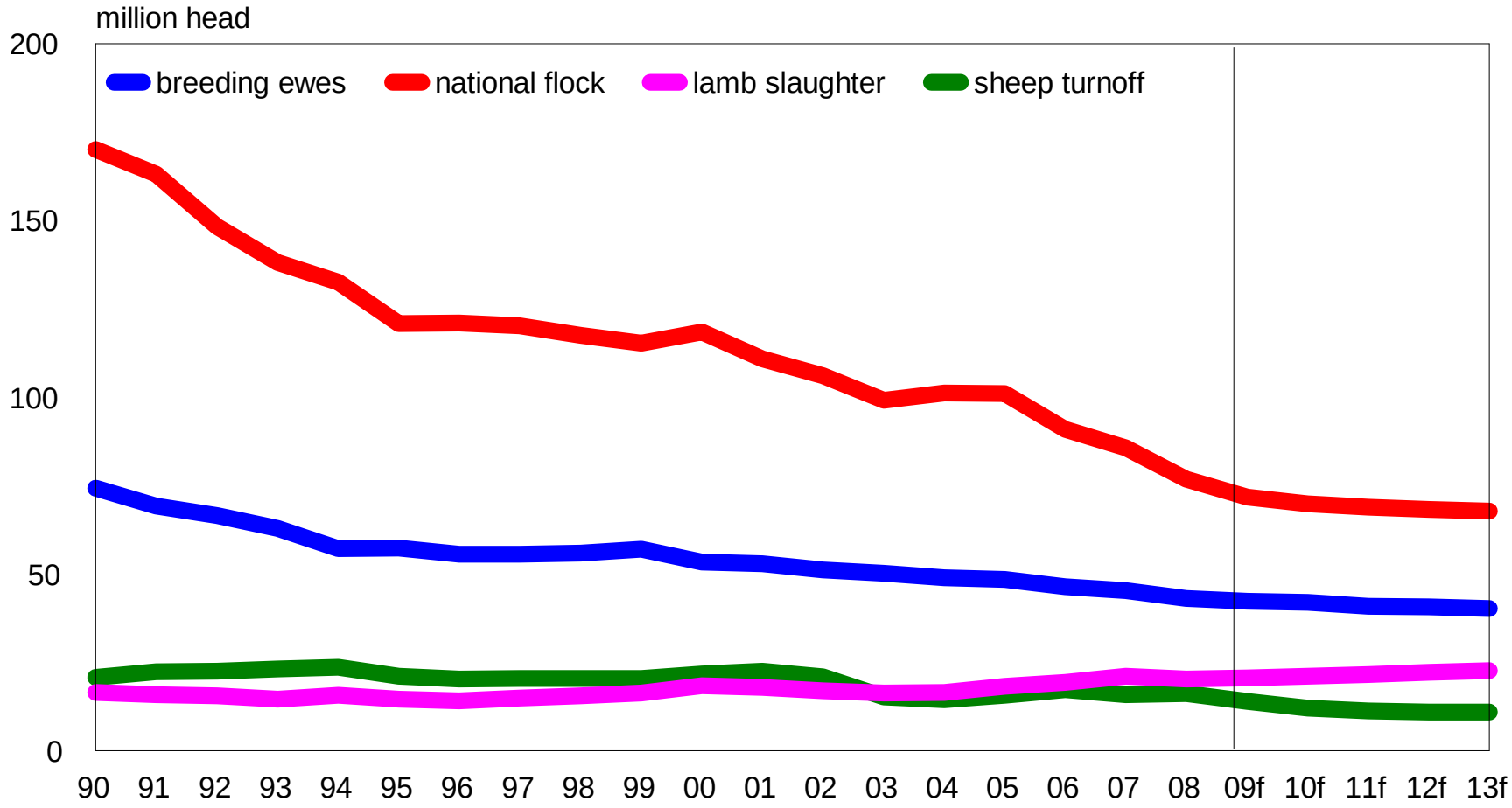
The New Ewe

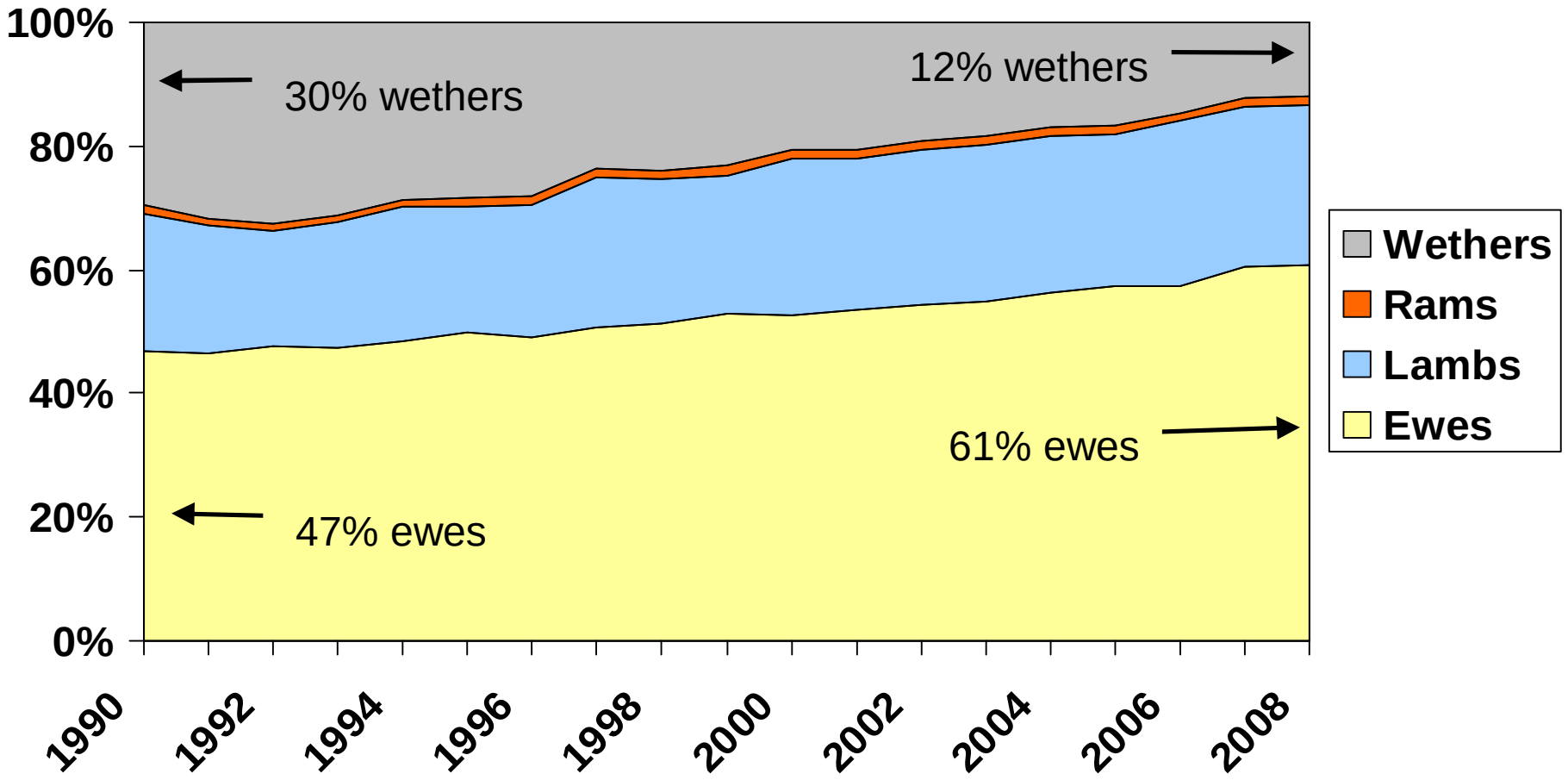
Jason Trompf
J.T. Agri-Source

National and breeding ewe flock decline



Source: ABS, MLA forecasts

Ewe & lamb proportion of the flock rising

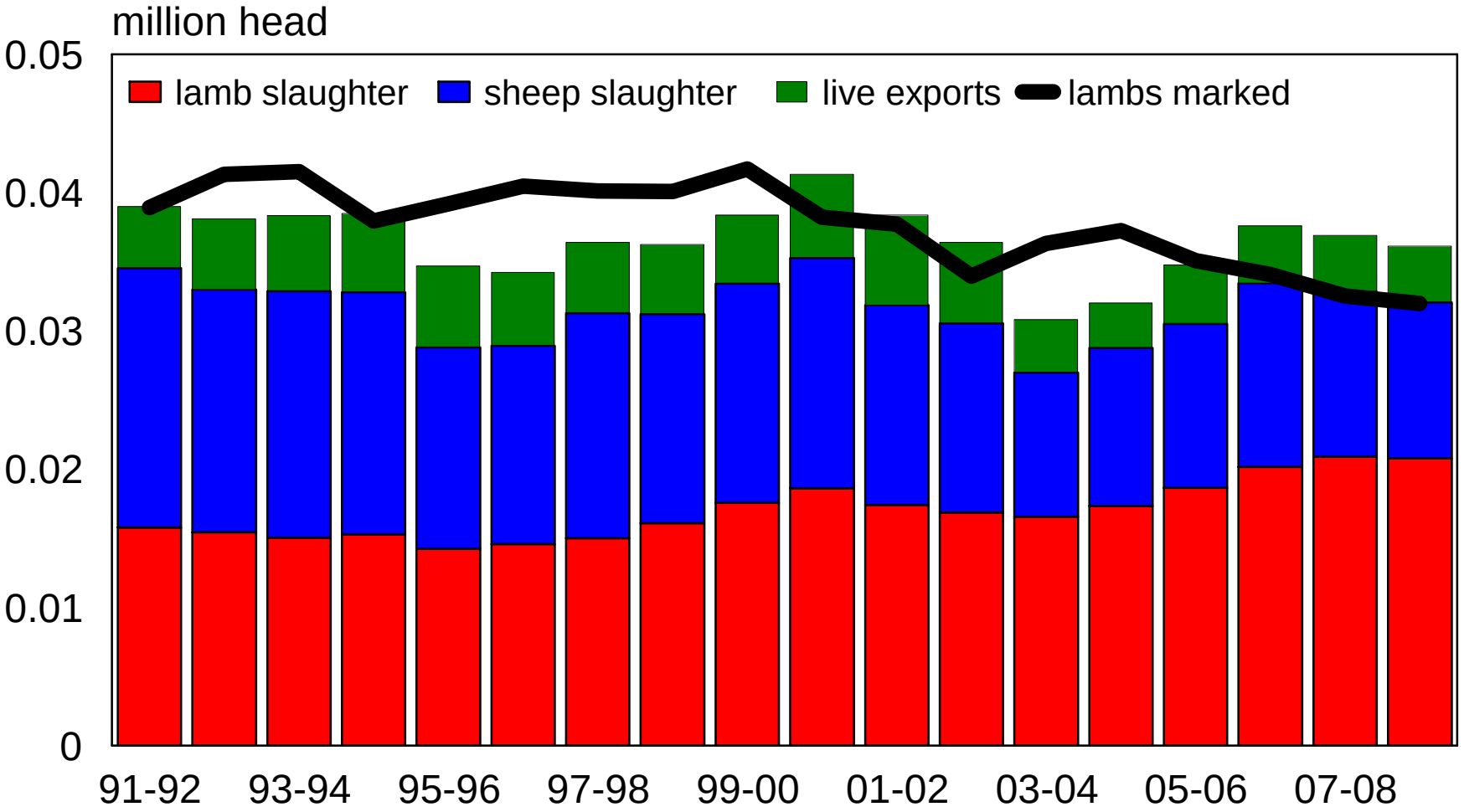


Source: ABARE AgSurf, Kimble Curtis

Why the right ewe matters!

	Broiler	Pig	Cattle	Sheep
Weight of dam	3	180	450	75
Weight of carcass	1.5	45	250	18
Progeny/year	240	22	1	1.5
Weight of carcass per yr/dam wt	120	5.5	0.55	0.36
Where the energy goes				
To Dam	**4**	**16**	**50**	**70**
To Progeny	**96**	**84**	**50**	**30**

Total turn-off and lambs marked



Source: ABS, MLA

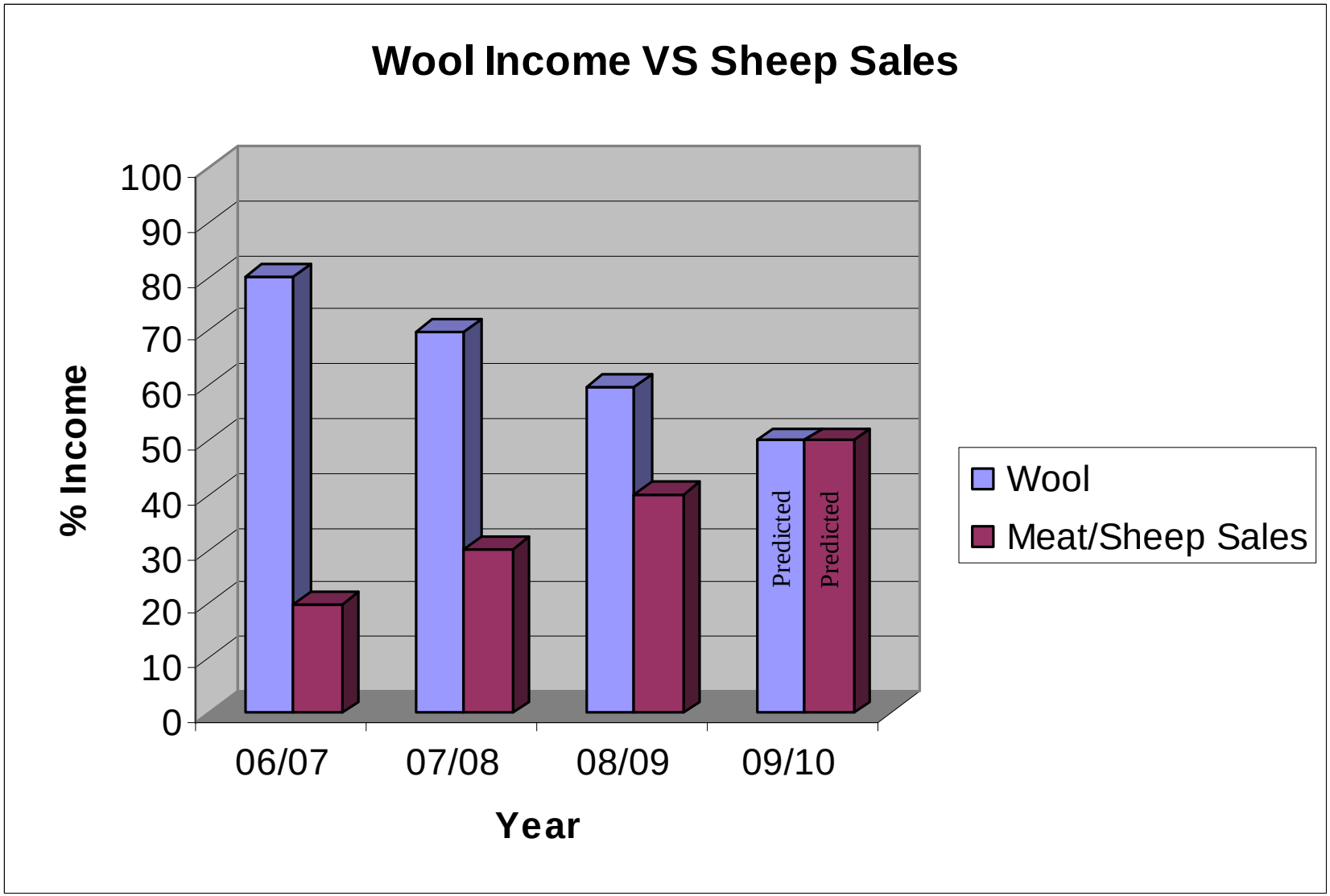
Trends in Average Marking Rate

(ABARE Survey data for all sheep regions of Aus)

Enterprise sector	Average marking rate (1990-1999)	Average marking rate (2000-2010)
Prime lamb specialists	84	85
Sheep specialists	73	71
Mixed sheep enterprises	75	74
Sheep Industry Total	77	77

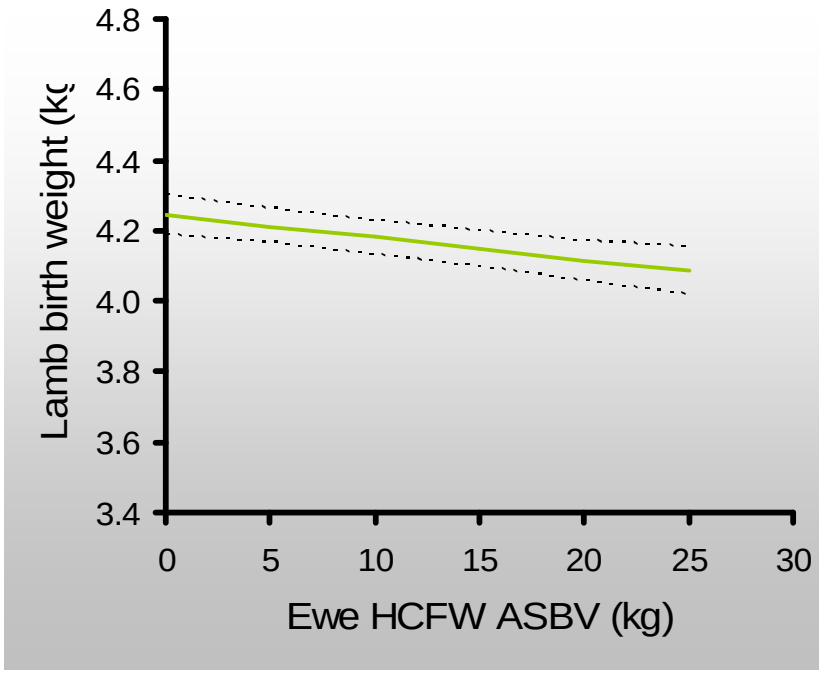
Income from wool vs sheep sales

- 30 ‘self replacing’ Merino enterprises
- 6000 sheep/enterprise
- Average micron 18.5
- Average lamb marking 75%
- Average stocking rate 13.6 DSE/ha (2.1 DSE/ha/100mm rainfall)
- Wethers kept to 3 years

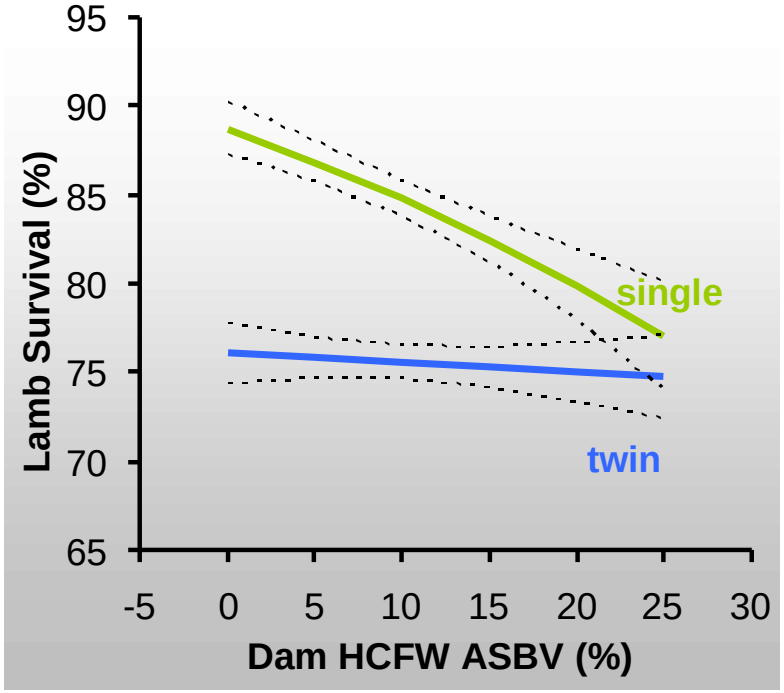

Wool Income VS Sheep Sales
% Income
100
90
80
70
60
50
40
30
20
10
0
06/07
07/08
08/09
09/10
Predicted
Predicted
Year
Wool
Meat/Sheep Sales

Selection for fleece weight impacts reproduction

High wool – light lambs



High wool – high lamb mortality



Evergraze analysis- crossbreds

- Fleece value $20-25 less per ewe
- Less ewes per ha or higher supplement costs (10-15 kg higher standard reference weight)
- Replacement/opportunity cost of ewes

- Lamb marking rates >150% to ewes joined
- Higher lamb growth rates

The Maternal Profit Drivers

- Lambing rate (weaning %) 60 %
- Growth of lambs 15 %
- Carcase compliance 15 %
- Ewe wool production 10 %

The future ewe

More lambs & better survival

Rapid lamb growth

'Easy-care'- less flies, worms, horns, chemicals and labour

Carcass appeal

Quality wool

One simple way to get them…

Australian

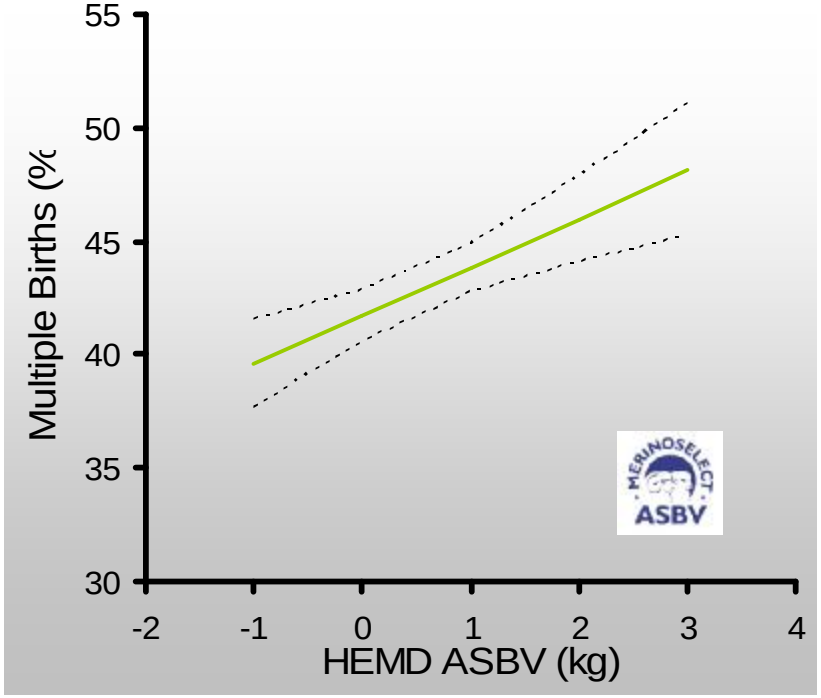
Sheep

Breeding

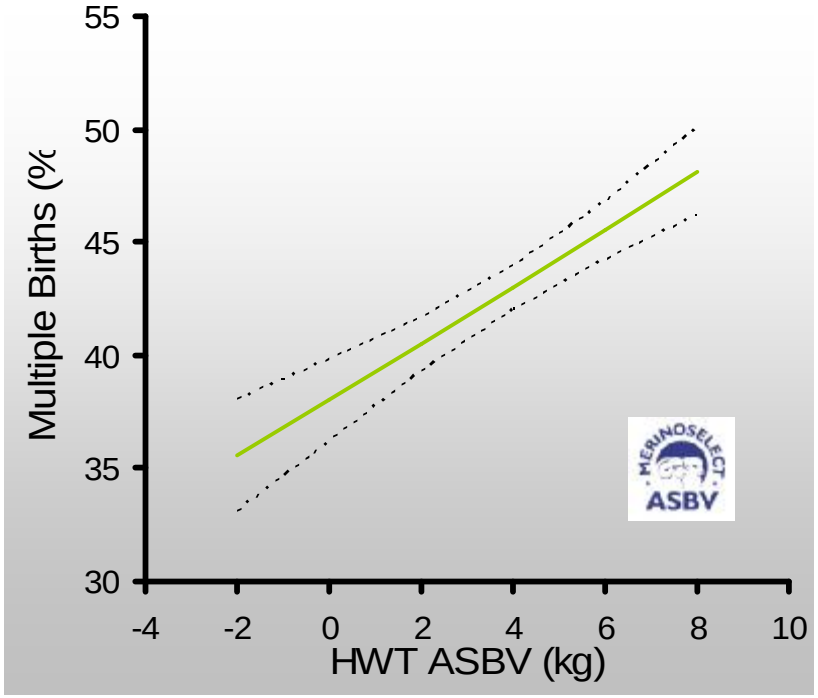
Values

Getting more lambs

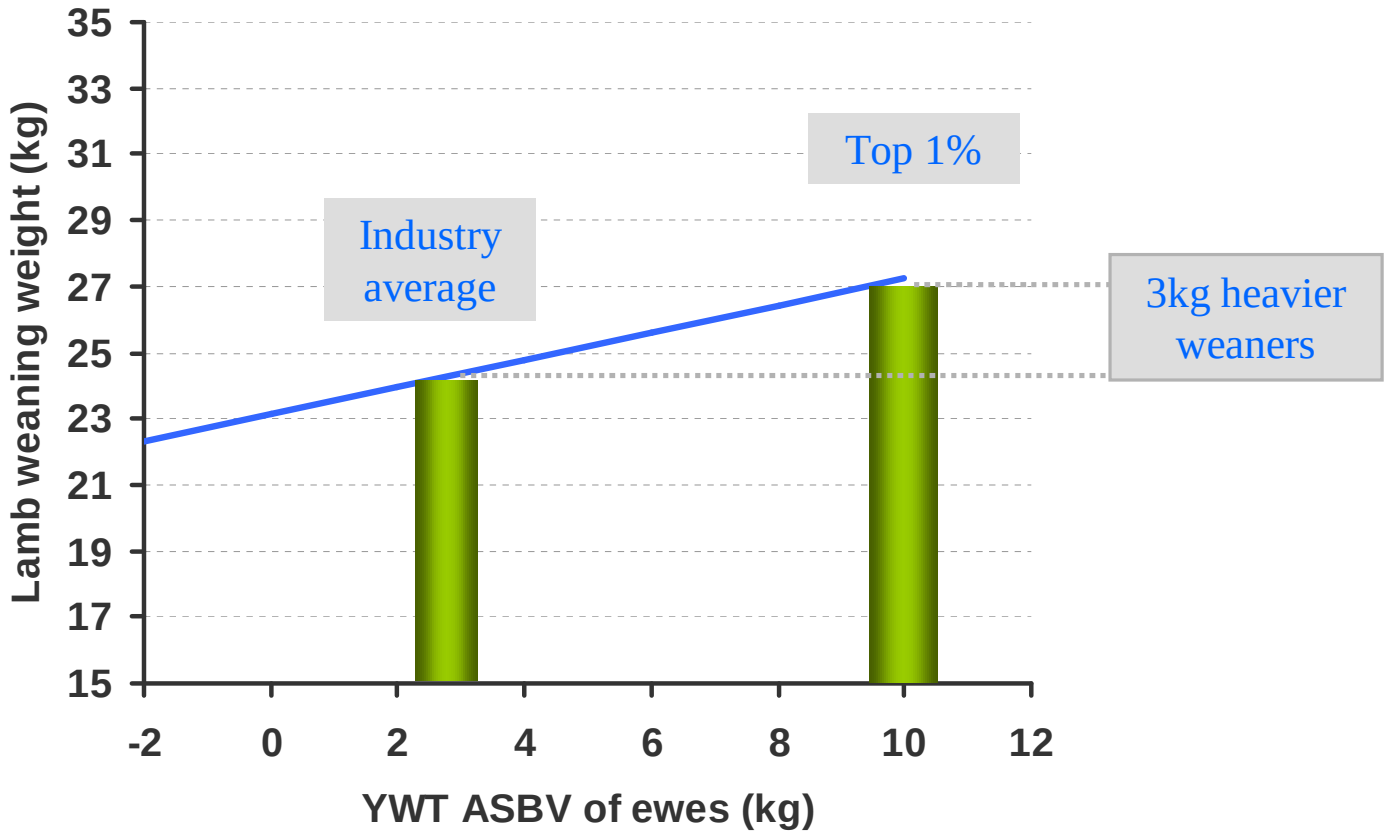
More muscle – more twins



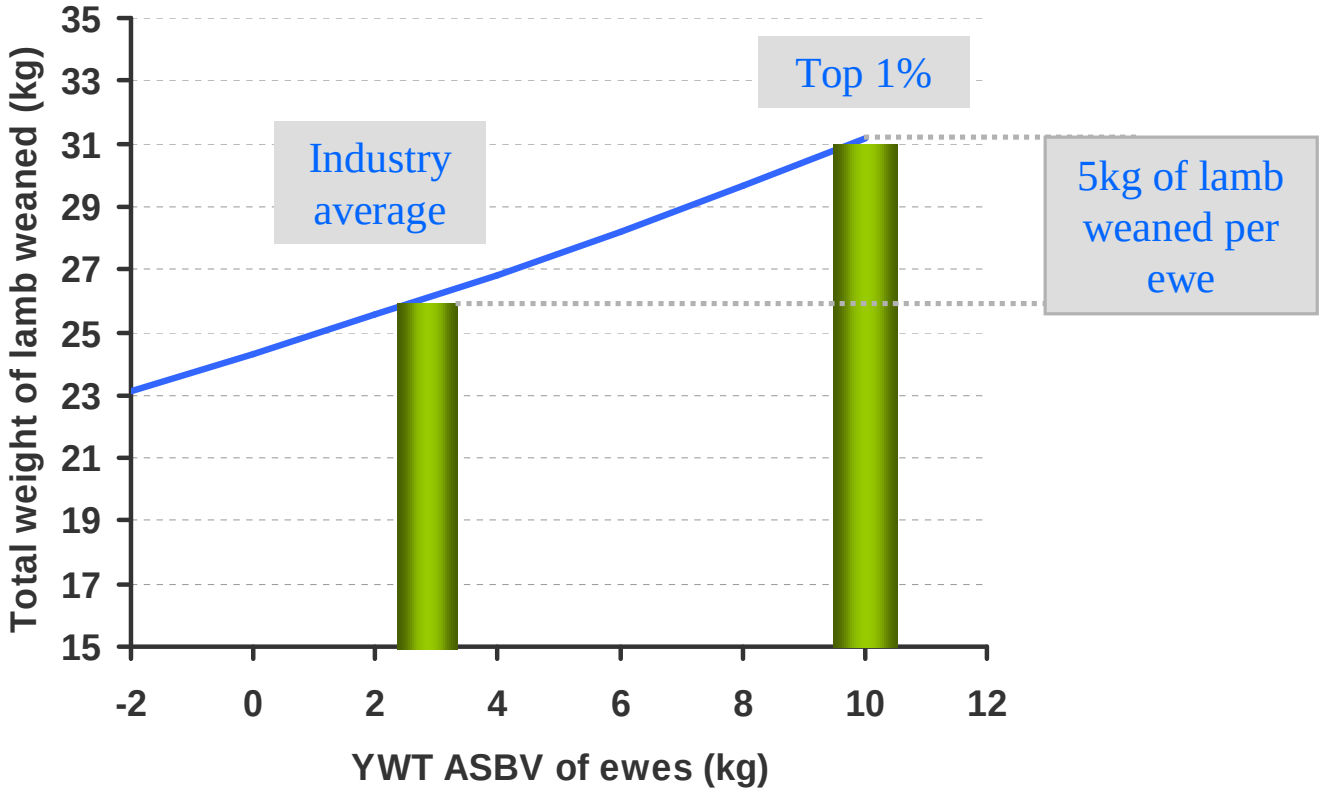
More growth – more twins



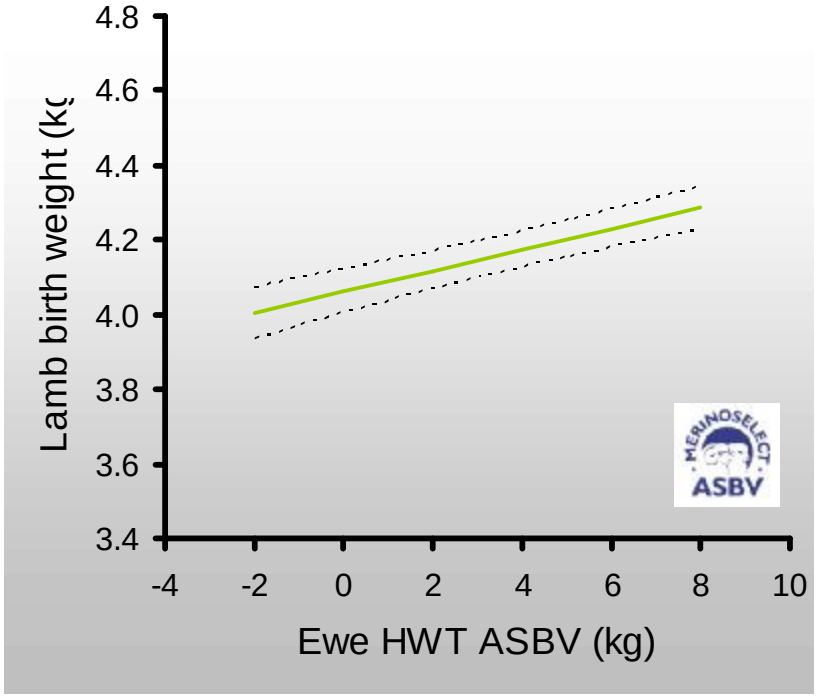
Growth


Lamb weaning weight (kg)
35
33
31
29
27
25
23
21
19
17
15
-2
0
2
4
6
8
10
12
YWT ASBV of ewes (kg)
Top 1%
Industry average
3kg heavier weaners

Growth

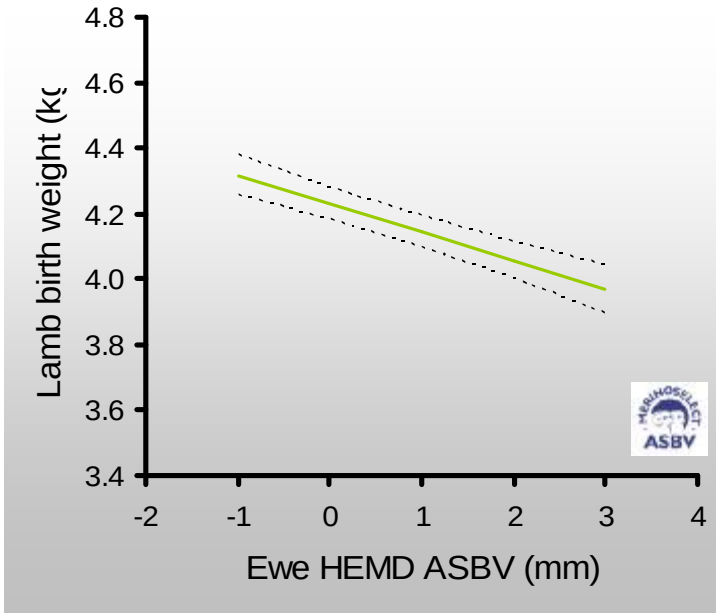

Total weight of lamb weaned (kg)
35
33
31
29
27
25
23
21
19
17
15
-2
0
2
4
6
8
10
12
YWT ASBV of ewes (kg)
Top 1%
Industry average
5kg of lamb weaned per ewe

Selection for growth- lamb birth wt

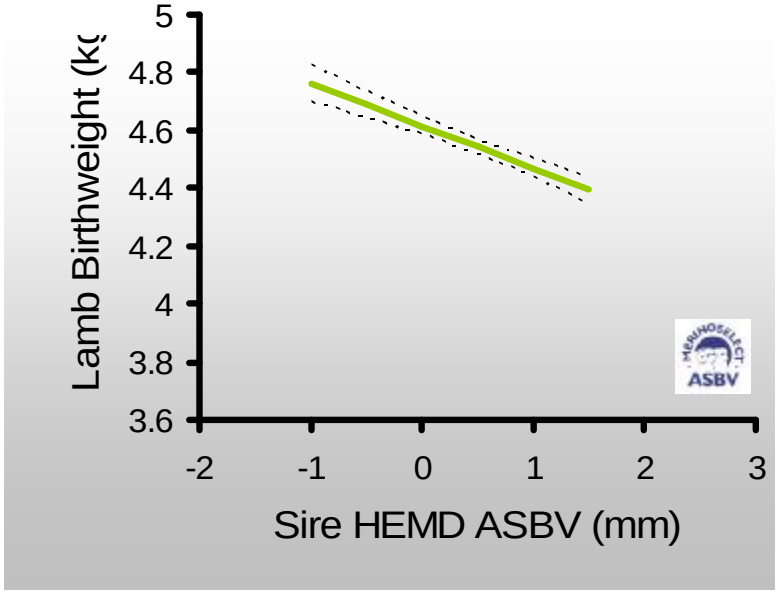


Selection for muscling- lamb birth wt

Ewe muscling

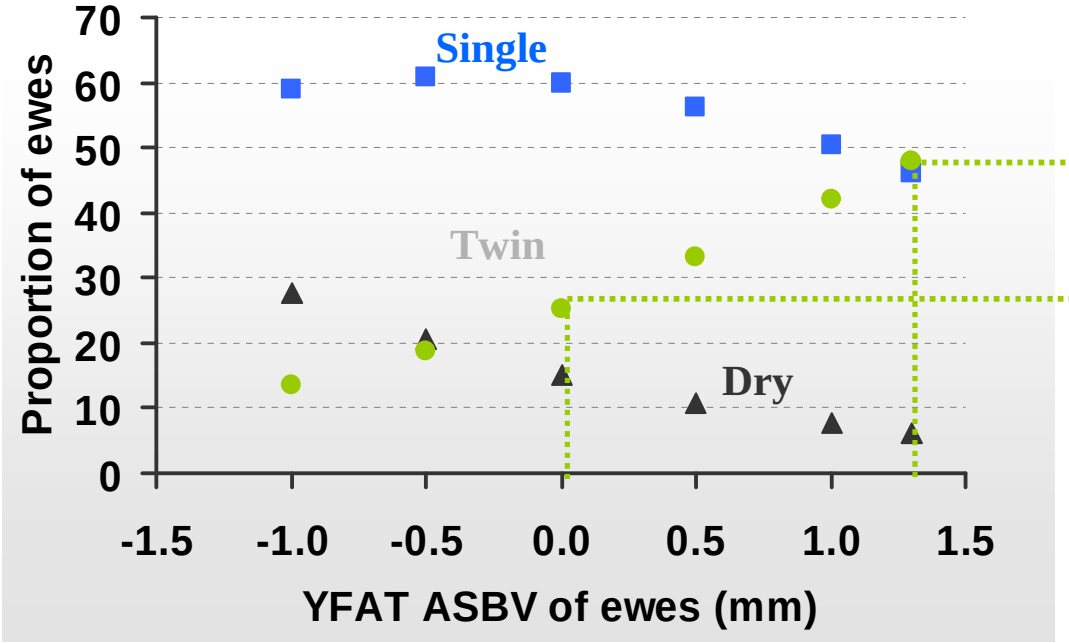


Sire muscling



No effect on lamb survival

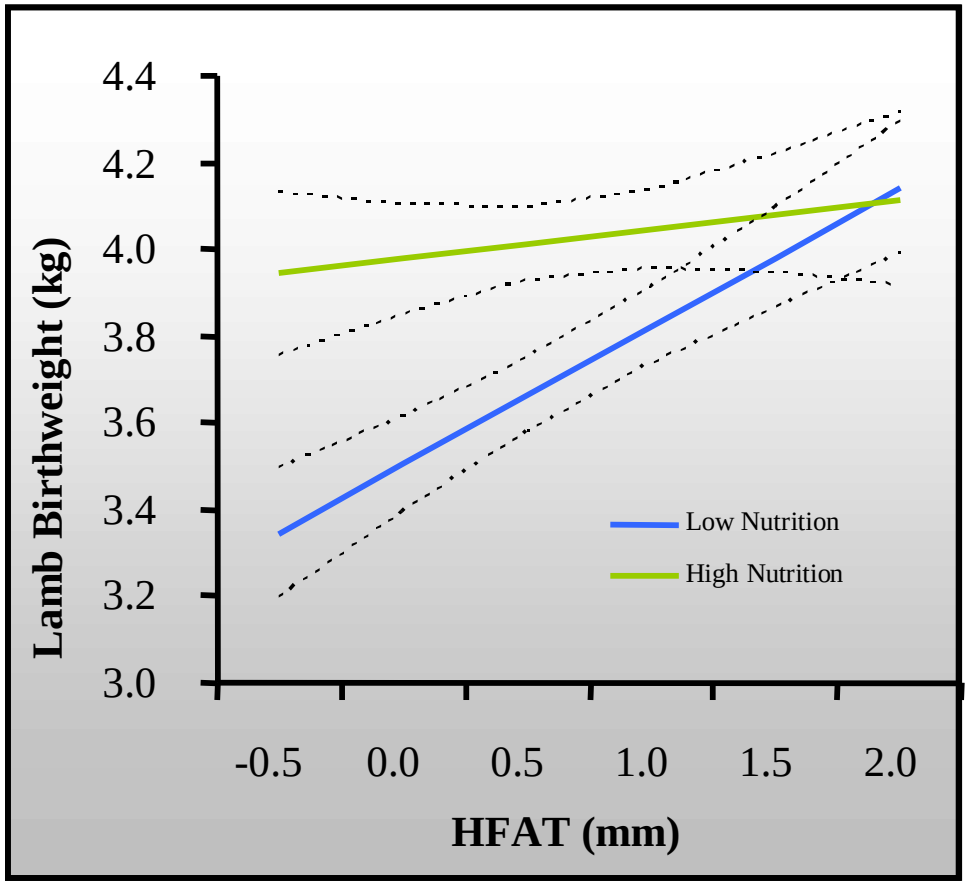
FAT



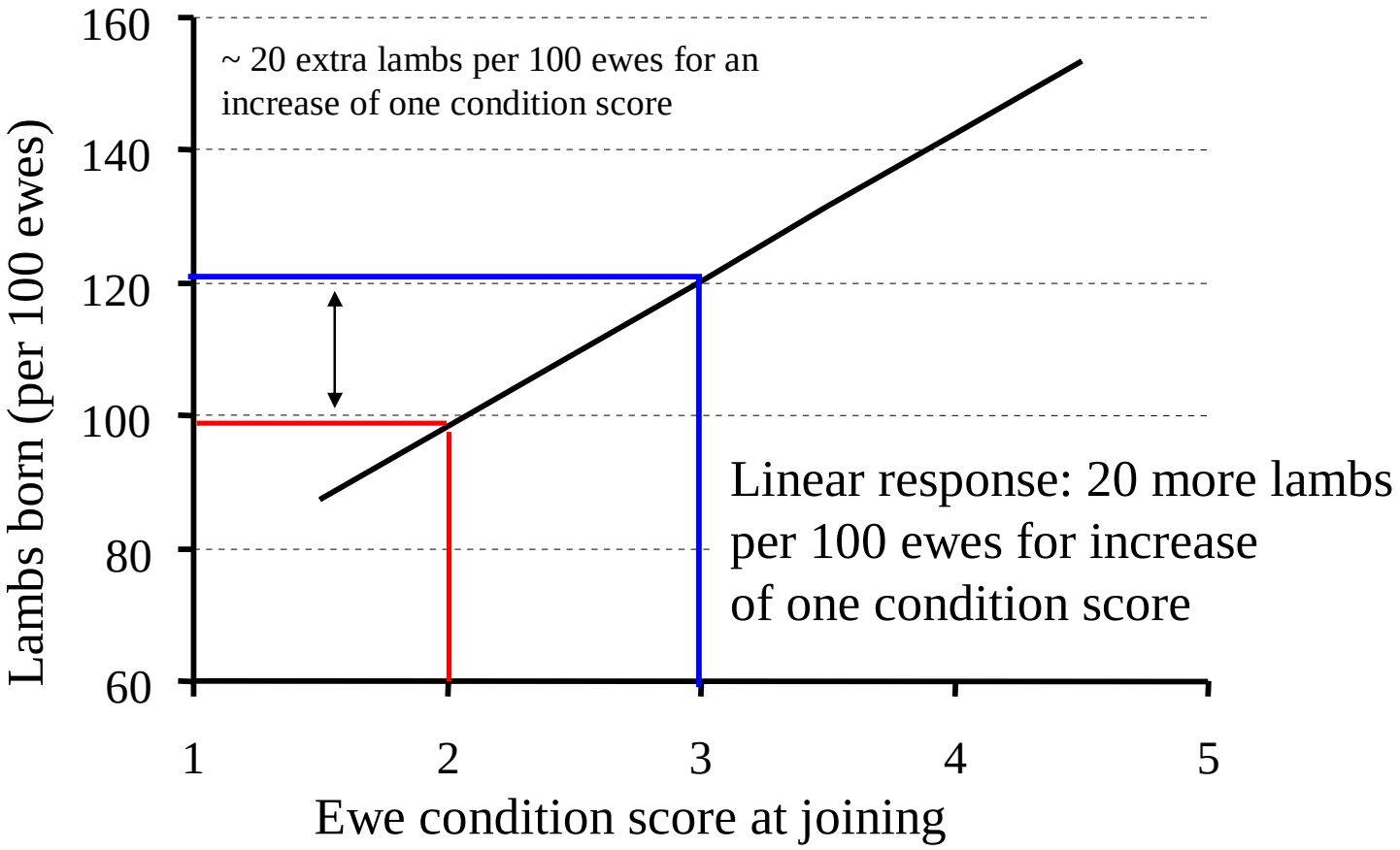
30 lambs per 100 ewes

Farm profit = $40,000/mm yfat

FAT- easy care



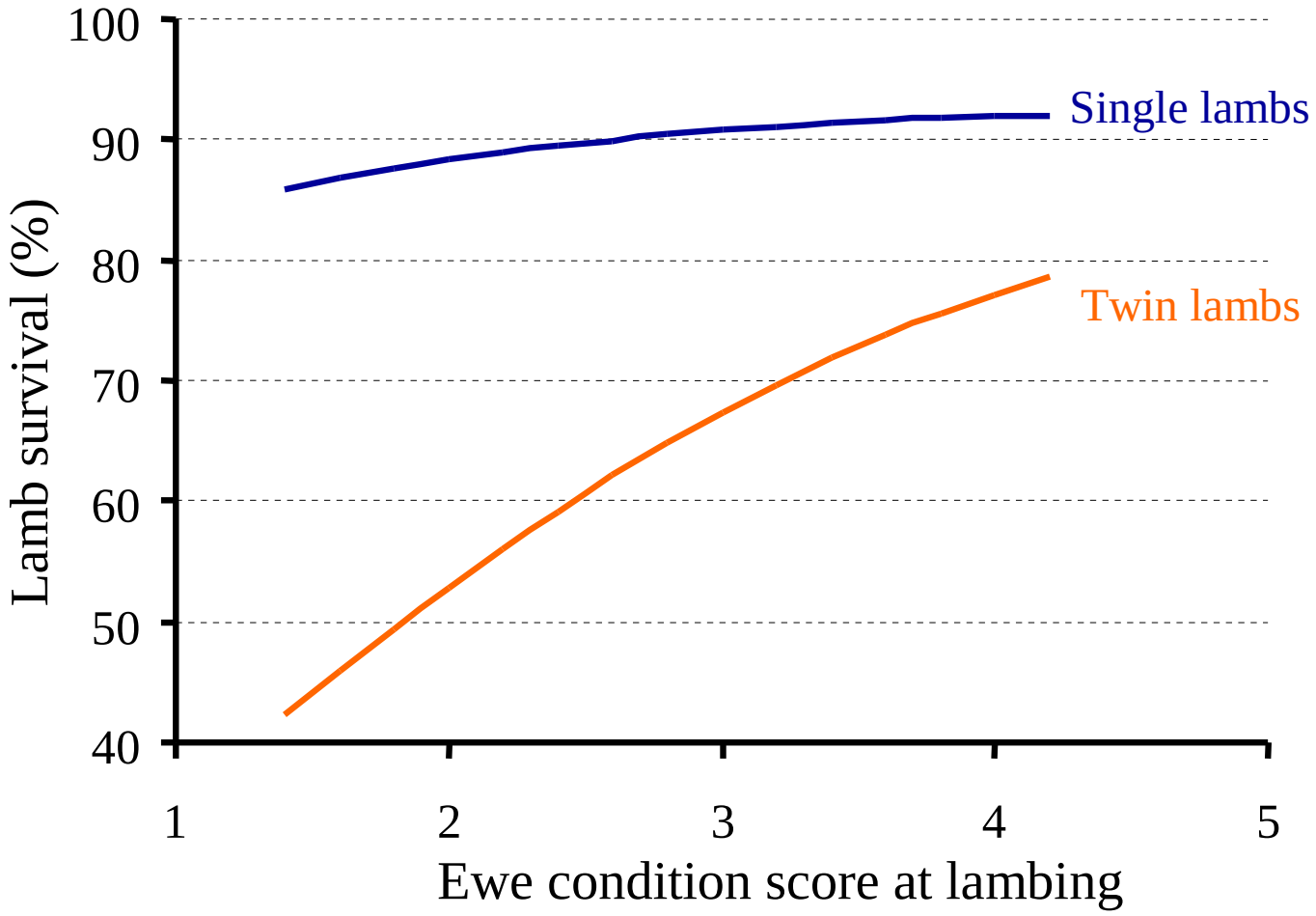
Number of lambs born determined by ewe condition score at joining



Responsiveness of scanning performance to condition score highly variable

Farm/location	Extra foetuses/CS
Edenhope (maidens)	+60
Skipton	+45
Ararat	+44
Edenhope	+27
Edenhope	+25
Ararat	+25
Dunkeld	+13

Lamb survival increases with improved ewe condition



Breeds and bloodlines give you something to talk about but do not make you money

Traits that improve performance in the paddock make you money

ASBV effects-

Increasing growth:

- Increases twinning percentage
- Increases lamb birth weight
- Increases ewe milk production and lamb growth rates

Increasing Fat:

- Increases twinning percentage
- Increases lamb birth weight – under low nutrition
- Increases milk production – under low nutrition
- Increases early lamb growth rate

Increasing Muscling:

- Increases twinning percentage
- Decreases lamb birth weight
- Increases weaning weight

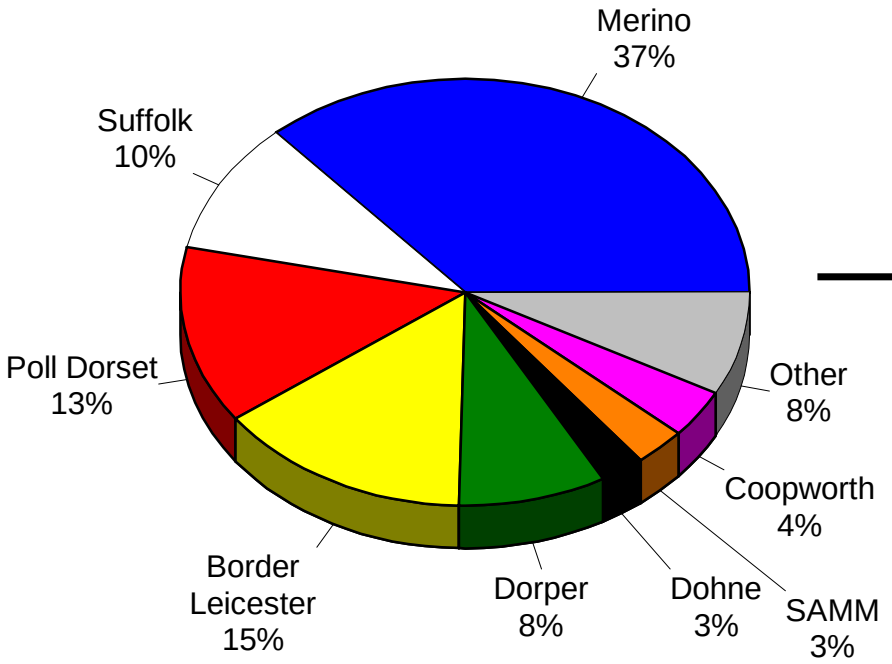
What is the right ewe?

- Fertile- 3% SIL per kg ewe body weight
- Efficient- kg lamb : kg ewe
  (wean 100% ewe wt at 12-14 wks)
- Resilient- ability to maintain production-
  in feed limited environments
  contract and expand quickly
  under parasite challenge

Importance of maternal genetics

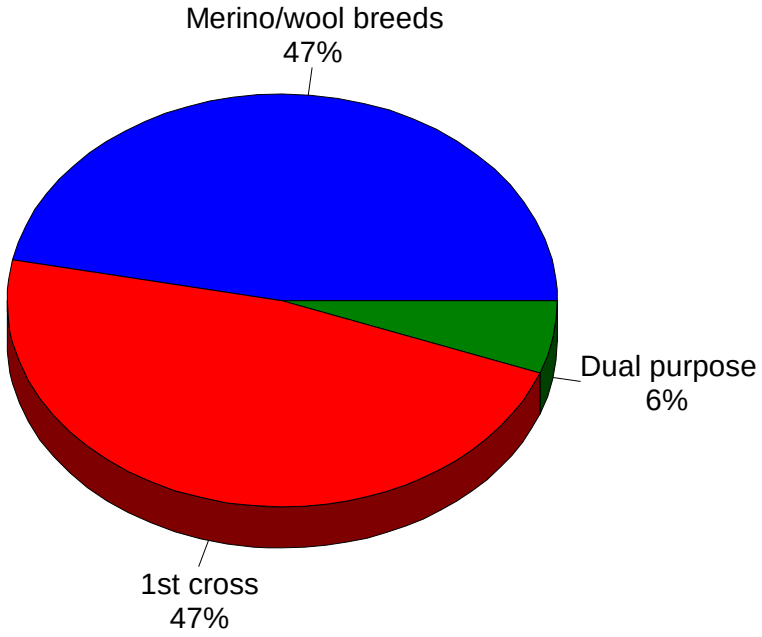
Sires used to generate maternal ewe flock

at February 2009



n = 613

Implied breed of ewes produced



Source: MLA February 2009 Lamb Survey

Merino ASBV Ranges

Trait	Top	Bottom	Range
YWT (kg)	14.4	-12.9	**27.3**
YFAT (mm)	-2.4	2.6	**5.0**
YEMD (mm)	4.6	-3.1	**7.7**
YCFW (%)	41.5	-39.3	**81**
YFD (um)	-5.1	3.3	**8.4**
YSS (N/ktex)	12.1	-16.7	**28.8**
YWEC (%)	-100	385	**485**
NLW (%)	24%	-18%	**42%**
MWWT (kg)	3.0	-3.3	**6.3**
EBWR (score)	-0.9	1.3	**2.2**

Percentile Band Table- Merino

Band	Yfd u	Ycfw %	Ysl mm	NLW %	Ywec %	Ywt kg	Yemd mm	7%DP	14%SS
0	-5.2	42.1	23.0	22	-100	14.1	3.4	204	180
1	-4.0	28.0	15.2	12	-97	9.8	2.1	176	157
10	-2.6	19.5	10.3	6	-49	6.6	1.3	156	145
50	-1.4	7.0	3.5	2	-10	2.4	0.3	132	129
100	3.4	-39.8	-22.0	-17	167	-10.4	-2.6	50	56

The Maternal Ewe Blueprint

Weaning %
NLW, LE, BWT

Growth Rate
WWT, PWT

Carcase $$
PFAT, PEMD LMY

Wool $$
GFW, FD, SS, SL

Mature Ewe Size
AWT

Worm Resistance
WEC