

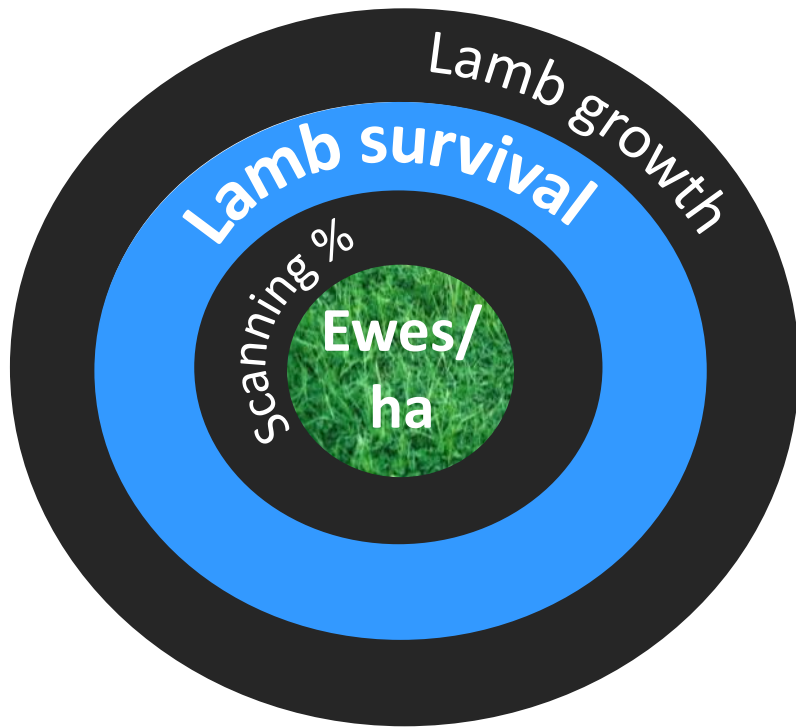
# Turning reproductive potential into reality

Jason Trompf  
LambsAlive

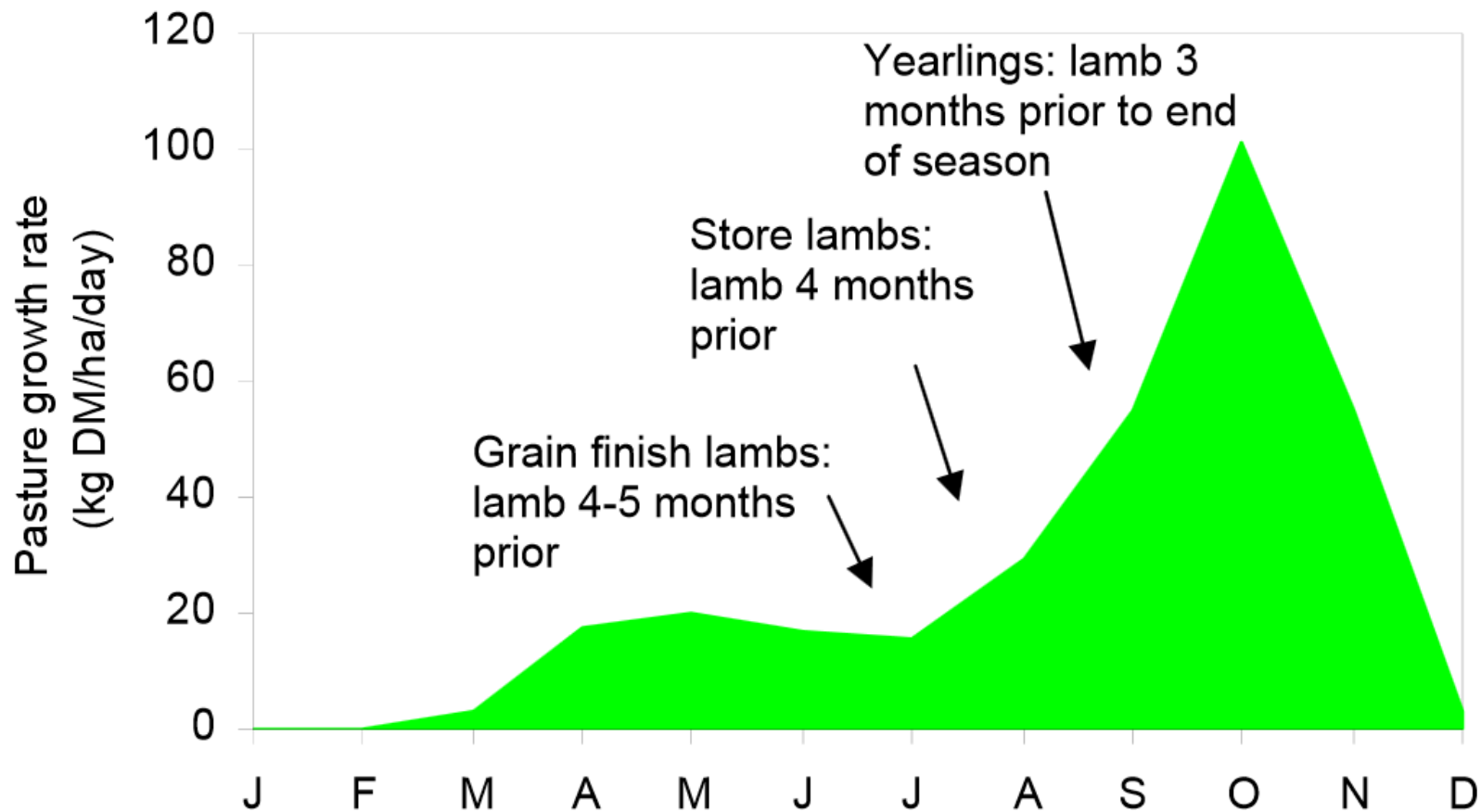
# What sets the top performers apart

- What wasn't different
  - Similar wool price and productivity
- What set them apart
  - Higher stocking rate (+7%)
  - Higher lambing % (+10%)
  - Higher price for surplus sheep (+10%)
  - Leading to a significantly higher profit from livestock trading (80% of difference)

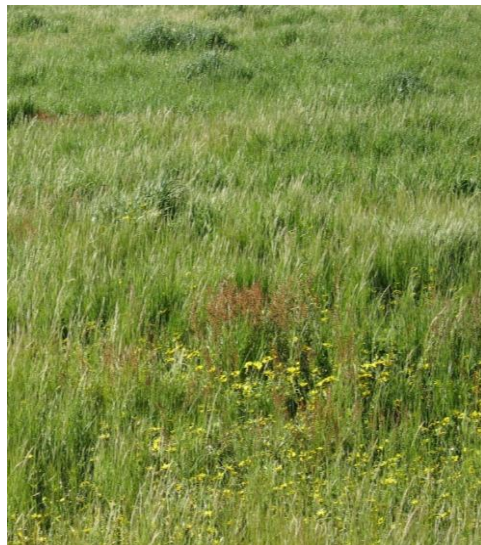
# Growing your flock-



More lambs  
More Kilos  
(Kg lamb weaned/ha)



**Lower quality pasture – energy and protein levels are decreasing**



Grass dominant (late Spring) – approximately 8.0 MJME/kgDM and 18% protein

Source: Lifetime Wool, Feed on Offer Photo Gallery 2007

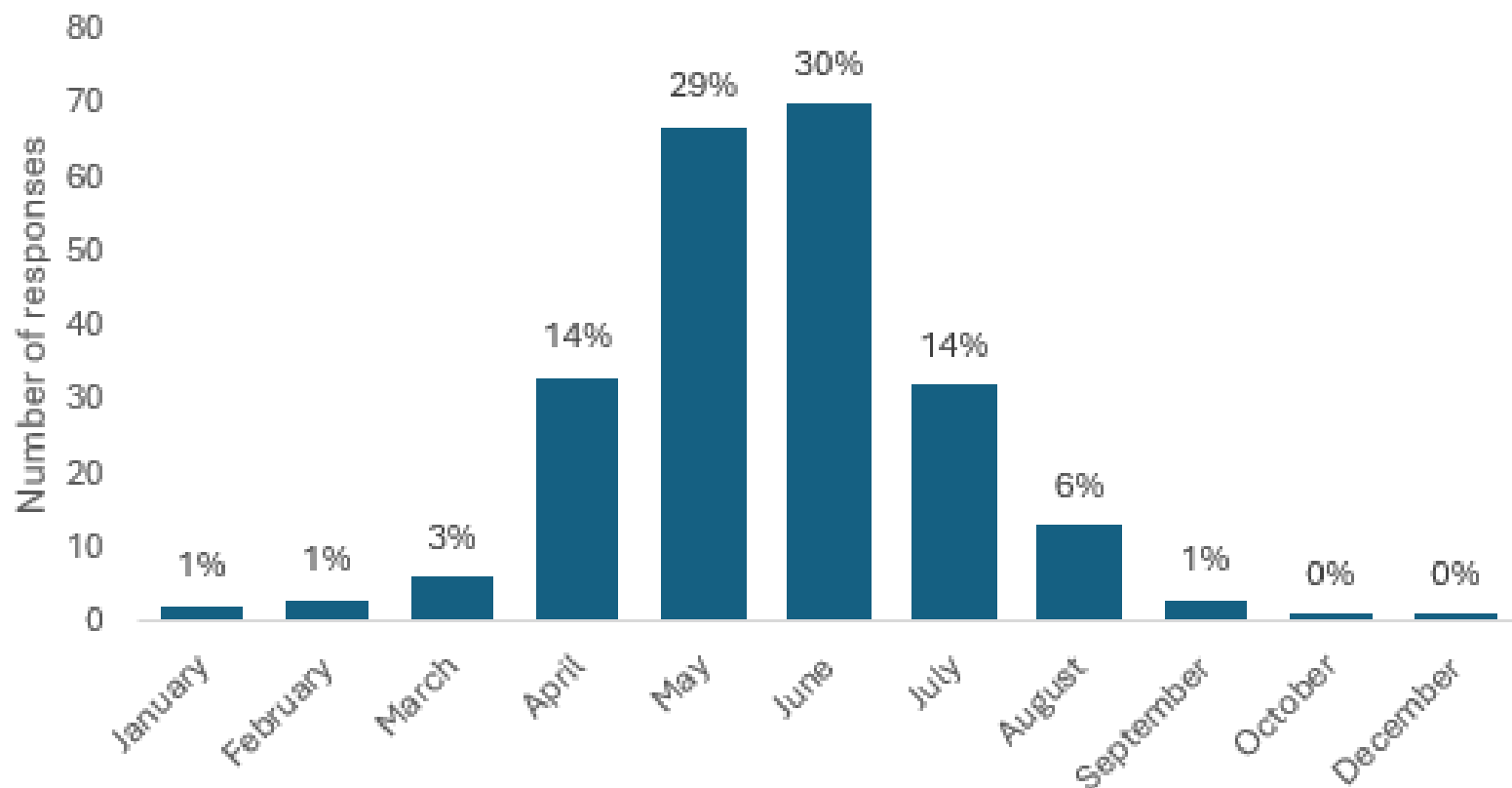
**High quality pasture – highly digestible, energy and protein levels high**



Grass/clover mix (Spring) – approximately 12 MJME/kgDM and 27% protein



## Which month do most of your breeding ewes lamb in?

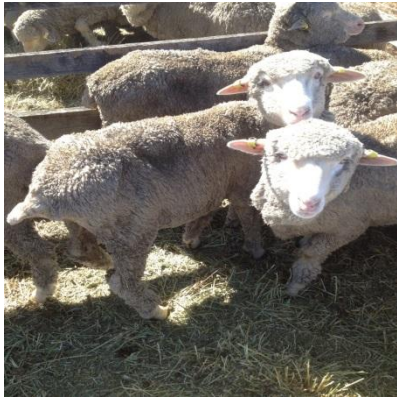
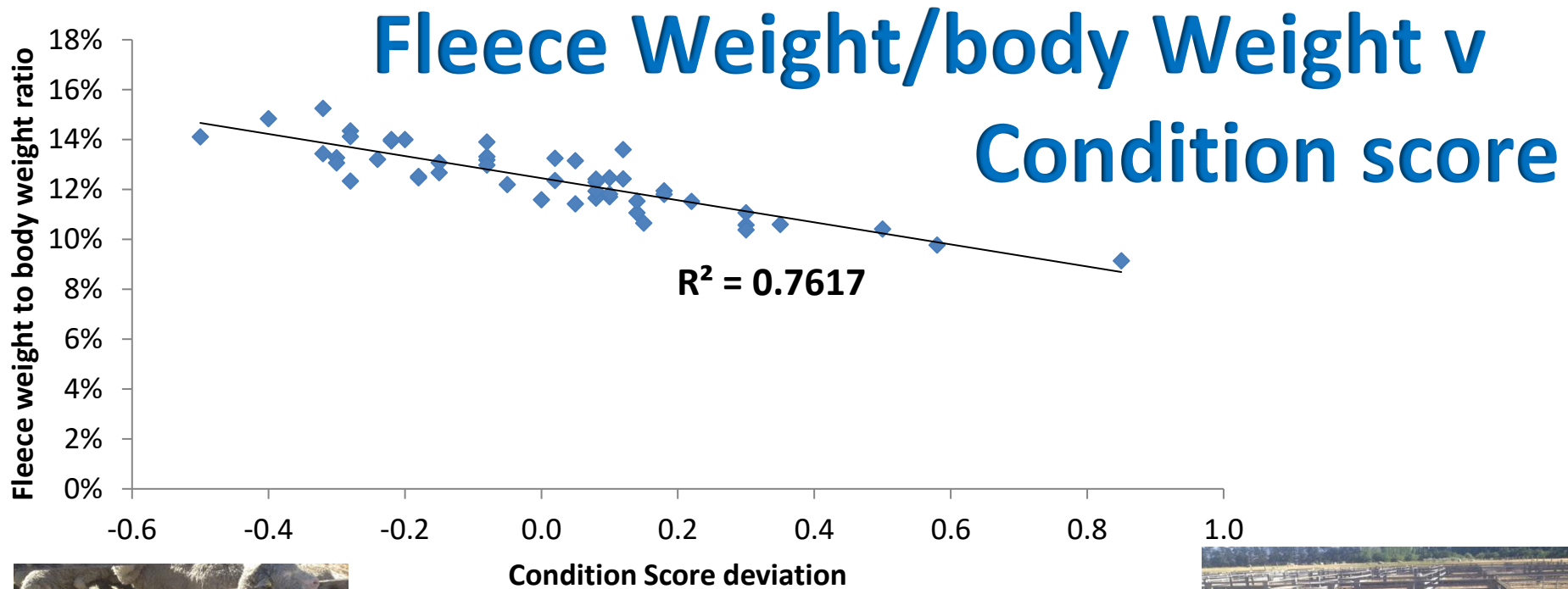


## 60 kg ewe with twins

Lactation day 10 requires 27 MJ/ day  
Grazing 1500 kg dry matter



| Low Quality                    | High Quality                  |
|--------------------------------|-------------------------------|
| <5 % Legume<br>65 % Digestible | 30% Legume<br>75 % Digestible |
| 15 MJ/day                      | 25 MJ/day                     |
| Loss of 0.9 CS in 30 days      | Loss of 0.3 CS in 30 days     |



Source: Peter Westblade Memorial Merino Challenge

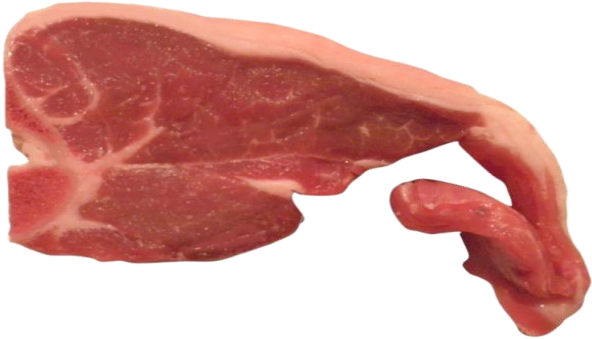




# Genetics and Condition score

The actual condition score of a sheep is governed by

25% genes and 75% environment



Genetic trait now available and.....

There is a strong correlation with YFAT and YEMD

# Ewe performance annual stock-take



**What percentage of the ewes you join rear a lamb (s)?**



# Ewe performance stocktake- current

| Ewe status- annual stocktake           | Average (%) | Per 1000 ewes |
|----------------------------------------|-------------|---------------|
| Ewes that scan dry                     | 10%         | 100           |
| Ewes that die                          | 6%          | 54            |
| Ewes scanned single that don't rear    | 15%         | 83            |
| Ewes scanned multiples that don't rear | 18%         | 82            |
|                                        |             | (319)         |
| Number of ewes that rear a lamb (s)    |             | 681           |
| Percent ewes joined that rear lamb(s)  |             | 68%           |

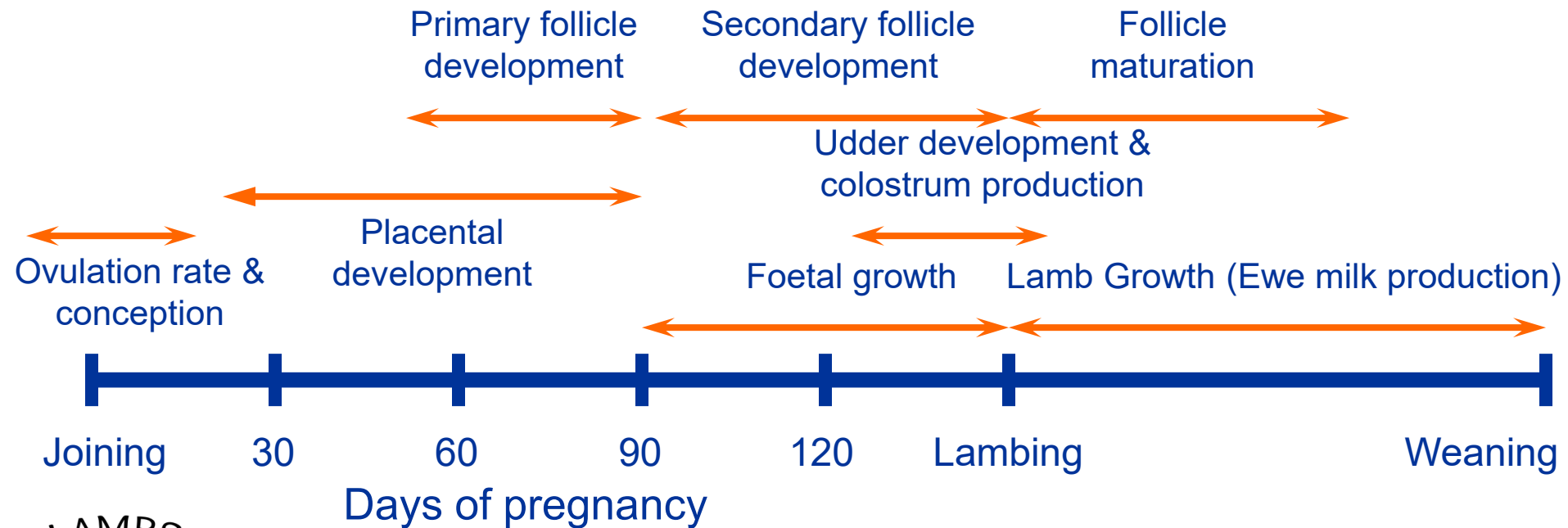


# Ewe performance stocktake- potential

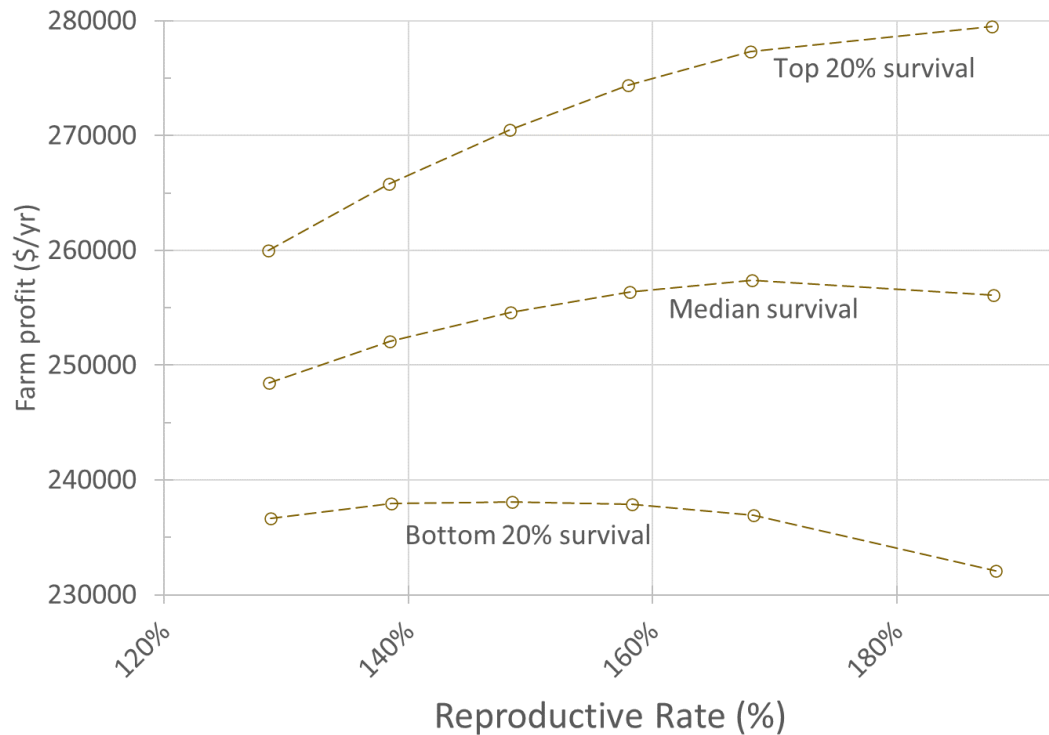
| Ewe status- annual stocktake           | Average<br>(%) | Per 1000<br>ewes |
|----------------------------------------|----------------|------------------|
| Ewes that scan dry                     | 3%             | 30               |
| Ewes that die                          | 2%             | 20               |
| Ewes scanned single that don't rear    | 5%             | 28               |
| Ewes scanned multiples that don't rear | 8%             | 37               |
|                                        |                | (115)            |
| Number of ewes that rear a lamb (s)    |                | 885              |
| Percent ewes joined that rear lamb (s) |                | 89%              |



# Ewe nutrition drives flock growth



# Careful what's slipping through your fingers



# Reproductive performance for WA- SPIS 2025

| Marking rate groups | Ewes joined | Percent of ewes joined | Average marking rate | Marking rate range |
|---------------------|-------------|------------------------|----------------------|--------------------|
| Very low            | 56,740      | 11%                    | 55%                  | 44% - 62%          |
| Low                 | 128,327     | 25%                    | 76%                  | 63% - 84%          |
| Average             | 240,023     | 45%                    | 96%                  | 84% - 106%         |
| High                | 93,151      | 18%                    | 114%                 | 106% - 126%        |
| Very high (for WA)  | 5,340       | 1%                     | 139%                 | 133% - 149%        |
| All breeding ewes   | 523,581     | 100                    | <b>90%</b>           | 44% - 149%         |



**130 Foetuses**

Single survival-85%

Twin survival -60%



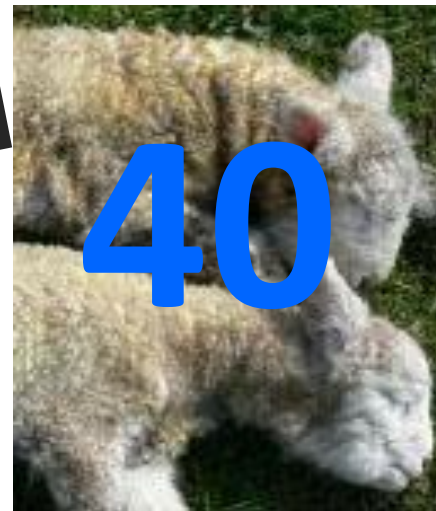
**90**



**Lambs marked**



**40**



**Lambs  
Loss  
30%**







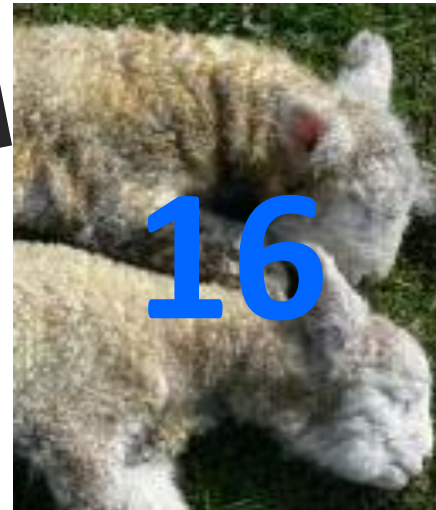
**130 Foetuses**

**Single survival- 95%** (up from 85%)  
**Twin survival- 80%** (up from 60%)

**114**



**Lambs marked**



**16**

**Lambs  
Loss**

**12%**

LAMBS



ALIVE

# Value of going from more lamb loss to core lamb loss

\$1 Billion in  
profit from  
saving 8  
million lambs

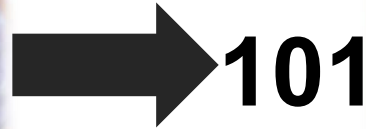
| Ewe Breed | Single (\$ m) | Twin (\$ m) | Triplets (\$ m) | Total (\$ m) |
|-----------|---------------|-------------|-----------------|--------------|
| Merino    | 190           | 488         | 19              | 697          |
| Maternal  | 34            | 259         | 16              | 309          |
|           | 224           | 747         | 35              | <b>1006</b>  |



**130 Foetuses**

**Single survival- 90%** (up from 85%)

**Twin survival- 70%** (up from 60%)



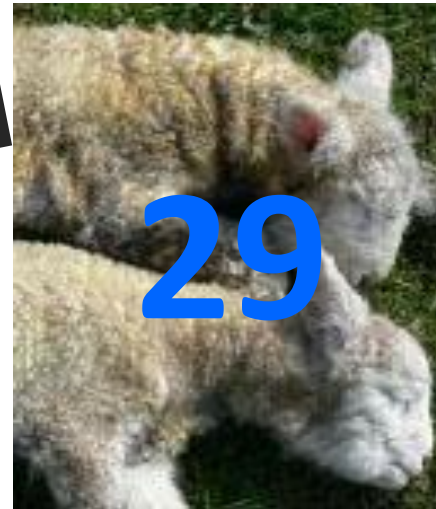
**101**



**Lambs marked**



**29**



**Lambs  
Loss**

**22%**



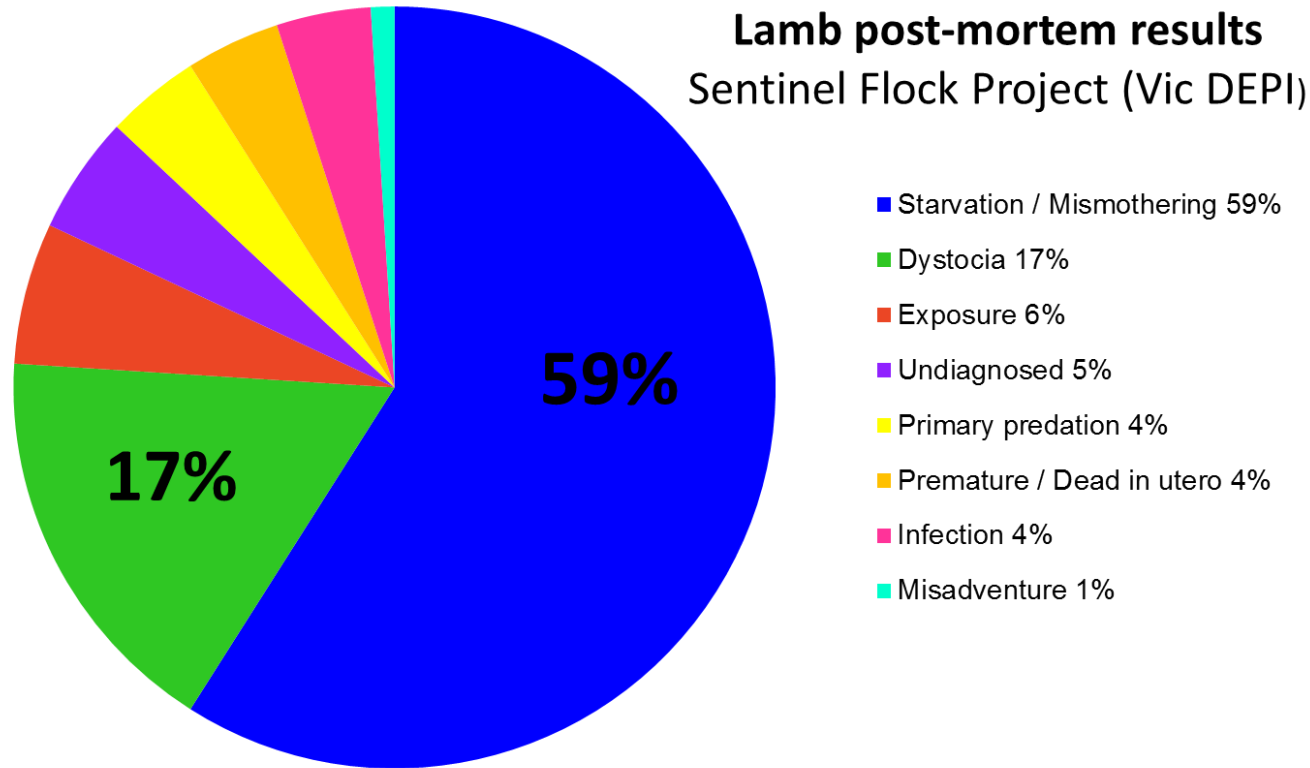
# Reproductive performance for WA- Projected

| Marking rate groups | Ewes joined | Percent of ewes joined | Average marking rate | Marking rate range | Projected marking rate |
|---------------------|-------------|------------------------|----------------------|--------------------|------------------------|
| Very low            | 56,740      | 11%                    | 55%                  | 44% - 62%          | 65%                    |
| Low                 | 128,327     | 25%                    | 76%                  | 63% - 84%          | 86%                    |
| Average             | 240,023     | 45%                    | 96%                  | 84% - 106%         | 105%                   |
| High                | 93,151      | 18%                    | 114%                 | 106% - 126%        | 126%                   |
| Very high (for WA)  | 5,340       | 1%                     | 139%                 | 133% - 149%        | 139%                   |
| All breeding ewes   | 523,581     | 100                    | <b>90%</b>           | 44% - 149%         | <b>100%</b>            |

# Reproductive performance for WA- Projected

|                                                                                    |              |
|------------------------------------------------------------------------------------|--------------|
| Lambs marked in SPIS (October 2025)                                                | 472,564      |
| Projected number of lambs marked due to uptake of sheep reproduction best practice | 523,581      |
| Projected number of additional lambs marked                                        | 51,765       |
| Estimated number of breeding ewes                                                  | 6.01 million |
| Breeding ewes reported in the SPIS survey                                          | 524,329      |
| Projected additional lambs marked in WA                                            | 594,225      |

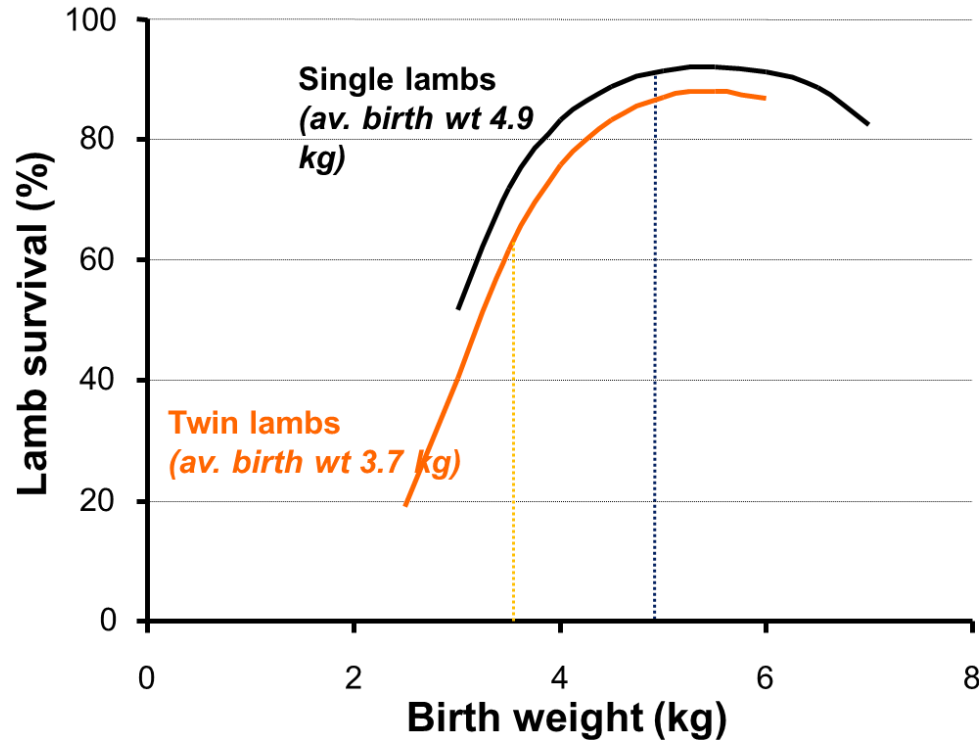
# Must allocate feed to meet need OR?



You will have a high lamb and ewe loss!

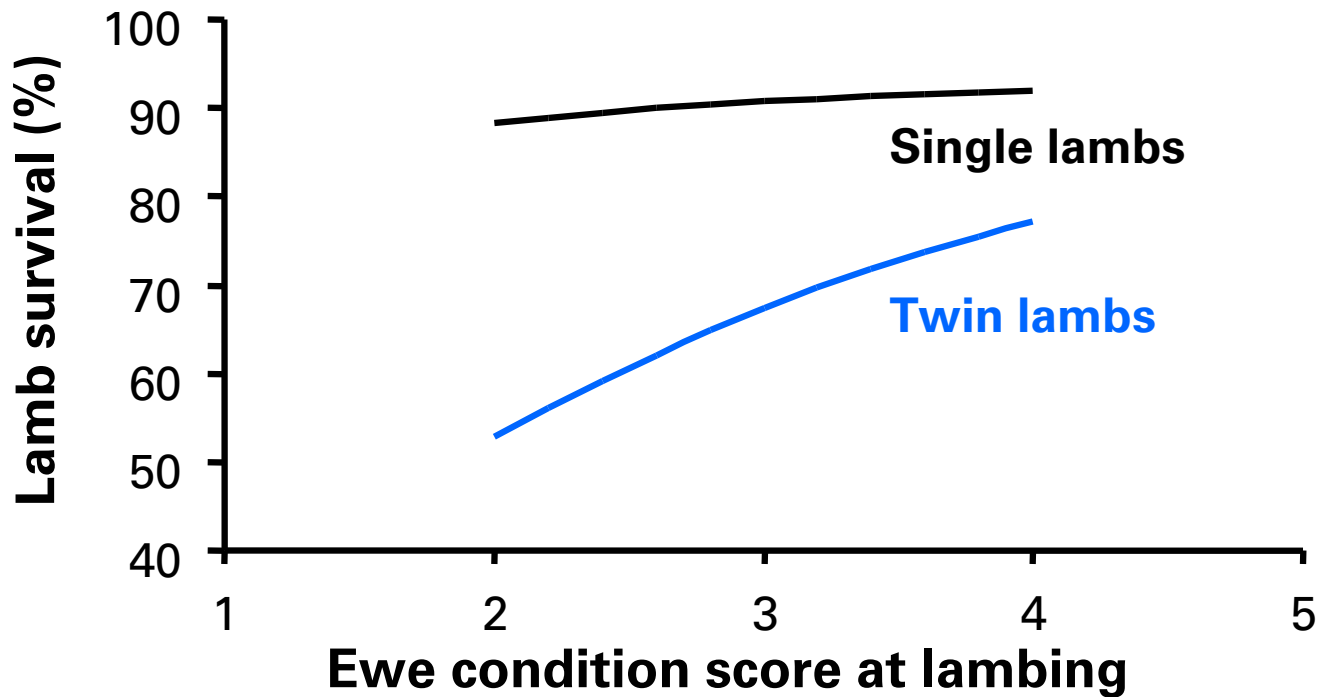


# Birth weight affects survival- Merinos



Source: Oldham *et al.* 2011

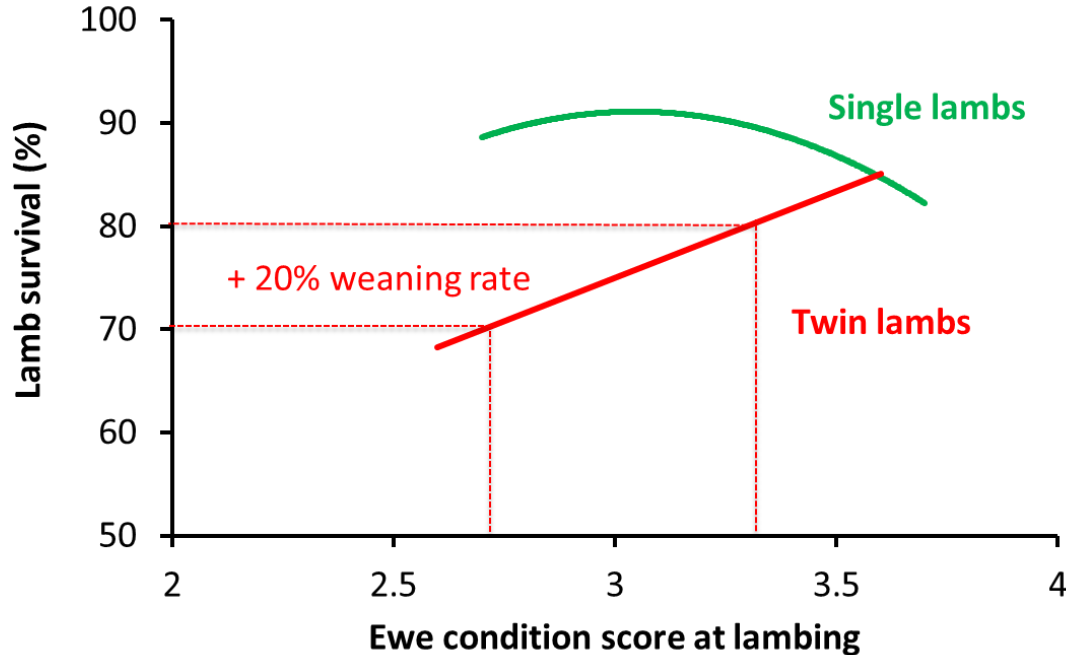
# Preferentially allocate feed to twins





# Ewe condition score profile and lamb survival- Maternal

- Preferentially allocate feed to twins just like Merinos
- Differential management is much more than just ewe nutrition

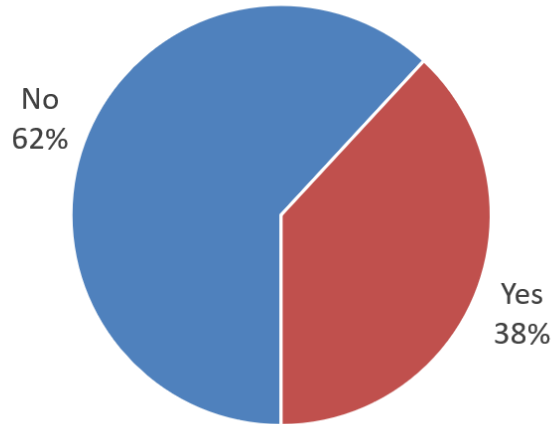


# Condition targets at lambing

| Litter size | Merino ewes | Maternal ewes    |
|-------------|-------------|------------------|
| Single      | 3.0         | 3.0              |
| Twin        | 3.3         | 3.5              |
| Triplet     | 3.5         | 3.5 <sup>+</sup> |

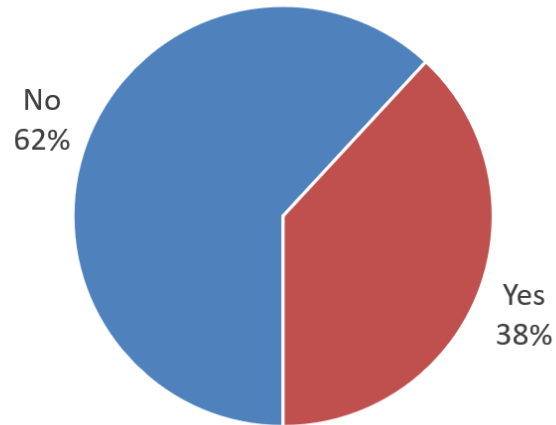
# Adoption of pregnancy scanning

Pregnancy scan ewes

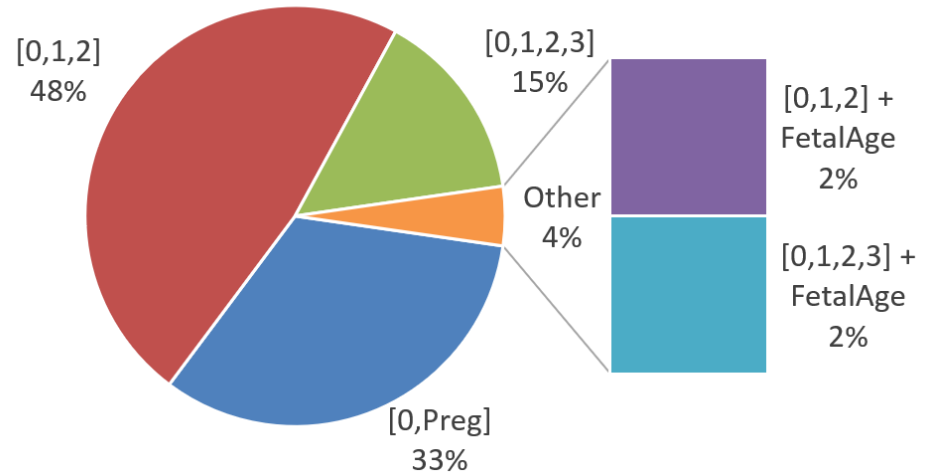


# Adoption of pregnancy scanning

Pregnancy scan ewes



Scan practice



# Managing twins & single separate to achieve CS targets

Manage twins separately after scanning to achieve higher condition score by lambing



# Impact of join weight and pregnancy weight gain on twin lamb survival (%) from ewe lambs

|              | Live-weight change (kg) during pregnancy |    |     |     |    |    |
|--------------|------------------------------------------|----|-----|-----|----|----|
|              | 5                                        | 10 | 15  | 20  | 25 | 30 |
| Join wt (kg) |                                          |    |     |     |    |    |
| 35           |                                          |    | <20 | <20 | 35 | 49 |
| 40           | <20                                      | 31 | 45  | 58  | 67 | 74 |
| 45           | 47                                       | 59 | 68  | 75  | 78 | 81 |
| 50           | 65                                       | 72 | 77  | 80  | 82 | 84 |
| 55           | 72                                       | 77 | 80  | 82  | 84 | 84 |
| 60           |                                          | 78 | 80  | 82  | 84 |    |
| 65           |                                          | 78 | 80  | 82  |    |    |



# The lambing paddock (nursery) must provide:



- Adequate feed and water
- Freedom from predators
- Shelter
- Privacy
- Minimal disturbance



# Feed-on-offer affects maternal behaviour

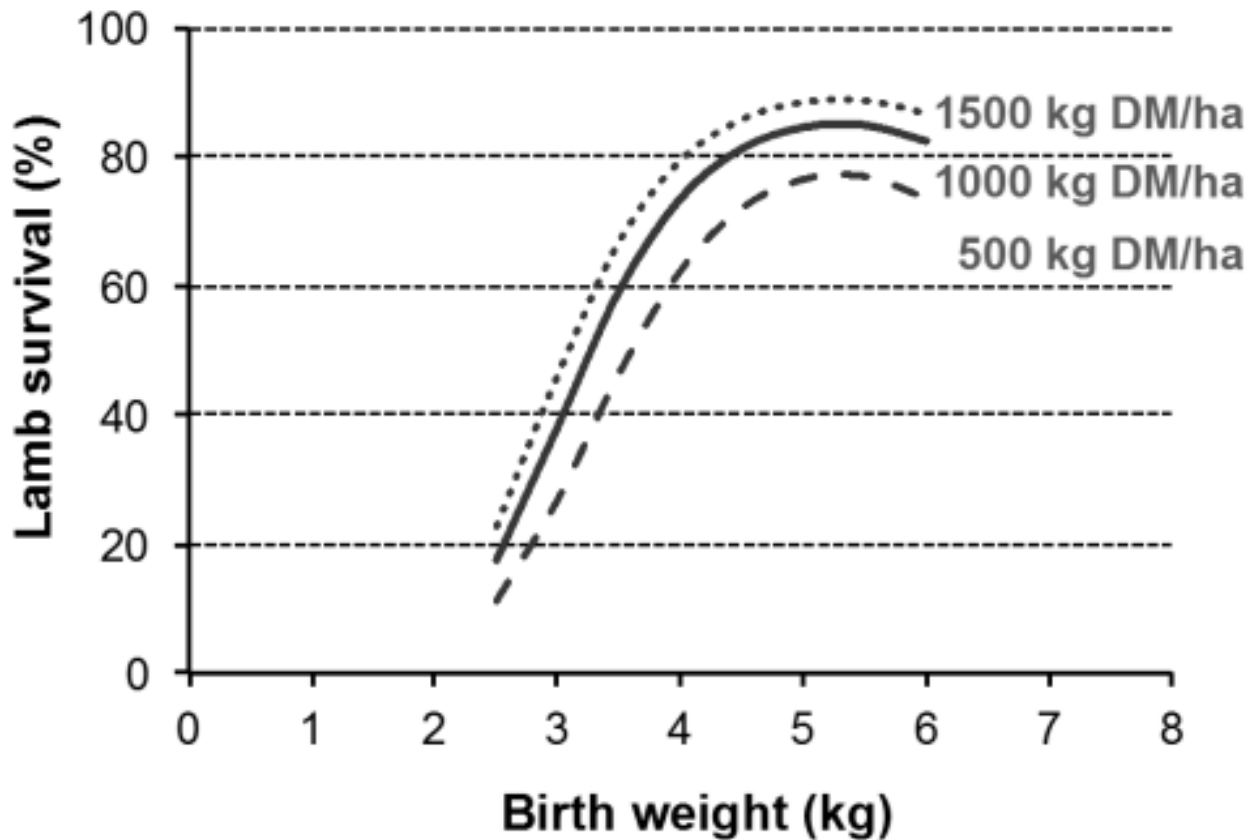


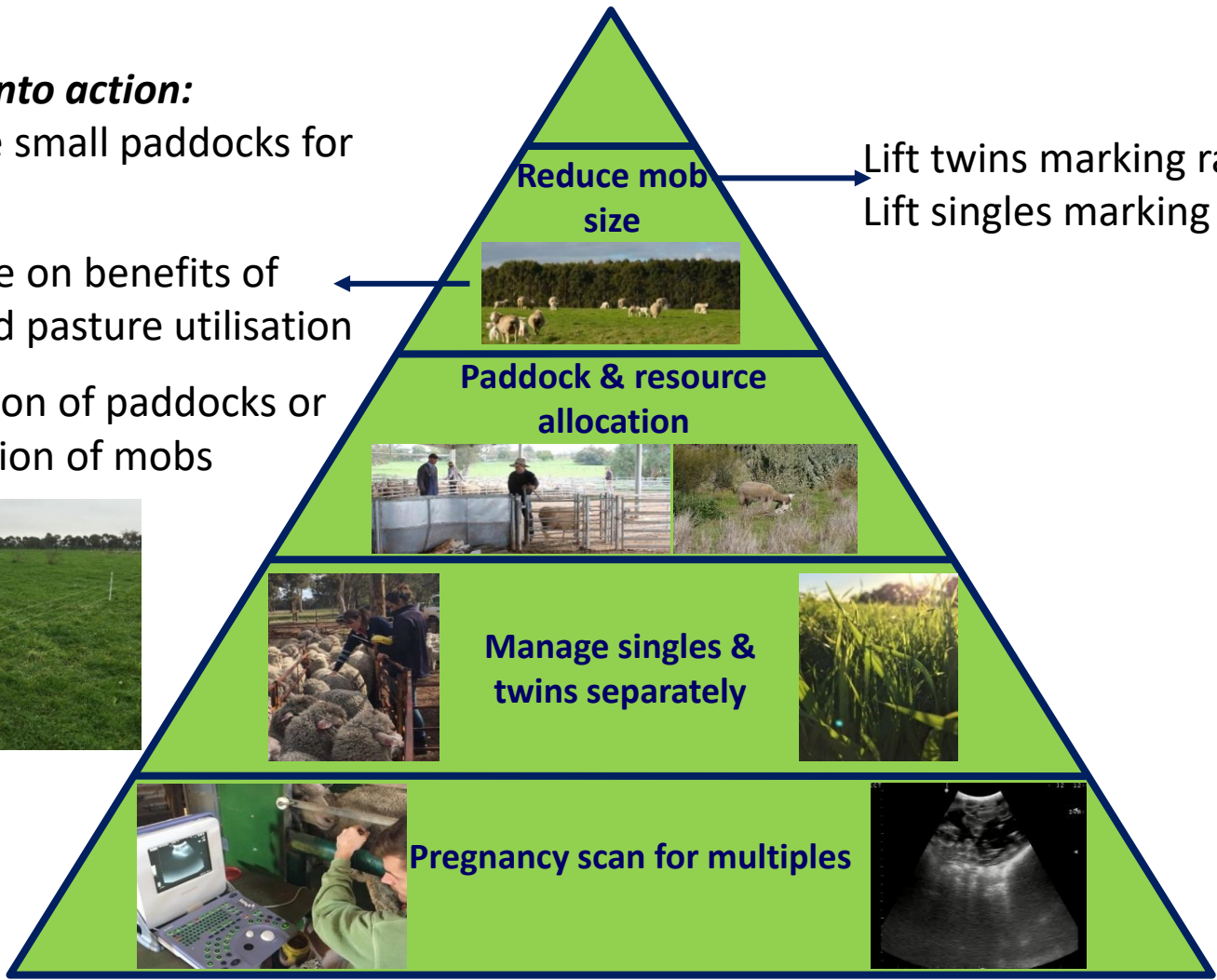


Table: Lamb survival matrix

| Ewe CS<br>at<br>lambing | FOO<br>at<br>lambing | Chill index |      |      |      |      |      |
|-------------------------|----------------------|-------------|------|------|------|------|------|
|                         |                      | Single      |      |      | Twin |      |      |
|                         |                      | 900         | 1000 | 1100 | 900  | 1000 | 1100 |
| 2.0                     | 500                  | 94%         | 86%  | 71%  | 74%  | 54%  | 32%  |
|                         | 800                  | 96%         | 90%  | 77%  | 80%  | 62%  | 39%  |
|                         | 1100                 | 97%         | 92%  | 82%  | 84%  | 68%  | 46%  |
|                         | 1500                 | 97%         | 94%  | 85%  | 87%  | 73%  | 52%  |
| 2.3                     | 500                  | 94%         | 87%  | 73%  | 78%  | 58%  | 36%  |
|                         | 800                  | 96%         | 90%  | 79%  | 83%  | 66%  | 44%  |
|                         | 1100                 | 97%         | 93%  | 83%  | 87%  | 72%  | 51%  |
|                         | 1500                 | 98%         | 94%  | 86%  | 89%  | 77%  | 57%  |
| 2.5                     | 500                  | 95%         | 88%  | 74%  | 80%  | 61%  | 39%  |
|                         | 800                  | 96%         | 91%  | 79%  | 85%  | 69%  | 47%  |
|                         | 1100                 | 97%         | 93%  | 83%  | 88%  | 75%  | 54%  |
|                         | 1500                 | 98%         | 94%  | 87%  | 90%  | 79%  | 60%  |
| 2.7                     | 500                  | 95%         | 88%  | 74%  | 82%  | 64%  | 42%  |
|                         | 800                  | 96%         | 91%  | 80%  | 86%  | 71%  | 50%  |
|                         | 1100                 | 97%         | 93%  | 84%  | 89%  | 77%  | 57%  |
|                         | 1500                 | 98%         | 95%  | 87%  | 91%  | 81%  | 63%  |

# Putting it into action:

- Prioritise small paddocks for twins
- Capitalise on benefits of increased pasture utilisation
- Subdivision of paddocks or reallocation of mobs



Lift twins marking rate by 5%  
Lift singles marking rate by 1%

Lift ewe survival by up to 50% and lamb survival by 10% +

# On-farm research: Mob size at low SR

- Adult, twin-bearing Merino ewes lambing at high vs low mob size

| State | High mob size |           | Low mob size |           | Stocking rate<br>(ewes/ha) |
|-------|---------------|-----------|--------------|-----------|----------------------------|
|       | Average       | Range     | Average      | Range     | Range                      |
| NSW   | 763           | 639 – 976 | 435          | 338 – 554 | 0.3 – 1                    |
| WA    | 299           | 255 – 340 | 117          | 93 – 190  | 1 – 3.8                    |

# On-farm research: Mob size at low SR

- Survival of twin-born Merino lambs greater at lower mob sizes

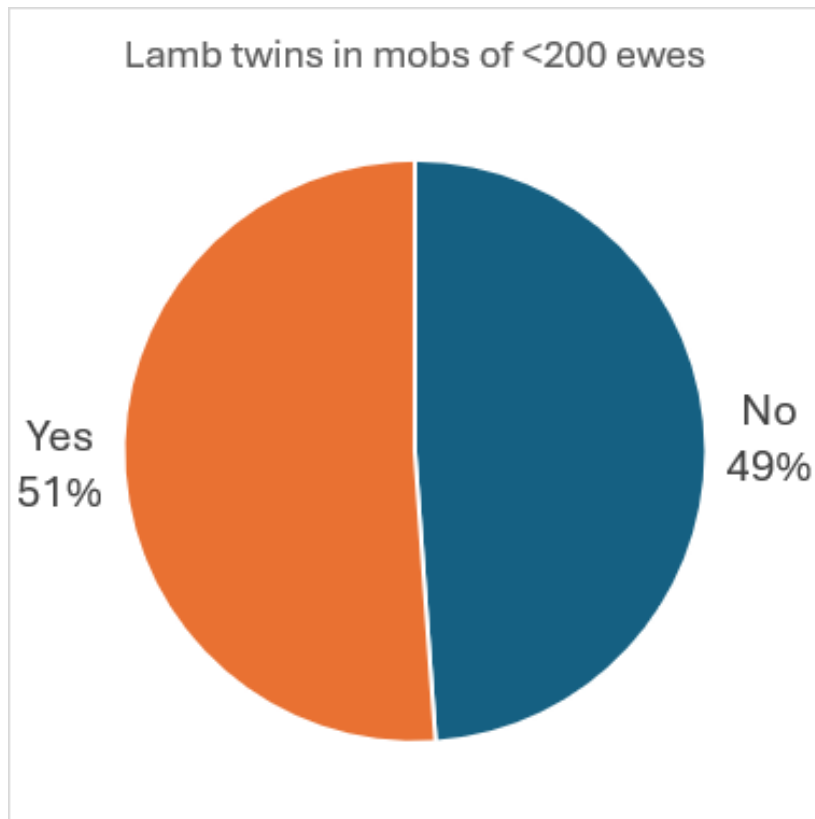
|     | High mob size | Low mob size |
|-----|---------------|--------------|
| NSW | 60.2%         | 70.9%        |
| WA  | 62.1%         | 66.1%        |

# Optimum mob size at lambing for adults

| Singles                 |        | Twins  |     |
|-------------------------|--------|--------|-----|
| DSE/ha                  | Adults | Adults |     |
| <u>Optimum Mob Size</u> |        |        |     |
| 2.1                     | 210    | 89     | 60% |
| 4.2                     | 193    | 80     | 60% |
| 8.4                     | 178    | 72     | 61% |
| 14.7                    | 168    | 67     | 63% |



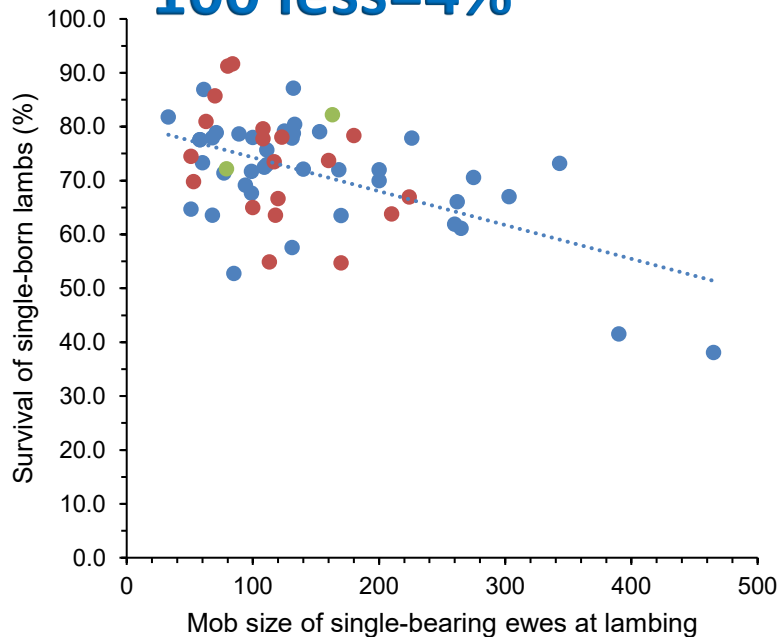
# Managing twins to smaller mob sizes



# Size does matter- for lambing mob size in ewe lambs

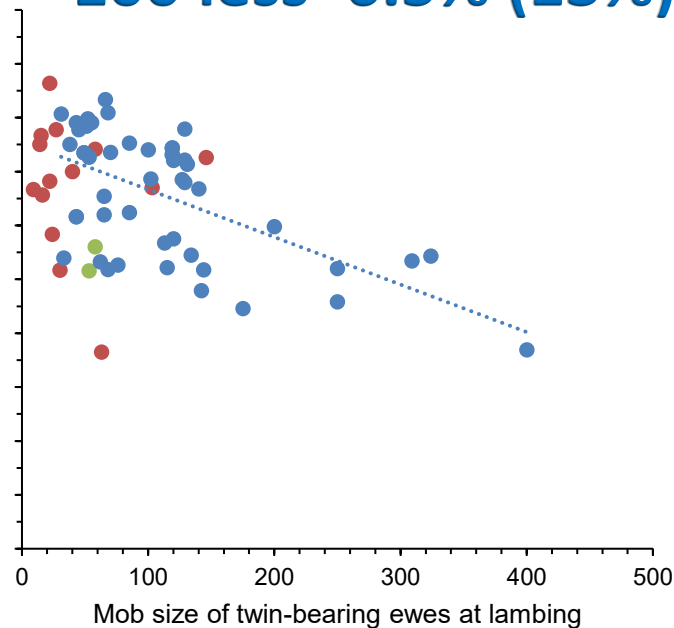
## Singles

100 less=4%



## Twins

100 less=6.5% (13%)



# Optimum mob size at lambing for ewe lambs

| Singles                        |           |        |        | Twins     |        |        |
|--------------------------------|-----------|--------|--------|-----------|--------|--------|
| DSE/ha                         | Ewe Lambs | Adults | Prop'n | Ewe Lambs | Adults | Prop'n |
| <b><u>Optimum Mob Size</u></b> |           |        |        |           |        |        |
| 2.1                            | 107       | 210    | 51%    | 53        | 89     | 60%    |
| 4.2                            | 93        | 193    | 48%    | 48        | 80     | 60%    |
| 8.4                            | 82        | 178    | 46%    | 44        | 72     | 61%    |
| 14.7                           | 77        | 168    | 46%    | 42        | 67     | 63%    |





# Optimum mob size- it depends!



|                     | Stocking rate<br>(DSE/ha) | Merino |         | Maternal |         |
|---------------------|---------------------------|--------|---------|----------|---------|
|                     |                           | Twin   | Triplet | Twin     | Triplet |
| Optimum<br>mob size | 2.1                       | 109    | 36      | 87       | 23      |
|                     | 4.2                       | 96     | 33      | 78       | 21      |
|                     | 8.4                       | 85     | 30      | 70       | 20      |
|                     | 14.7                      | 80     | 28      | 66       | 19      |

**Scenario: permanent subdivision, meat price at \$7/kg for lamb and a 5% minimum return-on-investment**

# Lamb marking is your yield mapping day

- Mark mobs in lambing mobs (don't box up)
- Collect good data (count all lambs and ewes)
- Record marking result against each paddock
- Identify lambs born as singles and twins (using either a numbered tag or ear notch)
- Wet-dry ewes every year (identify dry ewes)

# Take home messages

- Keep your eyes on the real prize- kgs of lamb weaned per hectare
- Must scan & manage differentially- multiples to lamb at least 0.3 CS higher
- Birth weight critical driver of lamb survival
- Pin-point and prepare lambing paddocks well in advance
- Lamb twins in smaller mobs
- Wet-dry ewes annually
- Plan – Do – Review
- Lamb survival is all about attention to detail

# MLA and relevant tools and resources

- Bred Well Fed Well
- Lifetime Ewe Management
- AWI Repro Master Class
- Pasture Paramedic Tool

# Turning reproductive potential into reality

Jason Trompf

Lambs Alive