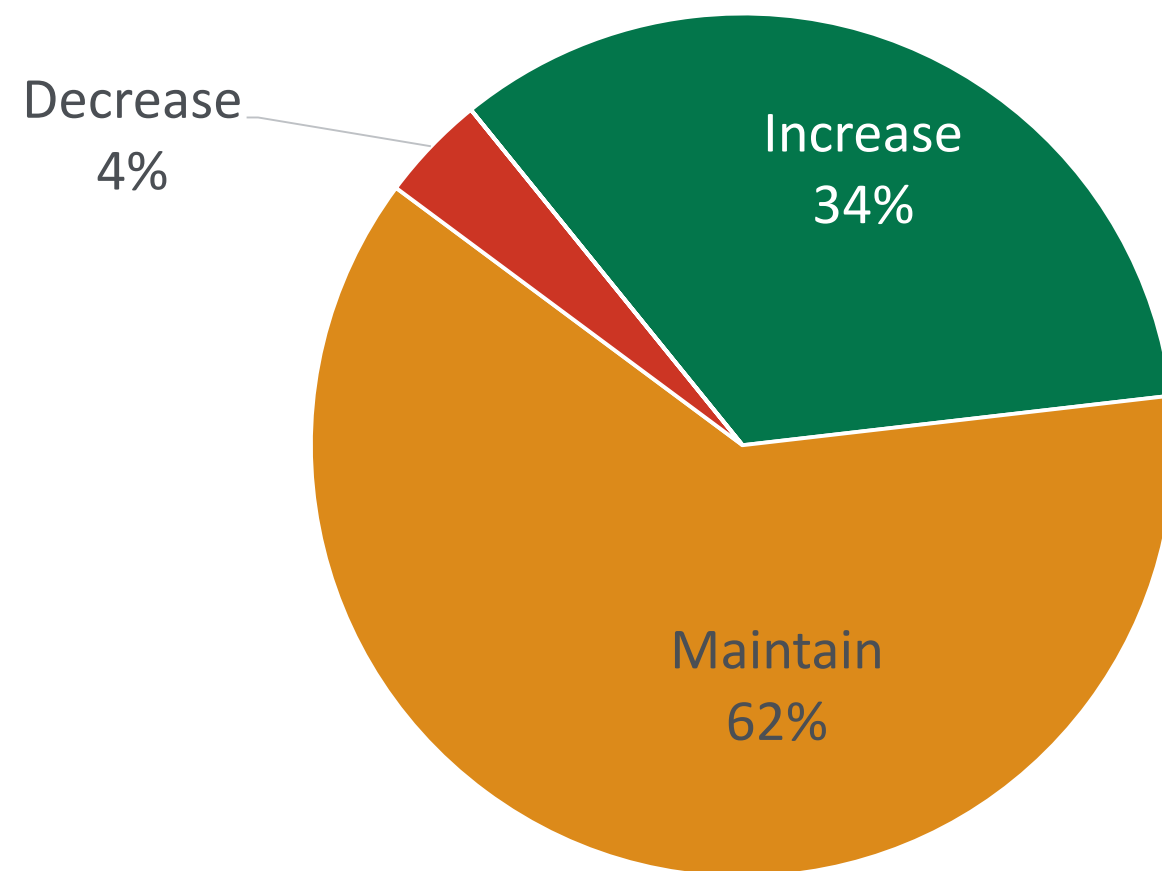
Lambs on hand



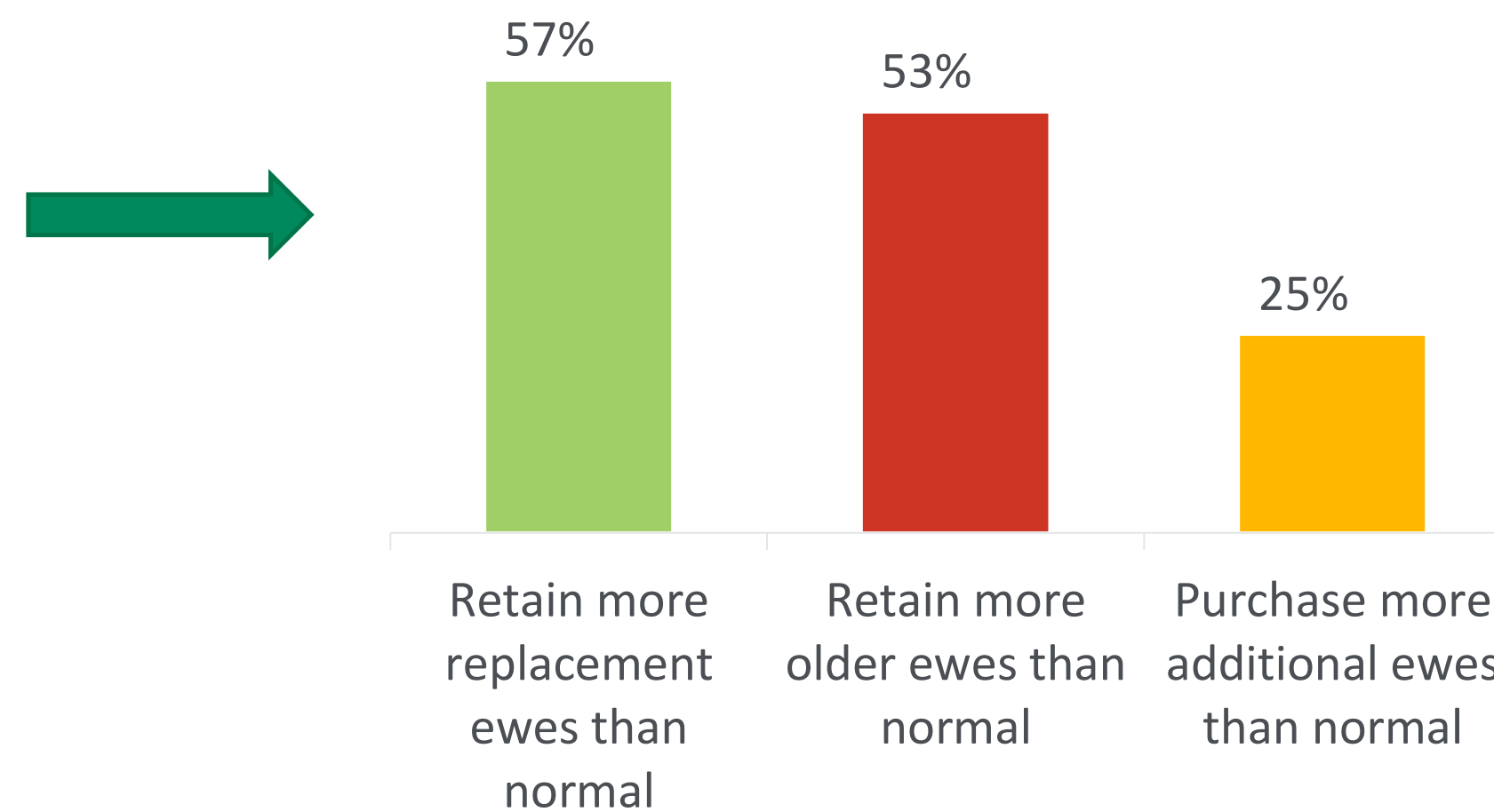
Lamb sales in next 4 months



Flock intentions



How to achieve increase

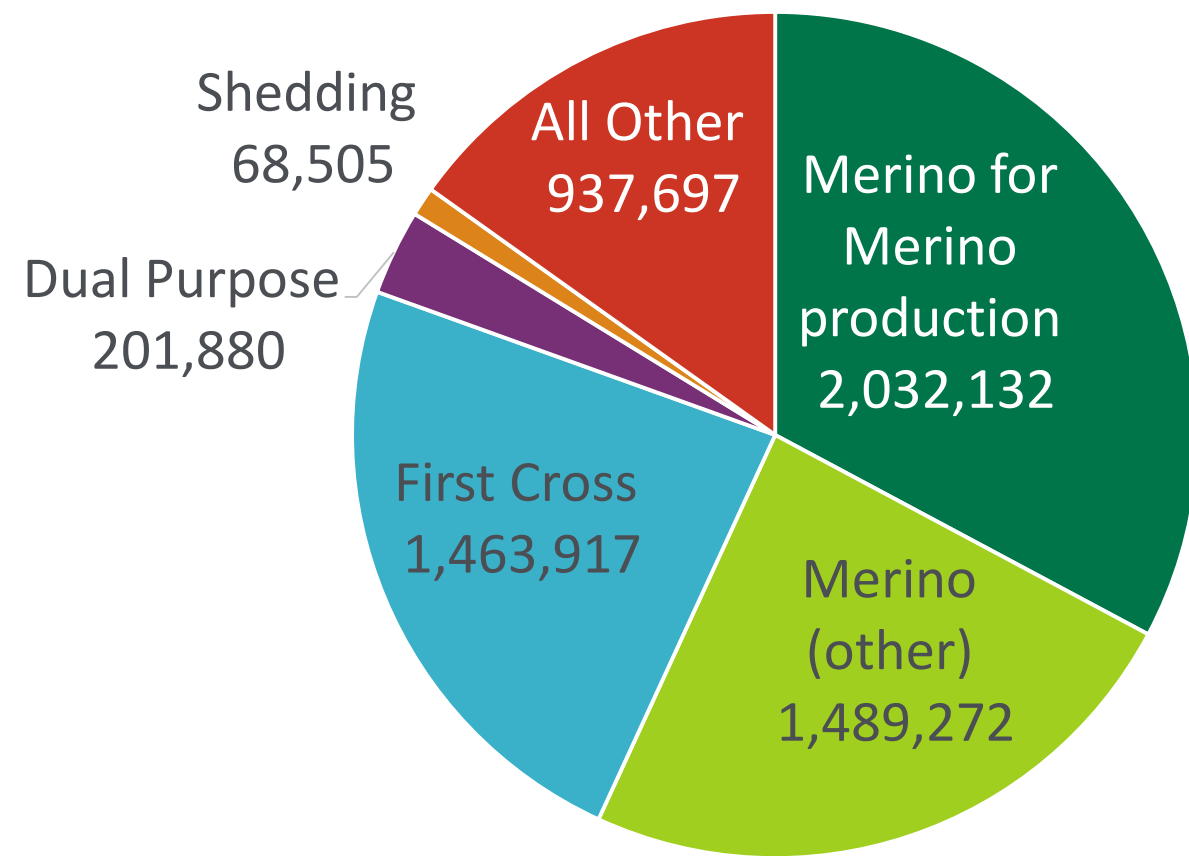


Totals

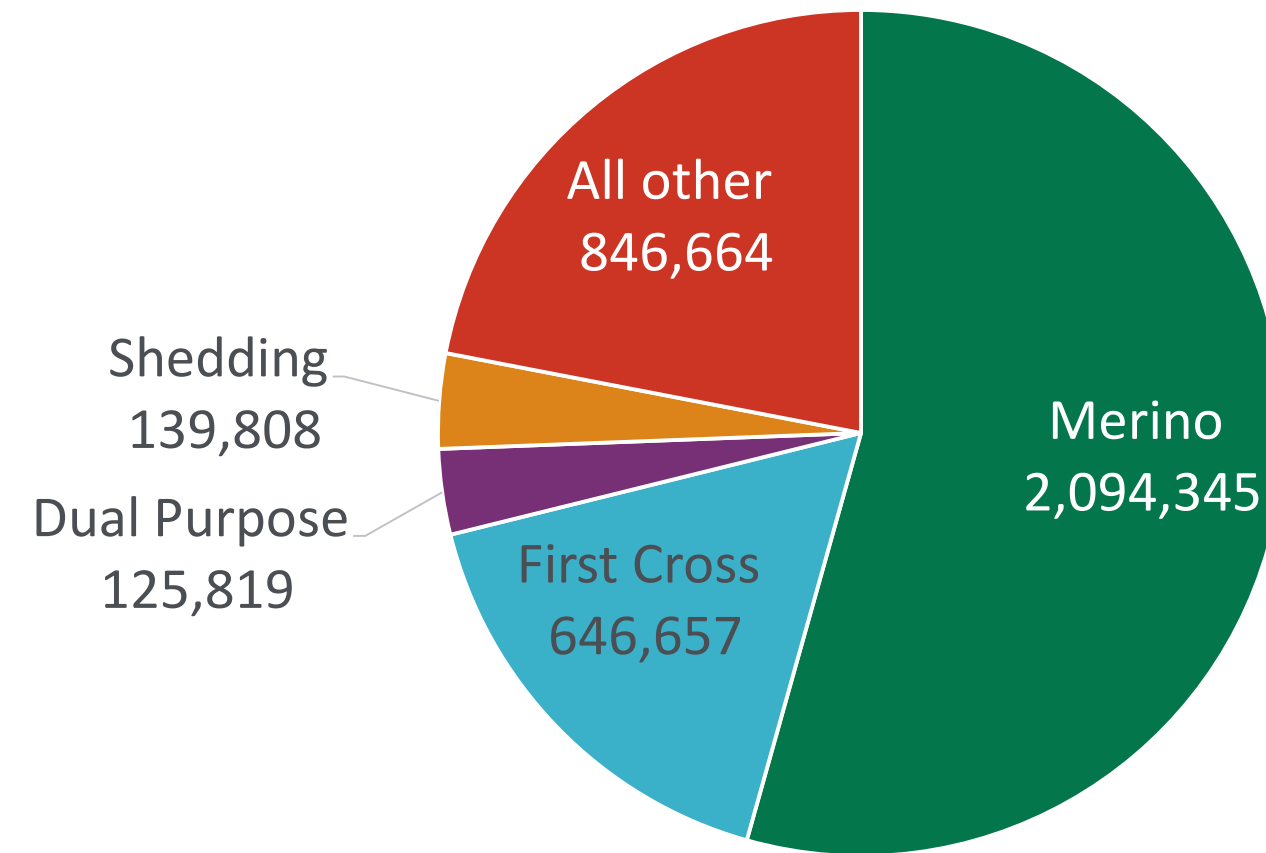
Breeding ewes on hand	2,863,365
Lambs on hand	1,380,142
Expected lamb sales in the next 4 months	436,519
Lambs marked in the past 4 months (1 Nov – 28 Feb)	183,080
Number of ewes joined to produce marked lambs	298,573

# Wimmera Mallee Murray

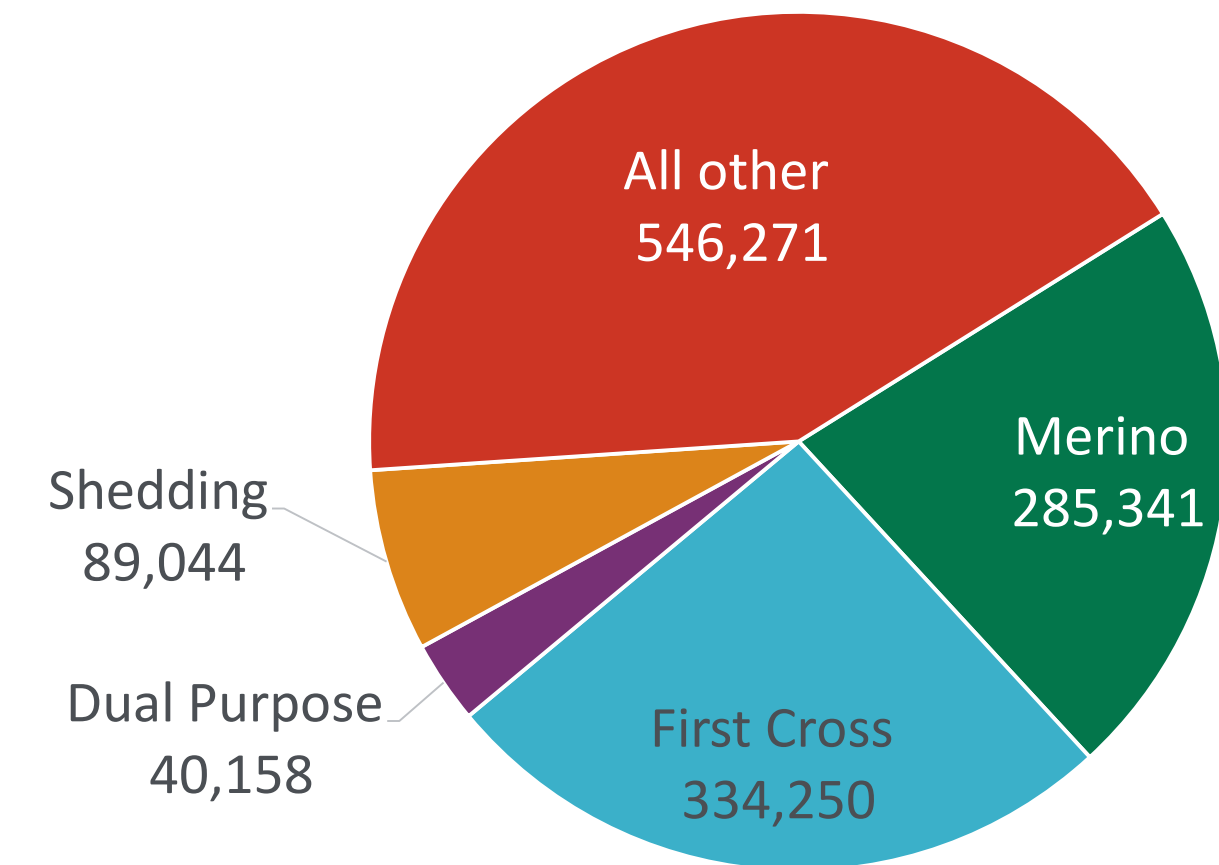
Breeding ewes on hand



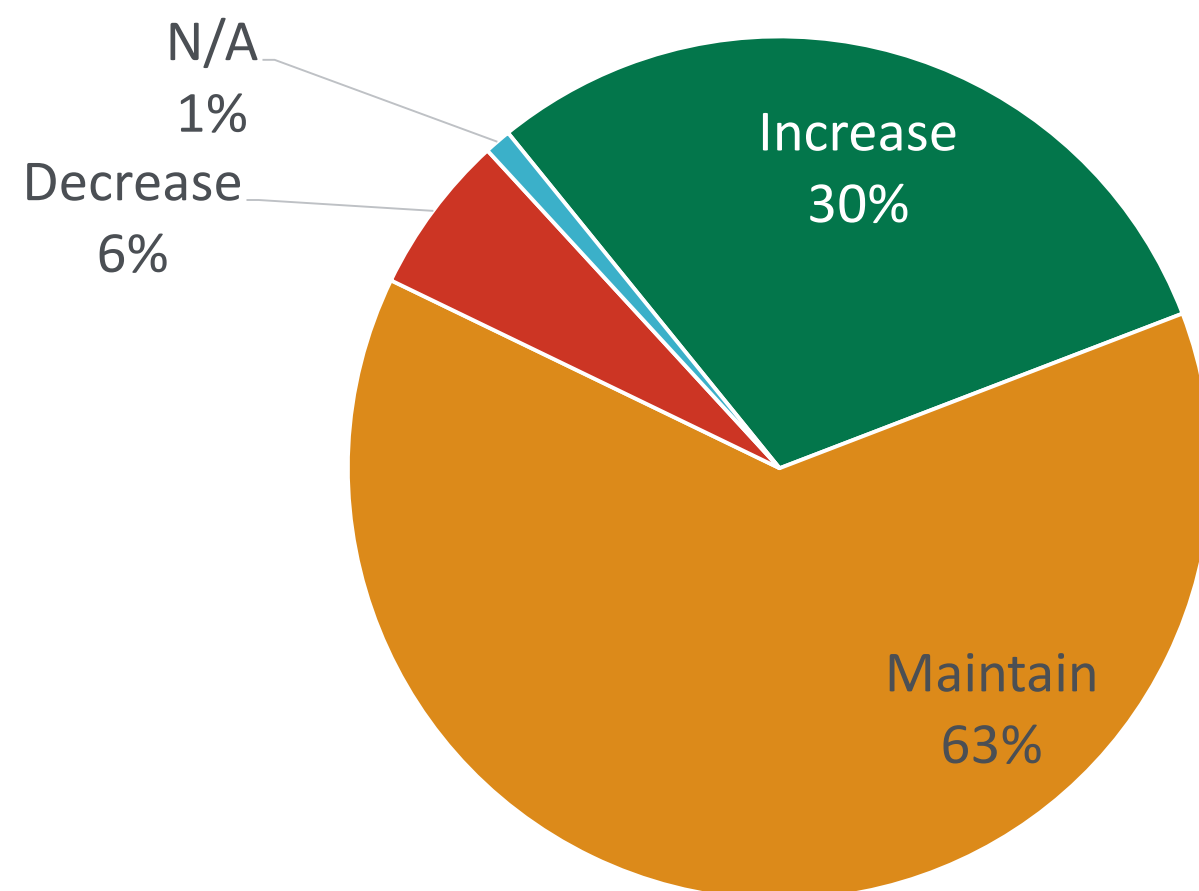
Lambs on hand



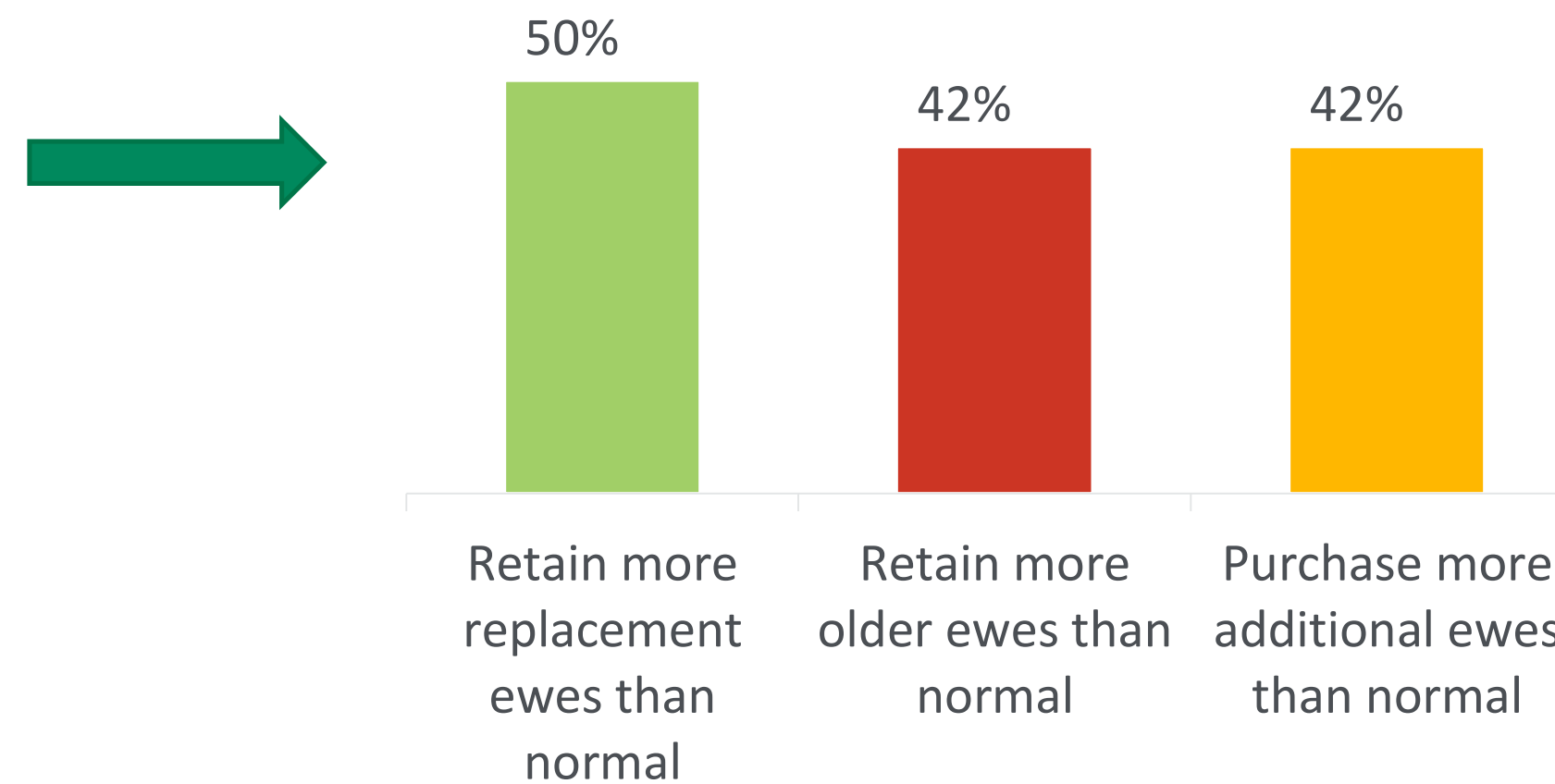
Lamb sales in next 4 months



Flock intentions



How to achieve increase

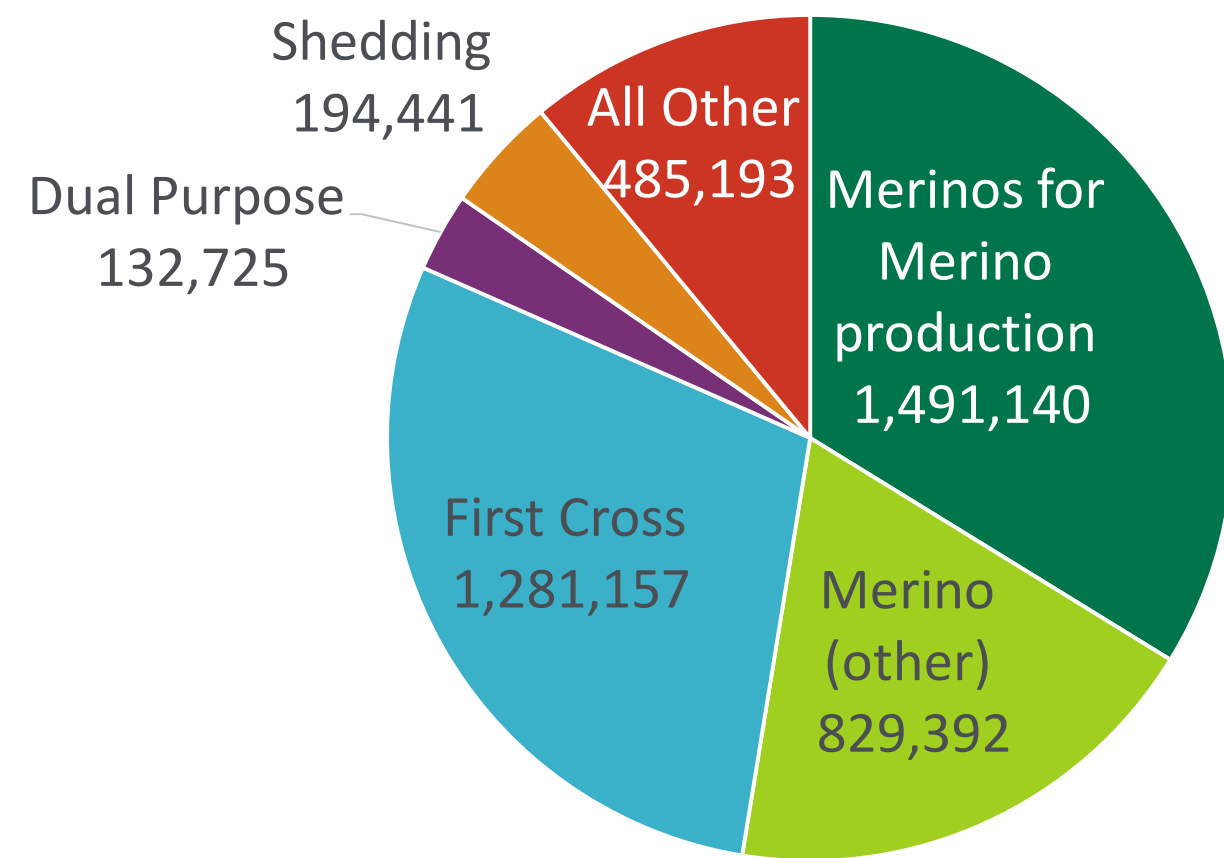


Totals

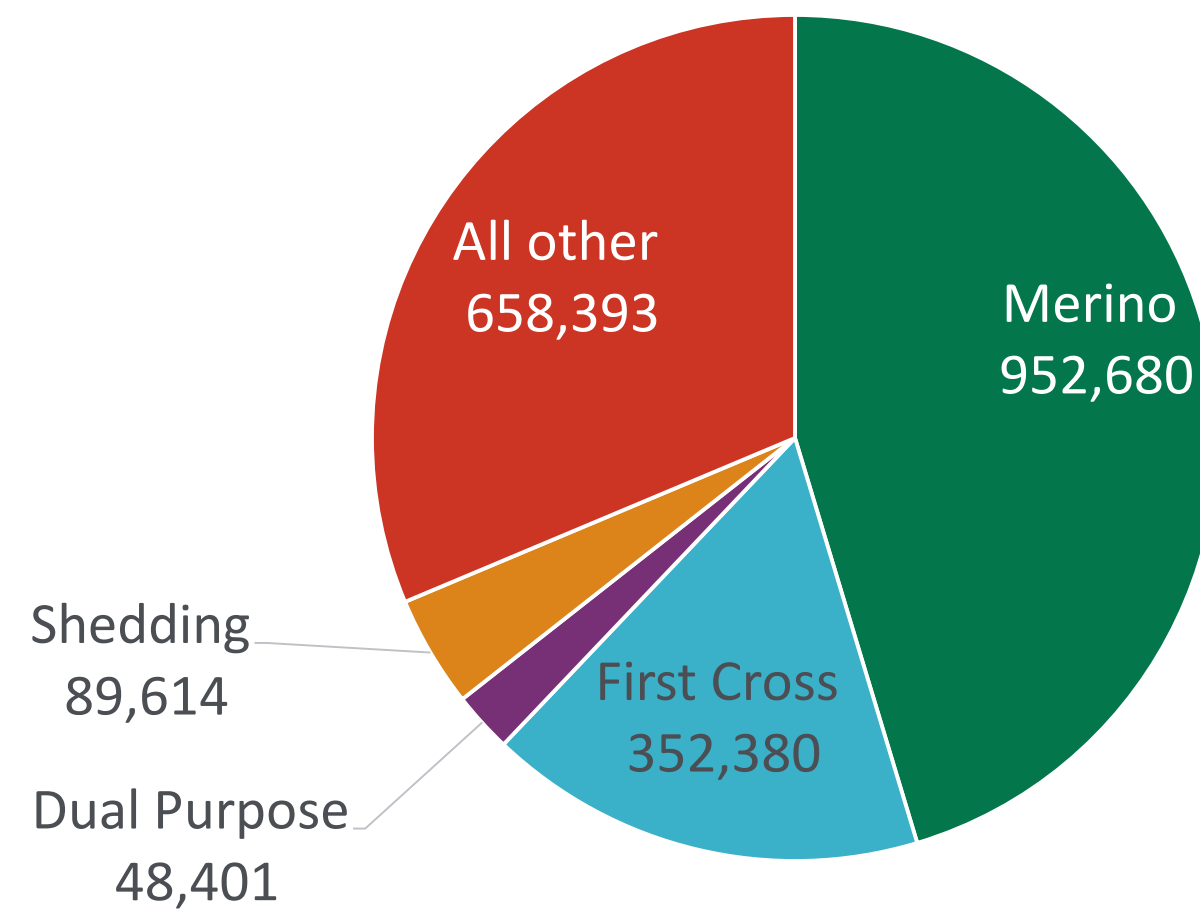
Breeding ewes on hand	6,193,402
Lambs on hand	3,853,293
Expected lamb sales in the next 4 months	1,295,065
Lambs marked in the past 4 months (1 Nov – 28 Feb)	423,921
Number of ewes joined to produce marked lambs	514,113

# East Victoria

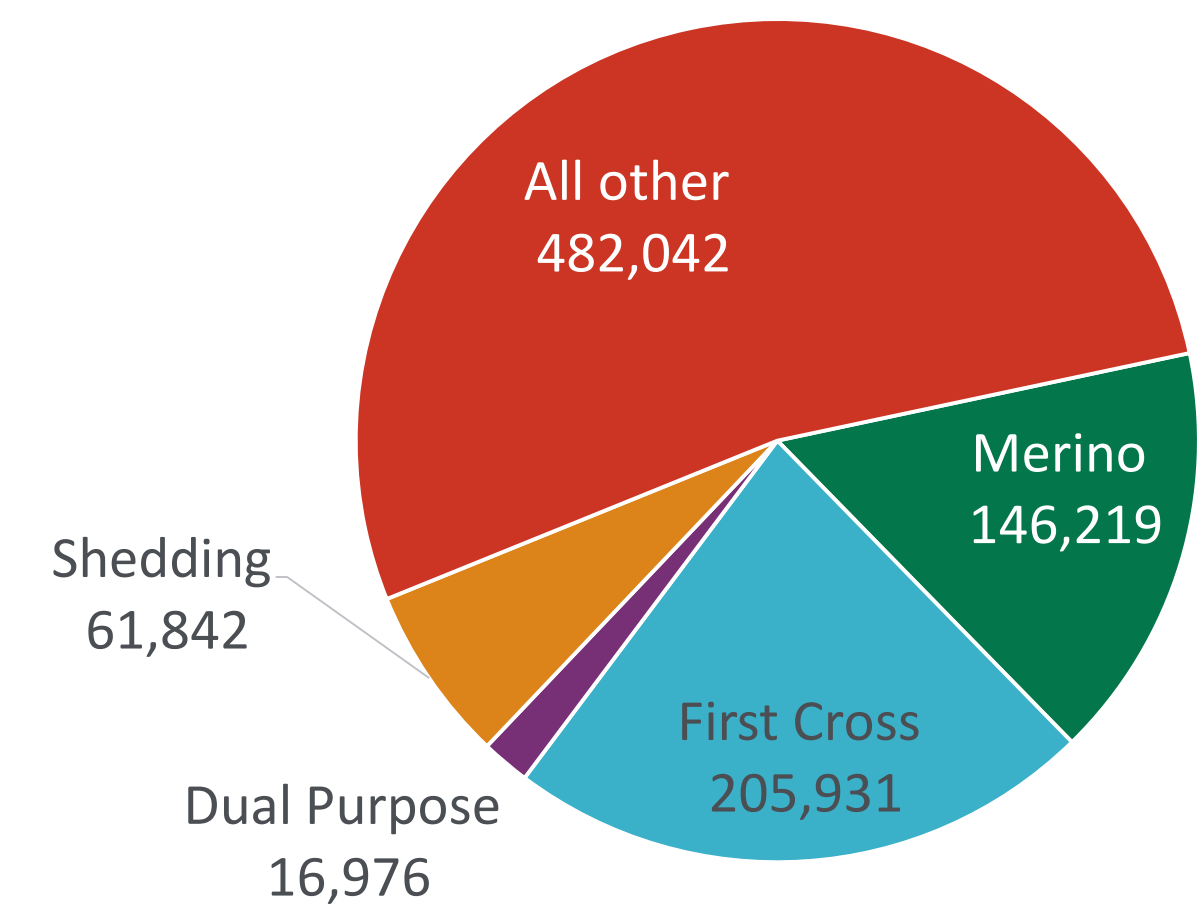
Breeding ewes on hand



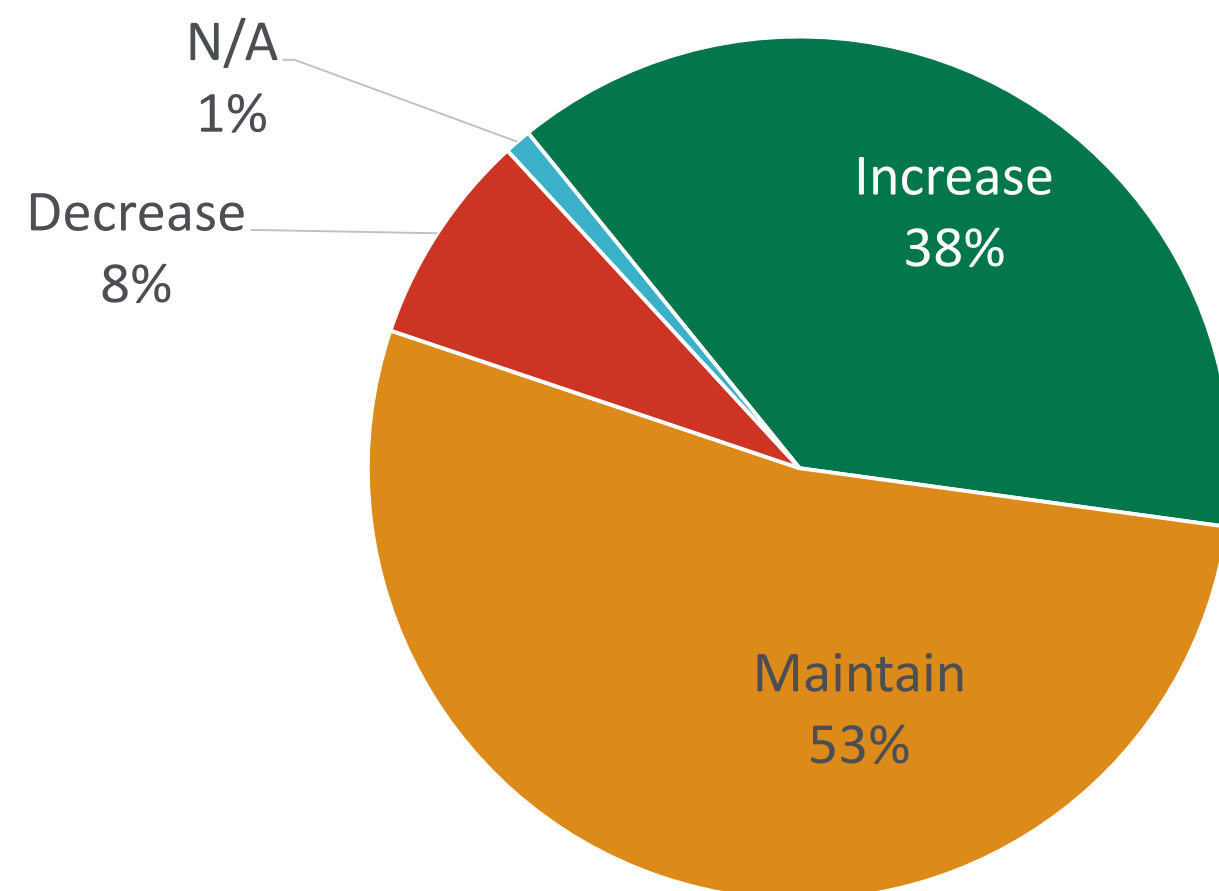
Lambs on hand



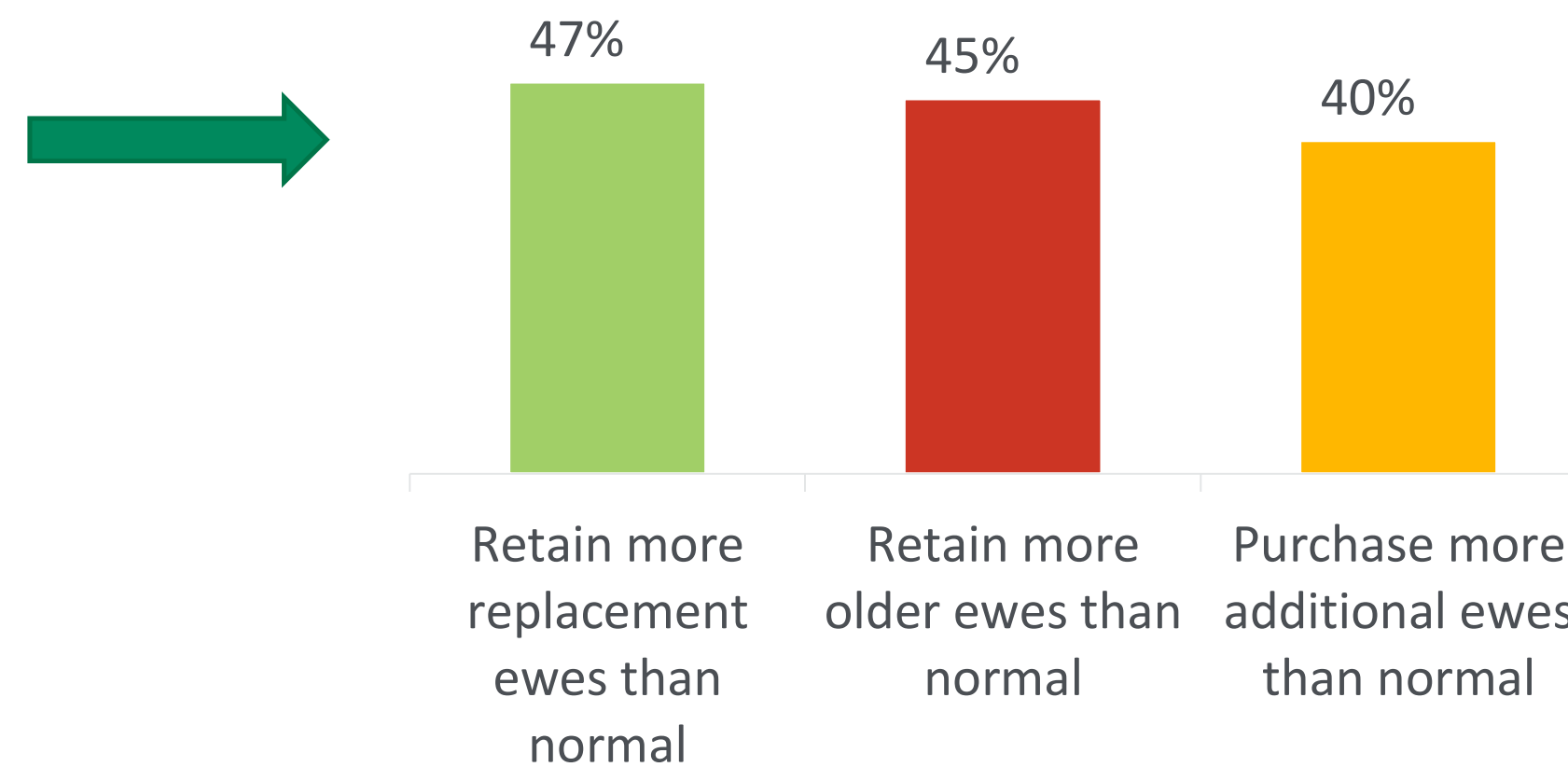
Lamb sales in next 4 months



Flock intentions



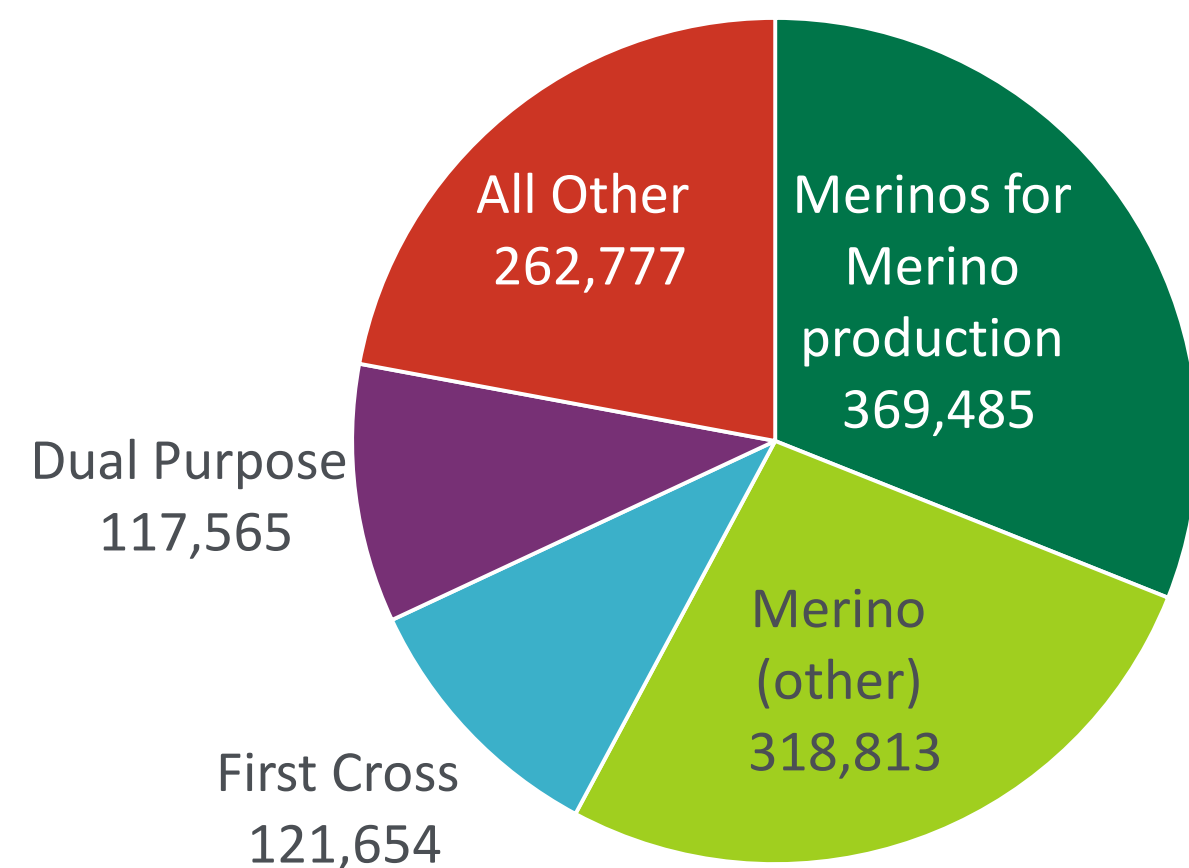
How to achieve increase



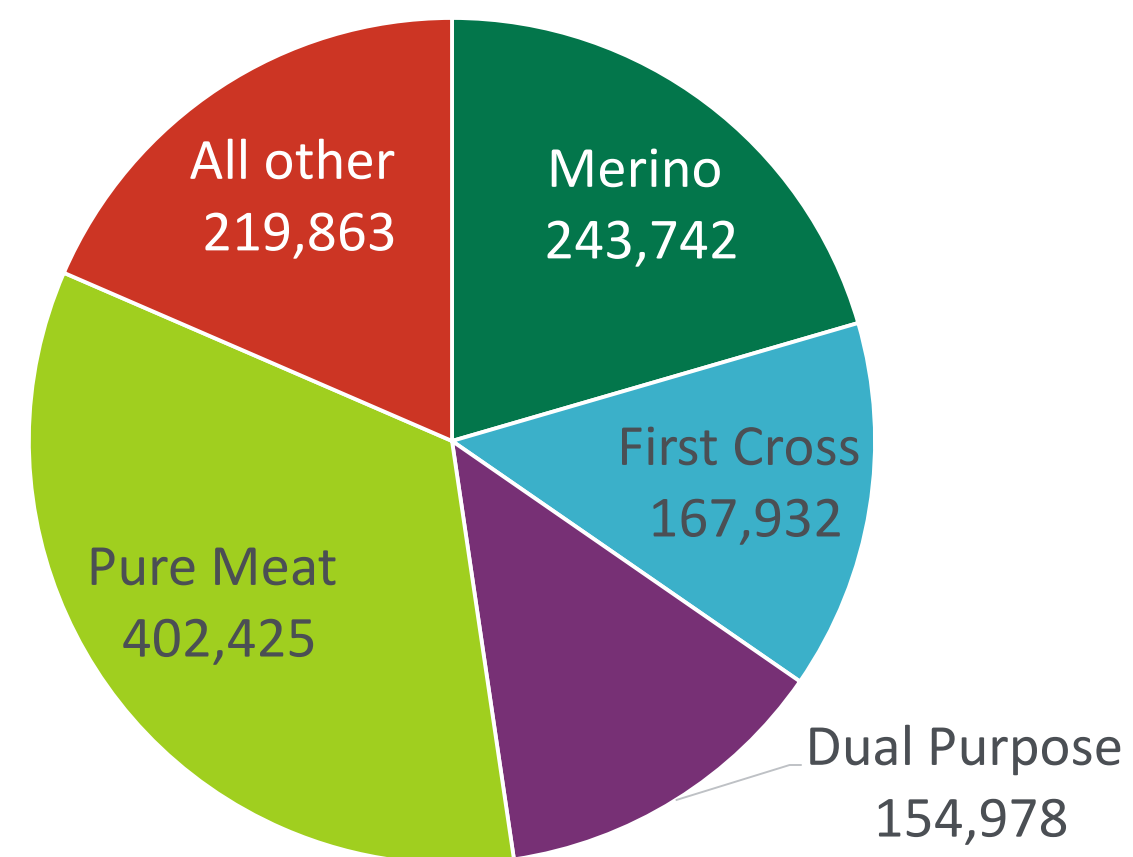
Totals

Breeding ewes on hand	4,414,049
Lambs on hand	2,101,469
Expected lamb sales in the next 4 months	913,010
Lambs marked in the past 4 months (1 Nov – 28 Feb)	464,911
Number of ewes joined to produce marked lambs	507,568

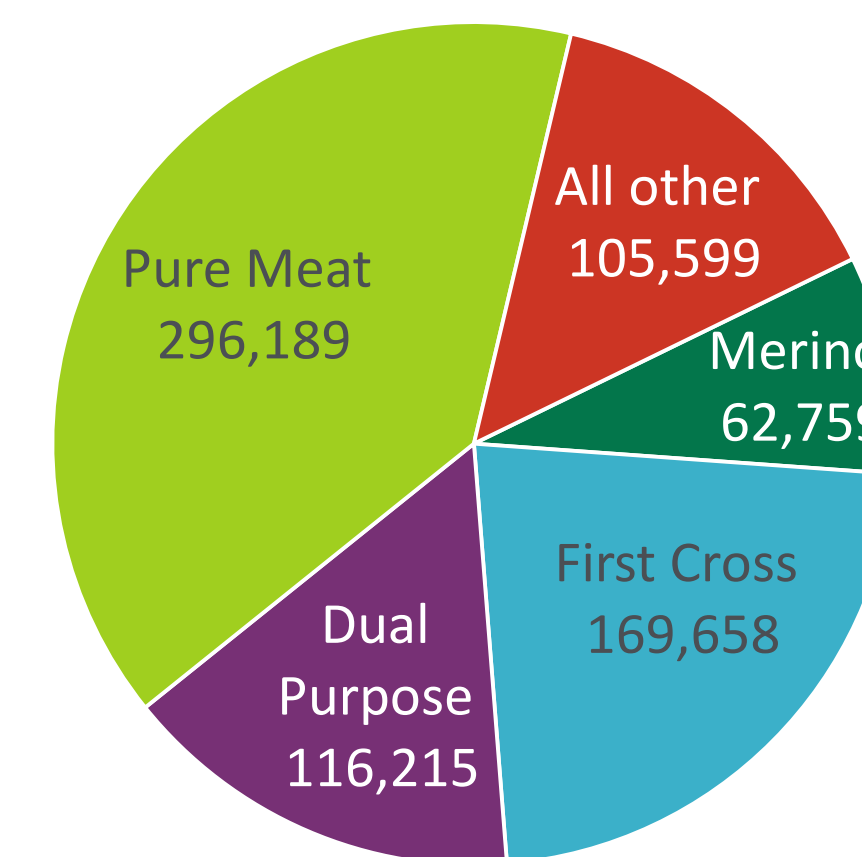
Breeding ewes on hand



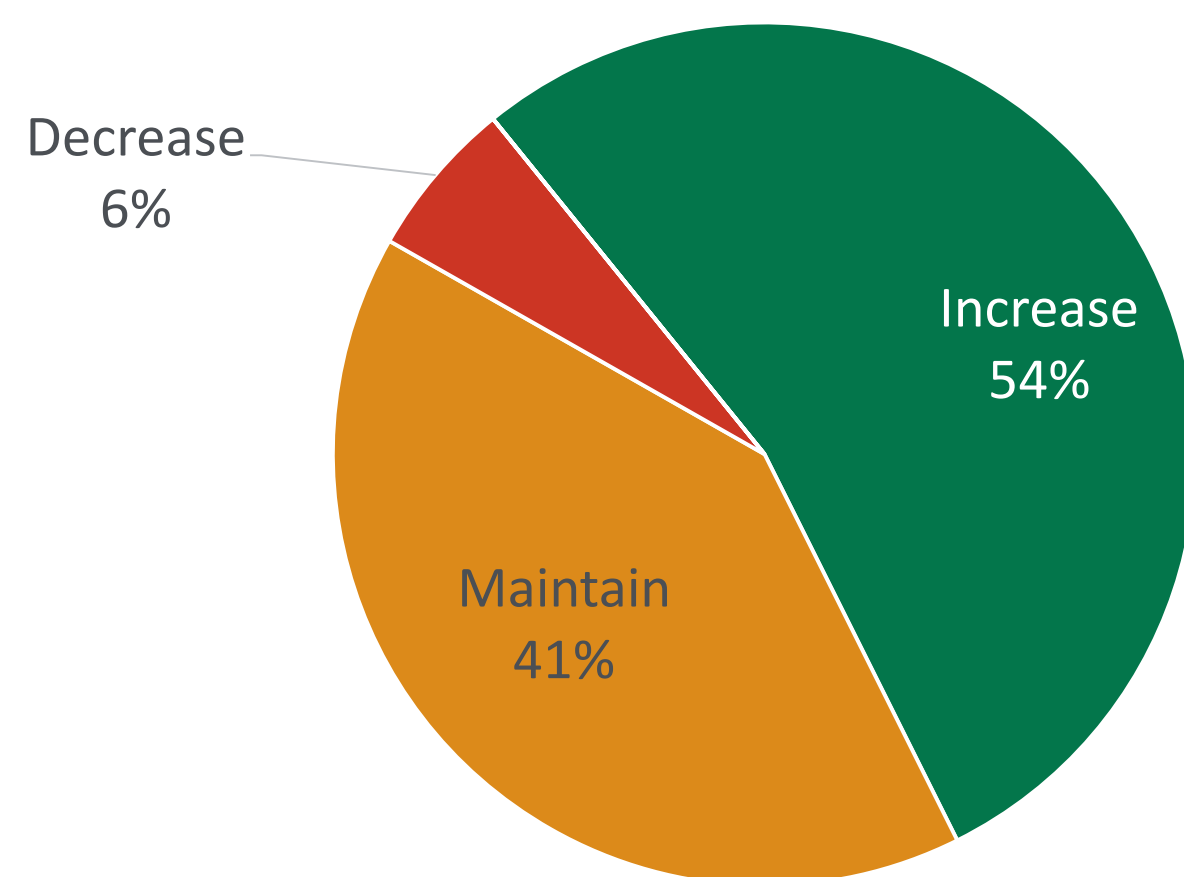
Lambs on hand



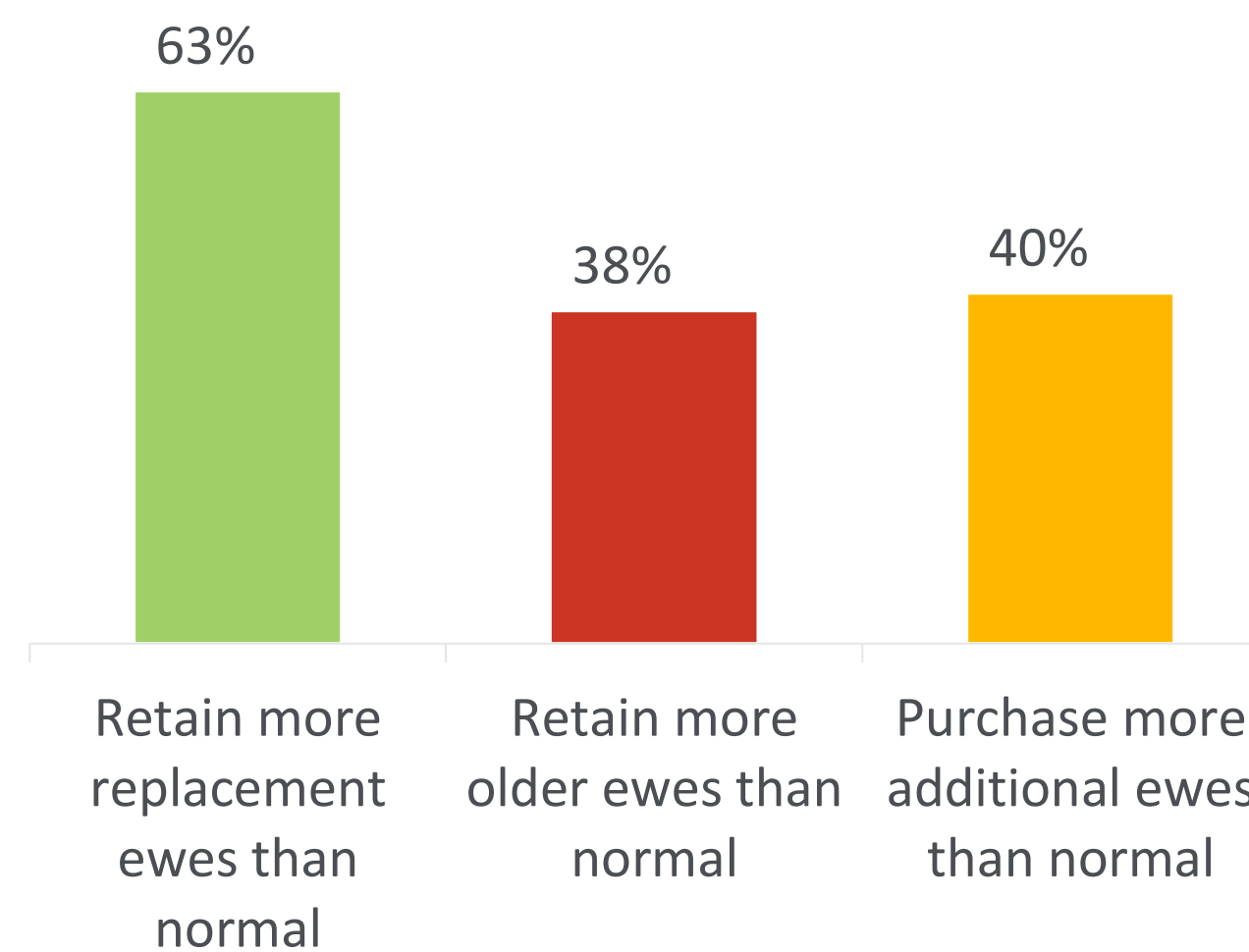
Lamb sales in next 4 months



Flock intentions



How to achieve increase

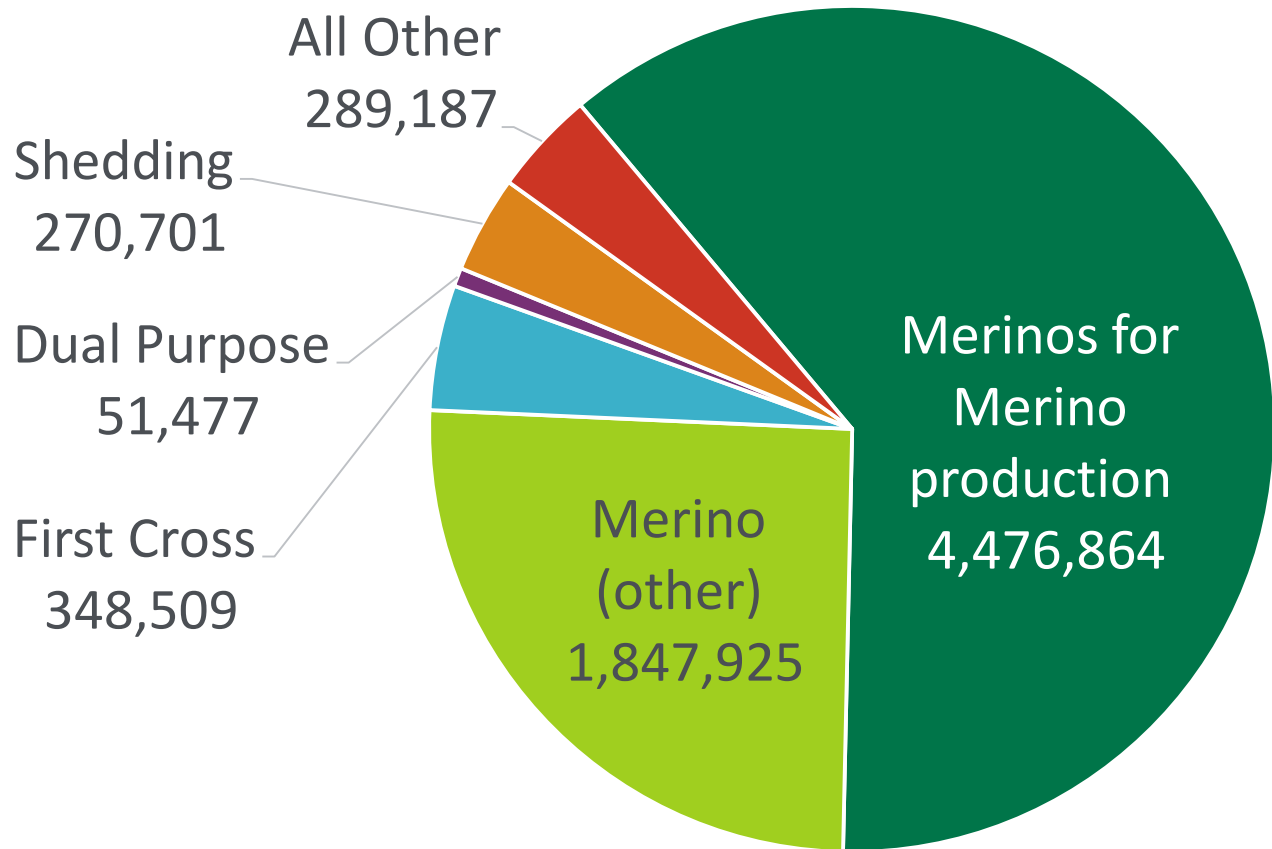


Totals

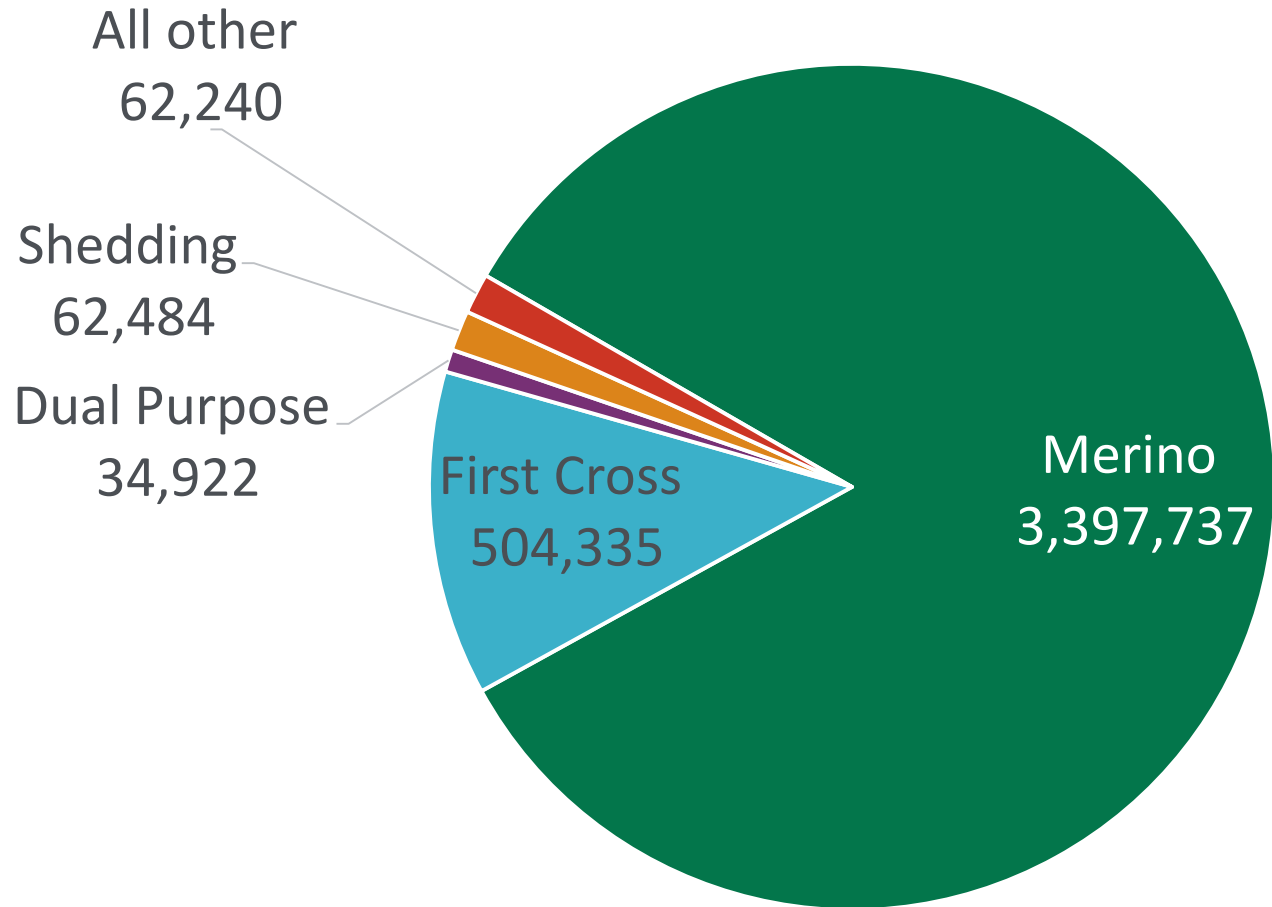
Breeding ewes on hand	1,190,294
Lambs on hand	1,188,940
Expected lamb sales in the next 4 months	750,419
Lambs marked in the past 4 months (1 Nov – 28 Feb)	529,393
Number of ewes joined to produce marked lambs	584,575

# Western Australia

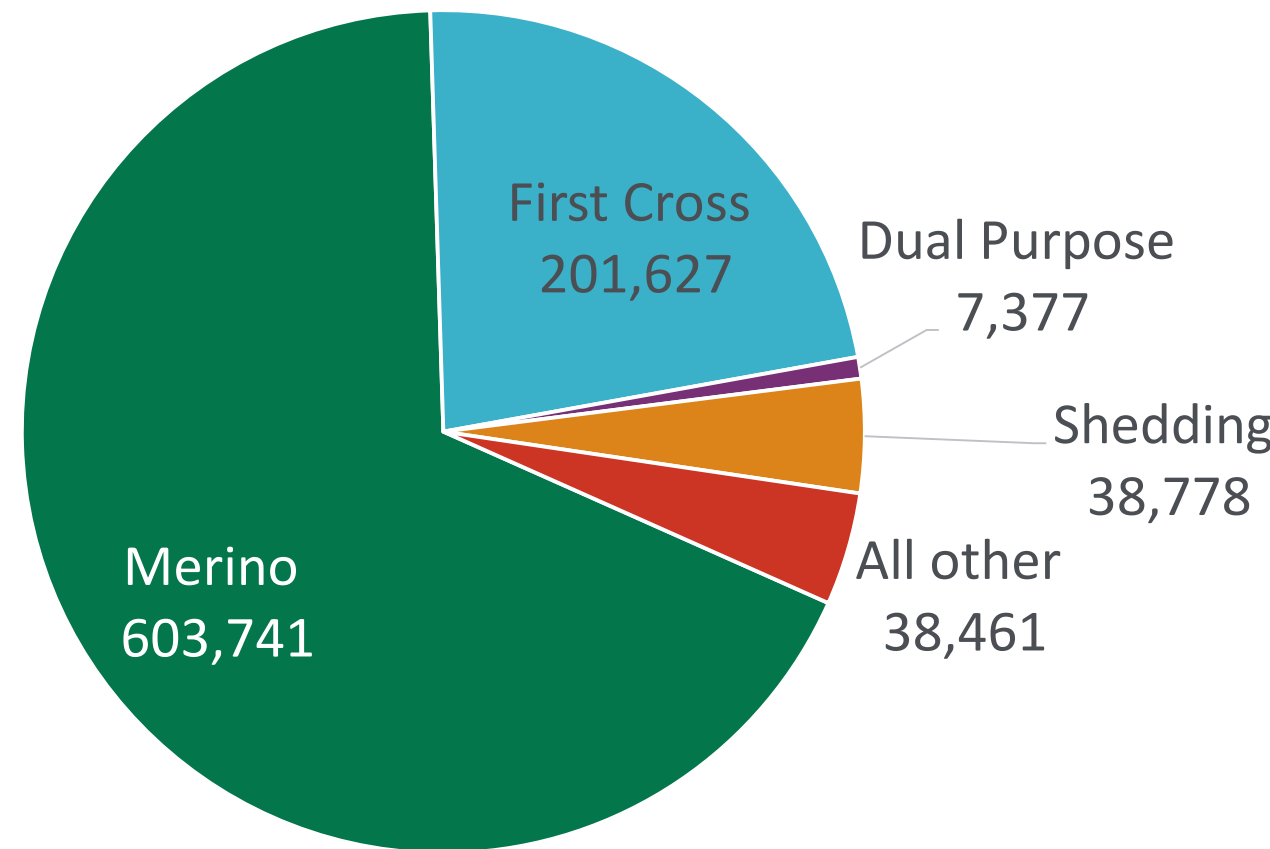
Breeding ewes on hand



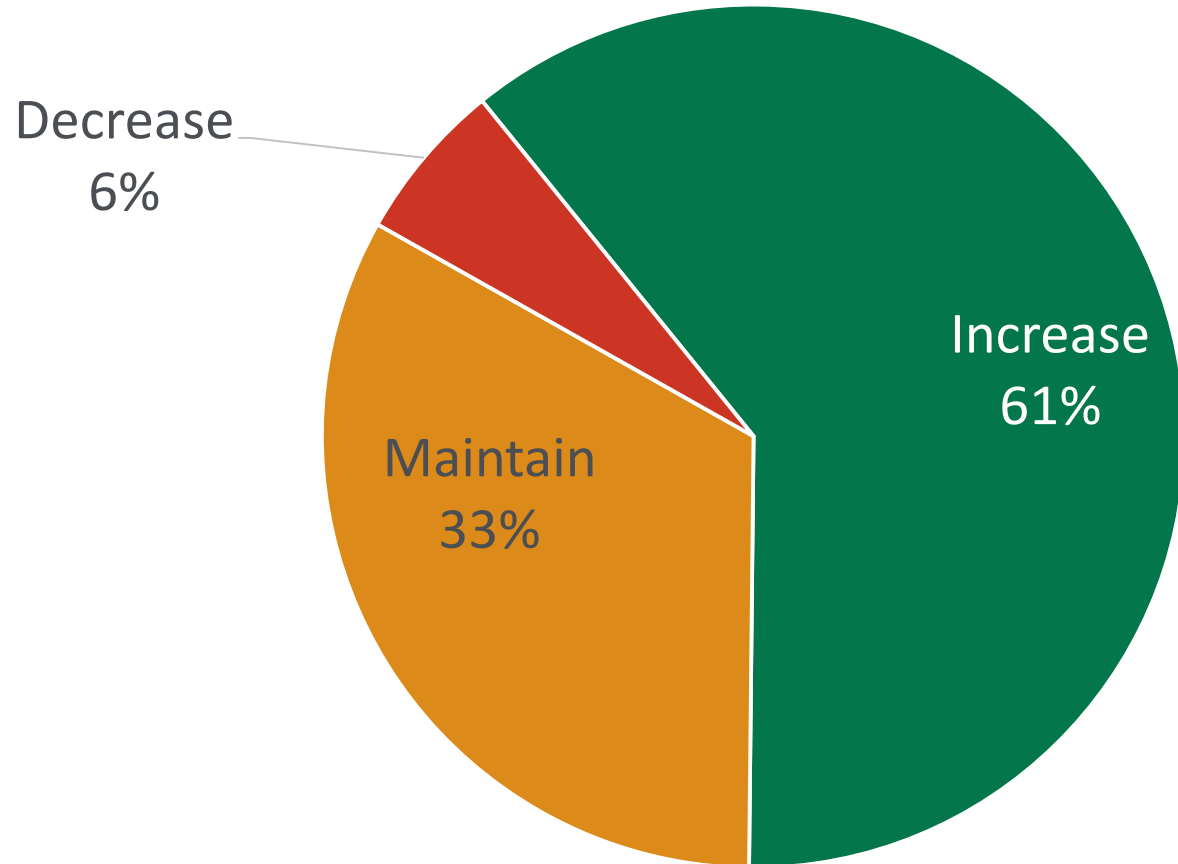
Lambs on hand



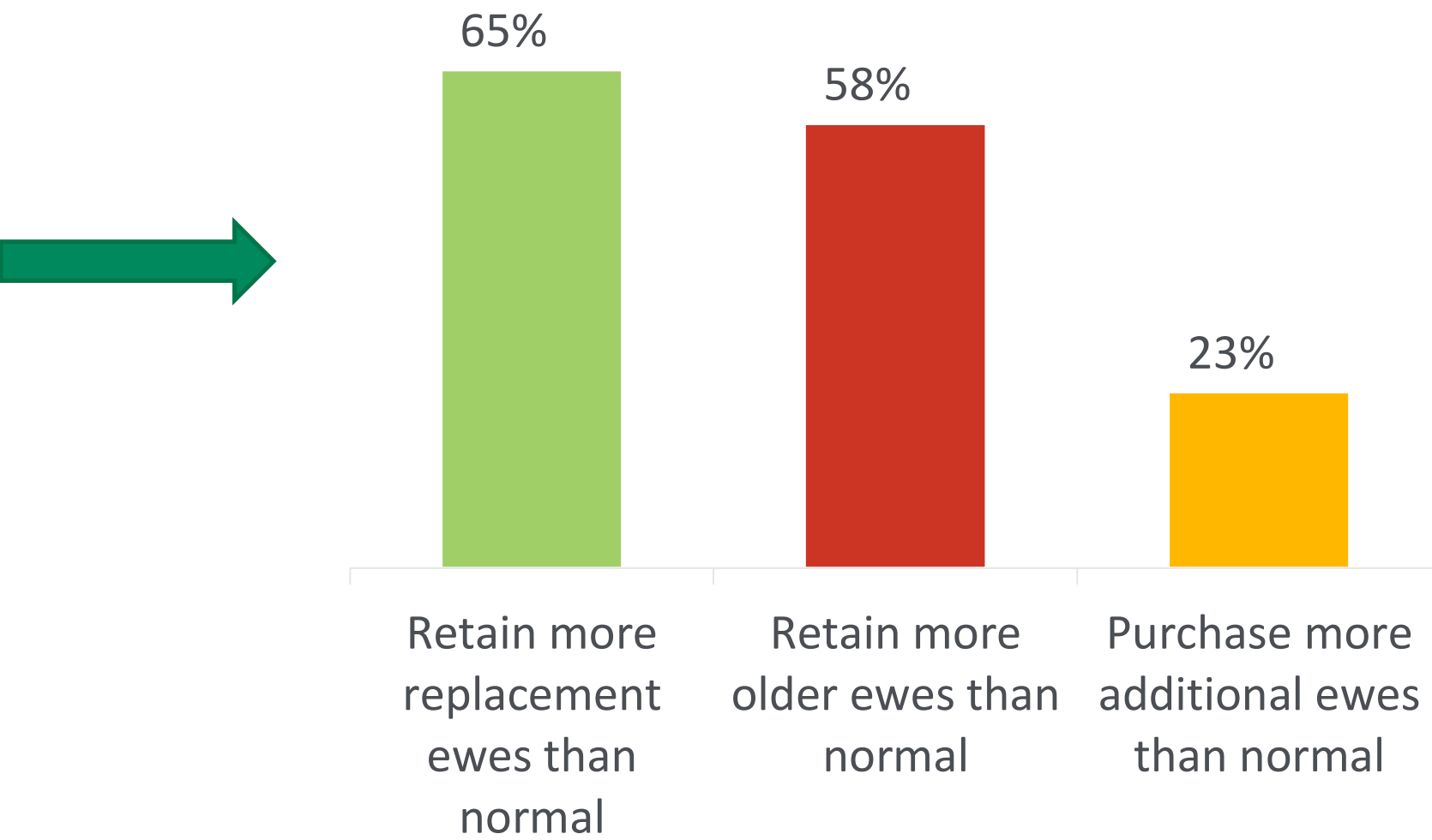
Lamb sales in next 4 months



Flock intentions



How to achieve increase



Totals

Breeding ewes on hand	7,284,664
Lambs on hand	4,061,717
Expected lamb sales in the next 4 months	889,984
Lambs marked in the past 4 months (1 Nov – 28 Feb)	272,427
Number of ewes joined to produce marked lambs	317,320

# Disclaimer

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