

MLA and AWI Wool and Sheepmeat Survey Report - Sheepmeat

November, 2016

Prepared by Kynetec

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Executive Summary – Lamb Production

Number and type of sheep producers

43,825 producers are involved in sheep production (ABS Census 2011)
39% of producers run both Merino and other/non-Merino sheep flocks
33% of producers run only non-Merino flocks
28% of producers run only Merino flocks

Number of breeding ewes on hand

38,404,253 total breeding ewes on hand
26,665,958 total Merino breeding ewe flock, 69% of total breeding flock
11,738,294 total non-Merino breeding ewes on hand, 31% of total breeding flock
Within the Merino flock, 69% for Merino lamb production and 31% for other lamb production (Merino other)

Number of lambs on hand

26,718,721 total lambs on hand
12,493,237 total Merino lambs, 47% of total lamb flock
14,225,212 total non-Merino lambs, 53% of total lamb flock

Expected lamb sales in the next four months (1 Nov 2016 – 28 Feb 2017)

10,813,524 total lamb sales in the next four months
2,110,263 total Merino sales (20% of total lamb sales)
4,106,378 total Pure meat sales (38% of total lamb sales)
3,200,399 total First cross sales (30% of total lamb sales)
1,396,485 total other breed sales (13% of total lamb sales)

Number of lambs marked in the past four months (1 Jul – 31 Oct)

19,365,872 total lambs marked in the past four months
8,455,960 total Merino lambs marked (44% of total markings)
10,909,912 total non-Merino lambs marked (56% of total markings)

Number of ewes joined to produce those lambs

23,528,316 total number of ewes joined to produce those lambs
11,289,860 total Merino lambs joined (48%)
12,238,456 total non-Merino lambs joined (52%)

Marking rates

75% National Merino marking rate
89% National non-Merino marking rate

Ewe flock intentions for next 12 months

35% increase
53% maintain
8% decrease
3% not applicable

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 October 2016 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 2,439 survey responses were achieved in October 2016, up from 1,972 in October 2015.

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 69 respondents completed the survey via this method.
 - 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 October to 31 October 2016) and send reminder emails accordingly. A total of 17,547 emails were sent to MLA and AWI members via the email addresses provided by MLA and AWI databases. Of those 3,596 emails bounced, giving a total emails received of 13,951. A total of five weekly 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 1,713 completed responses, up from 527 in October 2015.
2. **Mail-out survey:** A hard copy questionnaire and a reply paid envelope were sent to a random sample of 5,000 producers from the FARM database (Fairfax Agricultural Research and Marketing). This methodology was supported by 630 CATI reminder calls to producers in specific regions (Tasmania and western NSW) in order to boost response rates. A total of 643 producers responded by this methodology, down from 1,444 in October 2015.
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, 12 calls were successful combining with two other respondents who completed the online survey to achieve a sample of 14 very large producers.

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.

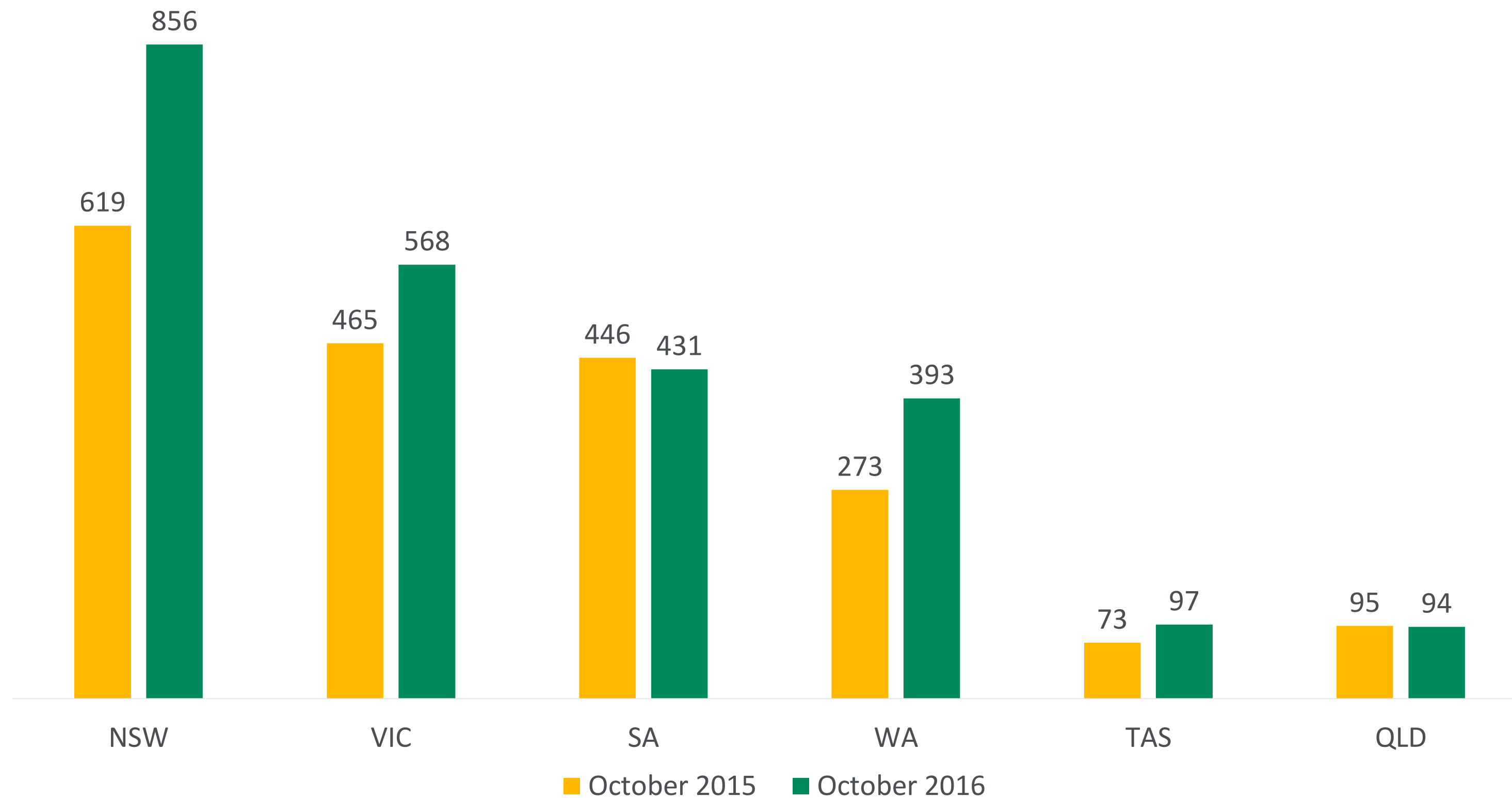
Statistical significance

The total research sample of 2,439 will give the results of this study a margin of error of $\pm 2.05\%$ 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 $\pm 2.05\%$ 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=2,439) 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.

Respondents



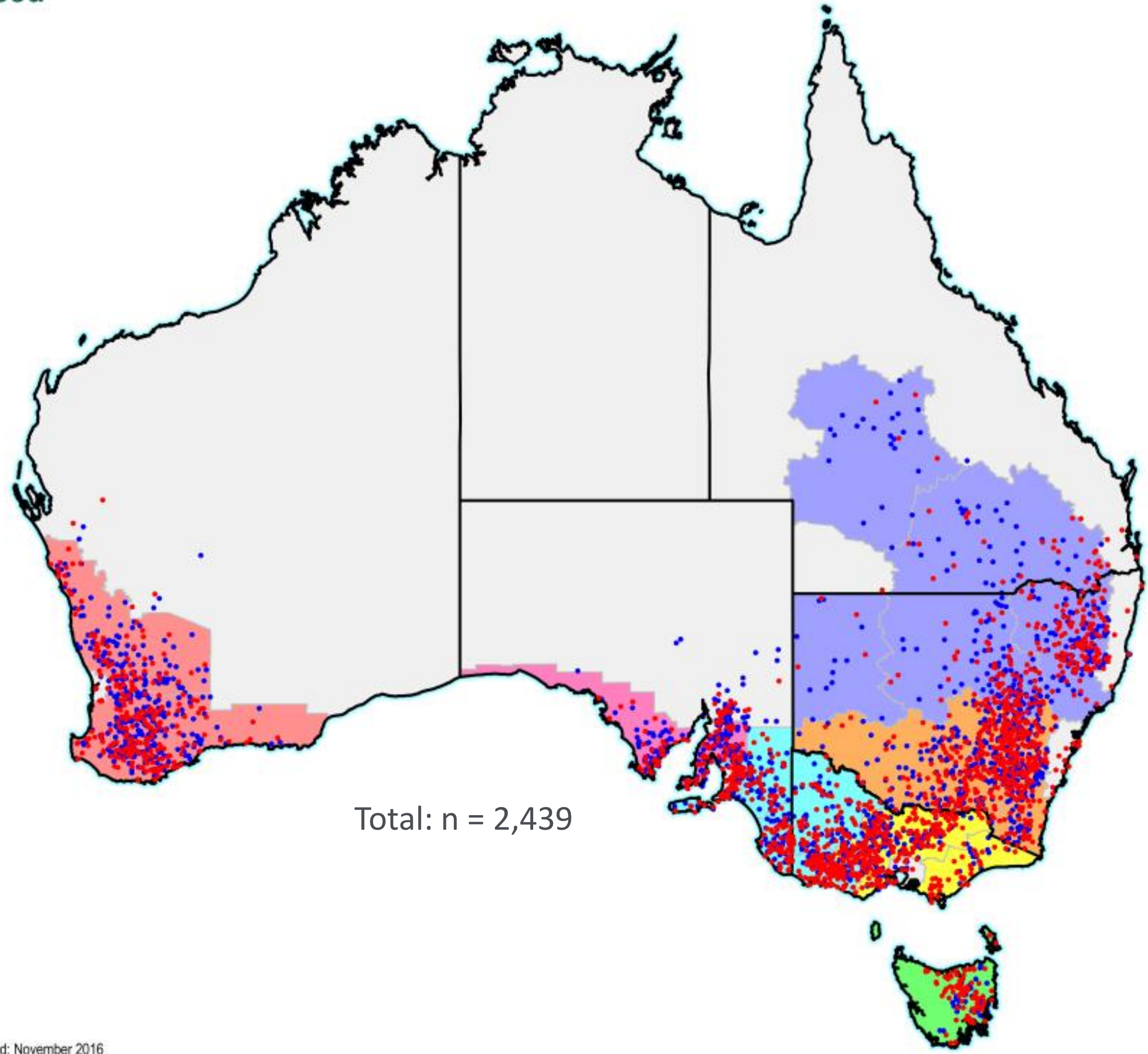
State	ABS (2014-15) Distribution	MLA and AWI Wool and Sheepmeat survey Distribution
NSW	38%	35%
VIC	26%	23%
QLD	0%	4%
SA	15%	18%
WA	13%	16%
TAS	4%	4%

Survey Responses [2/4]

Merino & Crossbreed Flock Count By Postcode

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

- Merino Flock Count**
1 Dot = 1
- Crossbreed Flock Count**
1 Dot = 1



Total: n = 2,439

Survey Responses [3/4]

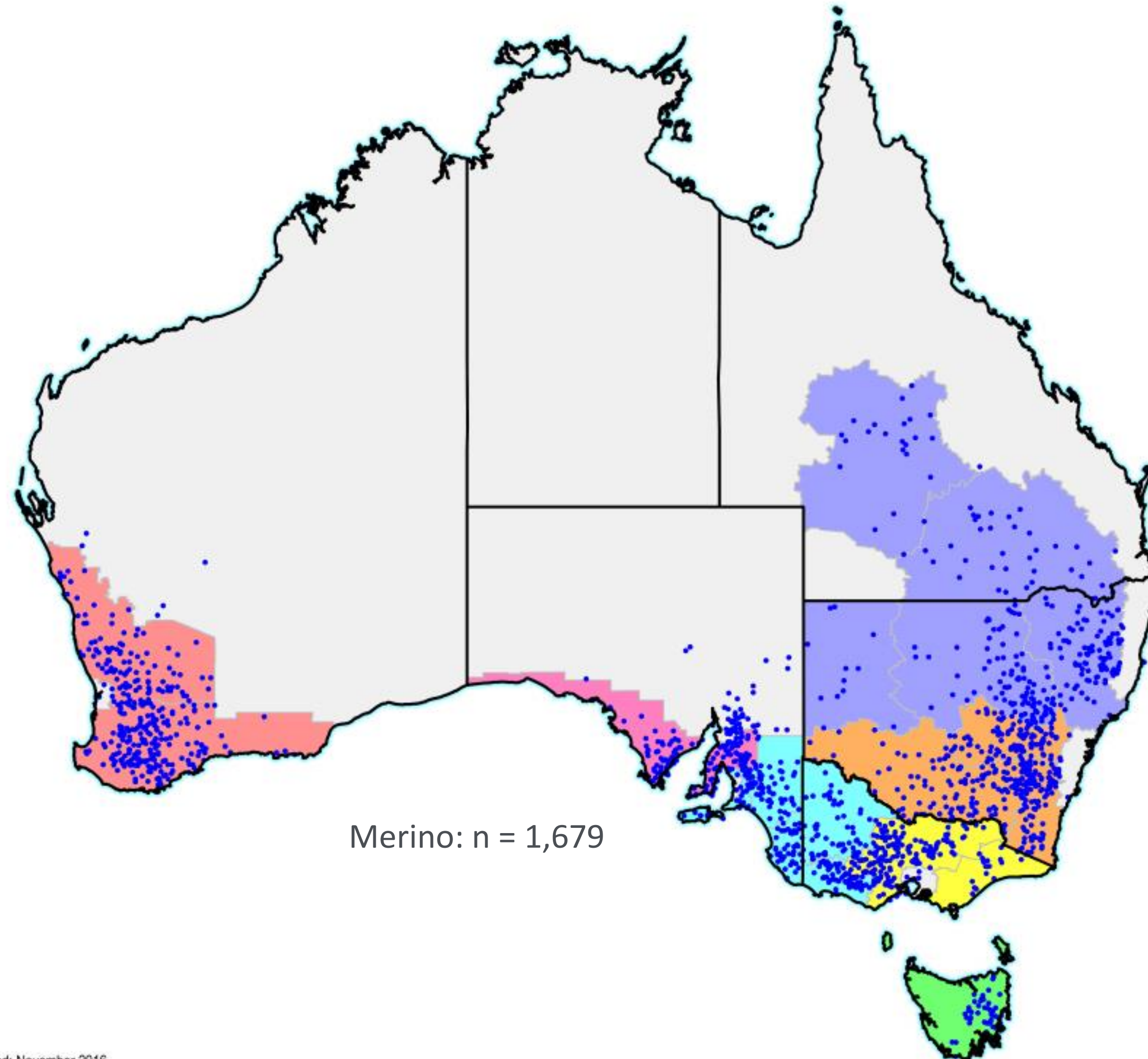
Merino Flock Count By Postcode

MLA Reporting Regions

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

Merino Flock Count

1 Dot = 1



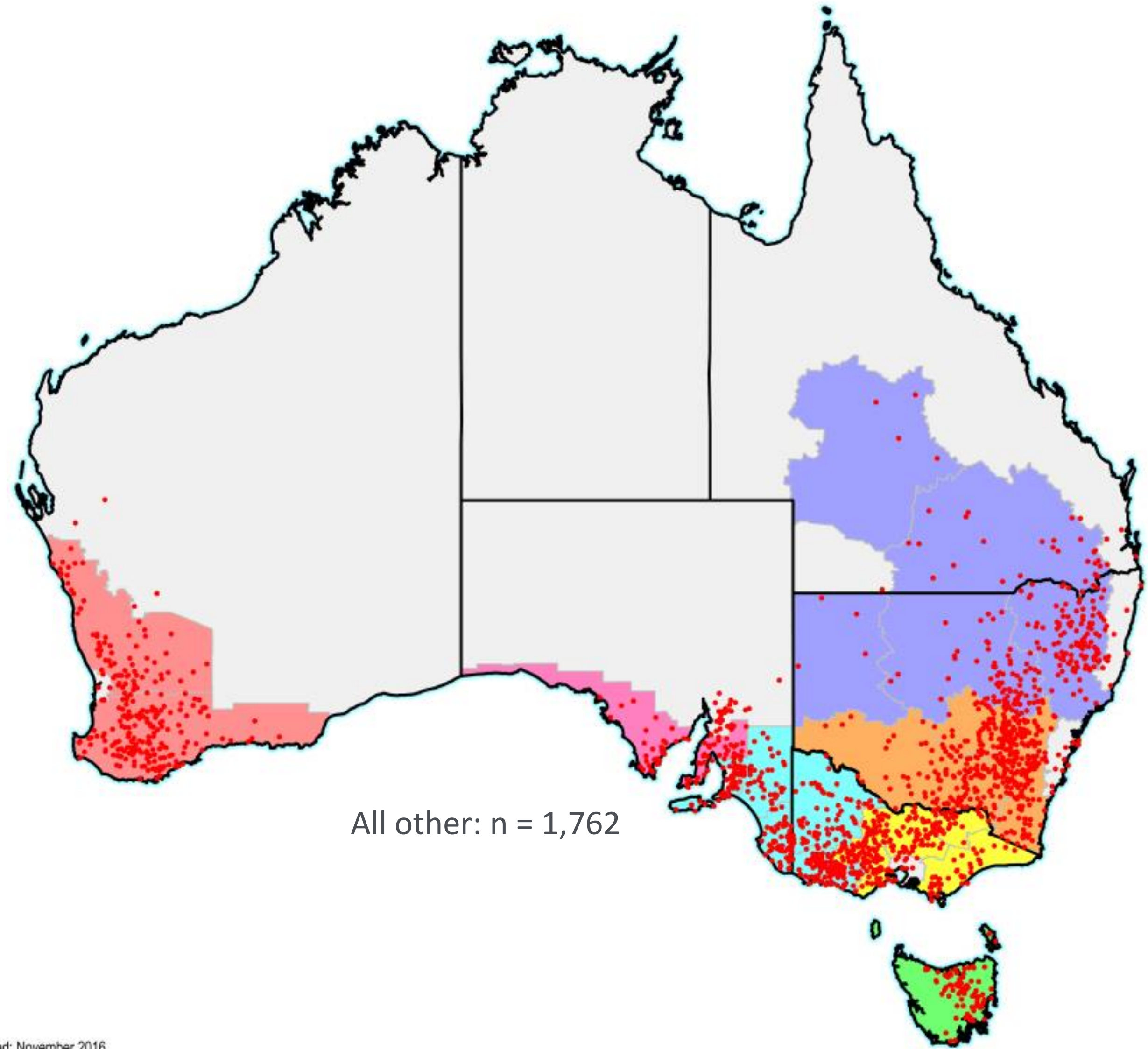
Merino: n = 1,679

Survey Responses [4/4]

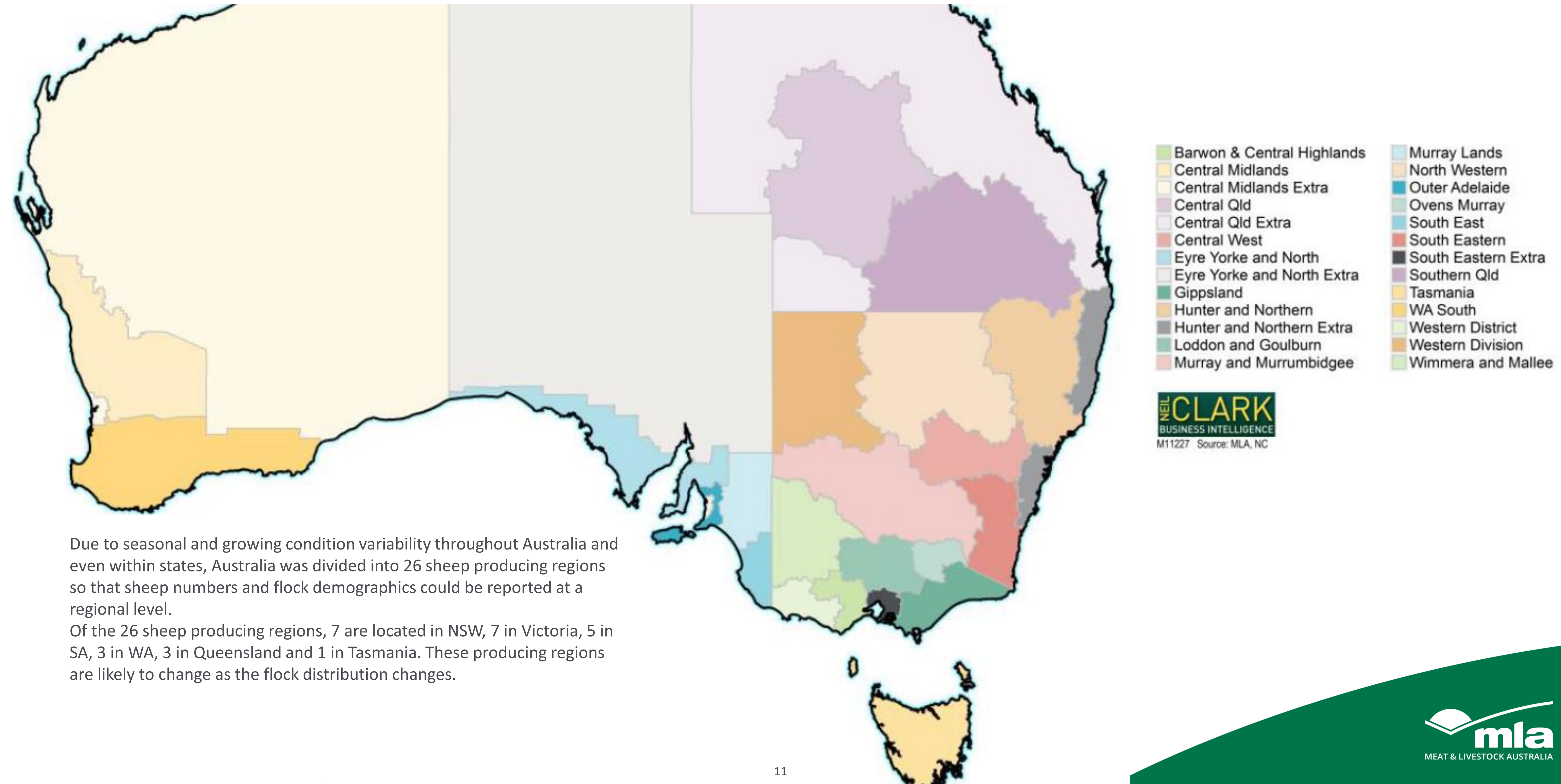
Crossbreed Flock Count By Postcode

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

Crossbreed Flock Count
1 Dot = 1



MLA sheep producing regions



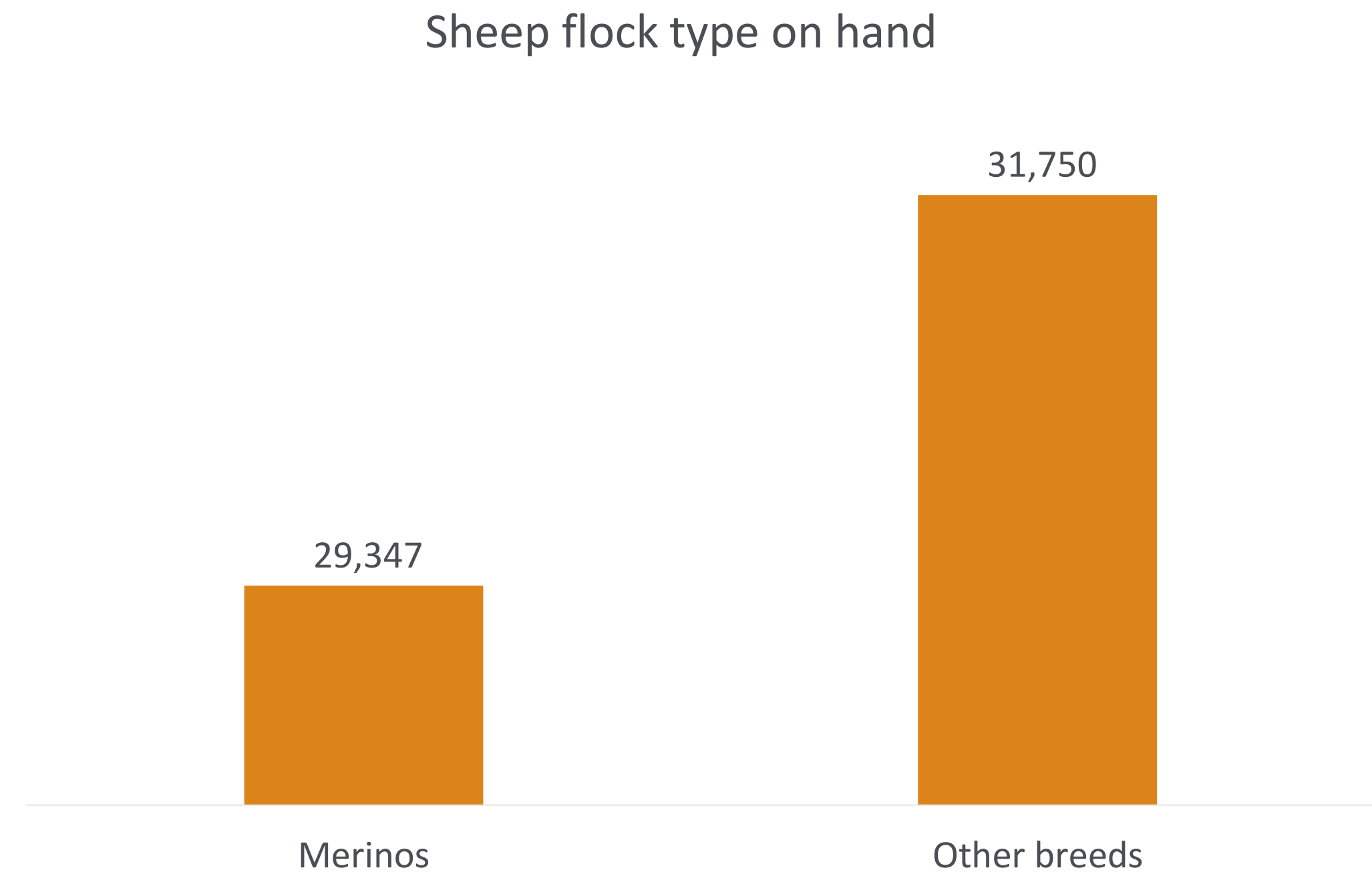
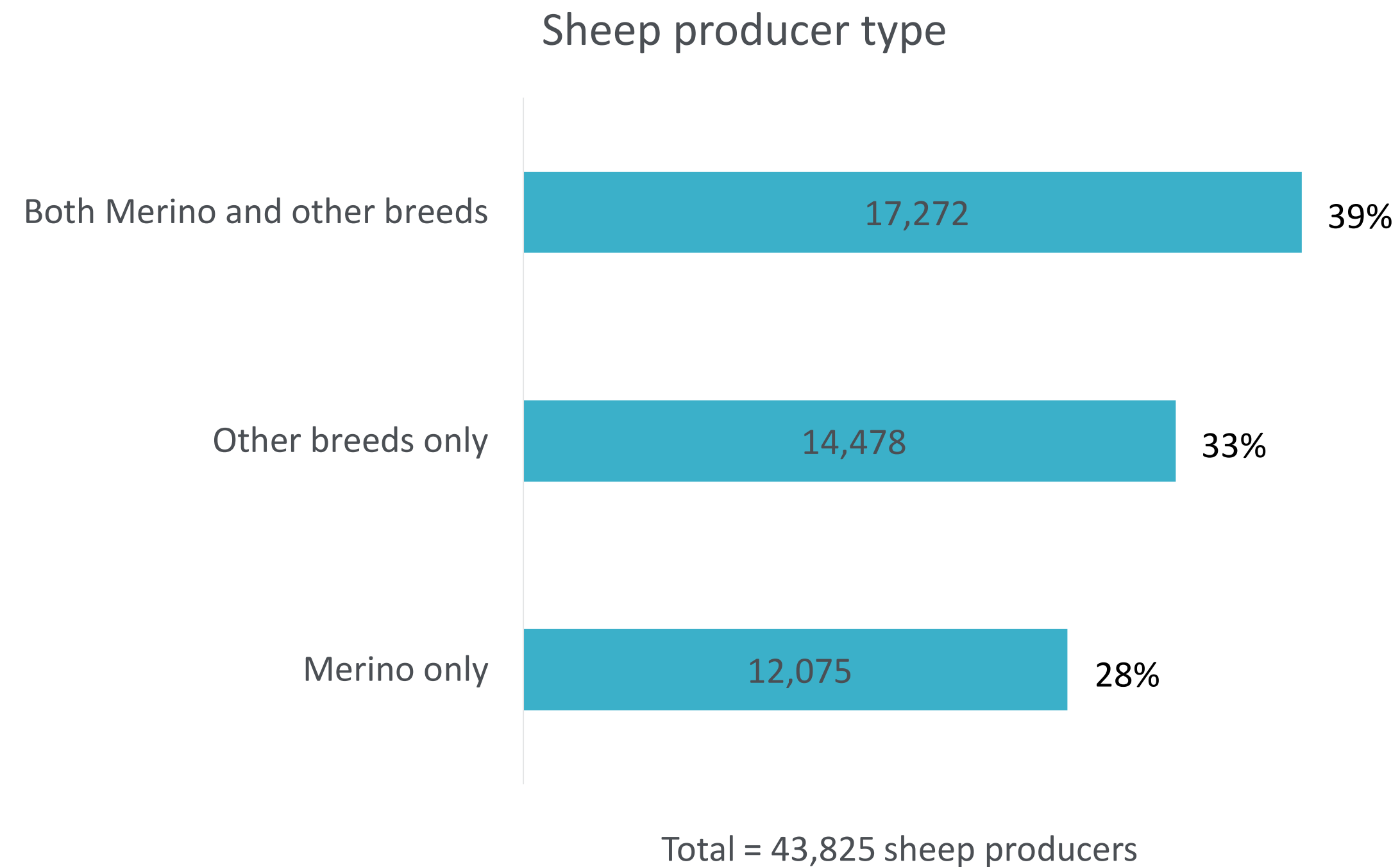
Due to seasonal and growing condition variability throughout Australia and even within states, Australia was divided into 26 sheep producing regions so that sheep numbers and flock demographics could be reported at a regional level.

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 39% of the sheep producer population. Although there are 29,347 pure bred Merino flocks in Australia, nearly 60% of them also produce other breeds of sheep. Similarly, 54% of other breed producers also produce pure bred Merinos.

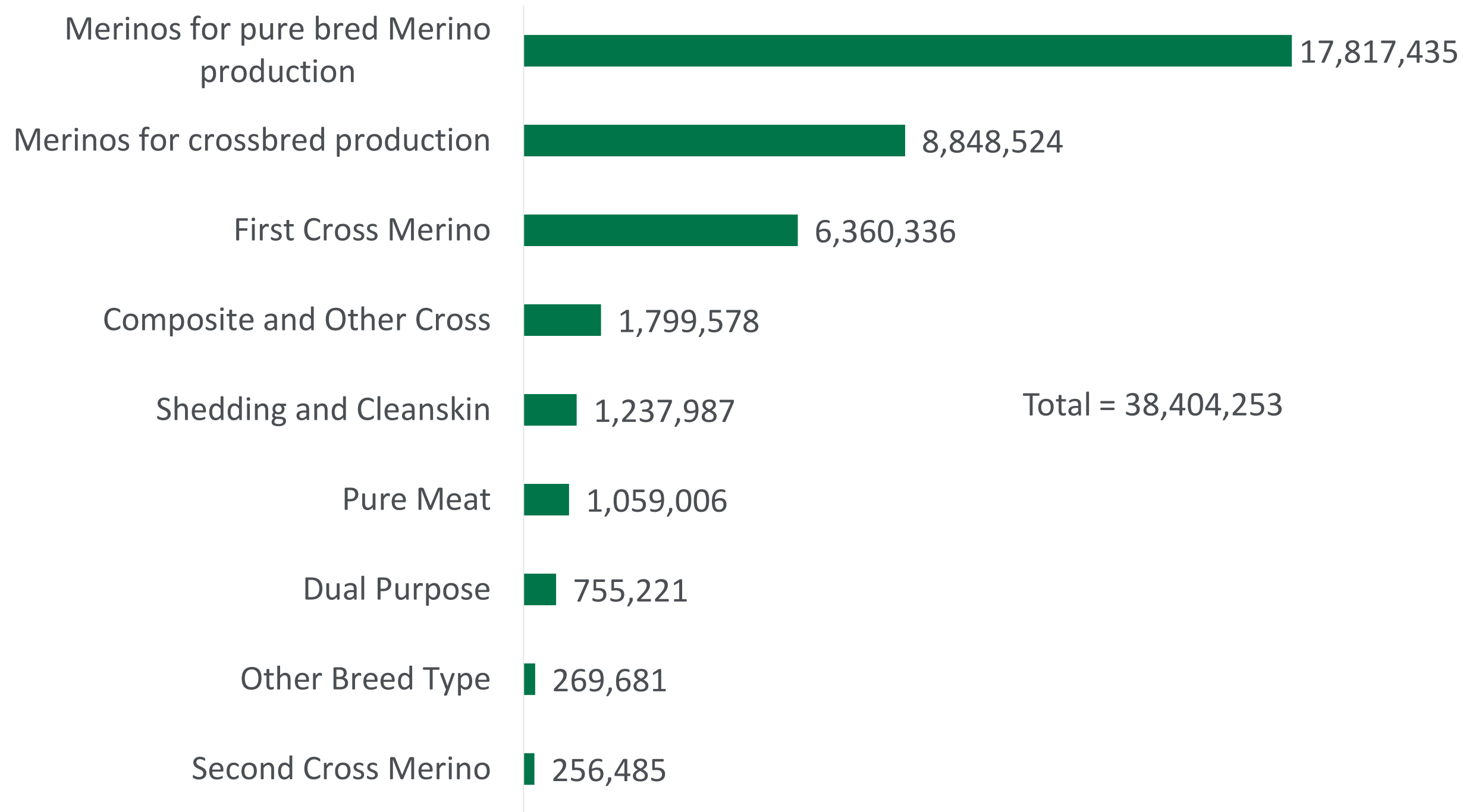


Ewes on hand and Lambs on hand - Australia

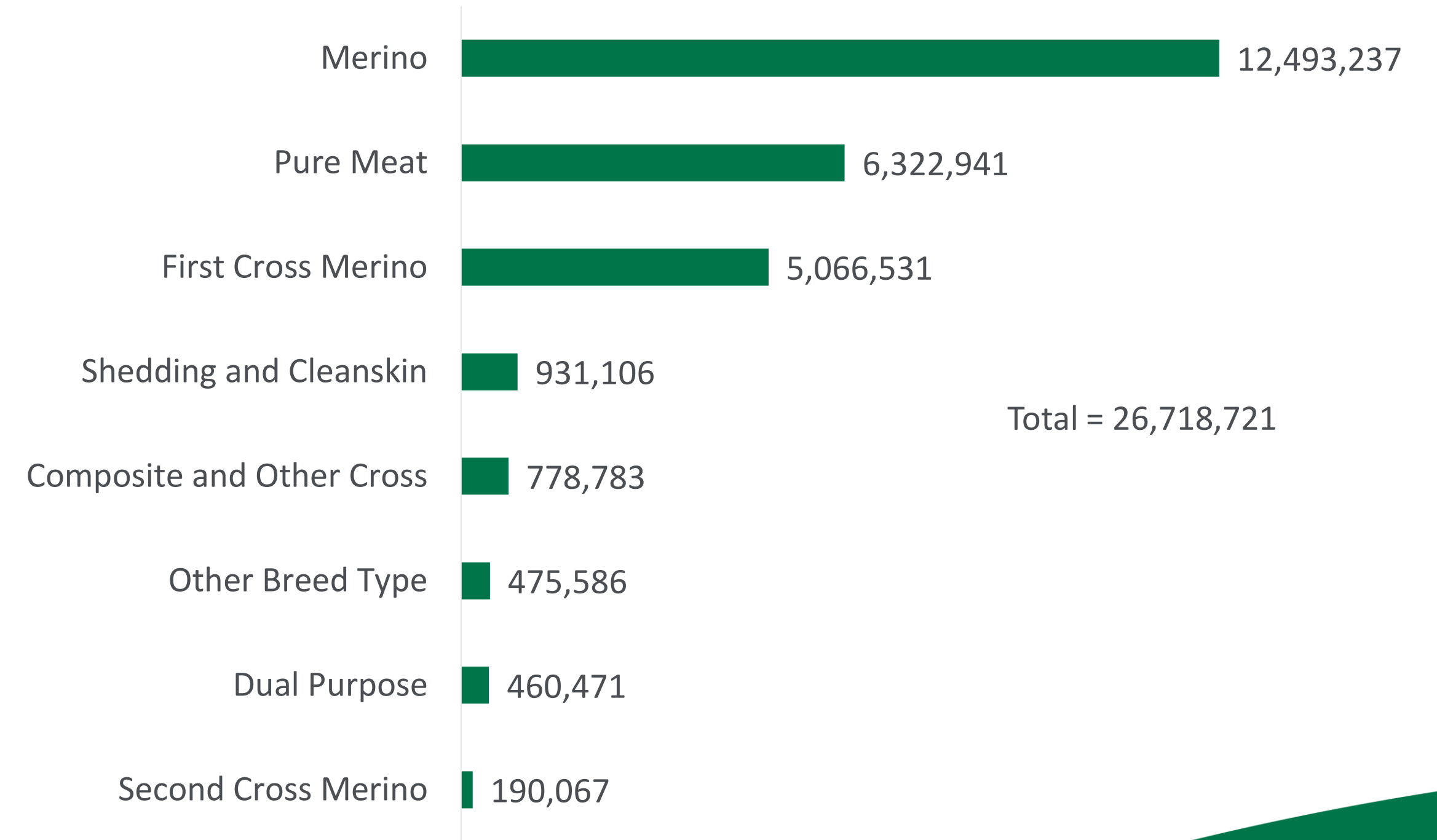
Merino's accounted for 69% of the total breeding ewe flock at 26.7 million head. Merino breeding ewes were further divided into Merino ewes for pure bred Merino production and Merino ewes for crossbred production, accounting for 69% and 31% of the merino flock, respectively.

There were 26.7 million lambs on hand at 31 October 2016. Similarly to the ewe flock, Merino's made up 47% of the total lamb flock, at 12.5 million head, followed by pure meat and first cross lambs accounting for 24% and 19% of the national lamb flock, respectively.

Number of ewes on hand



Number of lambs on hand

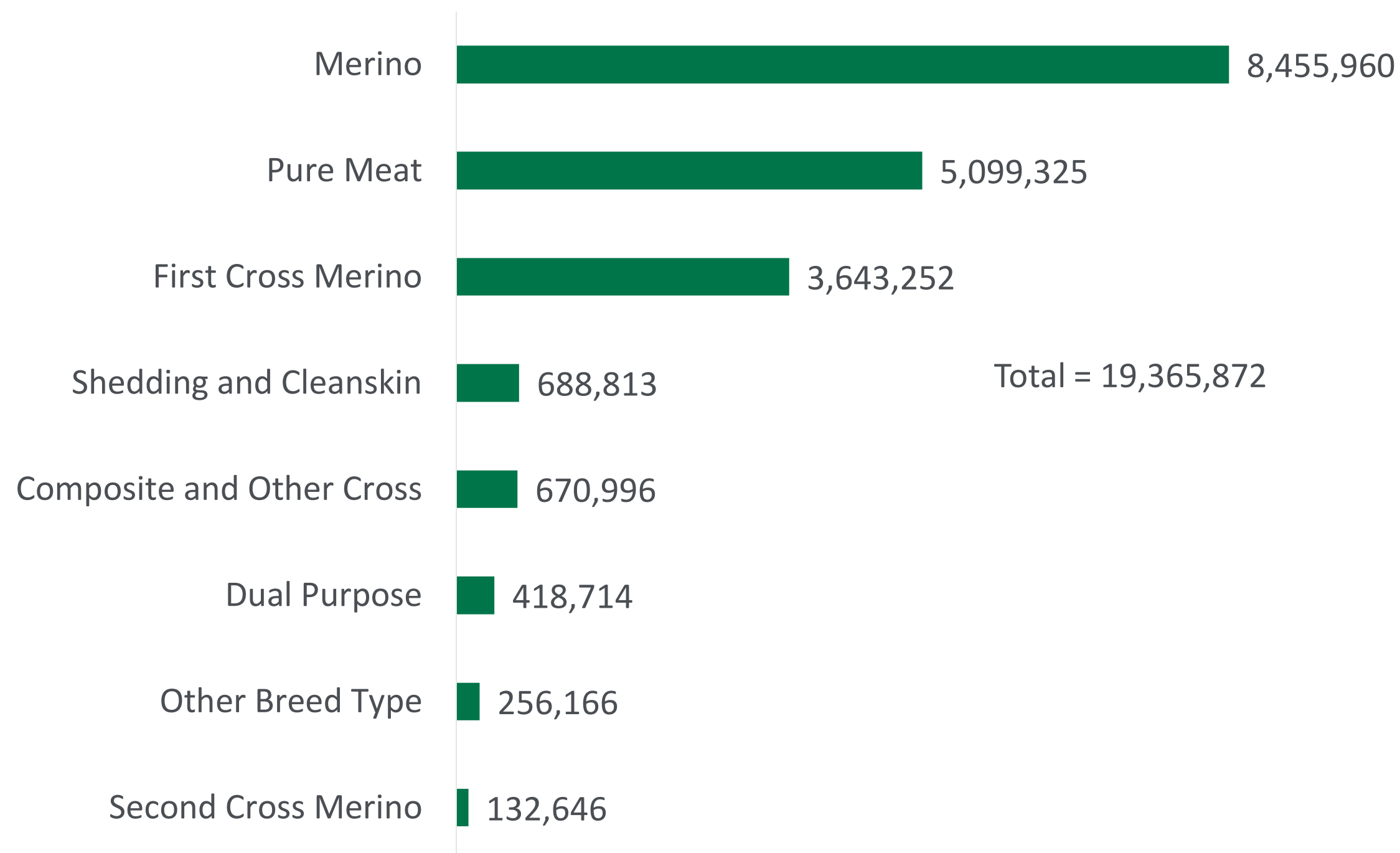


Lambs marked in the past four months and Ewes joined to produce those lambs - Australia

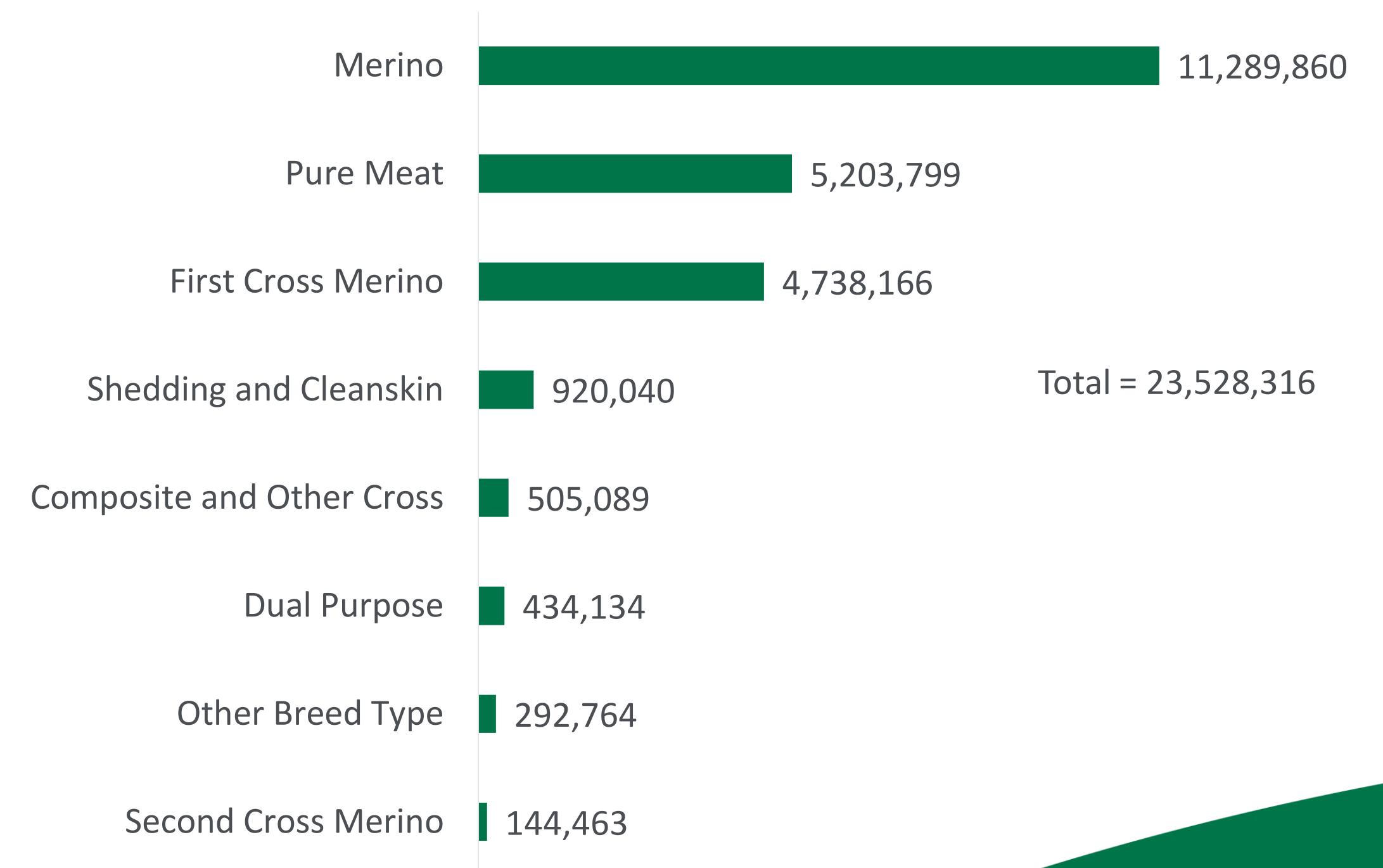
There were a total of 19.4 million lambs marked in the four months (from 1 July to 31 October 2016). In line with the total number of lambs on hand, Merino's accounted for the largest proportion of lambs marked in the past four months at 44%, with Pure meat and First Cross breeds accounting for 26% and 19%, respectively.

A total number of 23.5 million ewes were joined to produce these lambs. Despite the large number of Merino's joined, Merino marking rates were much lower than other breeds at 75%. In contrast, Pure meat breeds achieved marking rates of 98%.

Lambs marked in the past 4 months



Ewes joined to produce lambs

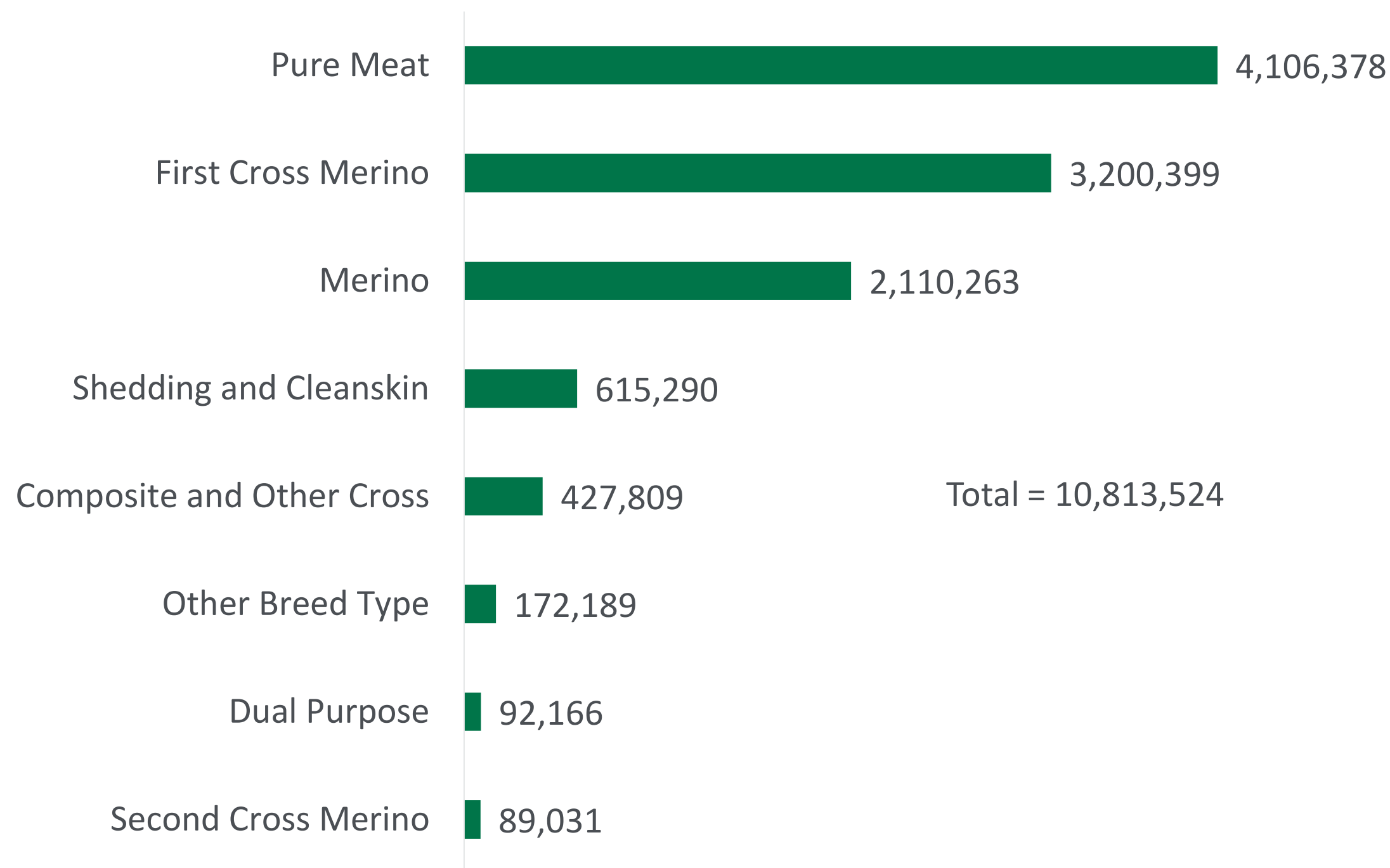


Expected lamb sales in the next 4 months - Australia

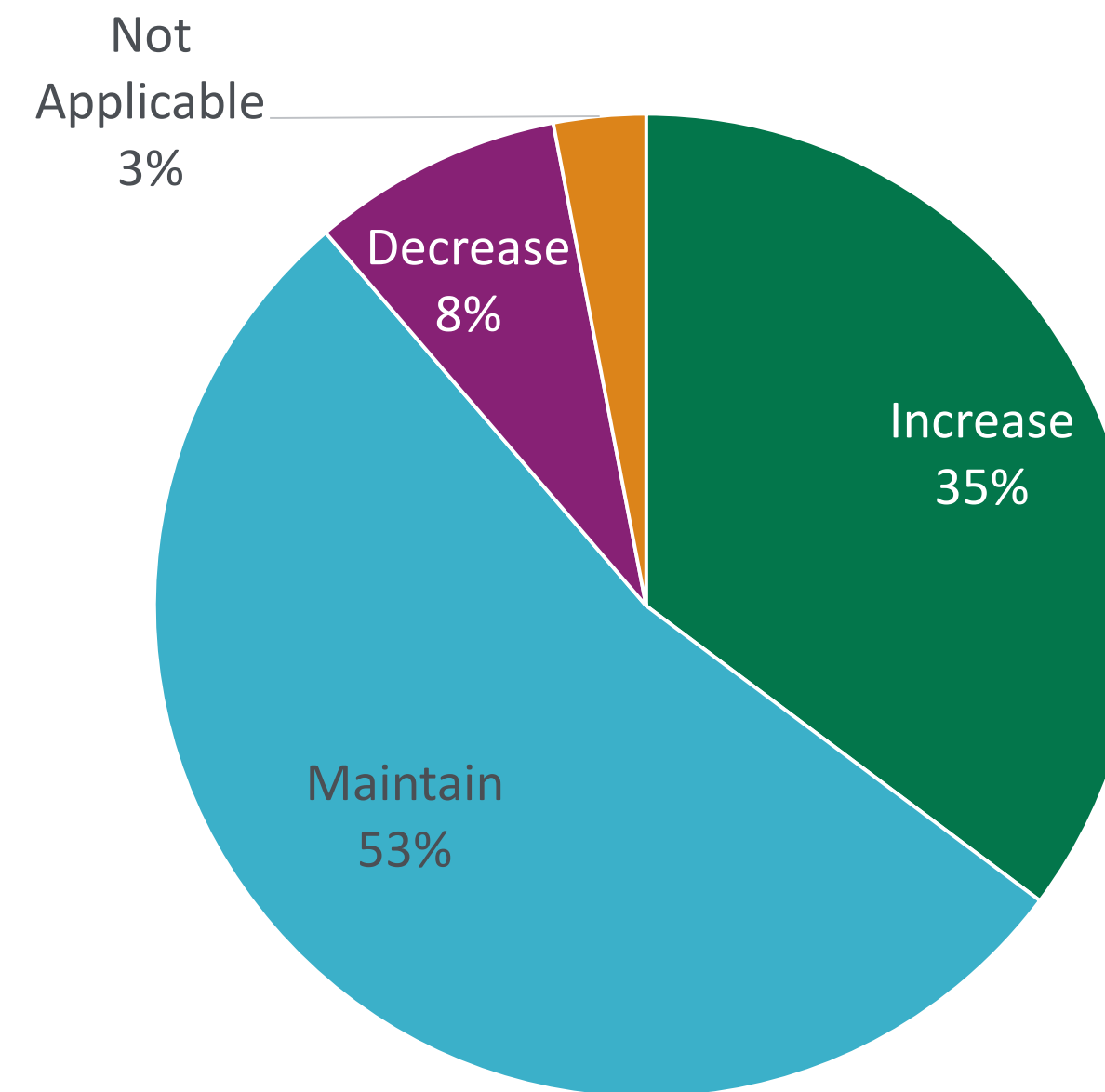
A total number of 10.8 million lambs are expected to be sold in the next four months (1 November 2016 to 28 February 2017), only 40% of the total number of lambs on hand. Of these, Pure meat, First Cross and Merino's are expected to account for 38%, 30% and 20% of lamb sales, respectively.

These results are consistent with producer ewe flock intentions for the next 12 months and method of achievement, with 35% looking to increase their ewe flocks and 39% of them looking to retain more replacement ewes than normal in order to achieve this increase.

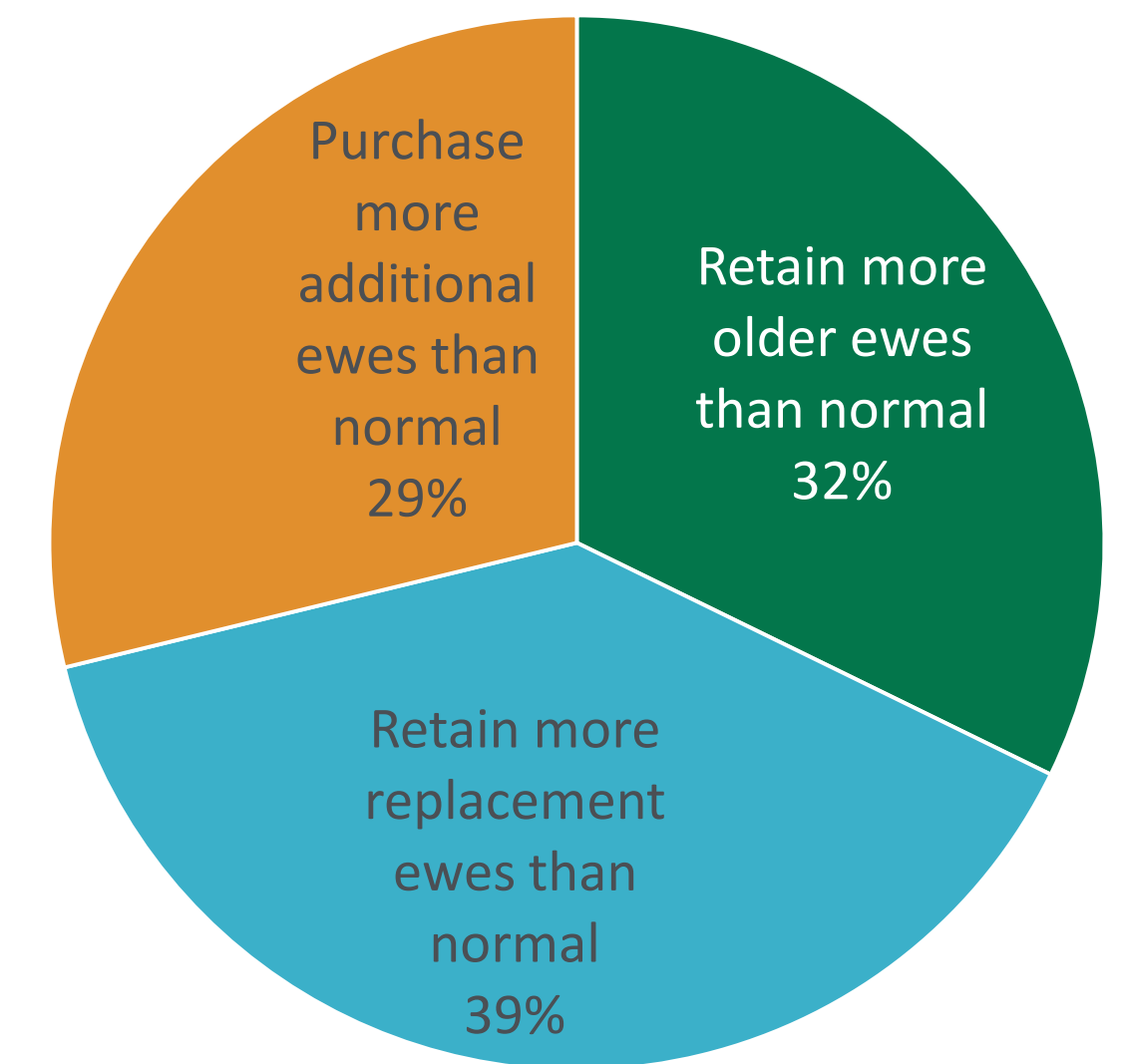
Expected sales in the next 4 months



Ewe flock intentions

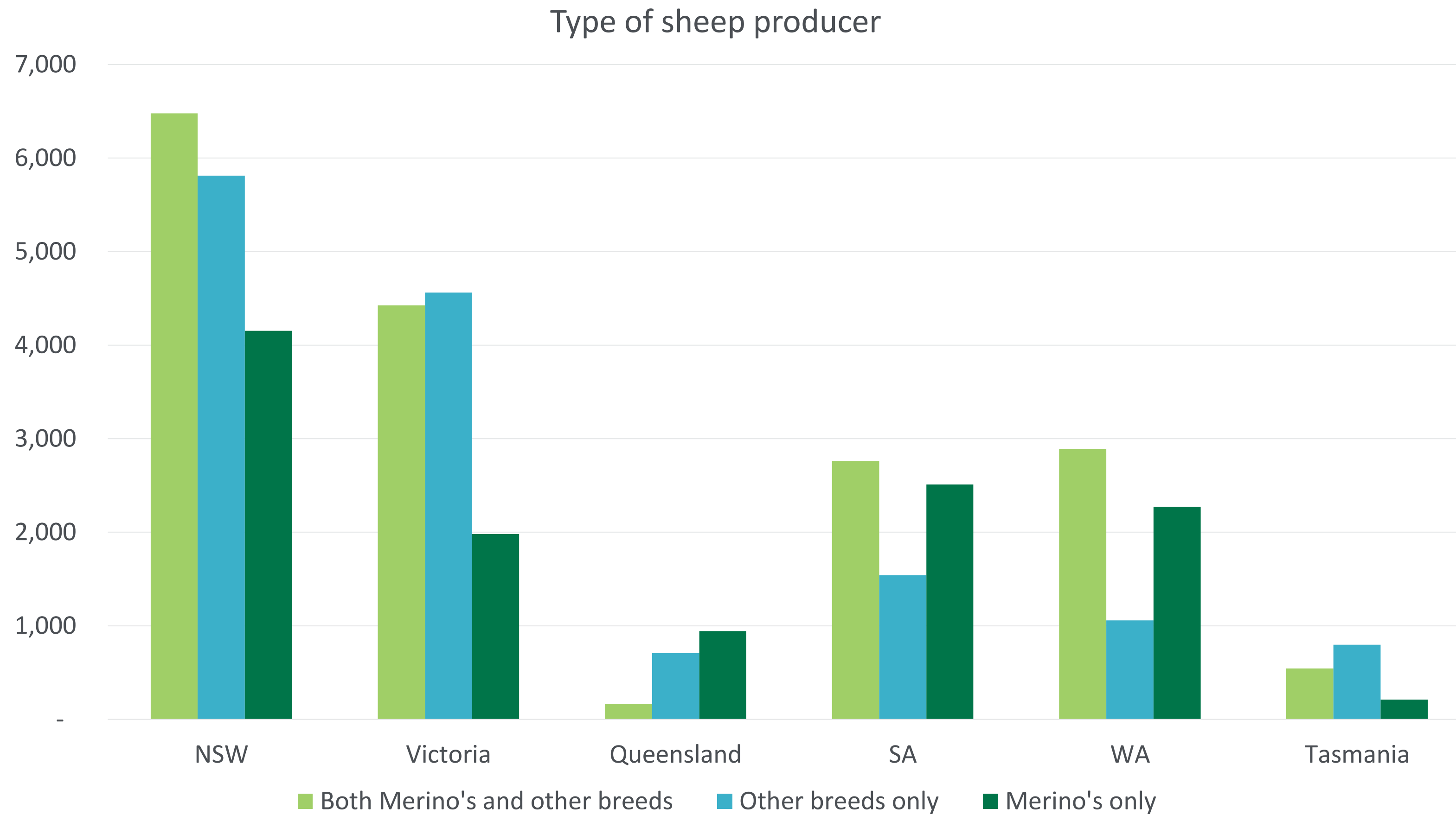


How to achieve increase



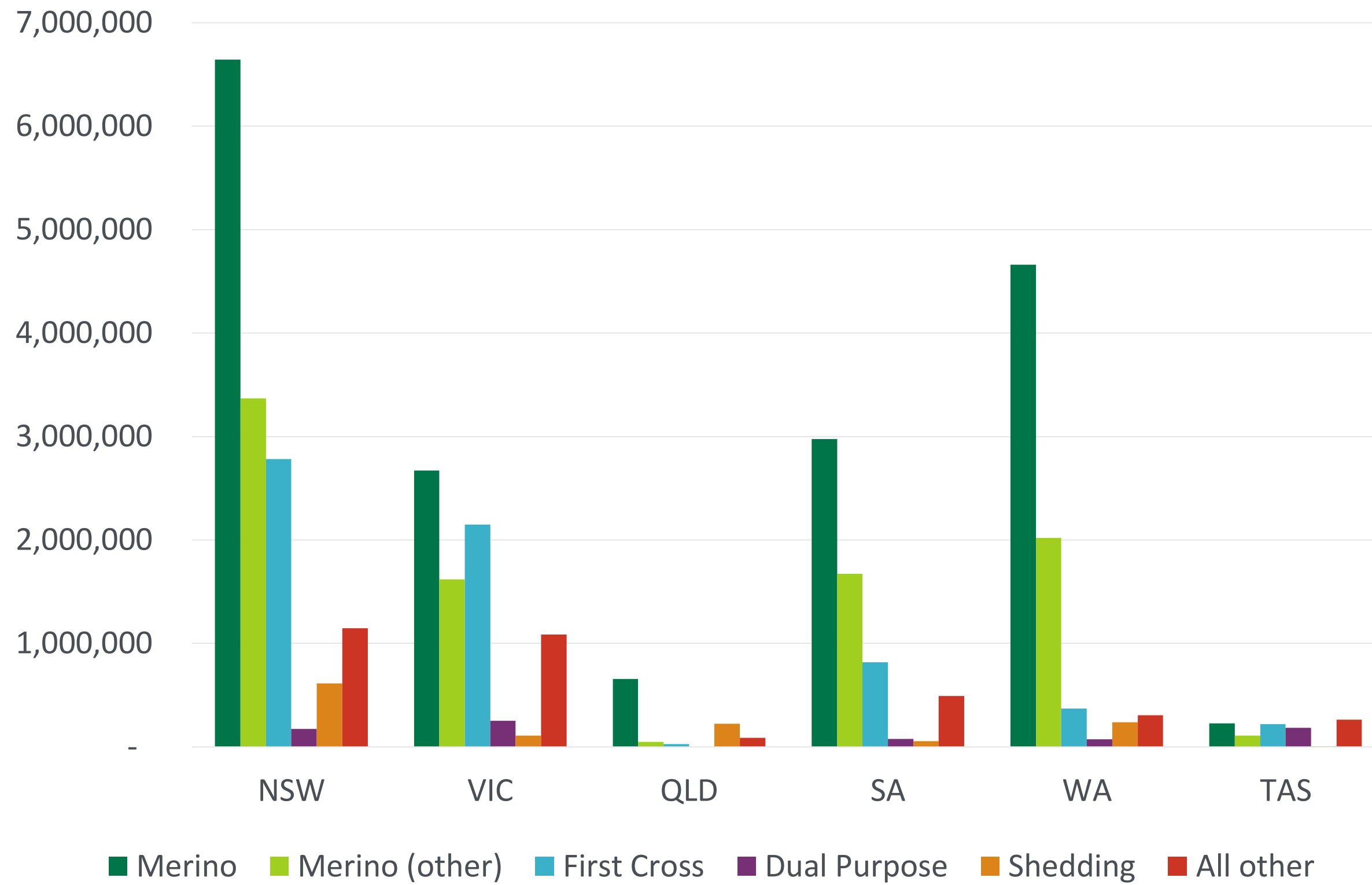
Results by State

Type of producer - State

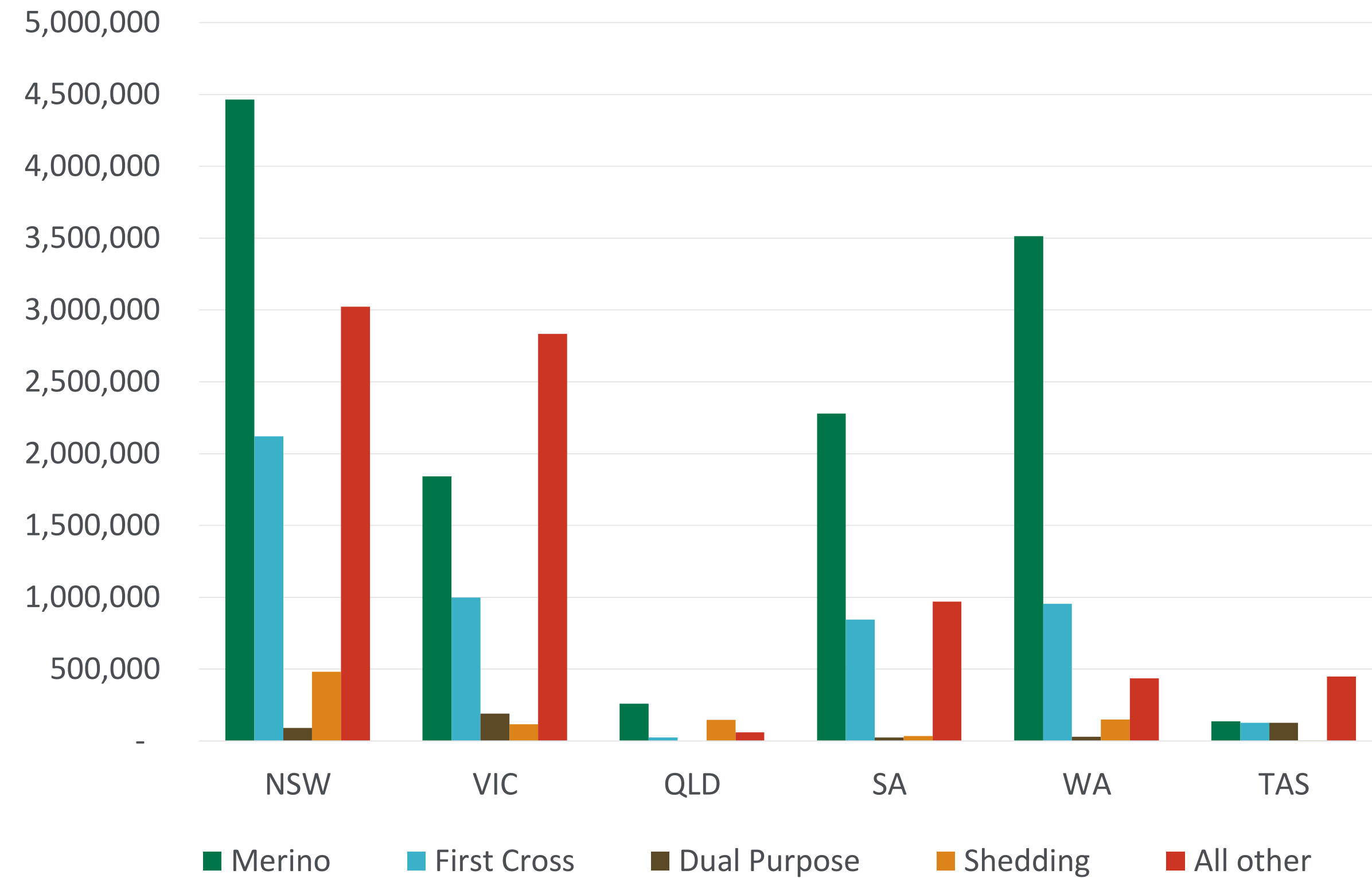


Ewes on hand and lambs on hand - State

Ewes on hand

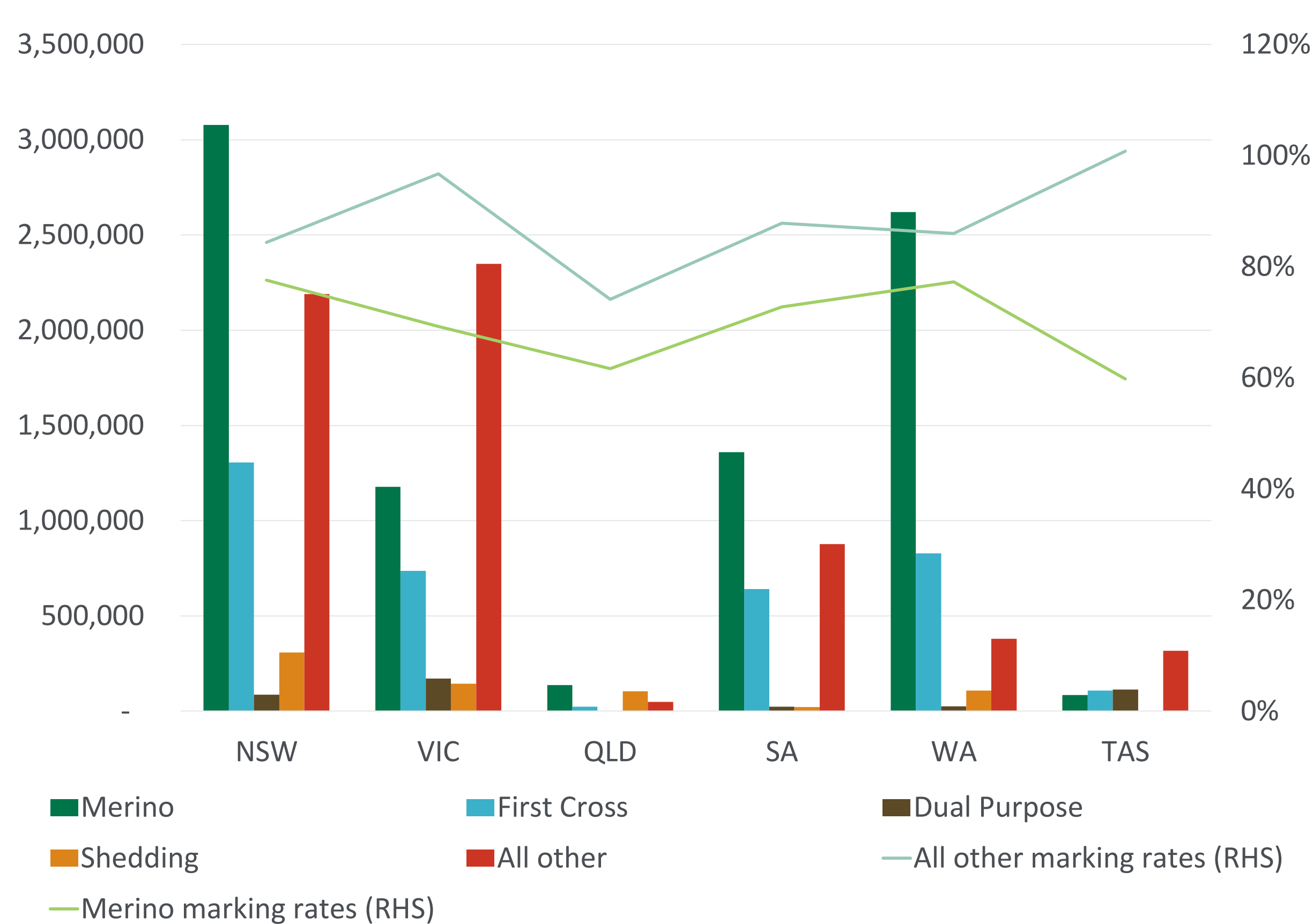


Lambs on hand

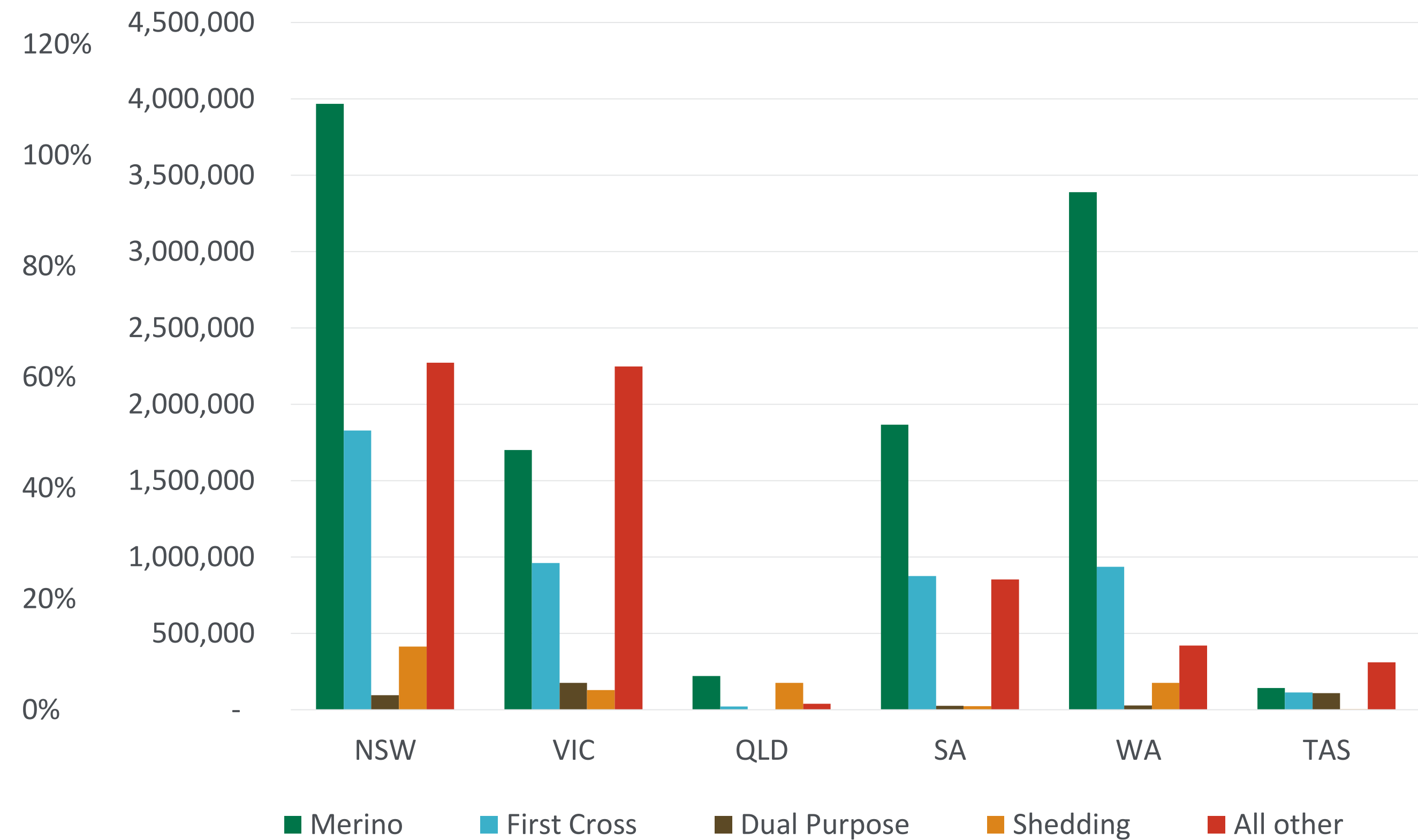


Lambs marked in the past four months and Ewes joined to produce those lambs - State

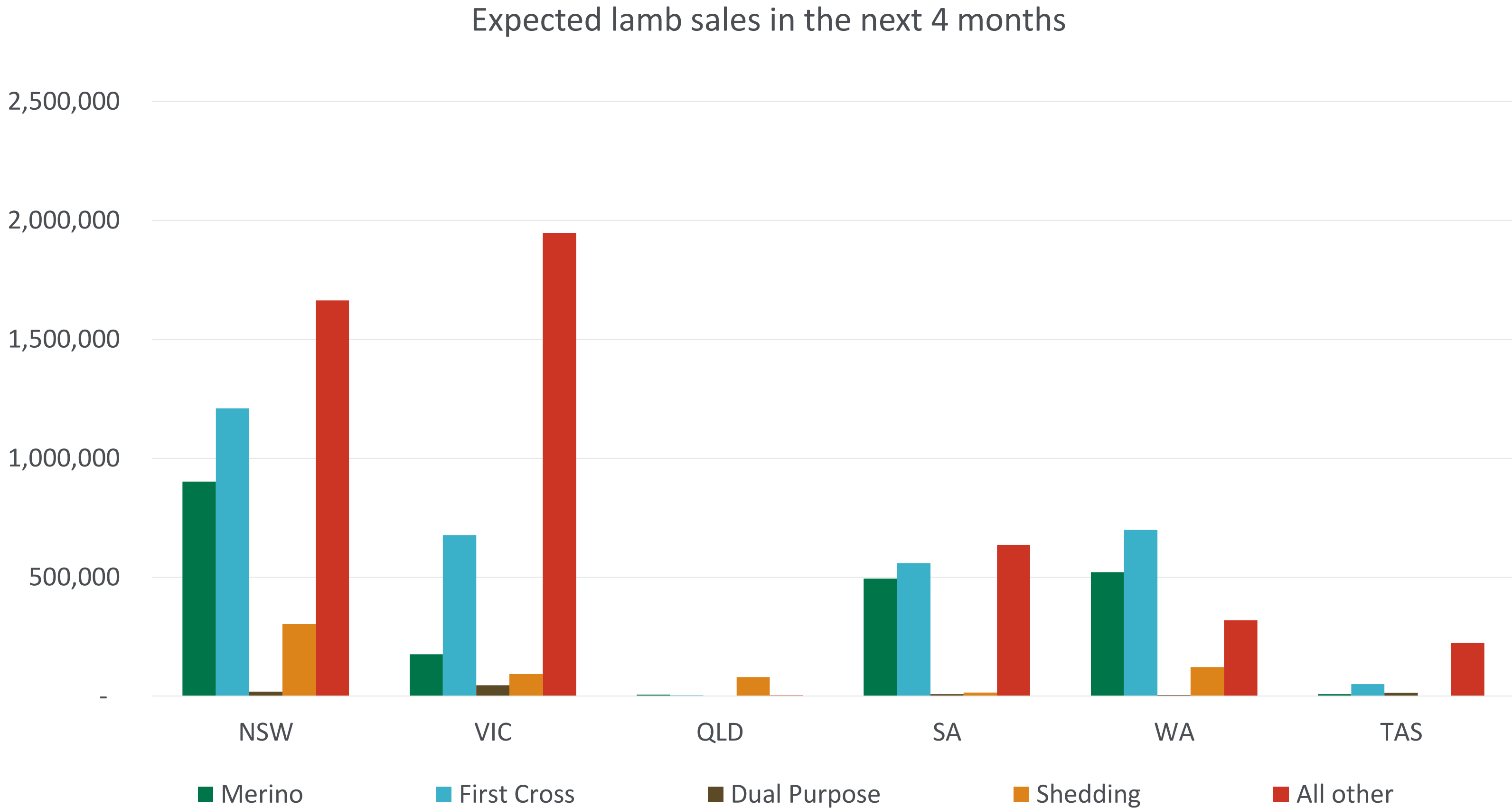
Lambs marked in the past 4 months



Ewes joined to produce those lambs

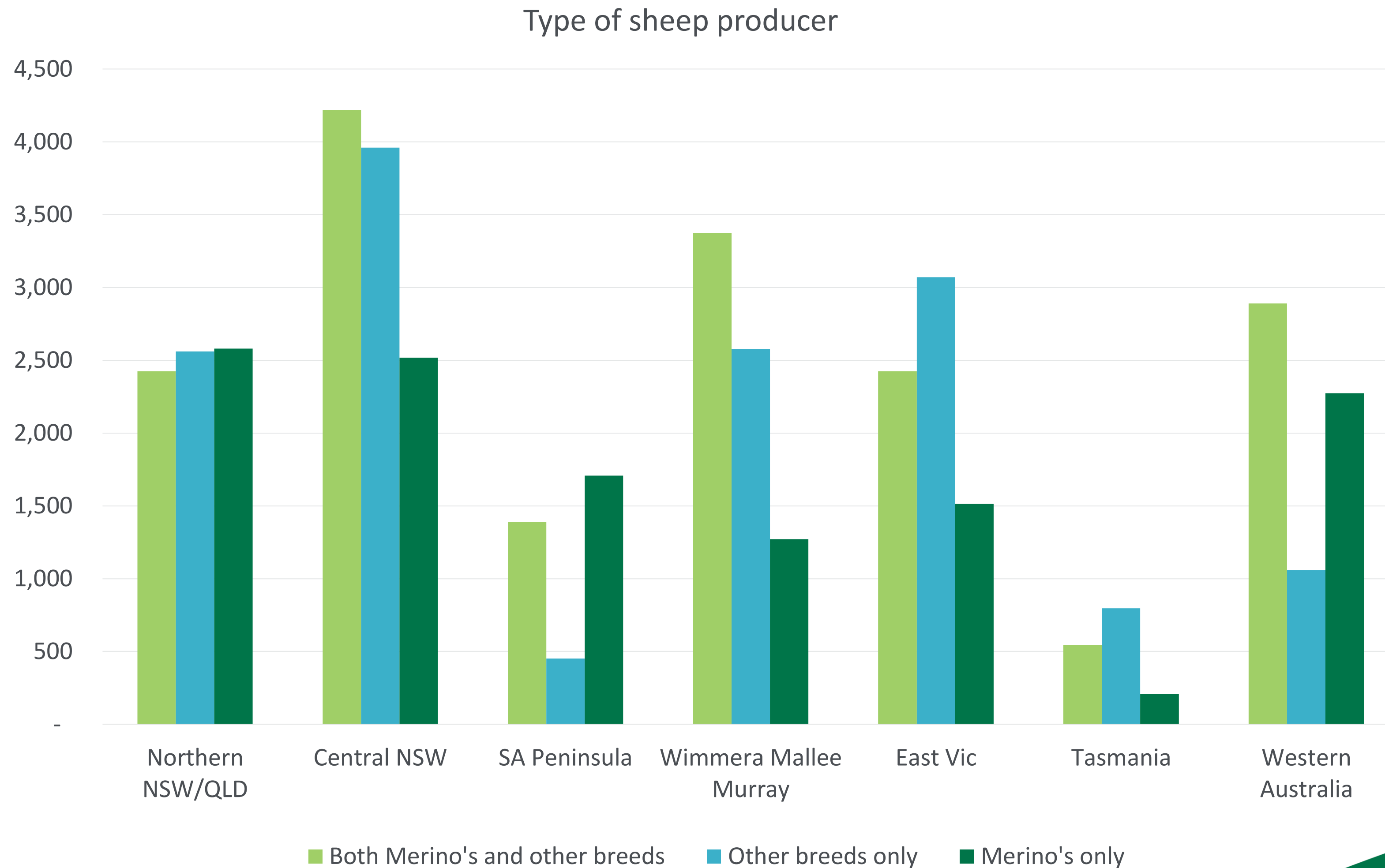


Expected lamb sales in the next four months - State



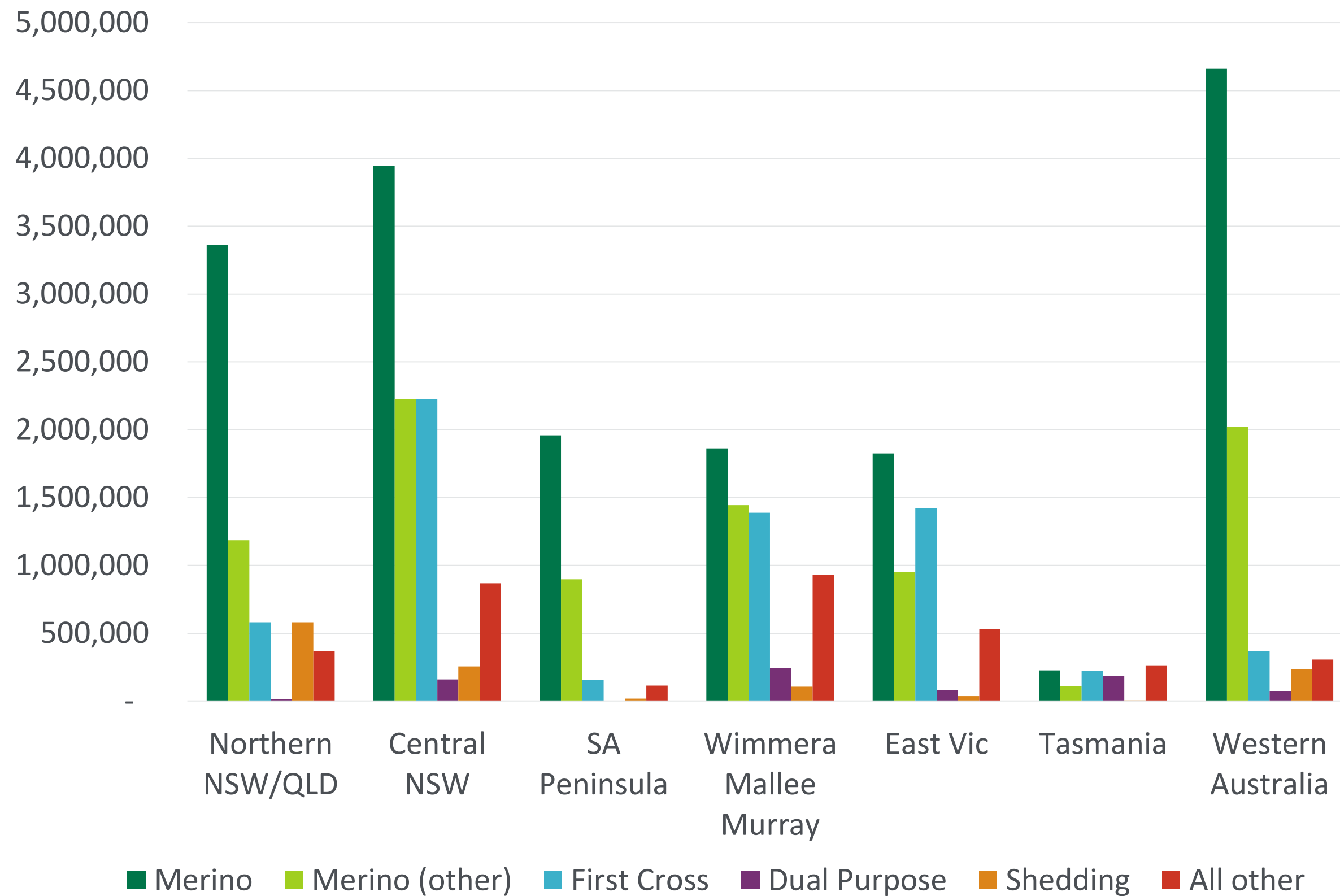
Results by MLA Reporting Region

Type of producer - MLA reporting region

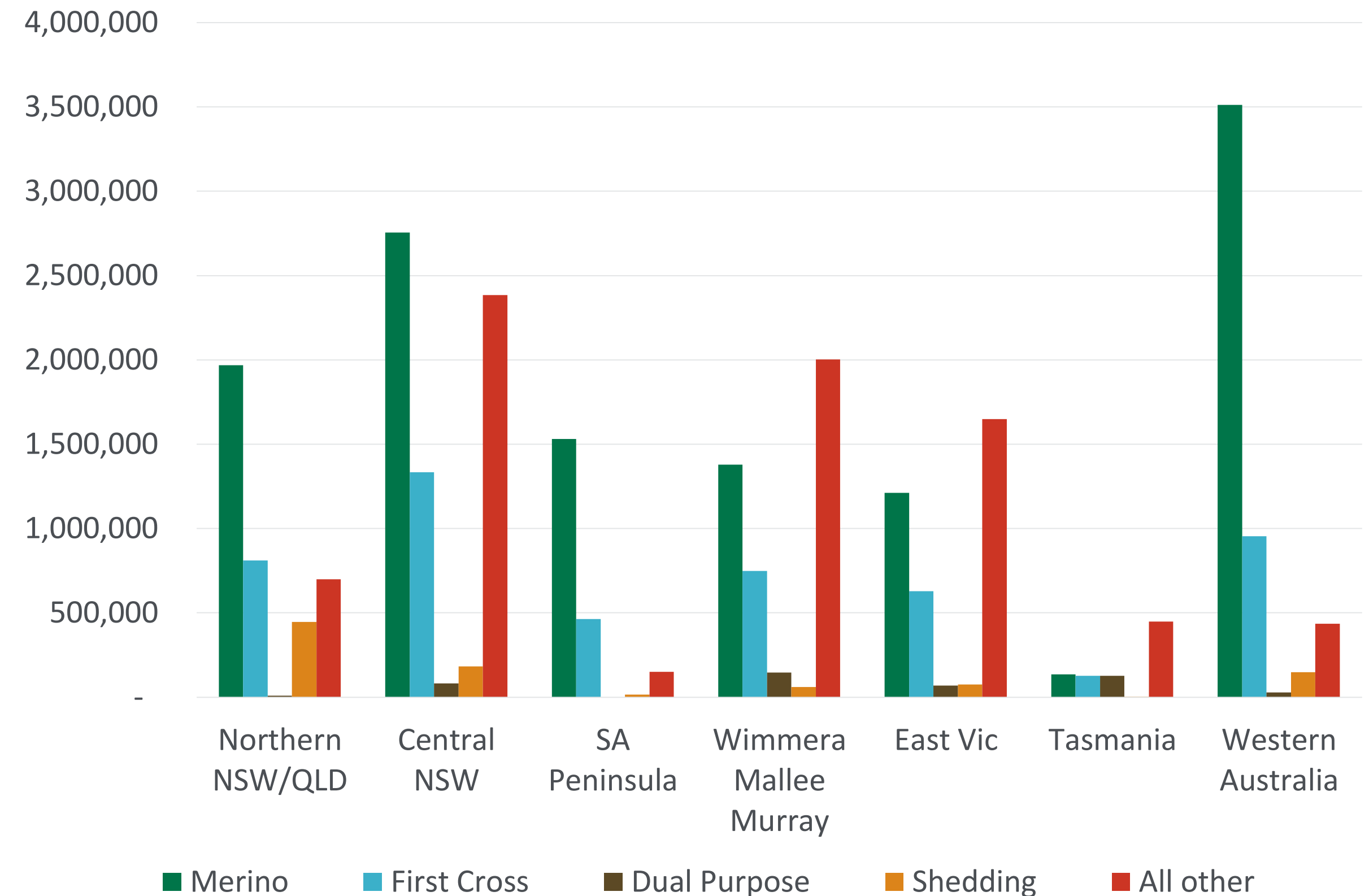


Ewes on hand and lambs on hand – MLA reporting regions

Ewes on hand

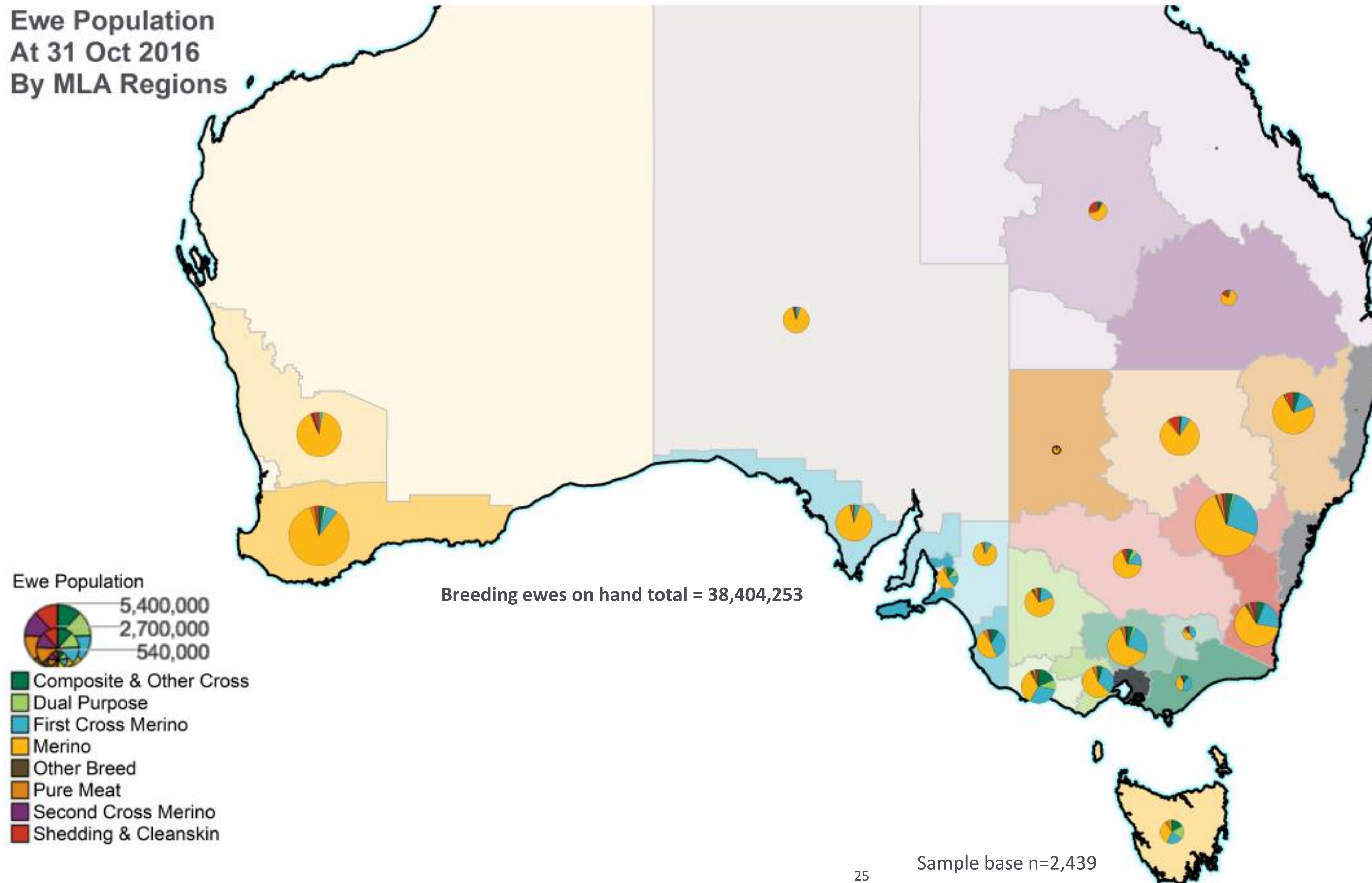


Lambs on hand



Ewes on hand – MLA reporting regions

Ewe Population
At 31 Oct 2016
By MLA Regions



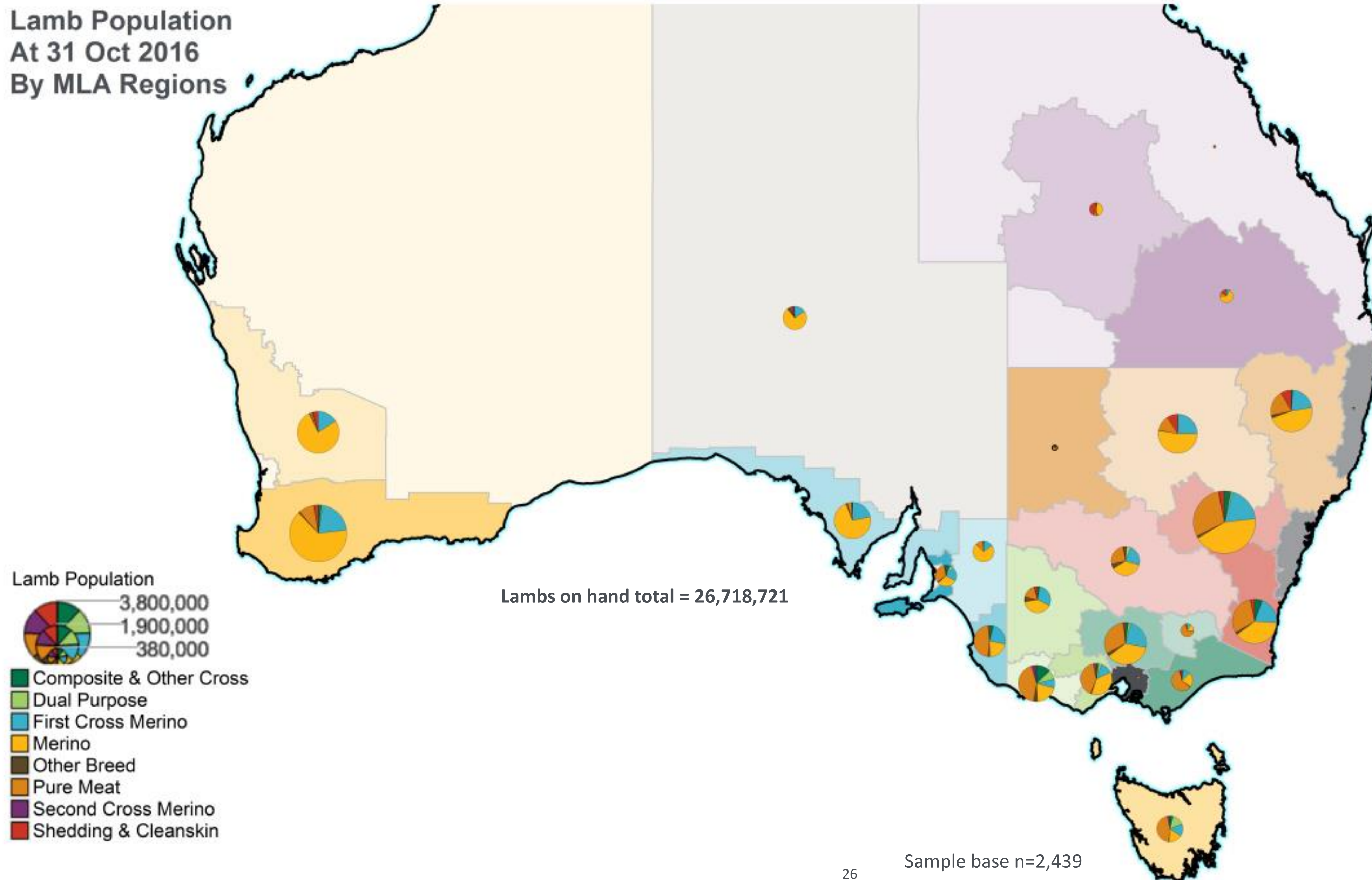
The breeding ewe population was largest in southern WA and the central western NSW, with 4.9 million and 5.3 million head, respectively.

Although the largest ewe flock was recorded in NSW, with the Hunter and northern, 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 Tasmania, with all non-Merino breeds combining to account for 67% of Tasmania's breeding ewe population

Lambs on hand – MLA reporting regions

Lamb Population
At 31 Oct 2016
By MLA Regions



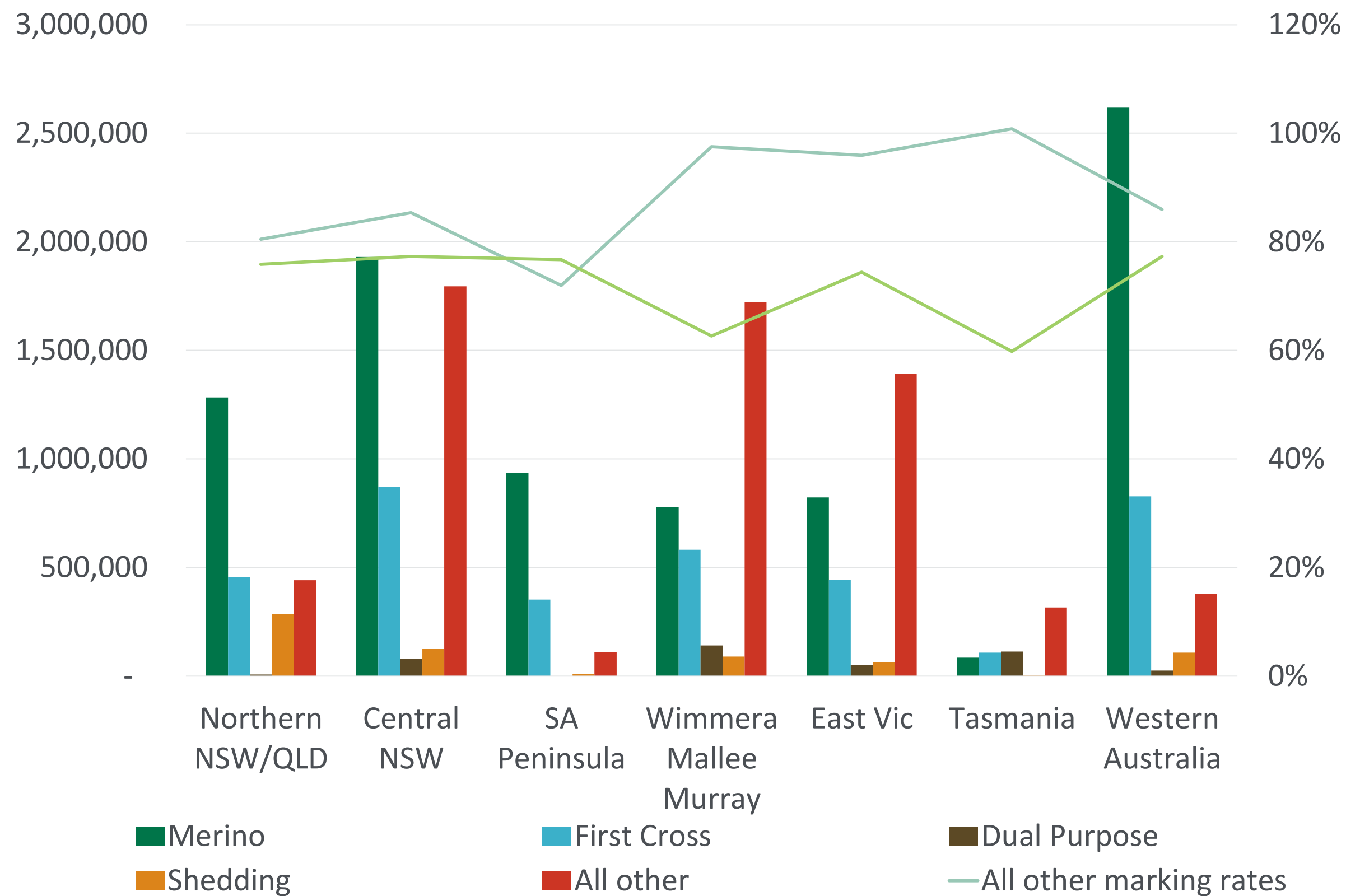
Similar to the breeding ewe population, the lamb population was largest in southern WA and the central western NSW, with 3.2 million and 3.7 million head recorded in each region.

Although NSW had the largest number of Pure meat breeds, Tasmania and Victoria had the highest proportion of pure meat breeds at 46% and 38% of their total flock, respectively.

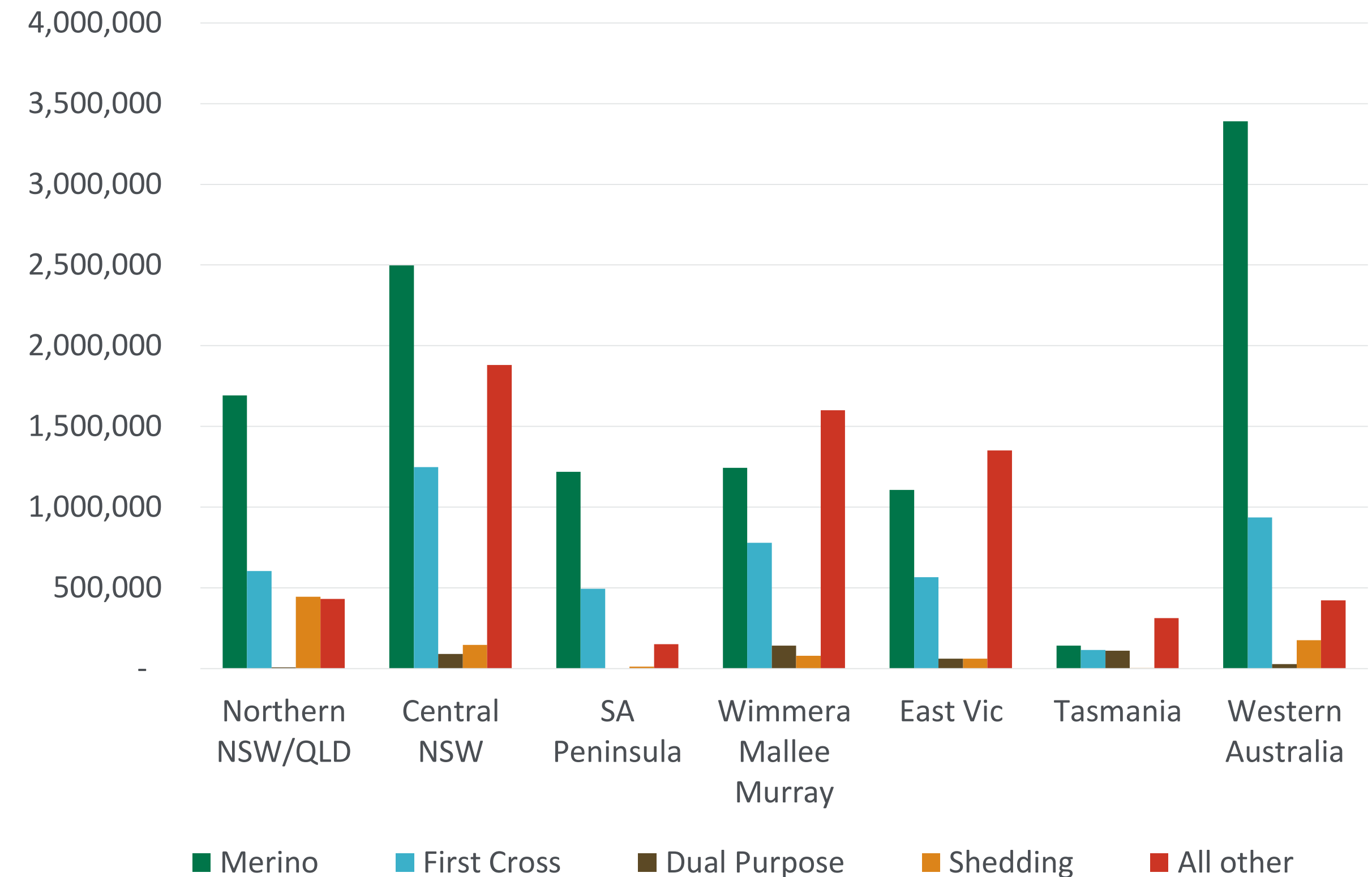
Similarly, Queensland was home to the third largest number of Shedding & Cleanskin breeds and accounted for 30% of their total lamb flock. This was largely underpinned by Shedding breeds accounting for almost half of all lambs in Central Queensland

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

Lambs marked in the past 4 months

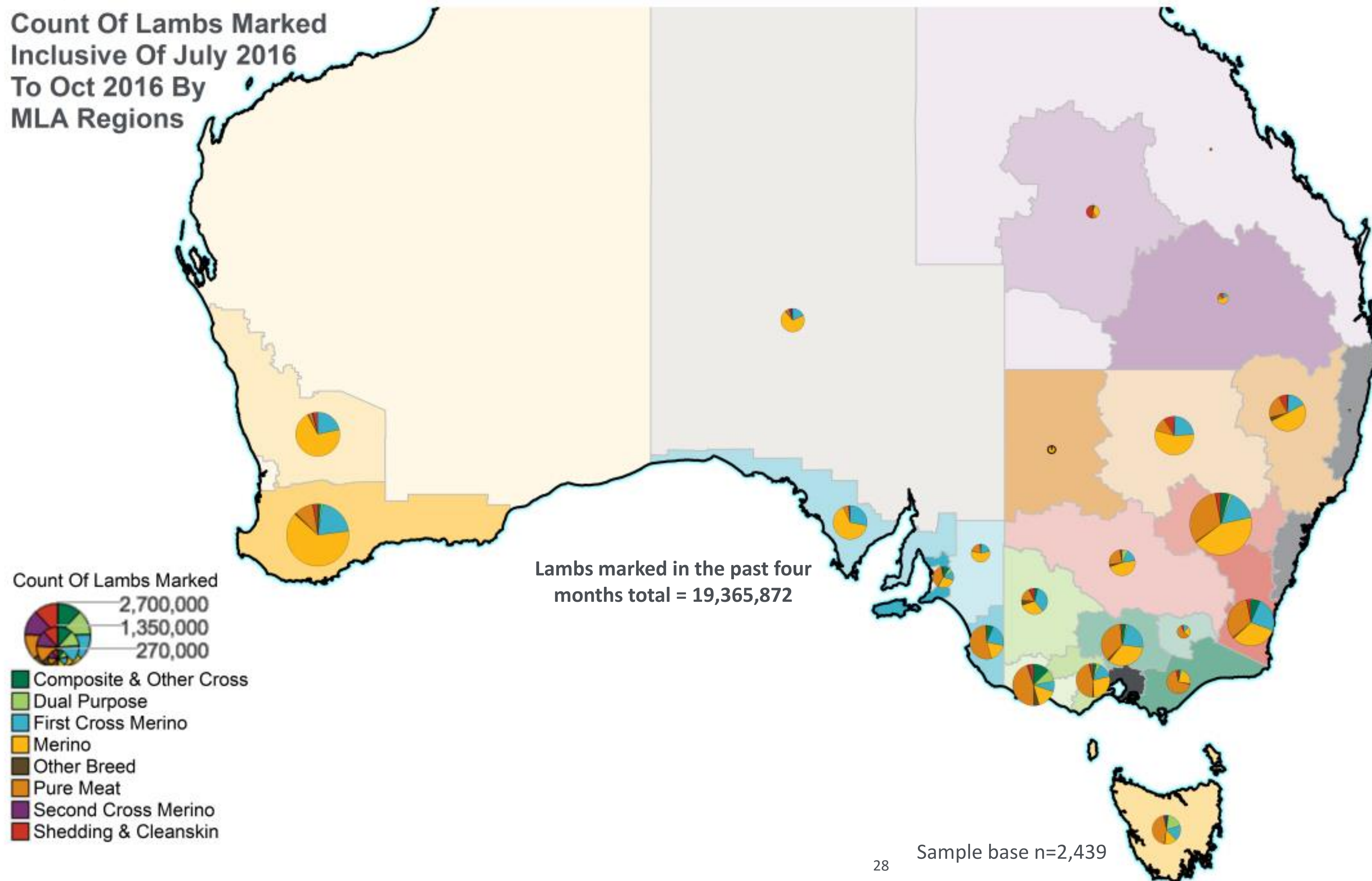


Ewes joined to produce those lambs



Lambs marked in the past four months – MLA reporting regions

Count Of Lambs Marked Inclusive Of July 2016 To Oct 2016 By MLA Regions

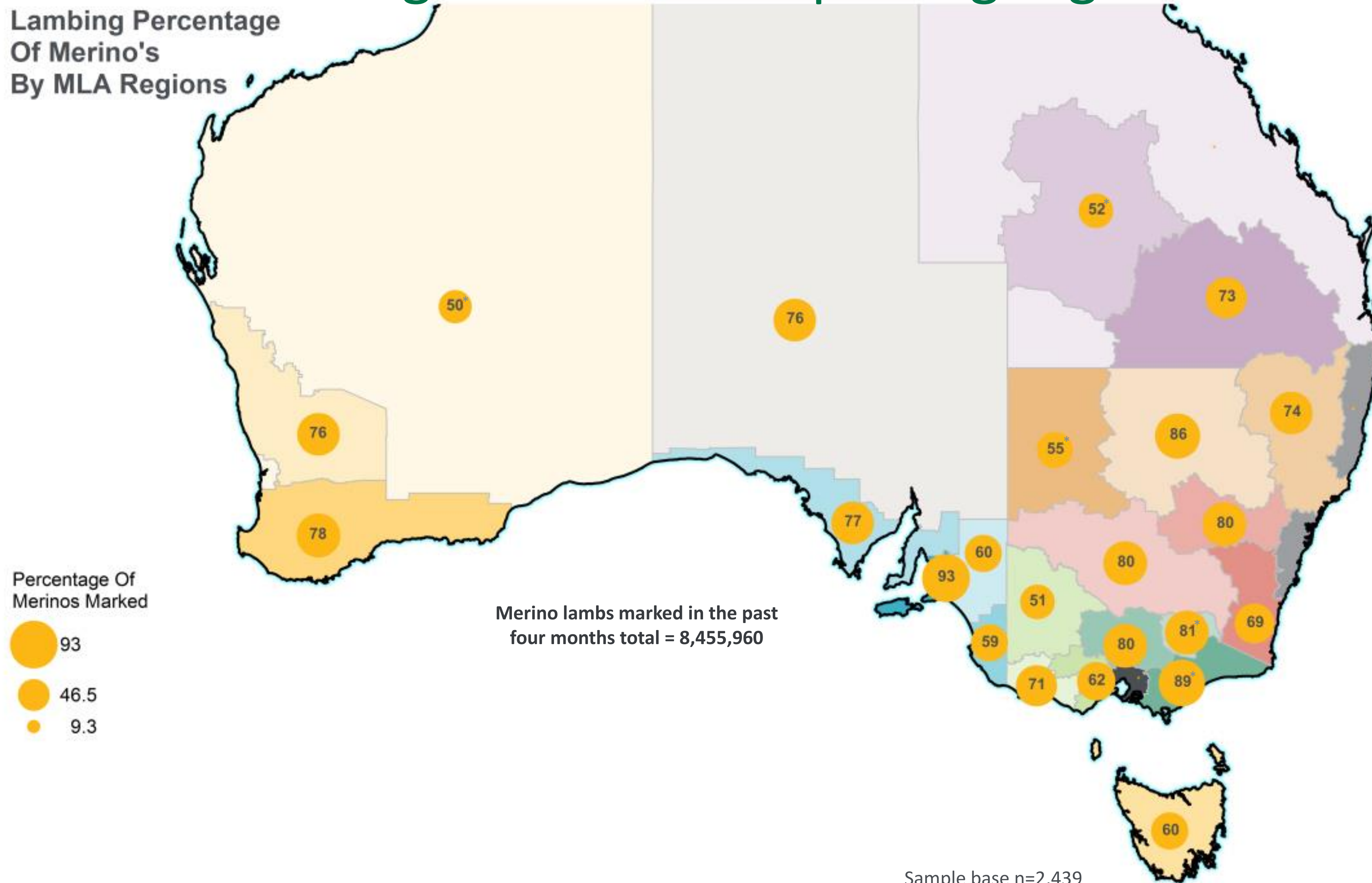


Consistent with the number of lambs on hand, the number of lambs marked in the past four months was greatest in southern WA and central NSW, each marking 2.5 and 2.7 million head, respectively.

Interestingly, Victoria accounted for the largest number of Pure meat breed markings, at 1.9 million head, or 10% of total markings over the past four months (1 July to 31 October 2016)

Merino marking rates - MLA reporting regions

Lambing Percentage
Of Merino's
By MLA Regions



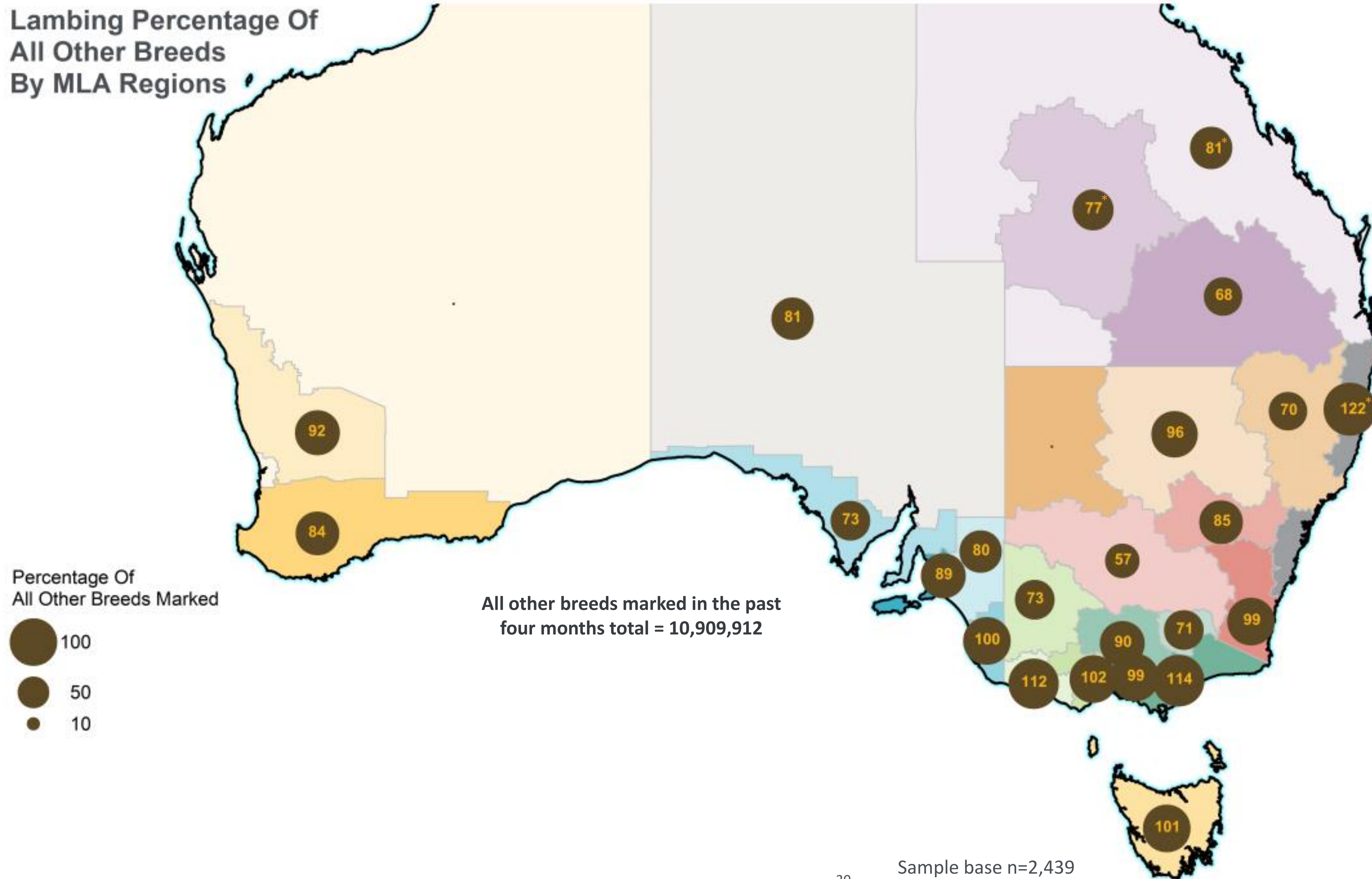
The highest Merino marking rate was recorded in the outer Adelaide region (93%), followed by 86% in north western NSW. Conversely, the lowest marking rates were recorded in the Wimmera and Mallee and in the south east of South Australia with 51% and 59%, respectively.

On a state basis, NSW and WA had the highest marking rates at 78% and 77%, while Tasmania recorded the lowest Merino marking rate of 60%

*regions where sample size was less than 20 (treat with caution).

All other breed marking rates - MLA reporting regions

Lambing Percentage Of All Other Breeds By MLA Regions



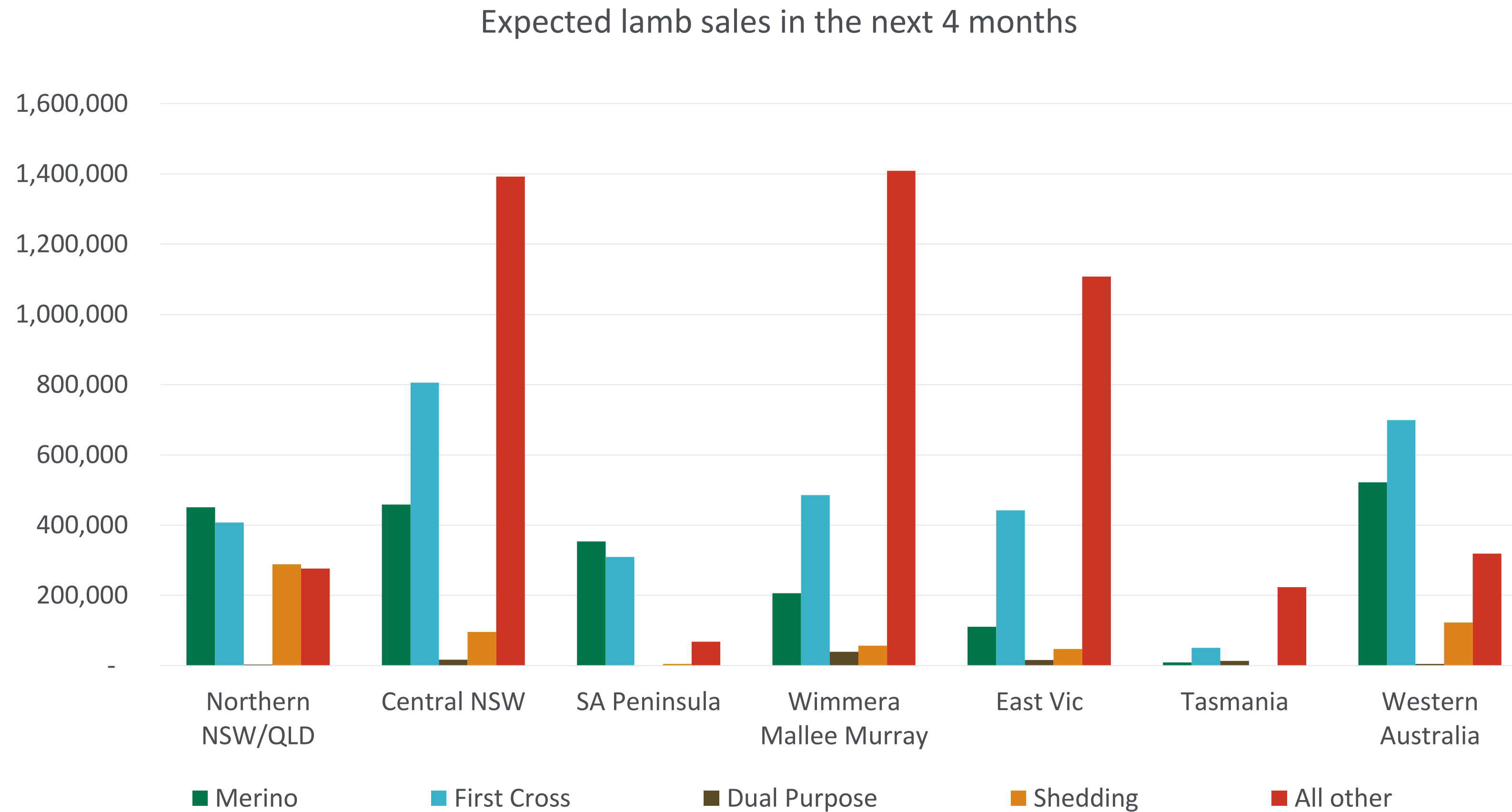
The Gippsland region and western district region of Victoria recorded the highest marking rates at 114% and 112%, respectively.

Interestingly, non-Merino marking rates were very low in the Murray and Murrumbidgee, at 57%. This is compared to 80% for Merinos in the same region.

Although strong seasonal conditions in Victoria saw the average non-Merino marking rate reach 97%, Tasmania recorded the largest average marking rate of 101%, a stark contrast to the 60% marking recorded for Merino's

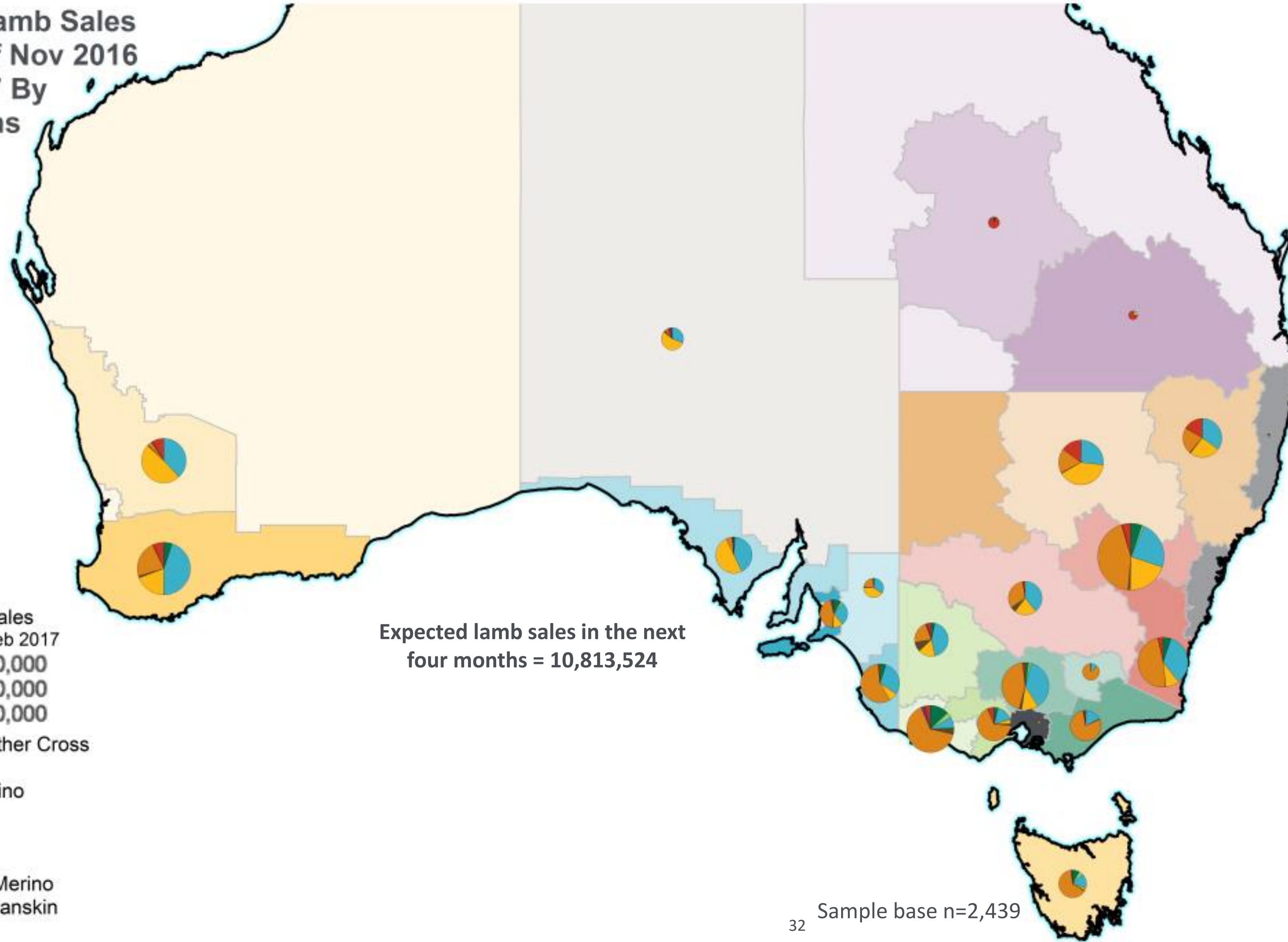
*regions where sample size was less than 20 (treat with caution).

Expected lamb sales in next four months – MLA reporting regions



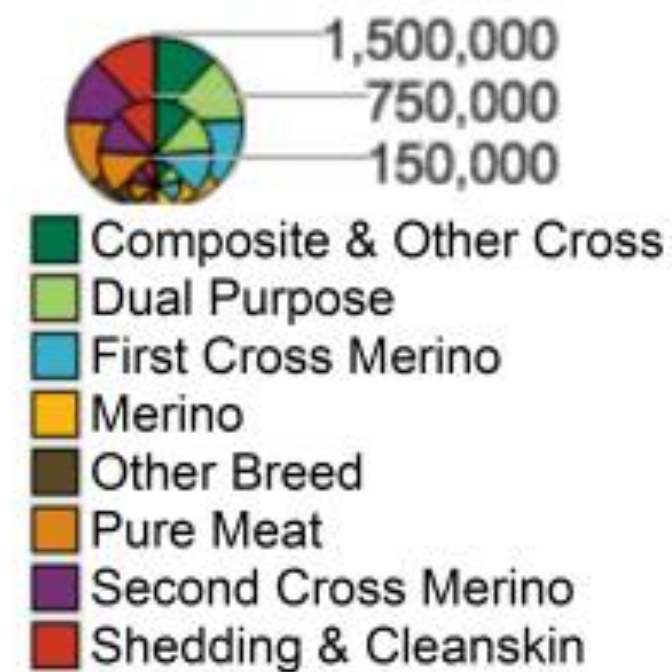
Expected lamb sales in next four months – MLA reporting regions

Expected Lamb Sales
Inclusive Of Nov 2016
To Feb 2017 By
MLA Regions



Expected lamb sales in the next four months = 10,813,524

Expected Lamb Sales
1 Nov 2016 to 28 Feb 2017



Over the next four months (1 November 2016 to 28 February 2017), most lamb sales are expected to occur in the central west region of NSW, with the sale of Pure meat lambs accounting for almost half (44%) of the lamb sales in the region.

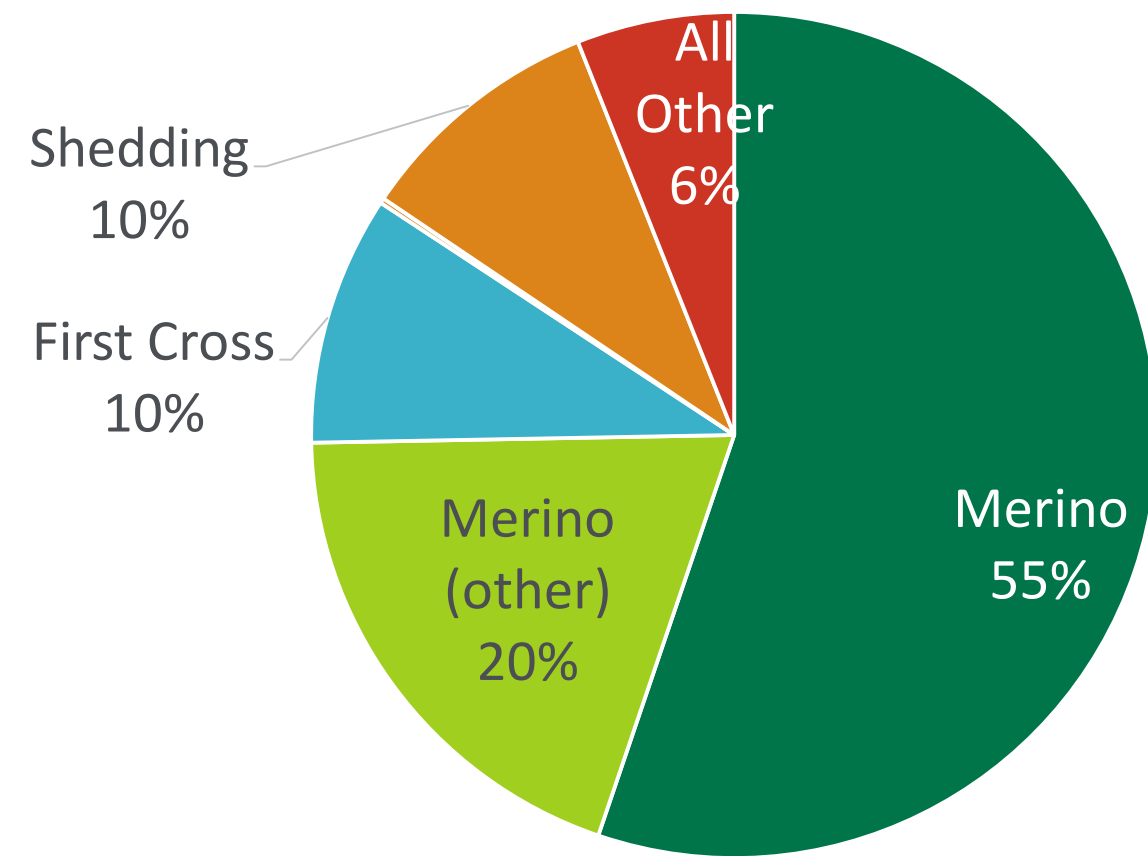
Similarly, Pure meat breeds are expected to account for a large proportion of total lamb sales, especially in the southern regions, with pure meat lamb sales accounting for well over half of the total sales in most regions of Victoria and Tasmania over the next four months

NSW is expected to account for 38% of total lamb sales over the next four months. This is followed by Victoria, accounting for 27% of total lamb sales. In addition, Victorian producers are expected to sell the most pure meat lambs, at 1.7 million head, which represents 56% of the state's lamb turnoff over the four month period.

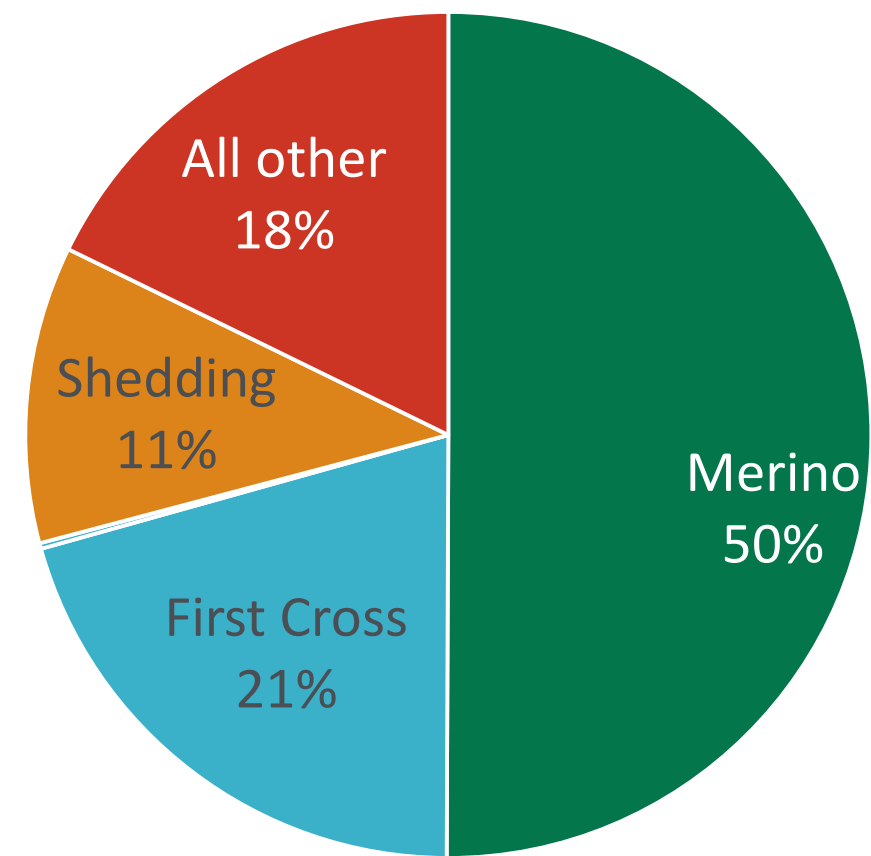
Regional Snapshots

Northern NSW/QLD

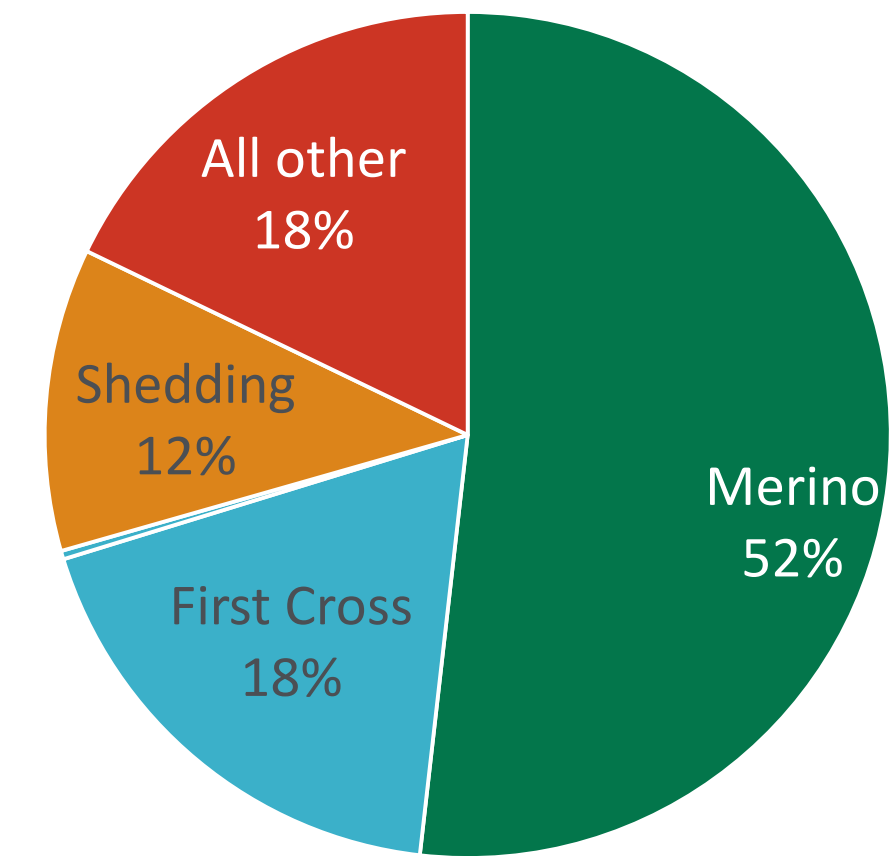
Breeding ewes on hand



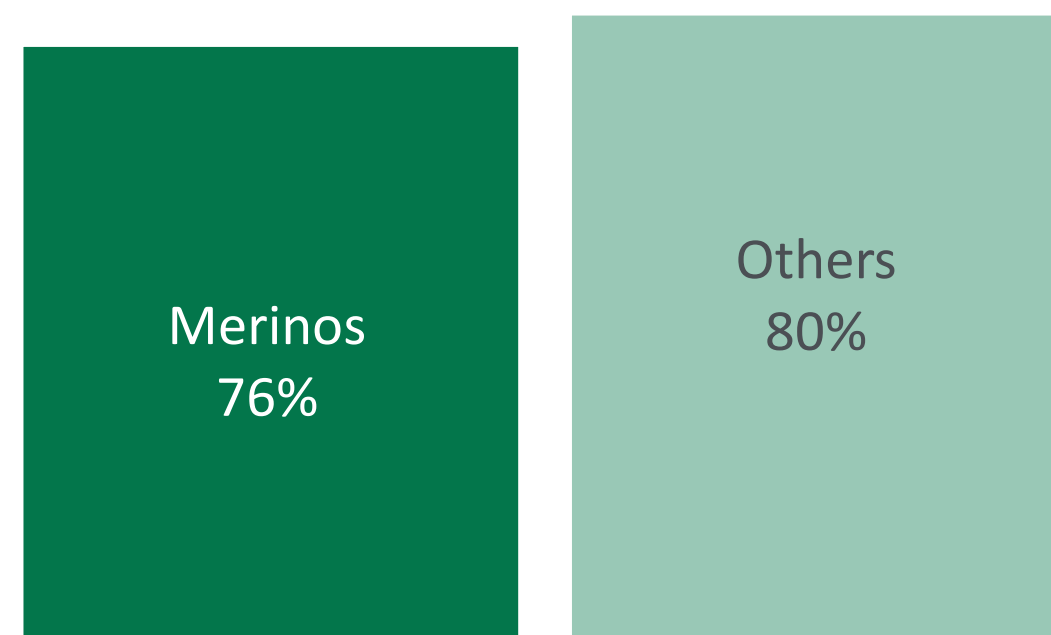
Lambs on hand



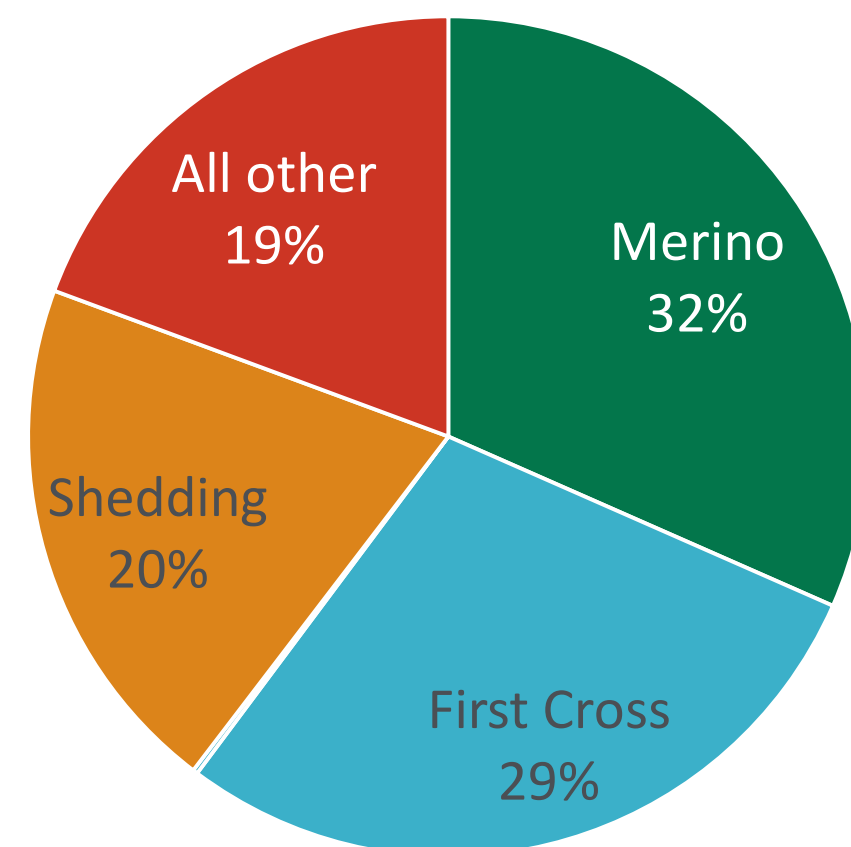
Marking in past 4 months



Marking rates



Lamb sales in next 4 months

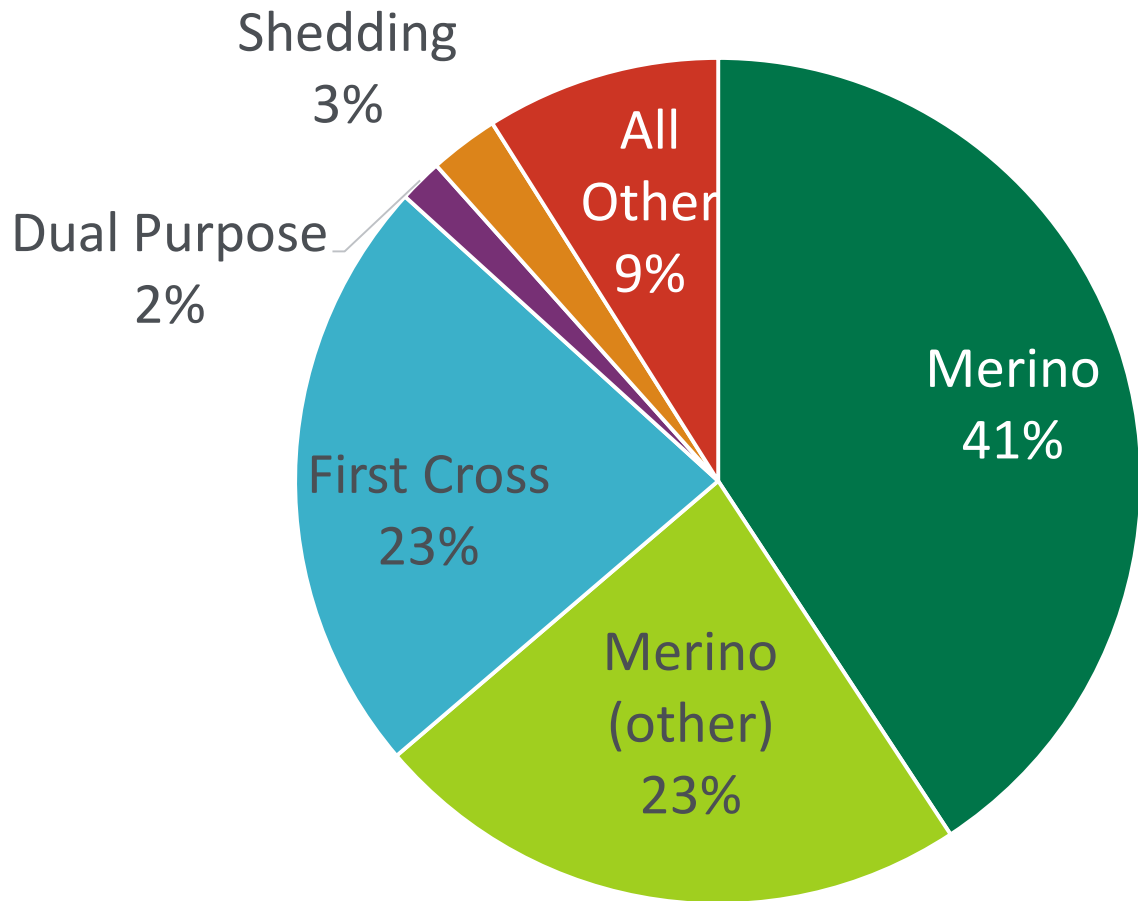


Totals

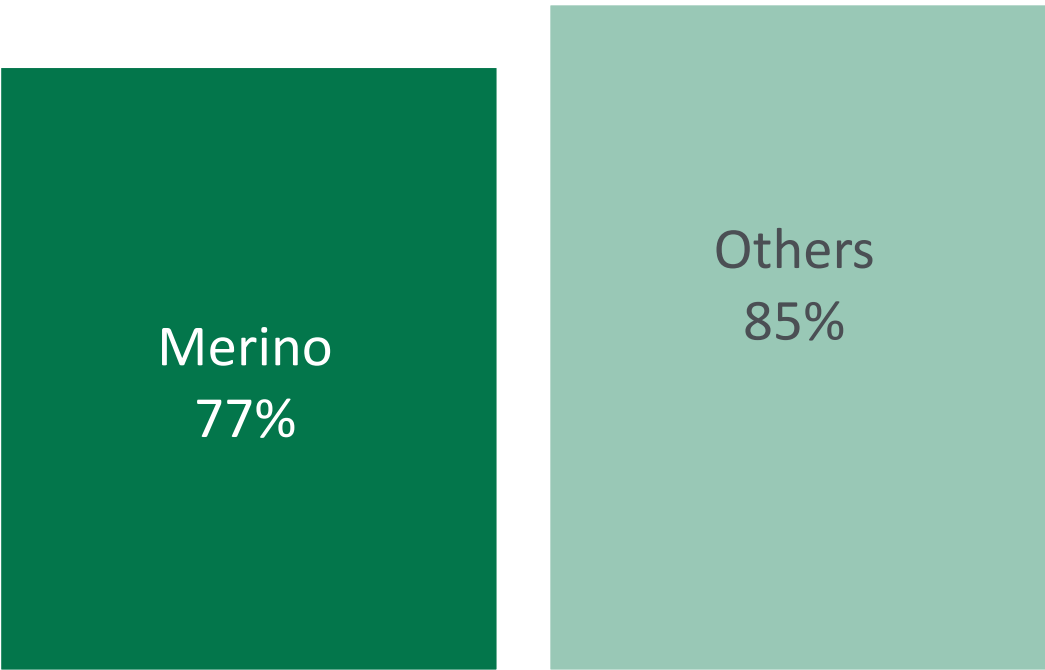
Breeding ewes on hand	6,084,264
Lambs on hand	3,932,527
Lambs marked in the past 4 months	2,478,295
Expected lamb sales in the next 4 months	1,425,508
Number of ewes joined to produce lambs	3,176,460

Central NSW

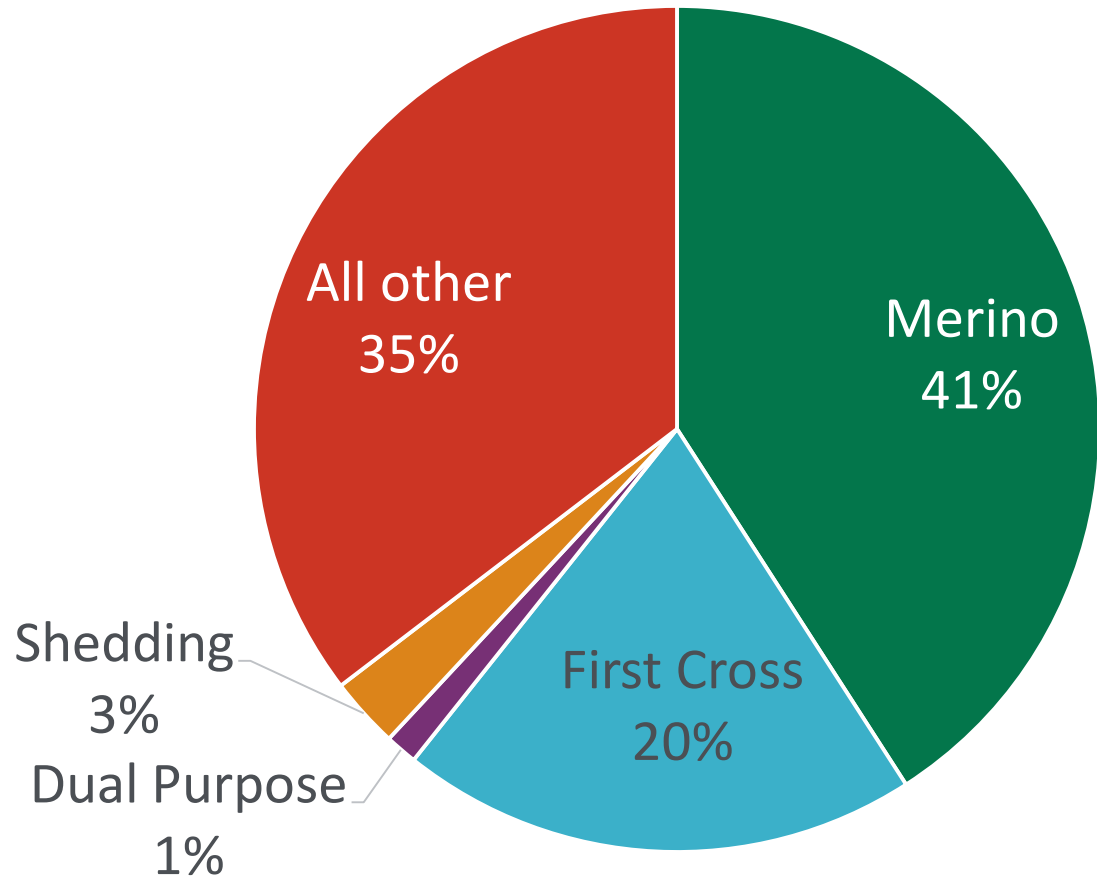
Breeding ewes on hand



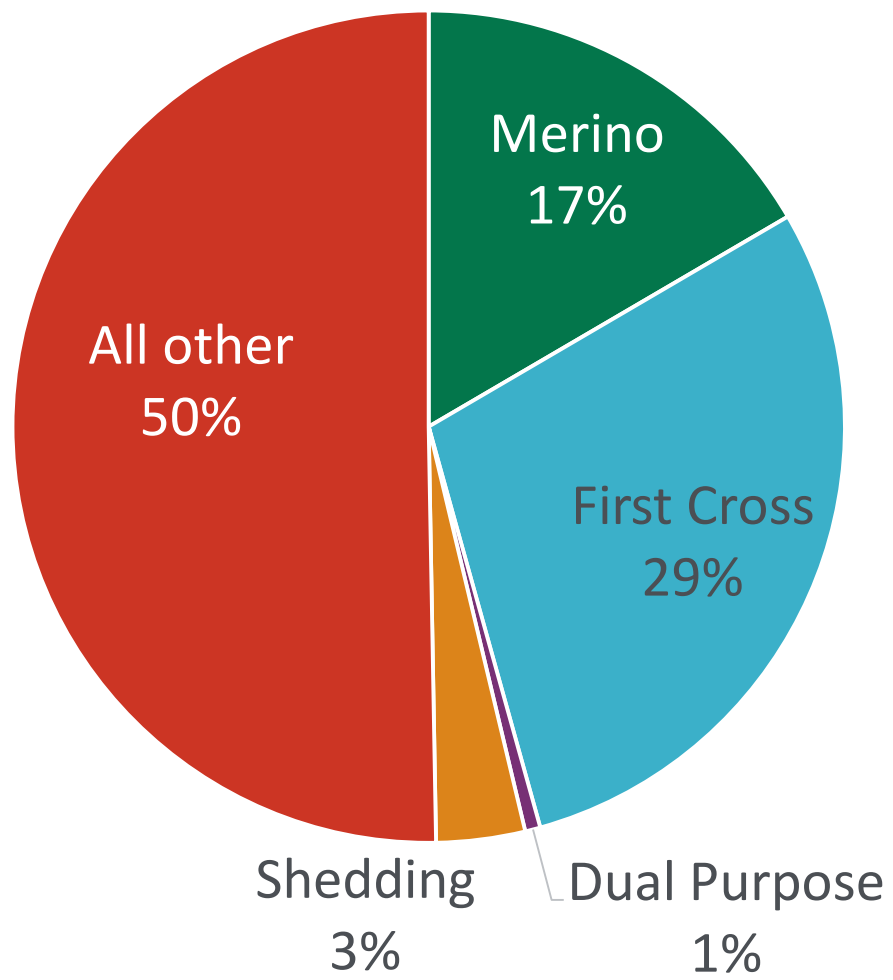
Marking rates



Lambs on hand

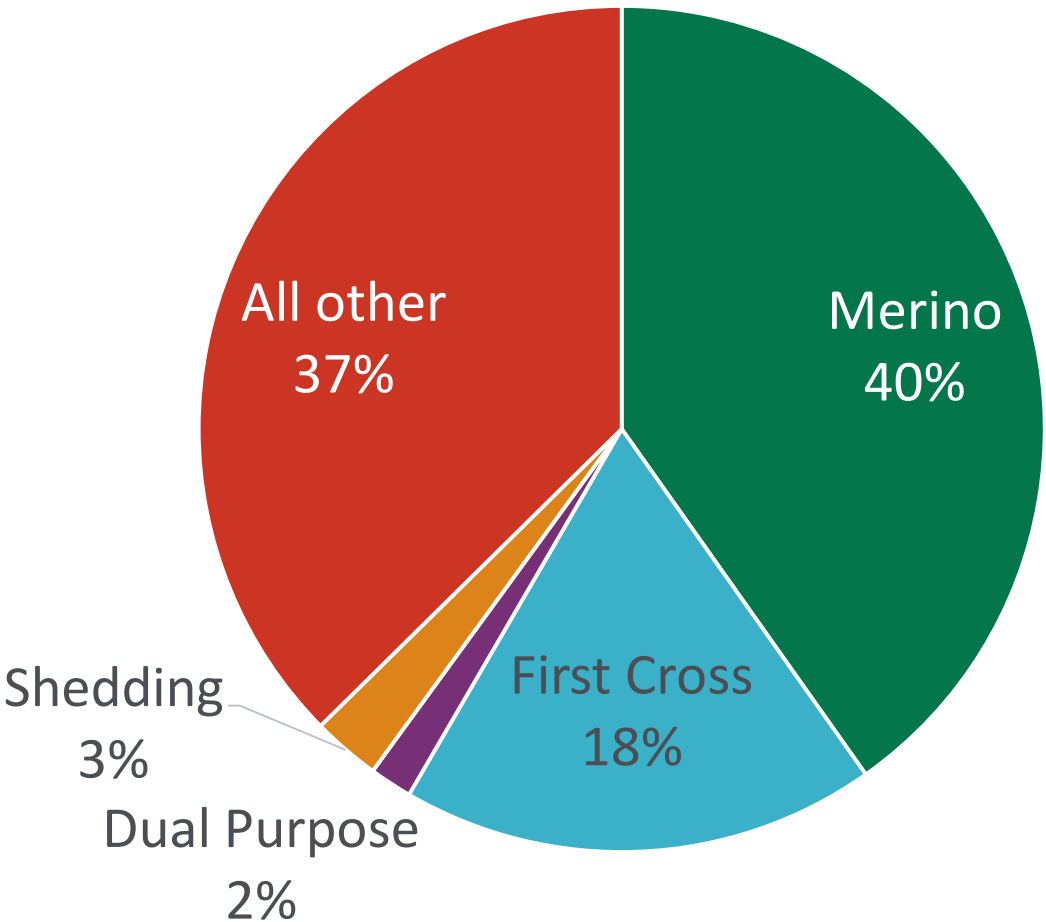


Lamb sales in next 4 months



Sample base n=556

Marking in past 4 months

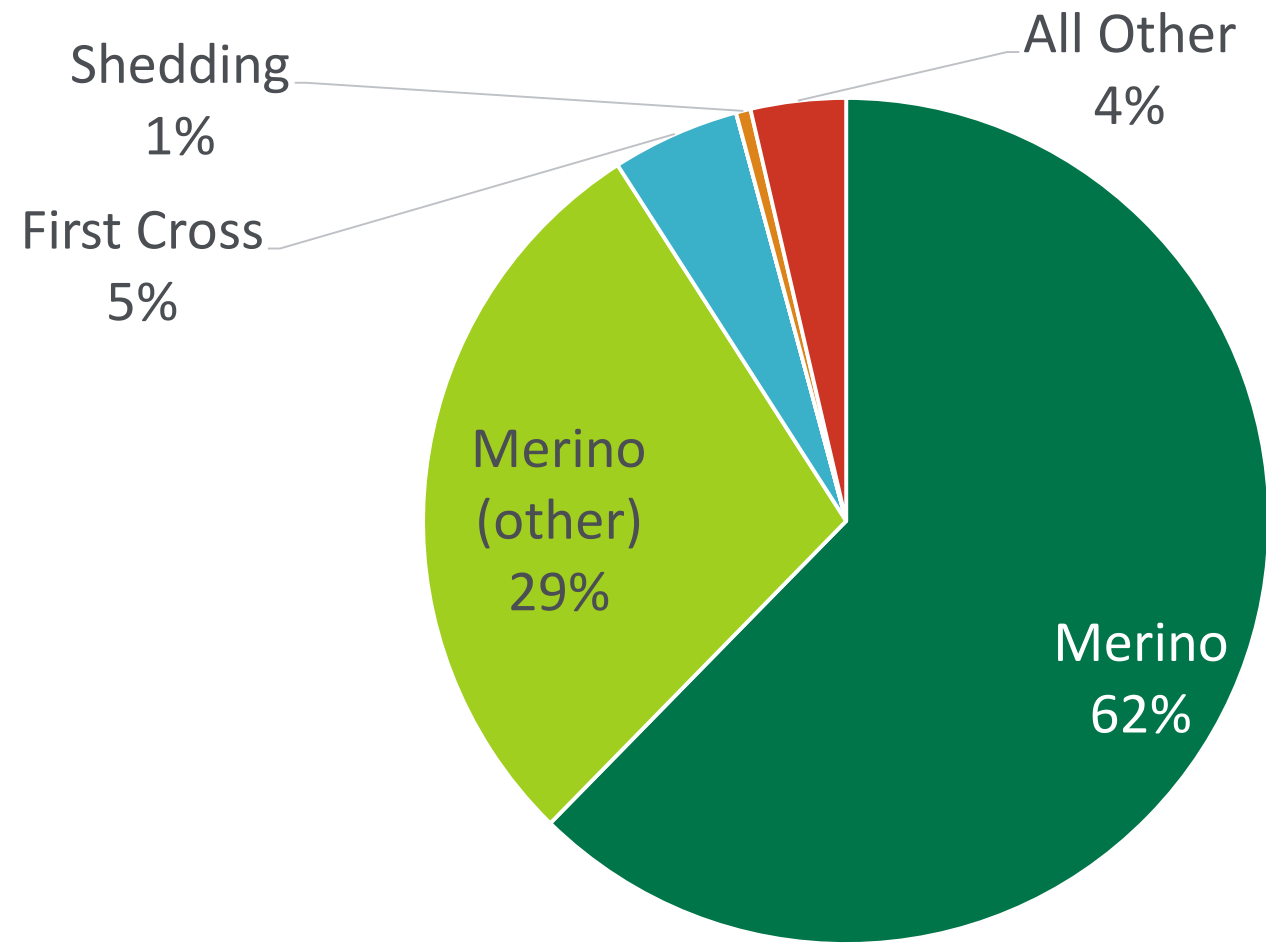


Totals

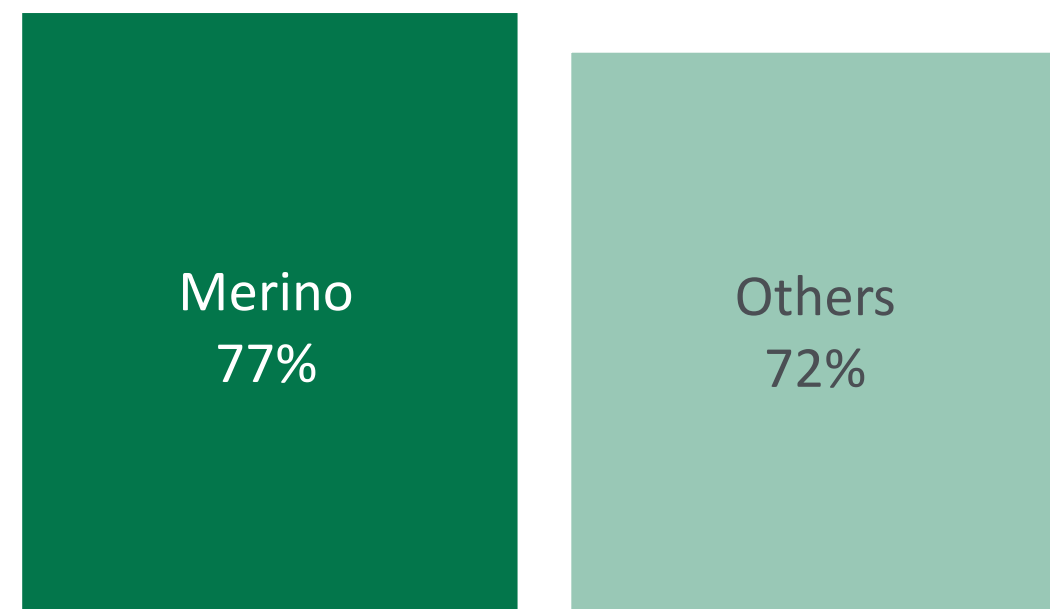
Breeding ewes on hand	9,680,151
Lambs on hand	6,738,240
Lambs marked in the past 4 months	4,801,150
Expected lamb sales in the next 4 months	2,768,742
Number of ewes joined to produce lambs	5,859,788

SA Peninsula

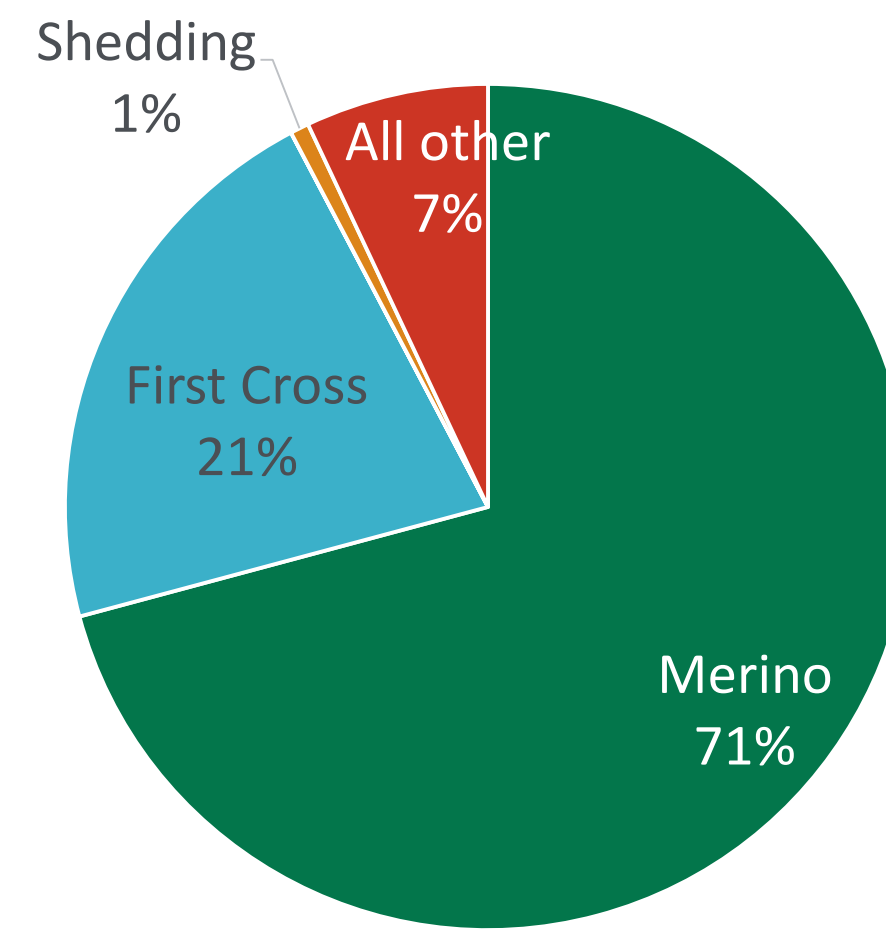
Breeding ewes on hand



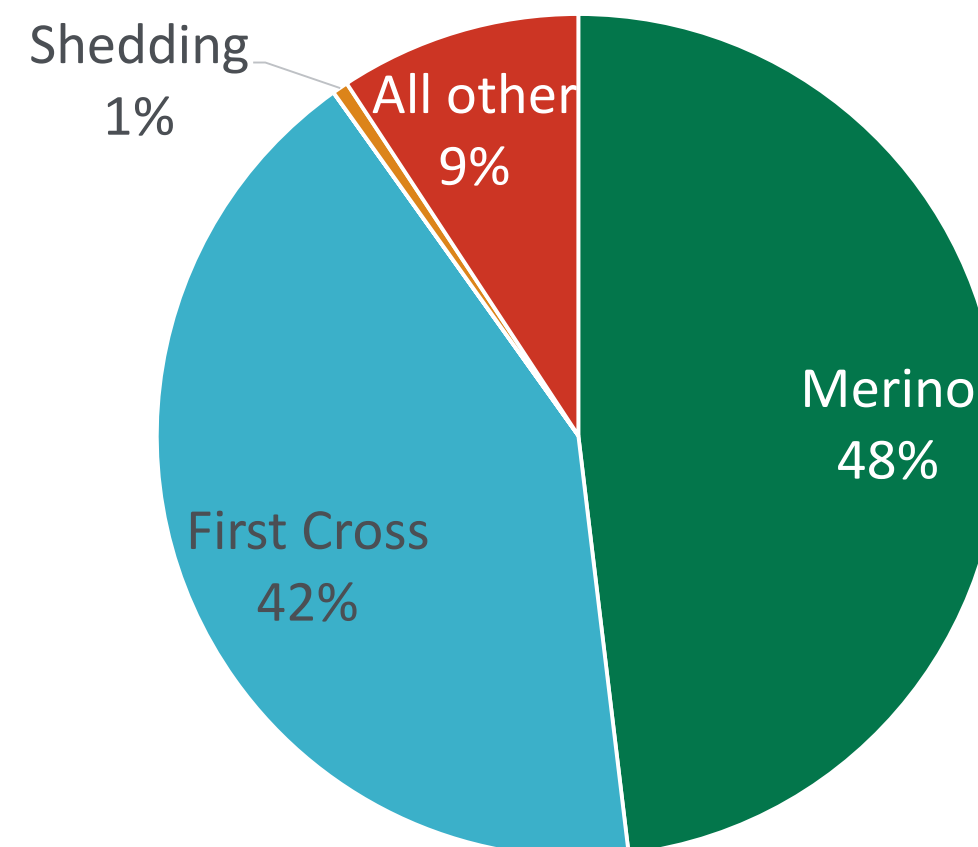
Marking rates



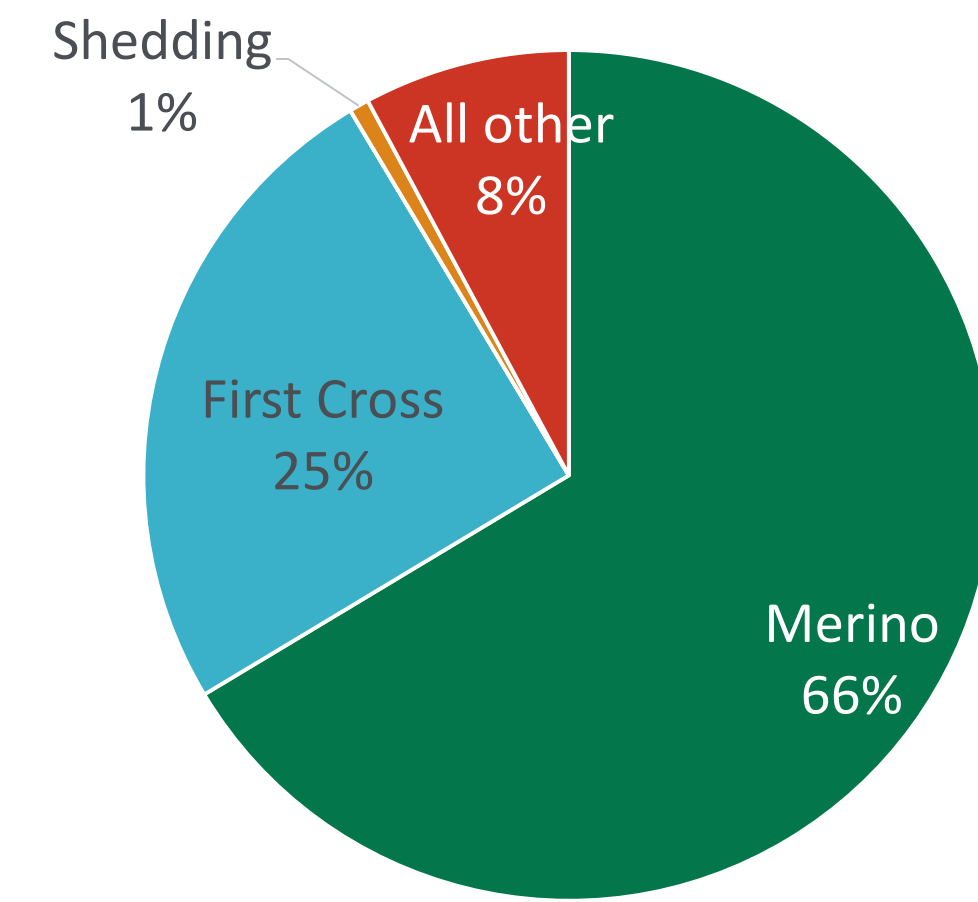
Lambs on hand



Lamb sales in next 4 months



Marking in past 4 months

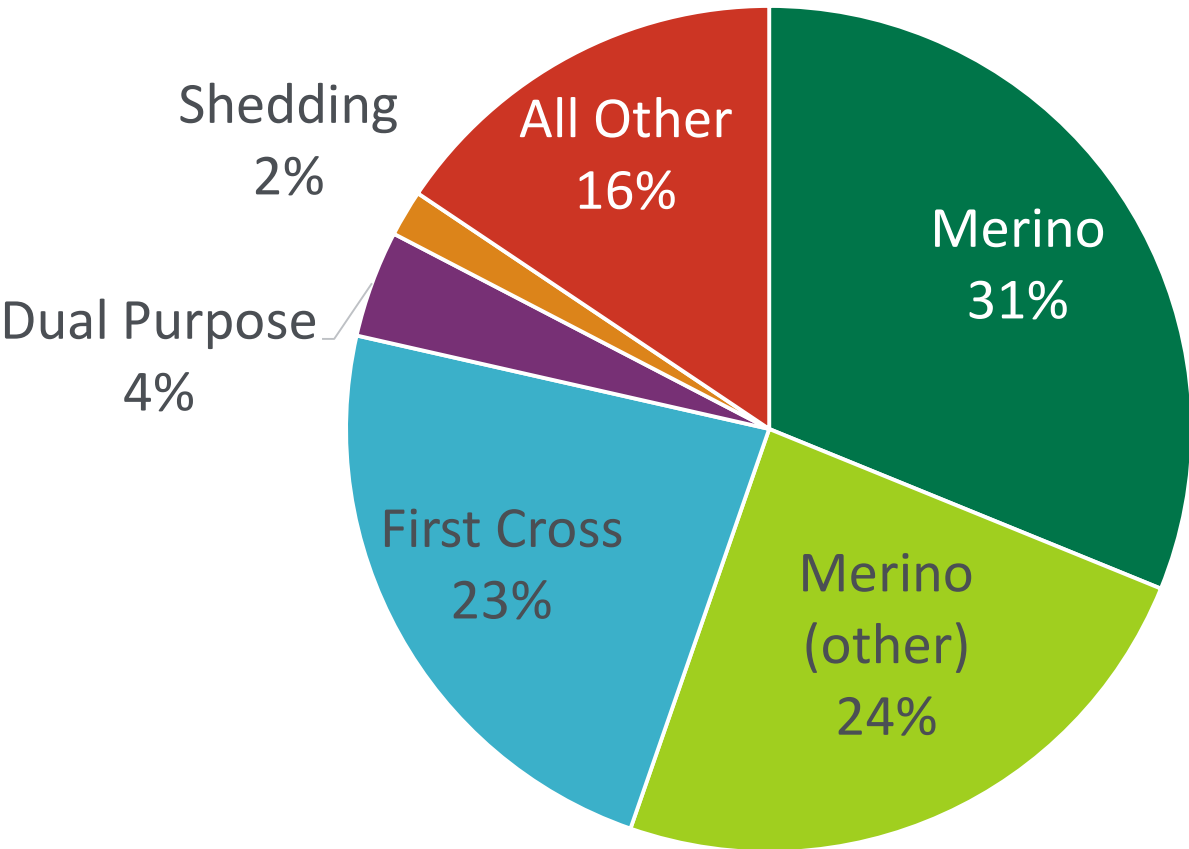


Totals

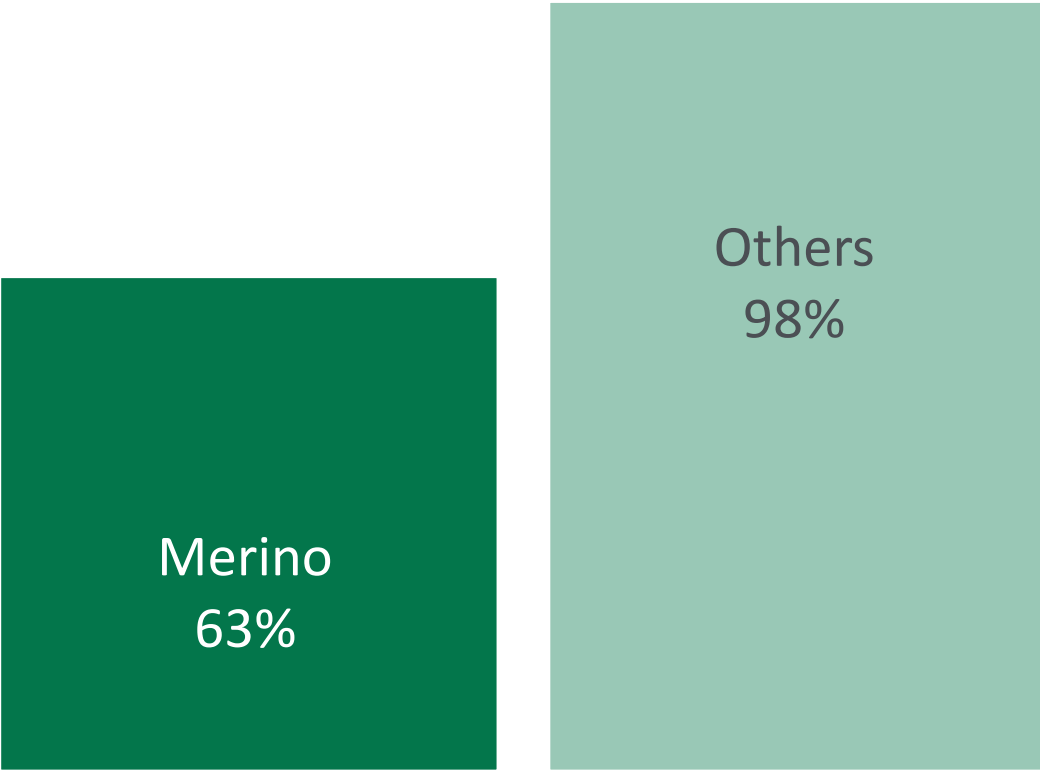
Breeding ewes on hand	3,141,156
Lambs on hand	2,160,562
Lambs marked in the past 4 months	1,408,476
Expected lamb sales in the next 4 months	735,639
Number of ewes joined to produce lambs	1,876,947

Wimmera Mallee Murray

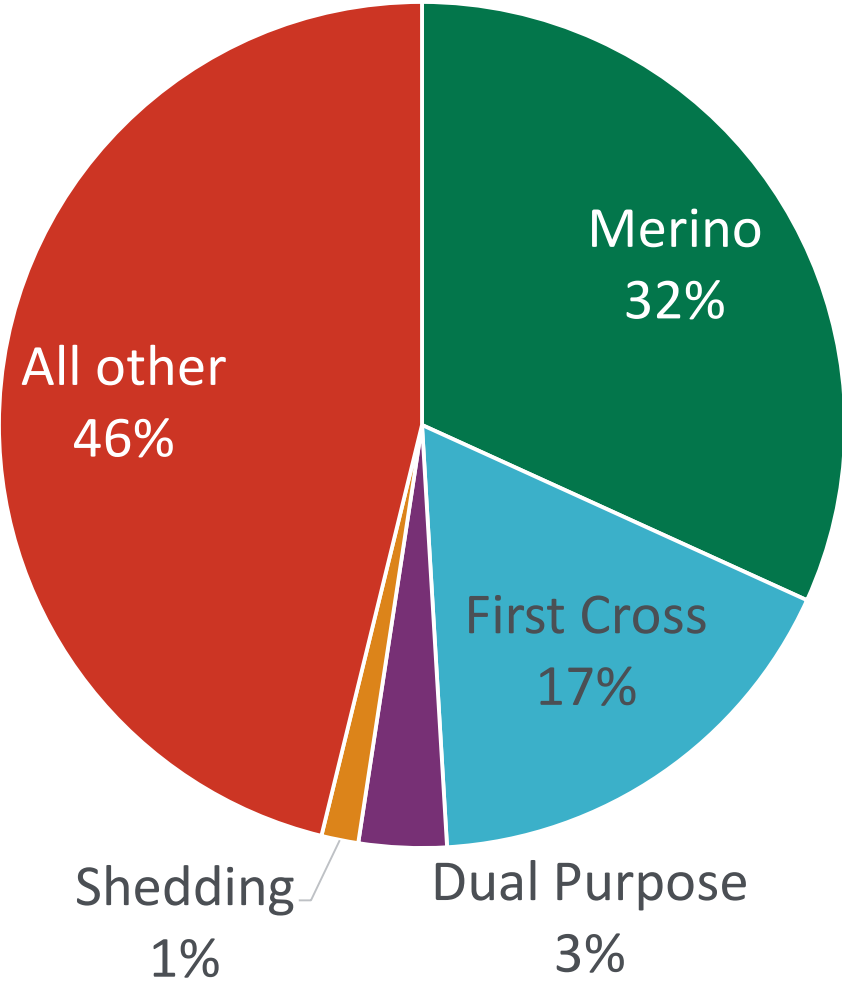
Breeding ewes on hand



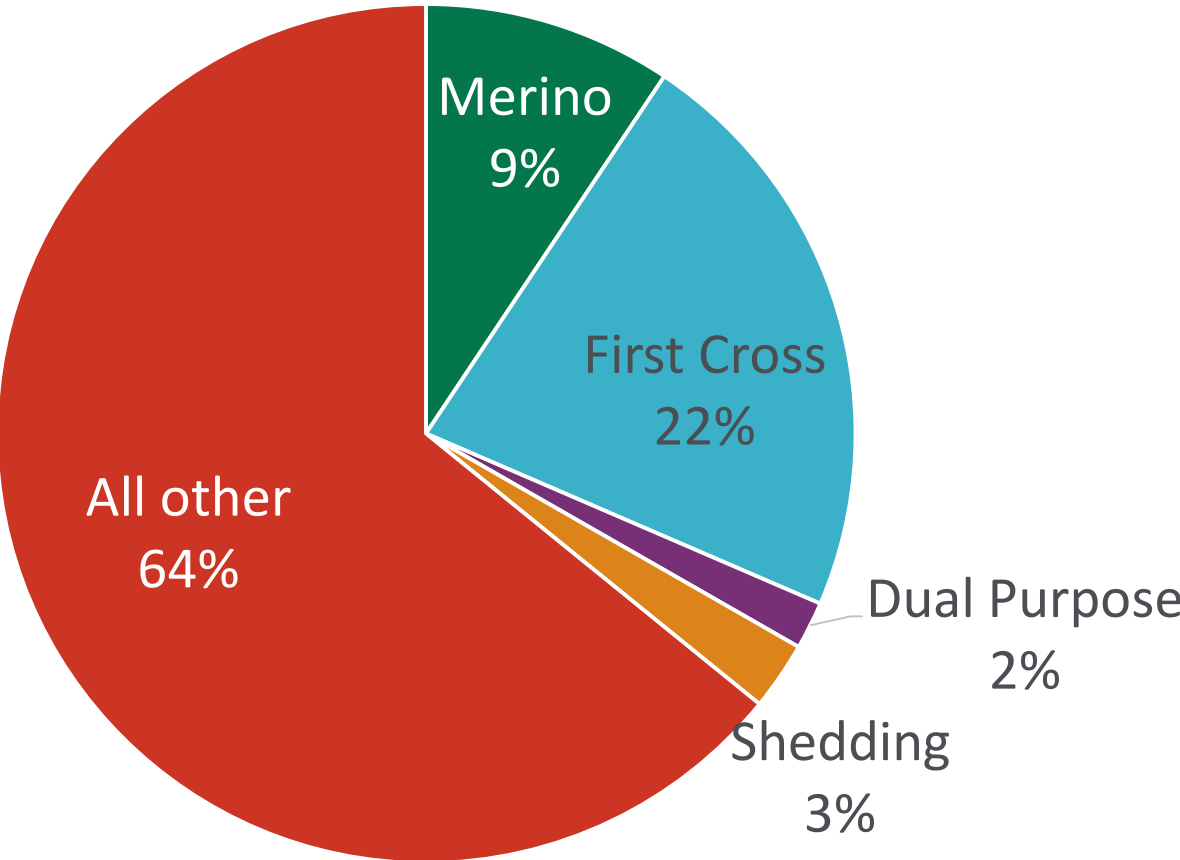
Marking rates



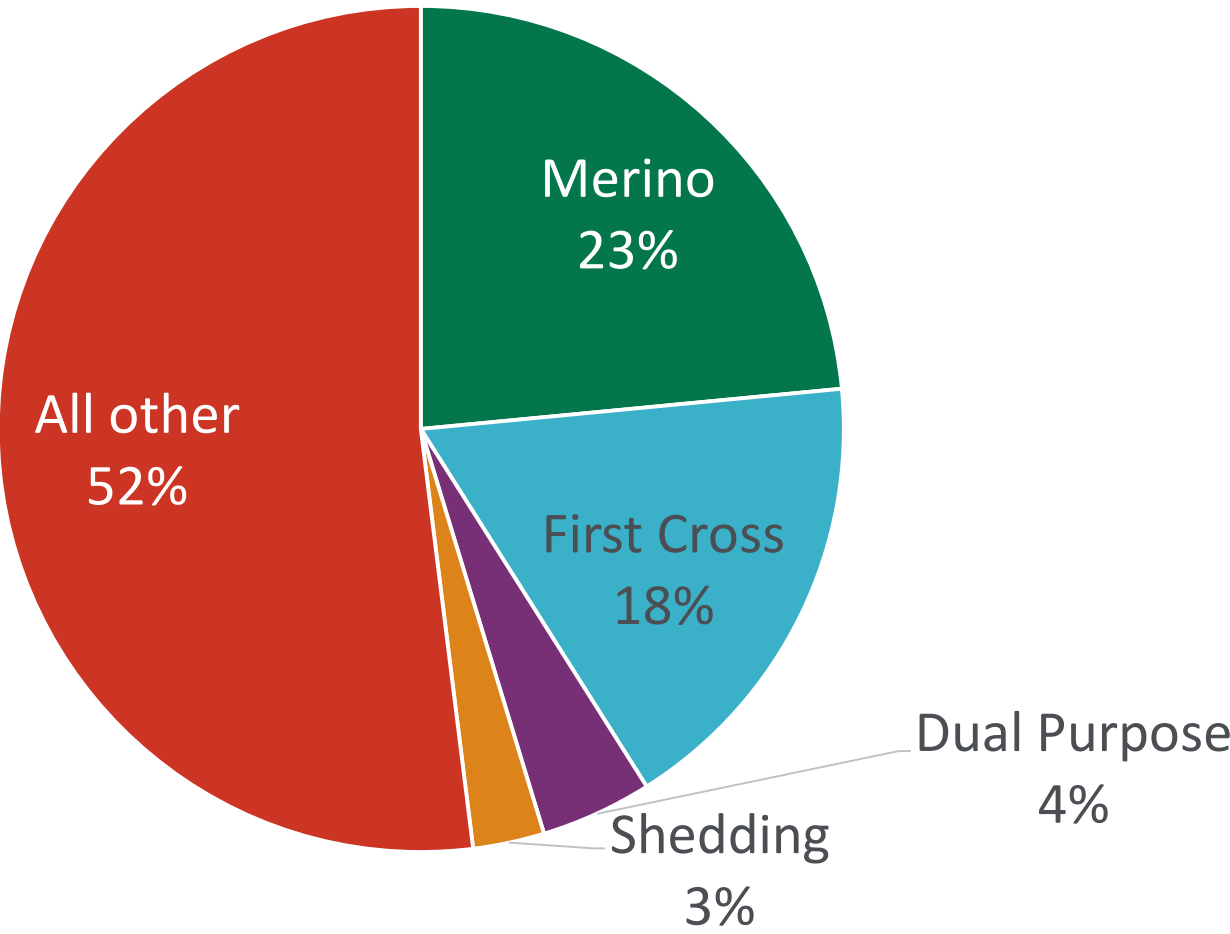
Lambs on hand



Lamb sales in next 4 months



Marking in past 4 months

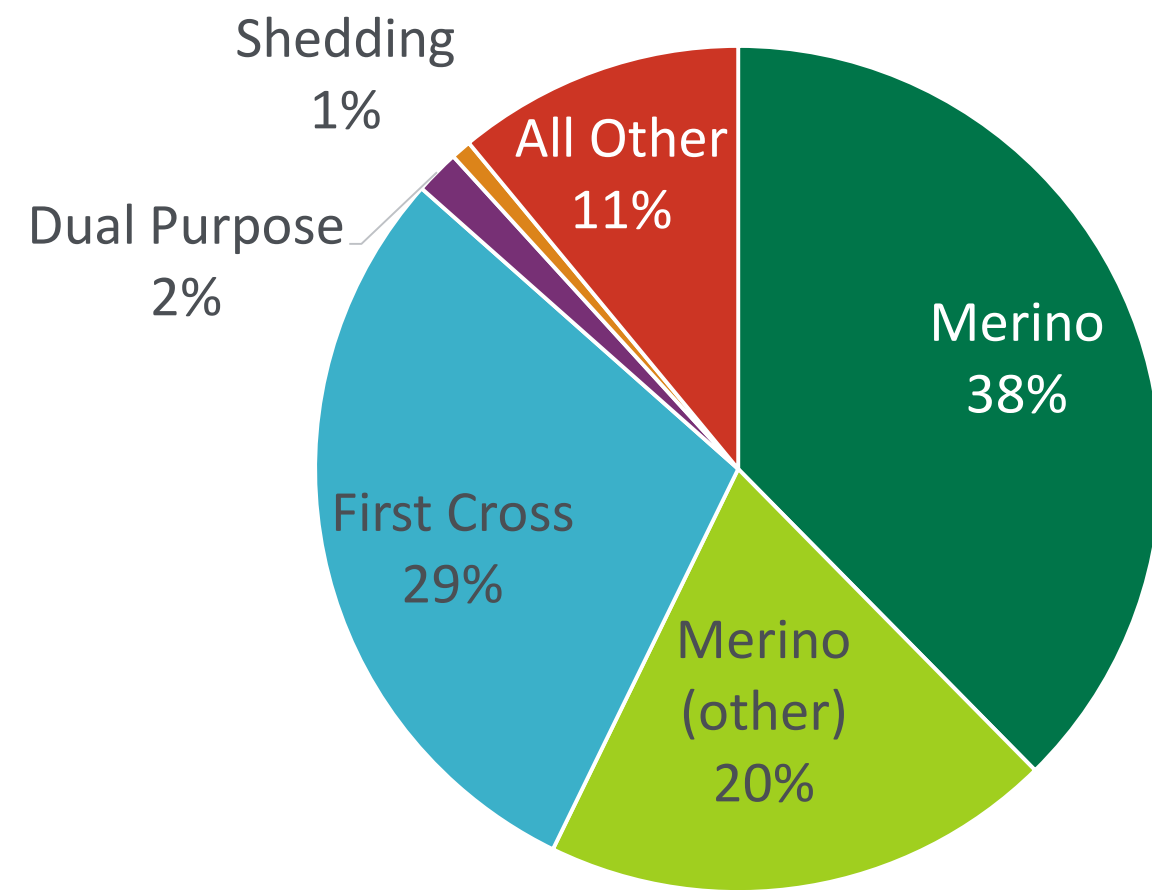


Totals

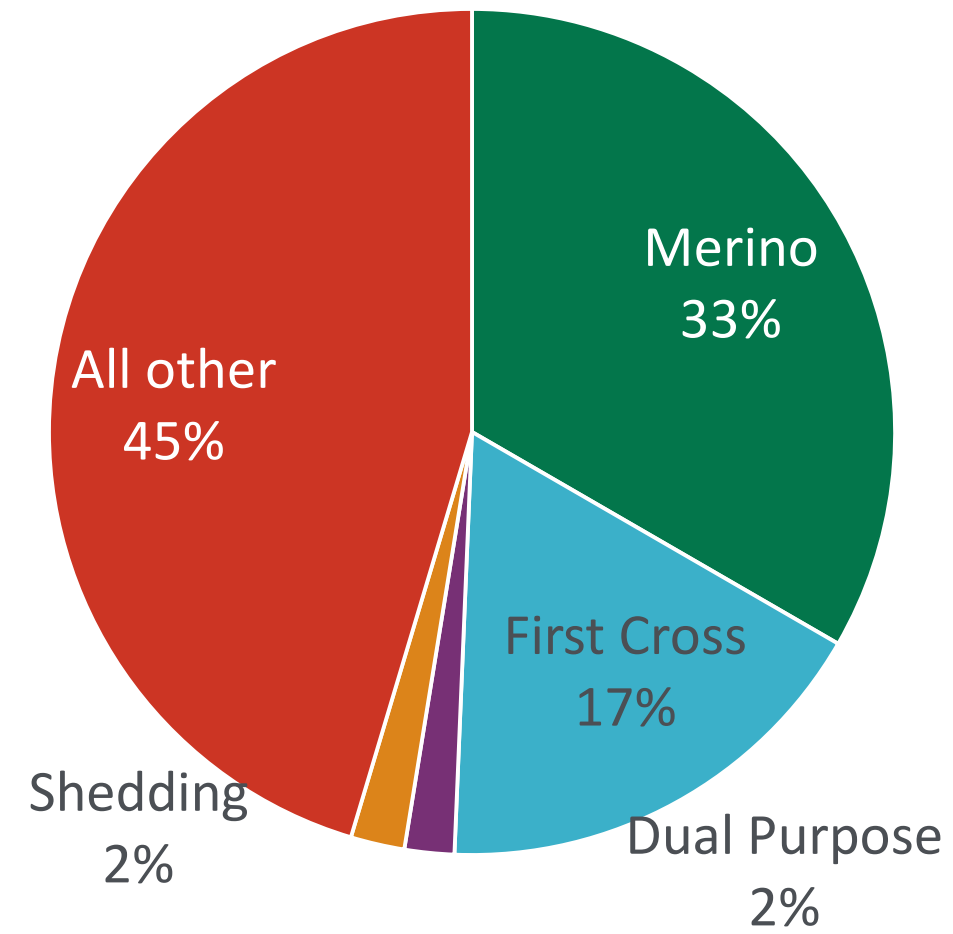
Breeding ewes on hand	5,975,371
Lambs on hand	4,335,482
Lambs marked in the past 4 months	3,314,129
Expected lamb sales in the next 4 months	2,195,886
Number of ewes joined to produce lambs	3,843,120

East Victoria

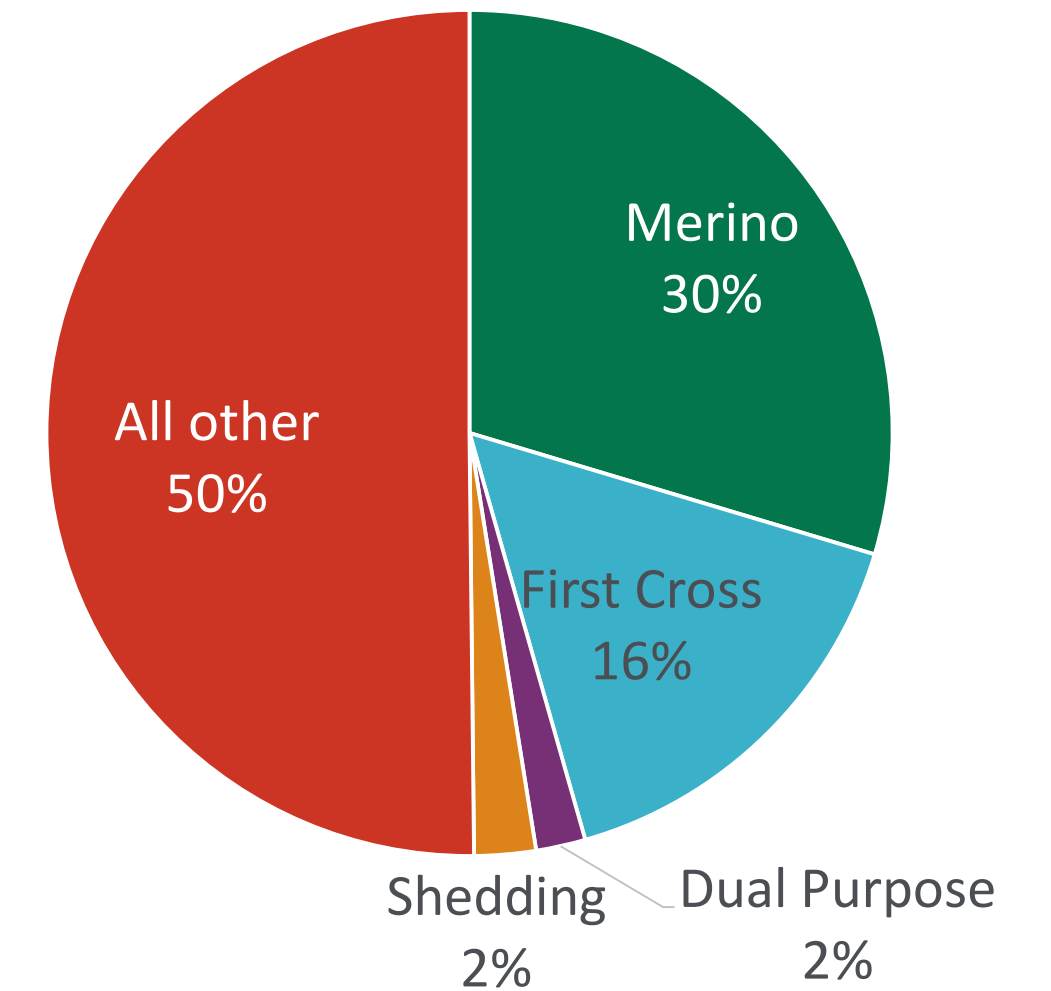
Breeding ewes on hand



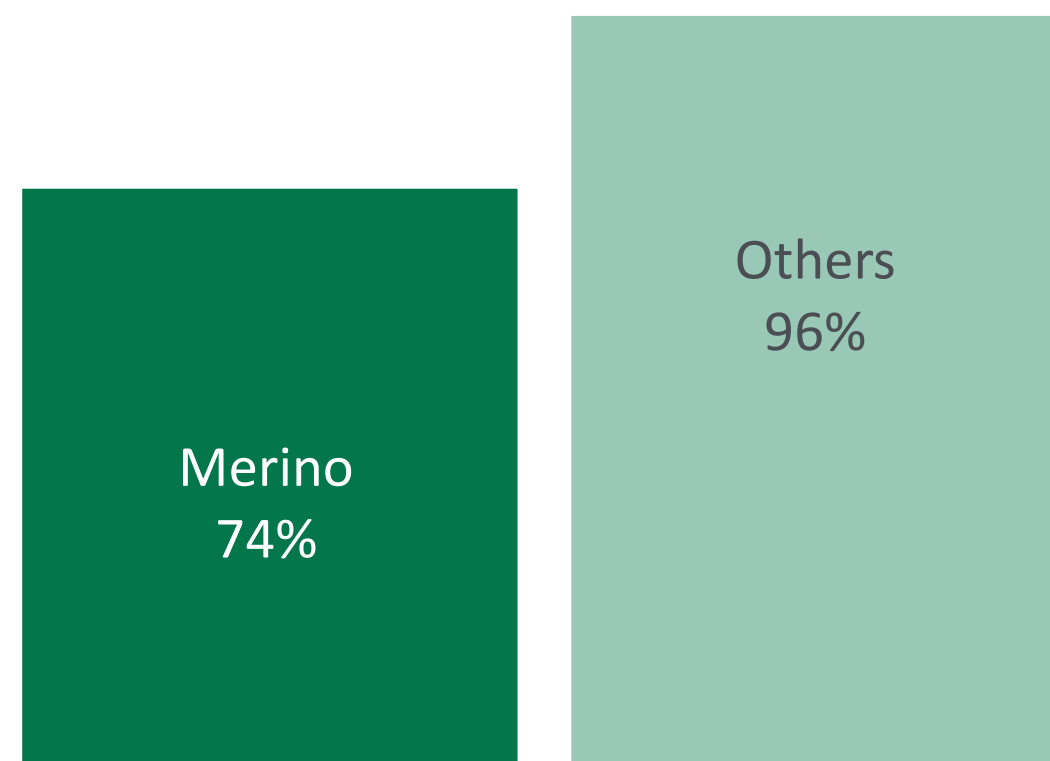
Lambs on hand



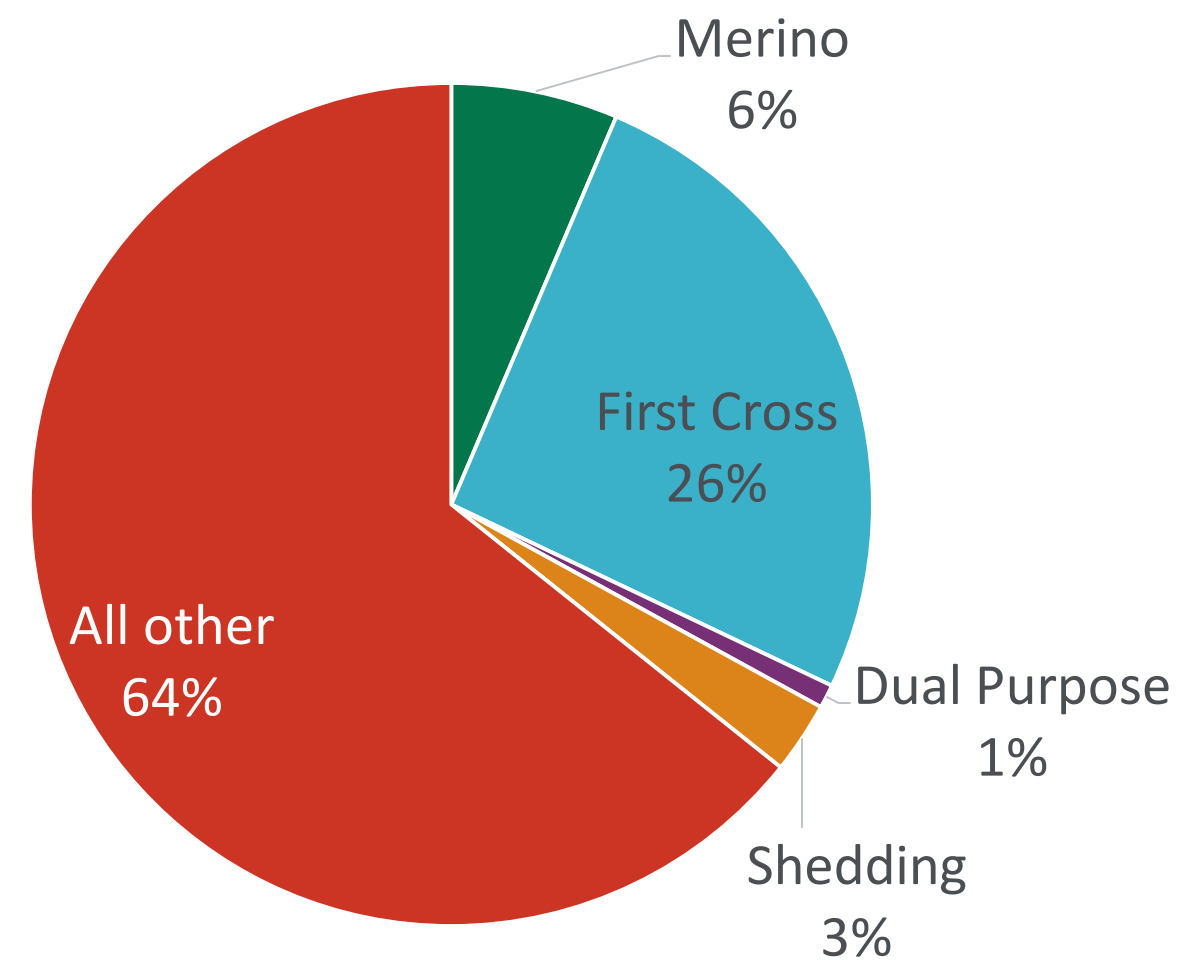
Marking in past 4 months



Marking rates



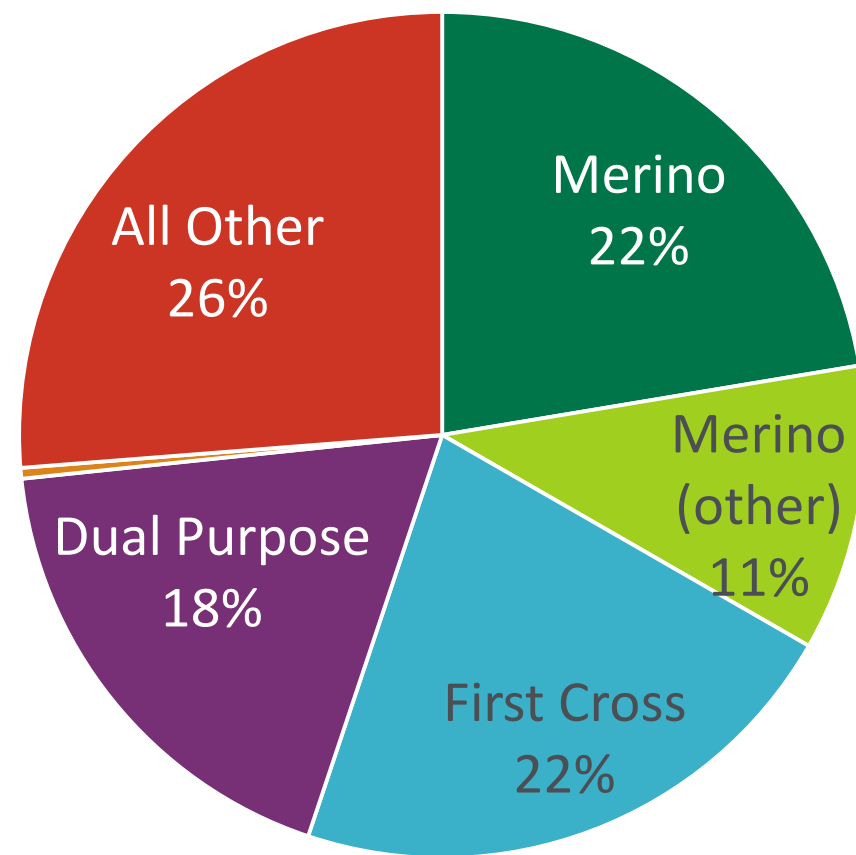
Lamb sales in next 4 months



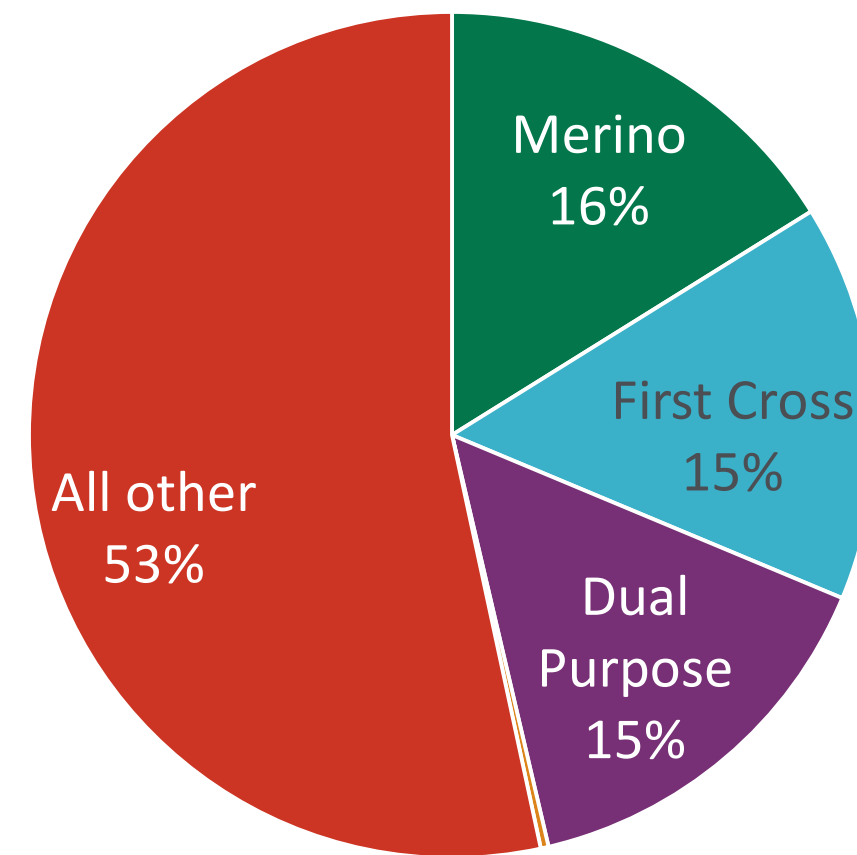
Totals

Breeding ewes on hand	4,850,775
Lambs on hand	3,634,637
Lambs marked in the past 4 months	2,776,483
Expected lamb sales in the next 4 months	1,723,466
Number of ewes joined to produce lambs	3,142,778

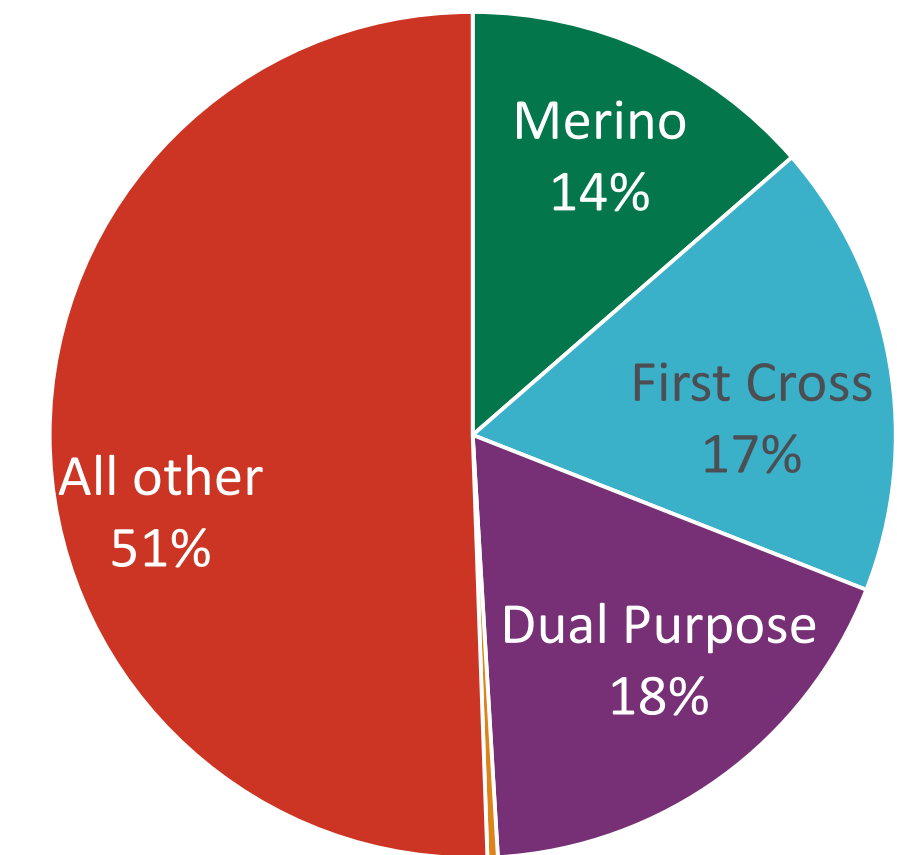
Breeding ewes on hand



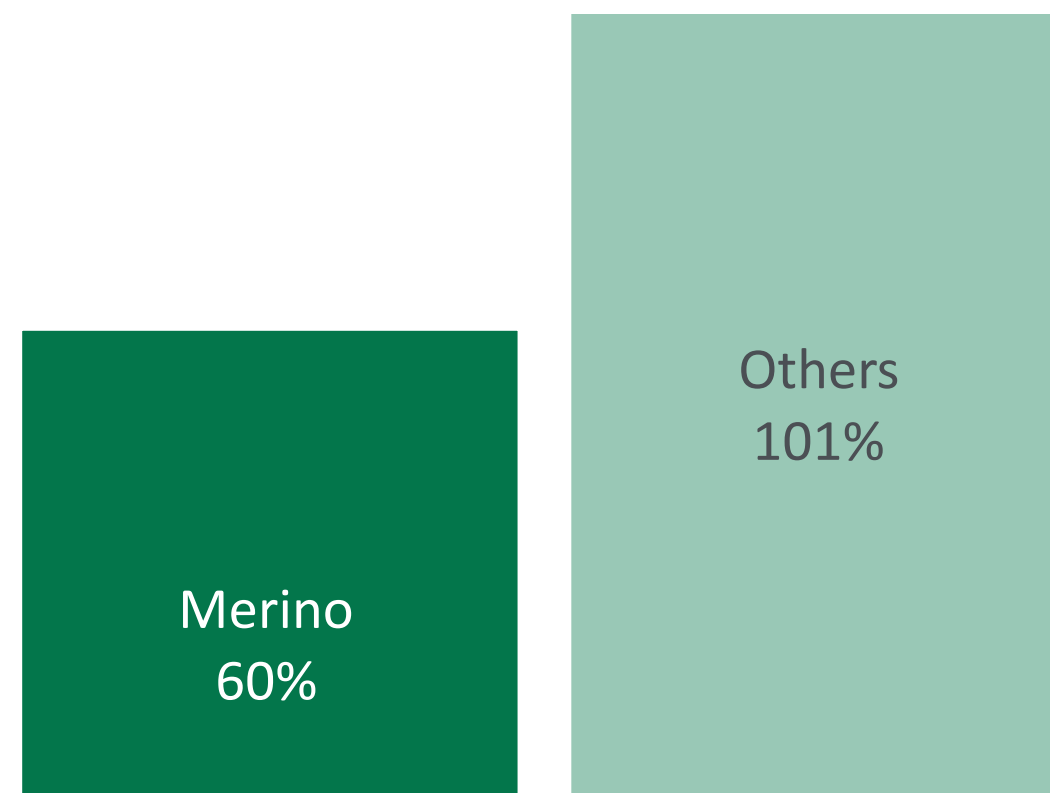
Lambs on hand



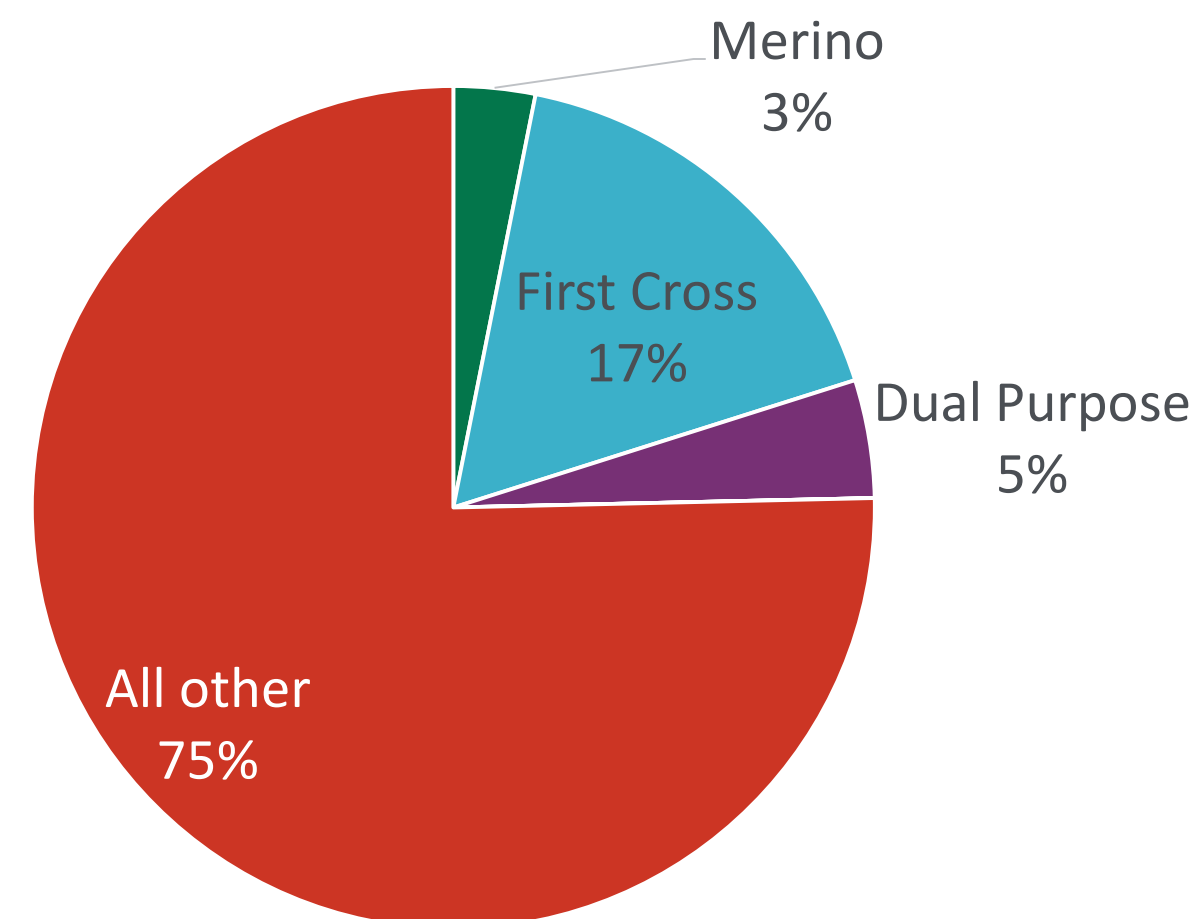
Marking in past 4 months



Marking rates



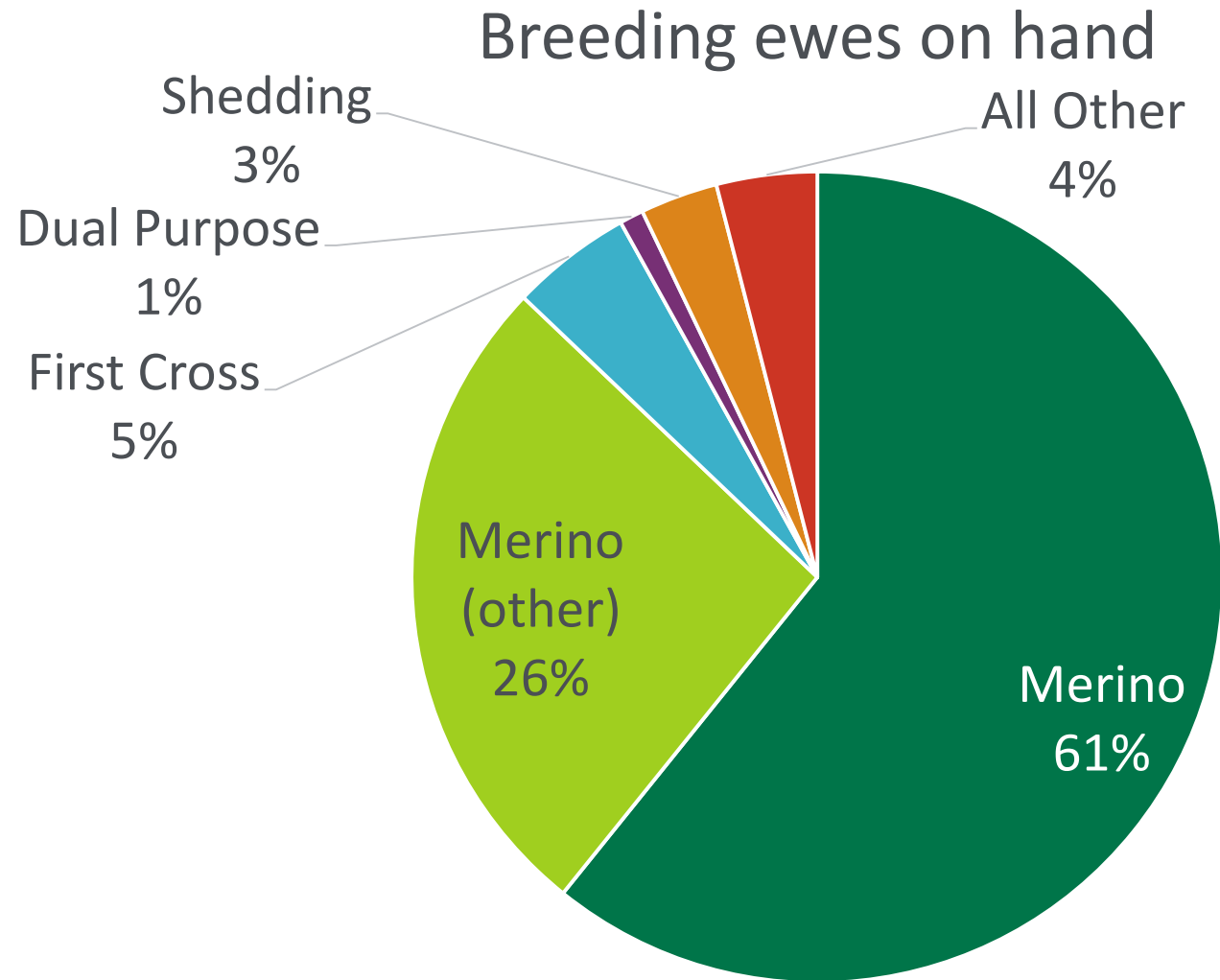
Lamb sales in next 4 months



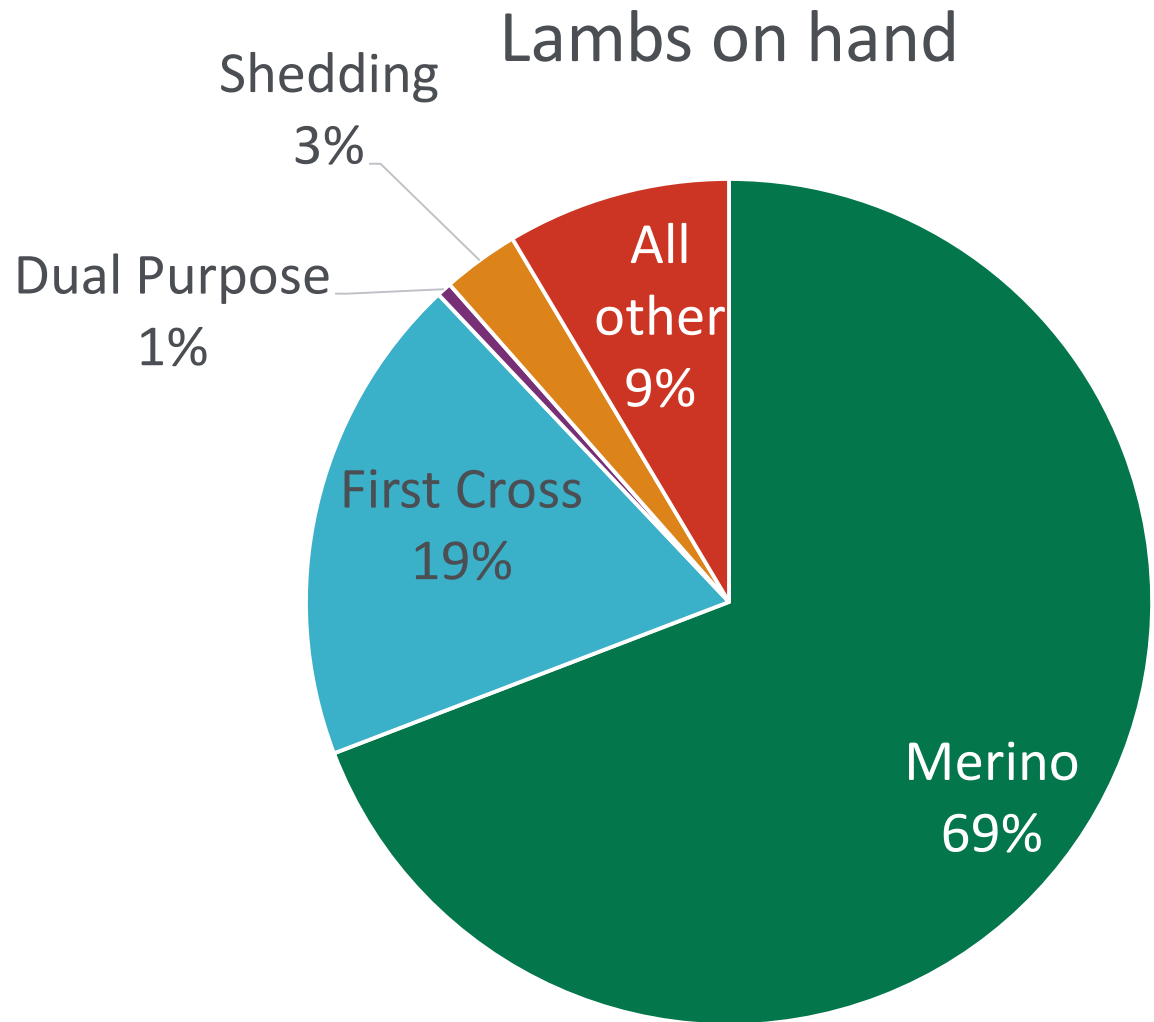
Totals

Breeding ewes on hand	1,006,702
Lambs on hand	839,110
Lambs marked in the past 4 months	626,342
Expected lamb sales in the next 4 months	296,851
Number of ewes joined to produce lambs	679,306

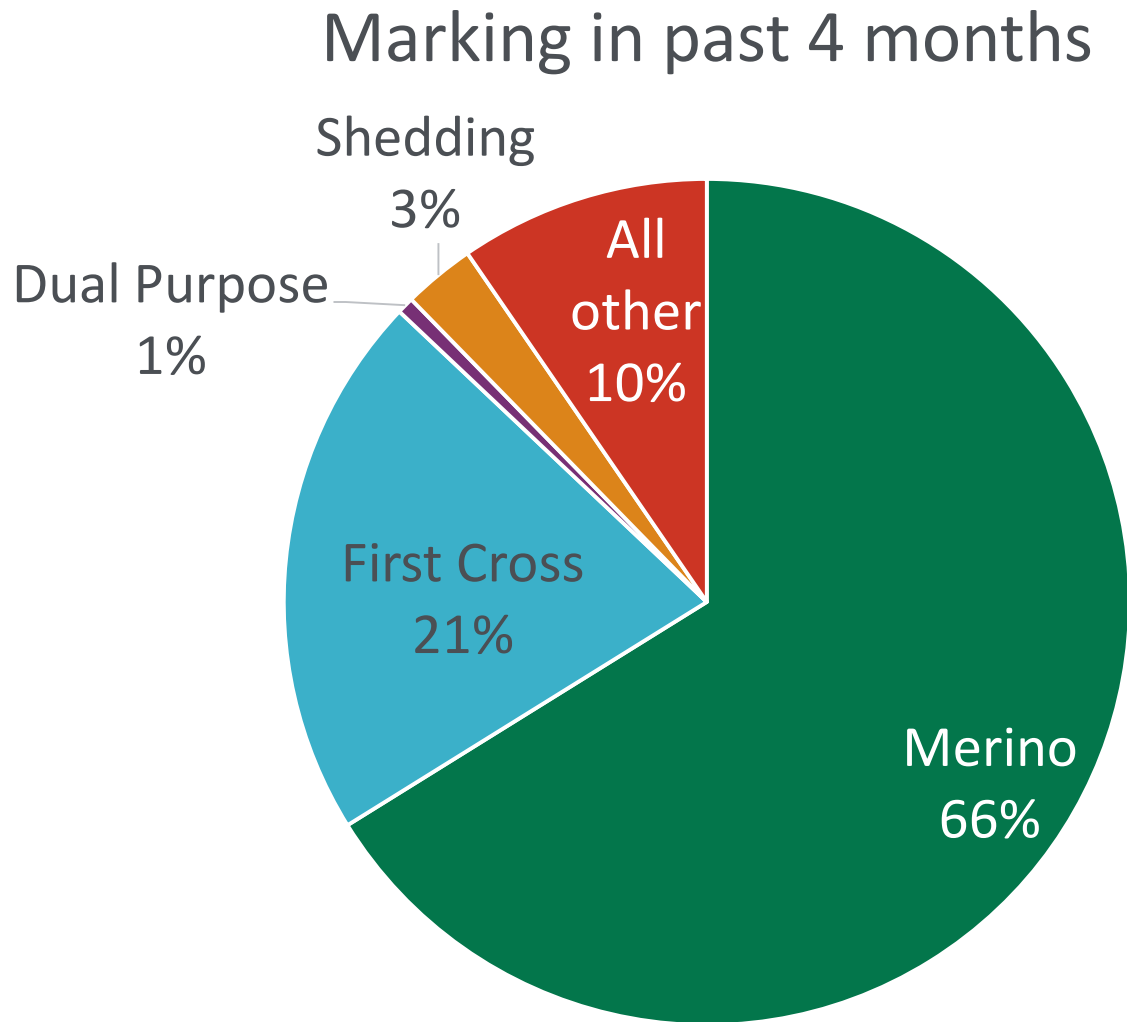
Western Australia



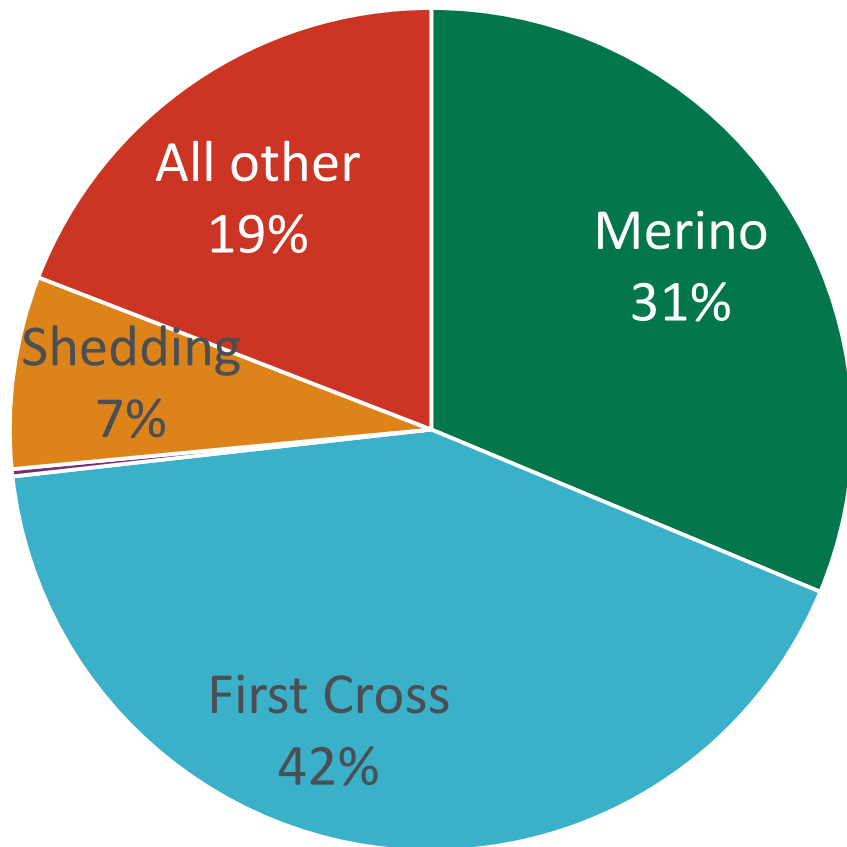
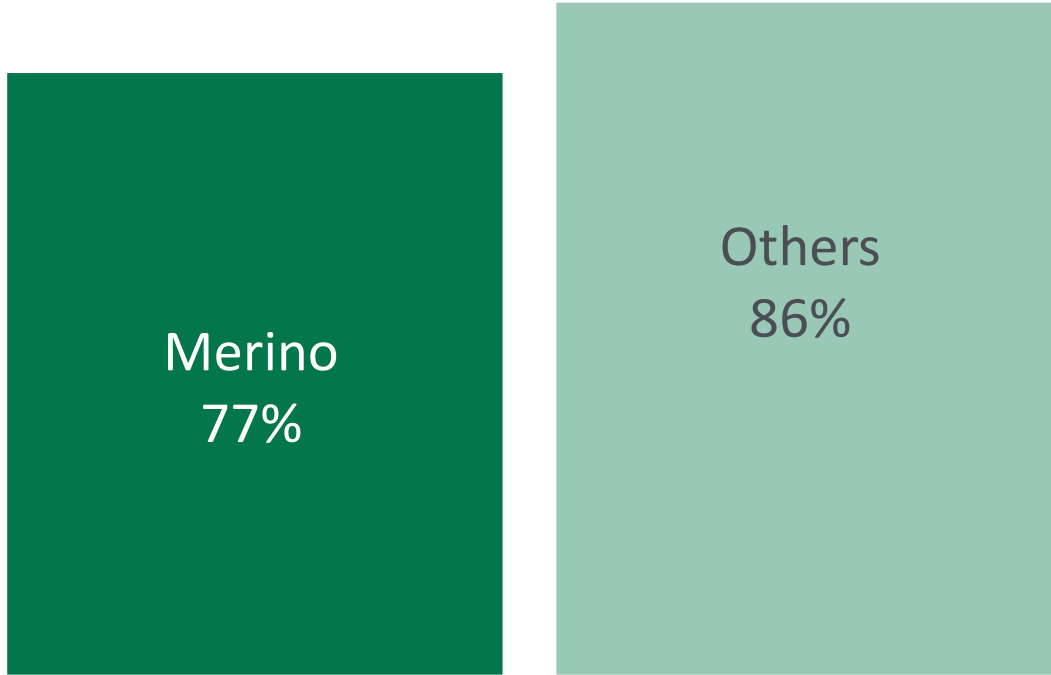
Marking rates



Lamb sales in next 4 months



Totals



Breeding ewes on hand	7,665,833
Lambs on hand	3,512,904
Lambs marked in the past 4 months	2,620,300
Expected lamb sales in the next 4 months	1,667,433
Number of ewes joined to produce lambs	4,949,917

Disclaimer

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