

# MLA and AWI Wool and Sheepmeat Survey Report - Sheepmeat

August, 2017

Prepared by Kynetec

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# Executive Summary – Lamb Production

## Number of breeding ewes on hand

41,711,714 total breeding ewes on hand  
30,213,305 total Merino breeding ewe flock, 72% of total breeding flock  
11,498,409 total non-Merino breeding ewes on hand, 28% 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

32% increase  
61% maintain  
6% decrease

## Intended method for achieving flock increase

48% Retain more replacement ewes than normal  
32% Retain more older ewes than normal  
30% Purchase more additional ewes than normal

## Number of lambs on hand

22,250,036 total lambs on hand  
12,999,795 total Pure bred Merino lambs, 58% of total lamb flock  
9,250,240 total non-Merino lambs, 42% of total lamb flock

## Expected lamb sales in the next four months (1 Jul – 31 Oct)

7,865,511 total lamb sales in the next four months  
2,880,809 total Merino sales (37% of total lamb sales)  
1,506,725 total Pure meat sales (19% of total lamb sales)  
2,447,275 total First cross sales (31% of total lamb sales)  
1,030,701 total other breed sales (13% of total lamb sales)

## Number of lambs marked in the past four months (1 Mar – 30 Jun)

10,108,906 total lambs marked in the past four months  
5,371,788 total Merino lambs marked (53% of total markings)  
4,737,118 total non-Merino lambs marked (47% of total markings)

## Number of ewes joined to produce those lambs

11,068,081 total number of ewes joined to produce those lambs  
6,025,414 total Merino lambs joined (54%)  
5,042,667 total non-Merino lambs joined (46%)

## Marking rates

89% National Merino marking rate  
94% 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 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 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 June 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 2,154 survey responses were achieved in June 2017, up from 2,090 in June 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, 3,109 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 70 respondents completed the survey via this method (3% 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 June to 30 June, 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 1,552 completed responses (72% 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 532 producers responded by this methodology (25% 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

This is the first survey using the ABS Census 2015-16 data and represents the number of flock types by size by region based the number of breeding ewes on hand. 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 June 2017 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, however this may be subject to change in future waves if necessary.

Due to the \$40k cutoff for ABS Census of agricultural businesses, a significant number of producers would not be included in the survey weighting. As flock sizes of less than 250 head represent around 32% of the number of sheep producing properties in Australia (ABS Census 2011), the base ABS 2015-16 Census number of farm businesses was boosted to include the smaller producers in each state. The table below illustrates the breakdown of producers from the ABS 2011 Census by flock size category (before the \$40k cut off was introduced). In this survey producer numbers in each state were boosted by the percentages listed in the 0 to 250 head column. This may be updated in future surveys if a more accurate measurement becomes available.

	0-250	251-500	501-1000	1001-2000	2001+
Australia	32%	14%	18%	18%	17%
New South Wales	29%	17%	22%	20%	12%
Queensland	43%	11%	13%	11%	22%
Victoria	30%	15%	22%	18%	15%
Tasmania	46%	14%	12%	13%	14%
South Australia	23%	11%	19%	25%	22%
Western Australia	23%	17%	21%	21%	18%

## Statistical significance

The total research sample of 2,154 will give the results of this study a margin of error of  $\pm 2.03\%$  at a 95% confidence level based on 36,874 breeding ewe producers in Australia (ABS 2015-16 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  $\pm 2.03\%$  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  $\pm 3.3\%$
- Victoria  $\pm 4.24\%$
- Queensland  $\pm 9.46\%$
- South Australia  $\pm 4.97\%$
- Western Australia  $\pm 5.3\%$
- Tasmania  $\pm 10.46\%$

# Survey Responses [1/4]

The total number of respondents (n=2,154) represented national industry distribution of sheep producers (31,136 as reported in the ABS Census 2015-16), 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.

Total Respondents = 2,154



State	ABS Census (2015-16) Distribution	MLA and AWI Wool and Sheepmeat survey Distribution (June 2017)
NSW	37%	37%
VIC	24%	23%
QLD	4%	5%
SA	17%	17%
WA	15%	15%
TAS	3%	4%

# Survey Responses [2/4]

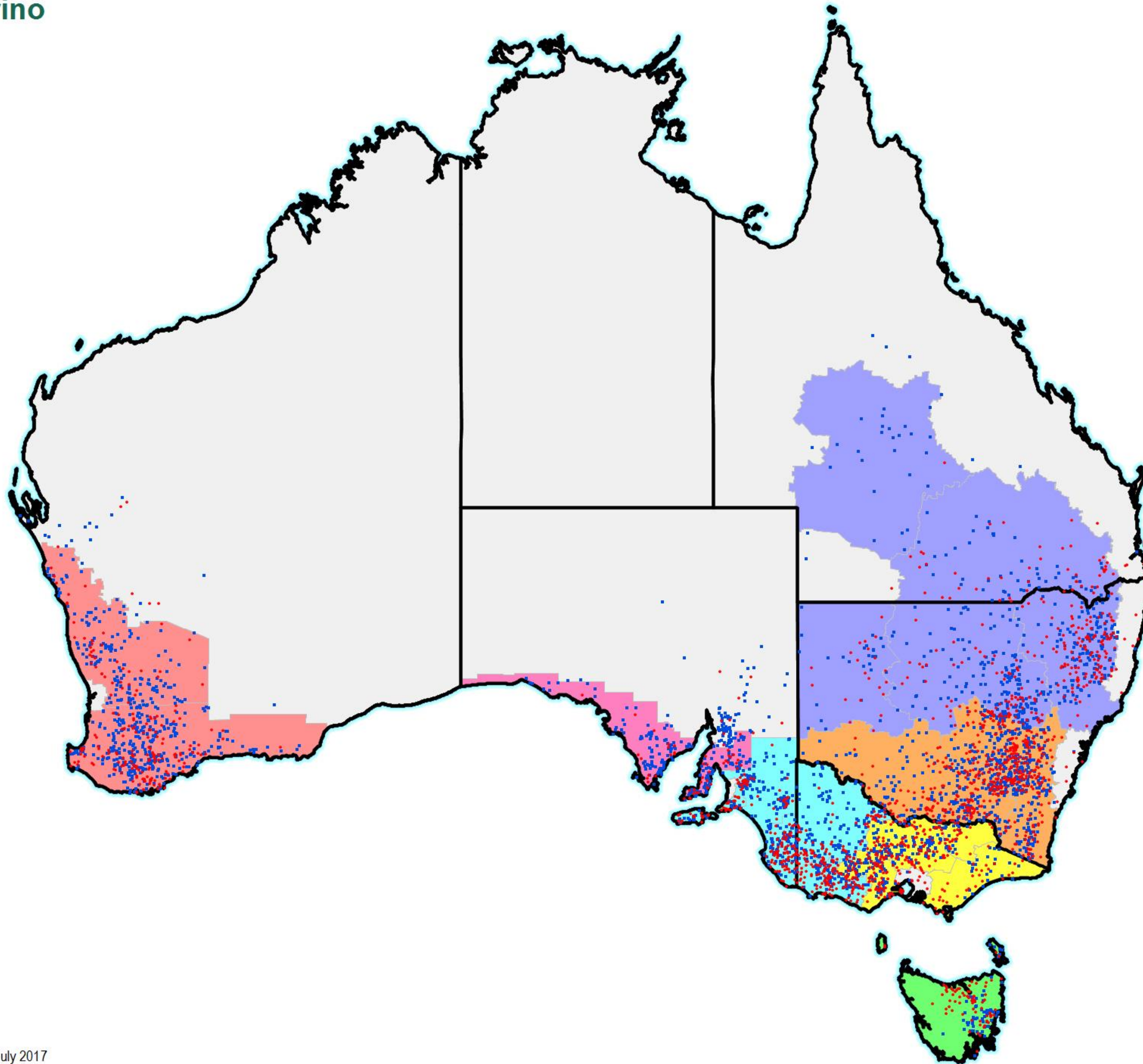
## Merino and non merino flock count by Postcode

Total number of properties = 3,109  
Merino properties = 2,122  
All other properties = 1,549

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

**Merino flock count by Postcode**  
1 Dot = 1

**Non merino flock count by Postcode**  
1 Dot = 1





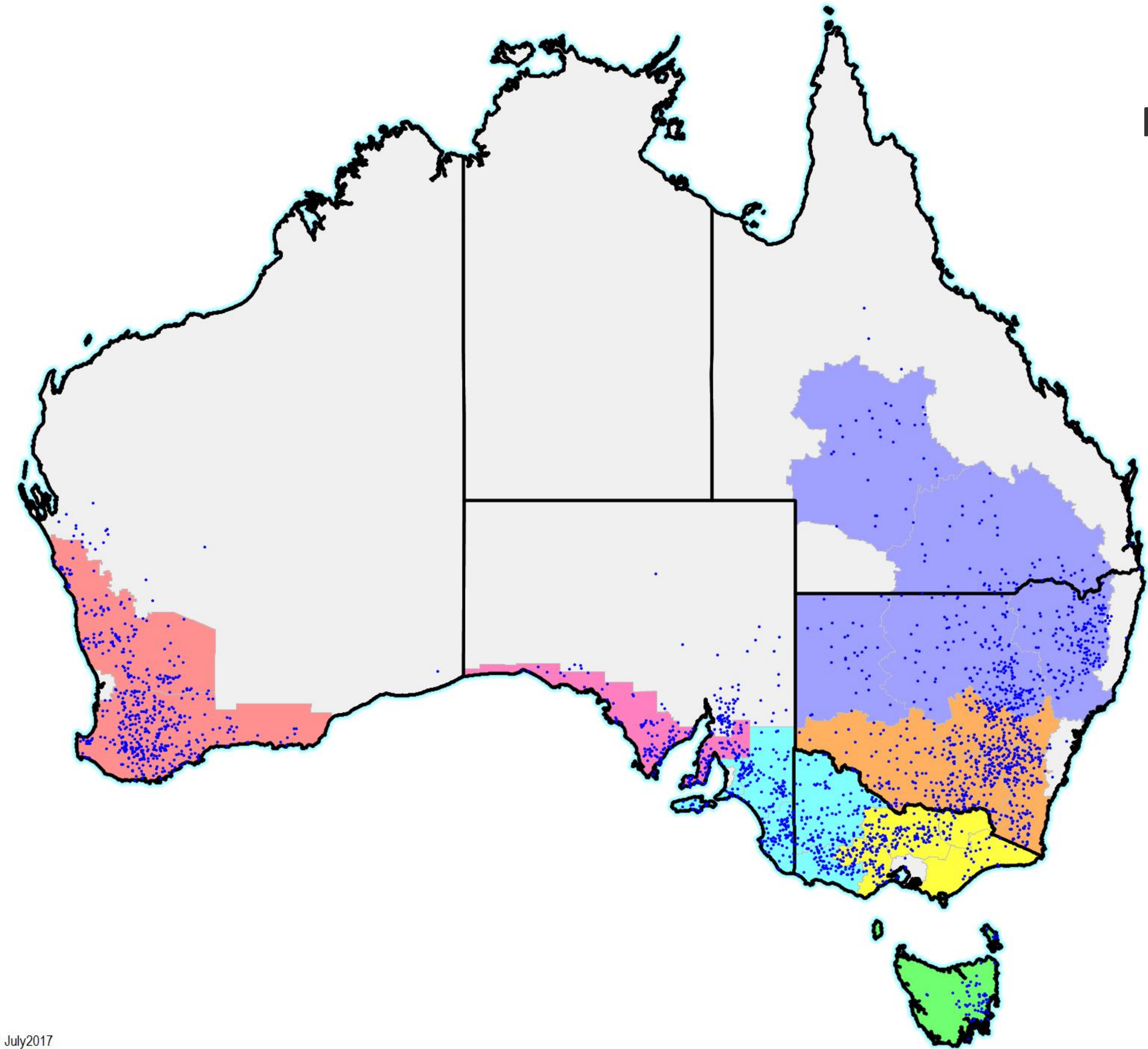
# Survey Responses [3/4]

## Merino flock count by Postcode

Merino properties = 2,122

- 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]

## Non merino flock count by Postcode

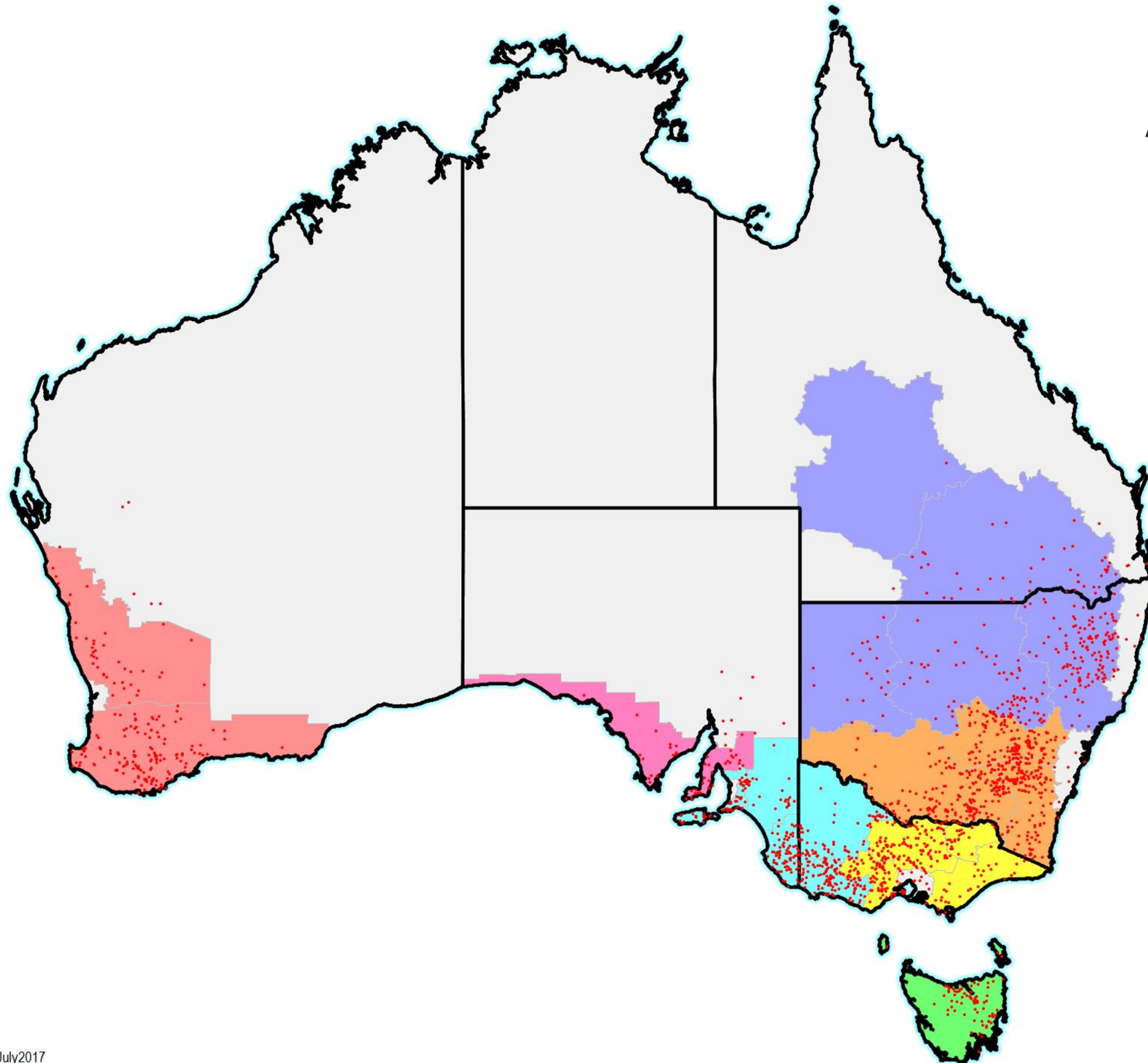
All other properties = 1,549

### MLA Reporting Regions

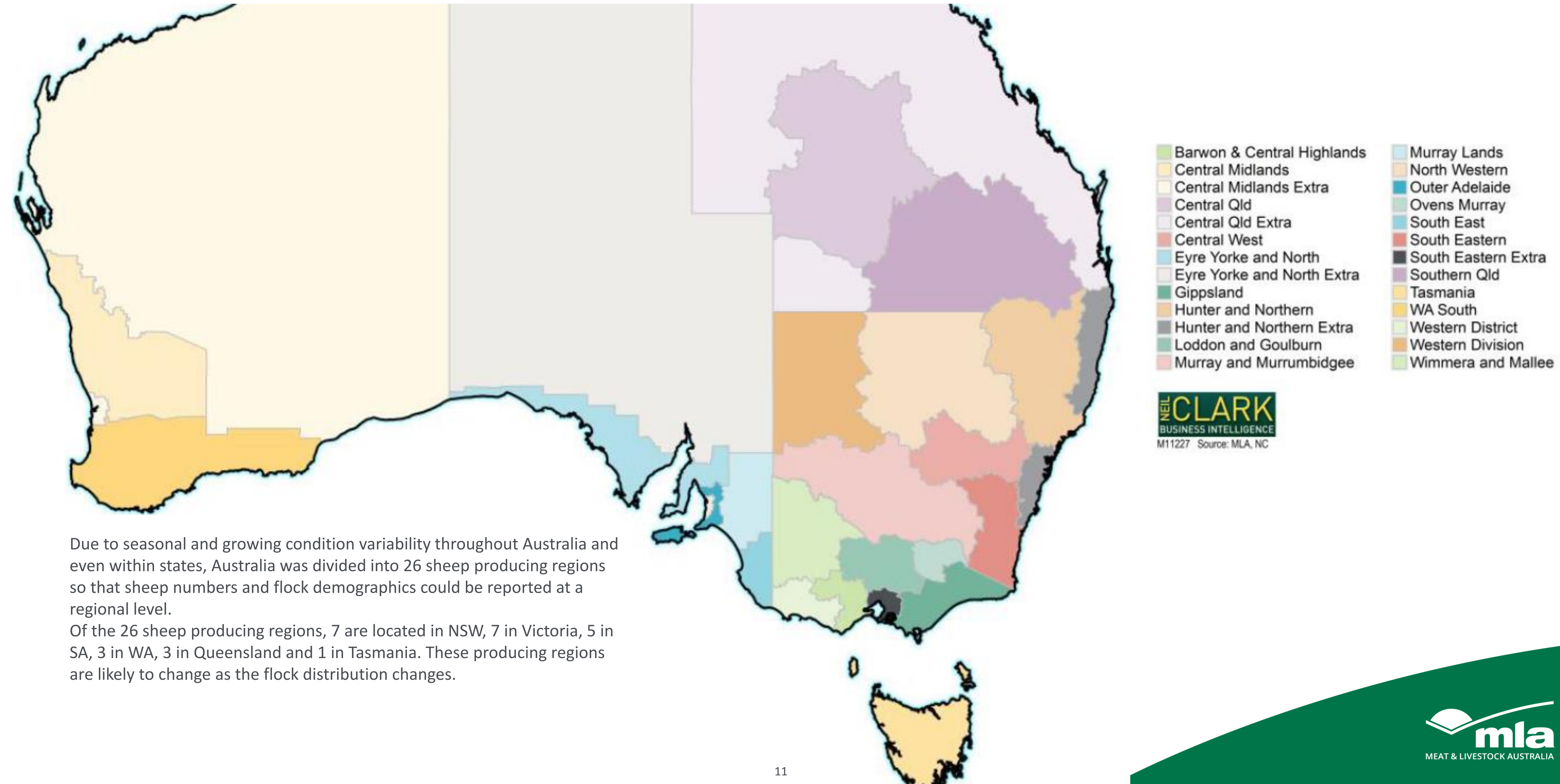
- Central NSW
- East Vic
- Northern NSW/Qld
- SA Peninsula
- Tasmania
- Western Australia
- Wimmera Mallee Murray

### Non merino flock count by Postcode

1 Dot = 1



# MLA sheep producing regions



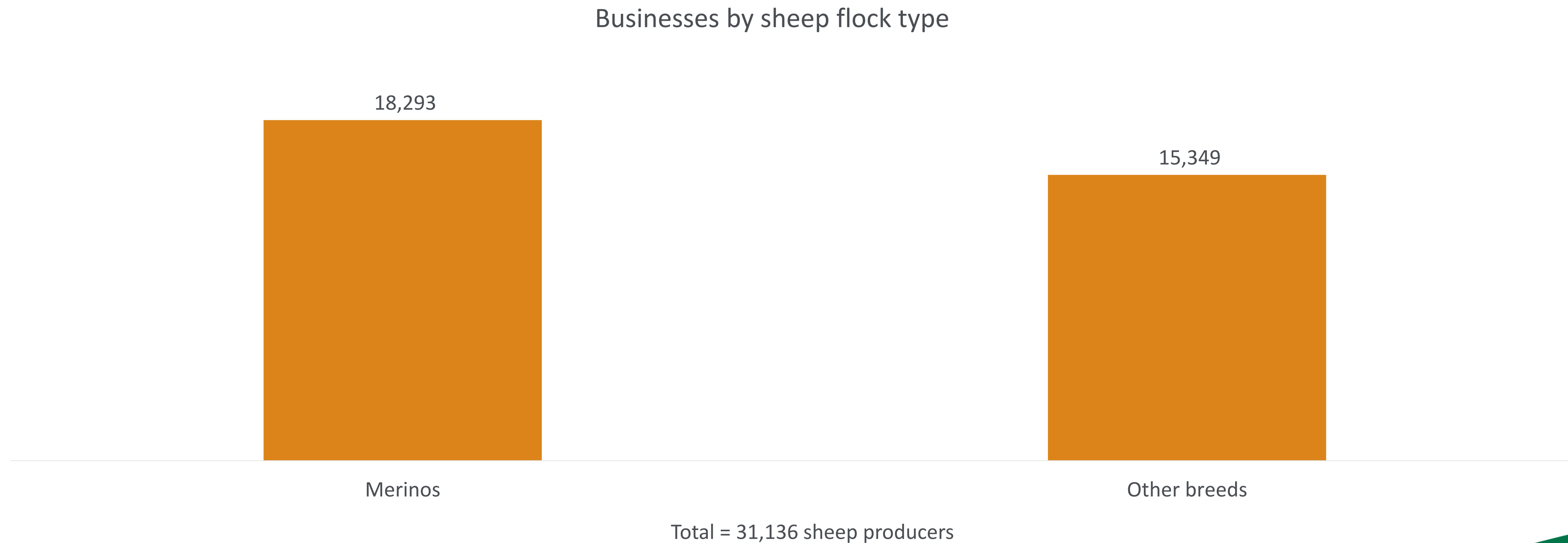
Due to seasonal and growing condition variability throughout Australia and even within states, Australia was divided into 26 sheep producing regions so that sheep numbers and flock demographics could be reported at a regional level.

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

This chart is representative of the 31,136 producers involved in sheep production within Australia as reported in the ABS Census 2015-16. The total sheep producer population can be divided into Merino and Other breed producers, with many of these being dual flock producers who manage both Merino and Other breed production systems. Note – these are farm businesses that turnover more than \$40k per year, so are not inclusive of smaller sheep producers who represent around one third of sheep production businesses in Australia.

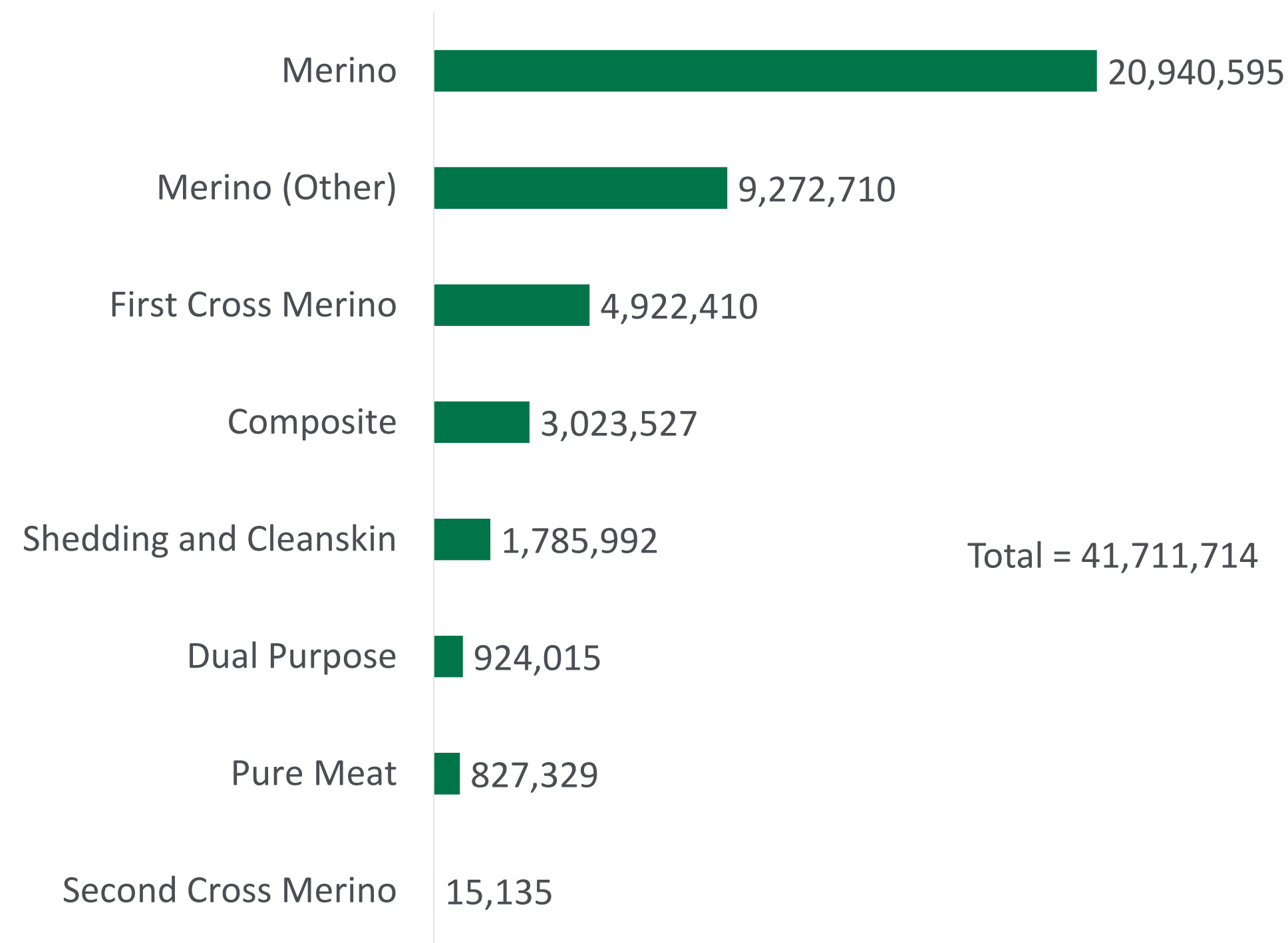


# Ewes on hand and Lambs on hand - Australia

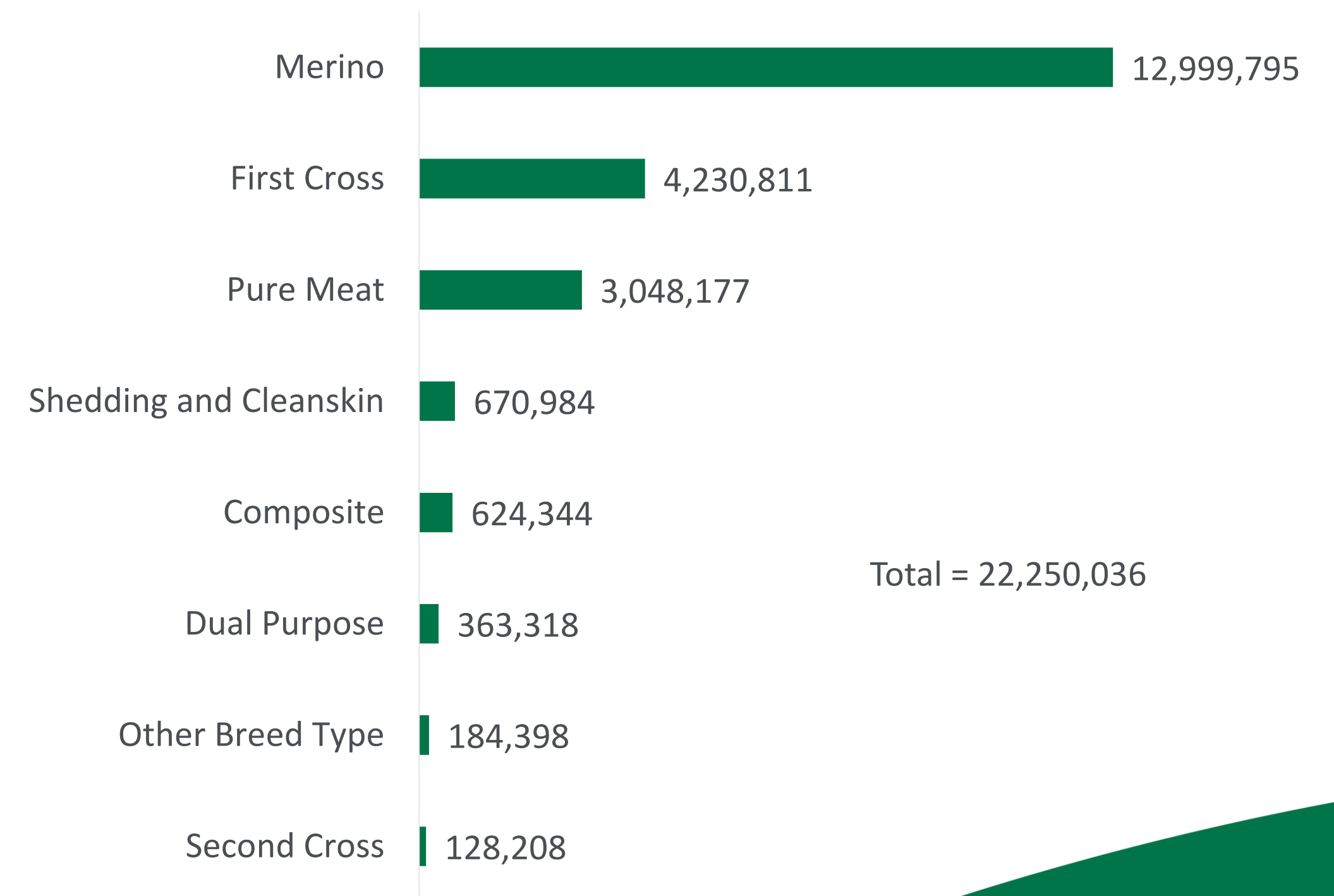
Merinos accounted for 72% of the total breeding ewe flock at 30.2 million head. Merino breeding ewes were further divided into Merino ewes for pure bred Merino production and Merino ewes for crossbred production, accounting for 69% and 31% of the merino flock, respectively.

There were 22.3 million lambs on hand at 30 June 2017. Merino's made up 58% of the total lamb flock, at 13 million head, followed by First cross and Pure meat lambs accounting for 19% and 14% of the national lamb flock, respectively.

Number of ewes on hand



Number of lambs on hand

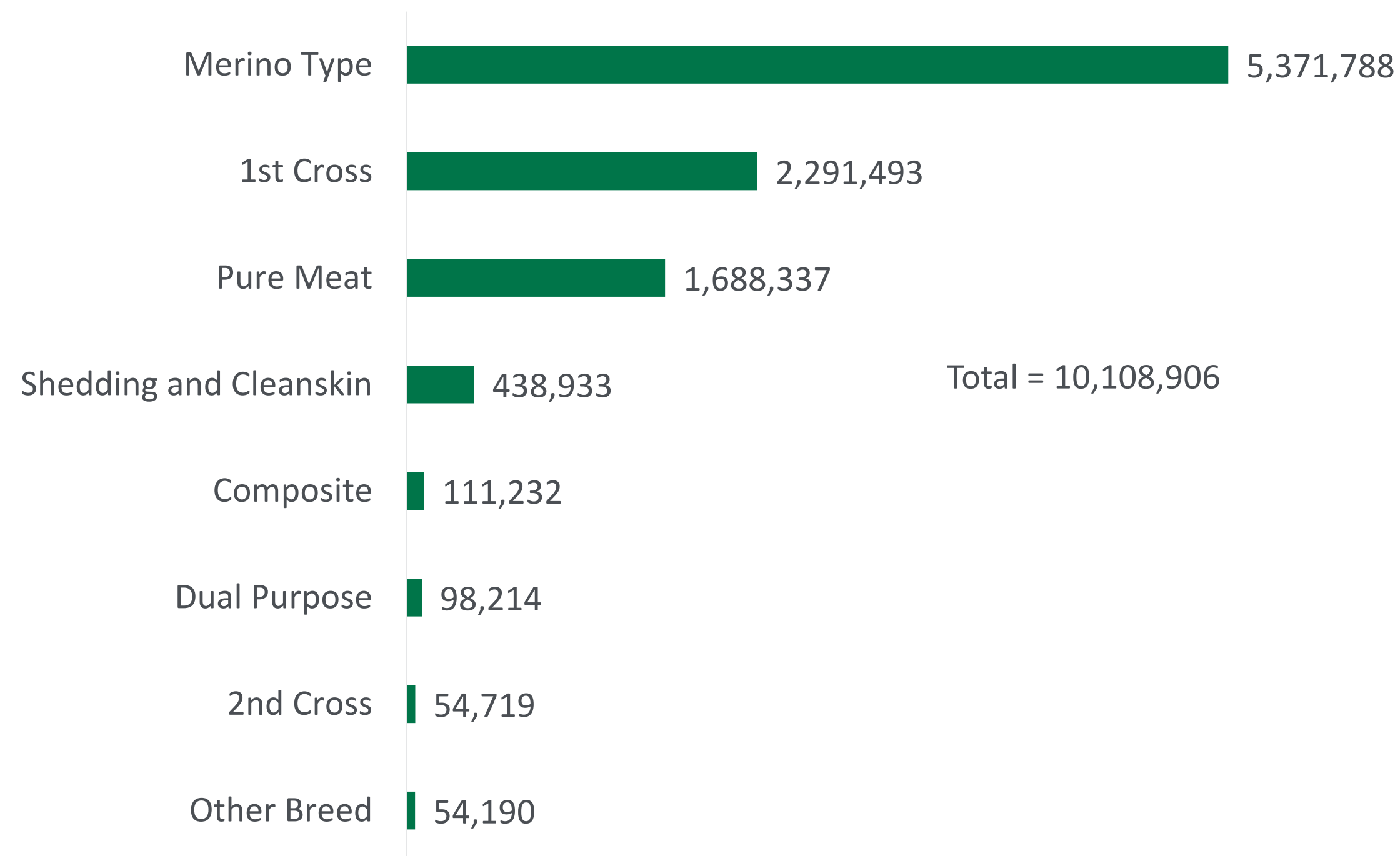


# Lambs marked in the past four months (1 March – 30 June) and Ewes joined to produce those lambs - Australia

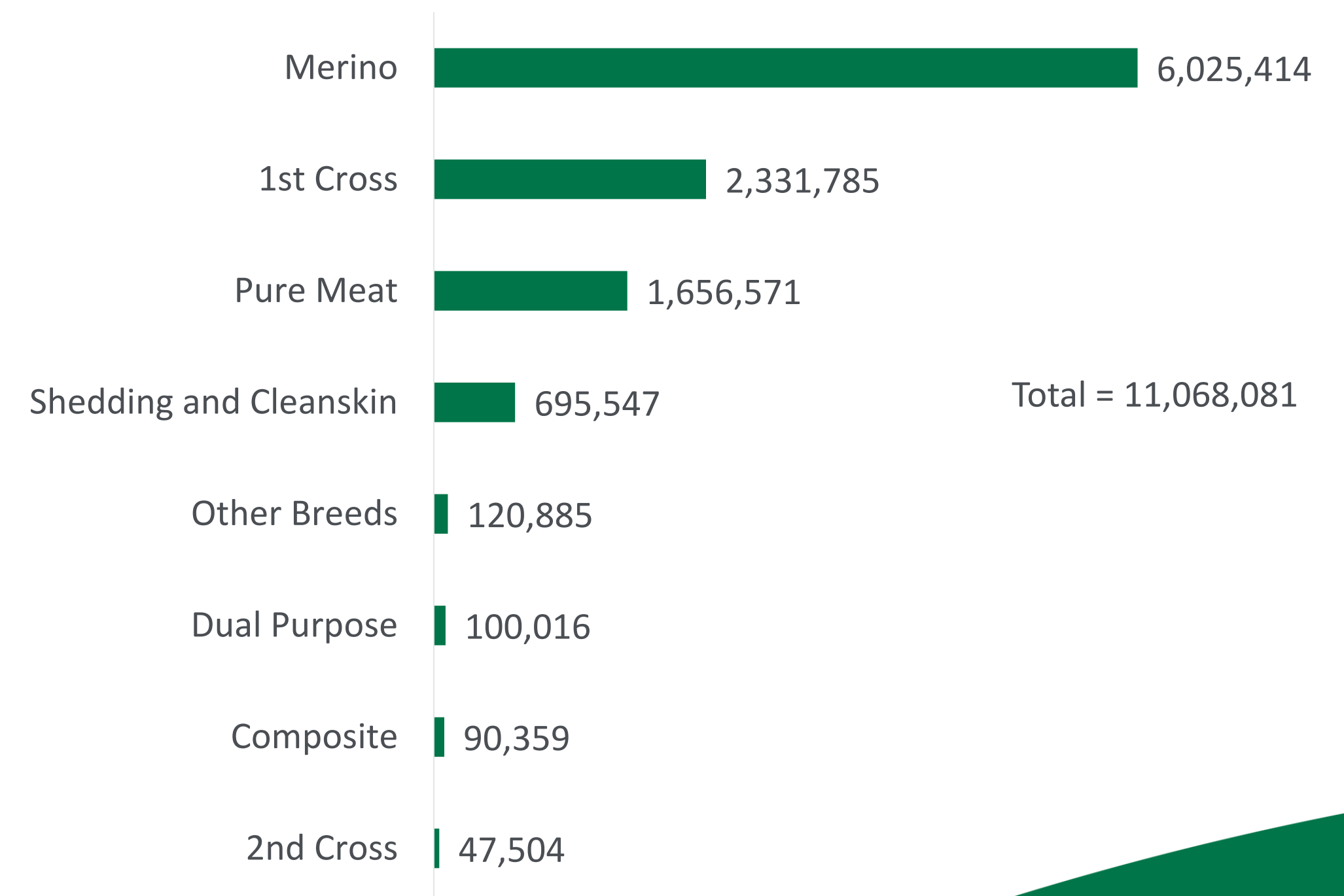
There were a total of 10.1 million lambs marked in the four months (from 1 March to 30 June 2017). Merino's accounted for the largest proportion of lambs marked in the past four months at 53%, with First Cross and pure meat breeds accounting for 23% and 17%, respectively.

A total number of 11.1 million ewes were joined to produce the lambs that were marked in the past four months. Merino marking rates were similar to those of non-merino breeds at 89% and 94%, respectively. Due to an extended autumn/winter lambing season in some regions, many producers were still lambing after 30 June.

Lambs marked in the past 4 months (1 March to 30 June)



Ewes joined to produce marked lambs

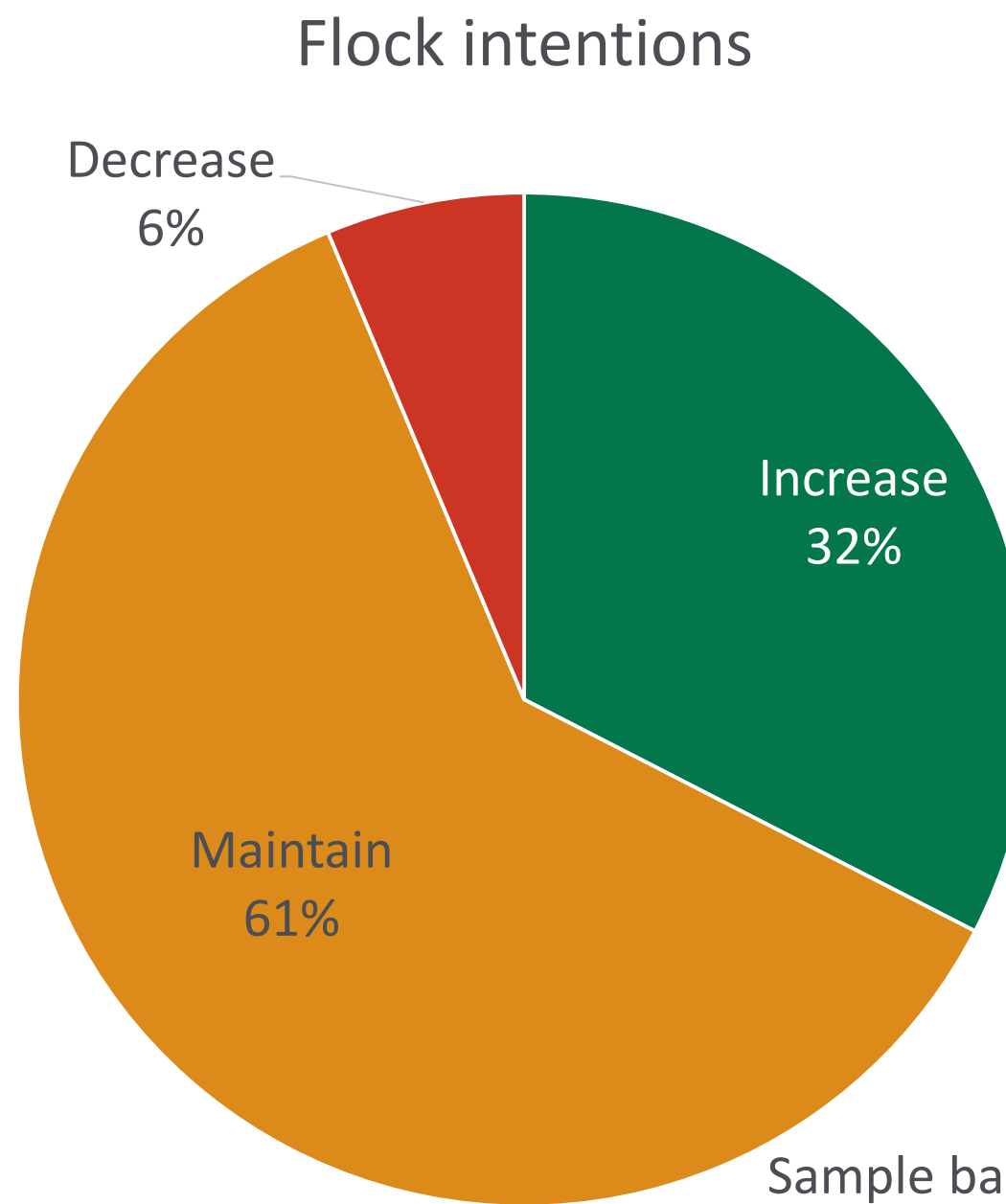
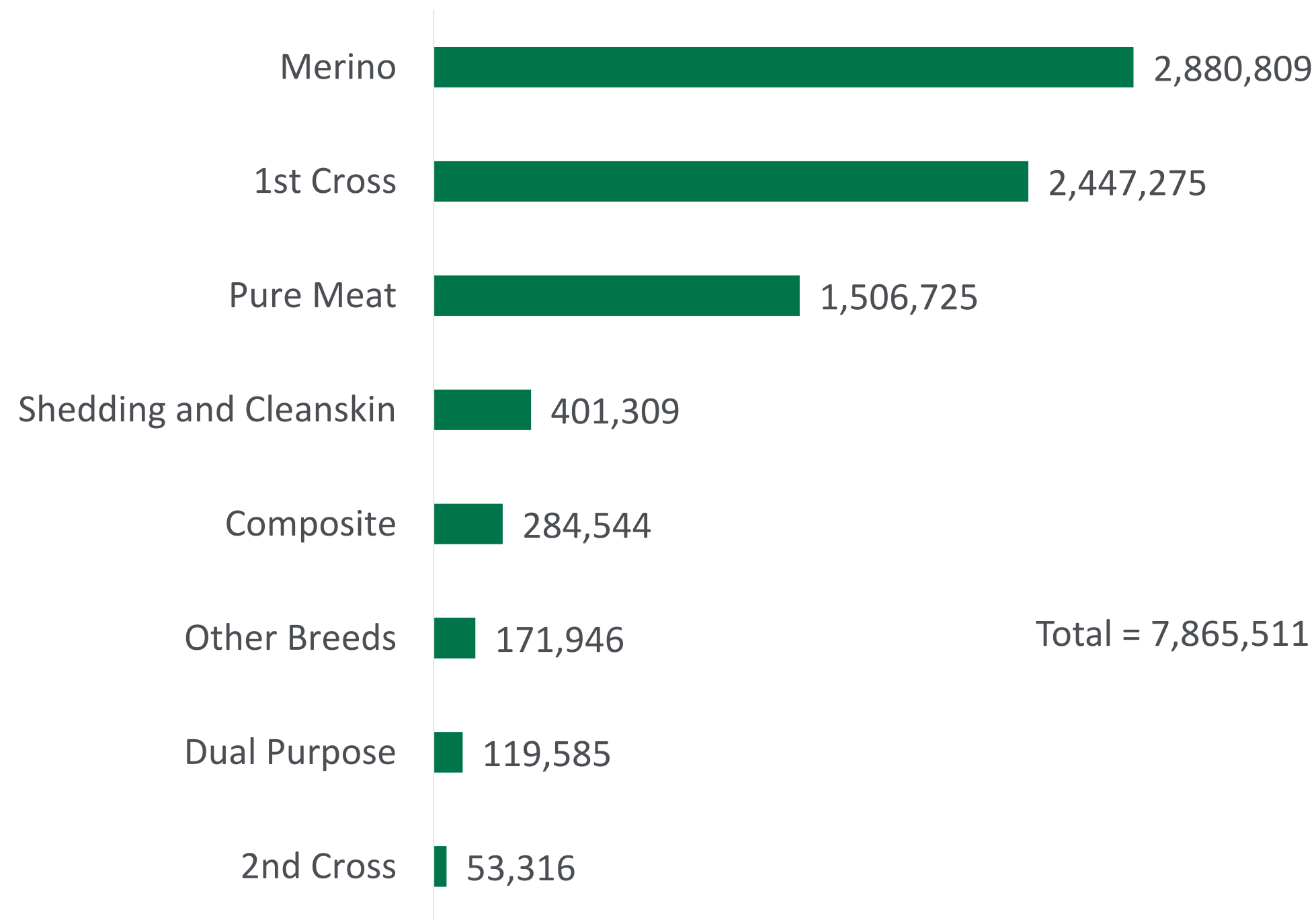


# Expected lamb sales in the next 4 months - Australia

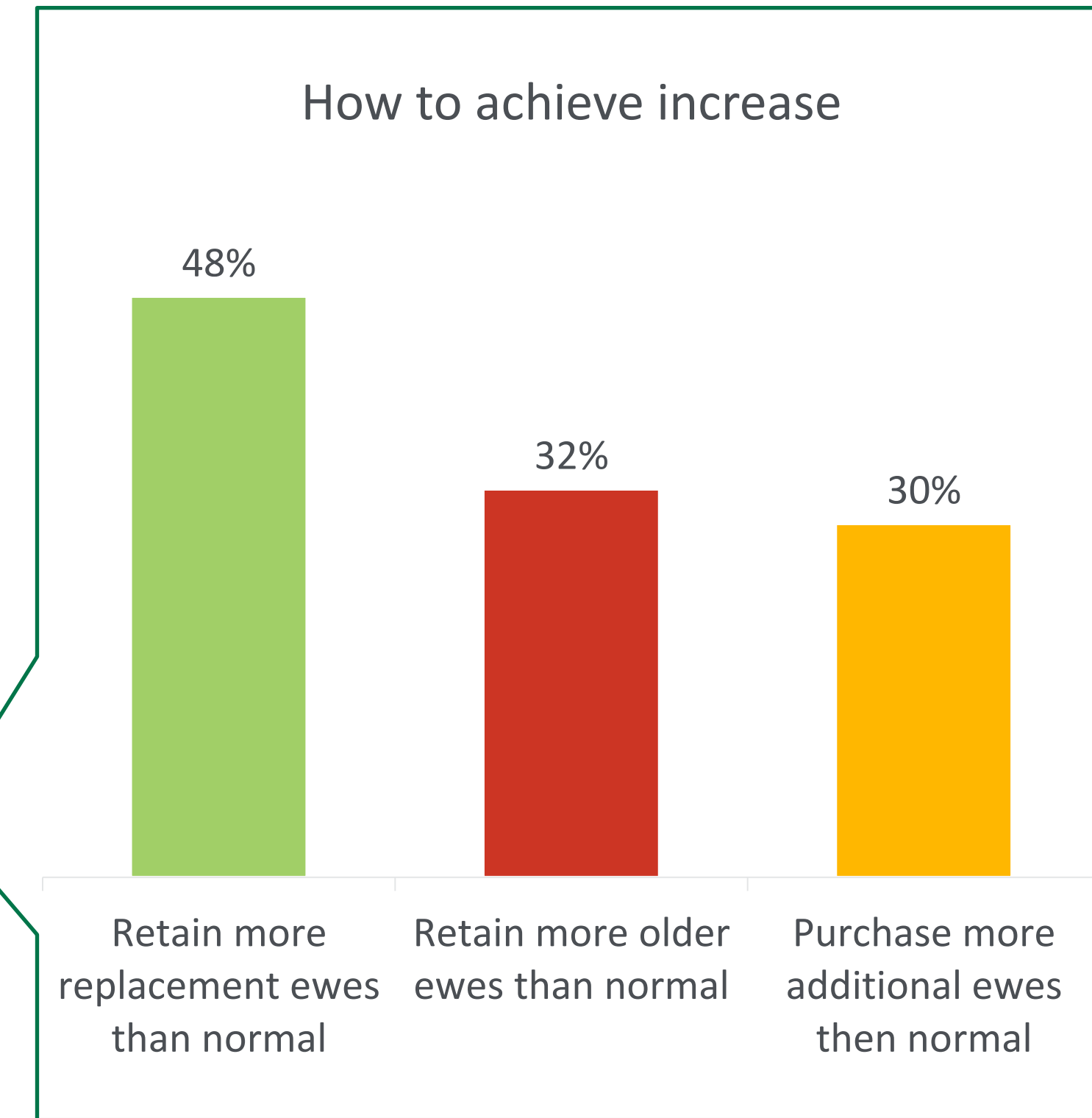
A total number of 7.9 million lambs are expected to be sold in the next four months (1 July 2017 to 31 October 2017), approximately 35% of the total number of lambs on hand. Of these: Merino's, 1<sup>st</sup> Crosses and Pure Meat breeds are expected to account for 37%, 31% and 19% of lamb sales, respectively.

These results are consistent with producer ewe flock intentions for the next 12 months and method of achievement, with 32% looking to increase their ewe flocks and of those looking to increase, 48% are expected to retain more replacement ewes than normal in order to achieve this increase.

Expected sales in the next 4 months



Sample base (properties) n=3,109

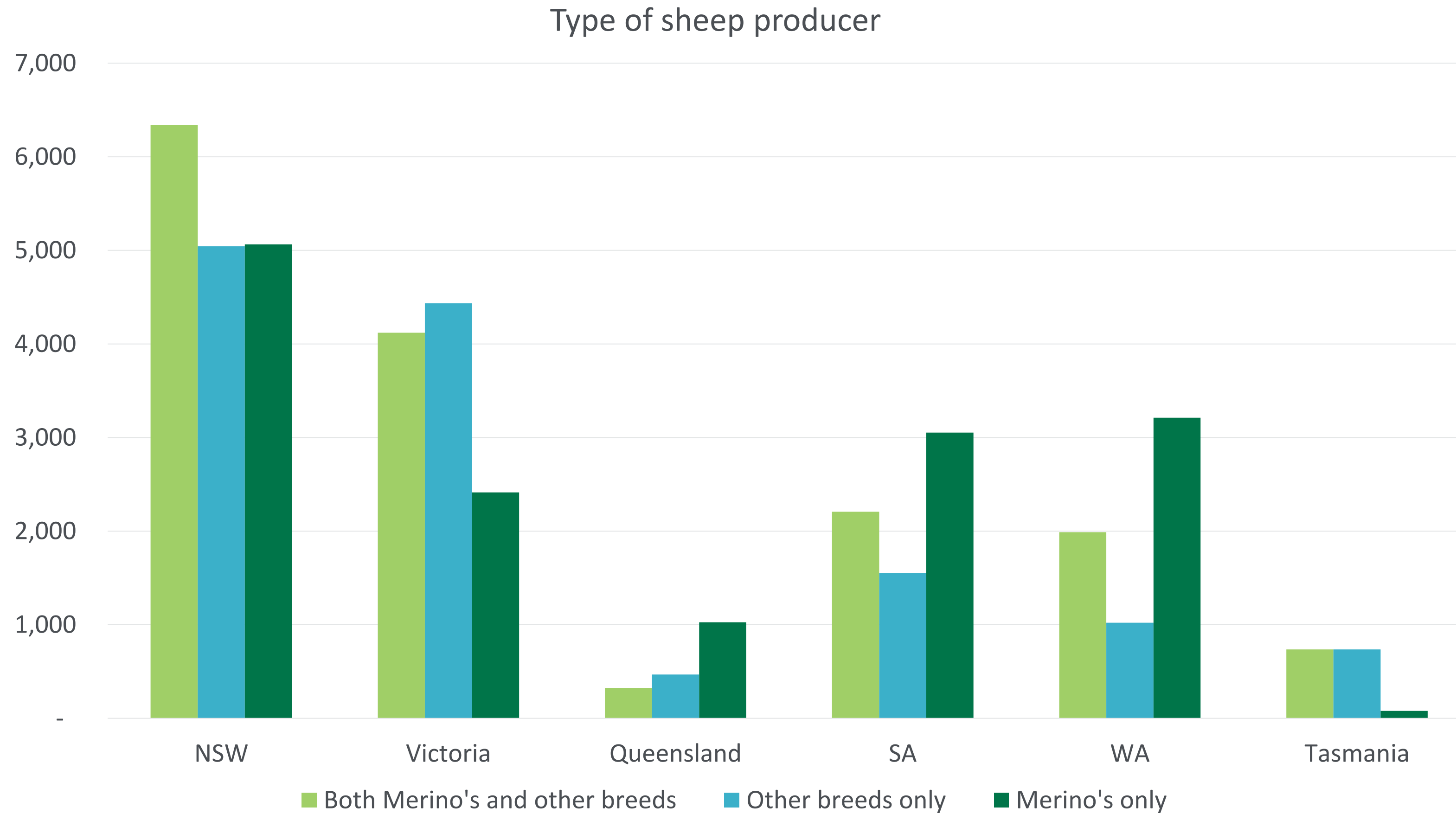


Sample base (respondents) n=2,062



# Results by State

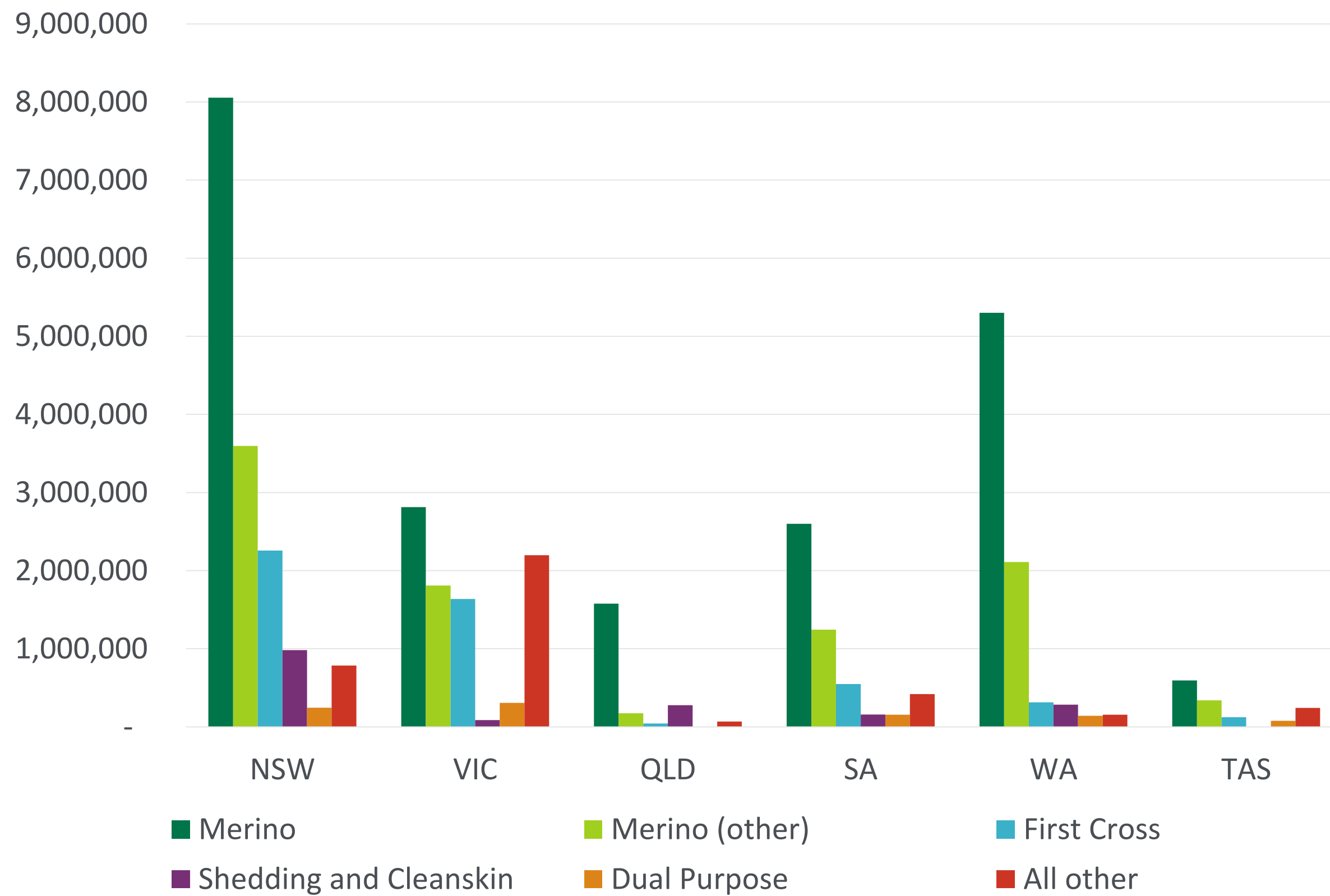
# Type of producer - State



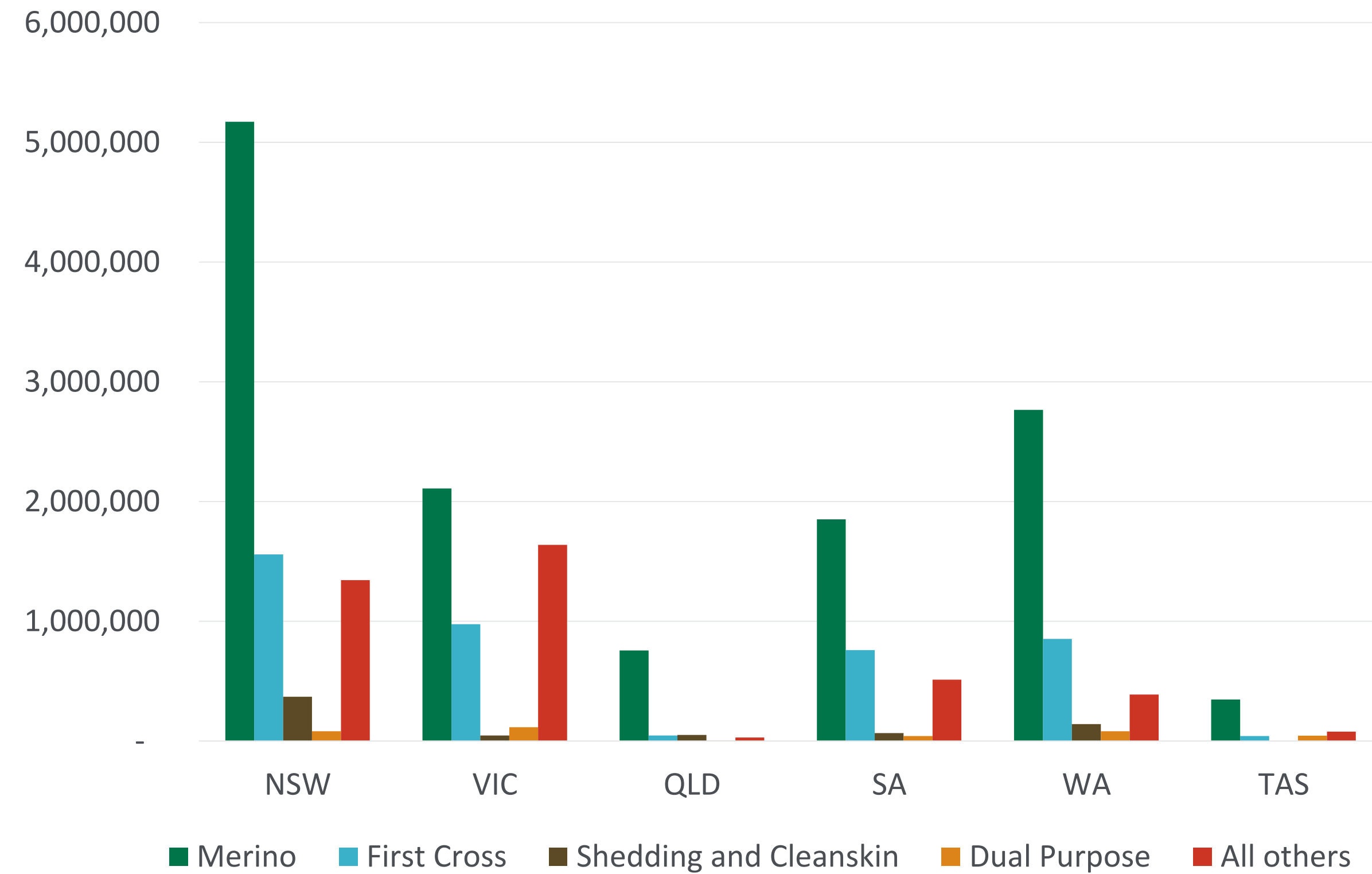
Sample base (respondents) n=2,062

# Ewes on hand and lambs on hand - State

Ewes on hand

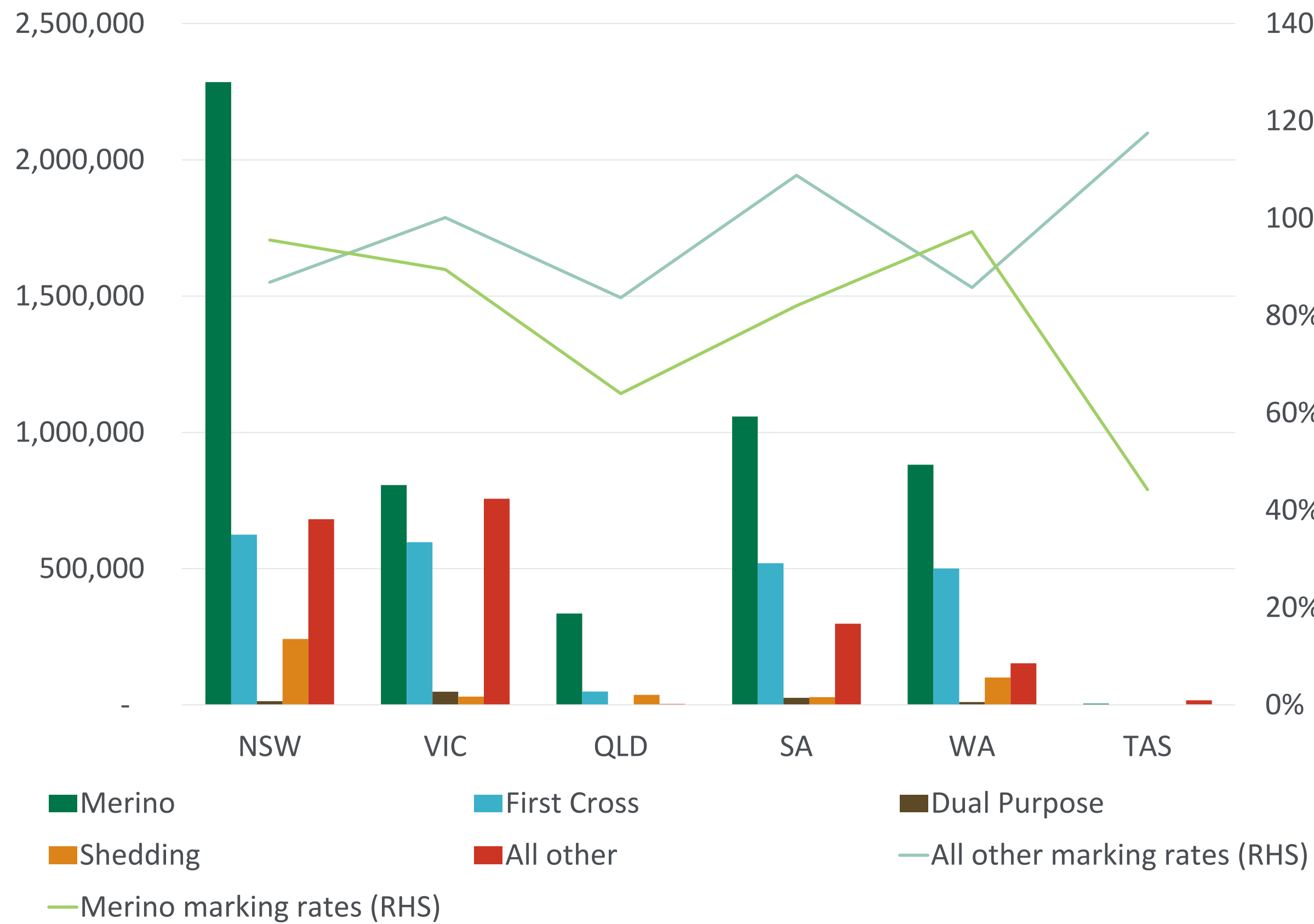


Lambs on hand

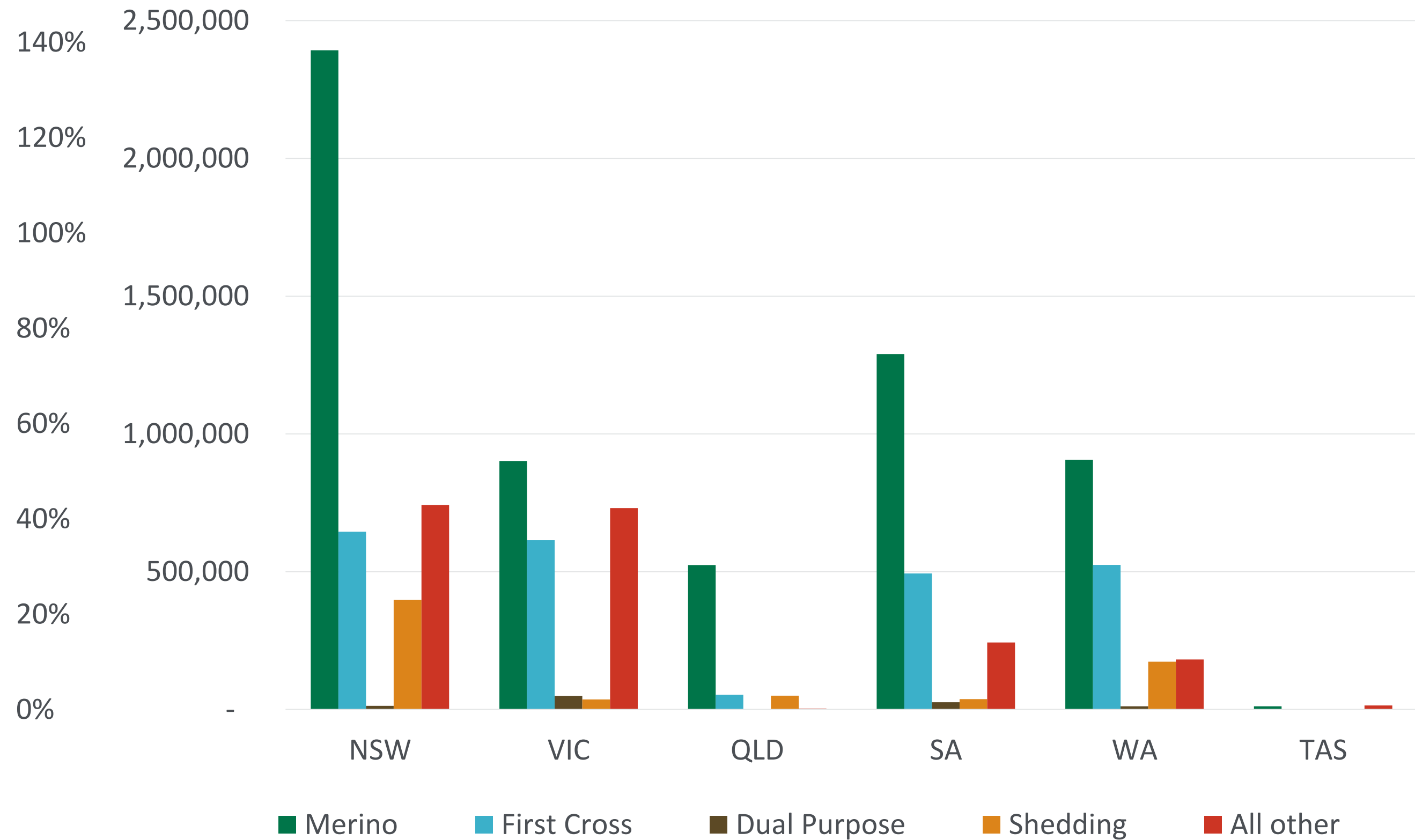


# Lambs marked in the past four months and Ewes joined to produce those lambs - State

Lambs marked in the past 4 months (1 March – 30 June)



Ewes joined to produce those lambs

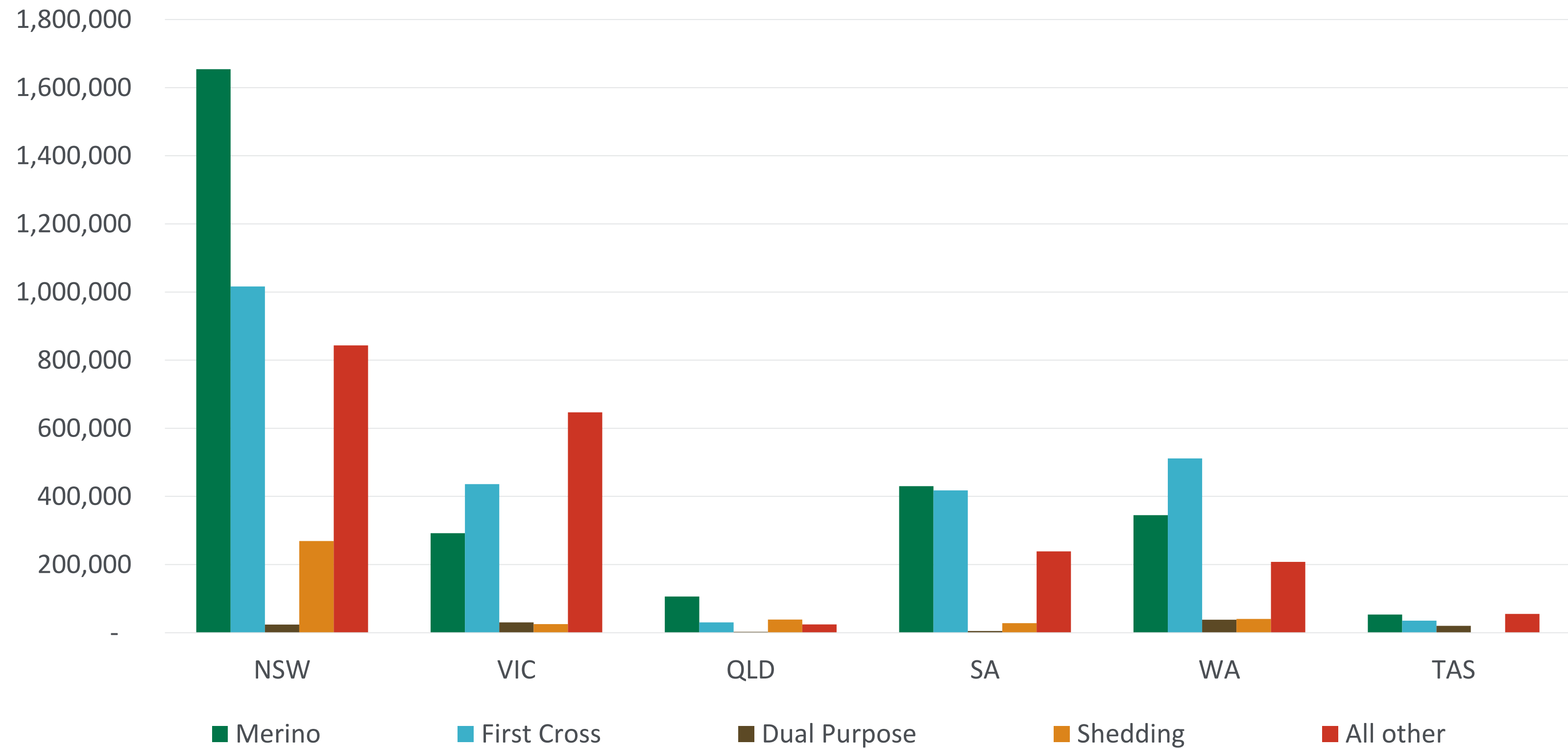


Sample base (properties) n=3,109

# Expected lamb sales in the next four months - State



Expected lamb sales in the next 4 months (1 July – 31 October)

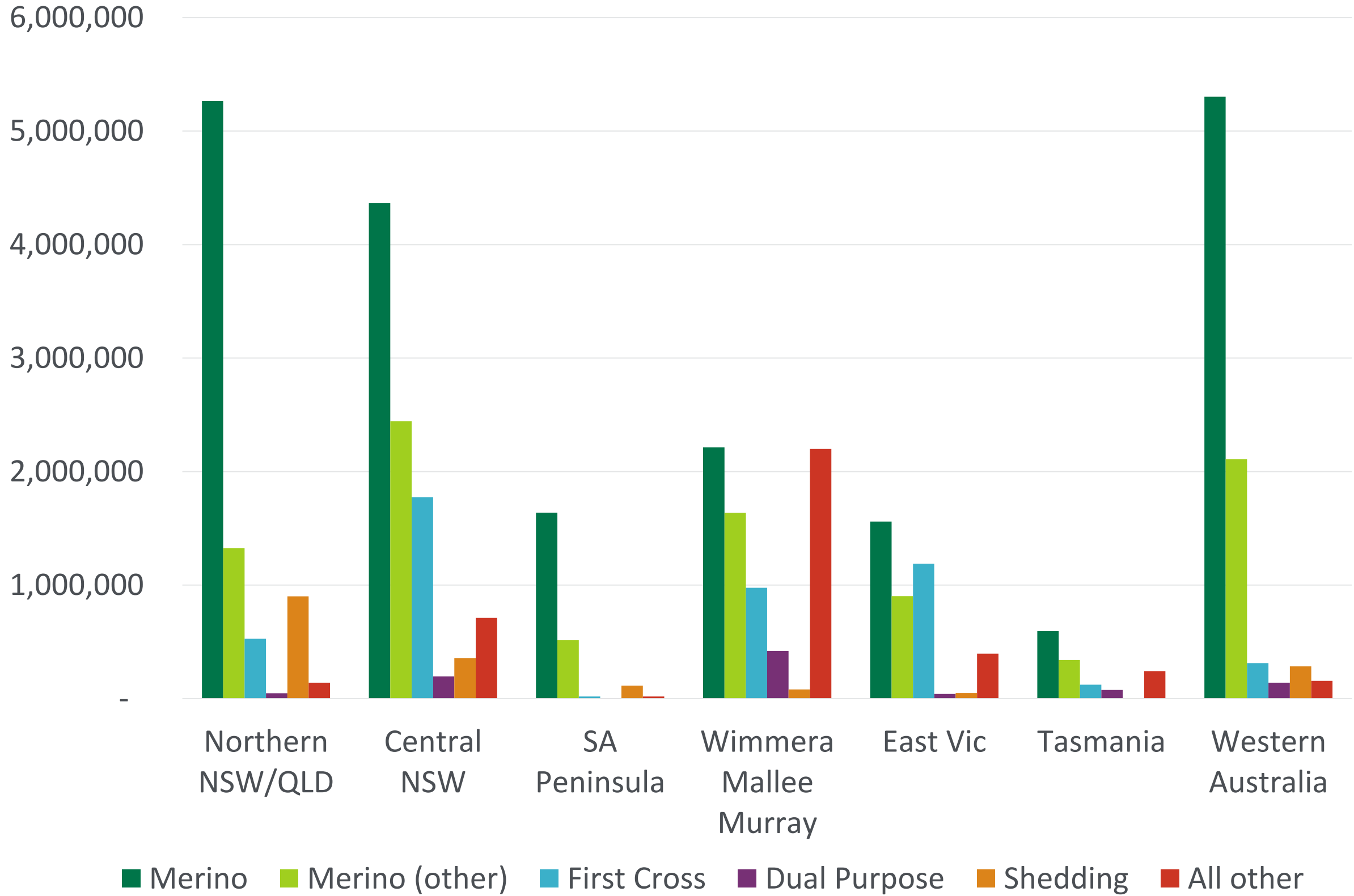


# Results by MLA Reporting Region

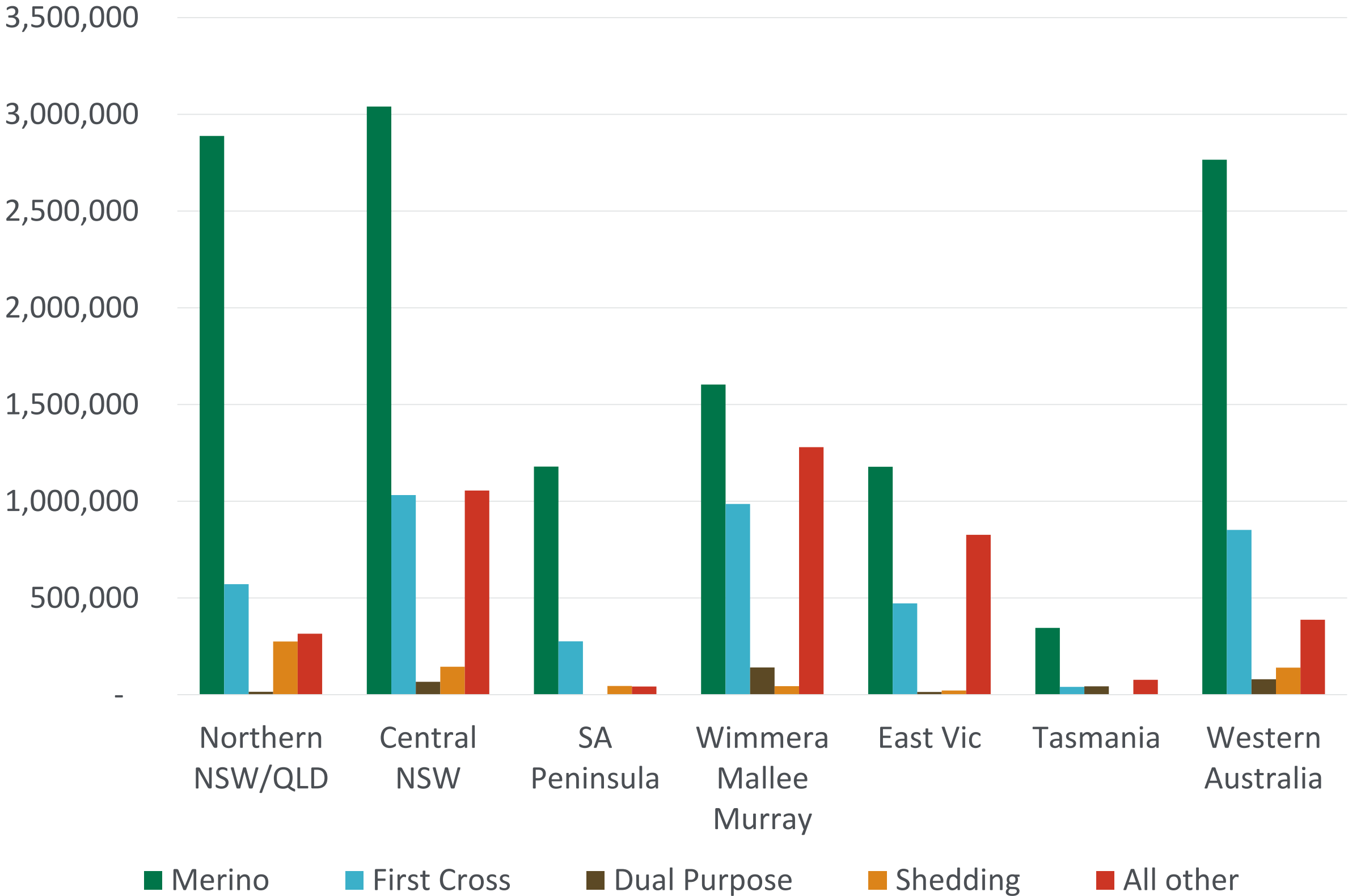
# Ewes on hand and lambs on hand 30 June – MLA reporting regions



Ewes on hand

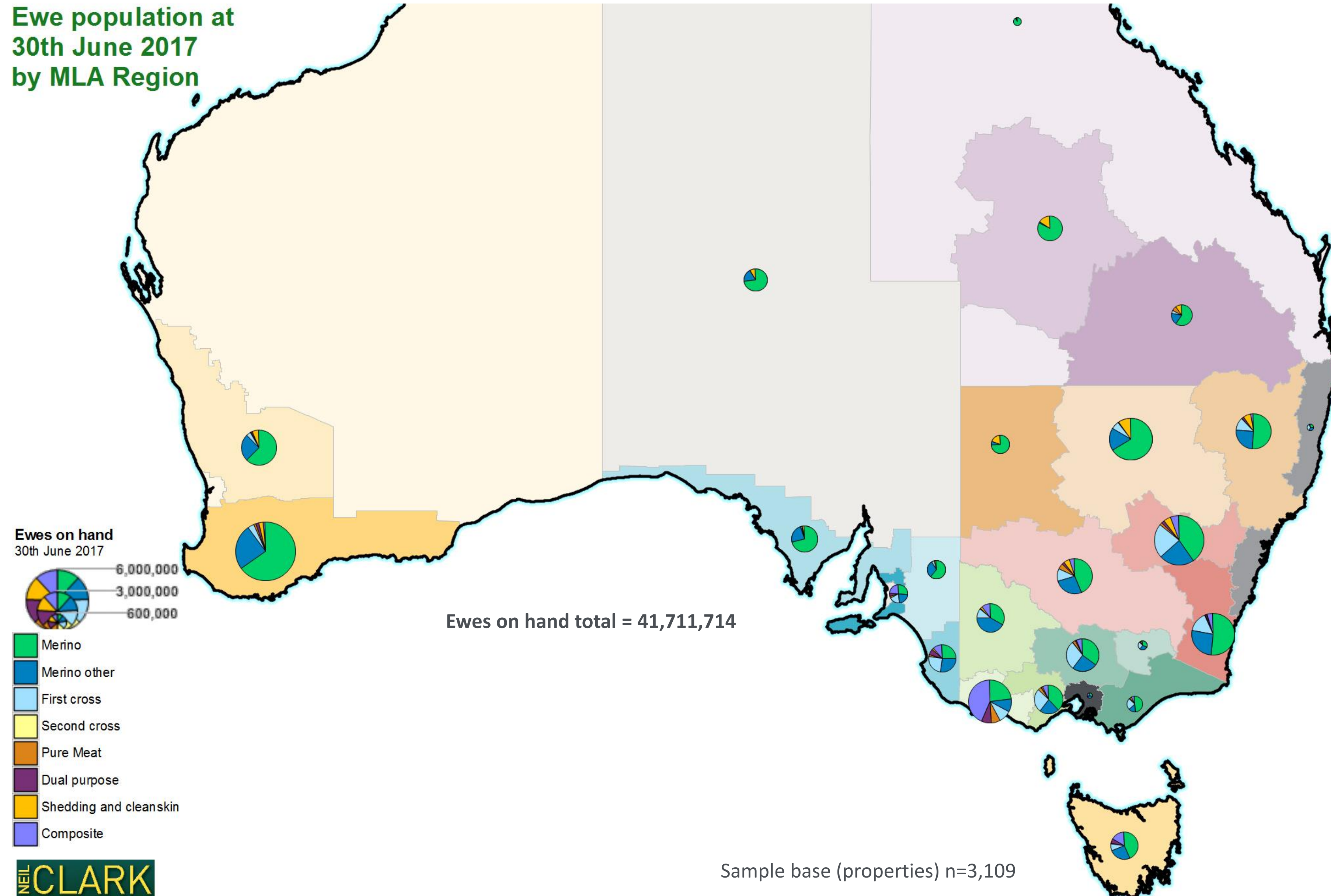


Lambs on hand



# Ewes on hand – MLA reporting regions

Ewe population at  
30th June 2017  
by MLA Region



The breeding ewe population was largest in Southern WA and the Central Western region NSW, with around 5.9 million and 4.3 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 three million head, WA had the largest proportion of Merino's in their flock, at 89% (Merino + Merino other).

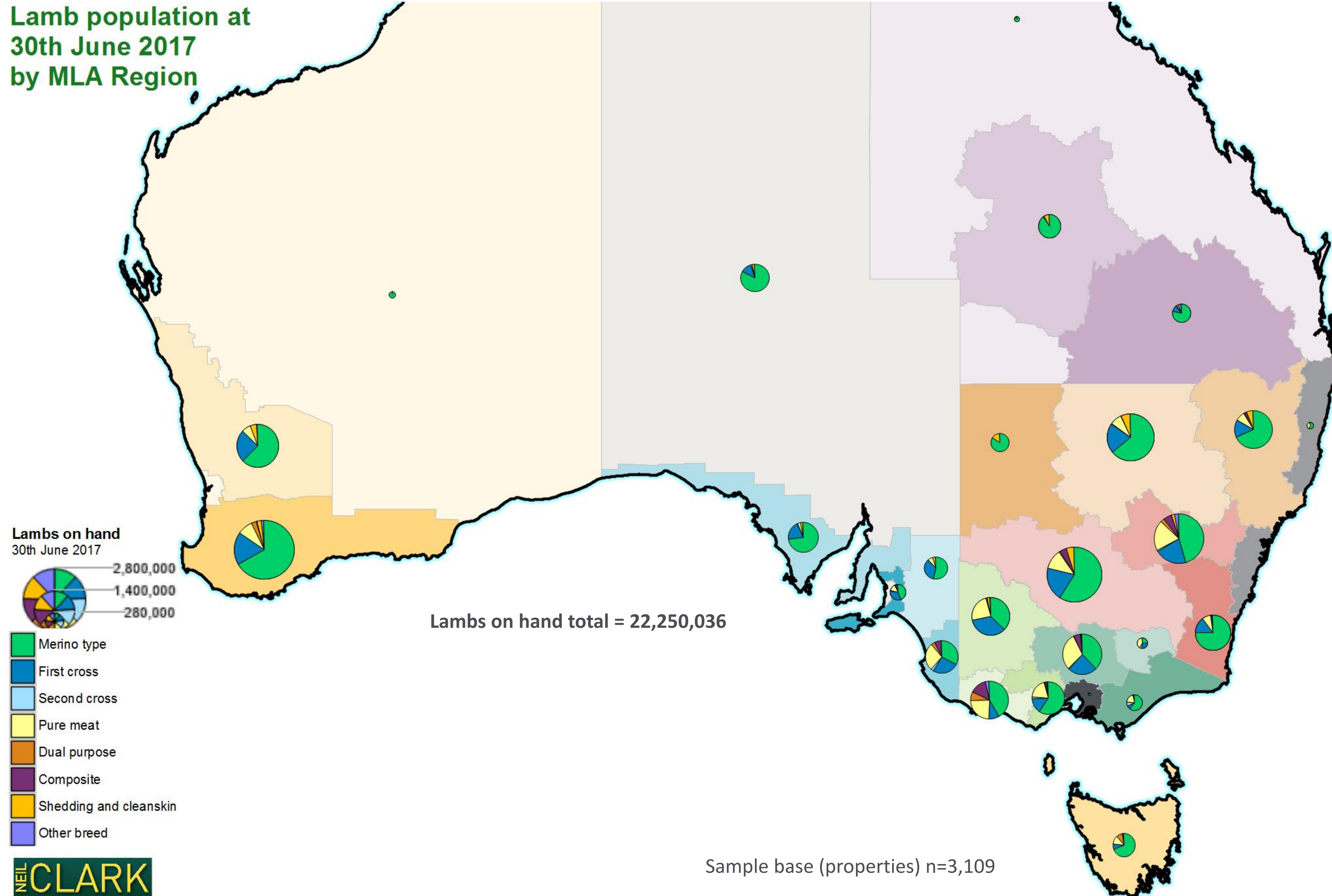
Conversely, the largest percentage of non-Merino ewes was in Victoria, with all non-Merino breeds combining to account for 48% of Victoria's breeding ewe population.

Sample base (properties) n=3,109



# Lambs on hand – MLA reporting regions

Lamb population at  
30th June 2017  
by MLA Region



In line with a larger ewe flock population, the number of lambs on hand on 30 June were greatest in Southern WA, at around 2.7 million head. This was followed by the Murray & Murrumbidgee region, recording around 2.3 million head.

Although Merino's tended to be the most dominant breed of lamb across almost all regions, a large proportion of flocks in Northern and Western regions of Victoria were made up of first cross and pure meat breeds. In Ovens Murray, Wimmera & Mallee and Loddon & Goulburn a combination of first cross and pure meat breeds accounted for 65%, 58% and 54% of total lamb flocks, respectively

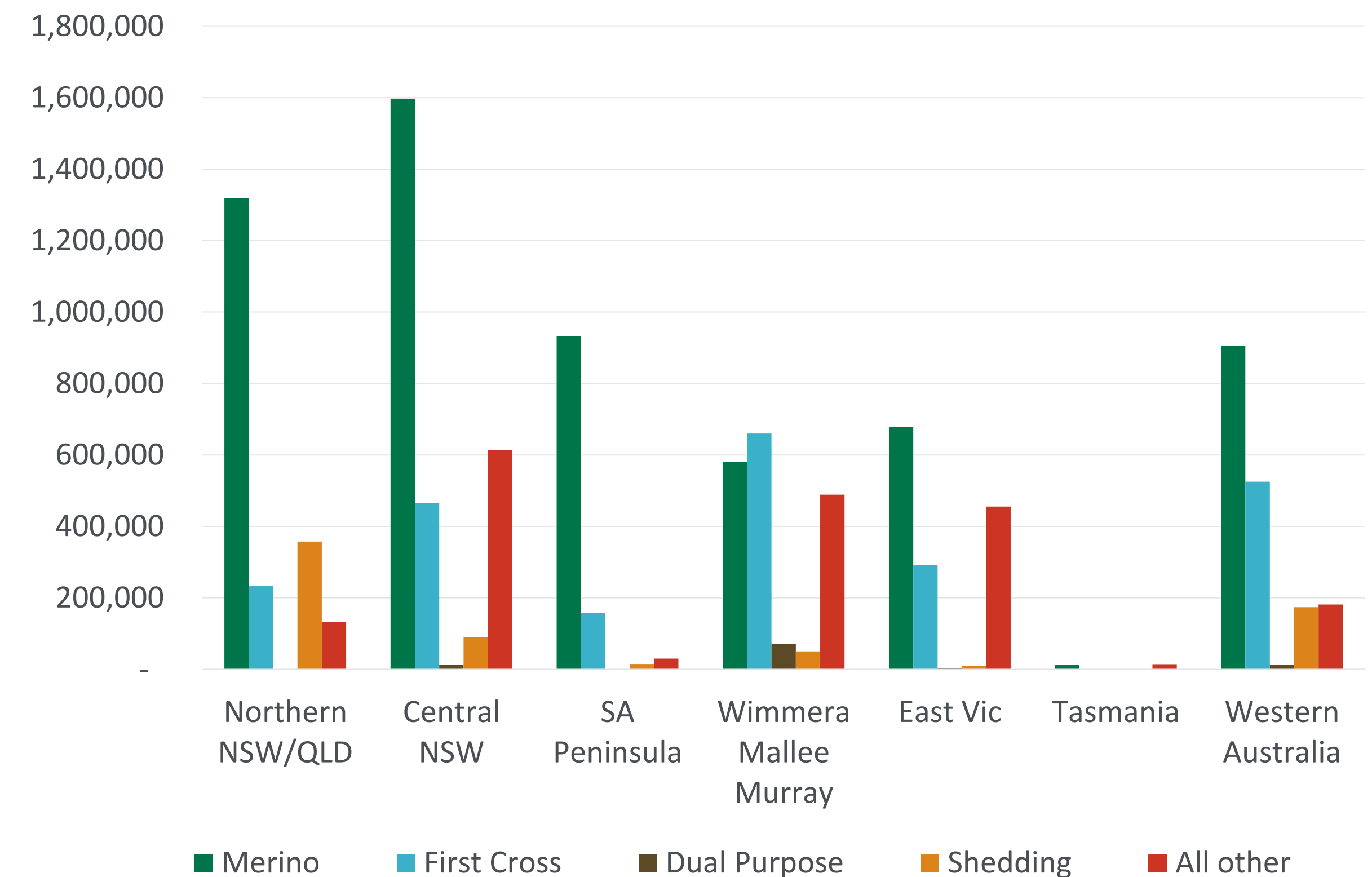
While NSW had the largest Merino lamb flock nationally at around 5 million head, Merino's accounted for 86% of the Queensland lamb flock at 882,111 head. This was underpinned a significant proportion of Merino lambs coming through in Central Queensland

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

Lambs marked in the past 4 months 1 March – 30 June

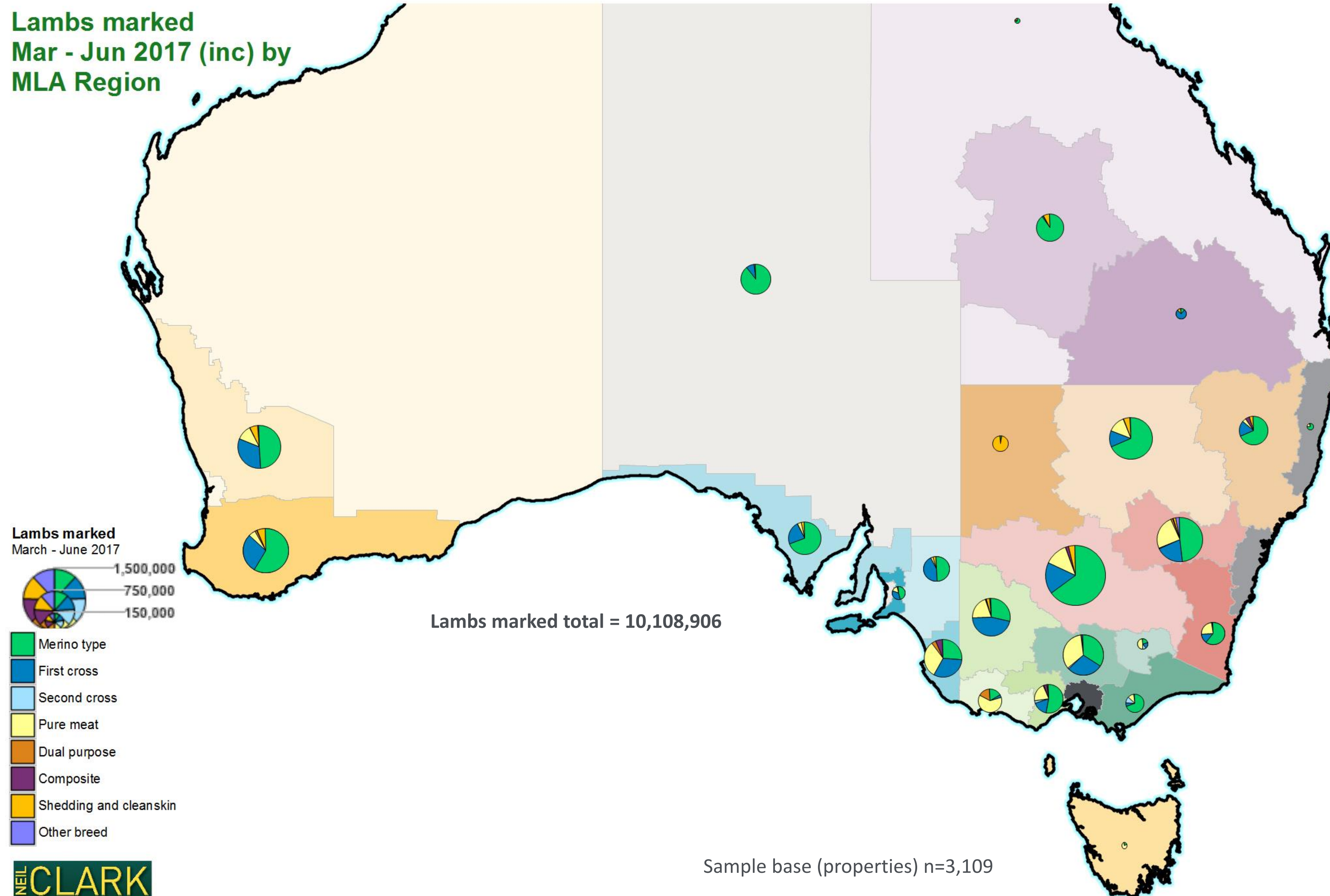


Ewes joined to produce those lambs



# Lambs marked in the past four months

Lambs marked  
Mar - Jun 2017 (inc) by  
MLA Region



Around 10.1 million winter lambs were marked over the past four months. Murray & Murrumbidgee, Central West and Southern WA accounted for a large proportion of new lambs, with markings of 1.4 million, 867,000 and 864,000 head respectively.

Although Merino lambs made up a large proportion of new lambs marked across Australia, Shedding & Cleanskin lambs dominated markings in the Western Division of NSW.

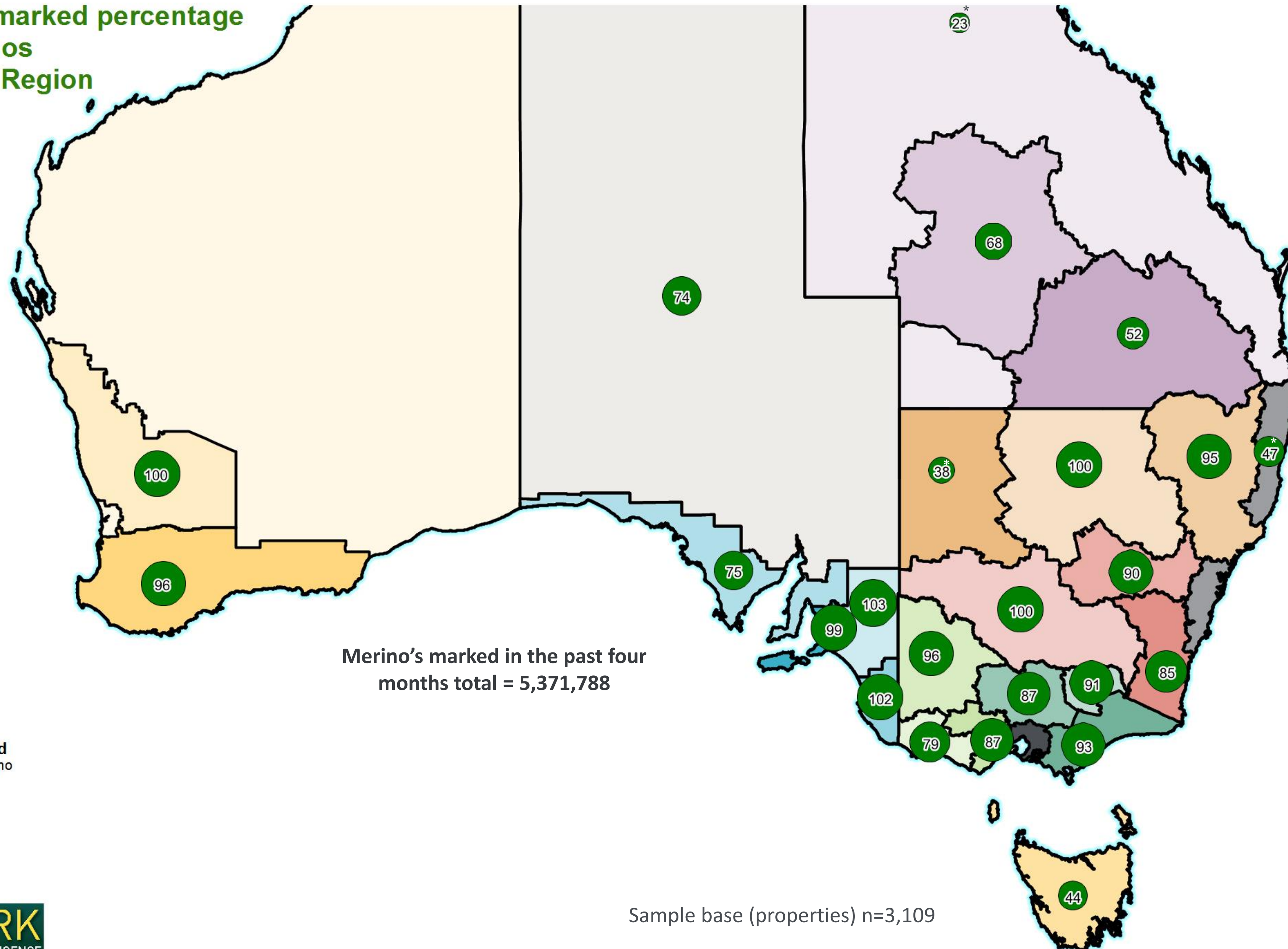
Lambs marked  
March - June 2017

1,500,000  
750,000  
150,000

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

# Merino marking rates - MLA reporting regions

Lambs marked percentage of Merinos by MLA Region



Merino's marked in the past four months total = 5,371,788

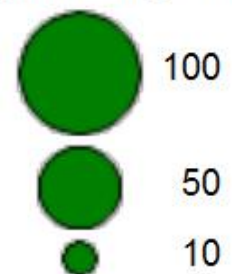
Sample base (properties) n=3,109

The highest Merino marking rate was recorded in the Murray lands region of SA (103%), followed by 102% in the South East of SA. Conversely, the lowest marking rates were recorded in Tasmania and Southern Queensland with 44% and 52%, respectively. (Western Division, Hunter & Northern Extra and Central Queensland Extra recorded lower marking rates, but we from a low population of respondents – denoted by \*)

On a state basis, Tasmania had the lowest marking rate at 44%, while WA and NSW recorded the highest Merino marking rates of 97% and 96%, respectively.

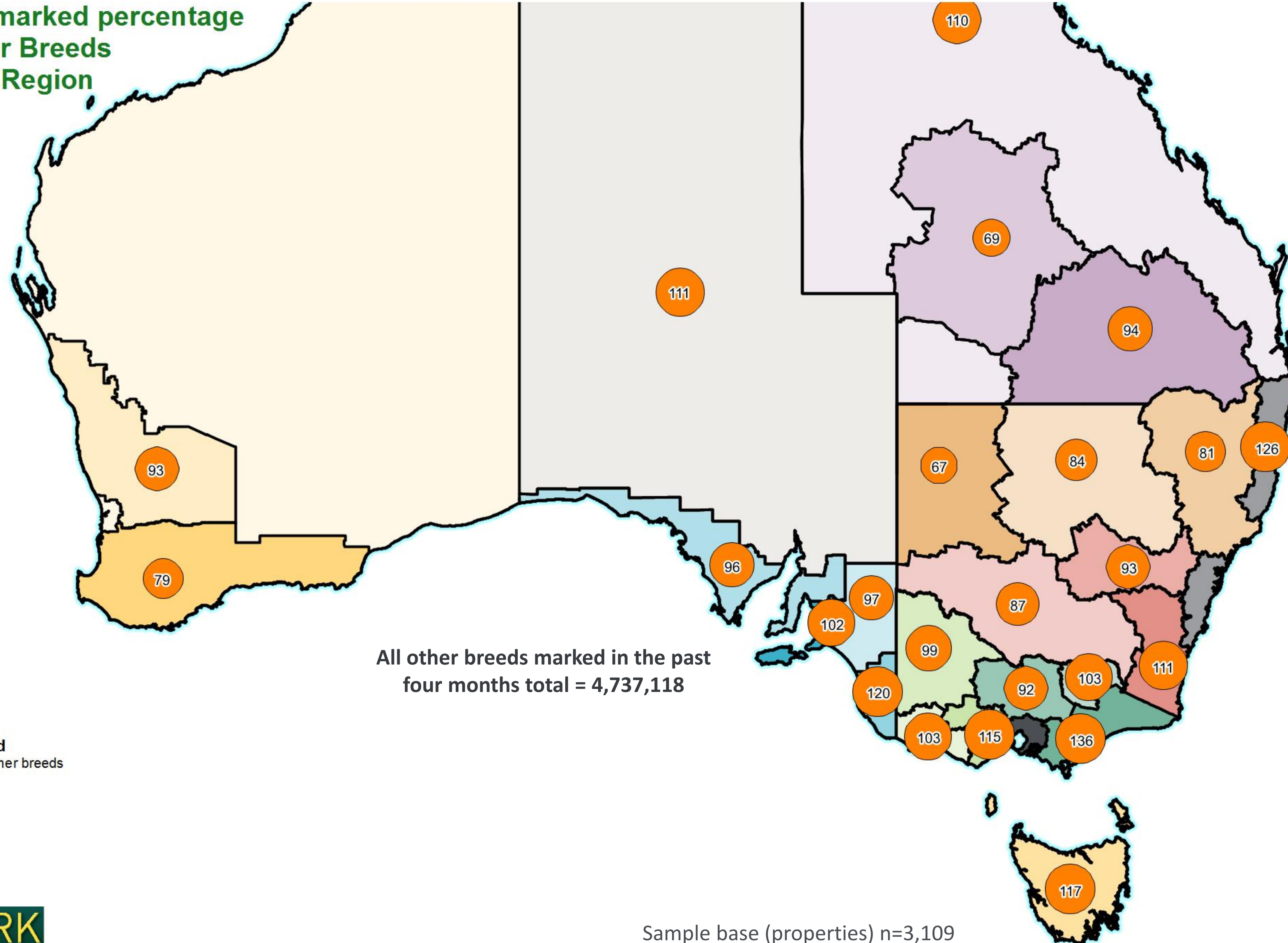
**Note:** These marking rates are for the period between 1 March and 30 June 2017 and are not an accurate representation of annual marking rates.

Lambs marked percentage Merino



# All other breed marking rates - MLA reporting regions

Lambs marked percentage  
All Other Breeds  
by MLA Region



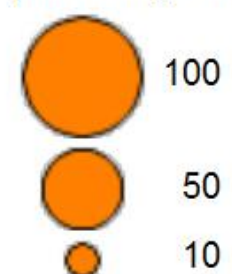
All other breeds marked in the past four months total = 4,737,118

The Gippsland region of Victoria and South East SA recorded the highest marking rates for non-Merino lambs at 136% and 120%, respectively. These were both consistent with strong marking rates across both states, with Victoria averaging 100% and SA averaging 109%.

On a state basis, Tasmania recorded the highest non-merino marking rates at 117%, a stark contrast from the 44% Merino marking rate reported over the same period.

**Note:** These marking rates are for the period between 1 March 2017 and 30 June 2017. 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.

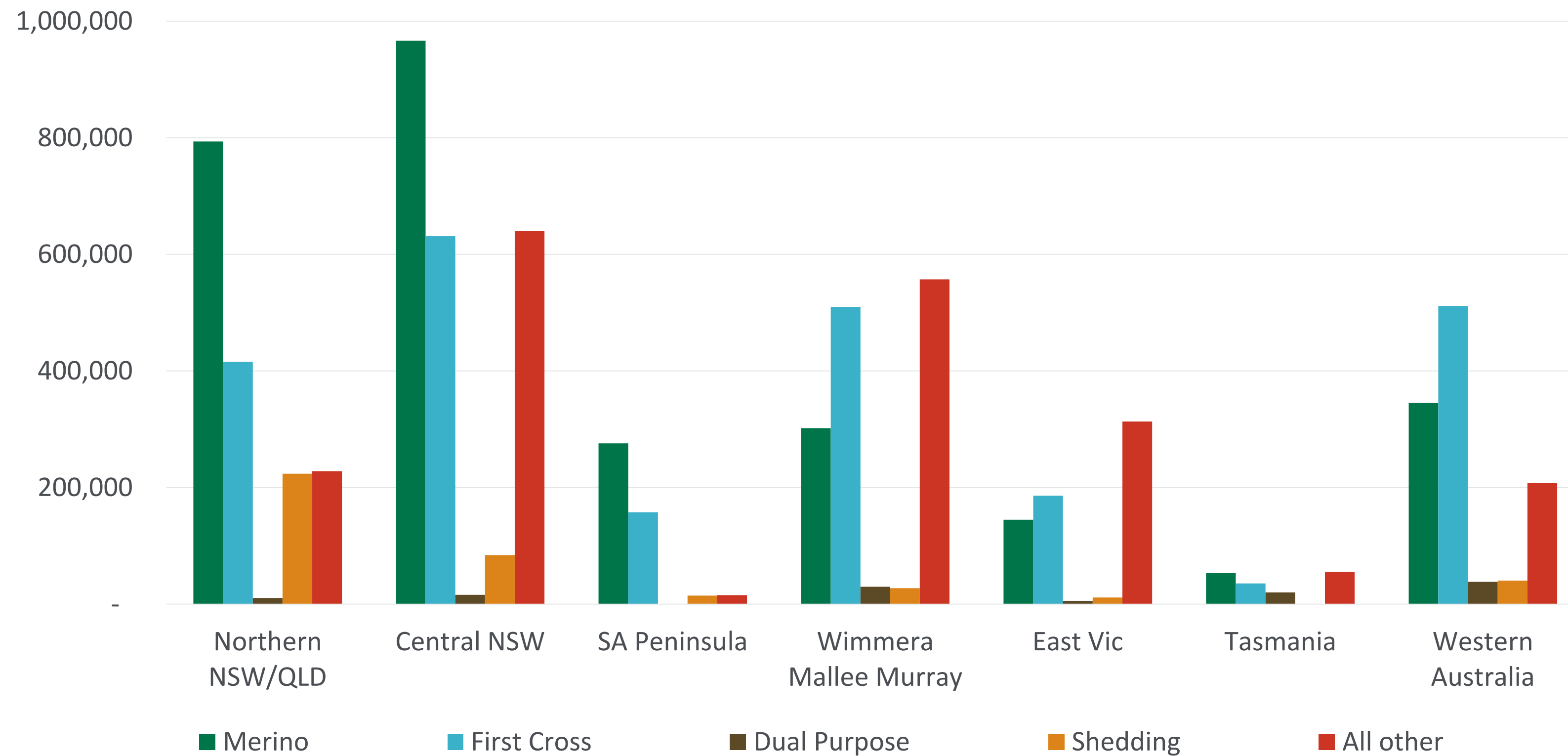
Lambs marked percentage all other breeds



# Expected lamb sales in next four months 1 July – 31 October

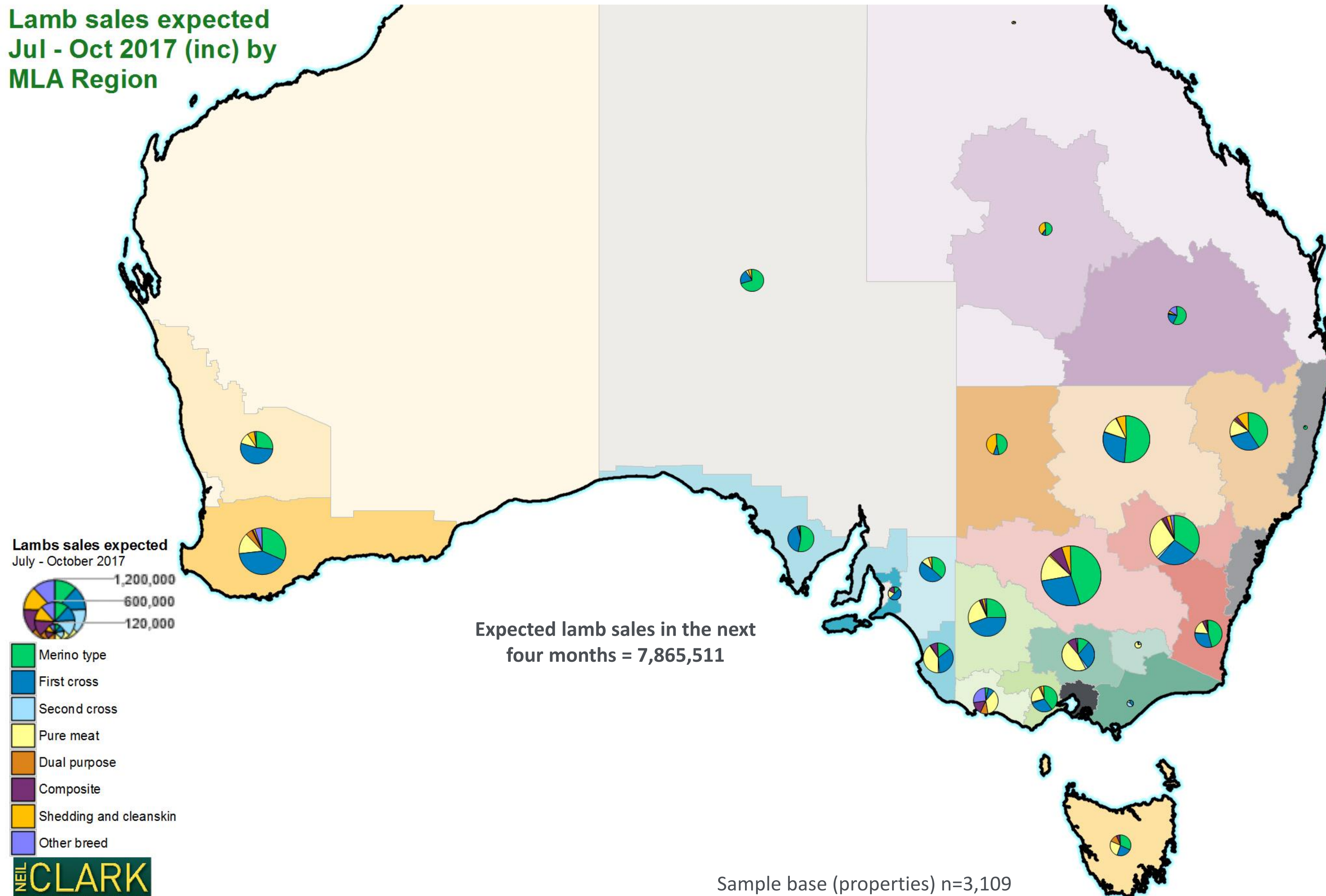
## – MLA reporting regions

Expected lamb sales in the next 4 months



# Expected lamb sales in next four months

Lamb sales expected Jul - Oct 2017 (inc) by MLA Region



Over the next four months (1 July to 31 October), most lamb sales are expected to occur in the Murray & Murrumbidgee region of NSW, with the sale of Merino's and first cross lambs combining to account for more than 70% of the lamb sales in the region.

Although Merino's are expected to dominate NSW lamb sales over the next four months (1 July to 31 October), first crosses and pure meat breads combined to account for 63% of lamb sales in Victoria, 59% in WA and 54% in SA.

NSW is expected to account for 48% of total lamb sales over the next four months, with more than 2.8 million lambs expected to be on offer from the North West, Central West and Murray & Murrumbidgee regions combined. This is followed by Victoria, WA and SA, accounting for 18%, 15% and 14% of total lamb sales, respectively.

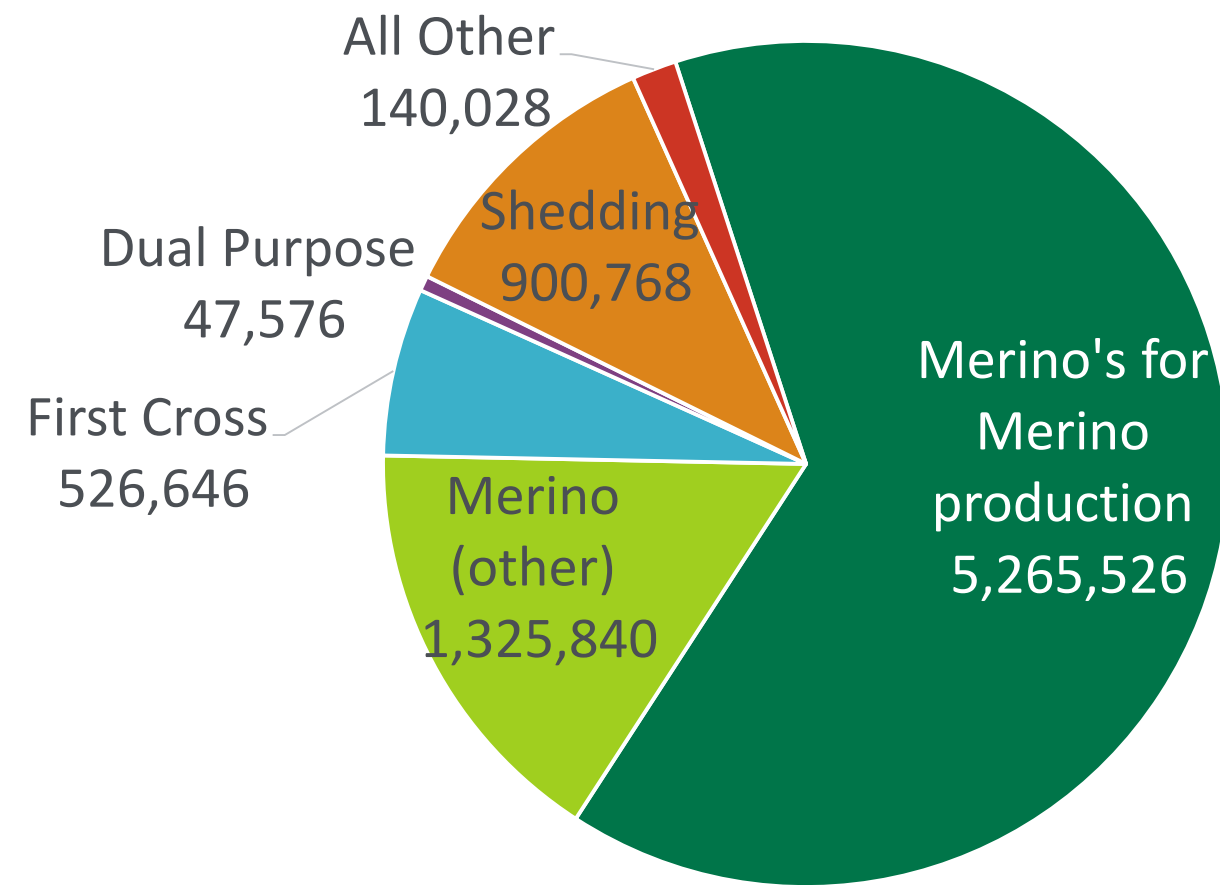
Sample base (properties) n=3,109

# Regional Snapshots

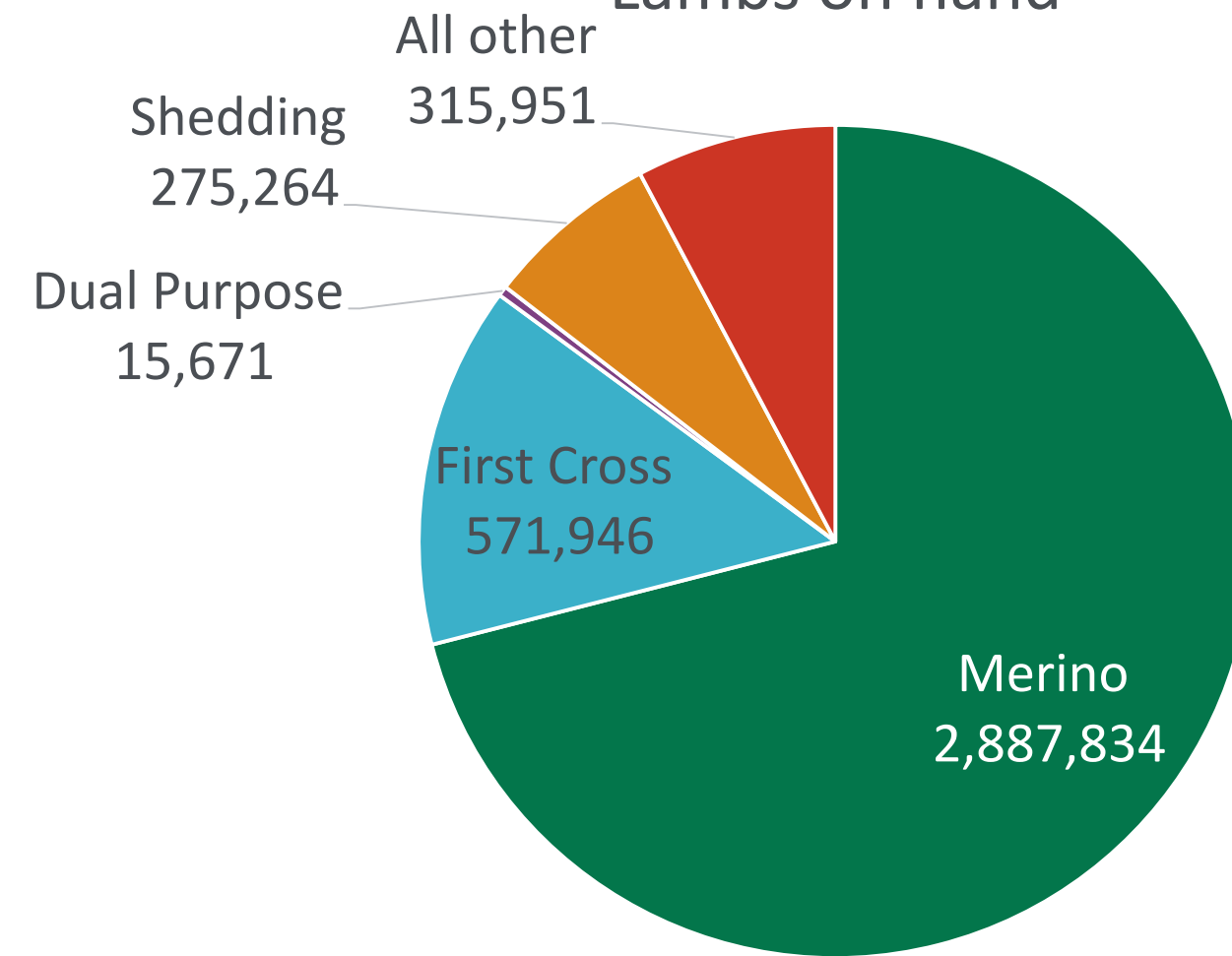


# Northern NSW/QLD

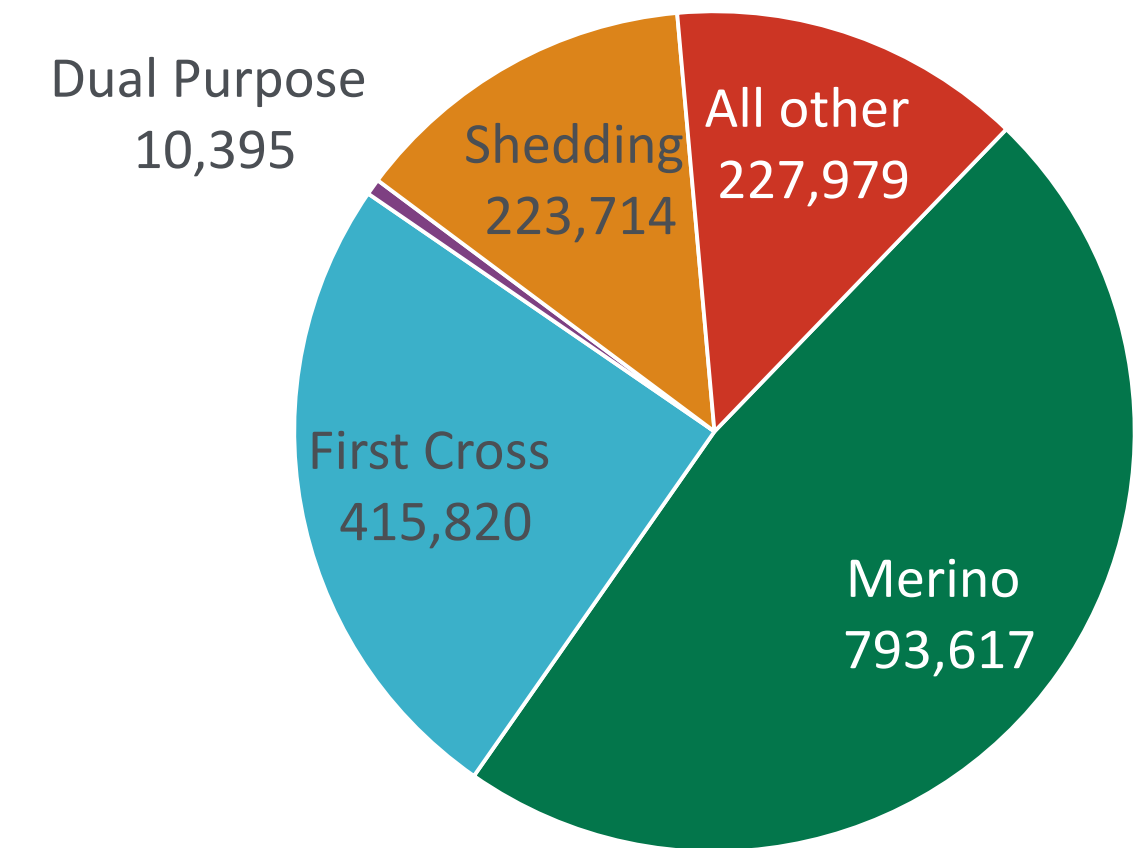
Breeding ewes on hand



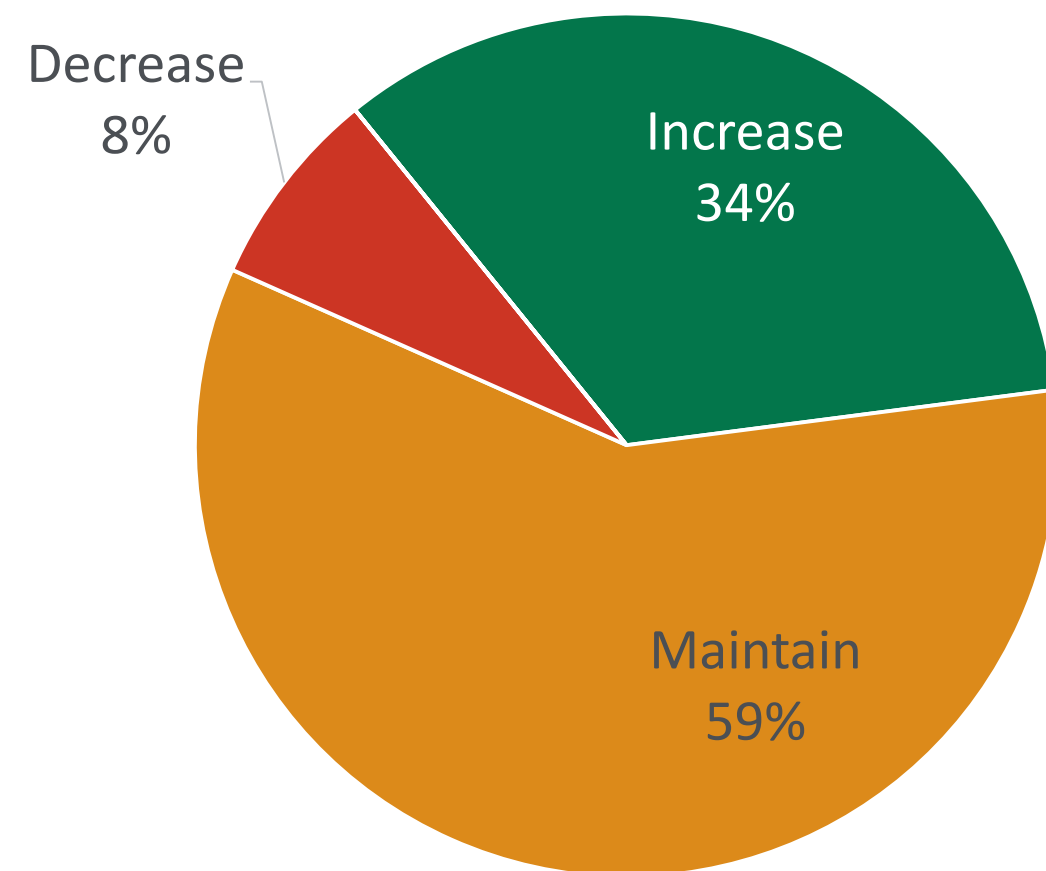
Lambs on hand



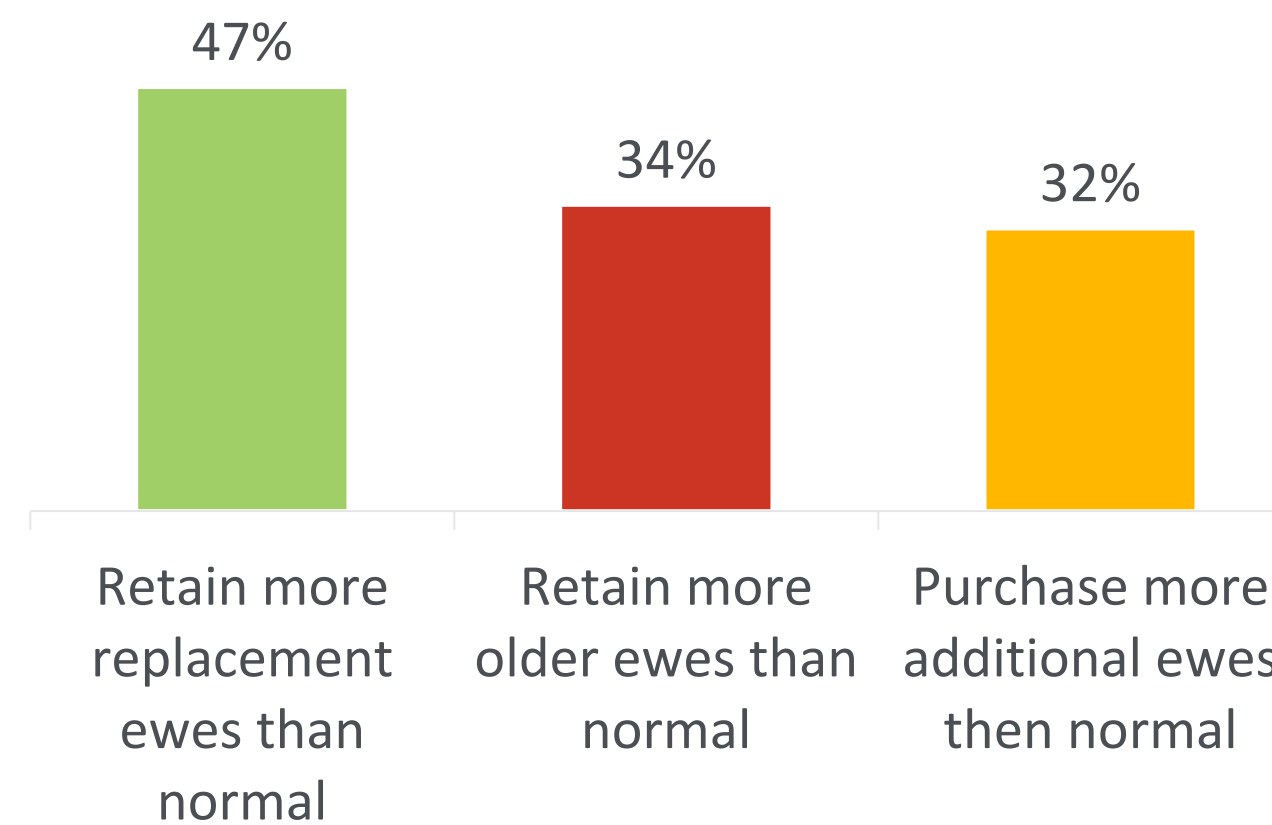
Lamb sales in next 4 months



Flock intentions



How to achieve increase

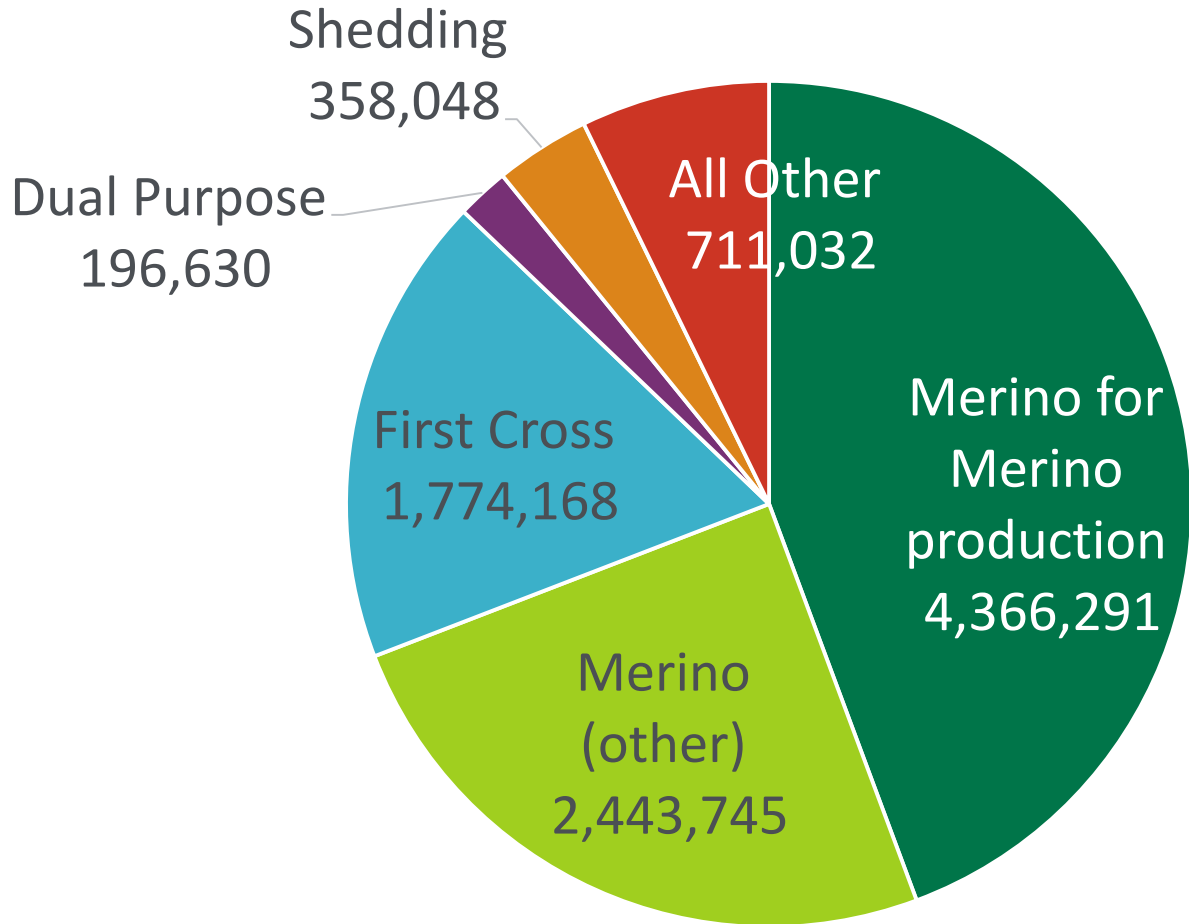


Totals

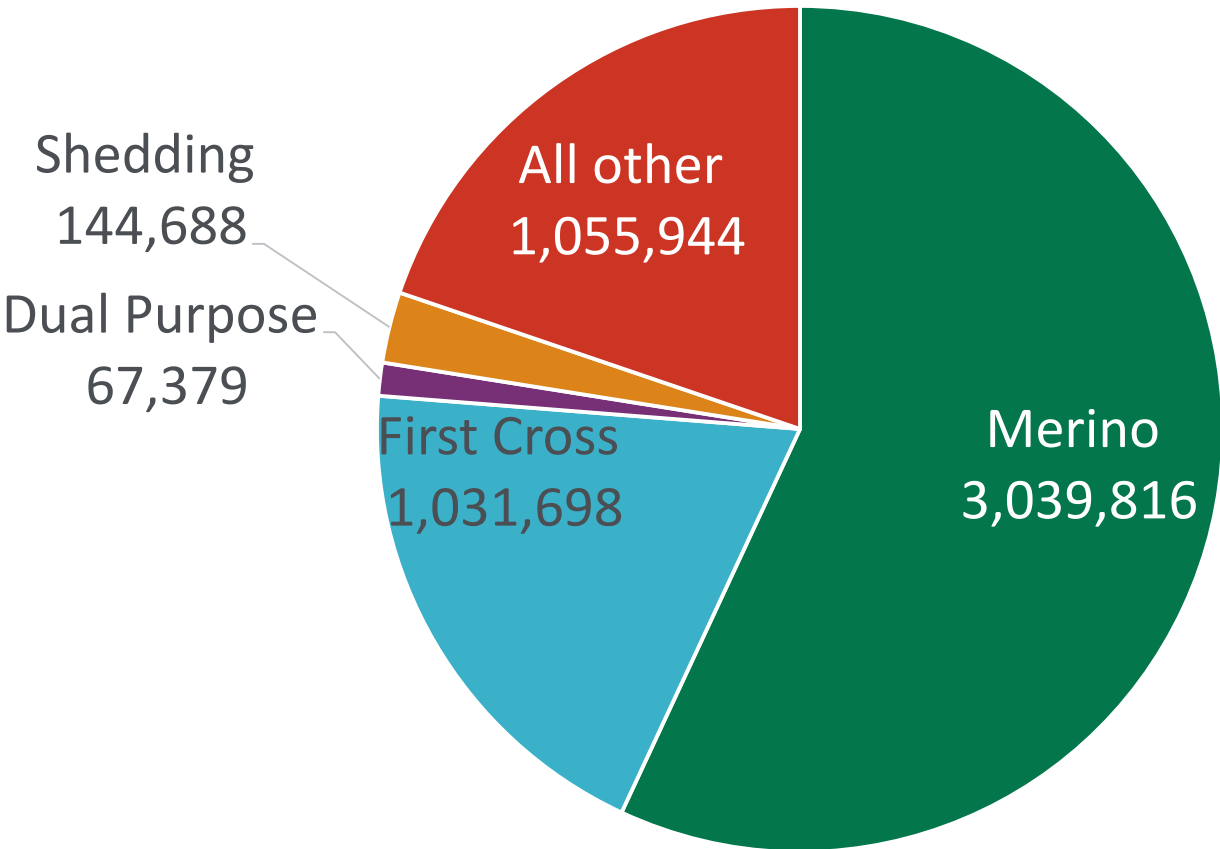
Breeding ewes on hand	8,206,384
Lambs on hand	4,066,665
Expected lamb sales in the next 4 months	1,671,526
Lambs marked in the past 4 months (1 Mar – 30 Jun)	1,678,954
Number of ewes joined to produce marked lambs	2,041,677

# Central NSW

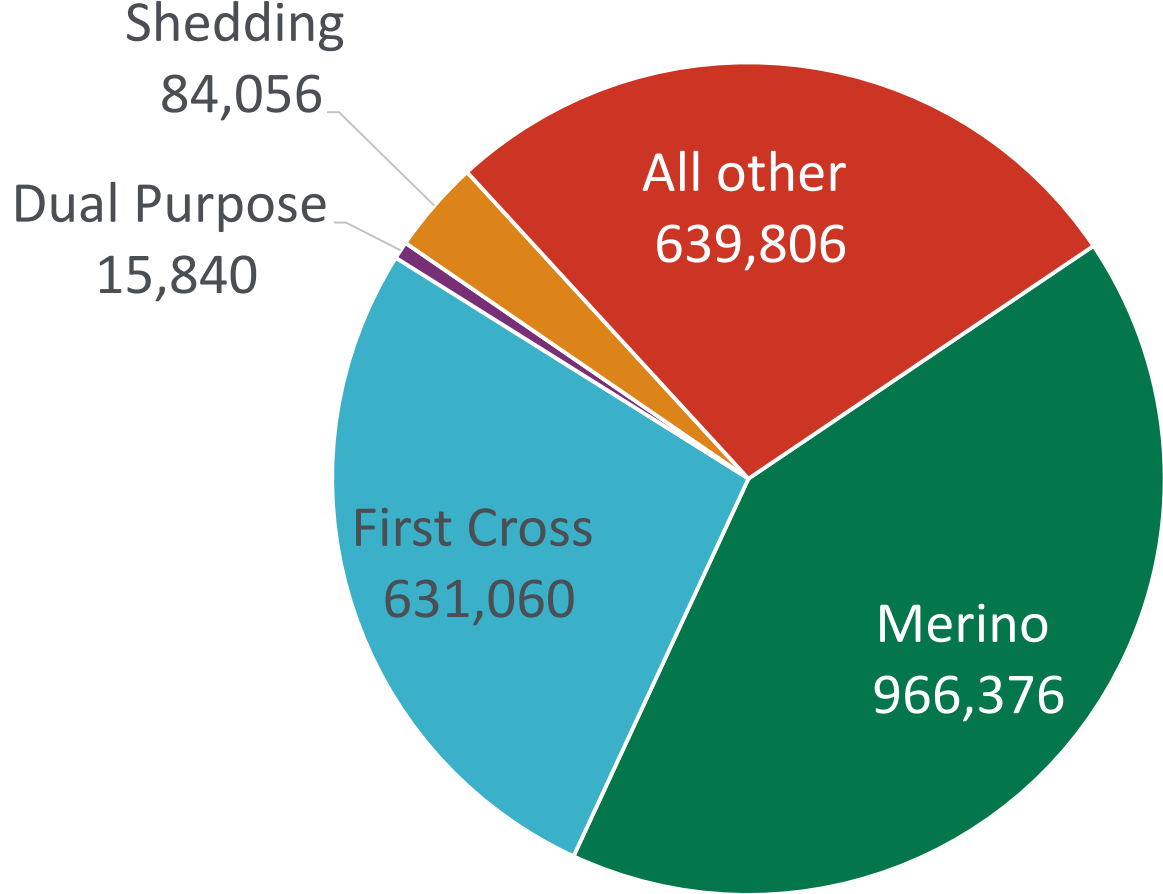
Breeding ewes on hand



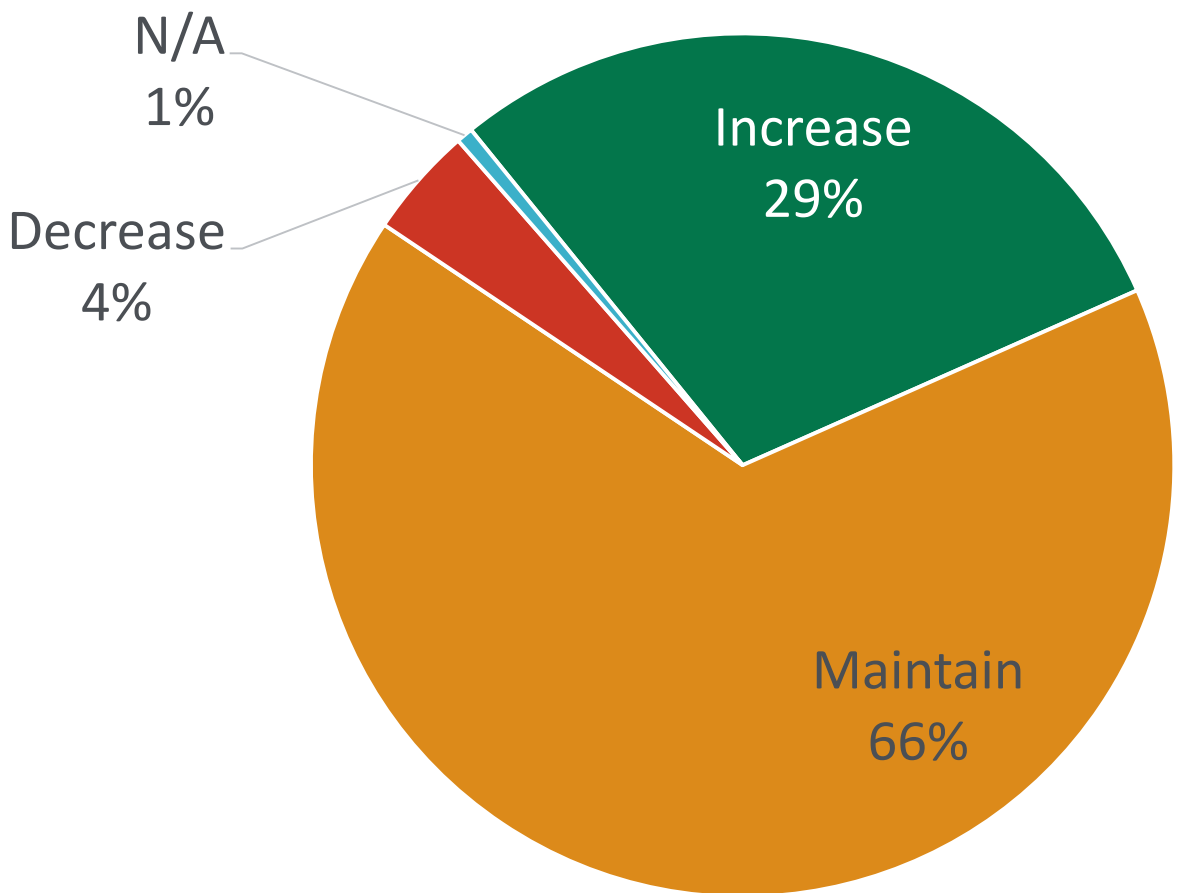
Lambs on hand



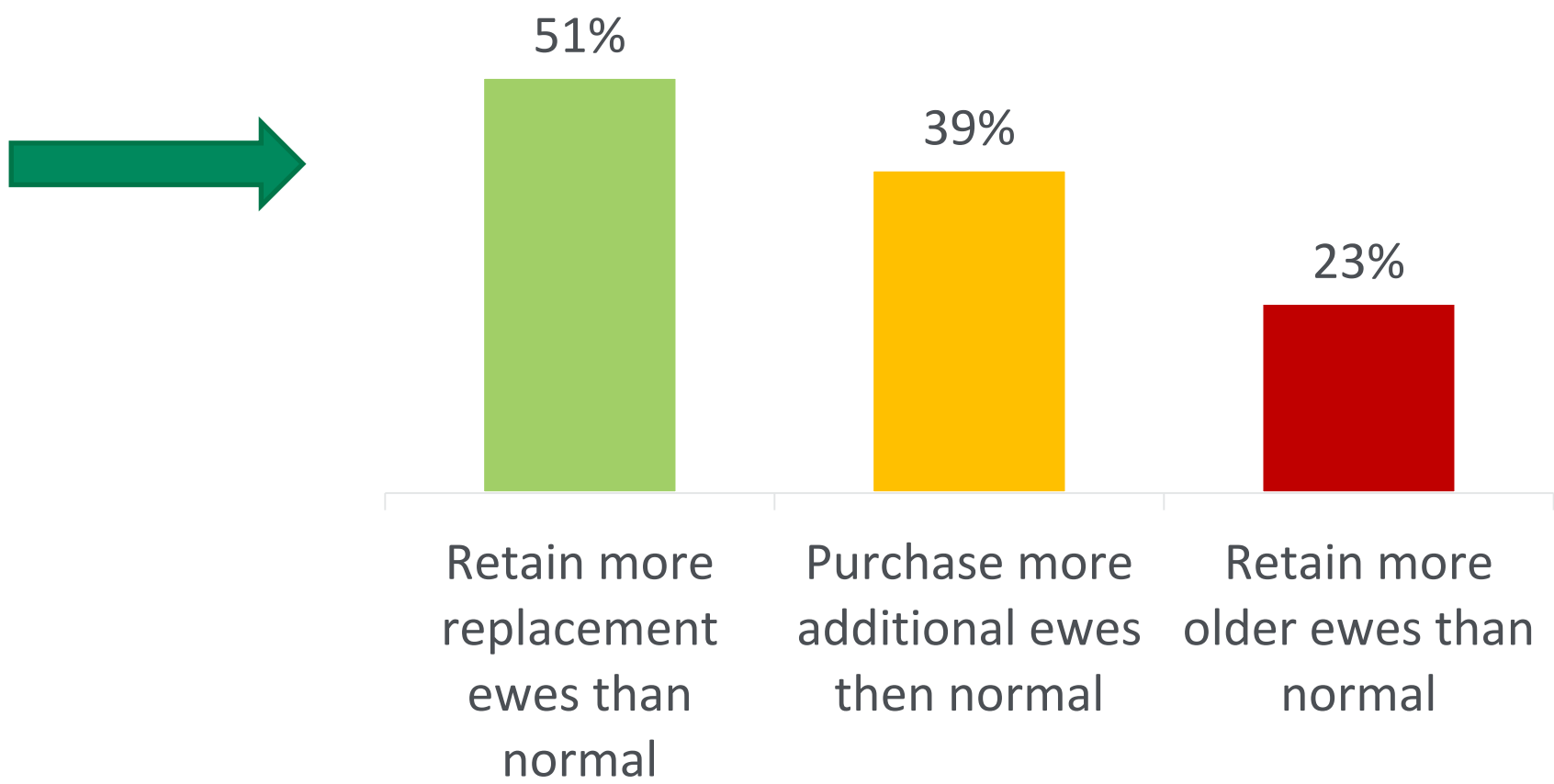
Lamb sales in next 4 months



Flock intentions



How to achieve increase

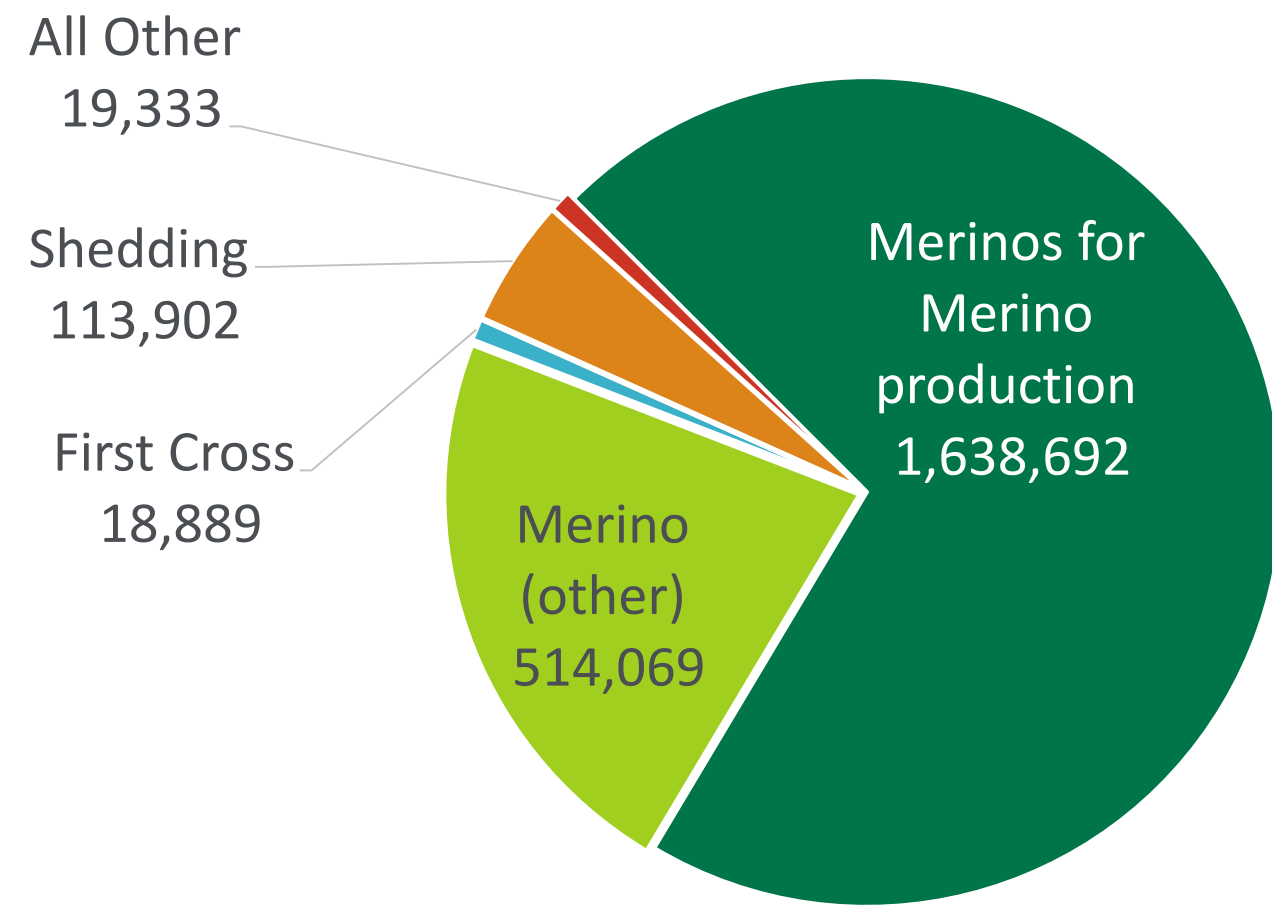


Totals

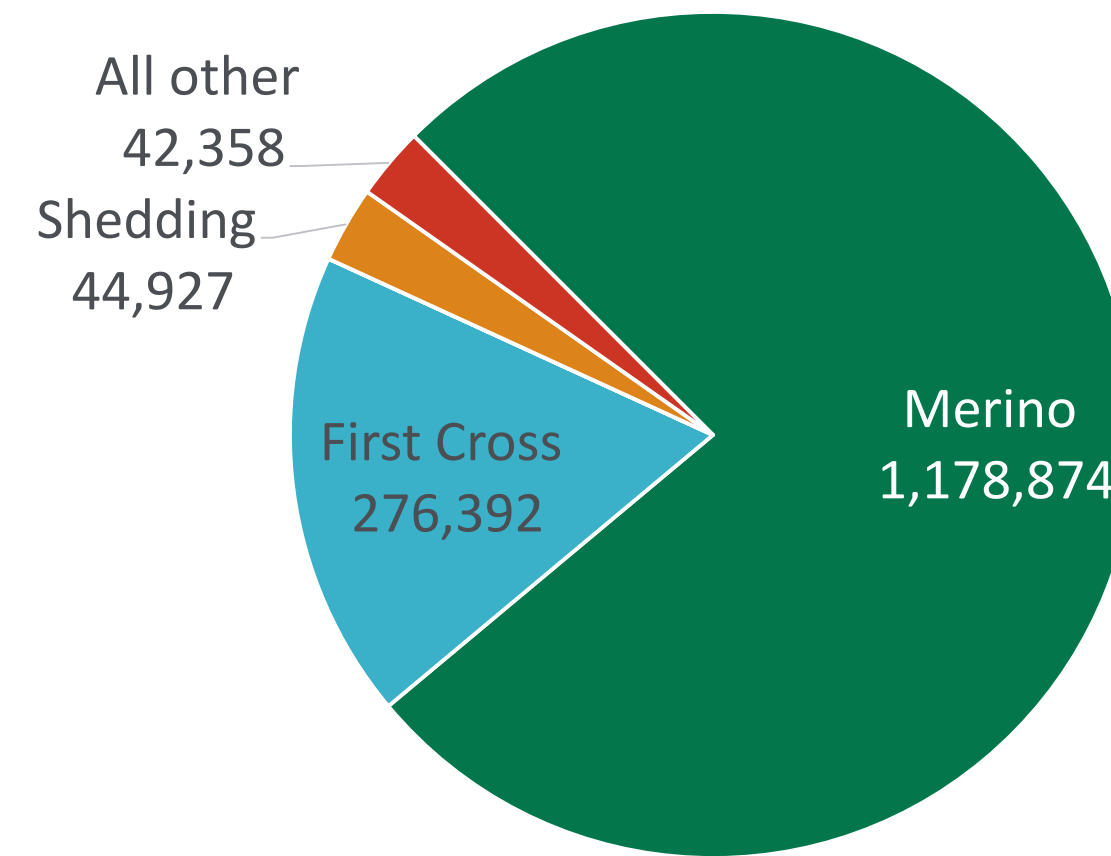
Breeding ewes on hand	9,849,914
Lambs on hand	5,339,524
Expected lamb sales in the next 4 months	2,337,137
Lambs marked in the past 4 months (1 Mar – 30 Jun)	2,592,977
Number of ewes joined to produce marked lambs	2,779,739

# SA Peninsula

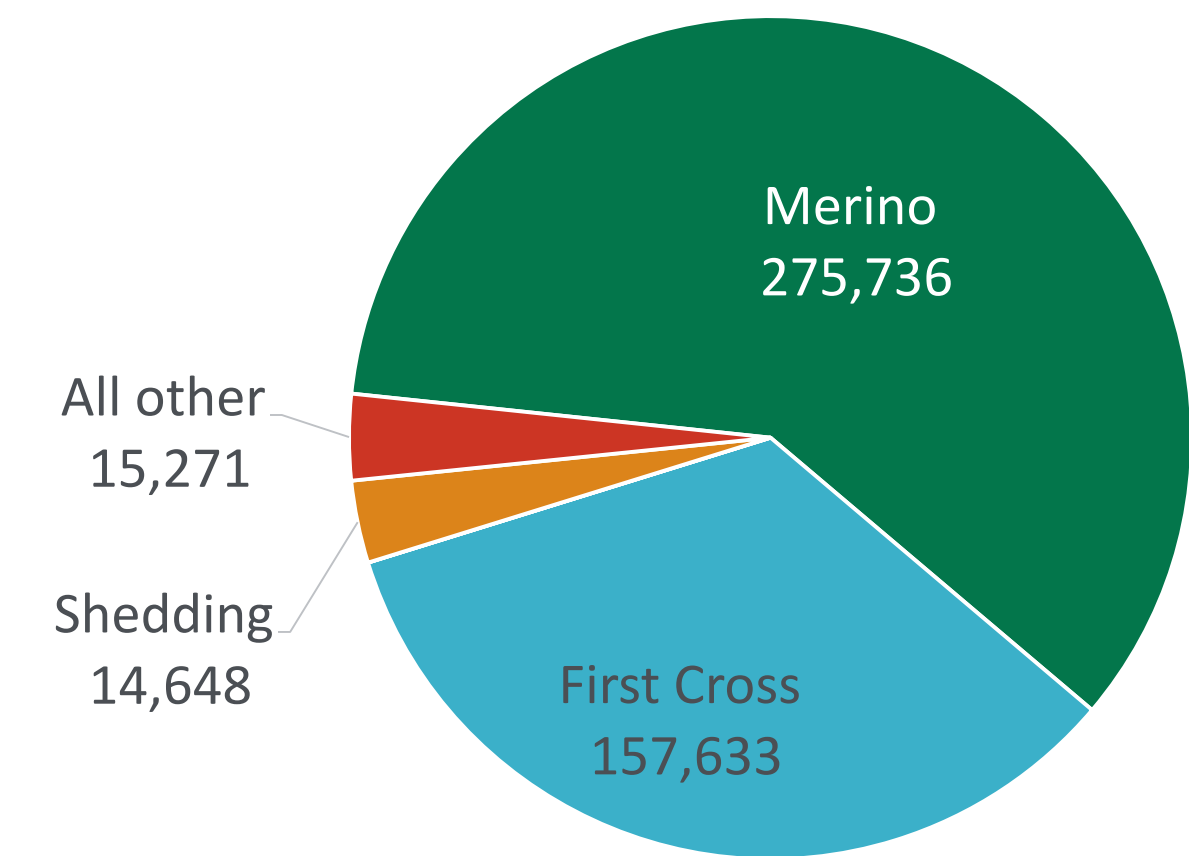
Breeding ewes on hand



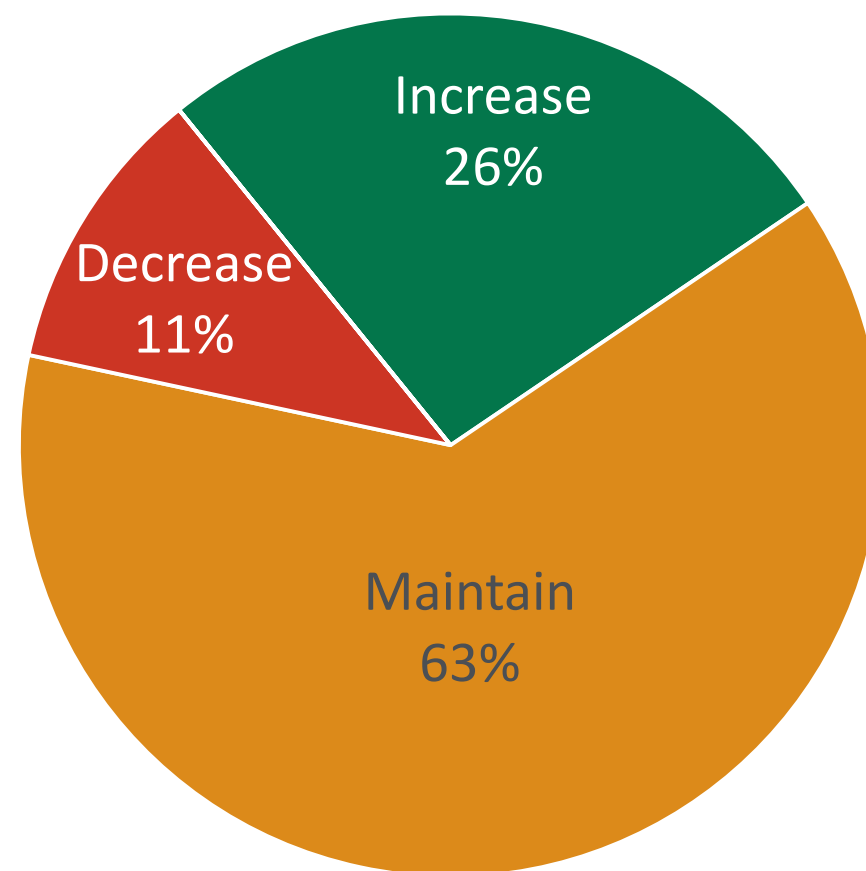
Lambs on hand



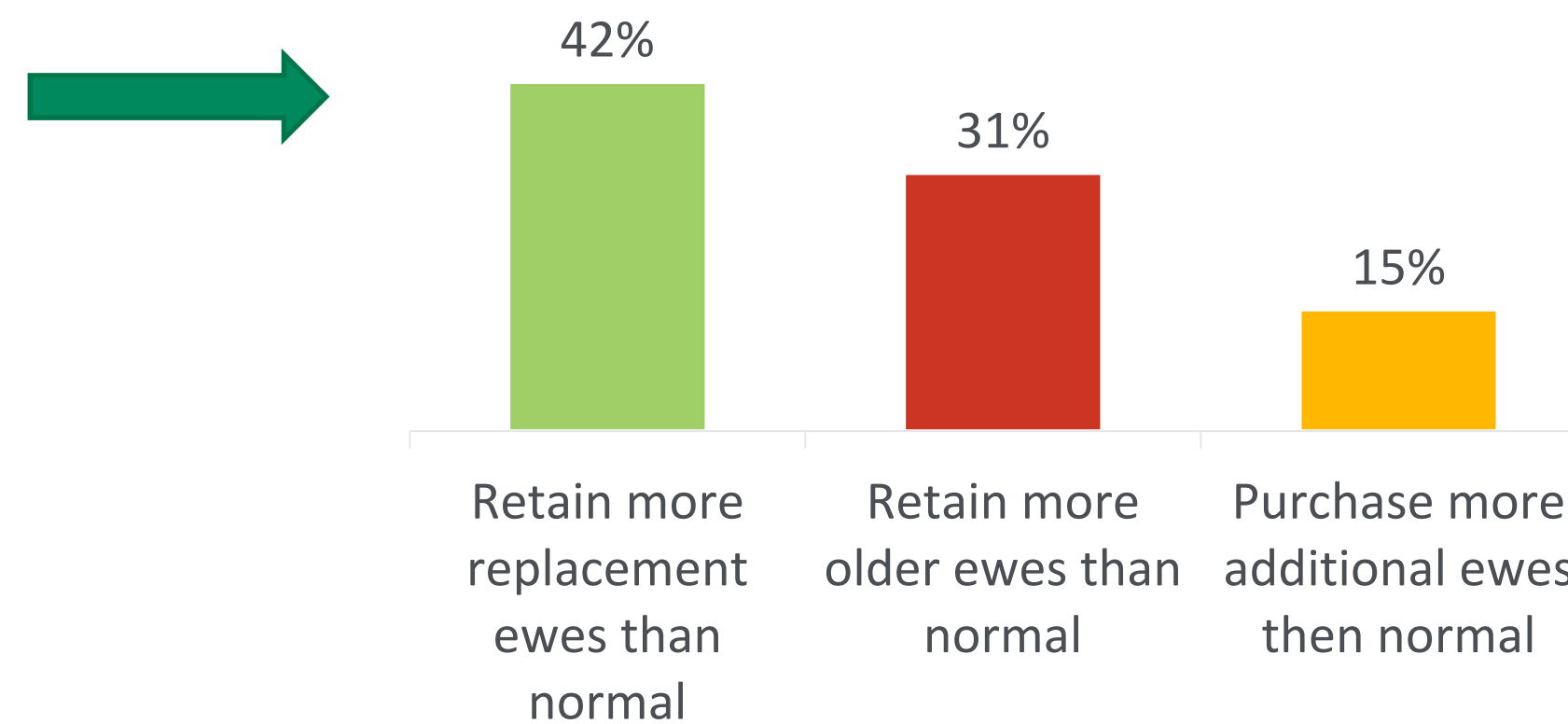
Lamb sales in next 4 months



Flock intentions



How to achieve increase

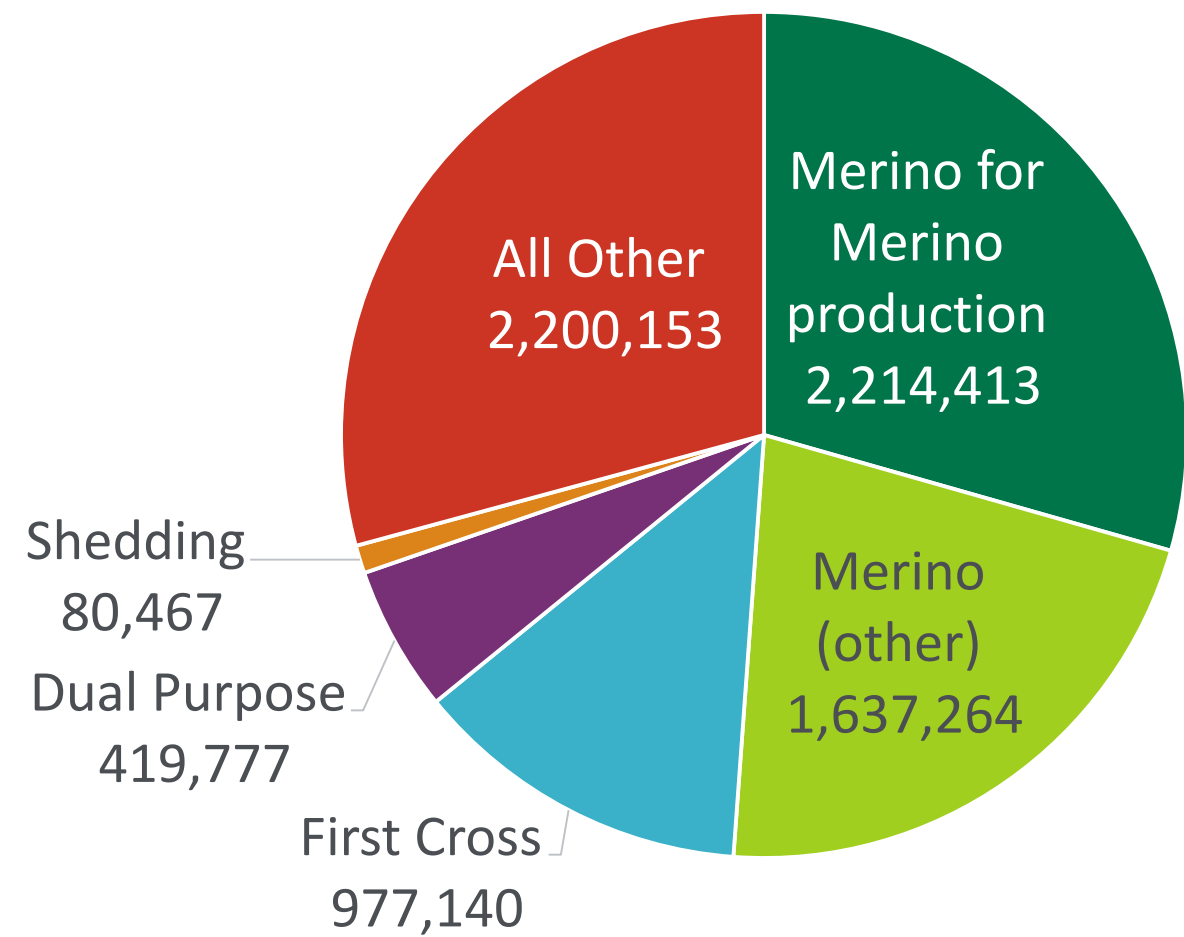


Totals

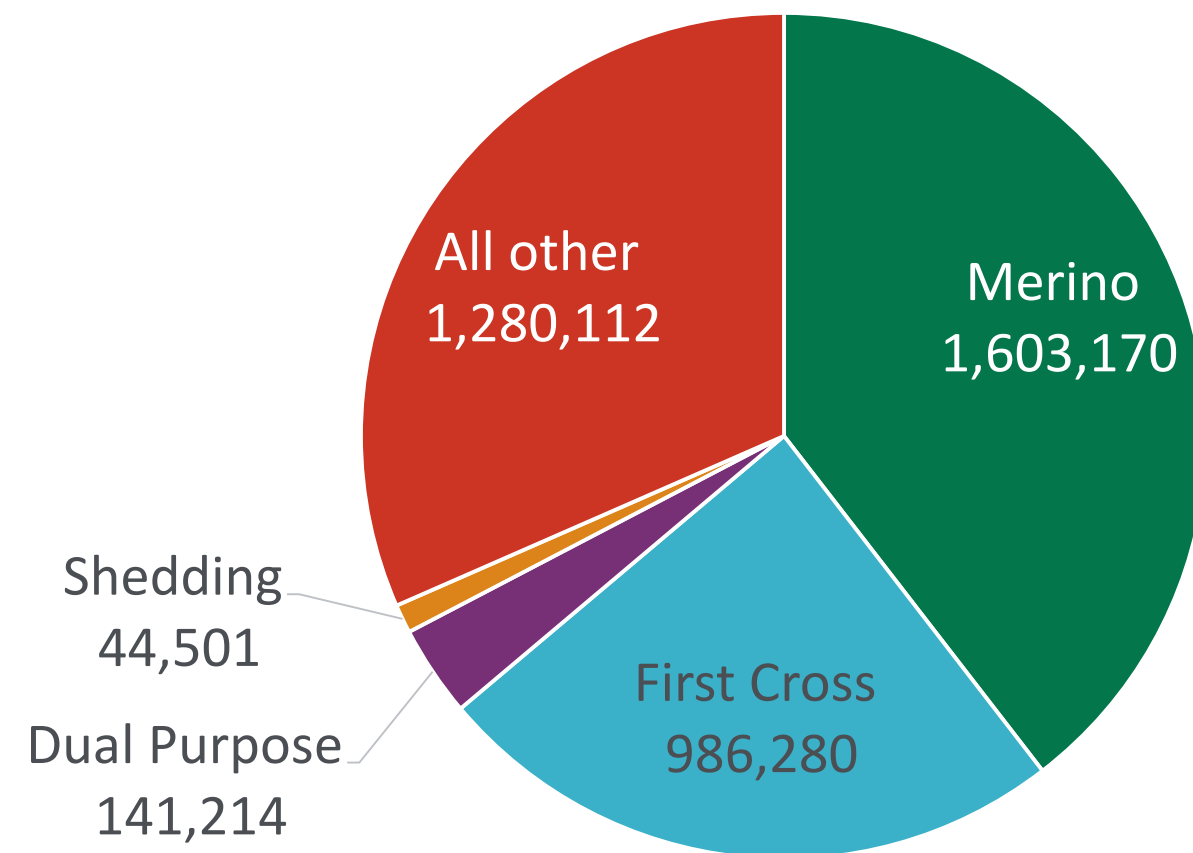
Breeding ewes on hand	2,305,738
Lambs on hand	1,542,550
Expected lamb sales in the next 4 months	463,287
Lambs marked in the past 4 months (1 Mar – 30 Jun)	892,192
Number of ewes joined to produce marked lambs	1,134,148

# Wimmera Mallee Murray

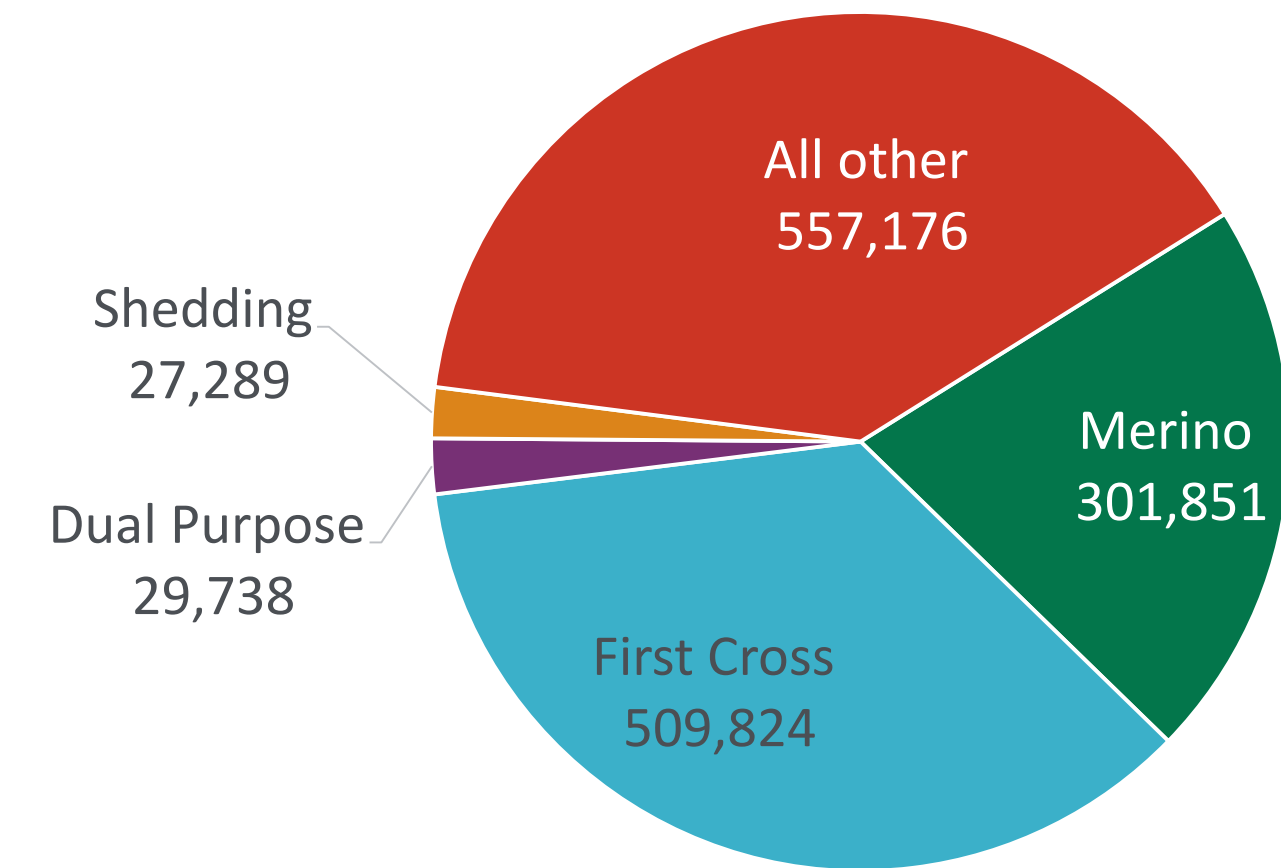
Breeding ewes on hand



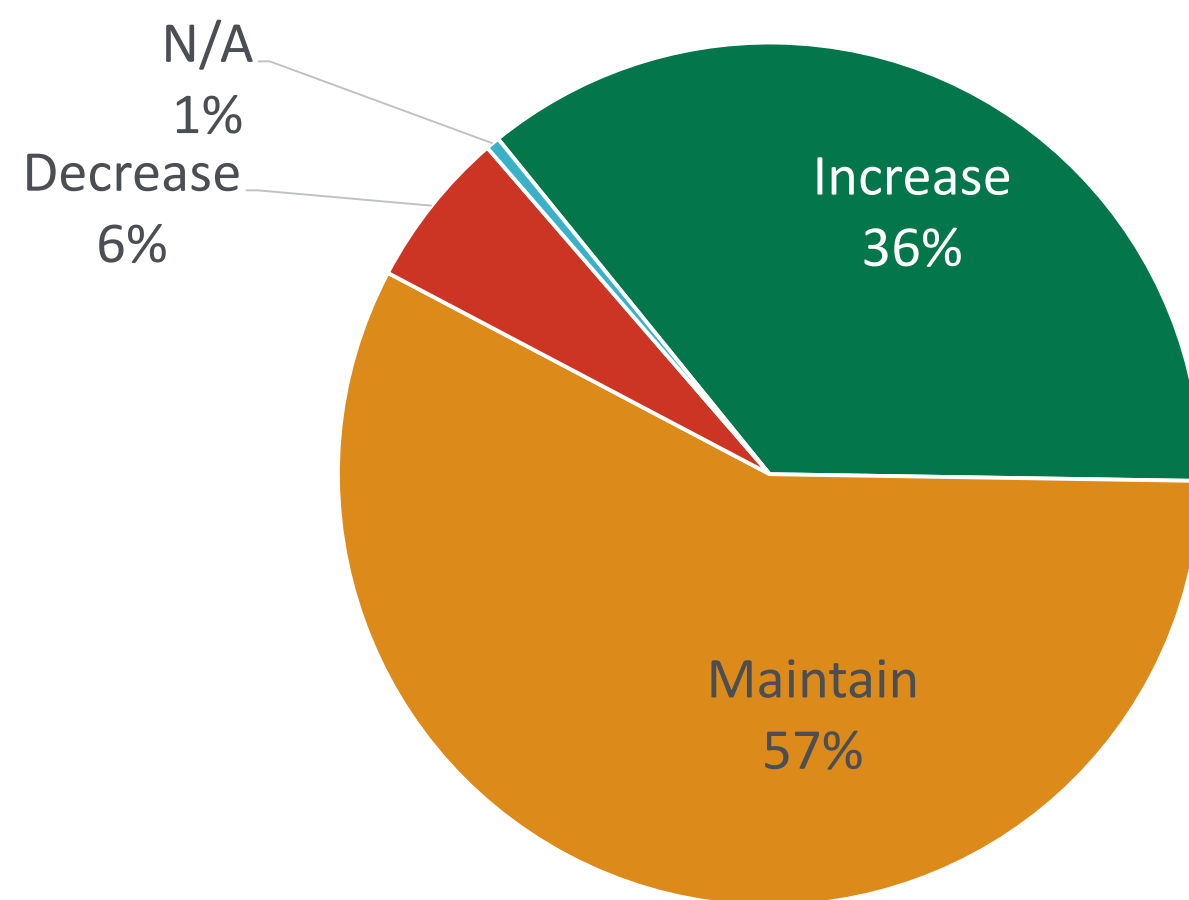
Lambs on hand



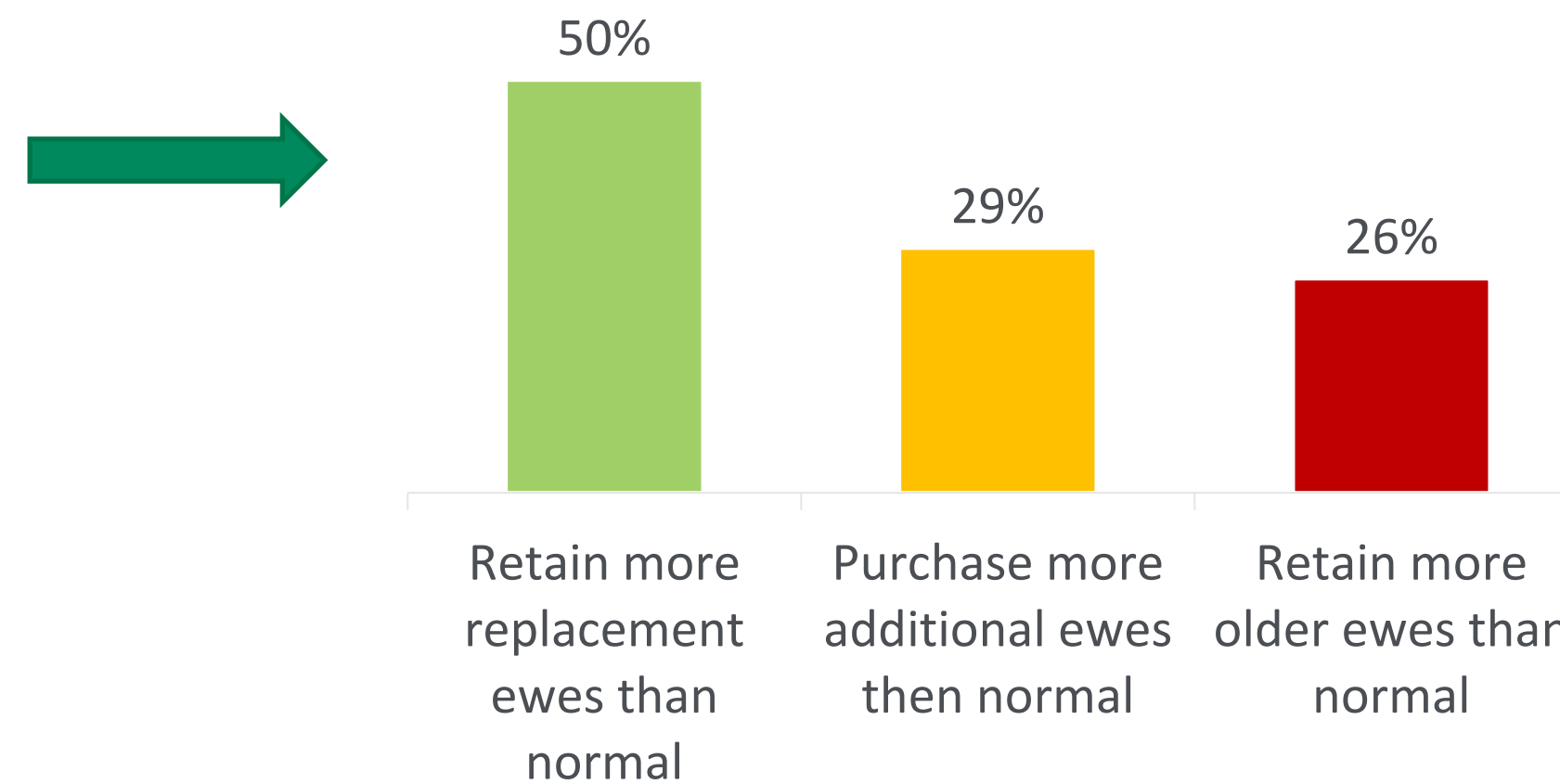
Lamb sales in next 4 months



Flock intentions



How to achieve increase

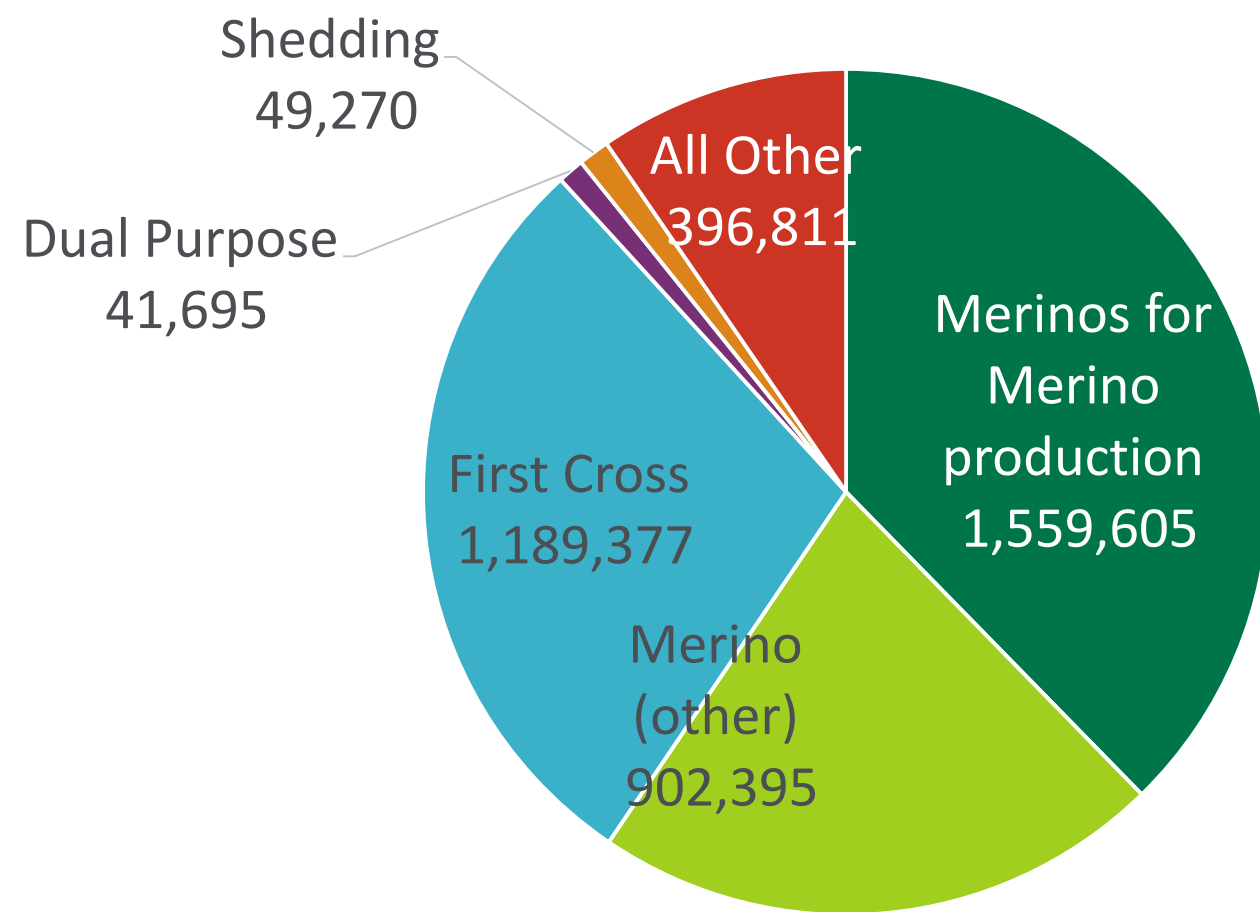


Totals

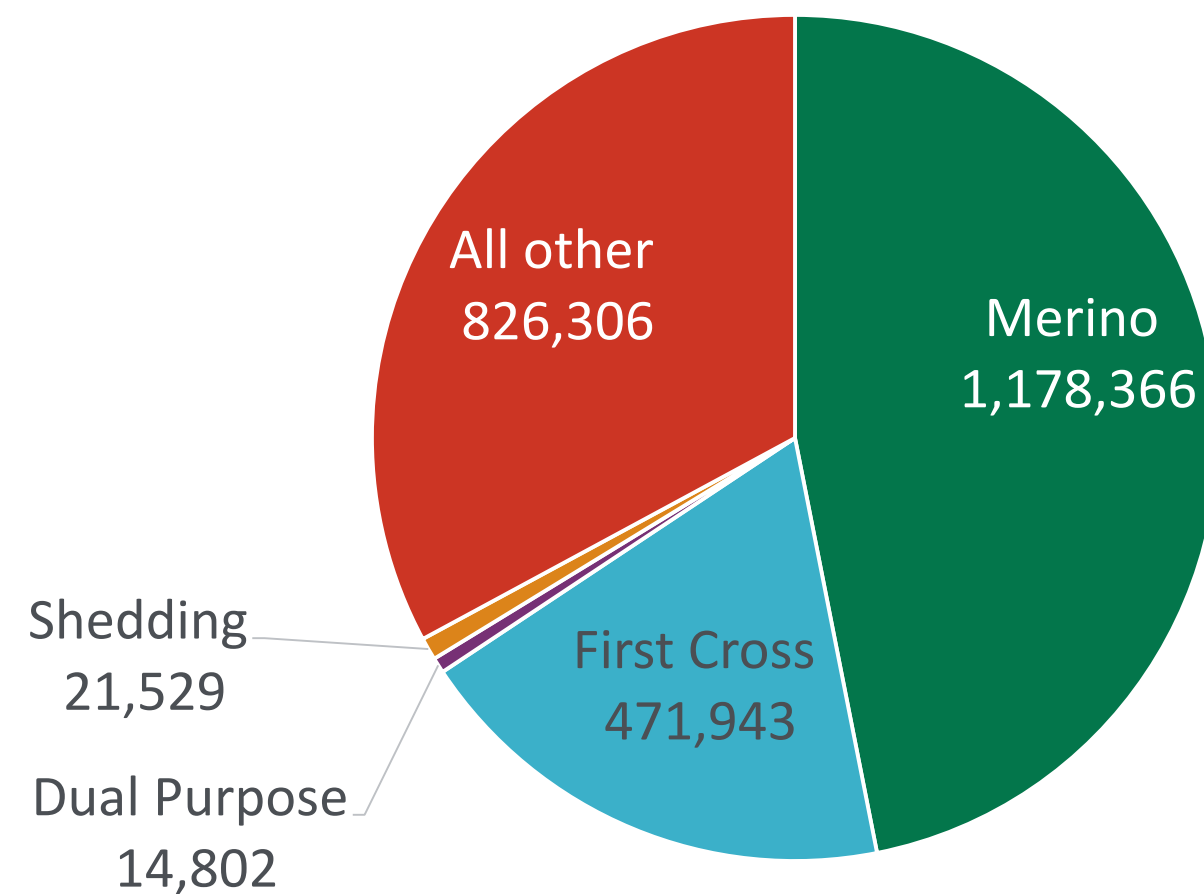
Breeding ewes on hand	7,529,214
Lambs on hand	4,055,276
Expected lamb sales in the next 4 months	1,425,877
Lambs marked in the past 4 months (1 Mar – 30 Jun)	1,918,012
Number of ewes joined to produce marked lambs	1,851,418

# East Victoria

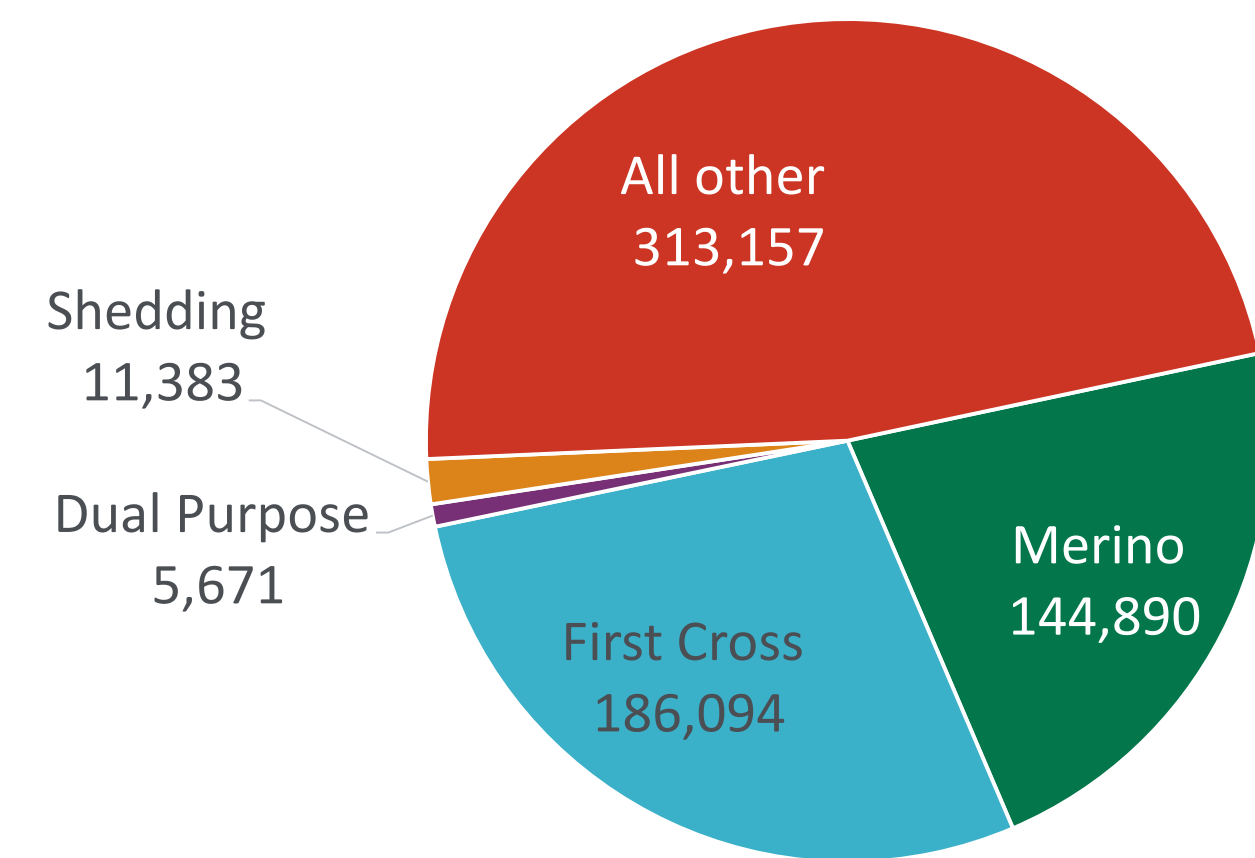
Breeding ewes on hand



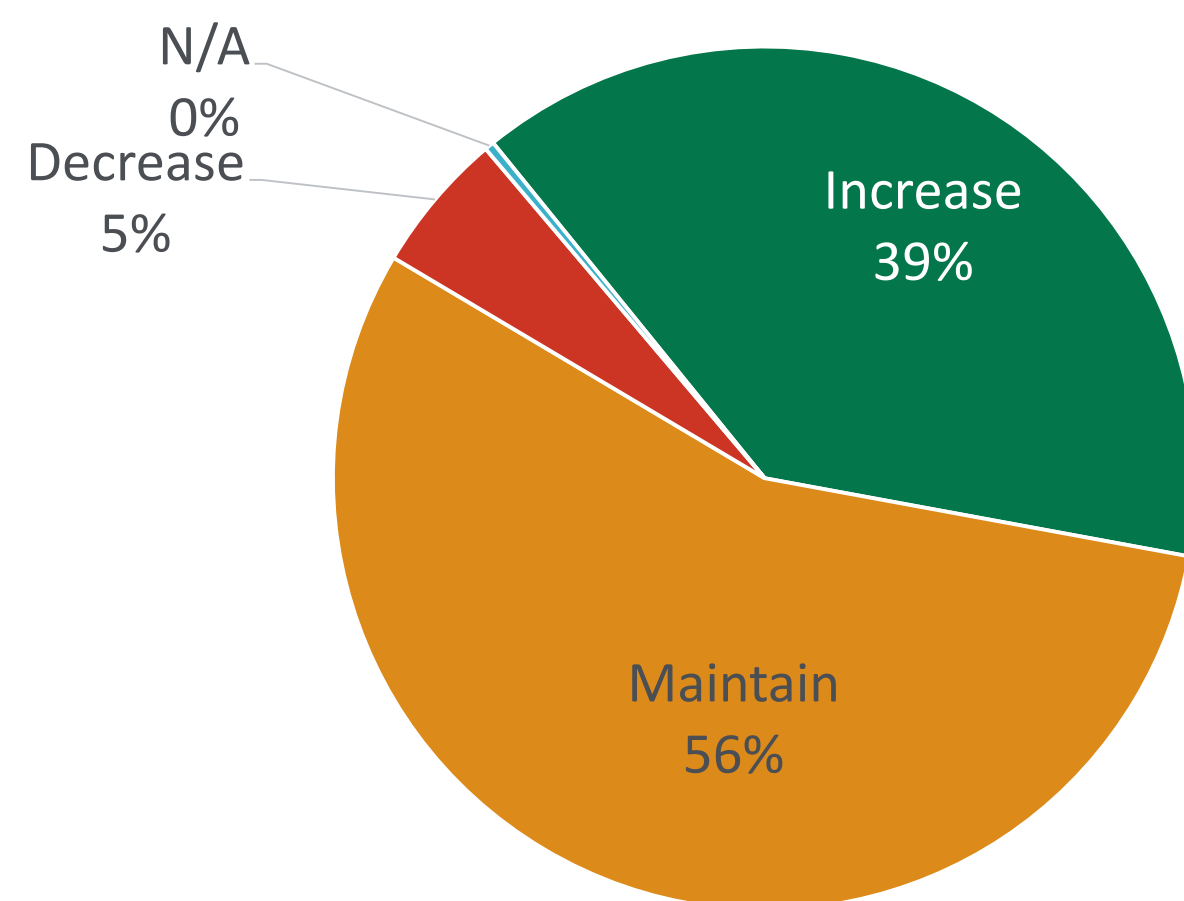
Lambs on hand



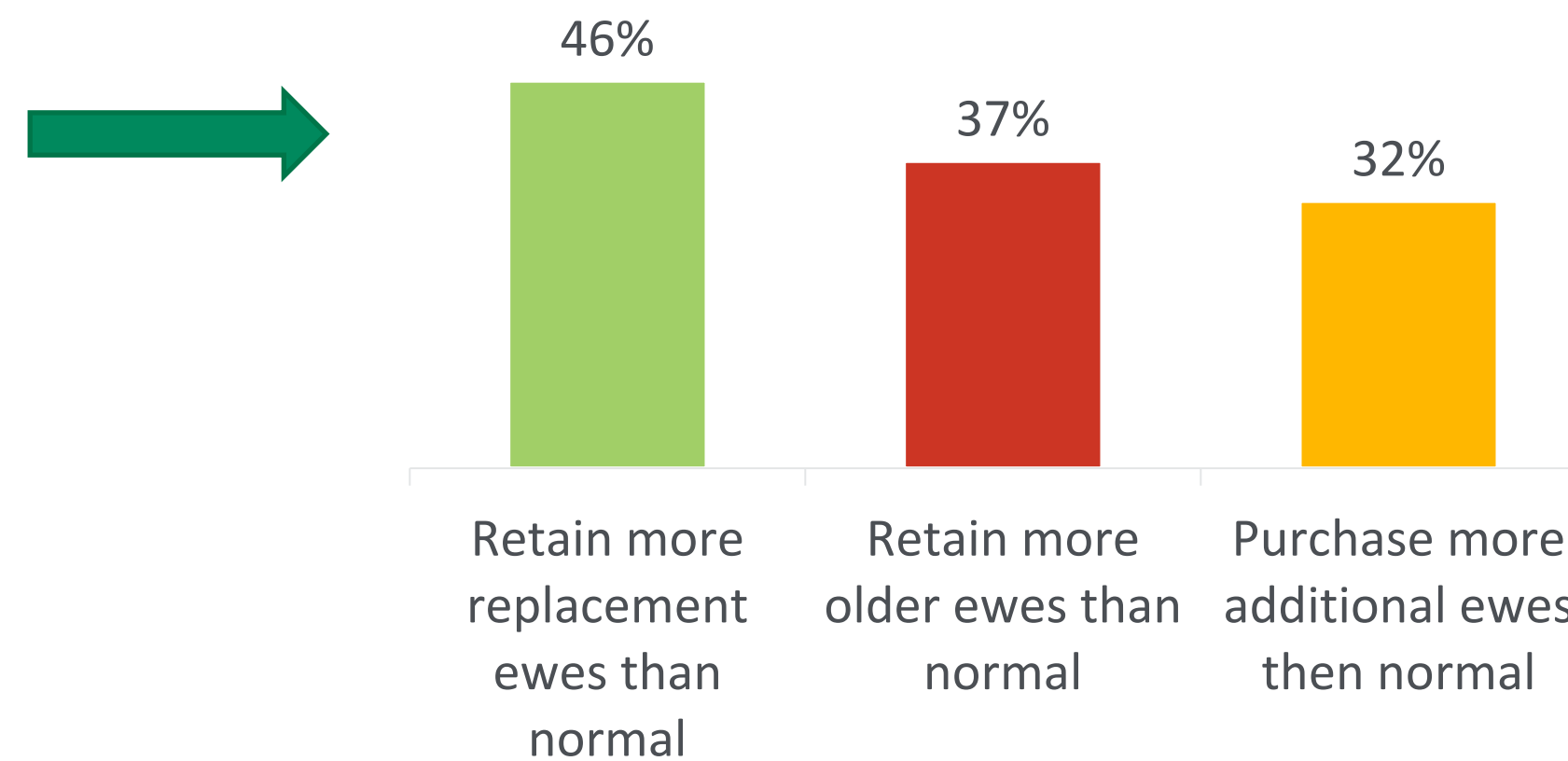
Lamb sales in next 4 months



Flock intentions



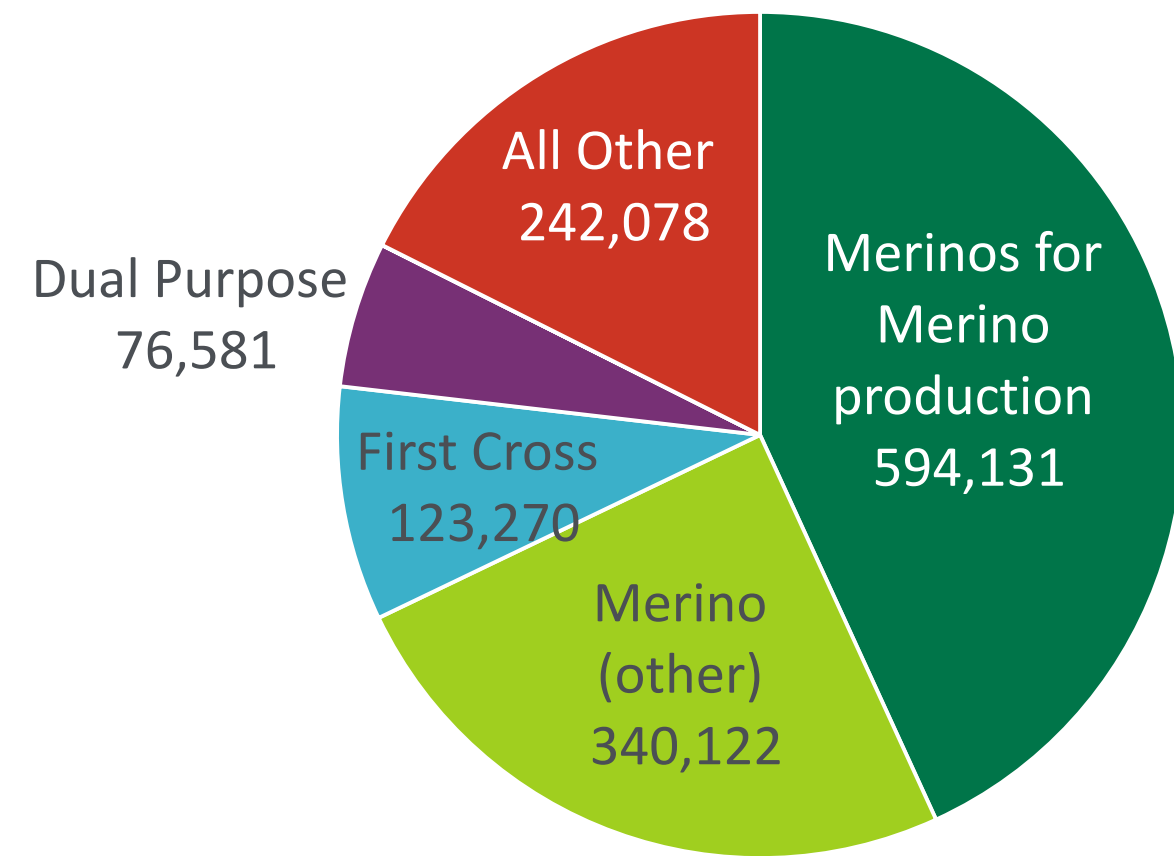
How to achieve increase



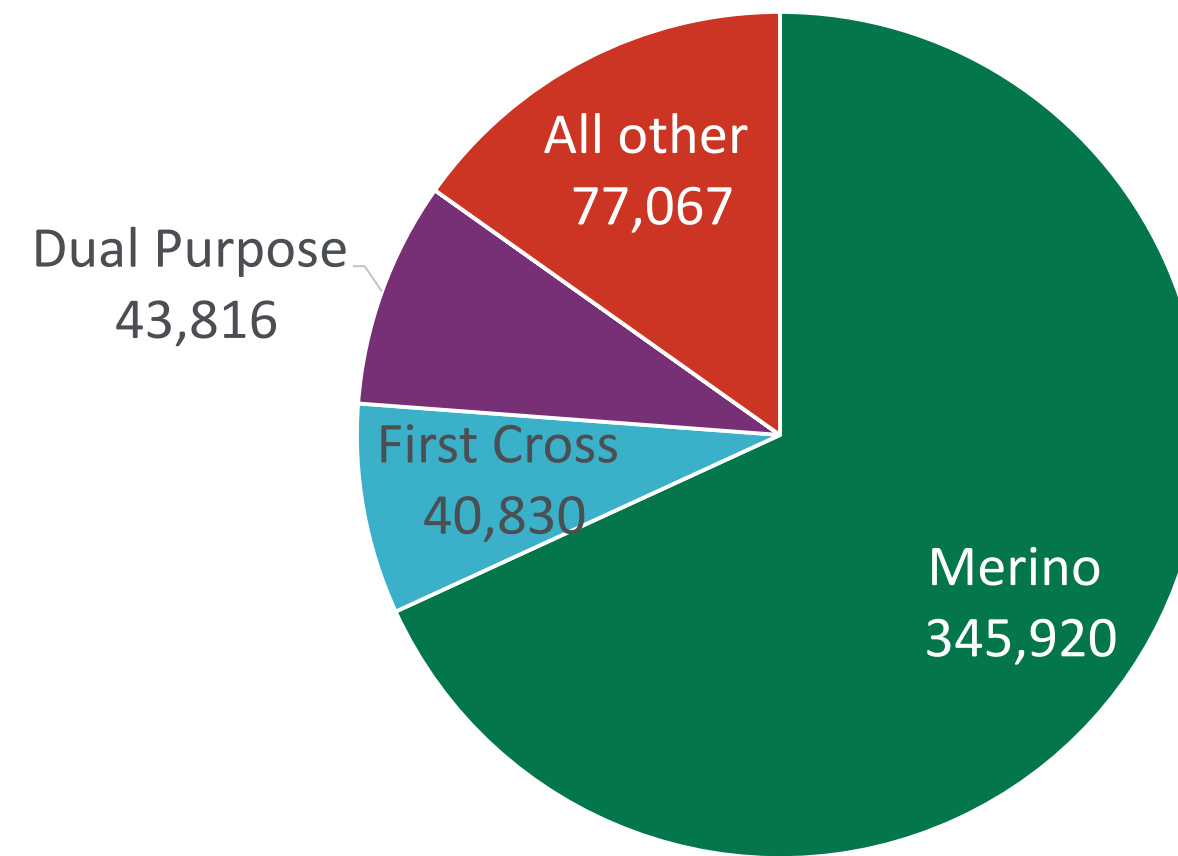
Totals

Breeding ewes on hand	4,139,153
Lambs on hand	2,512,946
Expected lamb sales in the next 4 months	661,194
Lambs marked in the past 4 months (1 Mar – 30 Jun)	1,359,220
Number of ewes joined to produce marked lambs	1,437,898

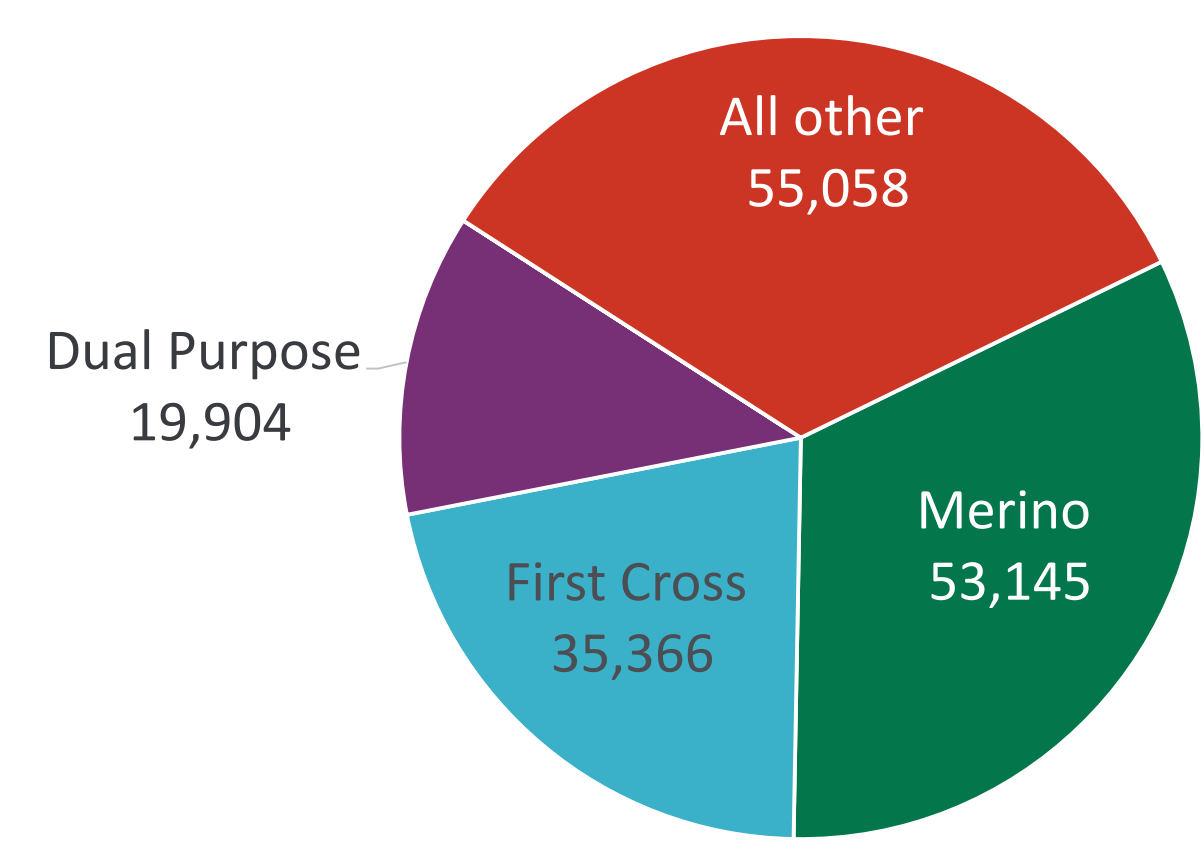
Breeding ewes on hand



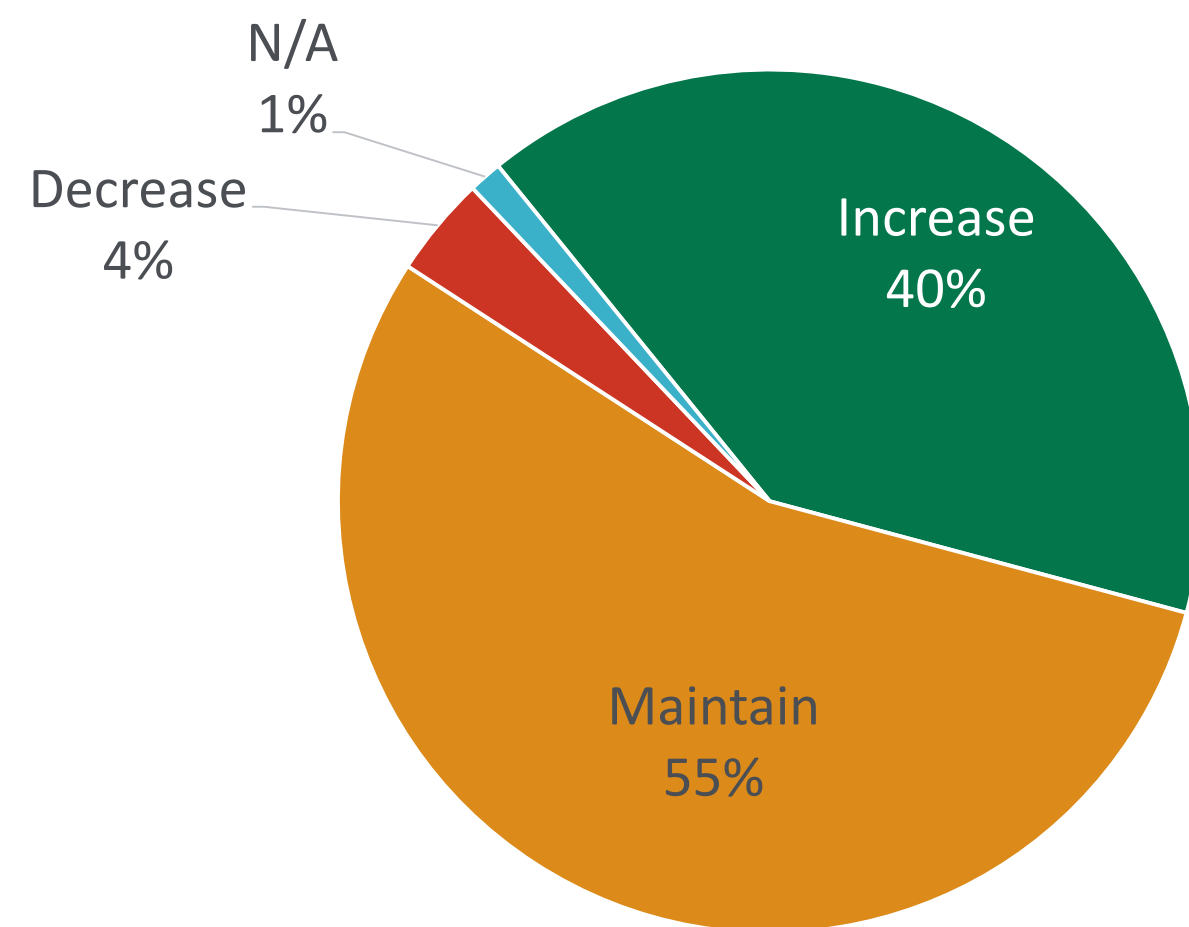
Lambs on hand



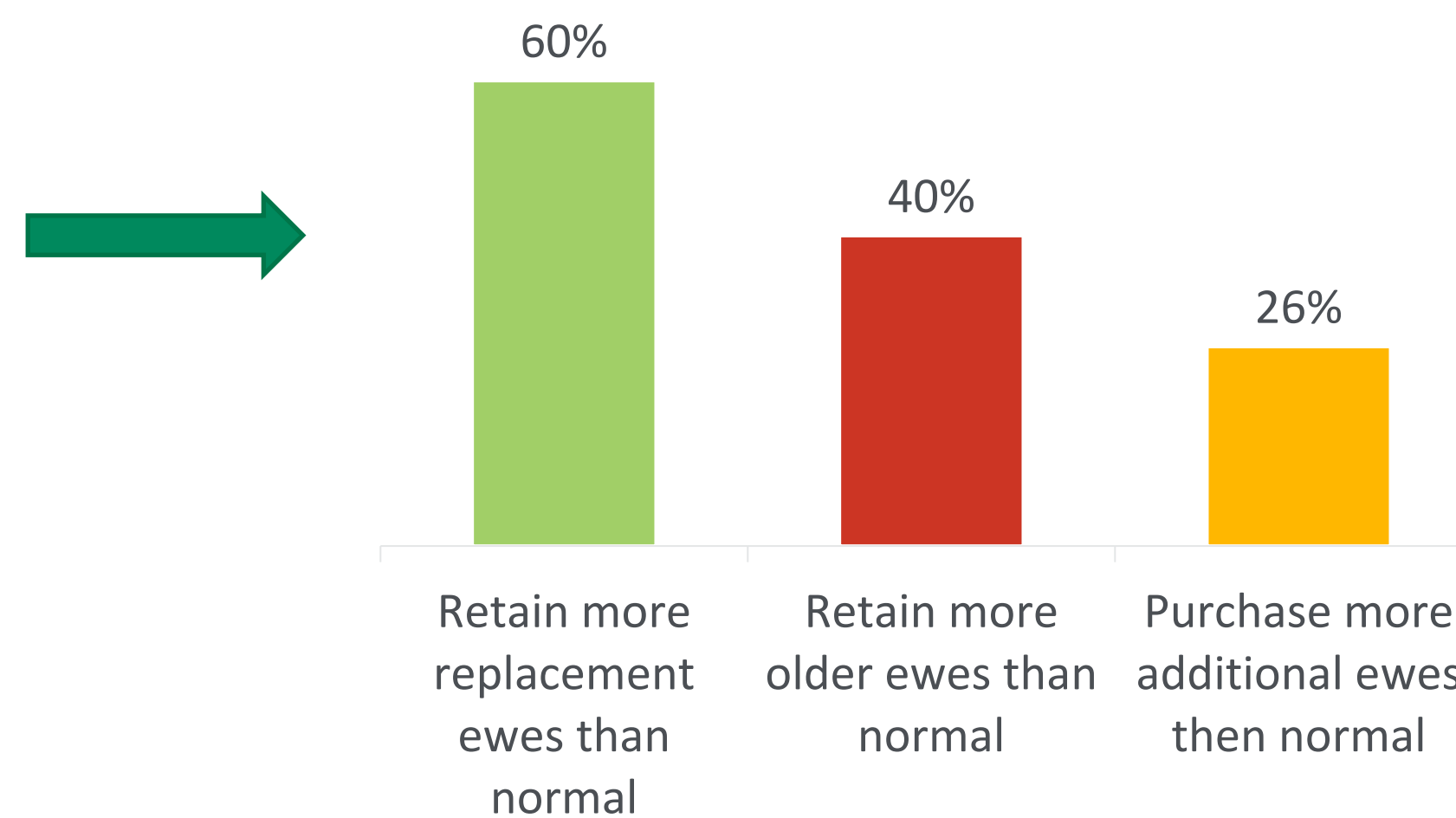
Lamb sales in next 4 months



Flock intentions



How to achieve increase

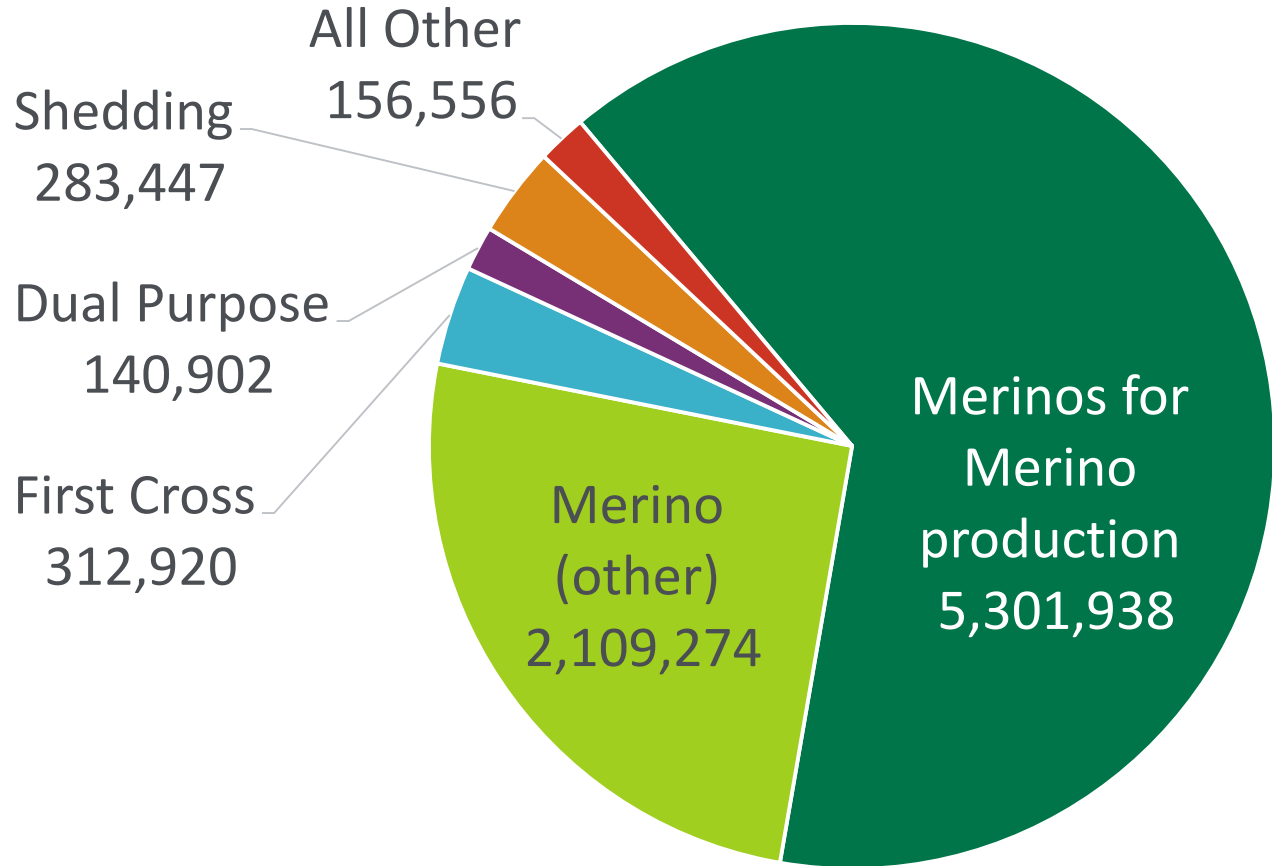


Totals

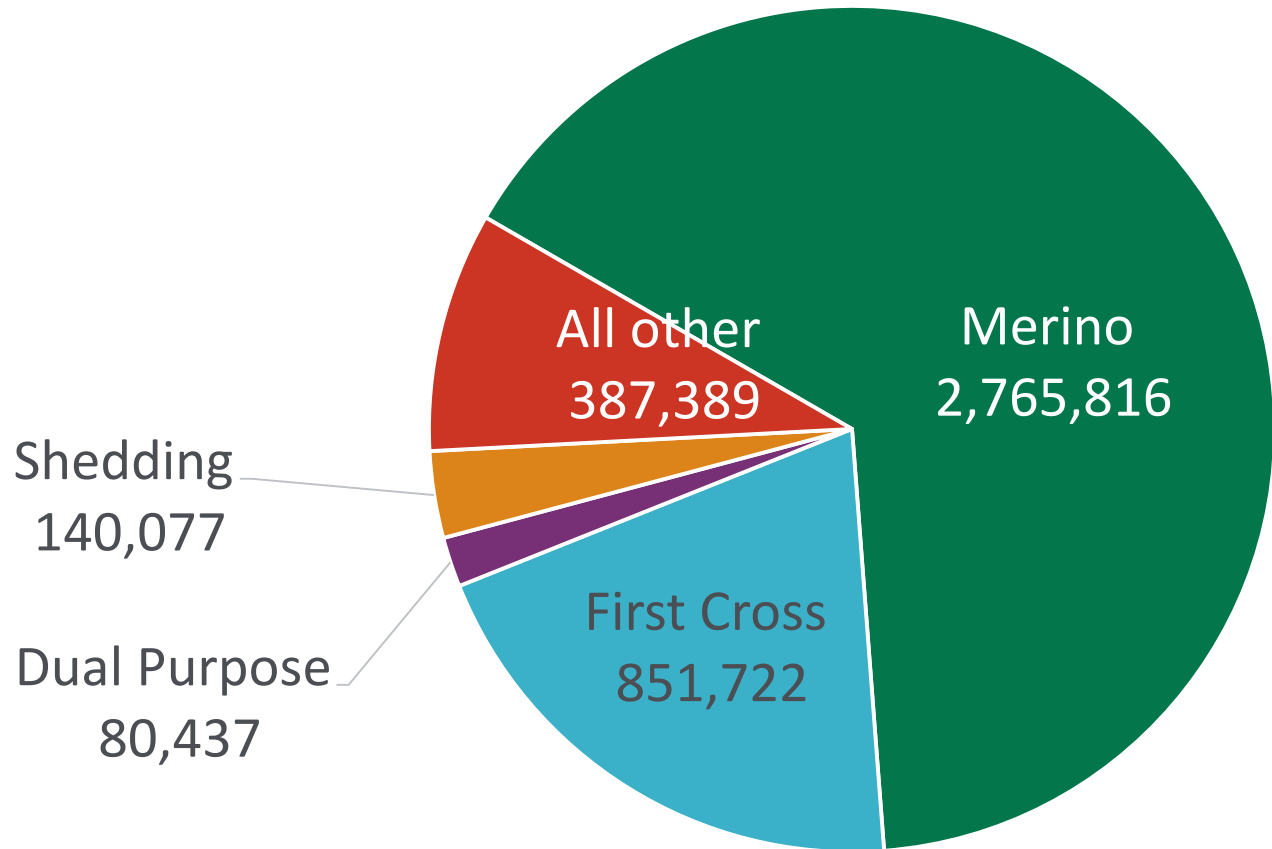
Breeding ewes on hand	1,376,274
Lambs on hand	507,633
Expected lamb sales in the next 4 months	163,474
Lambs marked in the past 4 months (1 Mar – 30 Jun)	21,979
Number of ewes joined to produce marked lambs	25,834

# Western Australia

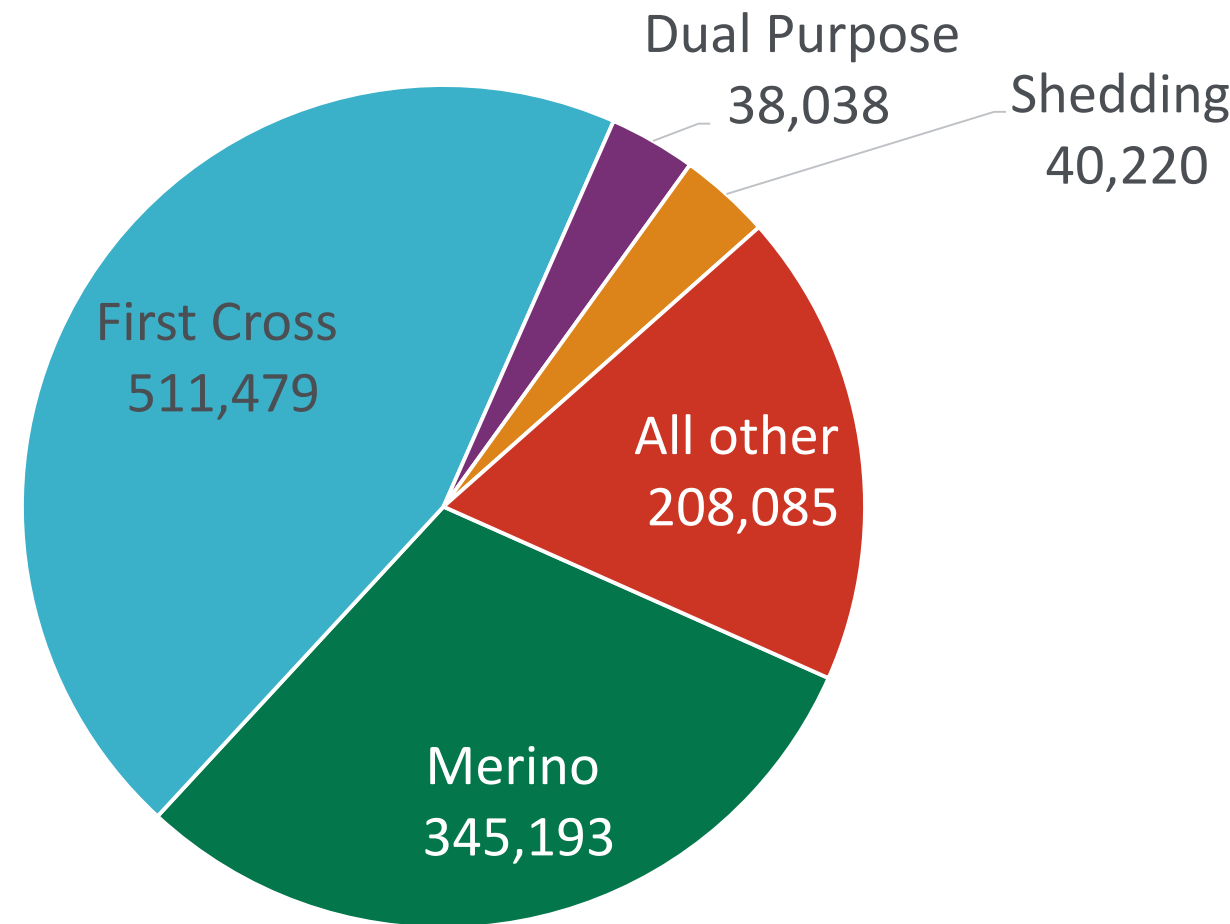
Breeding ewes on hand



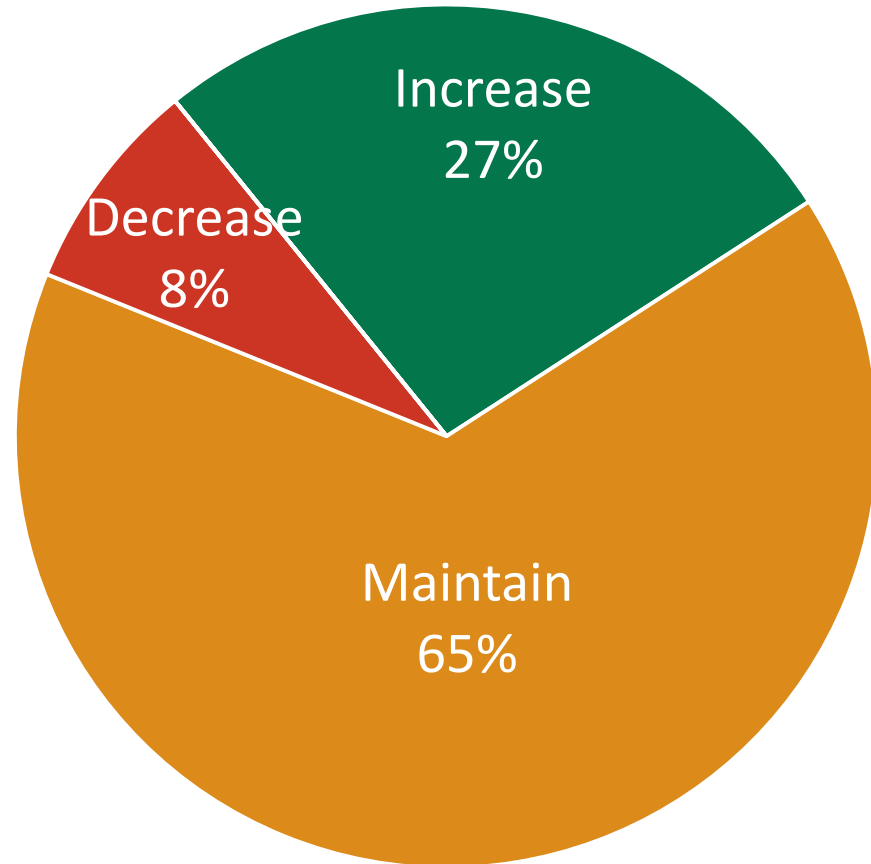
Lambs on hand



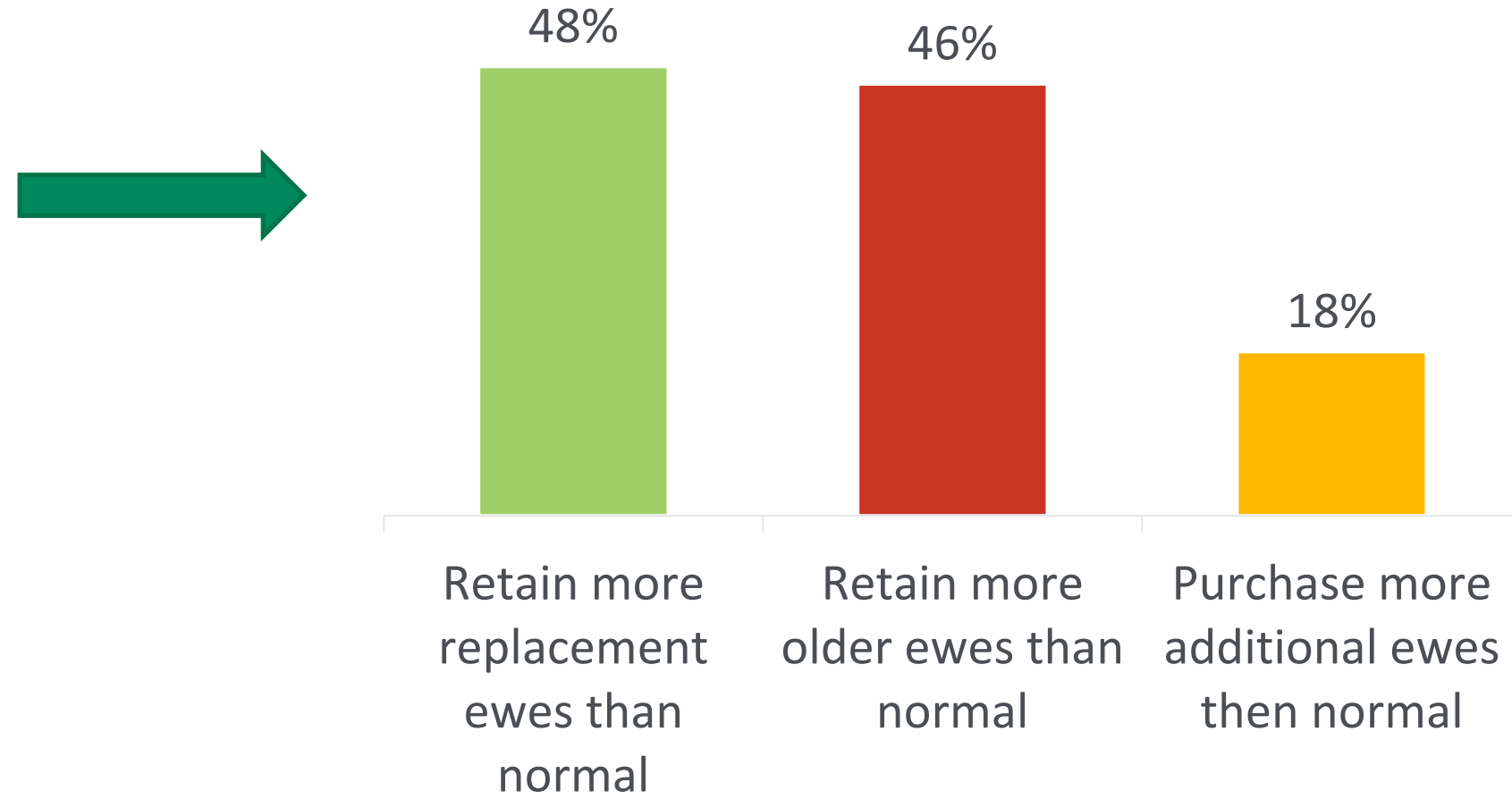
Lamb sales in next 4 months



Flock intentions



How to achieve increase



Totals

Breeding ewes on hand	8,305,037
Lambs on hand	4,225,441
Expected lamb sales in the next 4 months	1,143,016
Lambs marked in the past 4 months (1 Mar – 30 Jun)	1,645,573
Number of ewes joined to produce marked lambs	1,797,368

# Disclaimer

Information contained in this publication is obtained from a variety of third party sources. To the best of MLA's knowledge the information accurately depicts existing and likely future market demand. However, MLA has not verified all third party information, and forecasts and projections are imprecise and subject to a high degree of uncertainty.

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