

MLA and AWI Wool and Sheepmeat Survey Report - Sheepmeat

February, 2018

Prepared by Kynetec

Contents

| | |
|----------------------------------------|-----------|
| Executive Summary | 3 |
| Background and Purpose | 4 |
| Methodology | 5 |
| Survey Respondents | 8 |
| MLA Sheep Producing Regions | 11 |
| National Results | 13 |
| Results by State | 17 |
| Results by MLA Reporting Region | 21 |
| Regional Snapshots | 31 |

Executive Summary – Lamb Production

Number of breeding ewes on hand

42,638,123 total breeding ewes on hand
31,999,739 Merino breeding ewe flock, 75% of total breeding flock
10,638,384 total non-Merino breeding ewes on hand, 25% of total breeding flock
Within the Merino flock, 69% for Merino lamb production and 31% for other lamb production

Ewe flock intentions for next 12 months

29% increase
62% maintain
9% decrease

Intended method for achieving flock increase

47% Retain more replacement ewes than normal
29% Retain more older ewes than normal
27% Purchase more additional ewes than normal

Number of lambs on hand

20,981,920 total lambs on hand
12,495,768 total Pure bred Merino lambs, 60% of total lamb flock
8,486,152 total non-Merino lambs, 40% of total lamb flock

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

8,656,793 total lamb sales in the next four months
1,888,592 total Pure meat sales (22% of total lamb sales)
2,533,841 total First cross sales (29% of total lamb sales)
2,391,059 total Merino sales (28% of total lamb sales)
1,843,301 total other breed sales (22% of total lamb sales)

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

3,665,202 total lambs marked in the past four months
2,254,570 total Merino lambs marked (62% of total markings)
1,410,631 total non-Merino lambs marked (38% of total markings)

Number of ewes joined to produce those lambs

3,919,844 total number of ewes joined to produce those lambs
2,619,673 total Merino lambs joined (67%)
1,300,477 total non-Merino lambs joined (33%)

Marking rates

86% National Merino marking rate
108% National non-Merino marking rate

Background and Purpose

Survey Background

The current Sheepmeat and Wool survey has been running in various formats for the past 17 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 and AWI 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.

Sampling

The MLA and AWI Wool and Sheepmeat survey for February 2018 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 2,036 survey responses were achieved in February 2018, basically stable at the 2,054 surveys in October 2017 but down from the 2,295 surveys in February 2017. 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, 3,164 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 June. A total of 108 respondents completed the survey via this method (5% 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 to 28 February 2018) and send reminder emails accordingly. A total of 15,849 emails were sent to MLA and AWI members via the email addresses provided by MLA and AWI databases. Of those 4,272 emails bounced, giving a total emails delivered of 11,577. A total of seven 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 1,226 completed responses (60% 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 702 producers responded by this methodology (34% 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 of telephone calls on the online survey, a total of 29 very large producers were included in the survey (Ewe flock size >20,000 hd).

Methodology [2/2]

Weighting

This is the third survey using the new ABS Census 2015-16 data to estimate the number of flock types and other variables by state, MLA Reporting Region and MLA region by weighting the number of respondents to the ABS producer population. There were a number of changes in this wave however to improve estimation by better weighting procedures:

1. Breeding ewe and lamb estimates were again developed by weighting the number of respondents (by state) to the number of farm businesses with breeding ewes. Wether estimates however were developed by weighting to the number of total farm businesses with sheep and lambs. In the past, the number of breeding ewe businesses was used for all weighting. This change had the effect of increasing the estimate of wether numbers from the February survey from 5.8 million (based on breeding ewe producer population) to 6.7 million (based on total sheep and lamb producers).
2. As with the June and October 2017 surveys, the ABS population of producers used for weighting the February 2018 survey was adjusted to account for the significant number of smaller producers (flock sizes of less than 250 head) that were excluded from the census due to the \$40,000 EVAO cutoff. In this wave however, a more refined EVAO adjustment was applied based on feedback from AWI. This had the effect of slightly reducing the overall number of breeding ewe producers used in the weighting process. A comparison of the adjusted population used for the last two waves and the newly adjusted population for this wave is below:

| State | Breeding Ewe Producers used for Jun and Oct 2017 | Breeding Ewe Producers used for Feb 2018 |
|---------------------|--------------------------------------------------|------------------------------------------|
| Australia | 36,604 | 35,947 |
| New South Wales/ACT | 13,801 | 13,725 |
| Victoria | 9,048 | 9,173 |
| Queensland | 1,538 | 1,410 |
| South Australia | 5,826 | 5,414 |
| Western Australia | 5,197 | 4,906 |
| Tasmania | 1,194 | 1,318 |

February 2018 survey results were weighted to both the previous and the new breeding ewe producer population. A comparison of the two results for ewe numbers and lamb numbers is attached with this report. National, State and MLA 7 reporting regional data aligns reasonably well (though there was a difference noted in SA and QLD). We will continue to run comparisons with future waves to monitor any differences.

Methodology [2/2]

Statistical significance

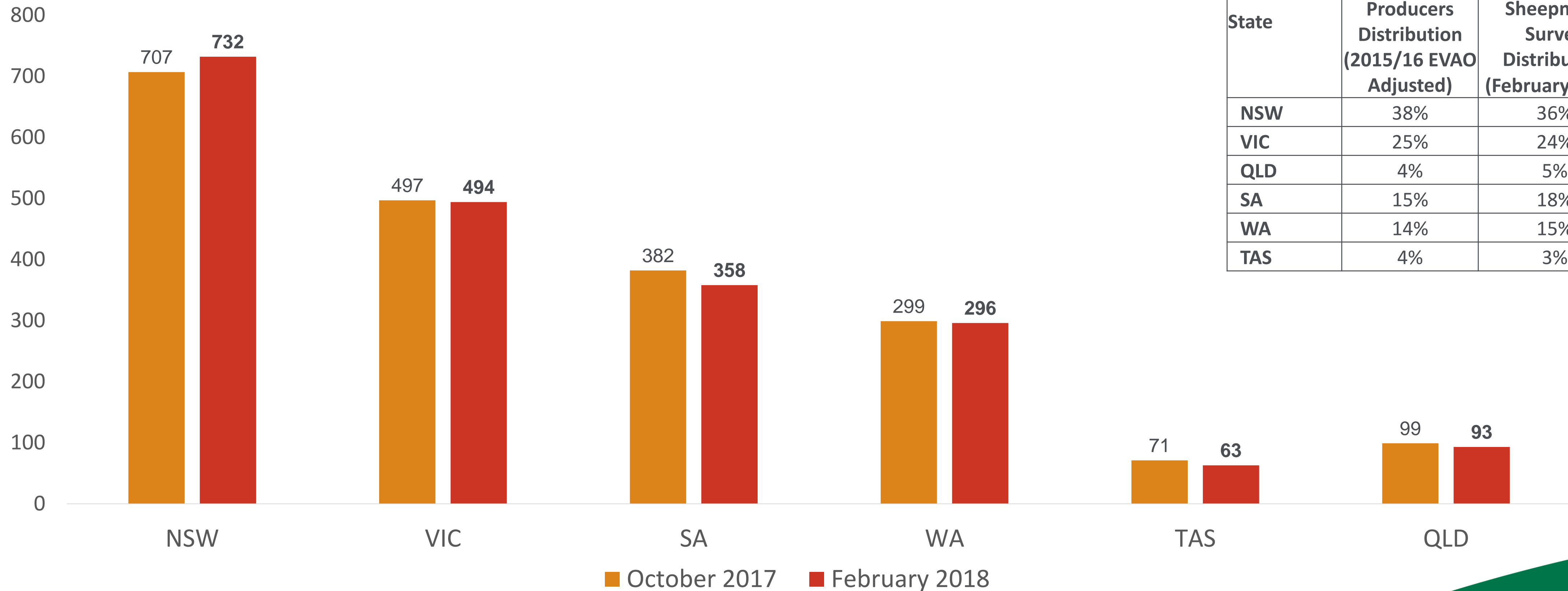
The total research sample of 2,036 will give the results of this study a margin of error of $\pm 2.11\%$ at a 95% confidence level based on 35,947 breeding ewe producers in Australia (ABS 2015-16 Census adjusted for \$40,000 EVOA cutoff). This is basically saying that if you conducted the same survey 100 times, 95 out of the 100 sheep producers should yield results within $\pm 2.11\%$ of the published number or percentage. However, the % of error increases as the sample size decreases (e.g. at the state and regional level).

- New South Wales $\pm 3.53\%$
- Victoria $\pm 4.47\%$
- Queensland $\pm 9.82\%$
- South Australia $\pm 5.01\%$
- Western Australia $\pm 5.52\%$
- Tasmania $\pm 12.05\%$

Survey Responses [1/4]: By State

The total number of respondents (n=2,036) represented national industry distribution of breeding sheep producers (31,136 as reported in the ABS Census 2015-16 with an adjustment to 35,947 for the new EVAO cutoff of \$40,000), with the proportion of respondents in each state being similar to that of the Census 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 and will be used to update state sampling structures in future surveys.

Total Respondents (February 2018) = 2,036



| State | ABS Census for Breeding Ewe Producers Distribution (2015/16 EVAO Adjusted) | MLA and AWI Wool and Sheepmeat Survey Distribution (February 2018) |
|-------|----------------------------------------------------------------------------|--------------------------------------------------------------------|
| NSW | 38% | 36% |
| VIC | 25% | 24% |
| QLD | 4% | 5% |
| SA | 15% | 18% |
| WA | 14% | 15% |
| TAS | 4% | 3% |

Survey Responses [2/4]: Total Flock Counts (Merino & Non-Merino)

Merino and non merino flock count by Postcode

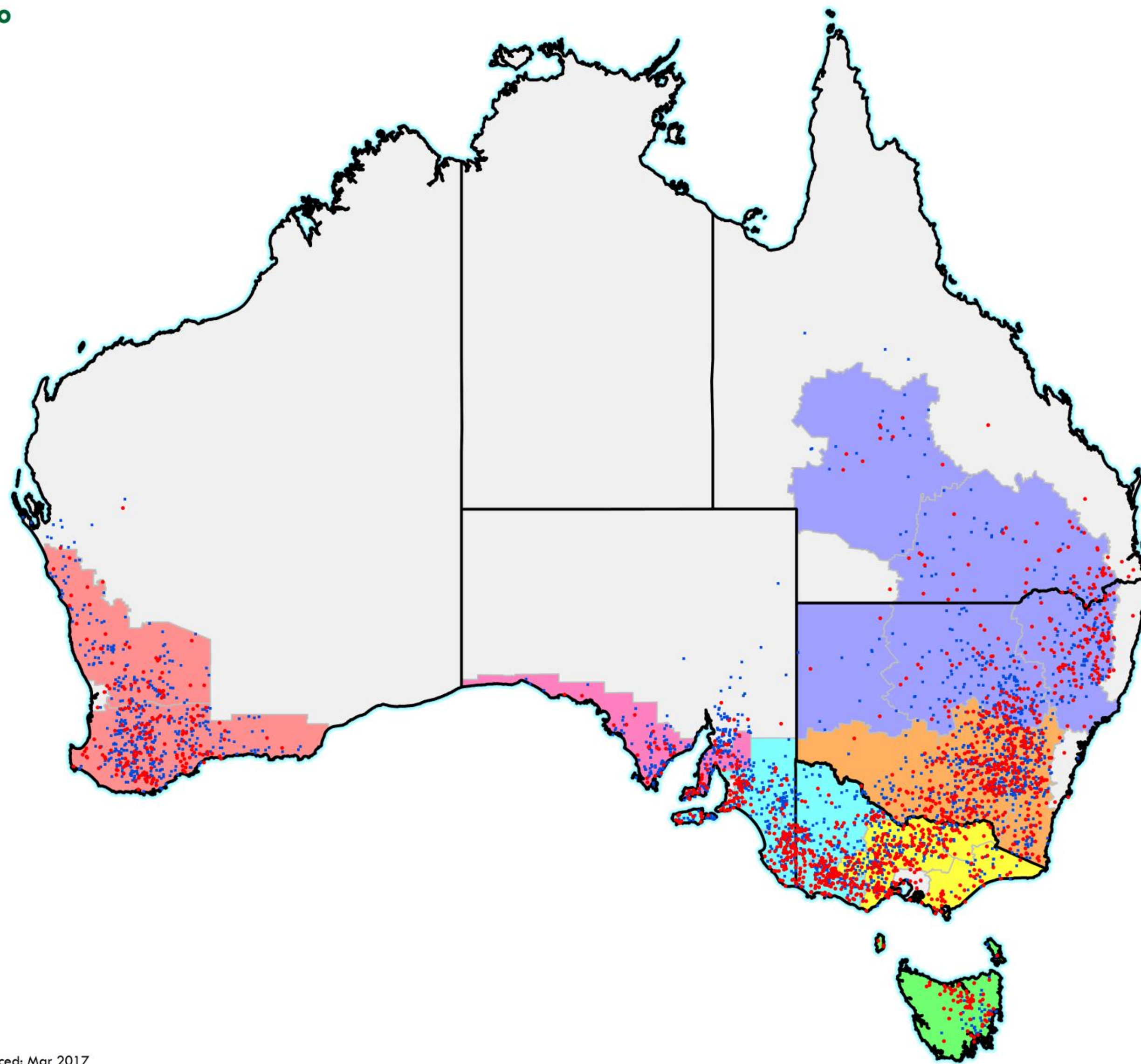
MLA reporting regions



Merino flock count by Postcode



Non merino flock count by Postcode



Total flocks: n = 3,164
Merino: n = 1,728
All other: n = 1,487

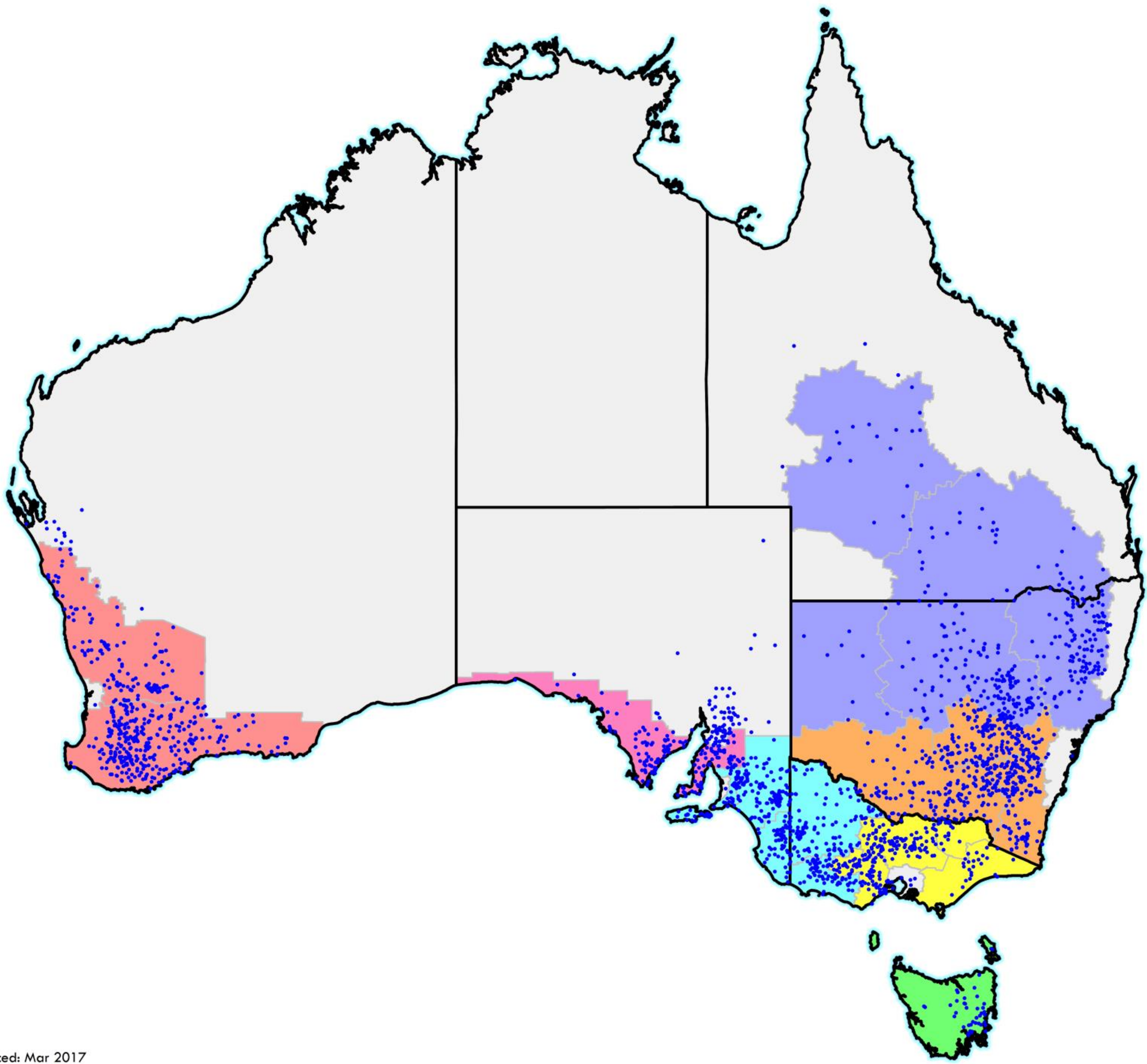
Survey Responses [3/4]: Merino Flock Counts by Postcode



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 properties: n = 1,728



HY03116 Source: MLA, NC Map Produced: Mar 2017



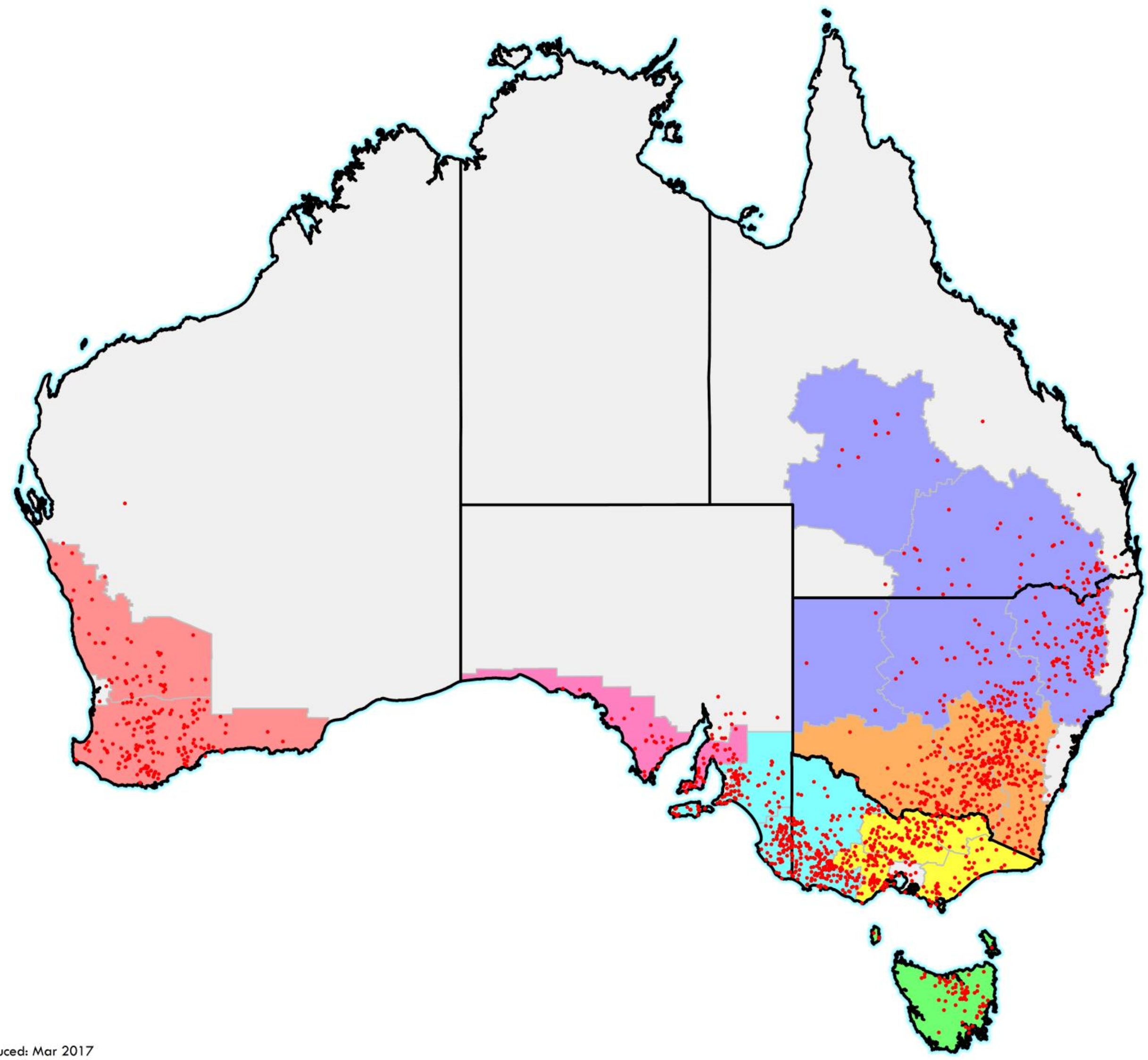
Survey Responses [4/4]: Non-Merino Flock Counts by Postcode



Non merino flock count by Postcode

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

Non merino flock count by Postcode
1 Dot = 1



All other properties: n = 1,487

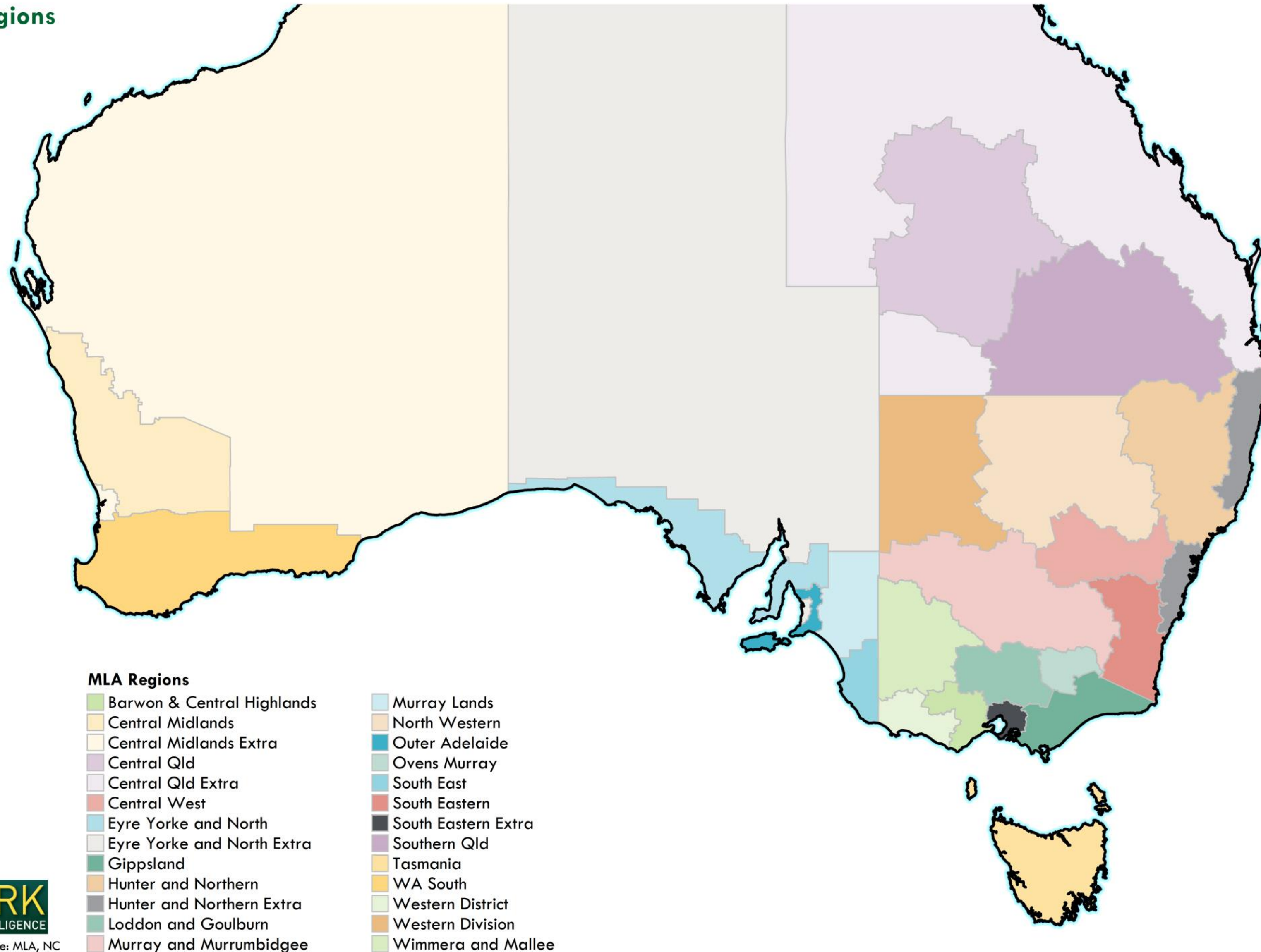


HY03116 Source: MLA, NC Map Produced: Mar 2017



MLA sheep producing regions

MLA 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.

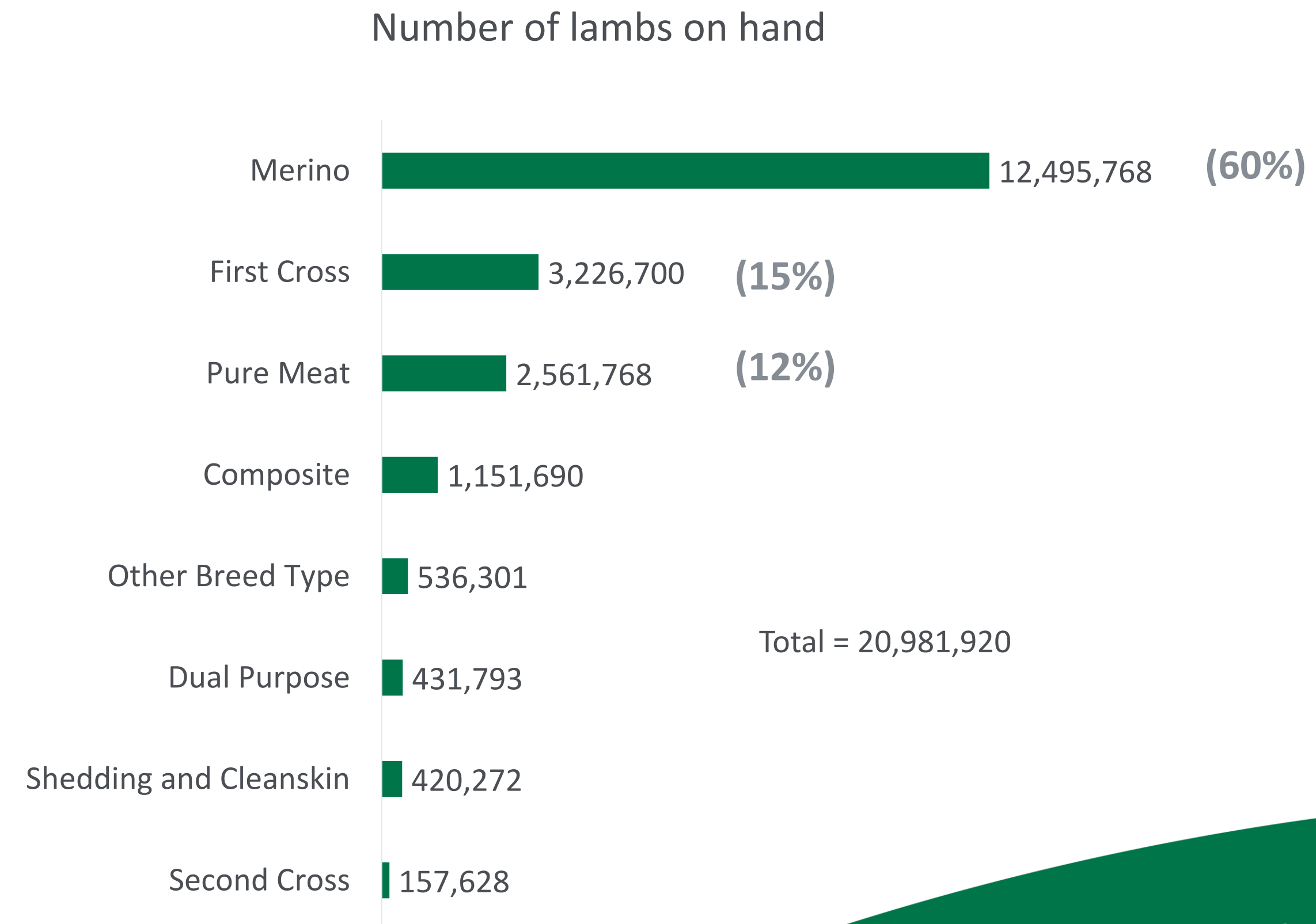
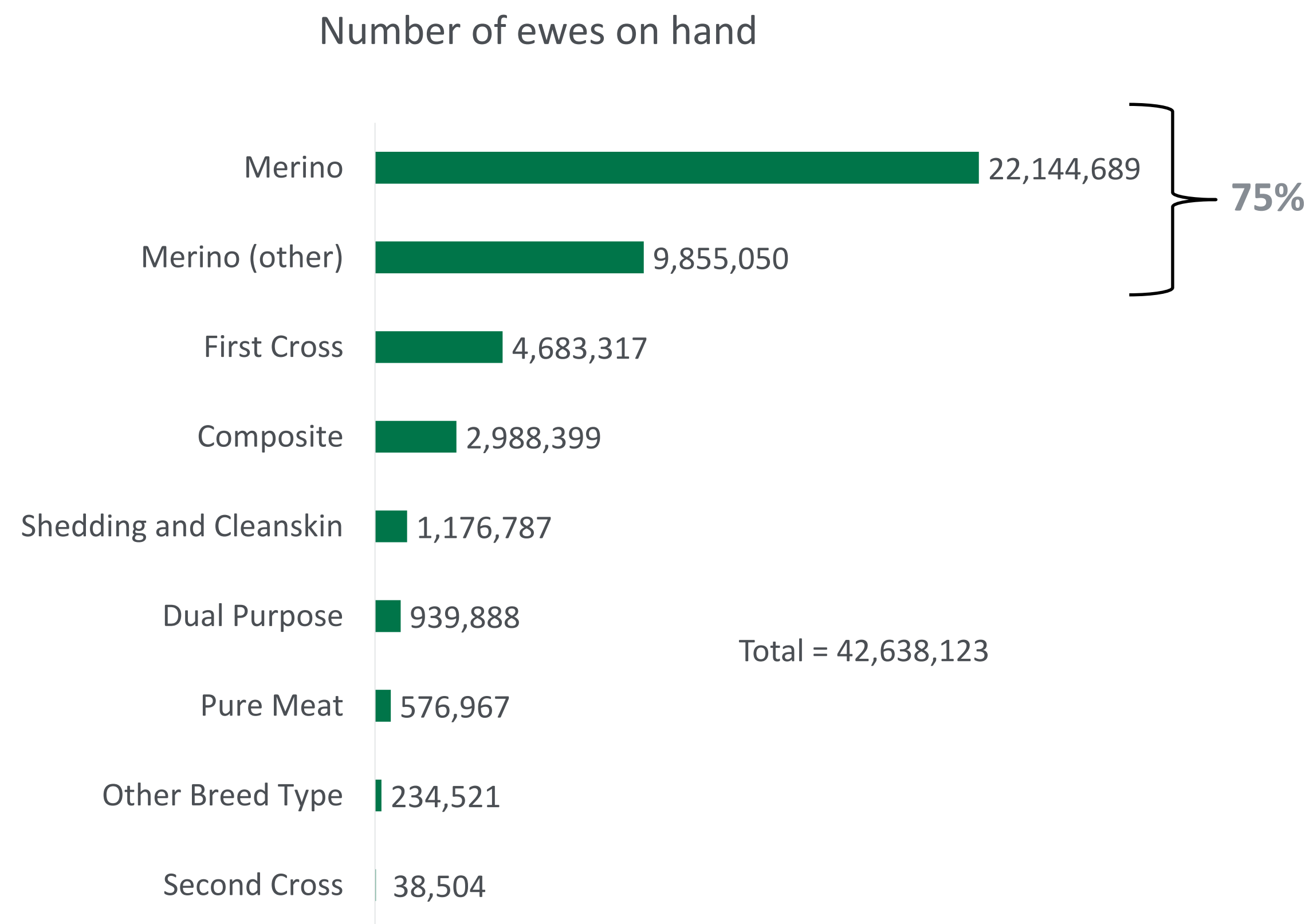
Of the 26 sheep producing regions, 7 are located in NSW, 7 in Victoria, 5 in SA, 3 in WA, 3 in Queensland and 1 in Tasmania. These producing regions are likely to change as the flock distribution changes.

National Results

Ewes on hand and Lambs on hand - Australia

Merinos accounted for 75% of the total breeding ewe flock at 32 million head. Merino breeding ewes were further divided into Merino ewes for pure bred Merino production and Merino ewes for crossbred production and 'other' Merinos, accounting for 69% and 31% of the merino flock, respectively.

There were 21 million lambs on hand at 28 February 2018. Merinos made up 60% of the total lamb flock, at 12.5 million head, followed by First cross lambs and Pure meat lambs and accounting for 15% and 12% of the national lamb flock, respectively.

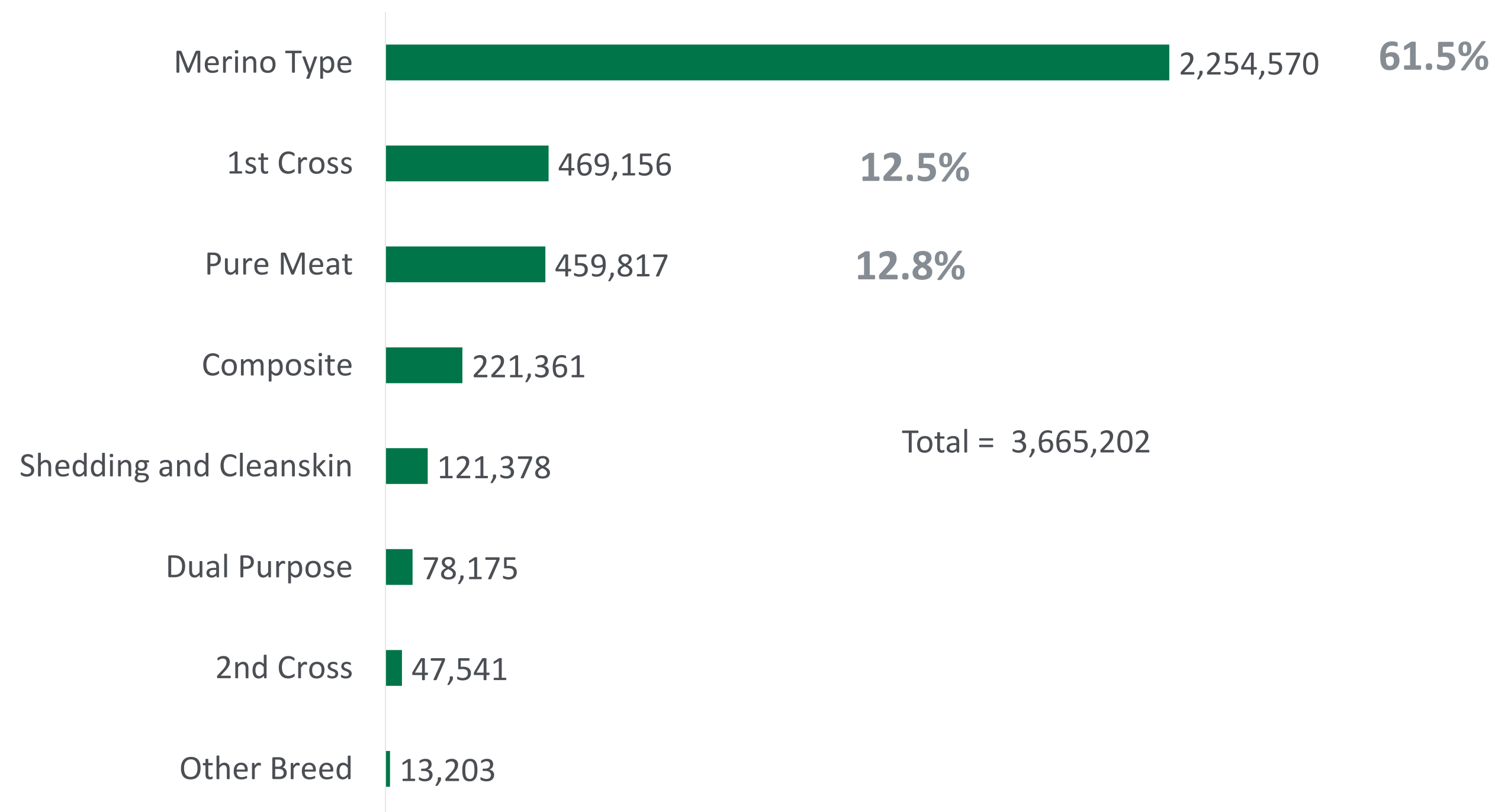


Lambs marked in the past four months (1 Nov – 28 Feb 2018) and Ewes joined to produce those lambs - Australia

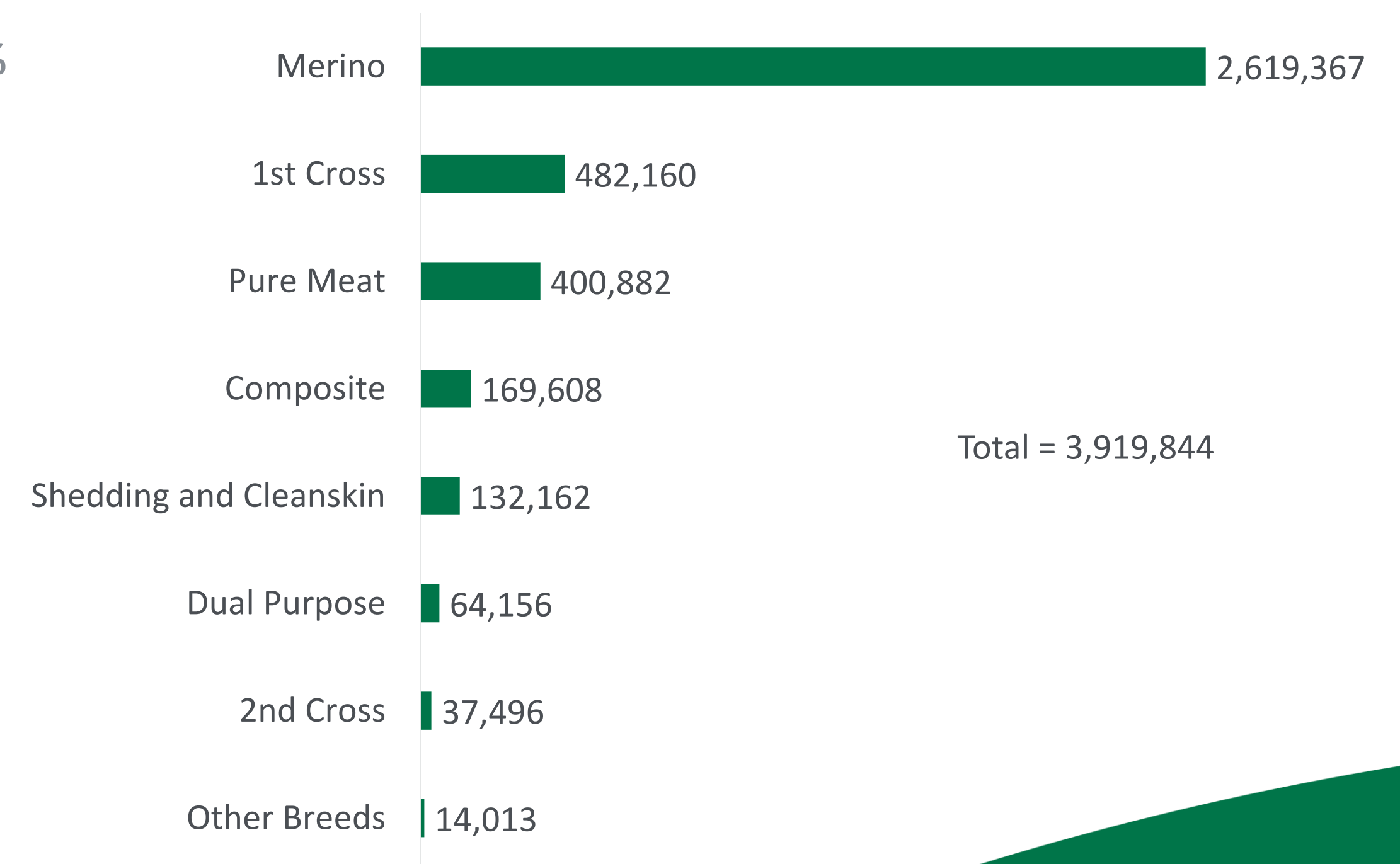
There were a total of 3.7 million lambs marked in the four months (from 1 November to 28 February 2018). Merinos accounted for the largest proportion of lambs marked in the past four months at **61.5%**, with Pure meat breeds and first cross breeds accounting for **12.5%** and **12.8%**, respectively.

A total number of 3.9 million ewes were joined to produce the lambs that were marked in the past four months. Merino marking rates were well below that of non-merino breeds at 86% and 108%, respectively.

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



Ewes joined to produce marked lambs (1 Nov to 28 Feb)

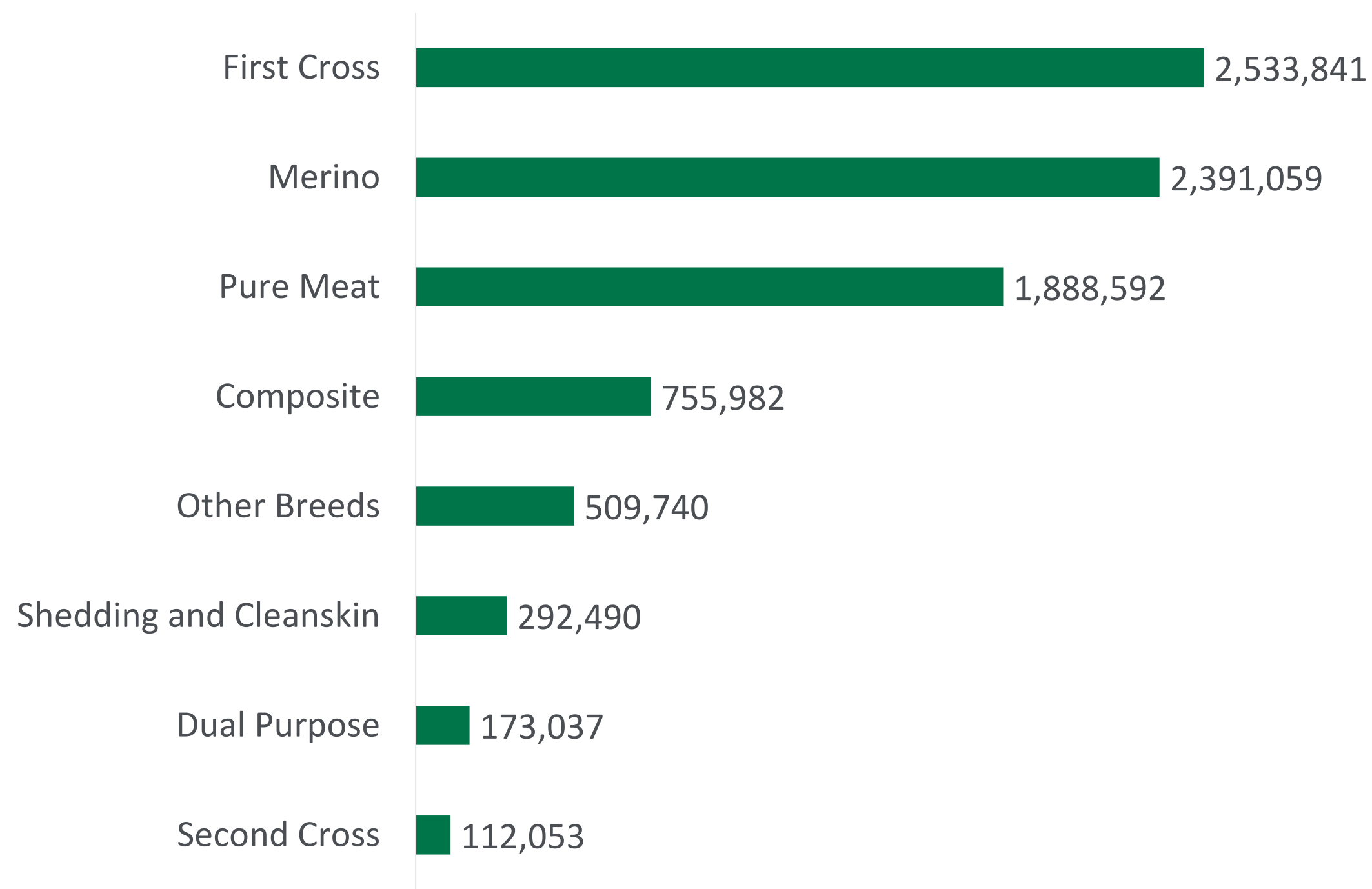


Expected lamb sales in the next 4 months - Australia

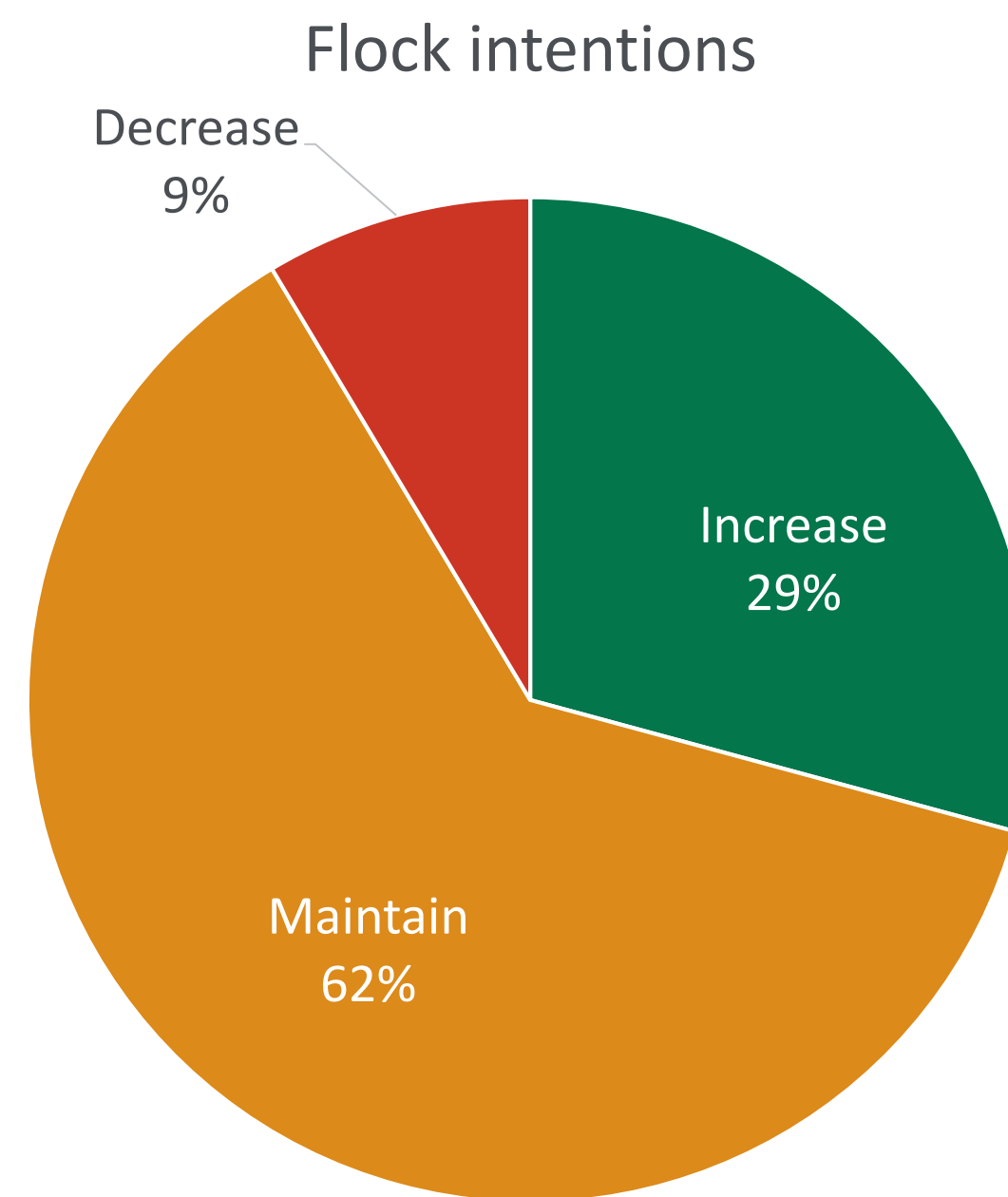
A total number of 8.7 million lambs are expected to be sold in the next four months (1 March 2018 to 30 June 2018), approximately 41% of the total number of lambs on hand (21 m). Of these: First Cross, Merino and Pure Meat breeds are expected to account for 29%, 28% and 22% of lamb sales, respectively.

These results are consistent with producer ewe flock intentions for the next 12 months and method of achievement, with 29% looking to increase their ewe flocks and of those looking to increase, 47% are expected to retain more replacement ewes than normal in order to achieve this increase.

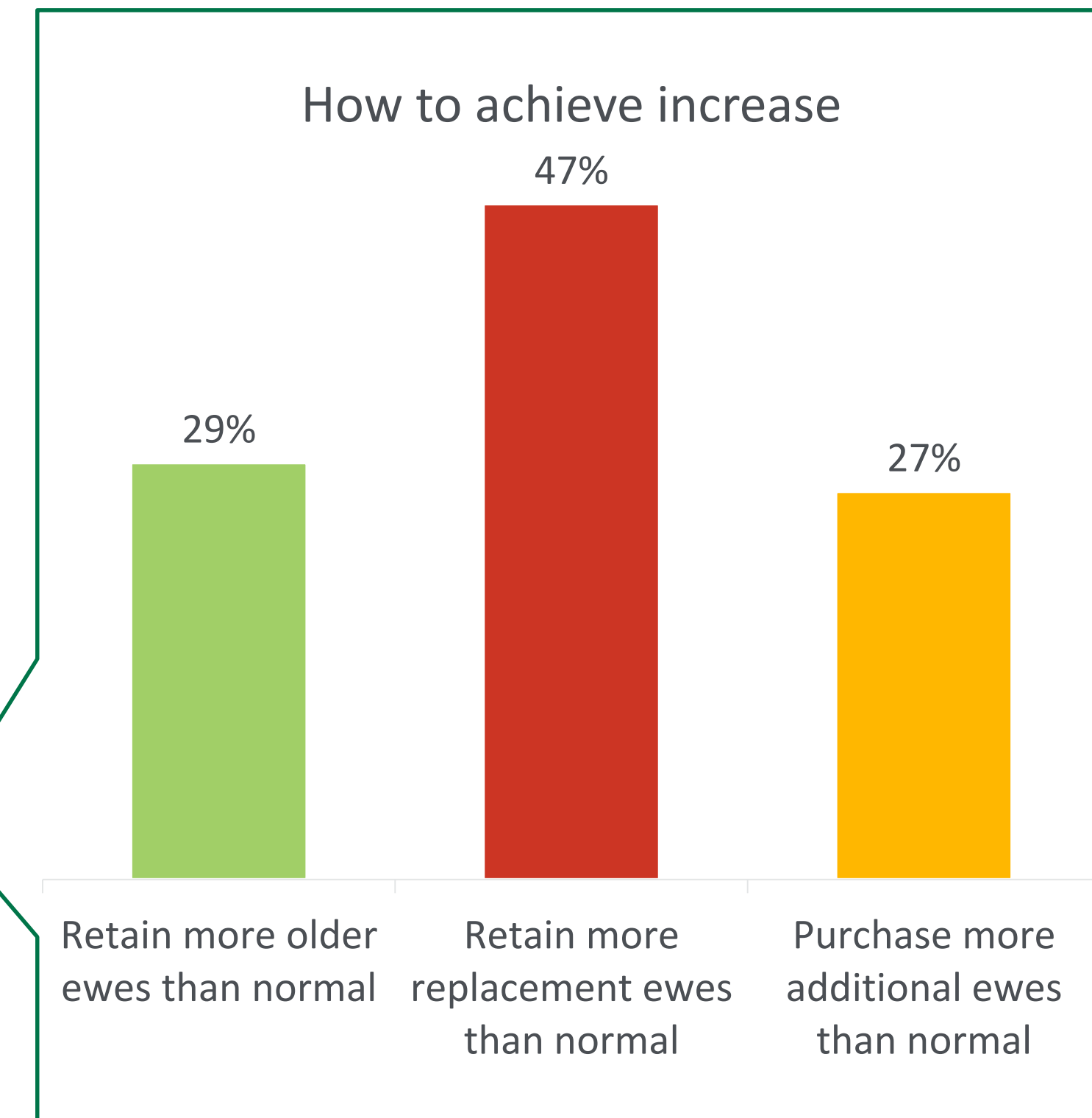
Expected lamb sales in the next 4 months



Total = 8,656,793



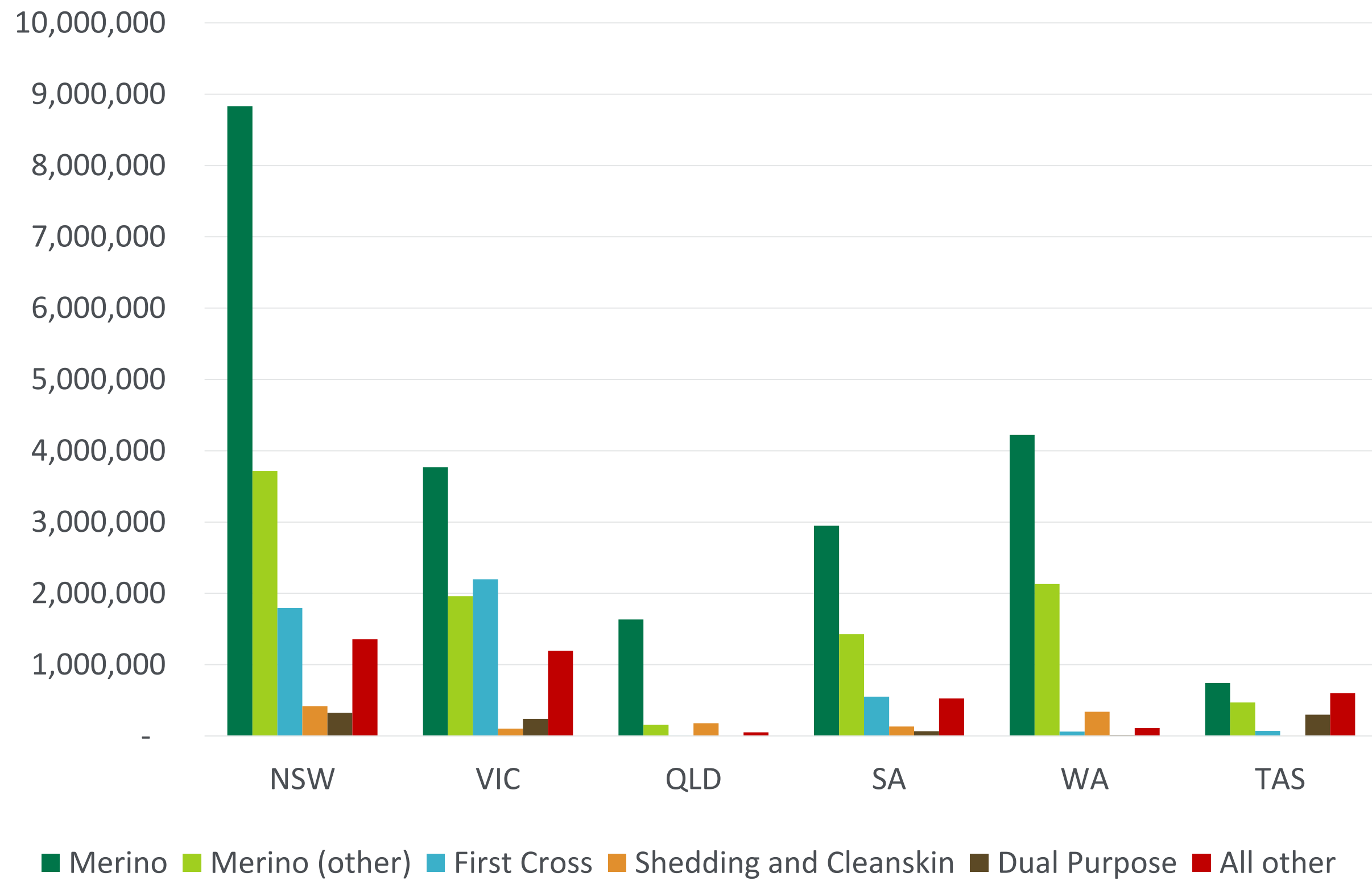
Sample base (respondents) n=1,891



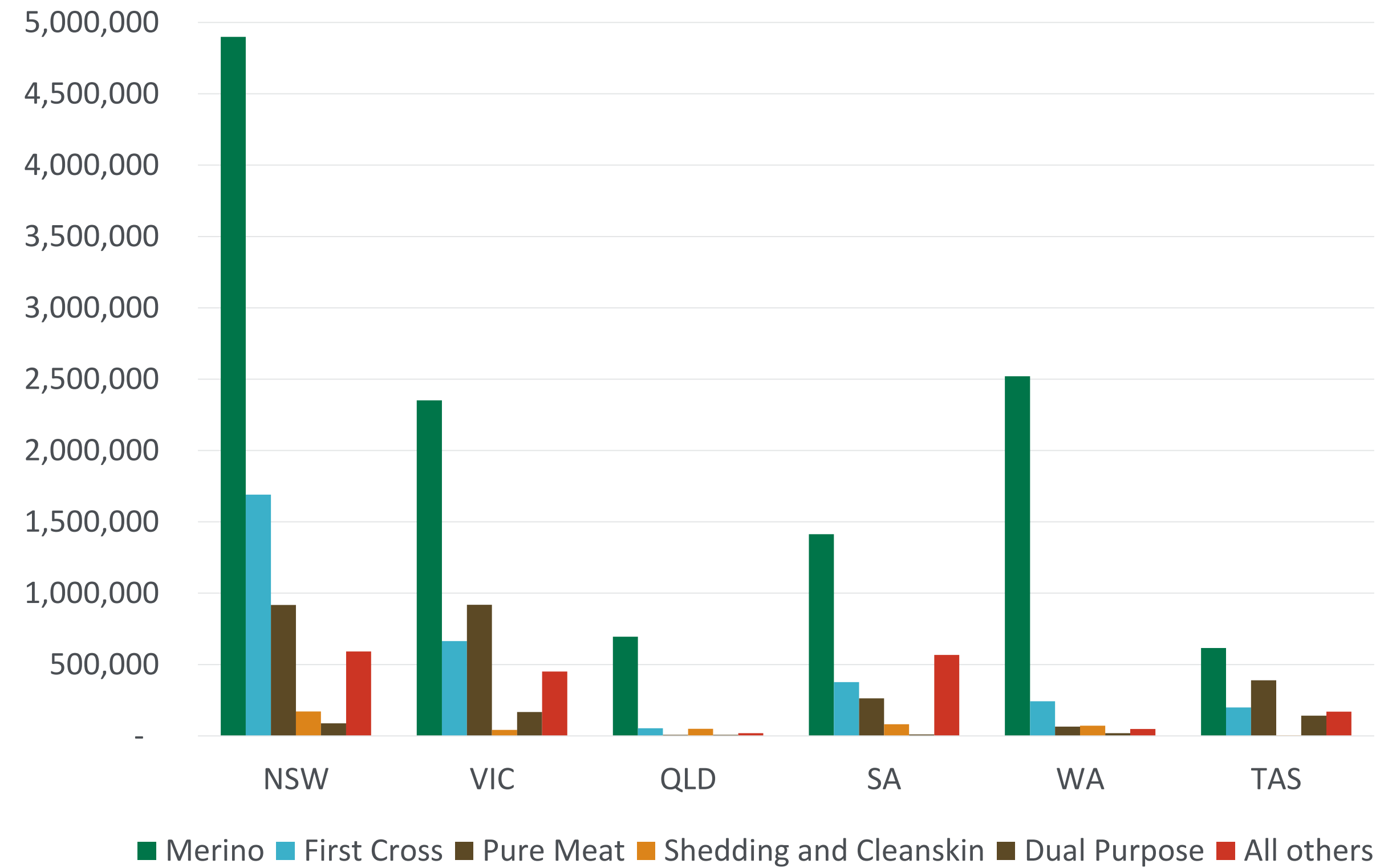
Results by State

Ewes on hand and Lambs on hand - State

Ewes on hand

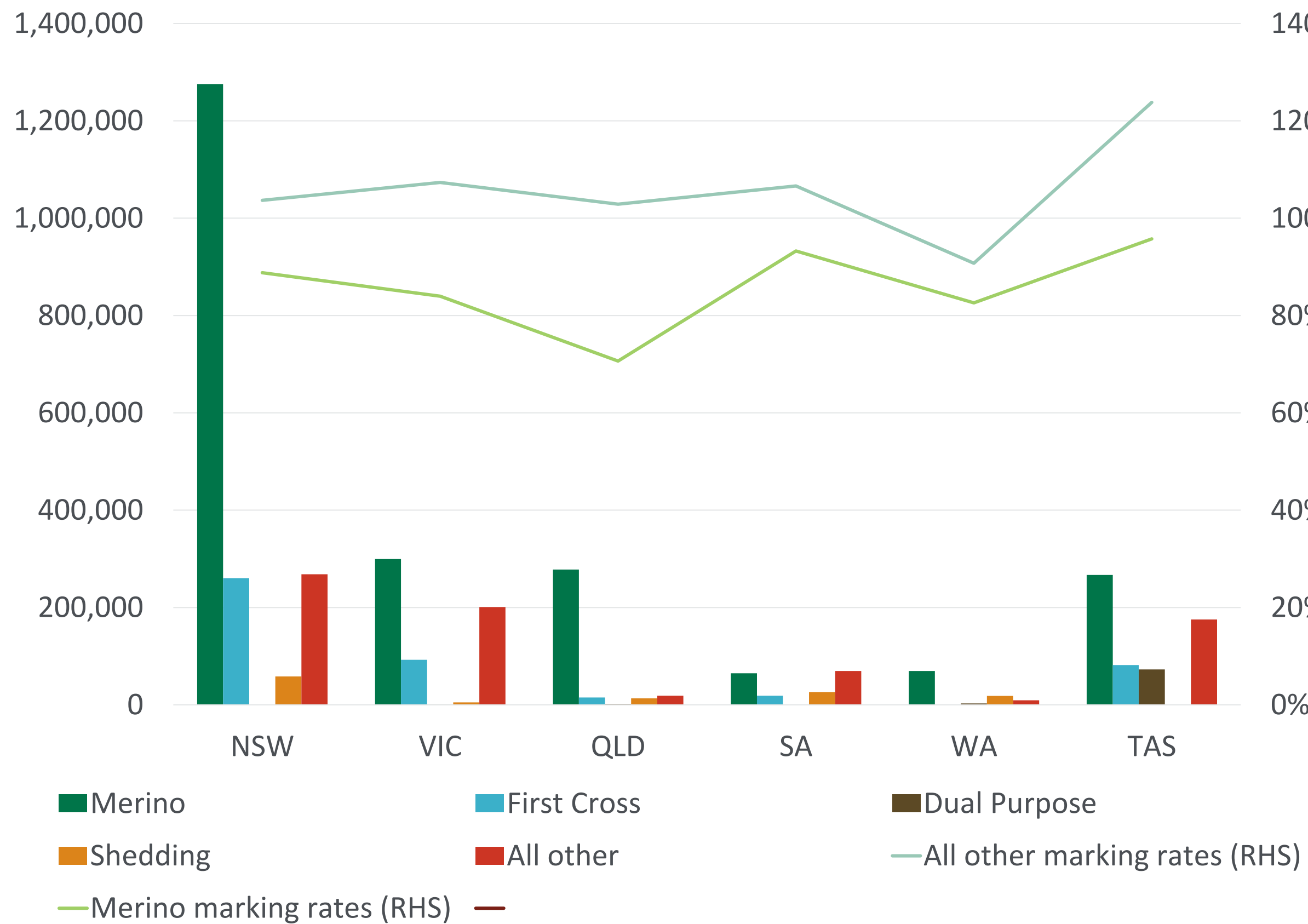


Lambs on hand

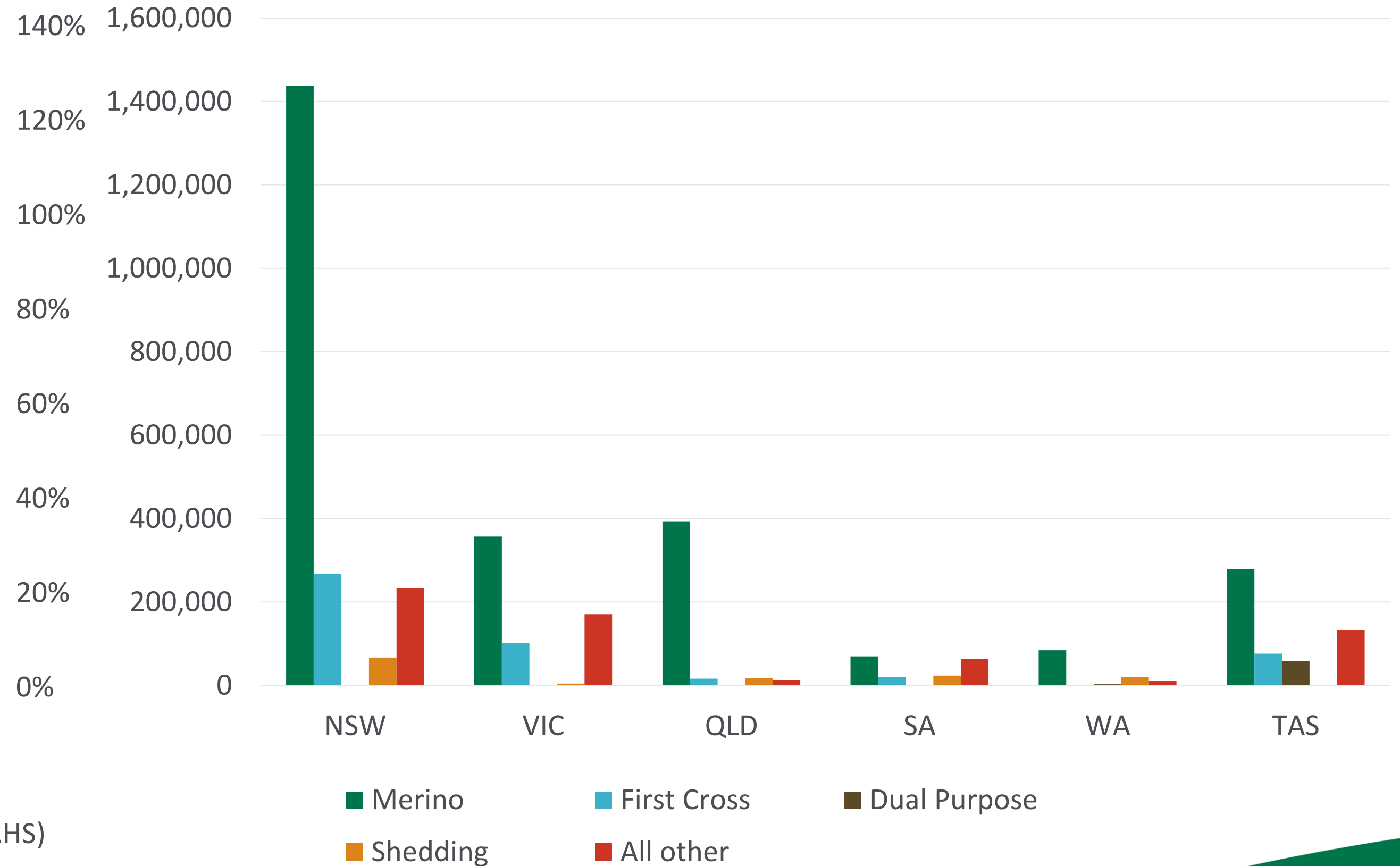


Lambs marked in the past four months and Ewes joined to produce those lambs - State

Lambs marked in the past 4 months (1 Nov 2017– 28 Feb 2018)



Ewes joined to produce those lambs

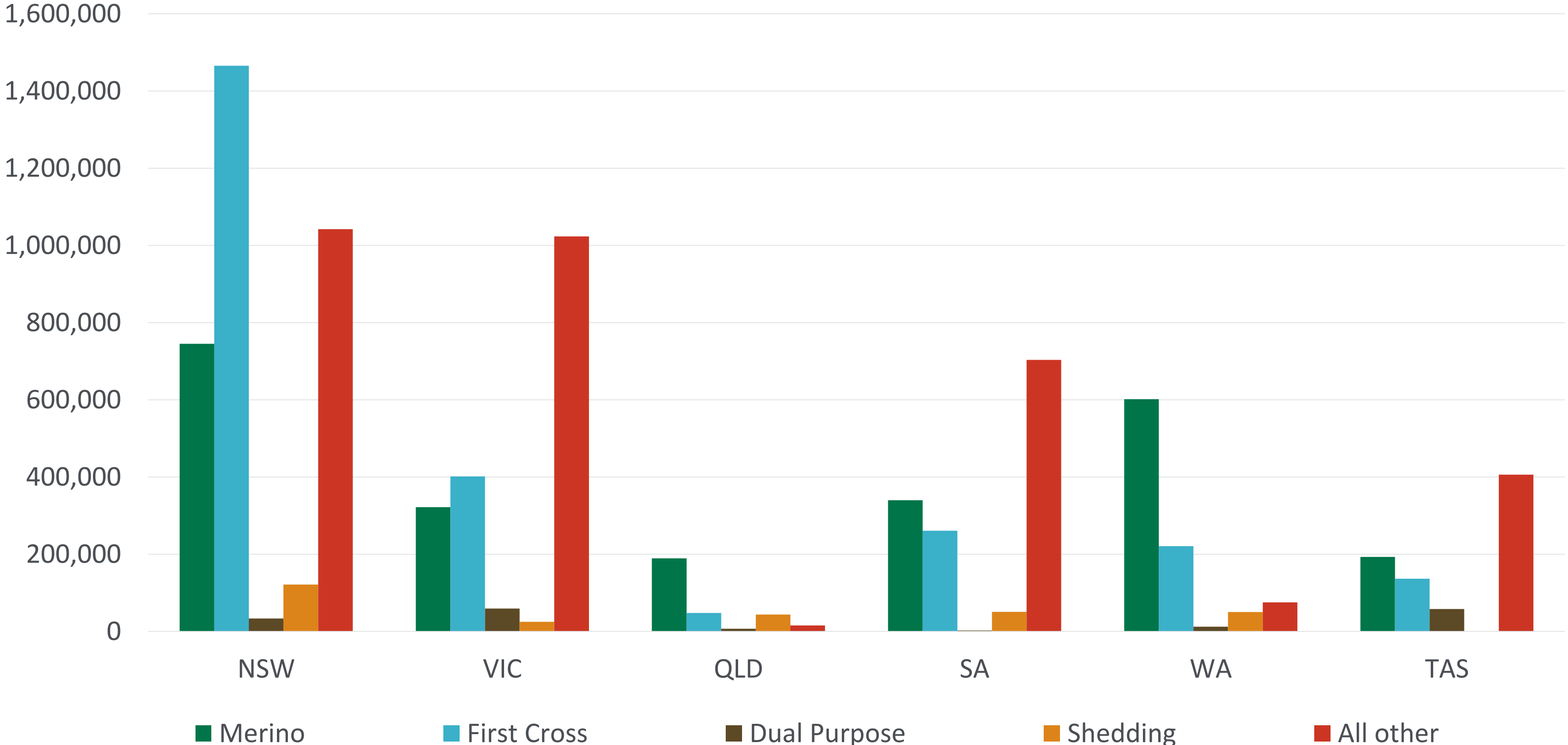


Sample base (properties) n=3,164

Expected lamb sales in the next four months - State



Expected lamb sales in the next 4 months (1 March 2018 – 30 June 2018)



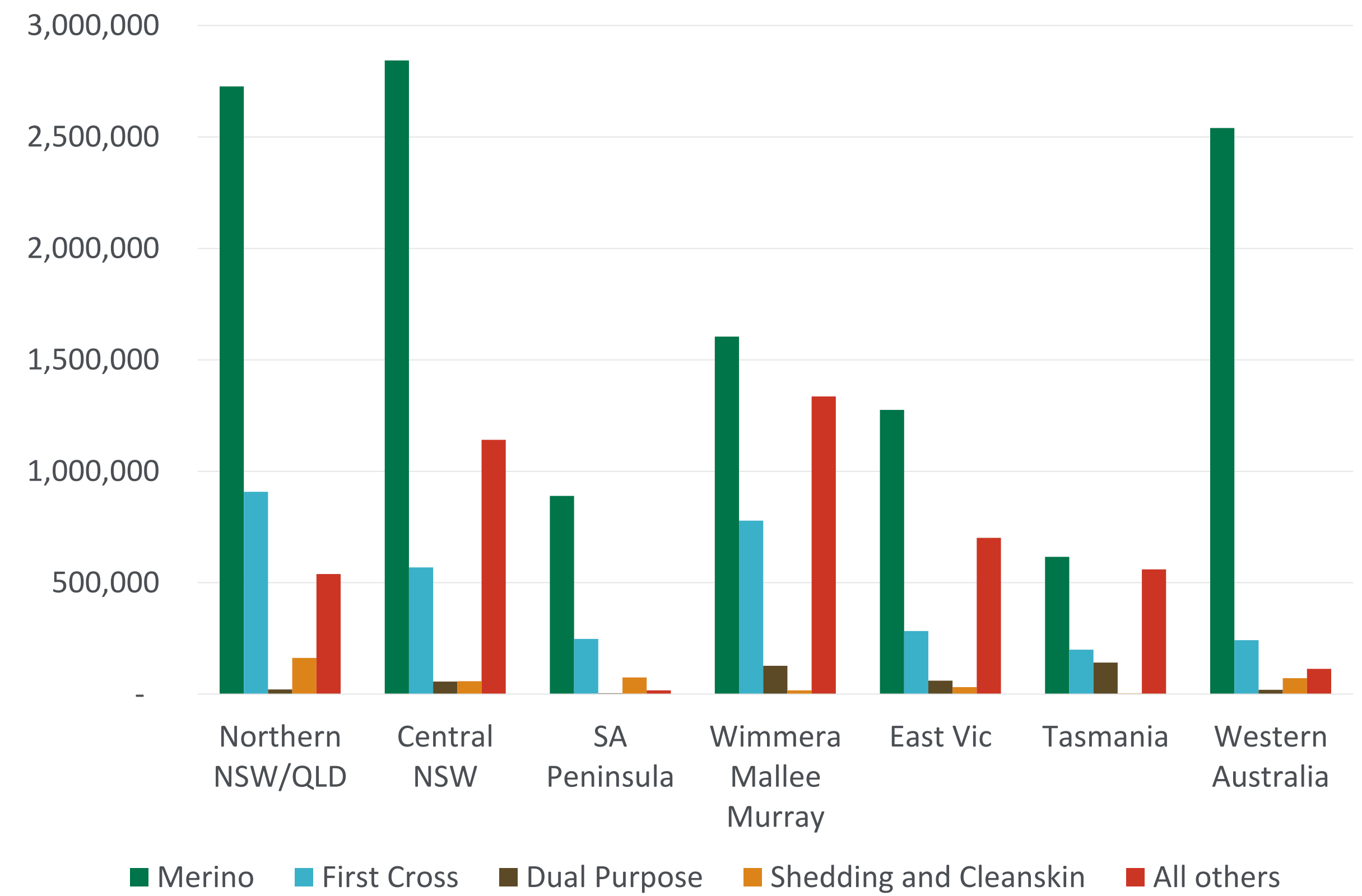
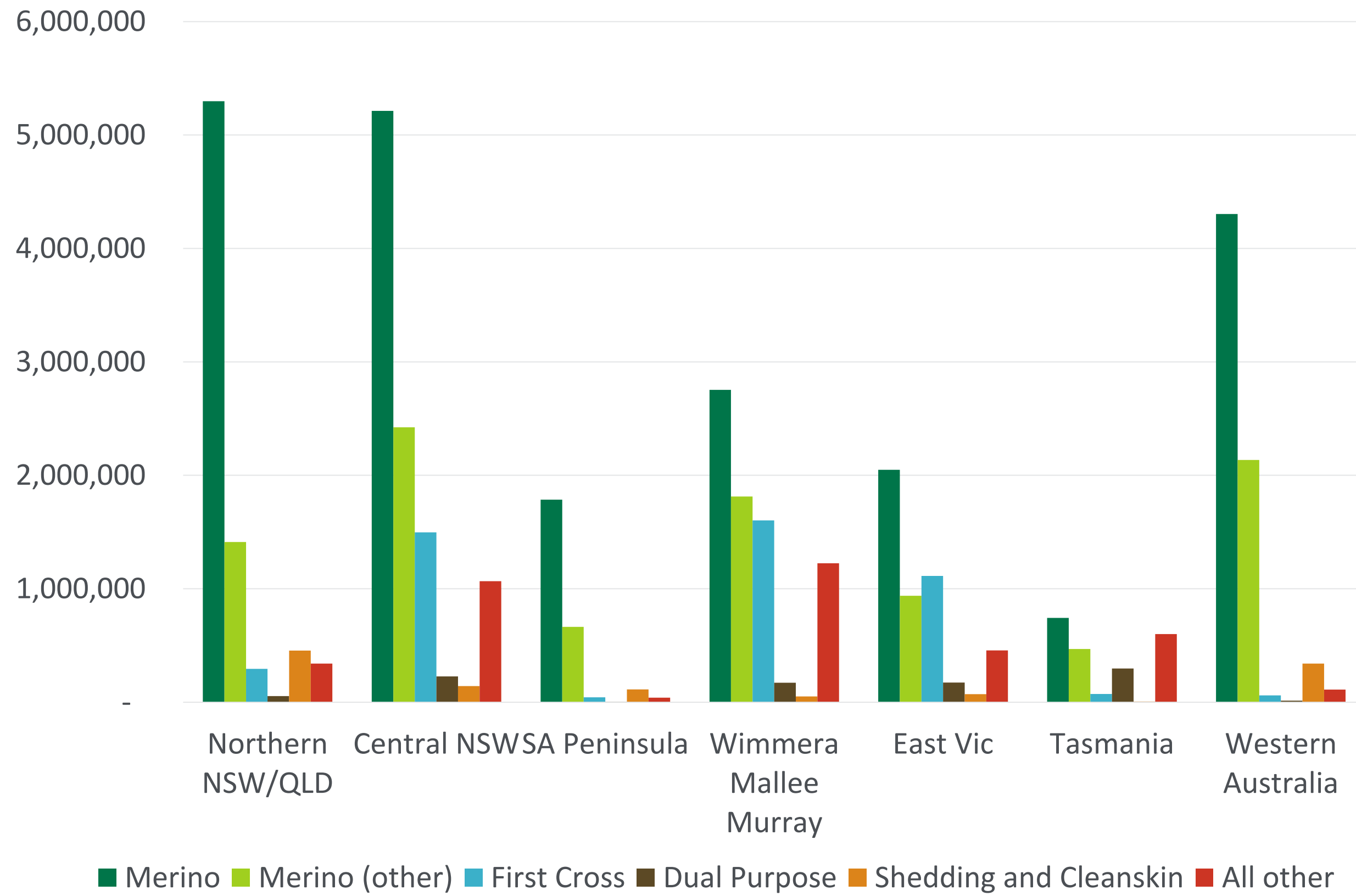
Results by MLA Reporting Region

Ewes on hand and lambs on hand 28 February 2018

MLA reporting regions

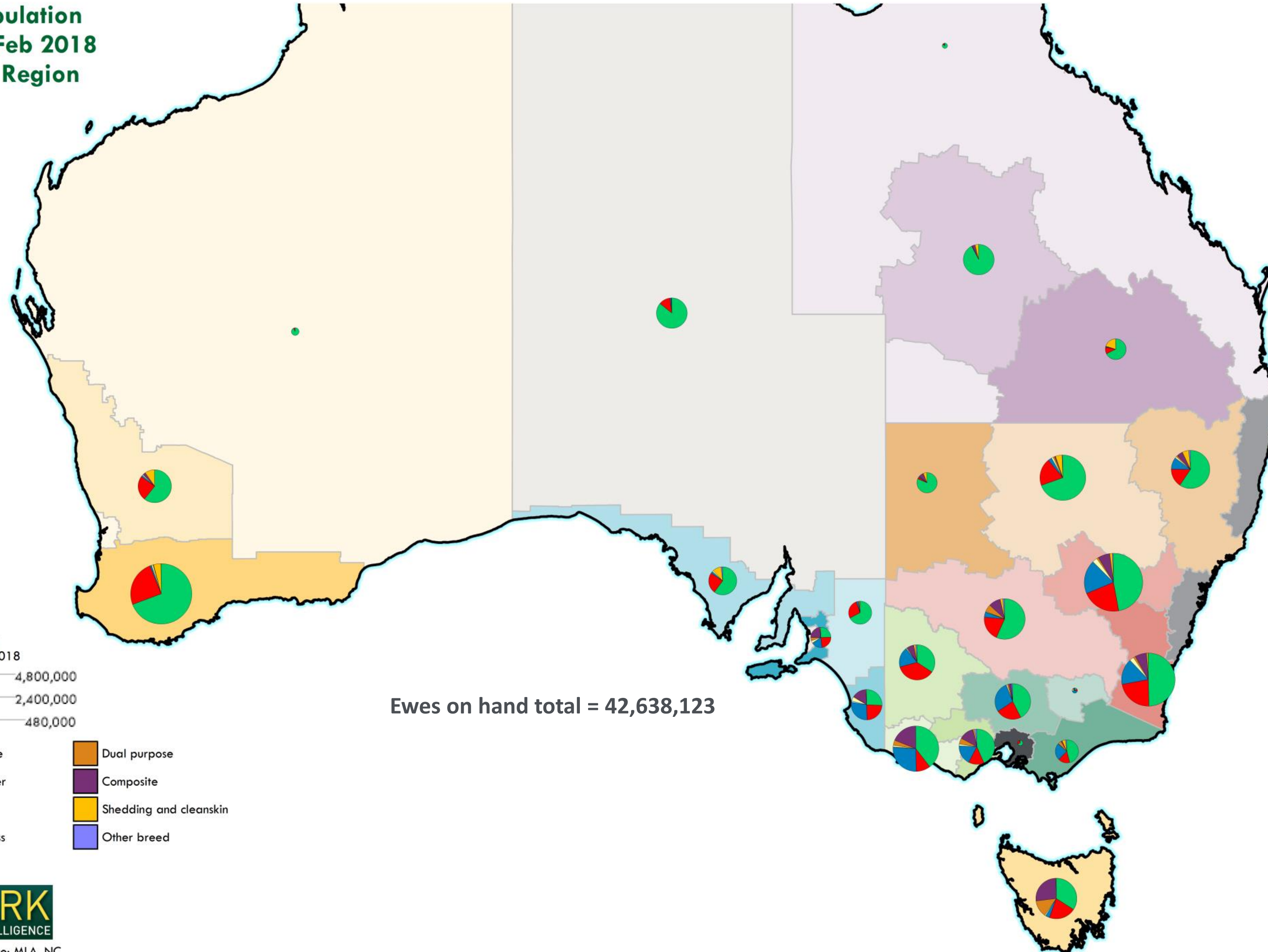
Ewes on hand

Lambs on hand



Ewes on hand – MLA reporting regions

Ewe population
at 28th Feb 2018
by MLA Region

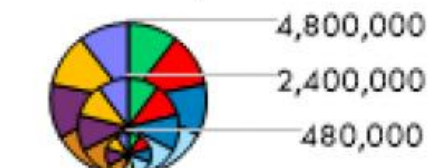


The breeding ewe population was largest in Southern WA and the Central Western region NSW, with around 5 million and 4.3 million head, respectively.

Although the largest ewe flock was recorded in NSW, with the Central West having a flock greater than 4 million head and North Western nearly 3 million head, WA had the largest proportion of Merino's in their flock, at 92% (Merino + Merino other).

Conversely, the largest percentage of non-Merino ewes was in Victoria and Tasmania, with all non-Merino breeds combining to account for 39% and 45% of each state's breeding ewe population respectively.

Ewes on hand
28th February 2018



- Merino type
- Merino other
- First cross
- Second cross
- Pure meat
- Dual purpose
- Composite
- Shedding and cleanskin
- Other breed

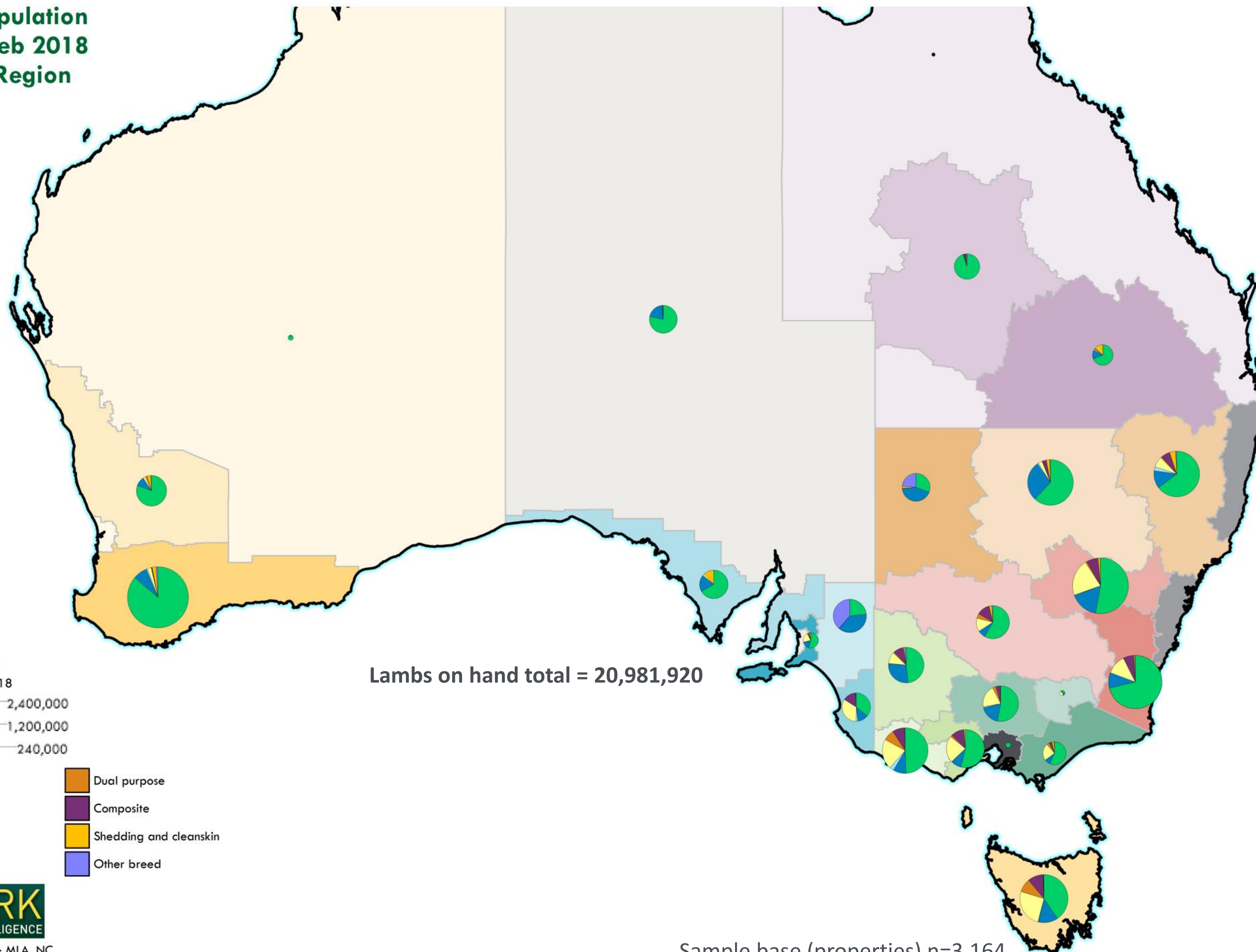
NEIL CLARK
BUSINESS INTELLIGENCE

HY03116 Source: MLA, NC

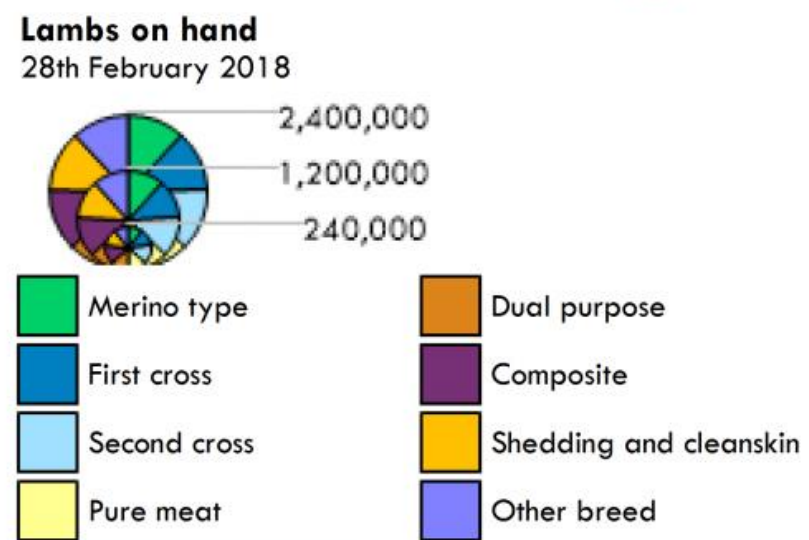
Sample base (properties) n=3,164

Lambs on hand – MLA reporting regions

Lamb population at 28th Feb 2018 by MLA Region



Lambs on hand total = 20,981,920



In line with a larger ewe flock population, the number of lambs on hand on 28 February was greatest in Southern WA, at 2.3 million head. This was followed by the Central West NSW region, recording around 2.1 million head.

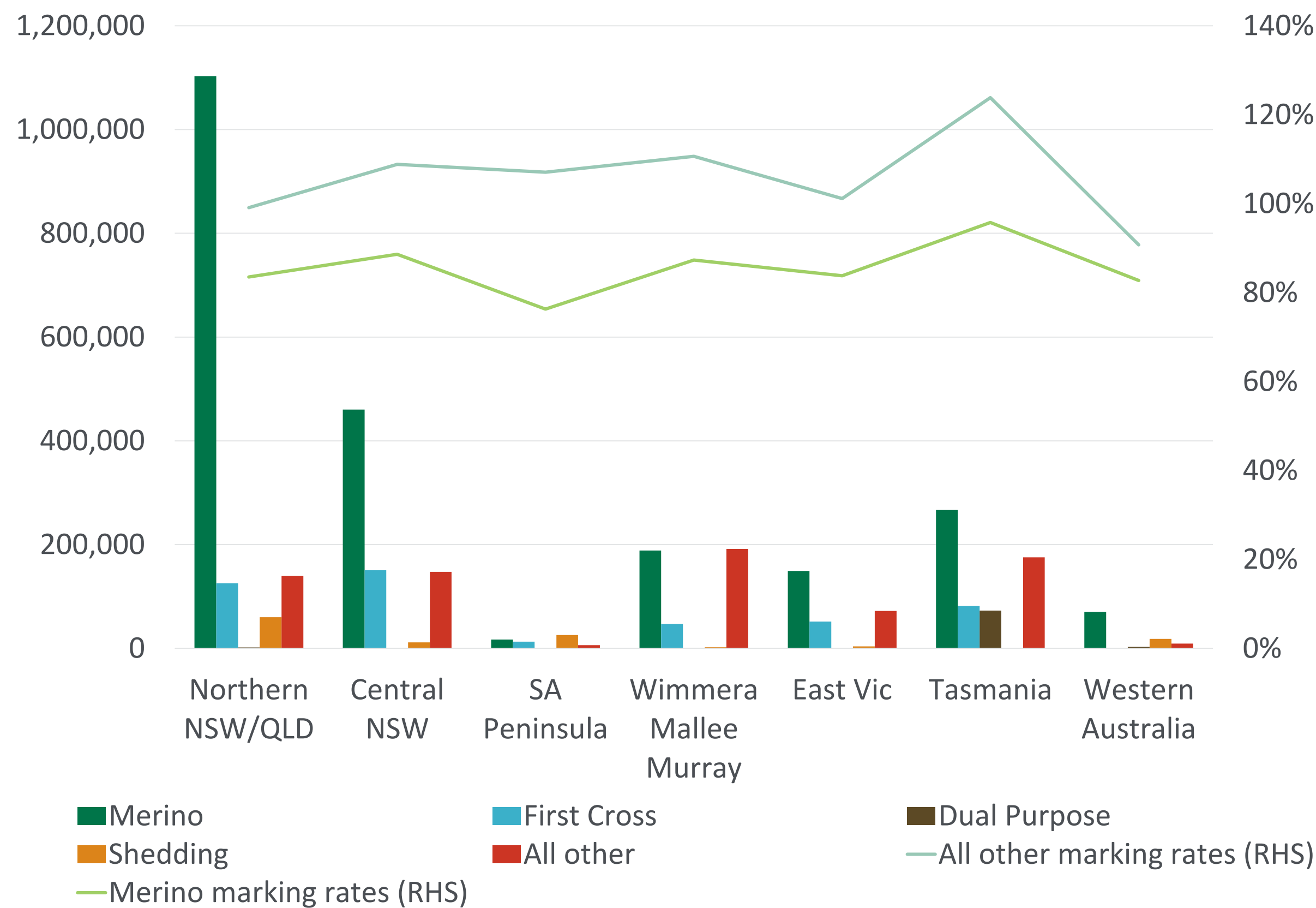
Although Merino's tended to be the most dominant breed of lamb across almost all regions, a large proportion of flocks in some regions were made up of first cross and pure meat breeds. In South East SA, Ovens Murray and Western Division, a combination of first cross and pure meat breeds accounted for 46%, 58% and 43% of total lamb flocks, respectively

NSW had the largest Merino lamb flock nationally at around 4.9 million head with Merino's accounting for 59% of the total flock. In WA however, Merino's accounted for 85% of the total lamb flock (2.5m of 3m head)

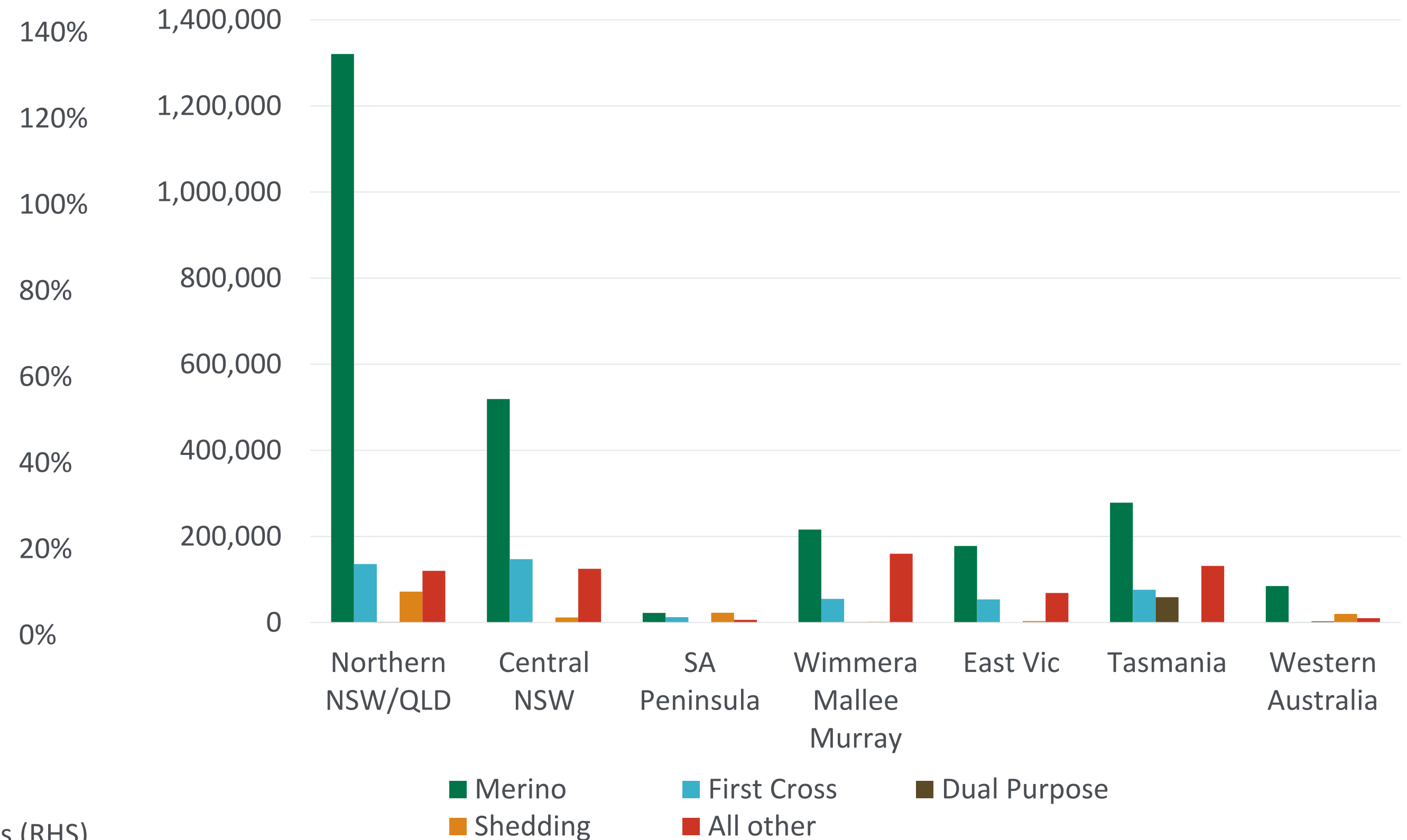
Sample base (properties) n=3,164

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 February 2018



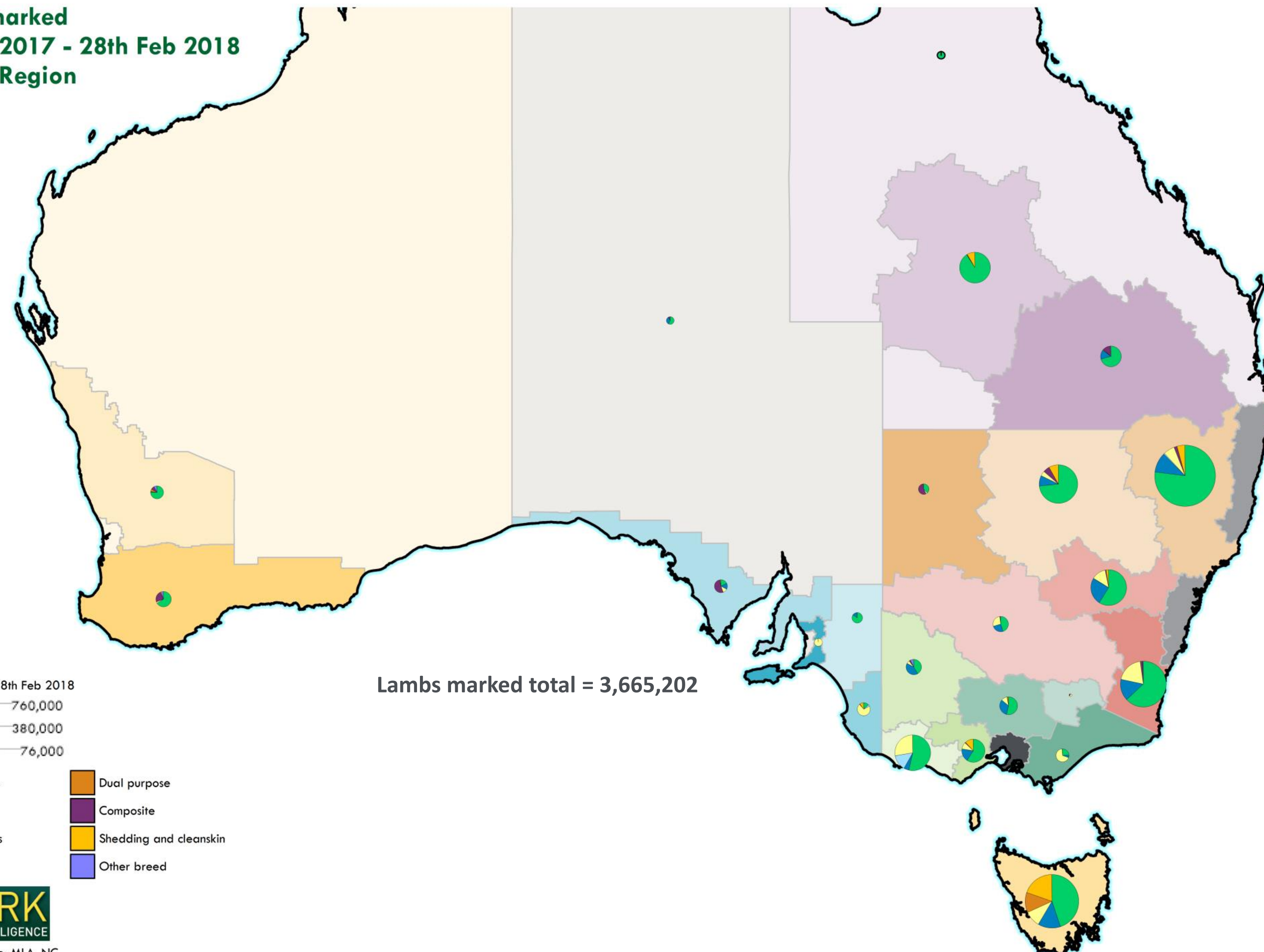
Ewes joined to produce those lambs



Sample base (properties) n=3,164

Lambs marked in the past four months

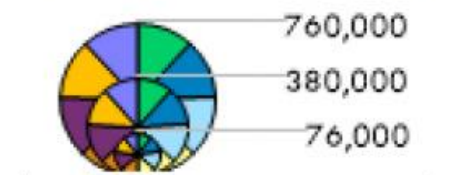
Lambs marked
1st Nov 2017 - 28th Feb 2018
by MLA Region



Lambs marked total = 3,665,202

Around 3.7 million lambs were marked over the past four months. Hunter and Northern, South Eastern and Tasmania accounted for a large proportion of new lambs, with markings of 0.75m, 0.43 and 0.6m head respectively.

Lambs marked
1st Nov 2017 - 28th Feb 2018



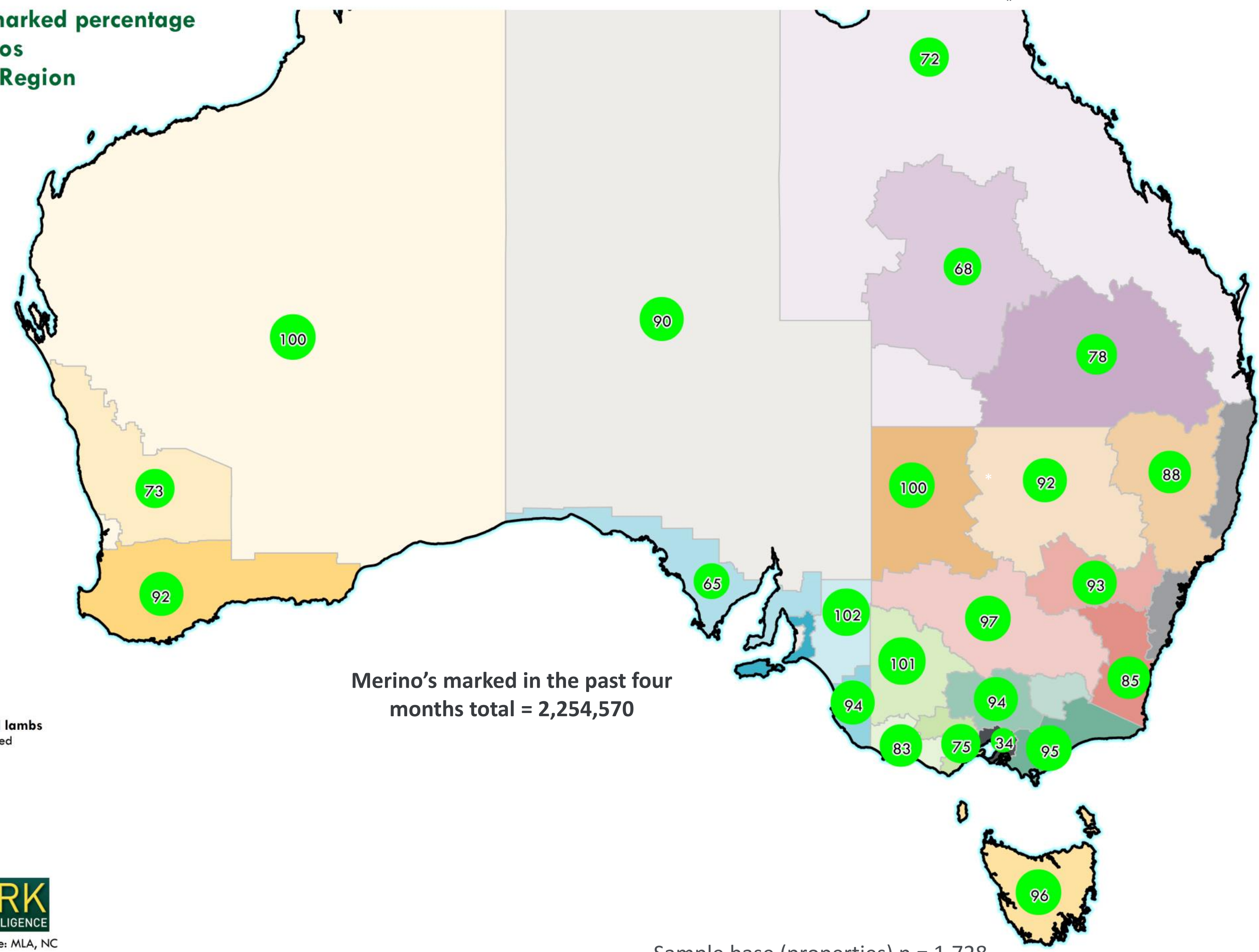
- Merino type
- First cross
- Second cross
- Pure meat
- Dual purpose
- Composite
- Shedding and cleanskin
- Other breed

NEIL CLARK
BUSINESS INTELLIGENCE
HY03116 Source: MLA, NC

Sample base (properties) n=3,164

Merino marking rates - MLA reporting regions

Lambs marked percentage of merinos by MLA Region



Merino's marked in the past four months total = 2,254,570

Sample base (properties) n = 1,728

The highest Merino marking rate was recorded in the Murray Lands of SA (102%) and Wimmera and Mallee in Victoria (101%). Conversely, the lowest marking rates were recorded Central Queensland and Eyre Yorke and North in SA, with 68% and 65%, respectively

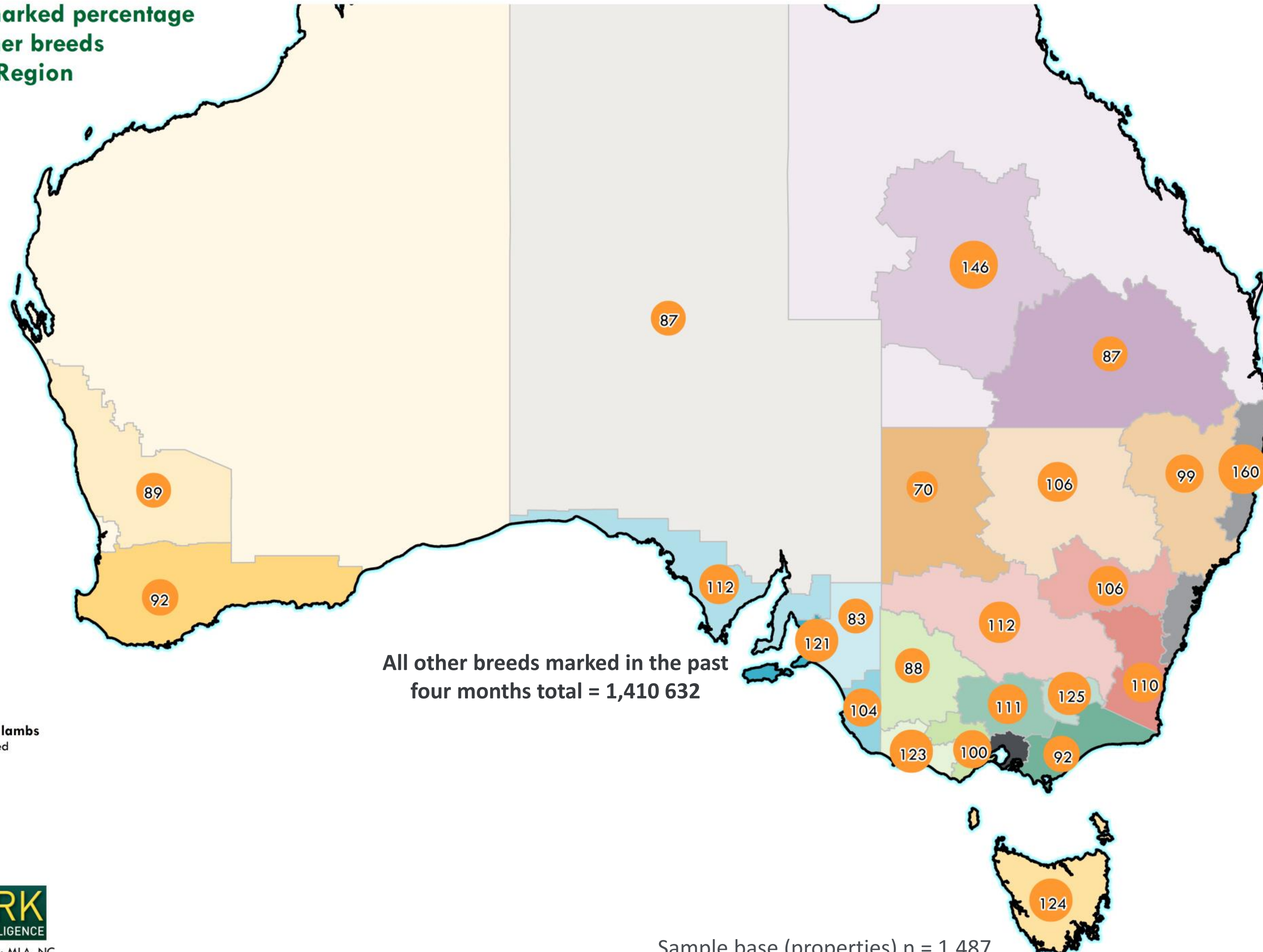
On a state basis, Queensland had the lowest marking rate at 71%, while TAS, SA and NSW recorded the highest Merino marking rates of 96%, 93% and 89% and respectively.

Note: These marking rates are for the period between 1 November 2017 to 28 February 2018 and are not an accurate representation of annual marking rates.



All other breed marking rates - MLA reporting regions

Lambs marked percentage of all other breeds by MLA Region

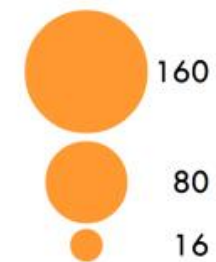


Central Queensland, Ovens Murray and Tasmania recorded the highest marking rates for non-Merino lambs at 146%, 125% and 124% respectively.

On a state basis, Tasmania recorded the highest non-merino marking rates at 124%, well above both SA and VIC (both 107%).

Note: These marking rates are for the period between 1 November 2017 and 28 February 2018. As this may be outside of the peak lambing period in some regions this year, these are not representations of the average annual marking rates.

All other breed lambs
Percentage marked

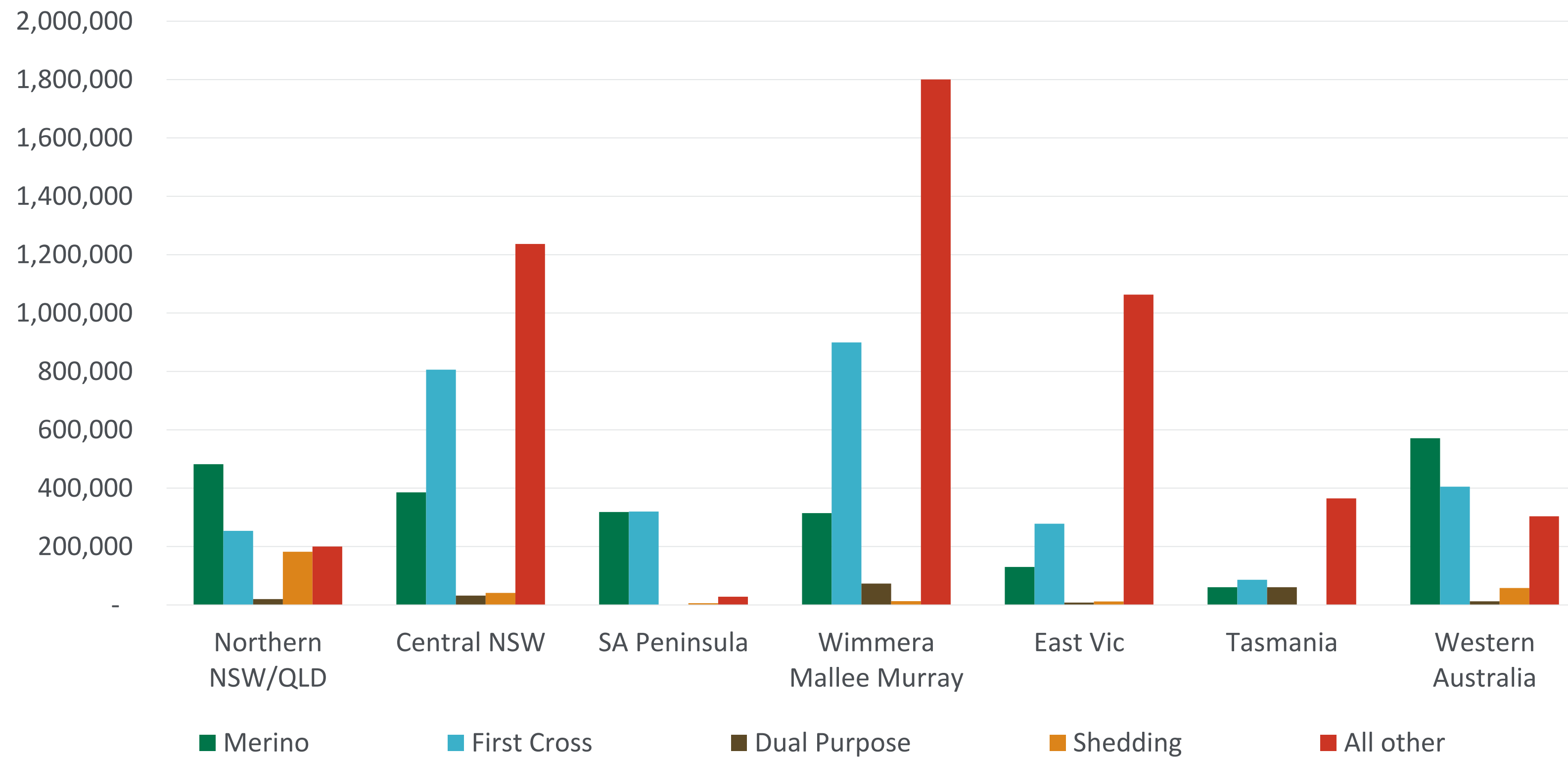


Expected lamb sales in next four months

1 March - 30 June 2018

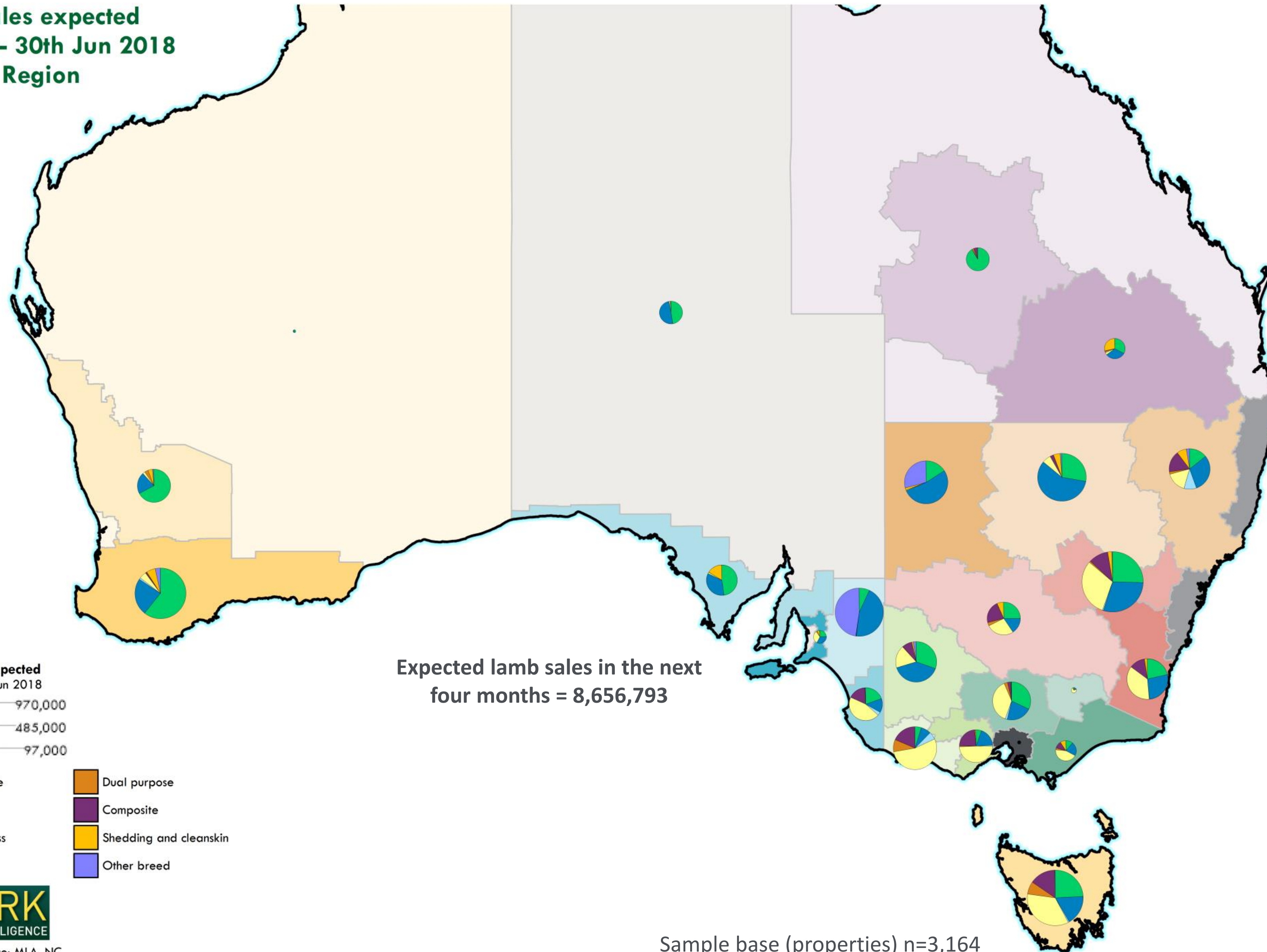
MLA reporting regions

Expected lamb sales in the next 4 months



Expected lamb sales in next four months

Lamb sales expected
1st Mar - 30th Jun 2018
by MLA Region

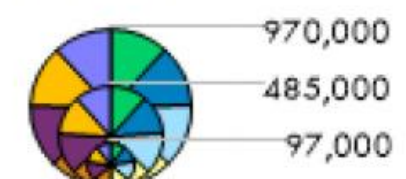


Over the next four months (1 November 2017 to 28 February 2018), most lamb sales are expected to occur in Central West NSW (0.96m), Tasmania (0.79m), WA South (0.65m), Murray Lands (0.63m) and North Western NSW (0.61m).

Merino's are expected to dominate WA and QLD lamb sales over the next four months (63% and 62% respectively). First crosses and pure meat breads will combine to account for 62% of lamb sales in NSW and Victoria and 52% in Tasmania.

NSW is expected to account for 39% of total lamb sales over the next four months, with around 3.4 million lambs expected to be on offer. This is followed by Victoria, SA and WA, accounting for 21%, 16% and 11% of total lamb sales, respectively.

Lamb sales expected
1st Mar - 30th Jun 2018

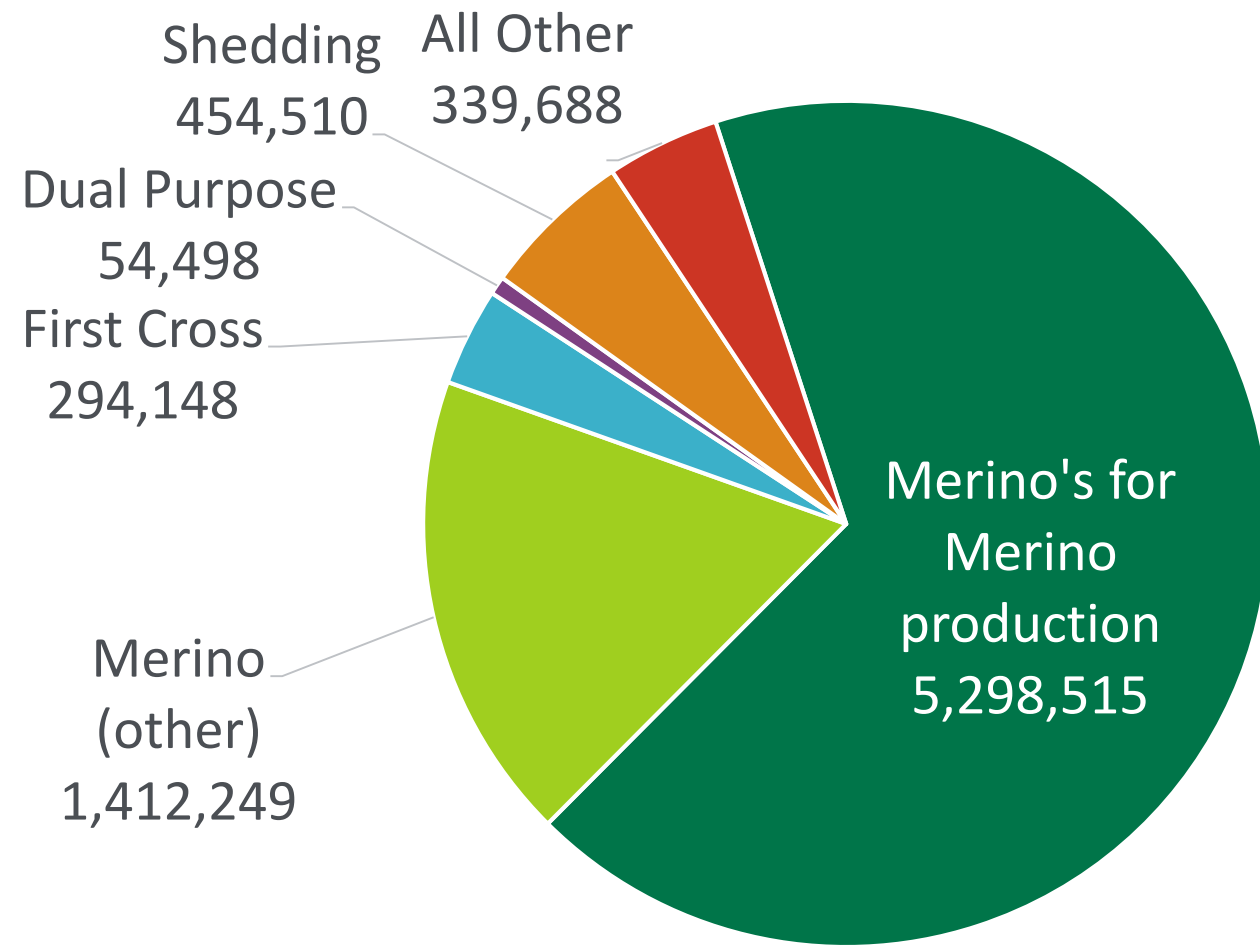


- Merino type
- First cross
- Second cross
- Pure meat
- Dual purpose
- Composite
- Shedding and cleanskin
- Other breed

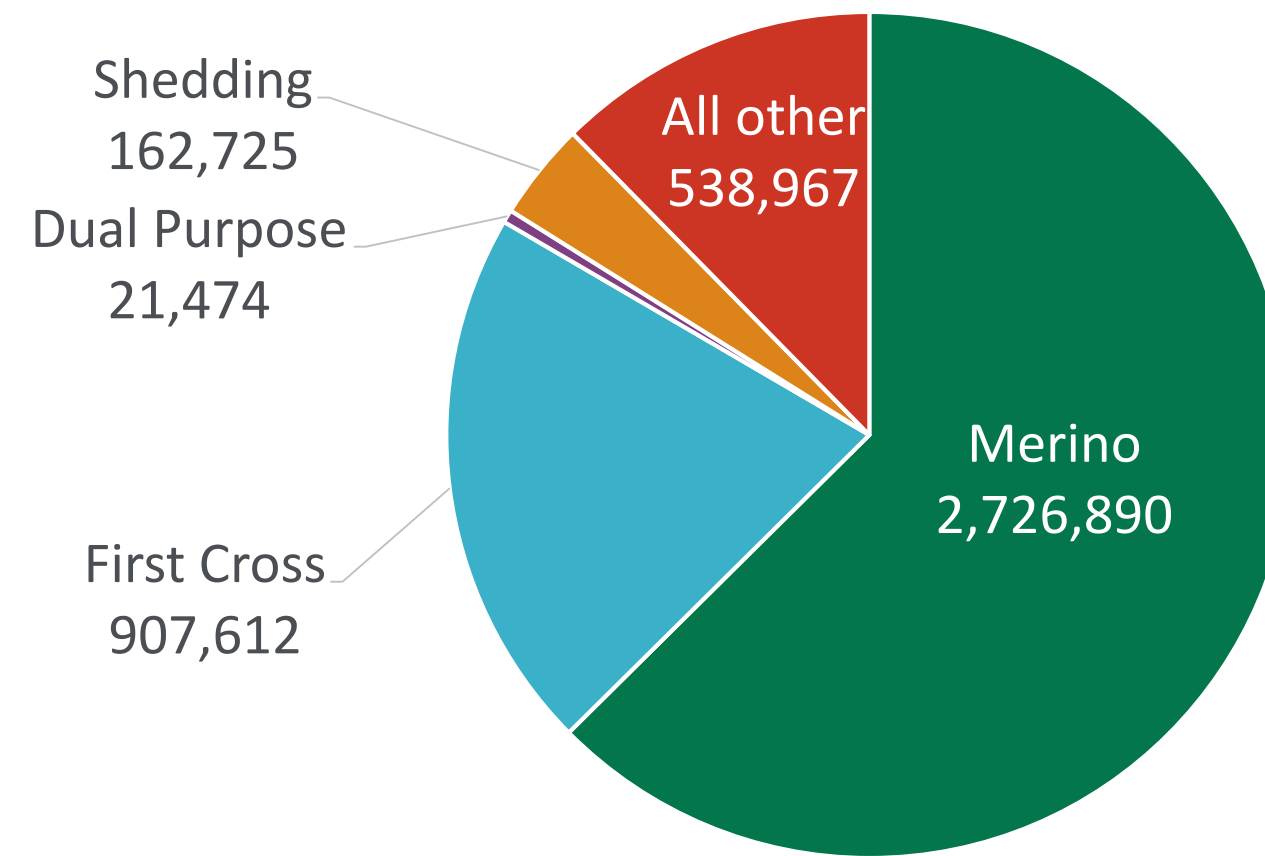
Regional Snapshots

Northern NSW/QLD

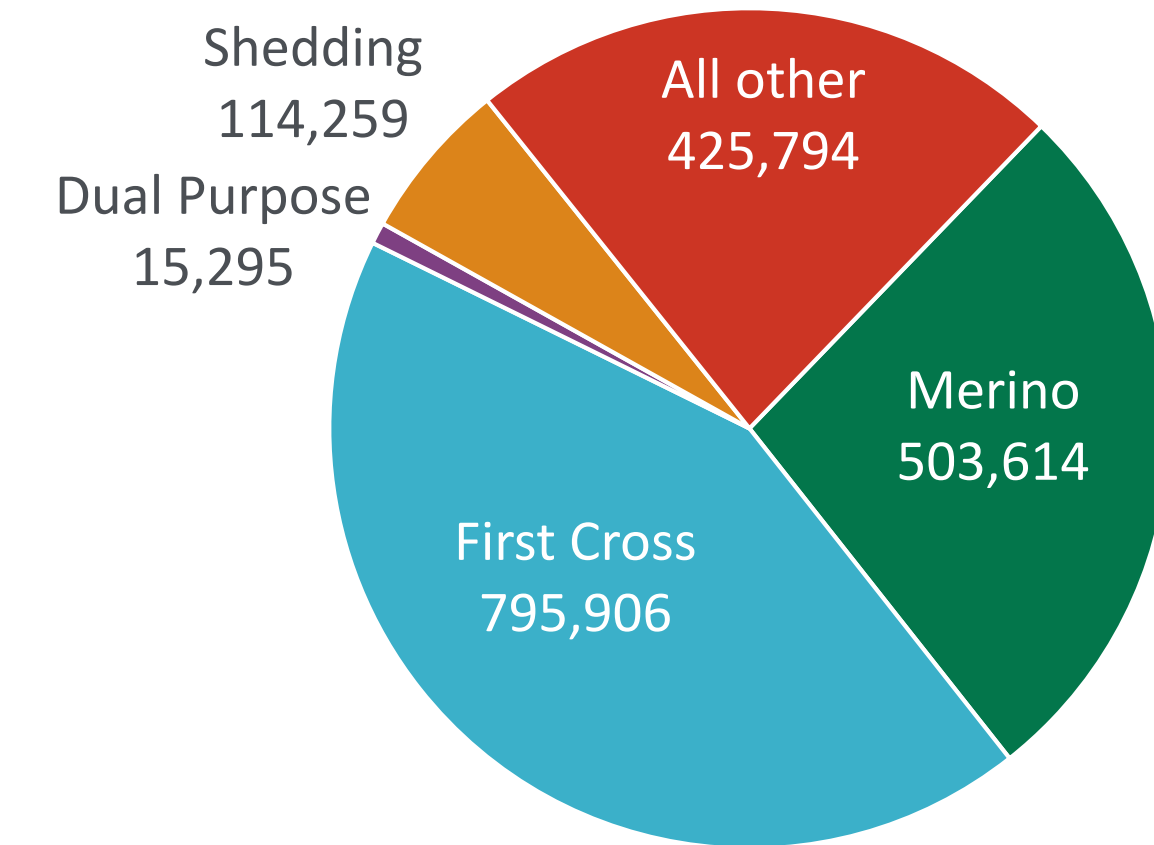
Breeding ewes on hand



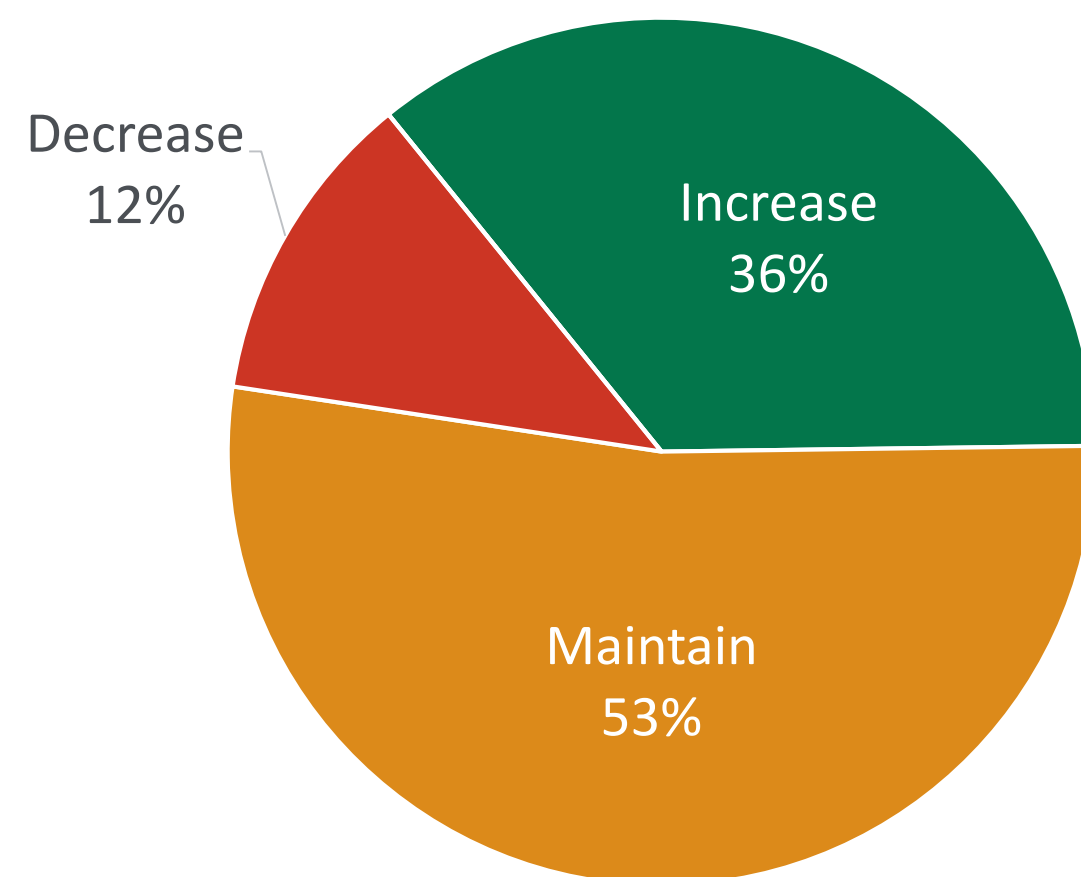
Lambs on hand



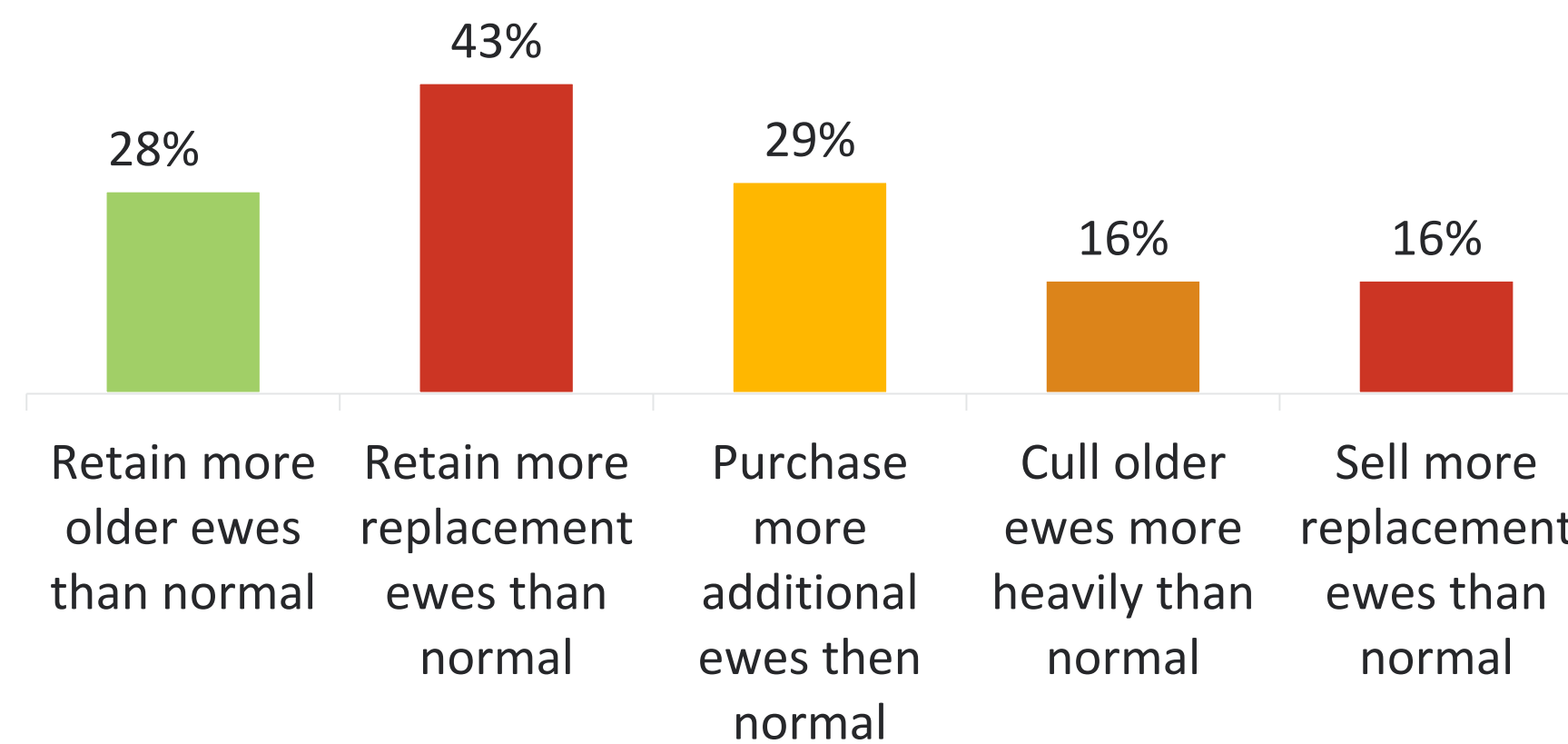
Lamb sales in next 4 months



Flock intentions



How to achieve increase

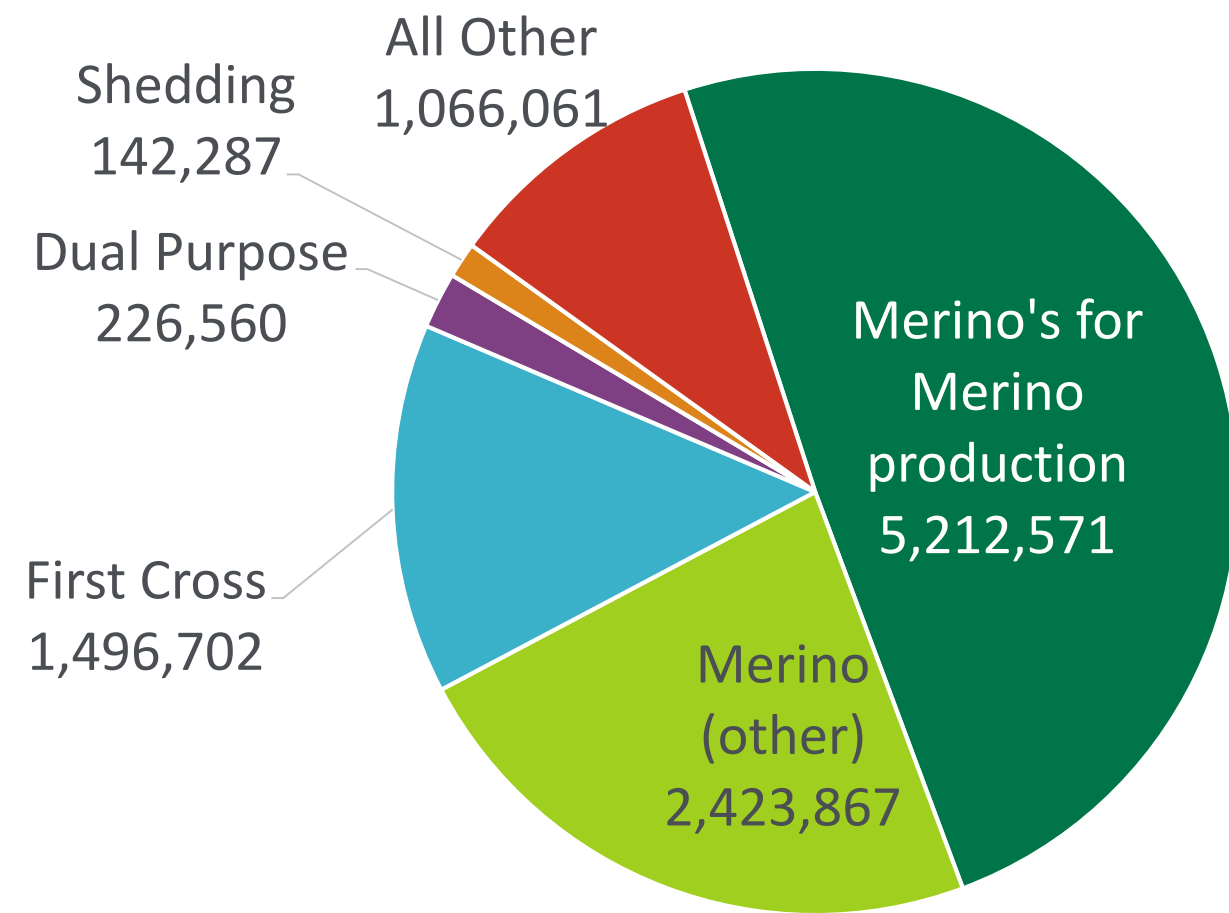


Totals

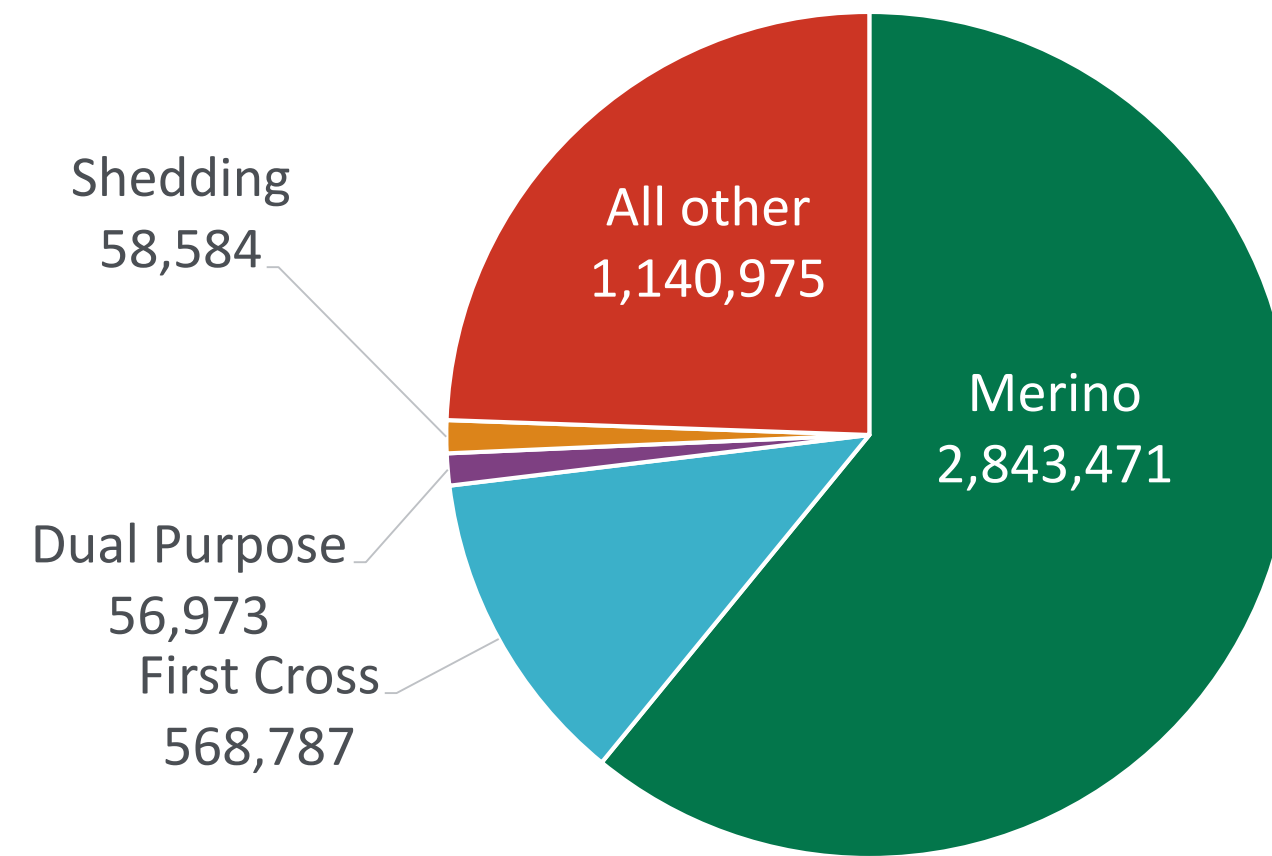
| | |
|----------------------------------------------------|-----------|
| Breeding ewes on hand | 7,853,608 |
| Lambs on hand | 4,357,668 |
| Expected lamb sales in the next 4 months | 1,854,868 |
| Lambs marked in the past 4 months (1 Nov – 28 Feb) | 1,429,514 |
| Number of ewes joined to produce marked lambs | 1,650,159 |

Central NSW

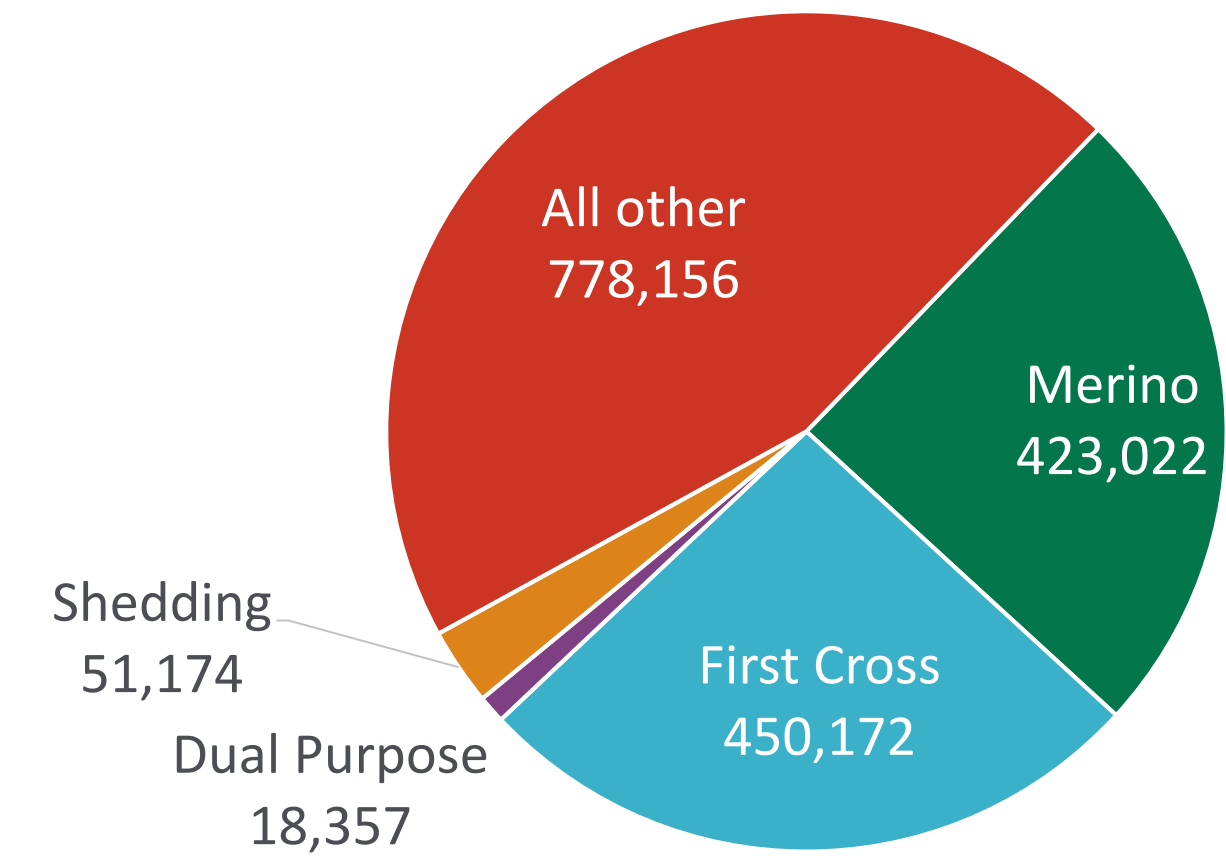
Breeding ewes on hand



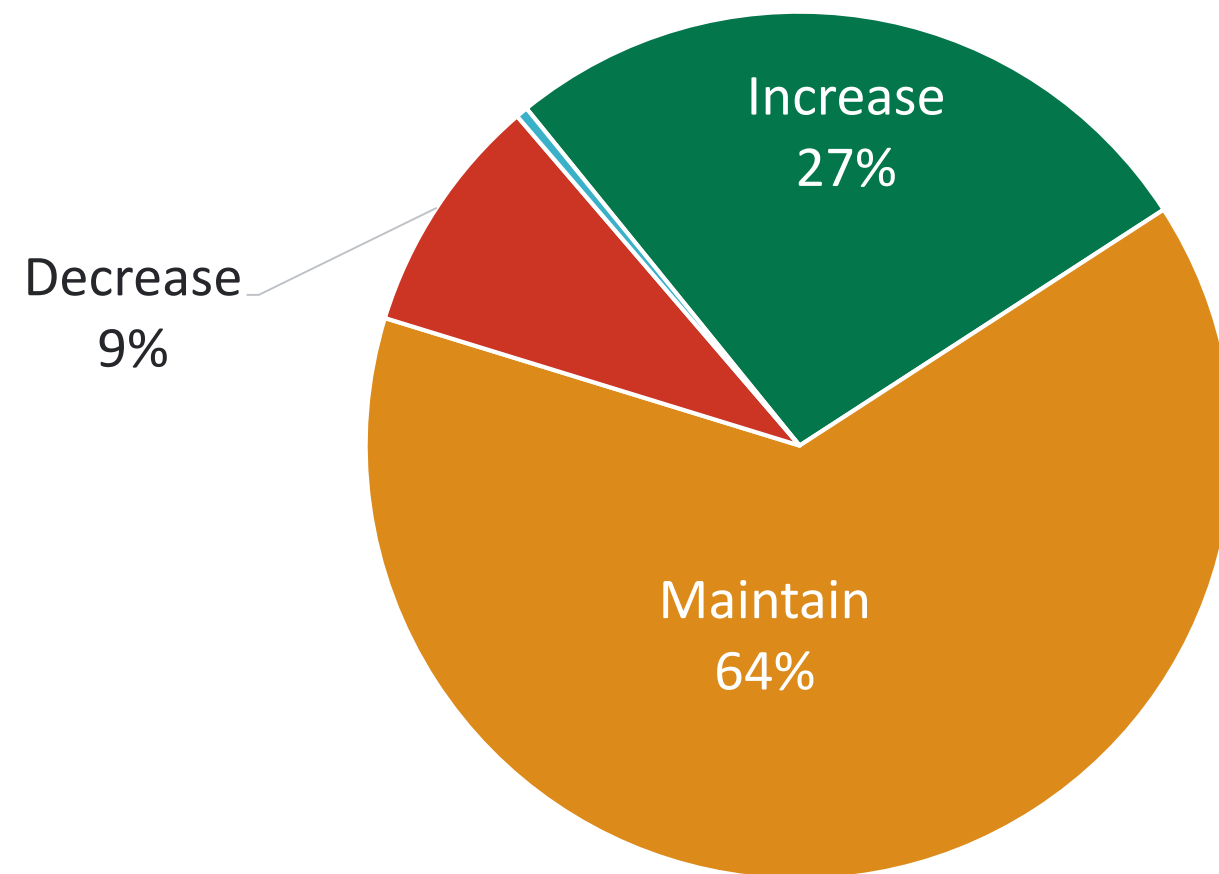
Lambs on hand



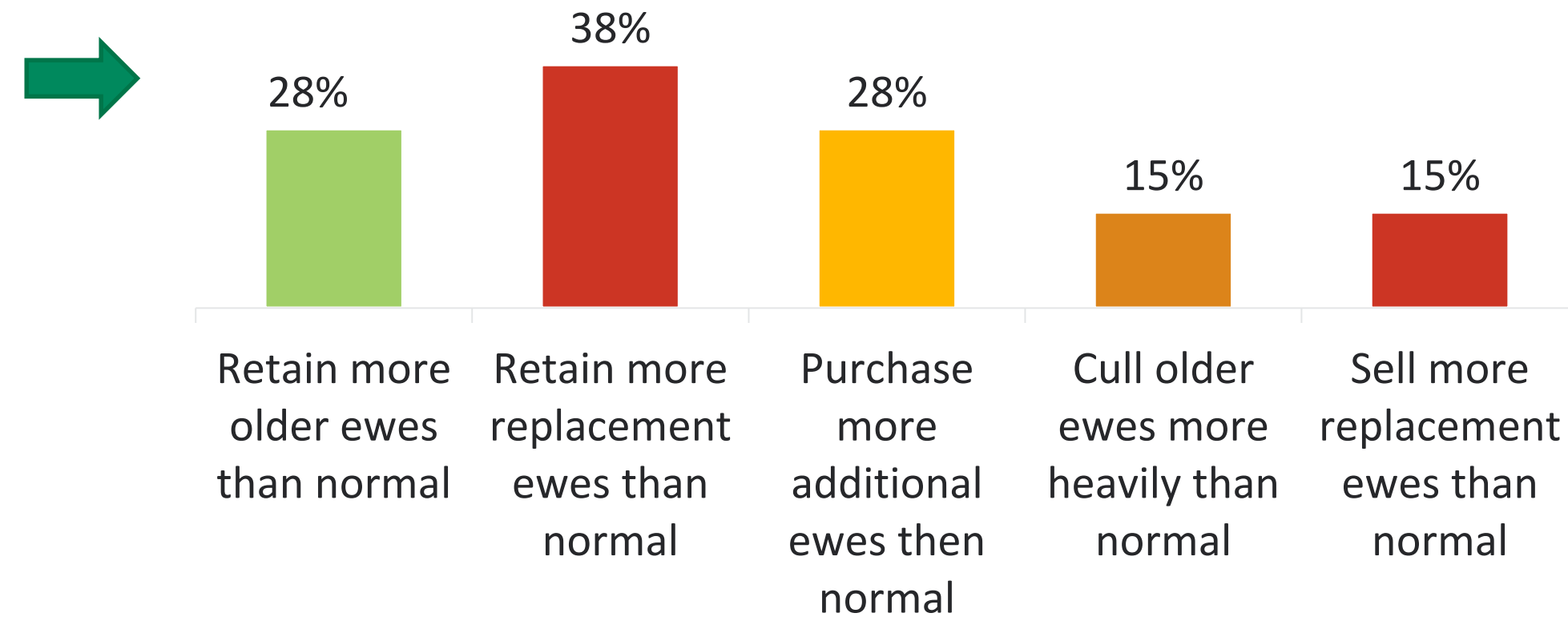
Lamb sales in next 4 months



Flock intentions



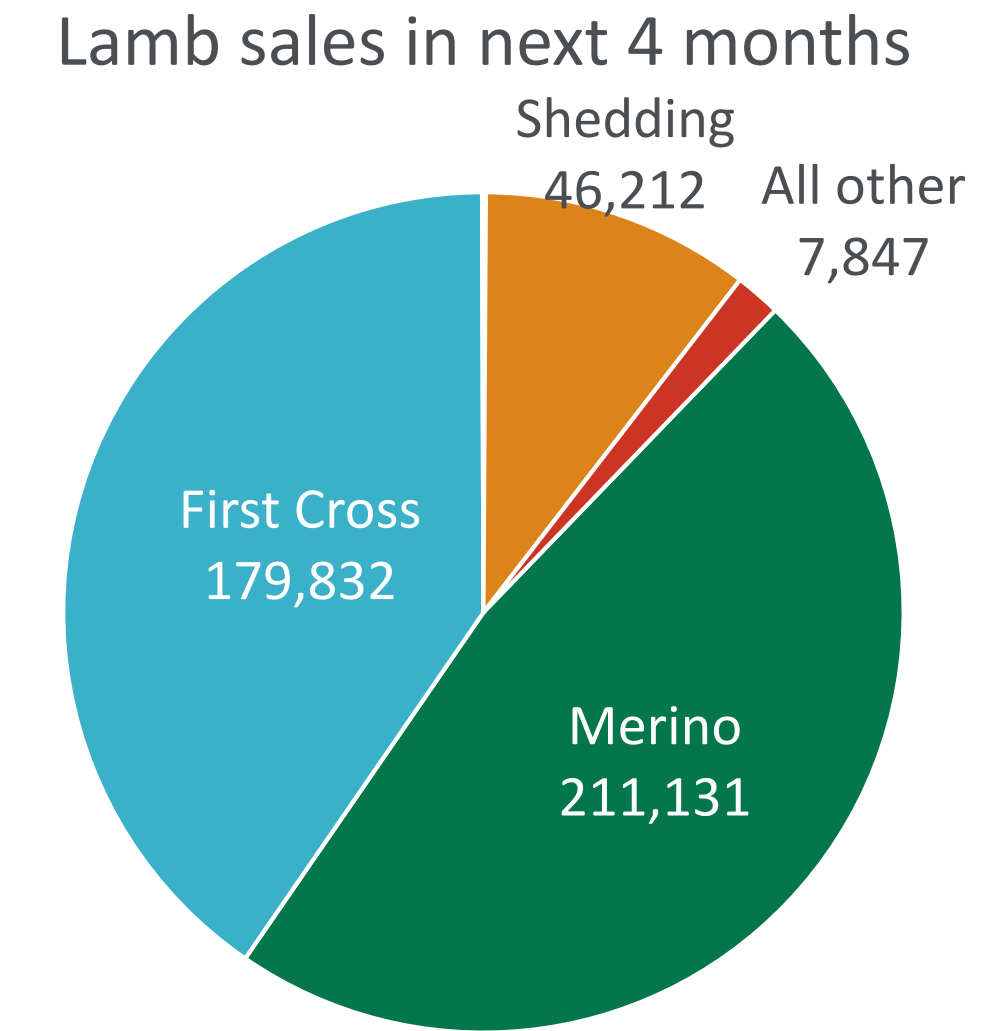
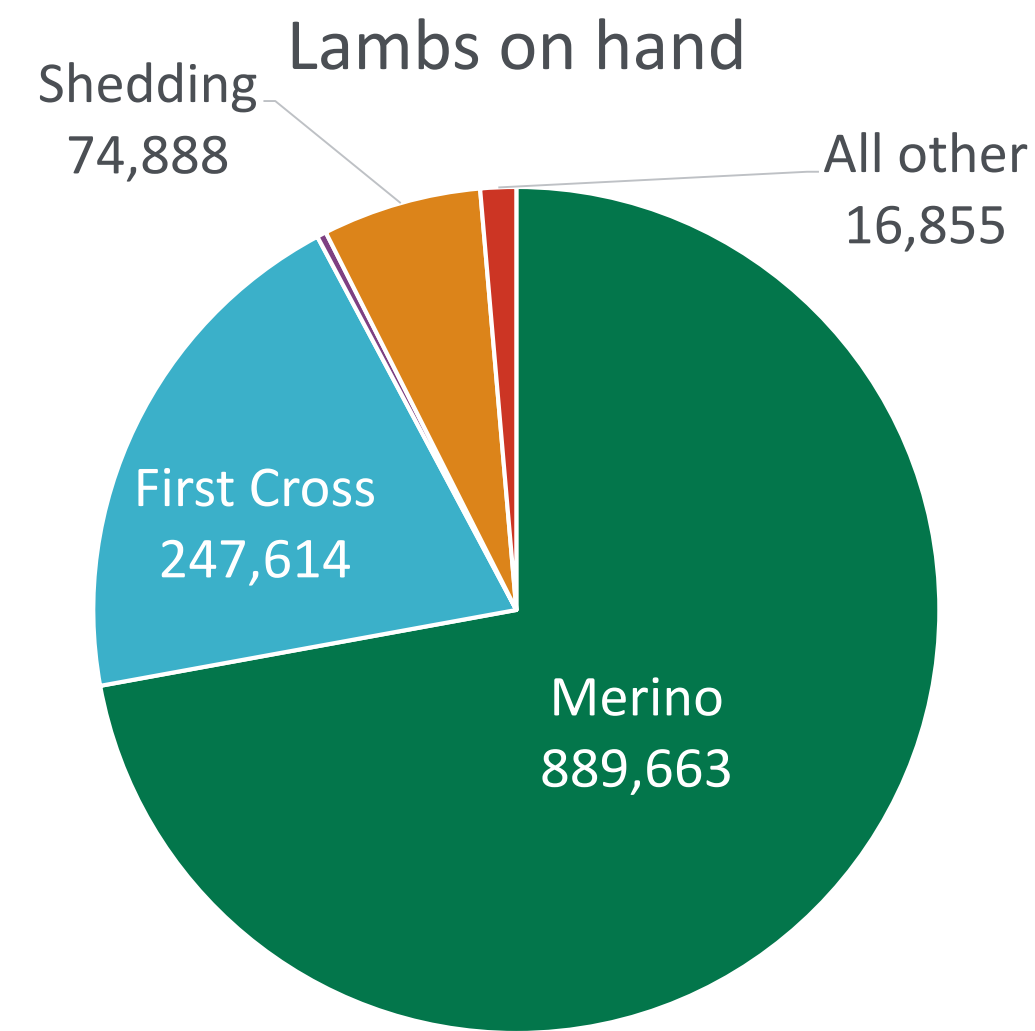
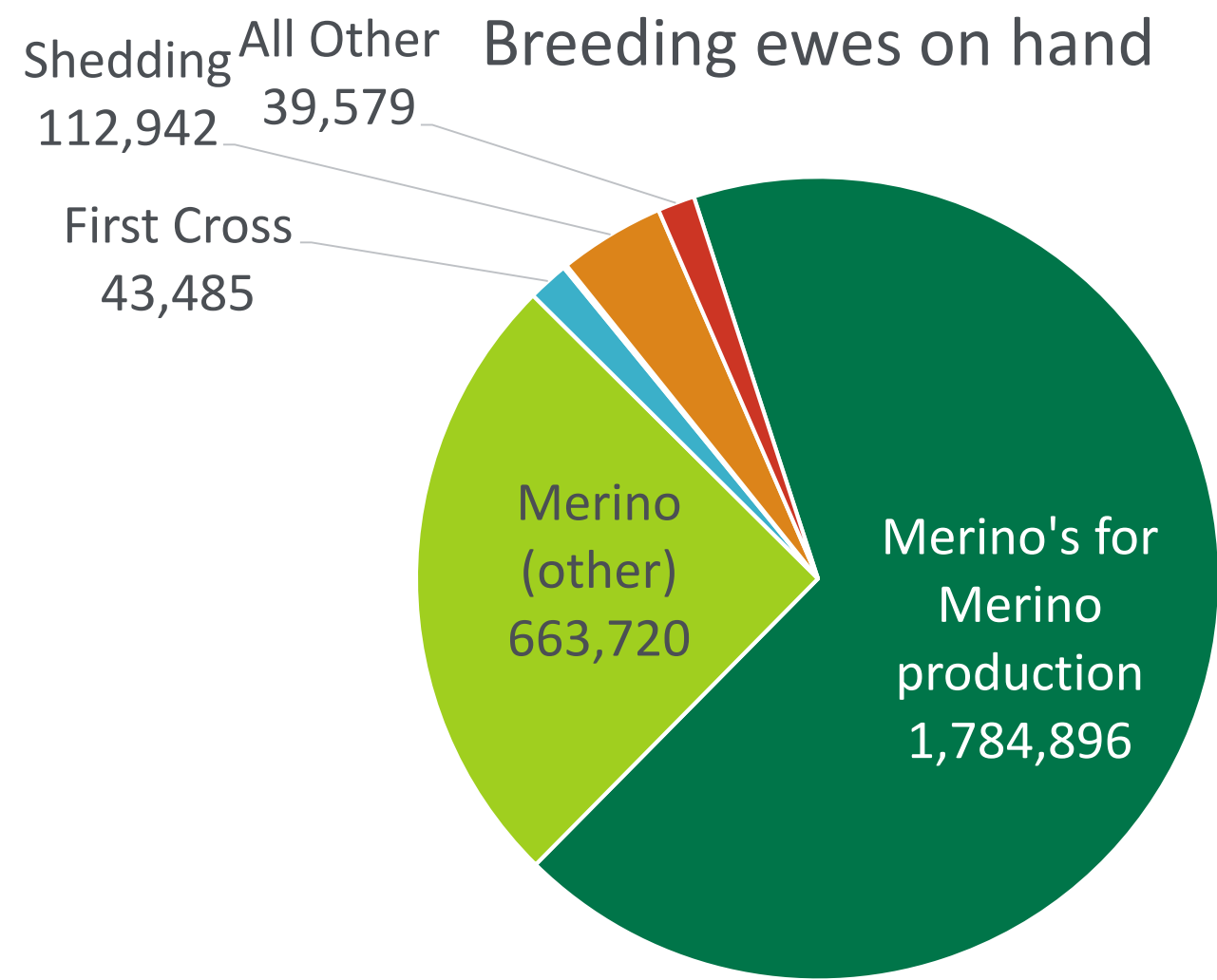
How to achieve increase



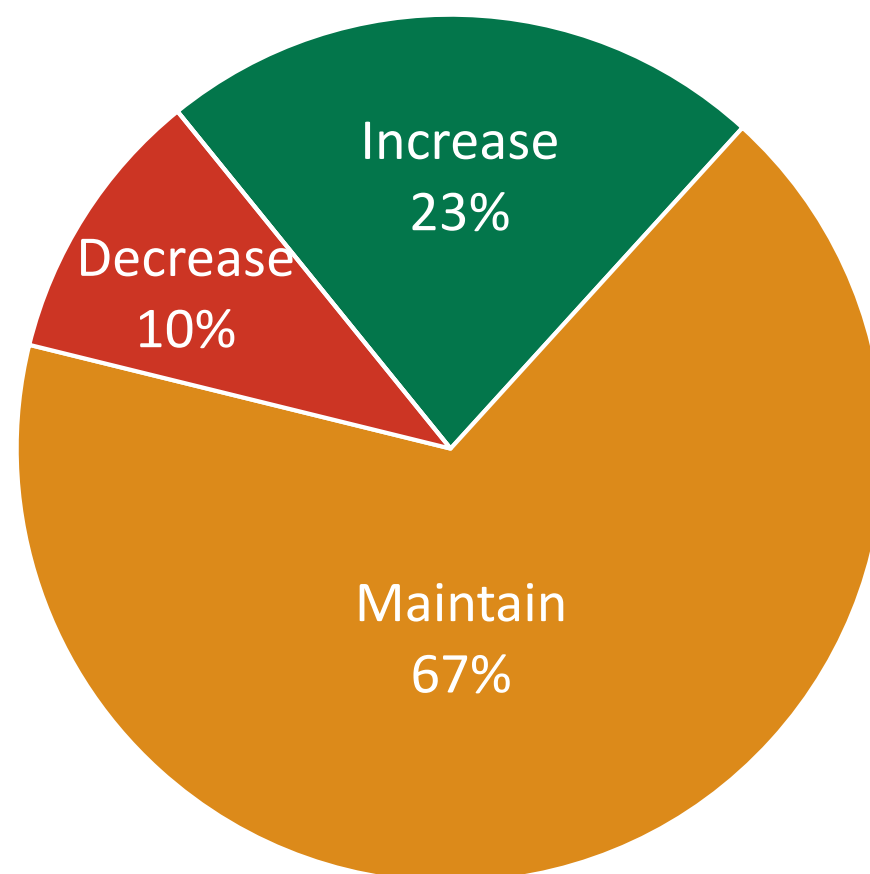
Totals

| | |
|----------------------------------------------------|------------|
| Breeding ewes on hand | 10,568,048 |
| Lambs on hand | 4,668,789 |
| Expected lamb sales in the next 4 months | 1,720,881 |
| Lambs marked in the past 4 months (1 Mar – 30 Jun) | 769,553 |
| Number of ewes joined to produce marked lambs | 803,523 |

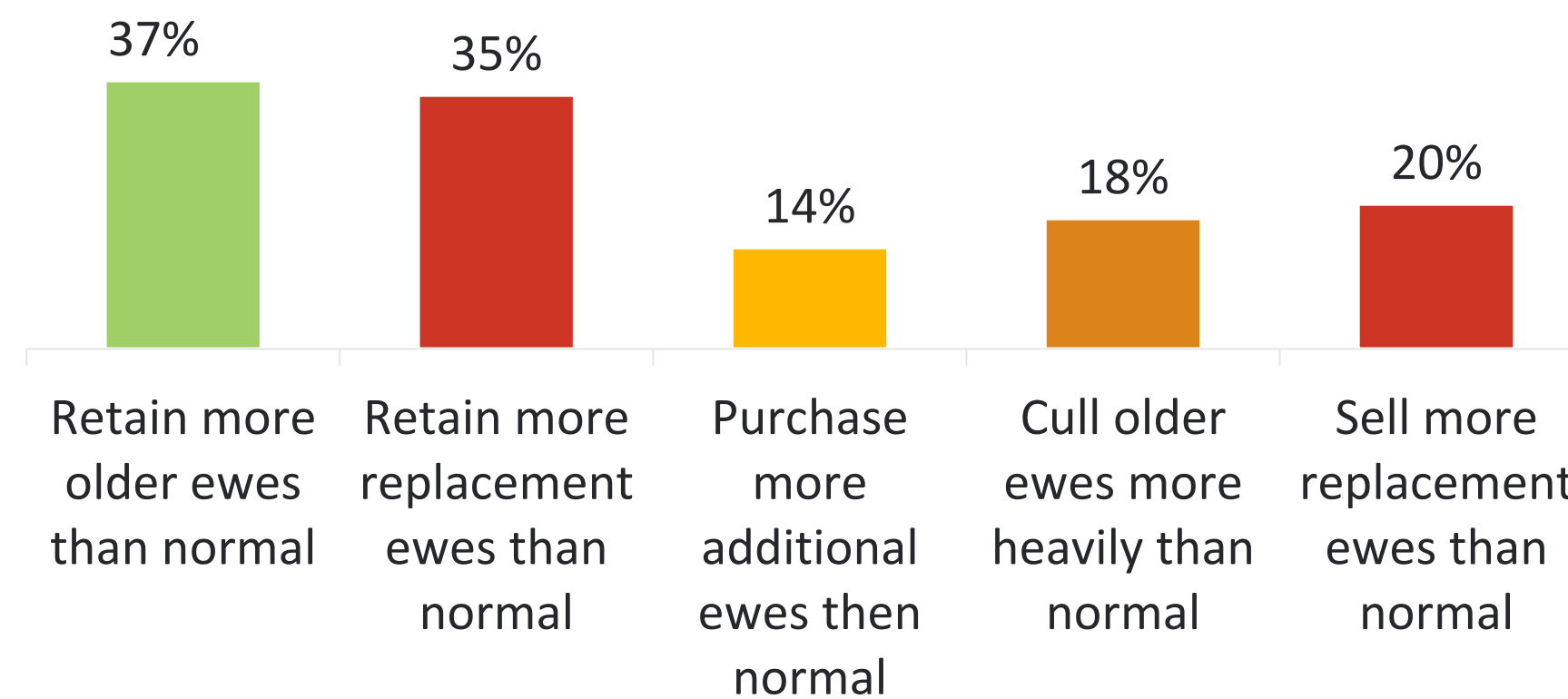
SA Peninsula



Flock intentions



How to achieve increase

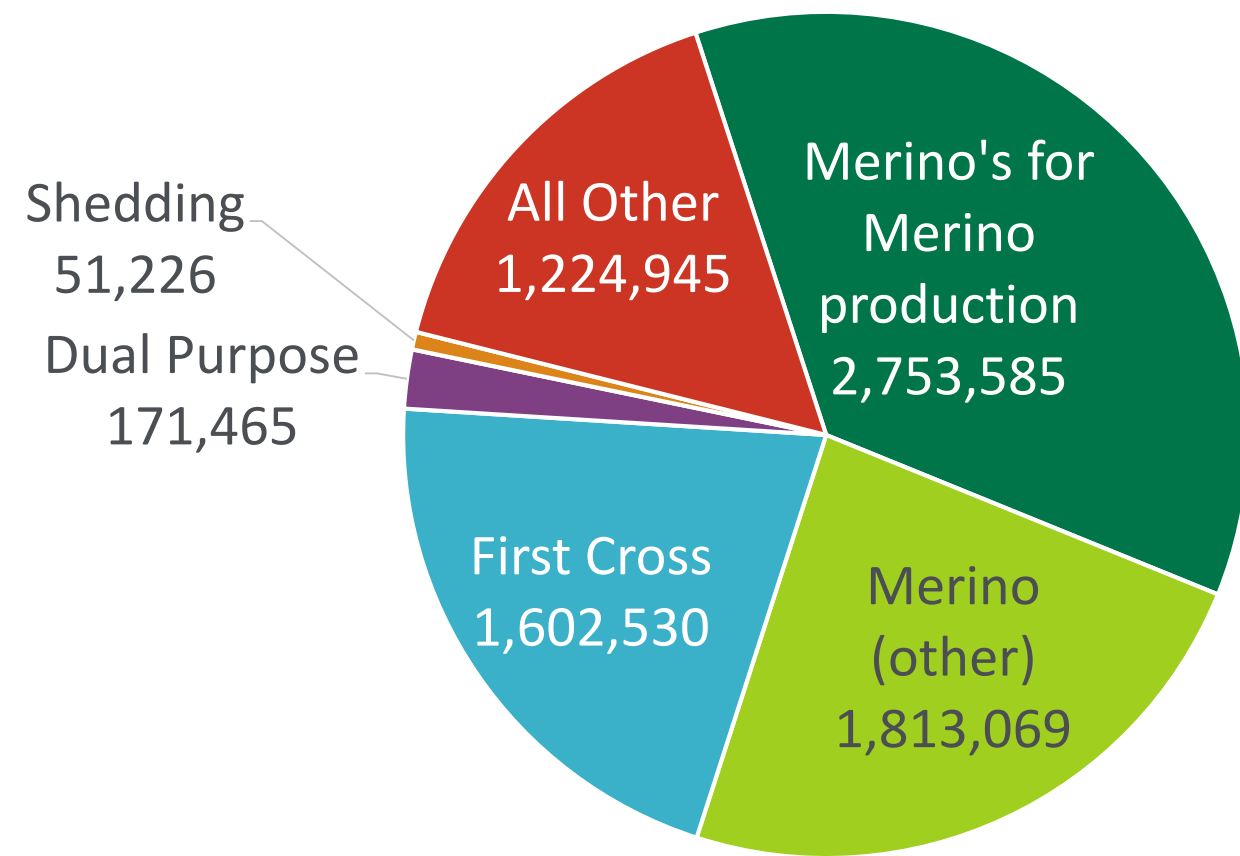


Totals

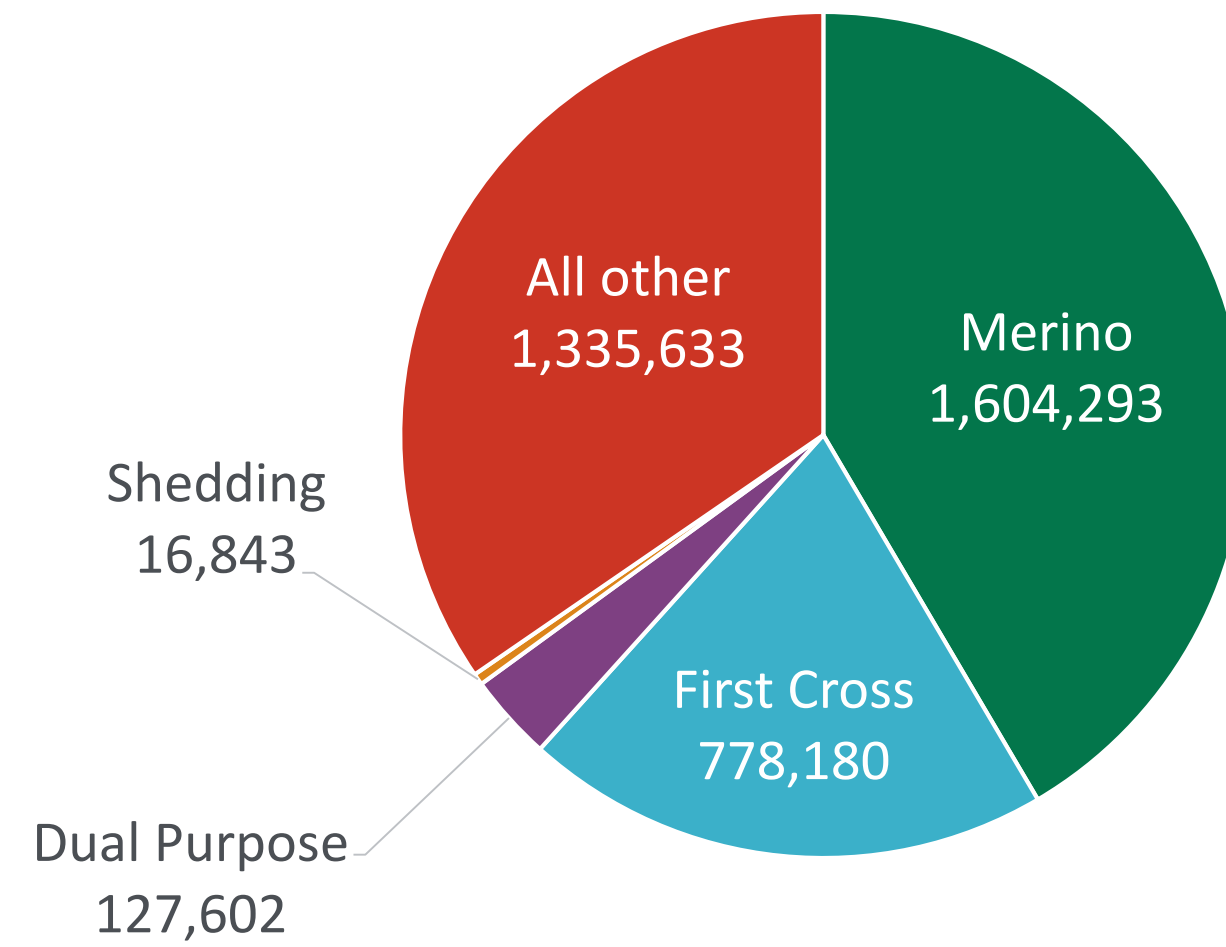
| | |
|----------------------------------------------------|-----------|
| Breeding ewes on hand | 2,648,425 |
| Lambs on hand | 1,233,423 |
| Expected lamb sales in the next 4 months | 445,673 |
| Lambs marked in the past 4 months (1 Mar – 30 Jun) | 61,355 |
| Number of ewes joined to produce marked lambs | 63,698 |

Wimmera Mallee Murray

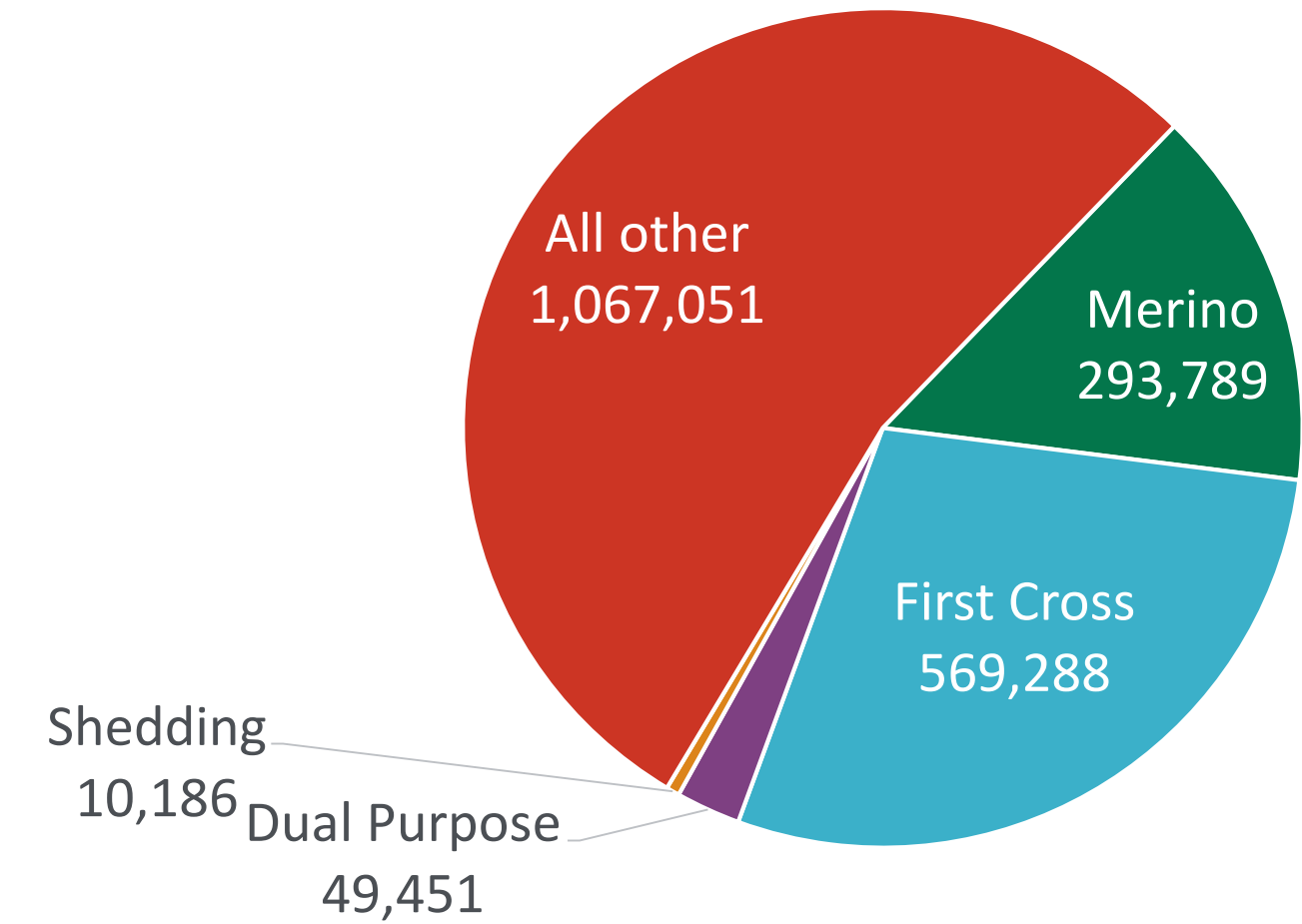
Breeding ewes on hand



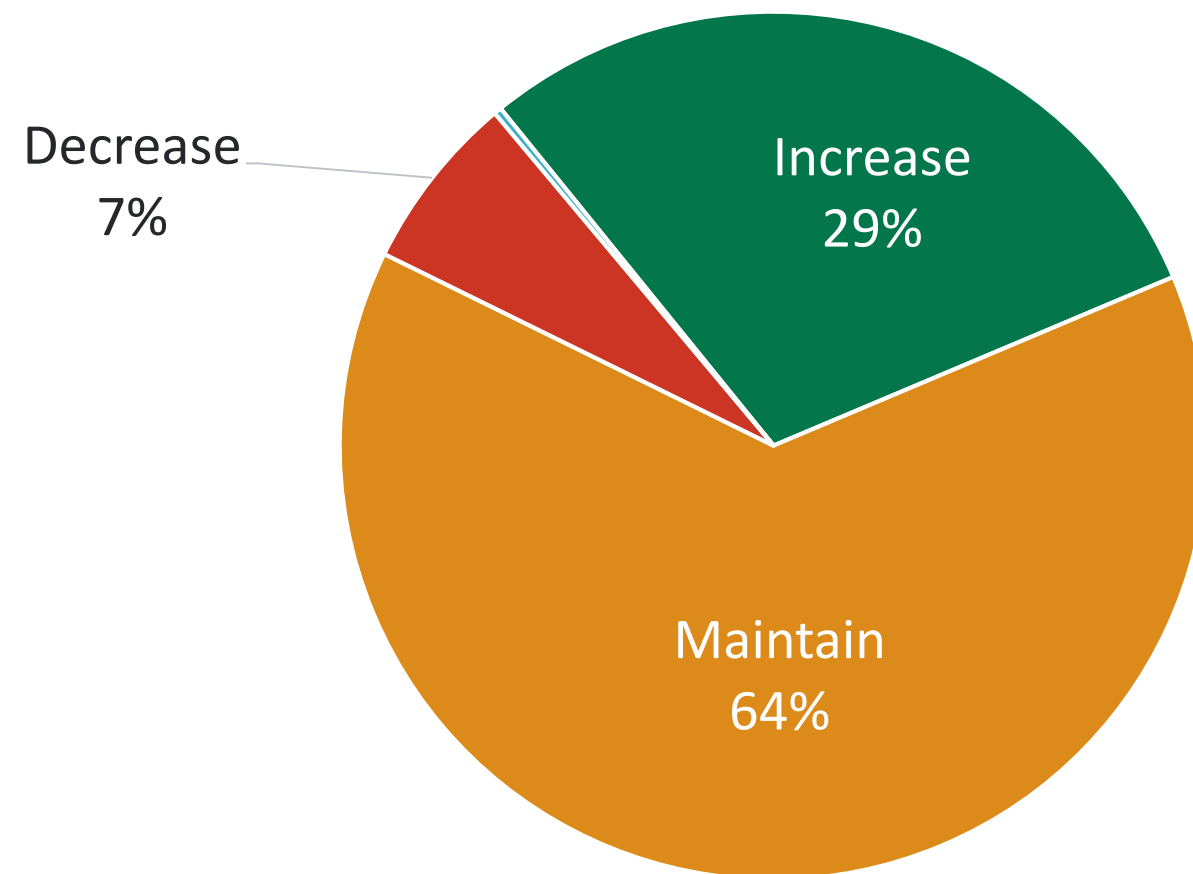
Lambs on hand



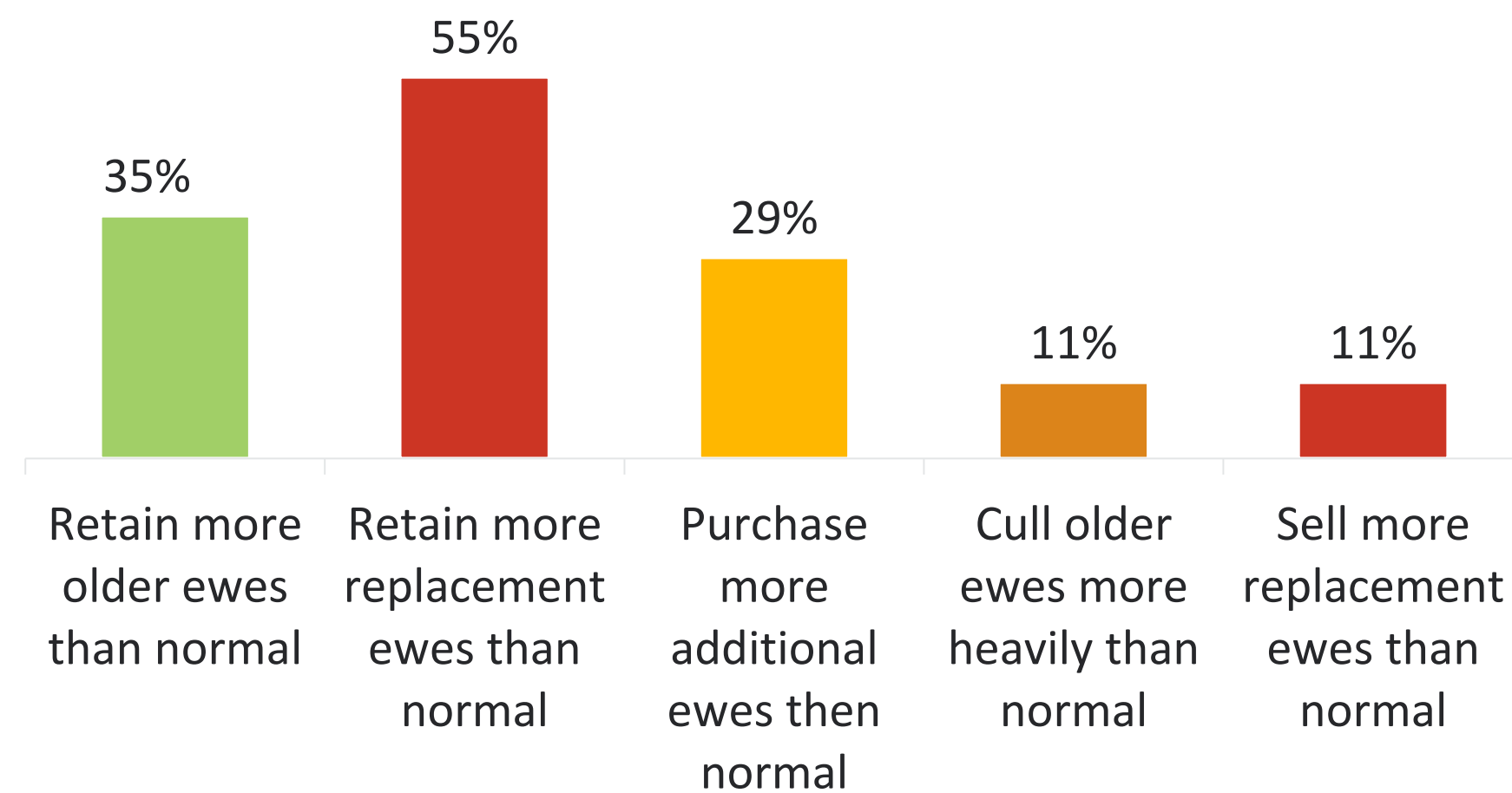
Lamb sales in next 4 months



Flock intentions



How to achieve increase

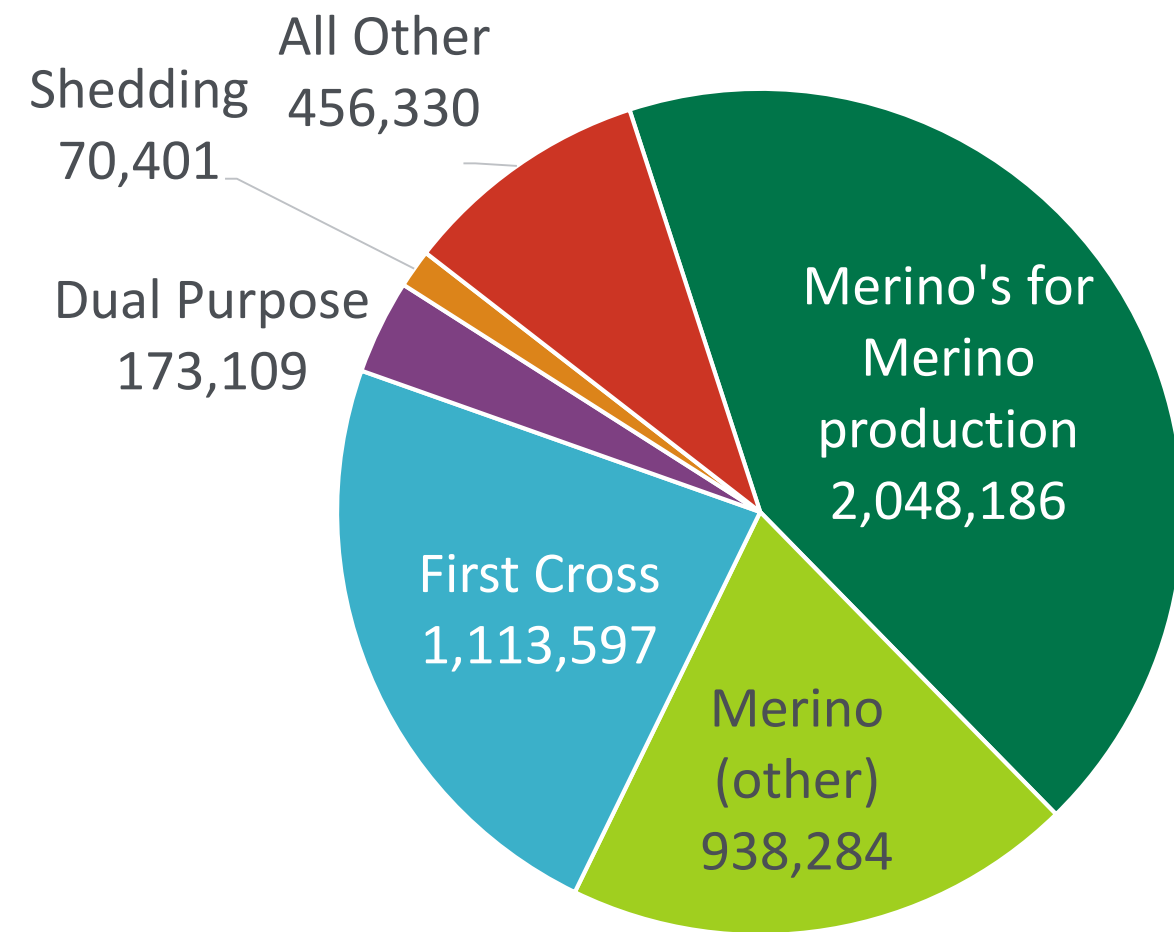


Totals

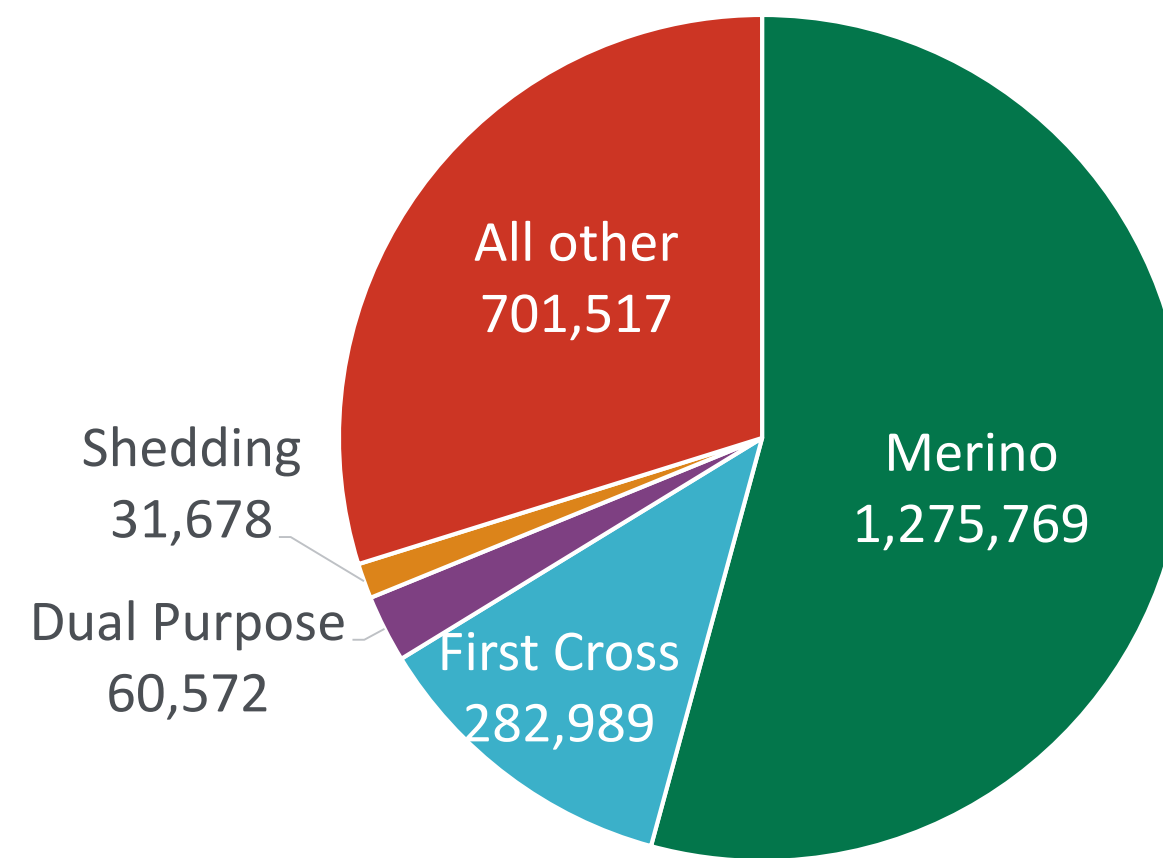
| | |
|----------------------------------------------------|-----------|
| Breeding ewes on hand | 7,616,821 |
| Lambs on hand | 3,862,552 |
| Expected lamb sales in the next 4 months | 1,989,765 |
| Lambs marked in the past 4 months (1 Mar – 30 Jun) | 430,097 |
| Number of ewes joined to produce marked lambs | 434,227 |

East Victoria

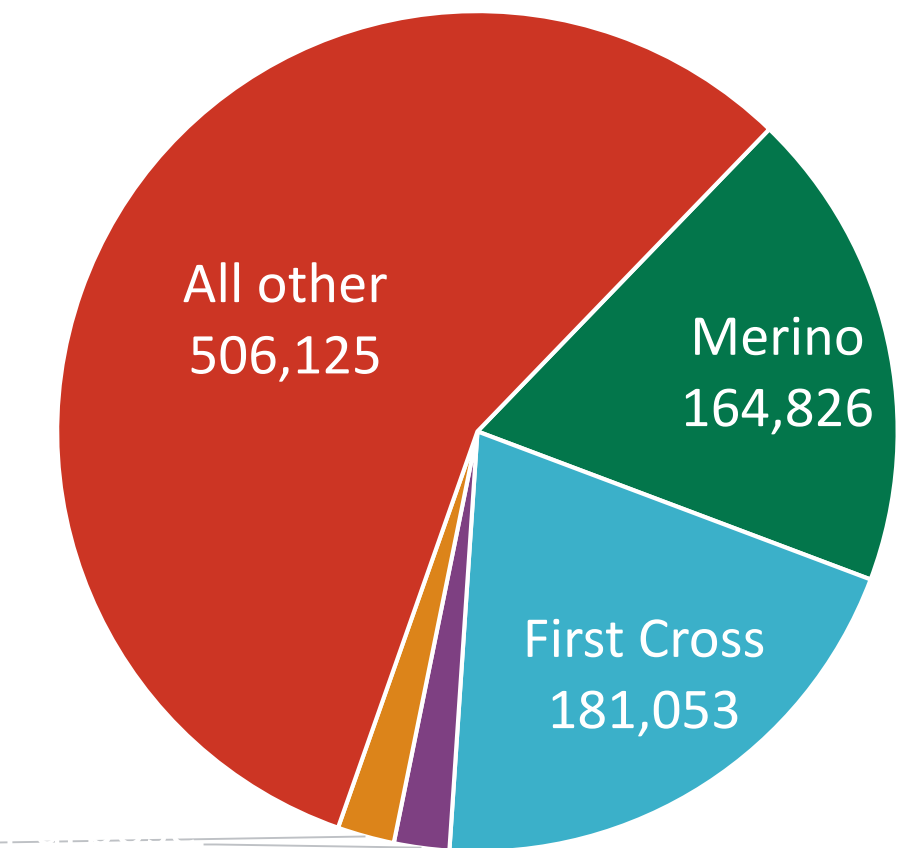
Breeding ewes on hand



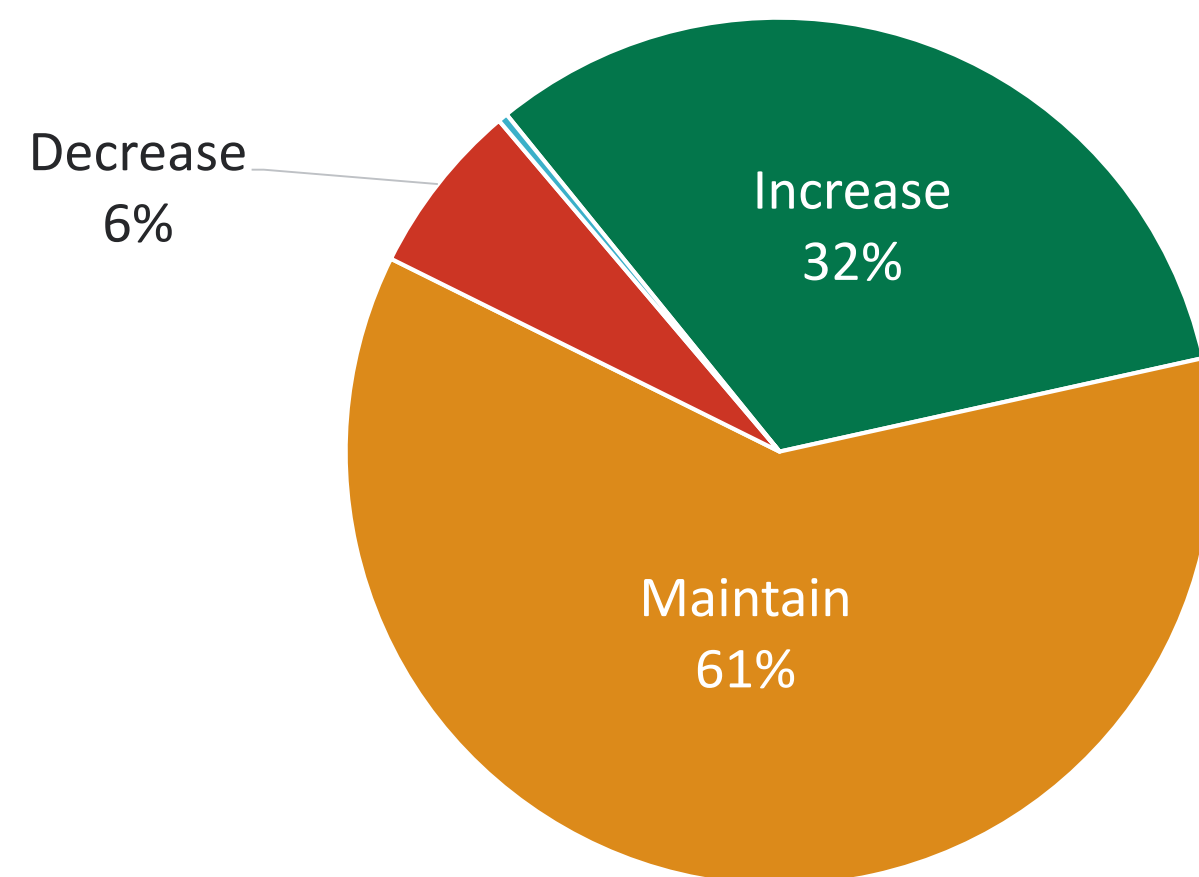
Lambs on hand



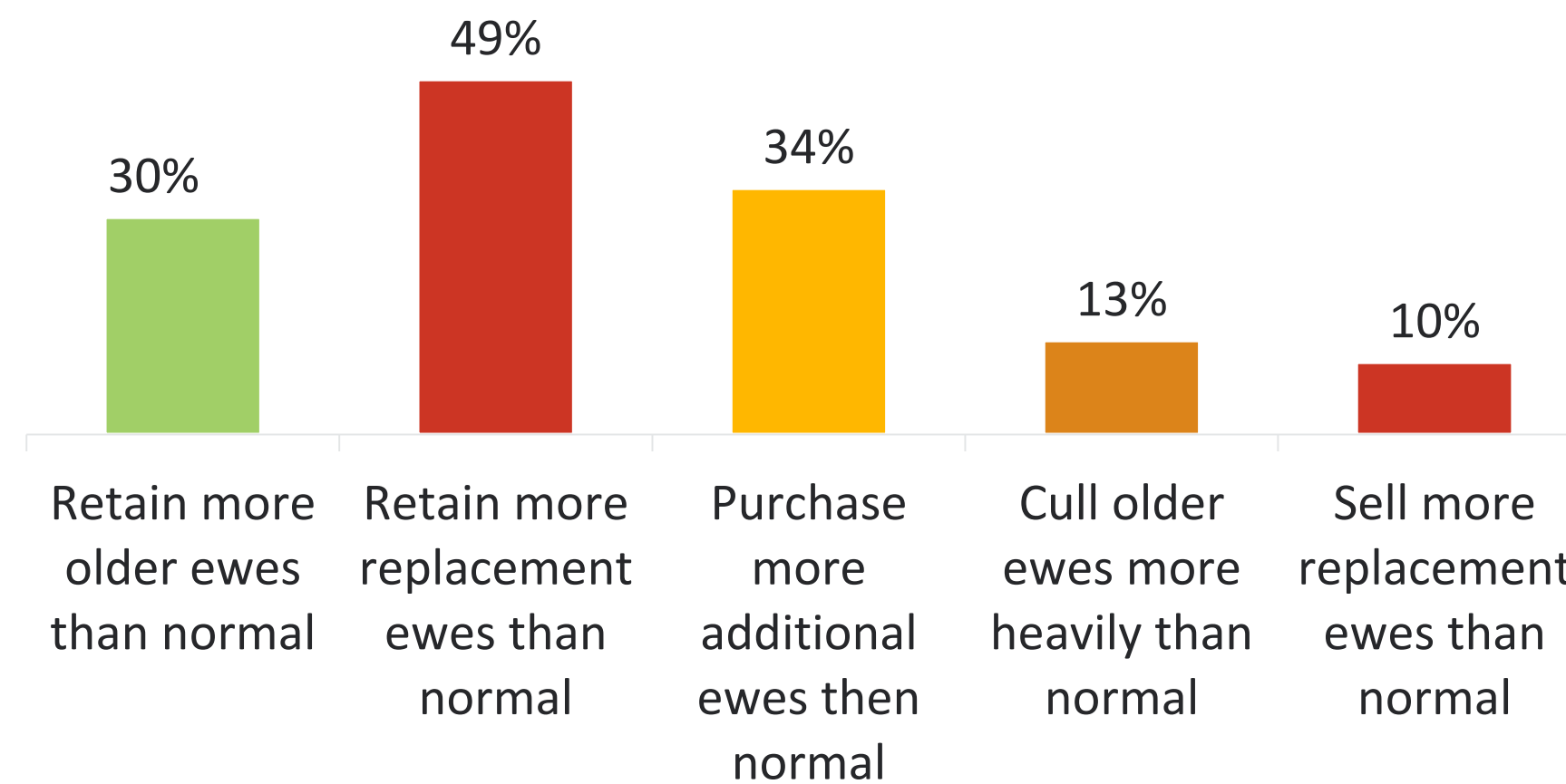
Lamb sales in next 4 months



Flock intentions



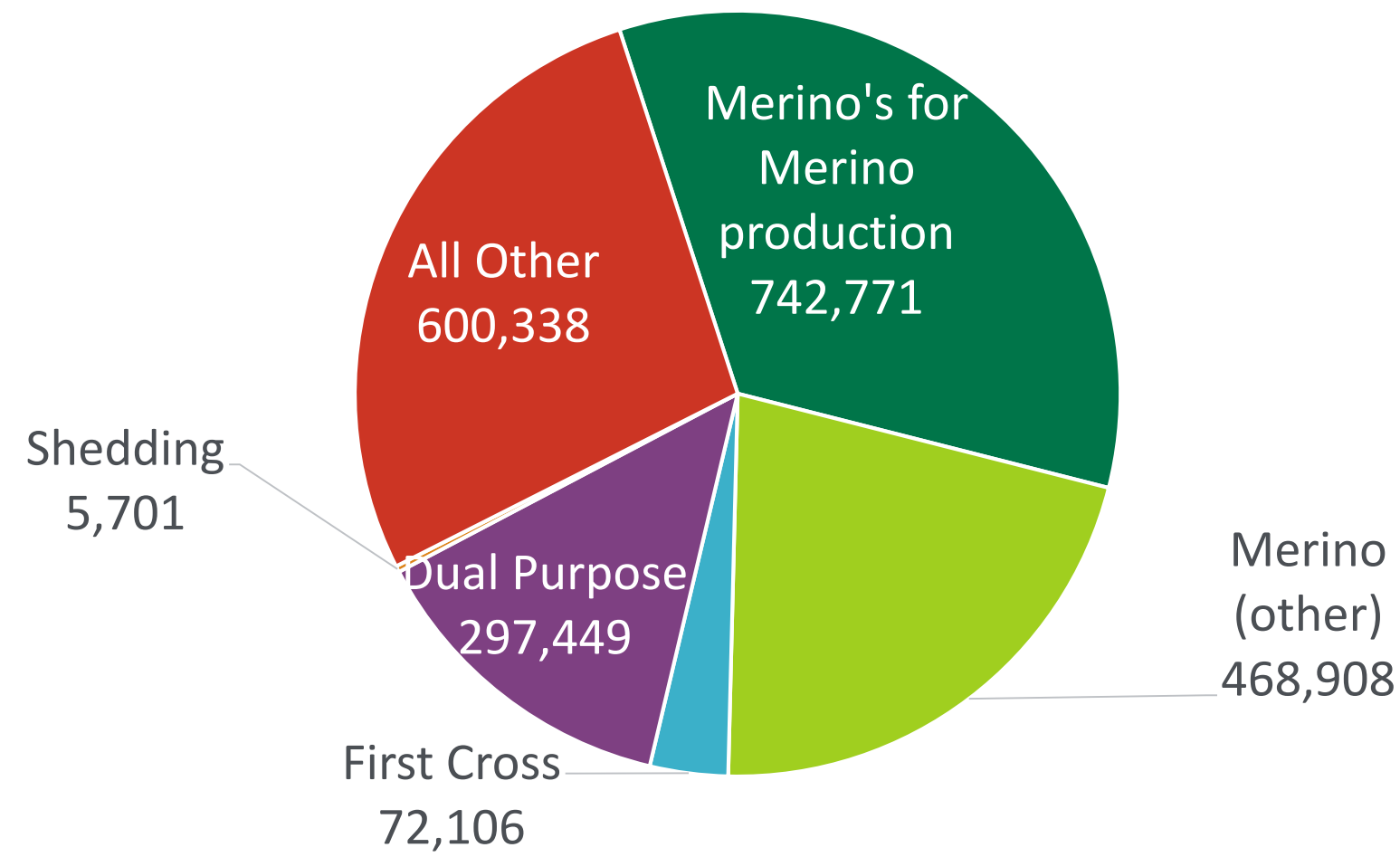
How to achieve increase



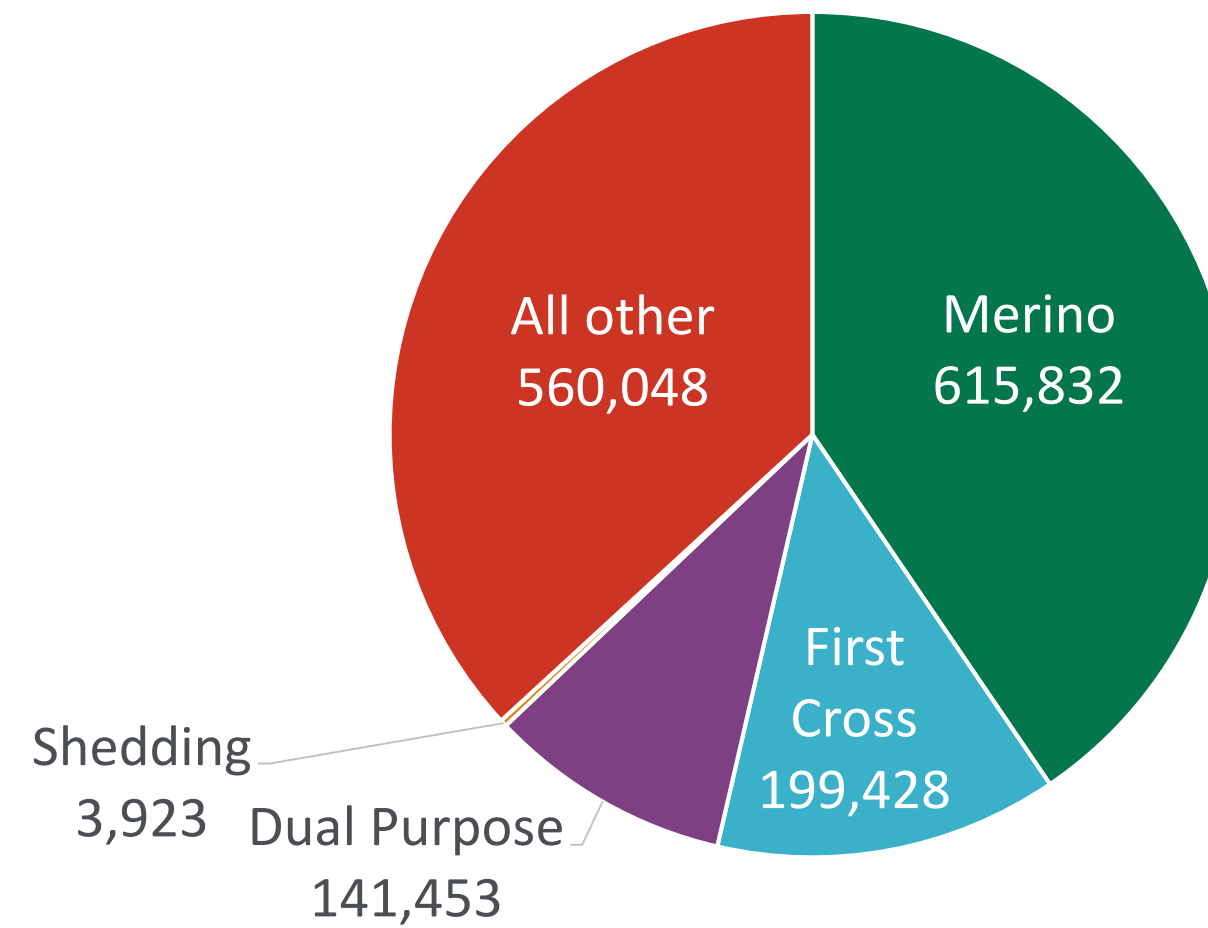
Totals

| | |
|----------------------------------------------------|-----------|
| Breeding ewes on hand | 4,799,907 |
| Lambs on hand | 2,352,525 |
| Expected lamb sales in the next 4 months | 890,467 |
| Lambs marked in the past 4 months (1 Mar – 30 Jun) | 276,770 |
| Number of ewes joined to produce marked lambs | 304,225 |

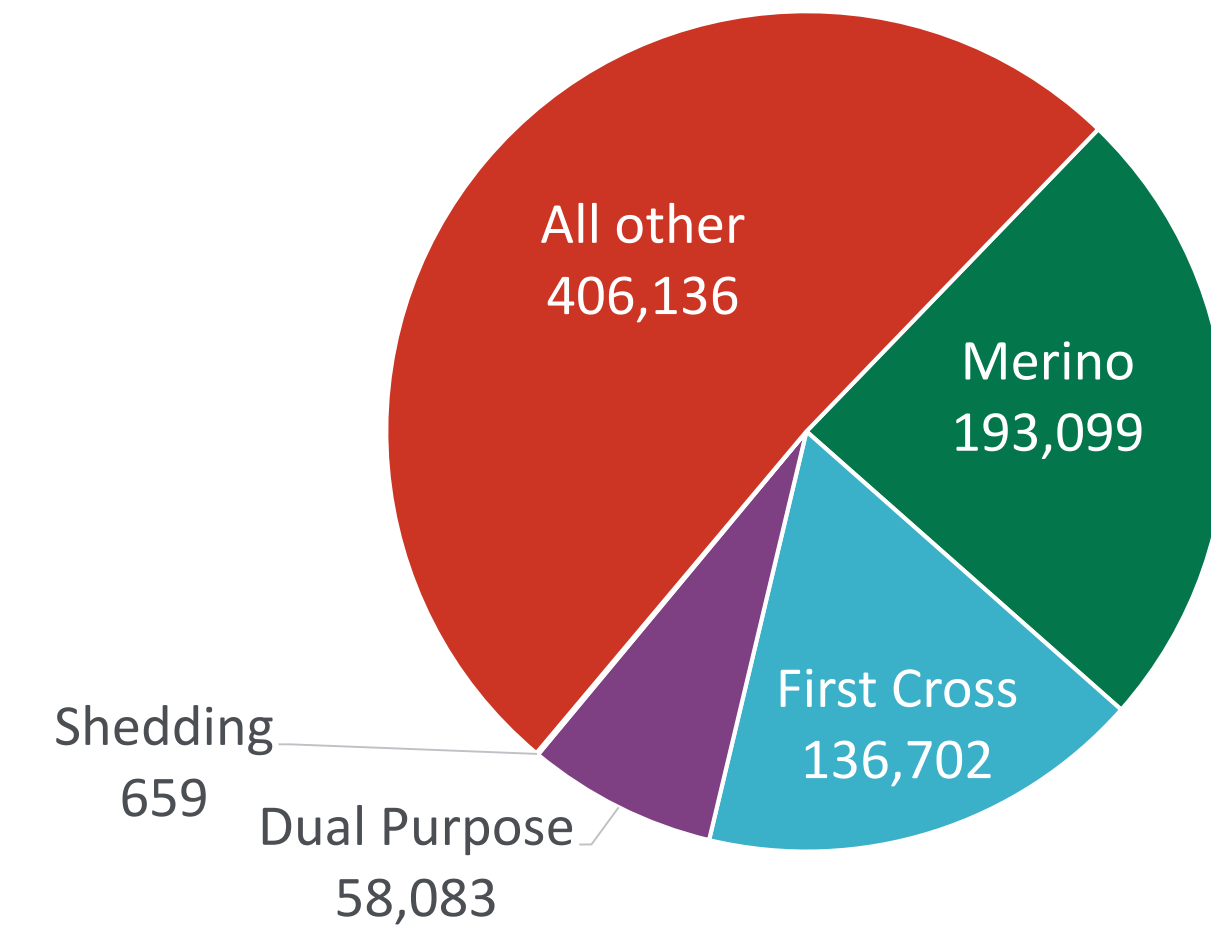
Breeding ewes on hand



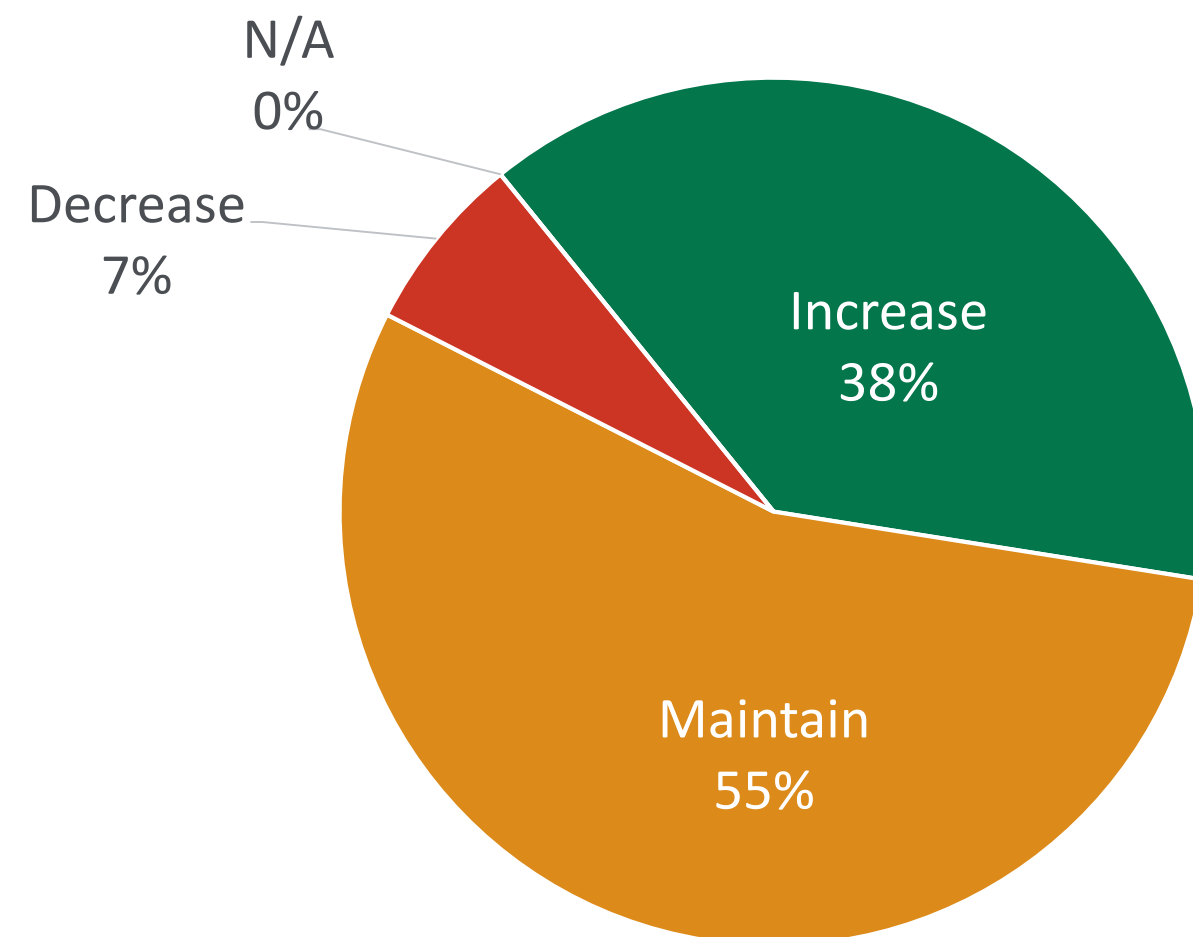
Lambs on hand



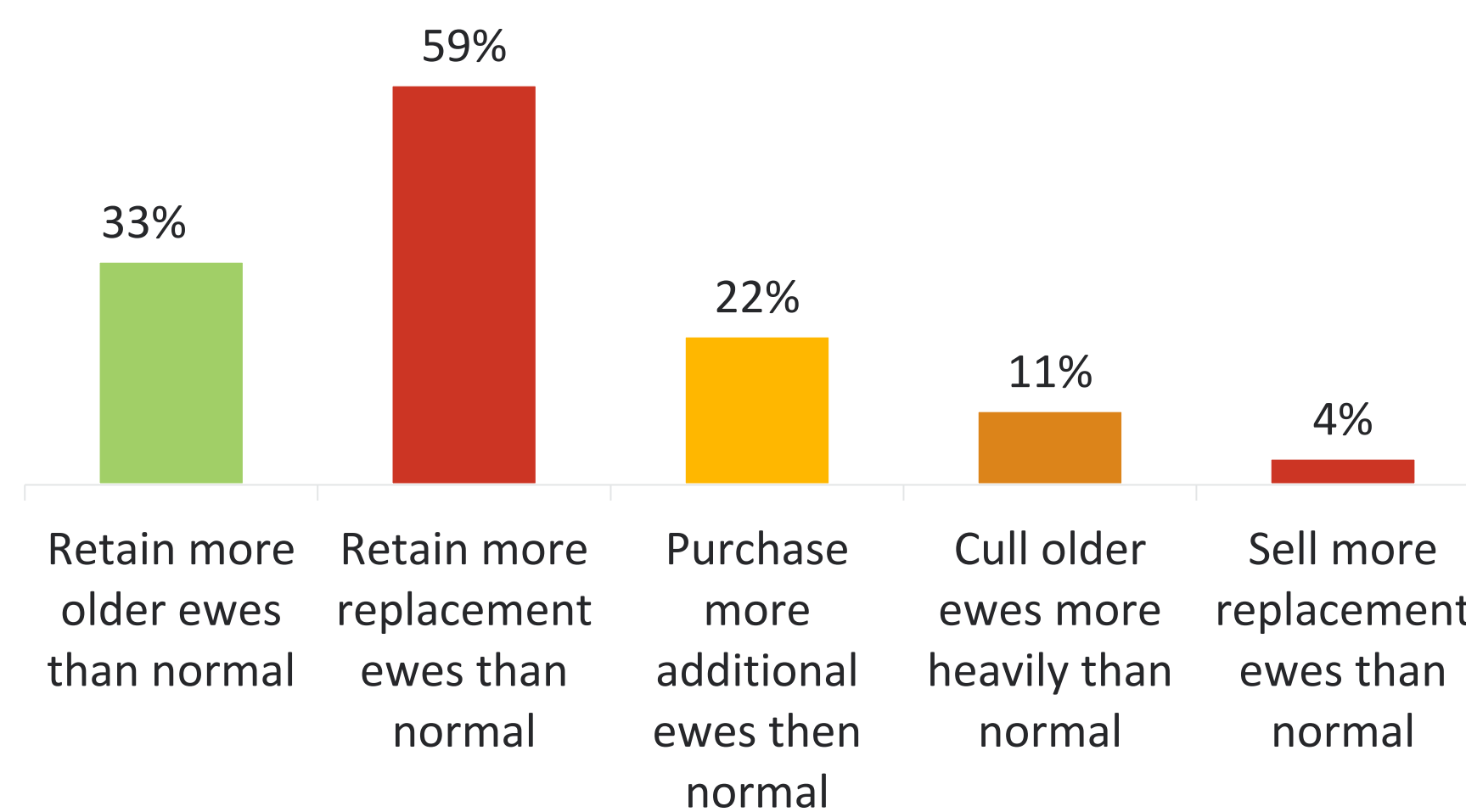
Lamb sales in next 4 months



Flock intentions



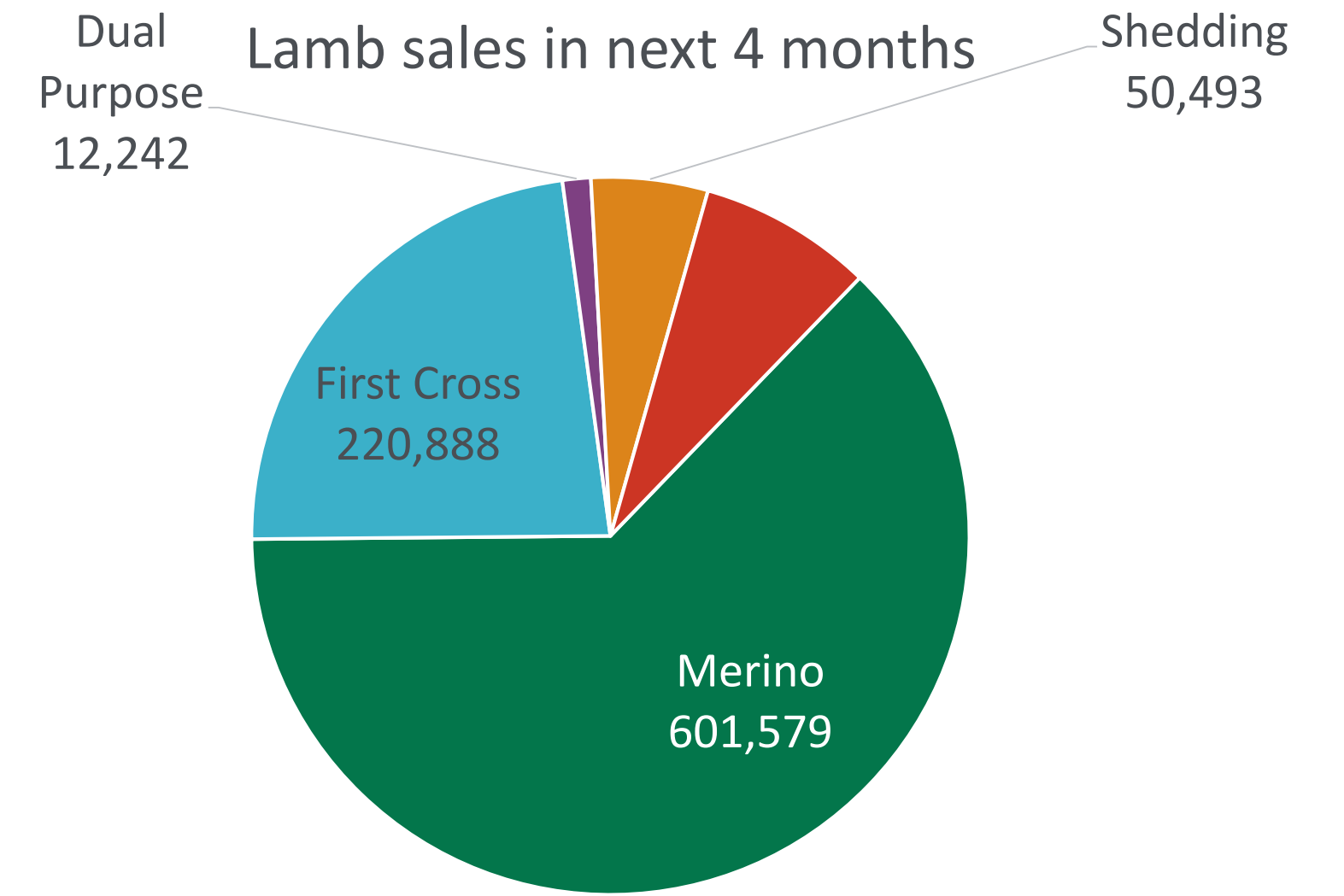
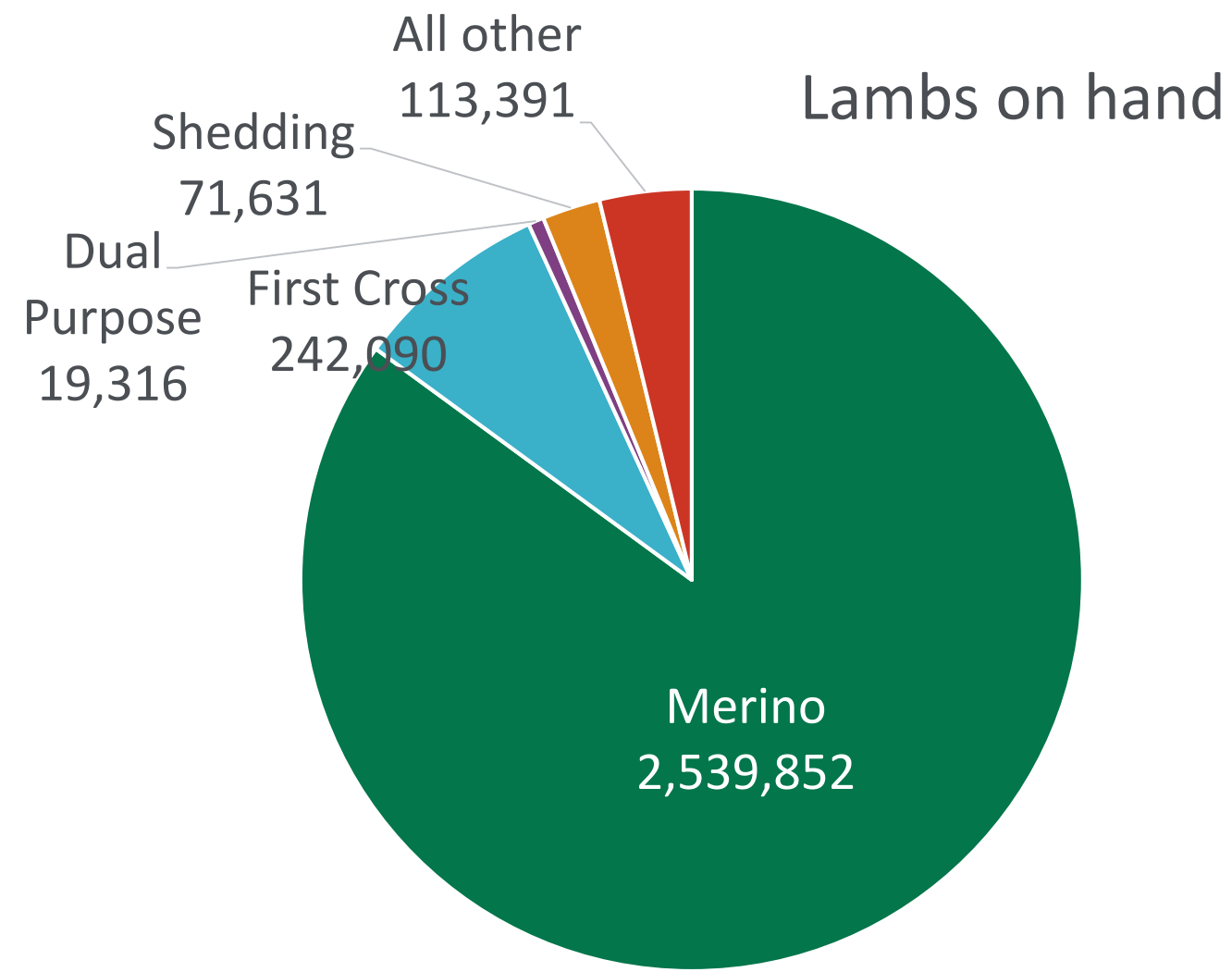
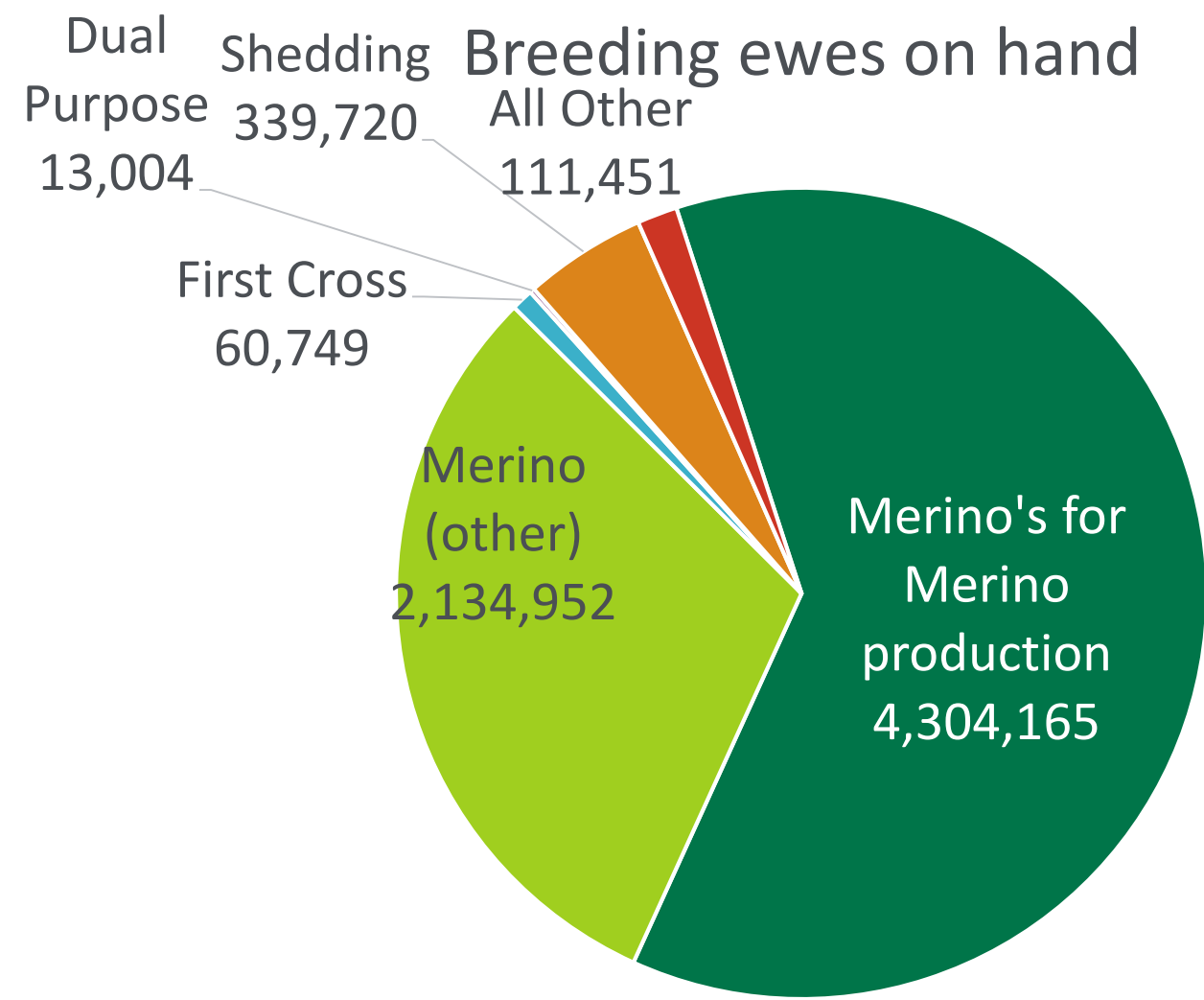
How to achieve increase



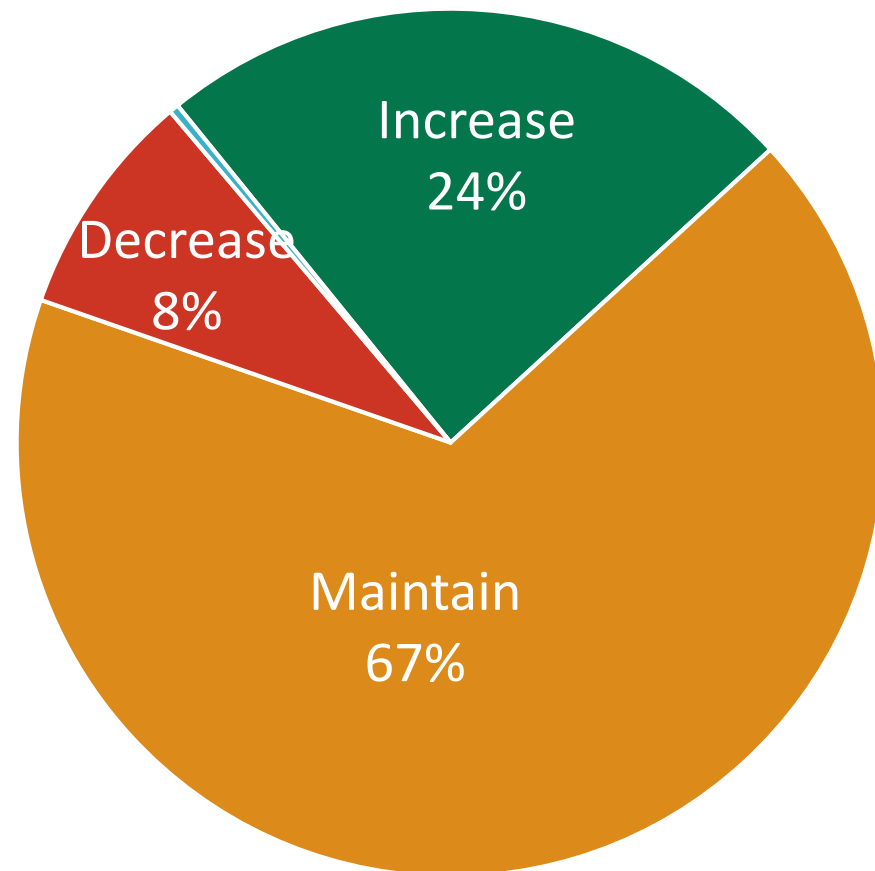
Totals

| | |
|----------------------------------------------------|-----------|
| Breeding ewes on hand | 2,187,273 |
| Lambs on hand | 1,520,684 |
| Expected lamb sales in the next 4 months | 794,678 |
| Lambs marked in the past 4 months (1 Mar – 30 Jun) | 596,997 |
| Number of ewes joined to produce marked lambs | 545,305 |

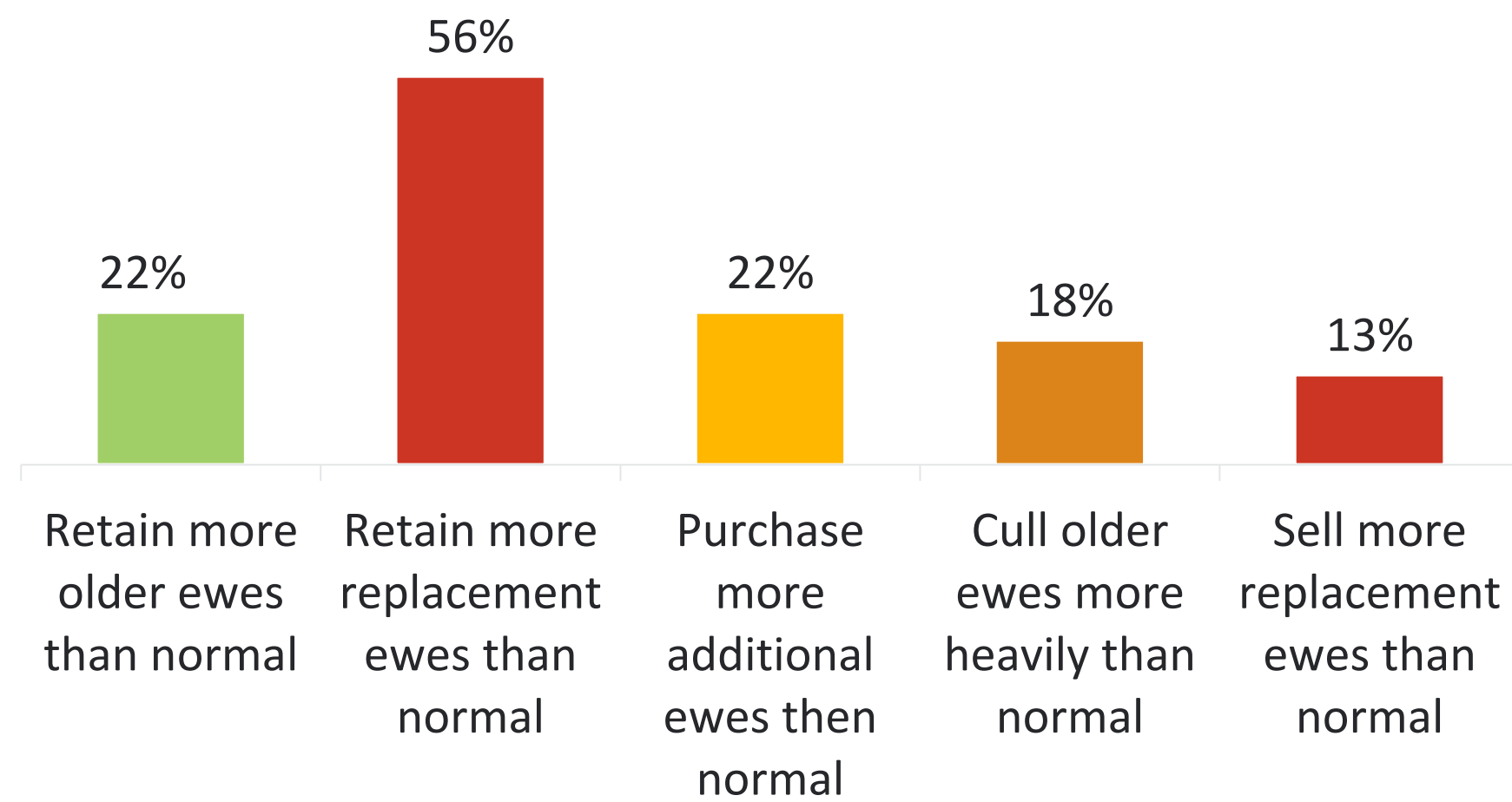
Western Australia



Flock intentions



How to achieve increase



Totals

| | |
|----------------------------------------------------|-----------|
| Breeding ewes on hand | 6,964,041 |
| Lambs on hand | 2,986,280 |
| Expected lamb sales in the next 4 months | 960,461 |
| Lambs marked in the past 4 months (1 Mar – 30 Jun) | 100,915 |
| Number of ewes joined to produce marked lambs | 118,707 |

Disclaimer

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