RamSelect.com.au

Sheep CRC
Telstra
Pivotal Labs – San Francisco
Sheep Genetics
NSW DPI

RamSelect.com.au

- Simplify the process of using ASBVs to buy rams
- Commercial sheep producer – 5,000 ewes
- Purchasing a team of rams each year
- Remove complexity and the need to understand ASBV figures
- Individual breeding objective
- Ranked list of sale rams

Find the best rams for your flock.

HOW IT WORKS   FIND RAMS

Trait categories for Merino, Maternal and Terminal breeds

MERINO and Dohne	TERMINAL	MATERNAL
Wool quality		
Fleece weight		
Growth	Growth	Growth
Carcase	Carcase	Carcase
Weaning percentage	Weaning Percentage	Weaning Percentage
Parasite resistance	Parasite resistance	Parasite resistance
	Eating Quality	Eating Quality
		Wool (maternal)

RamSelect
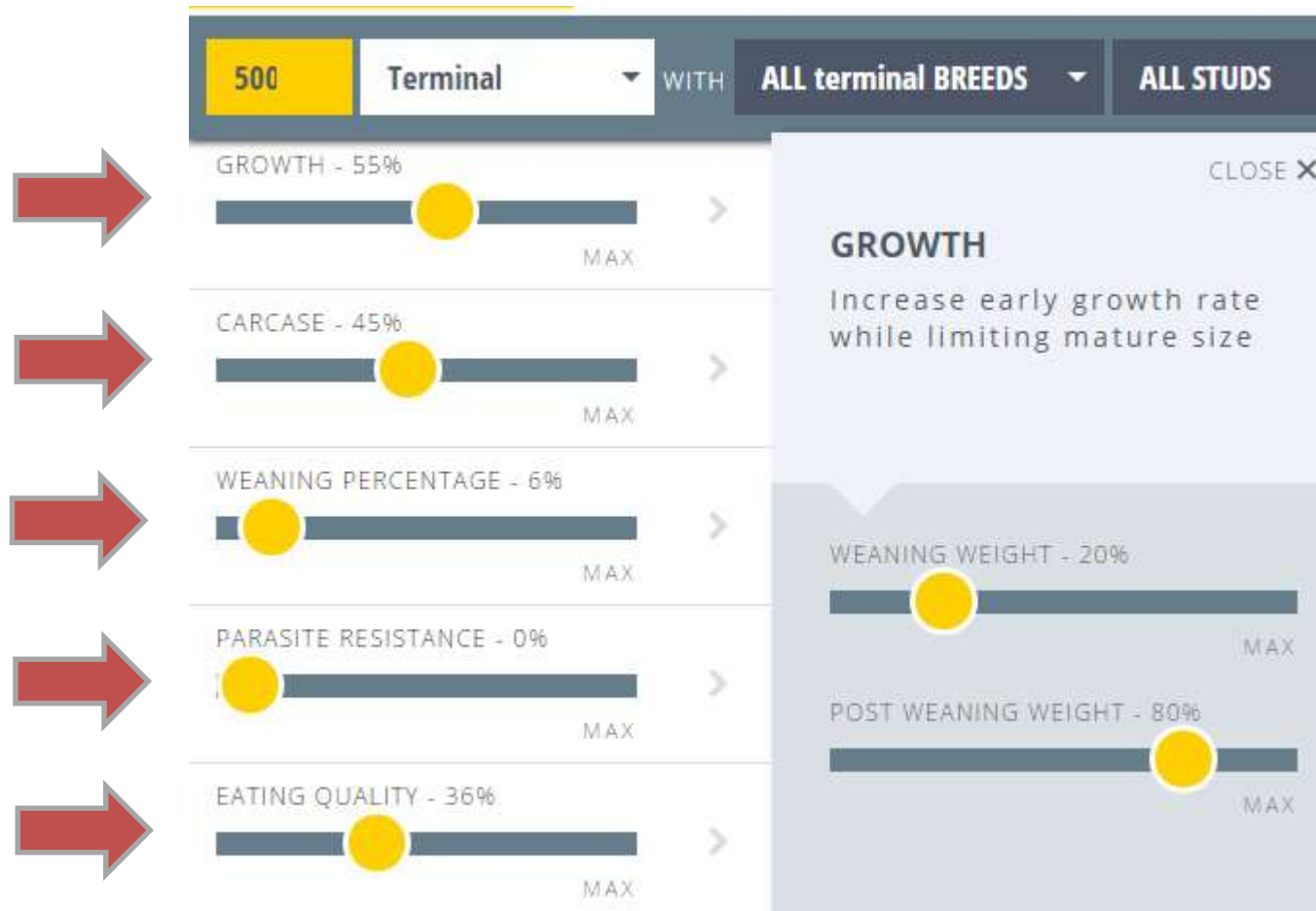
| 500 | Terminal ▾ | WITH | ALL terminal BREEDS ▾ | ALL STUDS ▾ | ALL SALES ▾ | WITHIN | 500 KM ▾ | OF | 3564 |

GROWTH - 55%

MAX

CARCASE - 45%

MAX

WEANING PERCENTAGE - 6%

MAX

PARASITE RESISTANCE - 0%

MAX

EATING QUALITY - 36%

MAX

RECOMMENDED RAMS

RANK	LOT #	STUD NAME	ANIMAL ID	PRICE	RATING
1	1	MILLSWYN	140195	Private Treaty	★★★
2	2	MILLSWYN	140197	Private Treaty	★★★
3	4	MILLSWYN	140228	Private Treaty	★★★
4	5	MILLSWYN	140180	Private Treaty	★★★
5	3	MILLSWYN	140020	Private Treaty	★★★
6	6	MILLSWYN	140261	Private Treaty	★★★

| 1 | 4 | MILLSWYN | 140228 | Private Treaty | ★★★ |

ANIMAL ID: 2301132014140228 (SIRE ID: 2301132013130201)

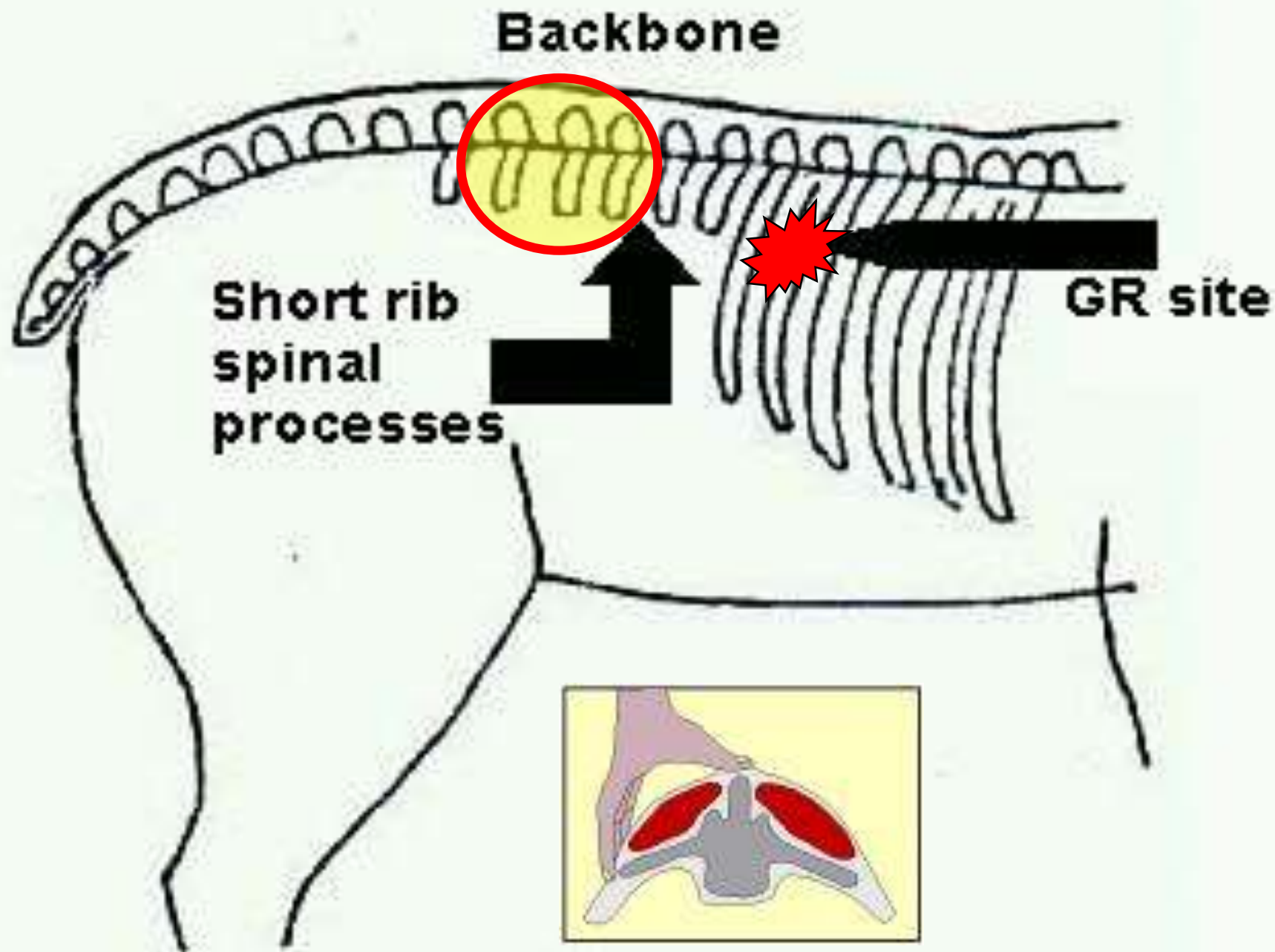|							
WWT	**9** 63%	PWT	**14** 61%	PEMD	**3.3** 68%	PFAT	**0.6** -%
LMY	**-0.48** 29%	BWT	**-0.04** 62%	NLW	**-** -%	PWEC	**-** -%
IMF	**0.29** 32%						

Keeping Sheep in Good Condition

Assessing livestock

- Know the feed requirements of different livestock classes

- Be able to condition score

- Know critical minimum condition/fat scores and times to assess stock

Appropriate Body Condition ??

- Ultimately production is <u>nutrition</u> driven

- Conception and survival to weaning are heavily dependent on
  - ewe body condition and
  - meeting the weaner lambs feed needs (increasing weaning by 10% can increase profit margins between 13 to 25%)

Backbone

Short rib spinal processes

GR site

Condition Score 1

Backbone
The bones form a sharp narrow ridge. Each vertebra can be easily felt as a bone under the skin. There is only a very small eye muscle. The sheep is quite thin (virtually unsaleable).

Short Ribs
The ends of the short ribs are very obvious. It is easy to feel the squarish shape of the ends. Using fingers spread 1cm apart, it feels like the fingernail under the skin with practically no covering.

Condition Score 2

Backbone
The bones form a narrow ridge but the points are rounded with muscle. It is easy to press between each bone. There is a reasonable eye muscle. Store condition- ideal for wethers and lean meat.

Short Ribs
The ends of the short ribs are rounded but it is easy to press between them. Using fingers spread 0.5cms apart, the ends feel rounded like finger ends. They are covered with flesh but it is easy to press under and between them.

Condition Score 3

Backbone
The vertebrae are only slightly elevated above a full eye muscle. It is possible to feel each rounded bone but not to press between them. (Forward store condition ideal for most lamb markets now. No excess fat).

Short Ribs
The ends of short ribs are well rounded and filled in with muscle. Using 4 fingers pressed tightly together, it is possible to feel the rounded ends but not between them. They are well covered and filled in with muscle.

Condition Score 4

Backbone
It is possible to feel most vertebrae with pressure. The back bone is a smooth slightly raised ridge above full eye muscles and the skin floats over it.

Short Ribs
It is only possible to feel or sense one or two short ribs and only possible to press under them with difficulty. It feels like the side of the palm, where maybe one end can just be sensed.

Condition Score 5

Backbone
The spine may only be felt (if at all) by pressing down firmly between the fat covered eye muscles. A bustle of fat may appear over the tail (wasteful and uneconomic).
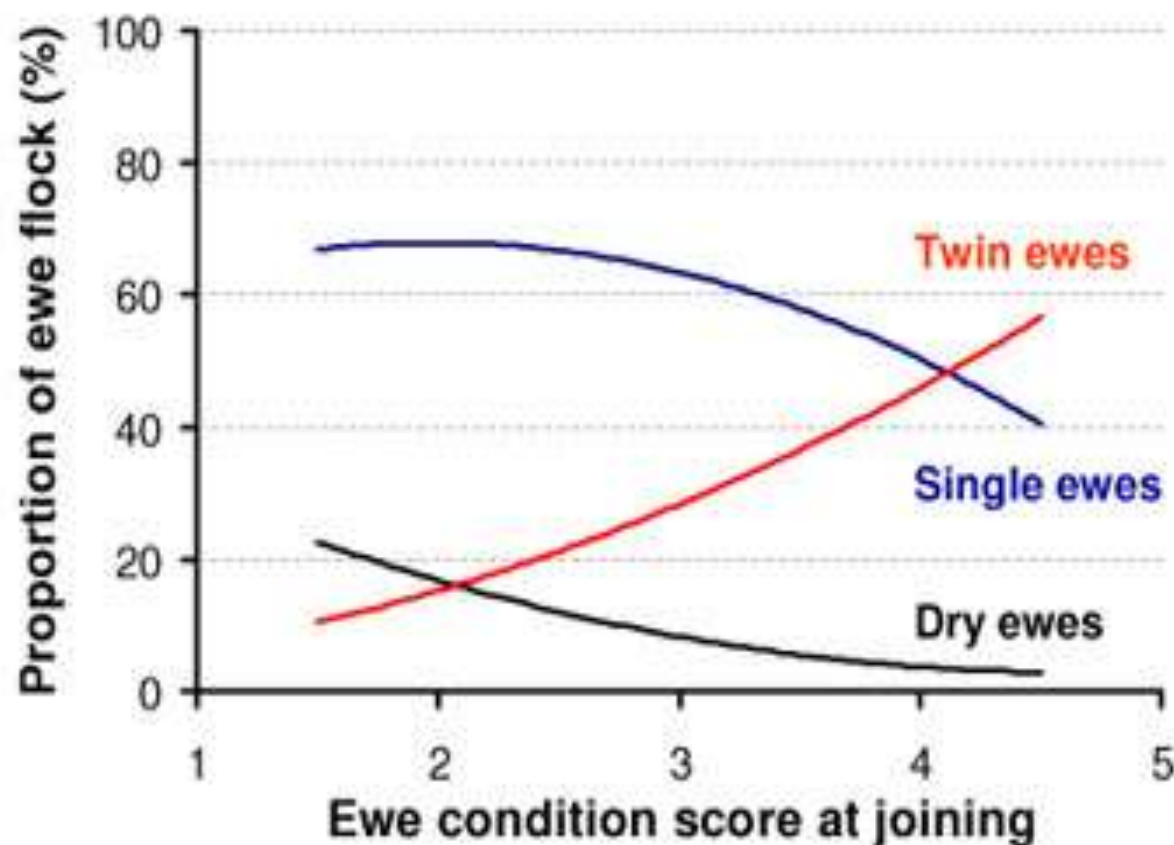
Short Ribs
It is virtually impossible to feel under the ends as the triangle formed by the long ribs and hip bone is filled with meat and fat. The short rib ends cannot be felt.
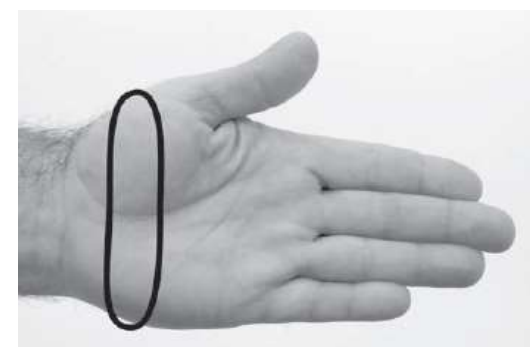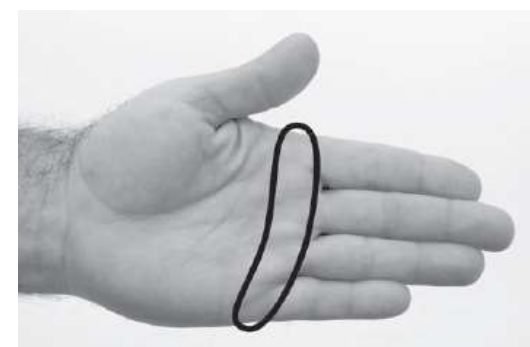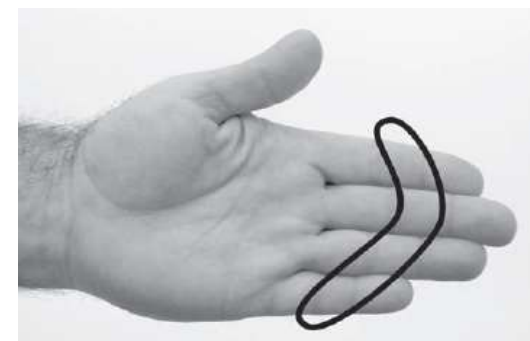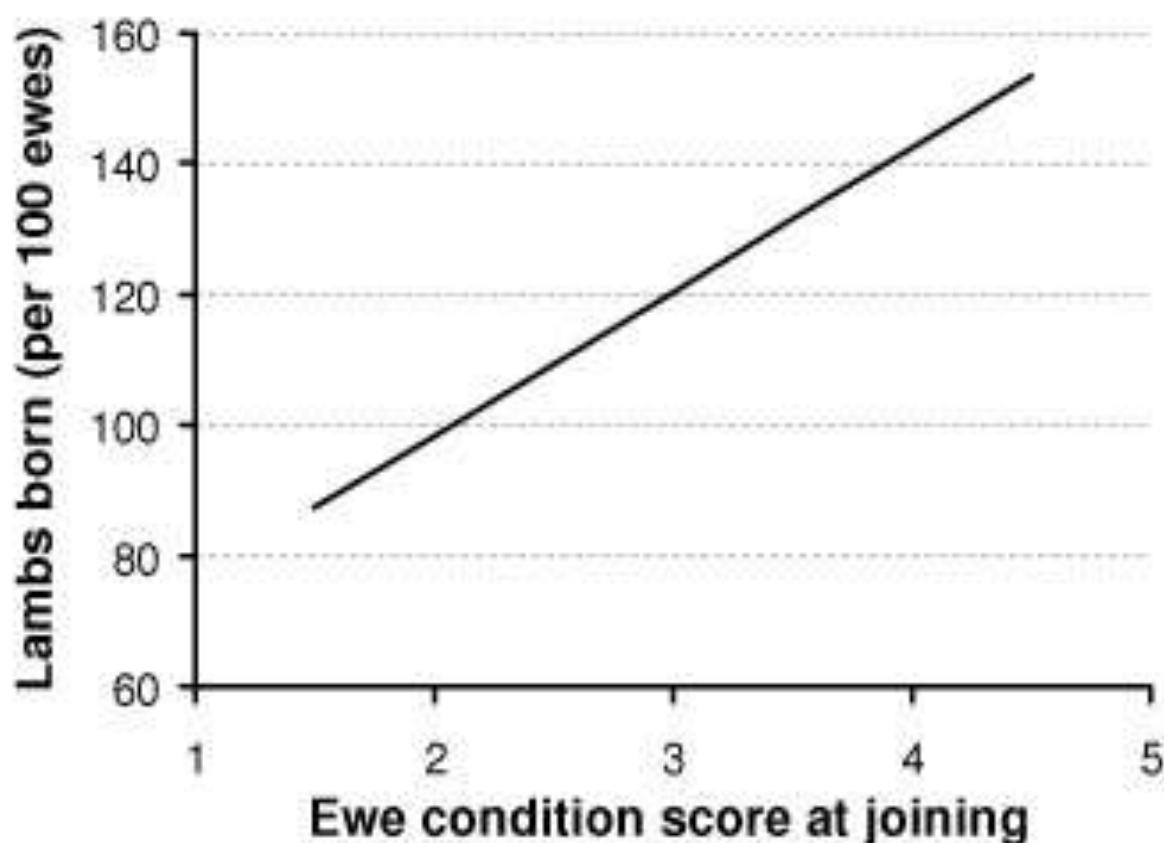
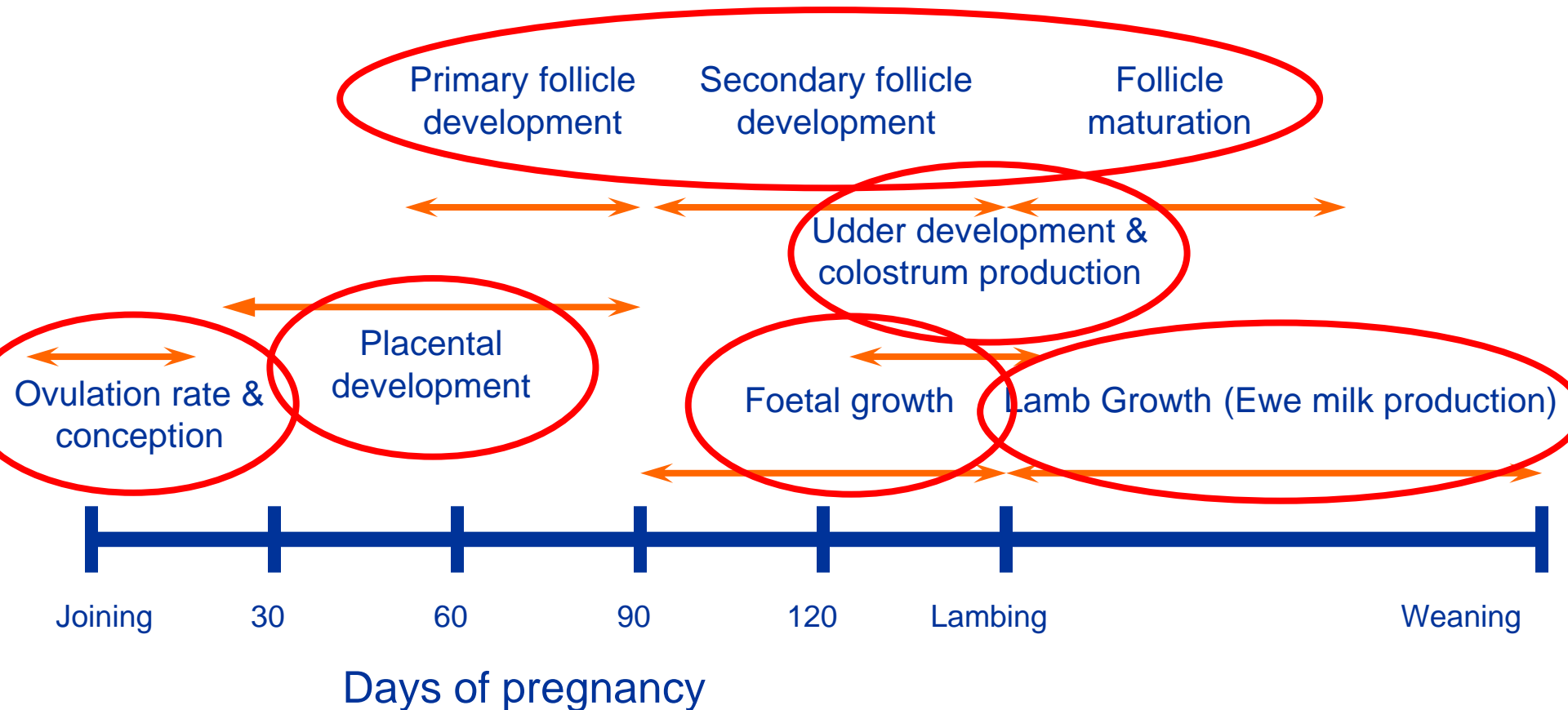| Class of sheep	Minimum condition score	Target condition score
Dry ewe at joining	2.5	3
Pregnancy	2.5	3
Lactation	2	2.5 to 3
End of growing season	3	3.5+
Wethers (minimum feed supply)	2- (winter)	2+
Rams at mating	3	3.5 to 4
Weaners (wool)	Better to weigh, but generally >2.5	
Lambs (meat)	Assess growth targets to meet market specifications	

Ewe condition score at joining and pregnancy status

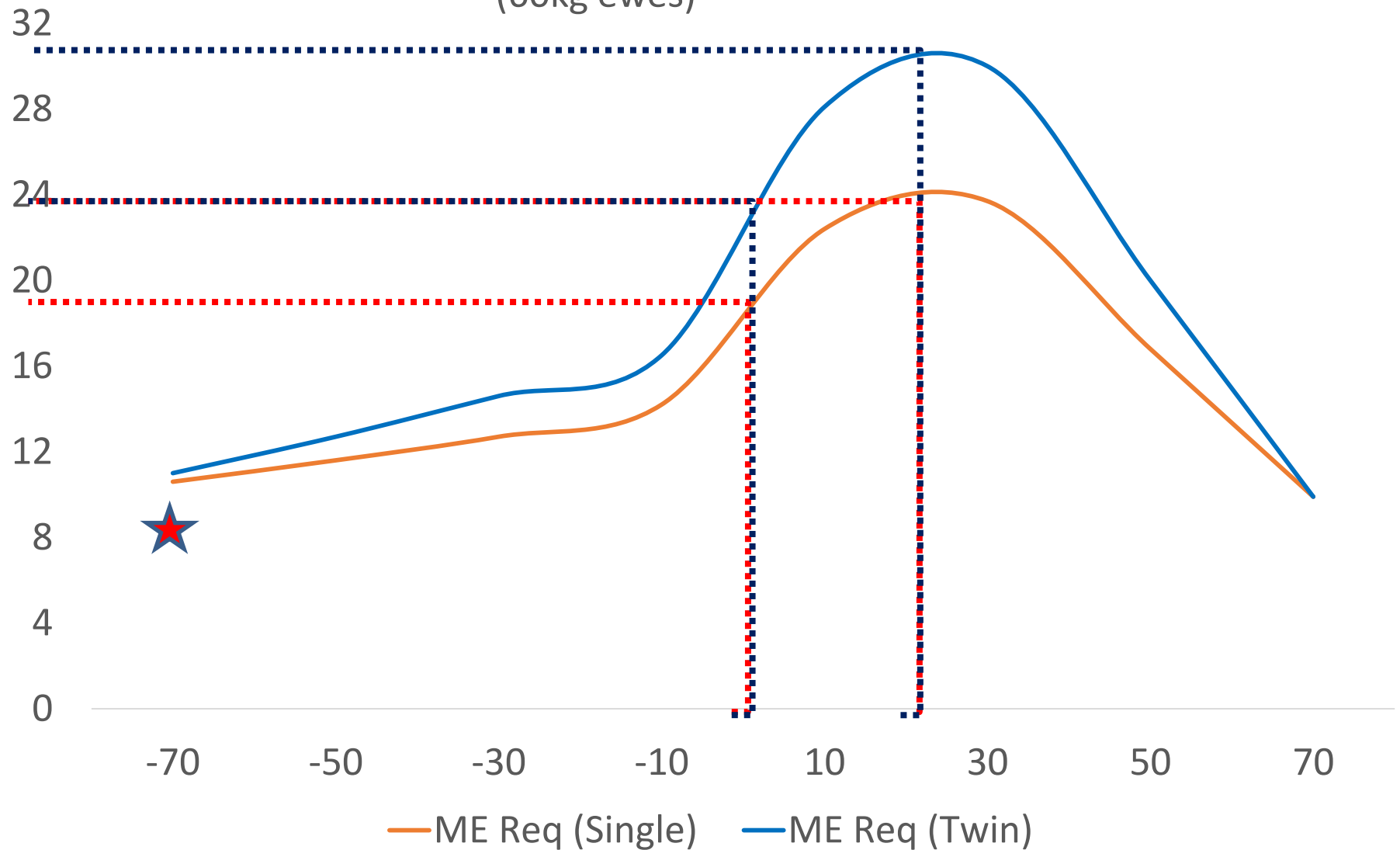# Ewe condition score at joining and number of lambs born

The developing lamb:

Primary follicle development | Secondary follicle development | Follicle maturation

Udder development & colostrum production

Placental development

Ovulation rate & conception

Foetal growth

Lamb Growth (Ewe milk production)

Joining — 30 — 60 — 90 — 120 — Lambing — Weaning

Days of pregnancy

Energy Requirements
Day 0 = Lambing
(60kg ewes)

— ME Req (Single)   — ME Req (Twin)

Making More From Sheep

A joint
initiative of

awi Australian Wool
Innovation Limited

mla
MEAT & LIVESTOCK AUSTRALIA

Practical

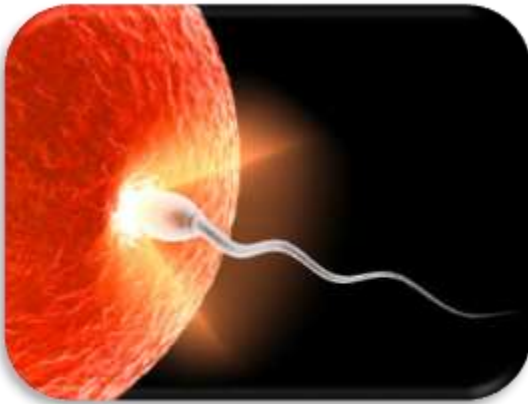## and

Lunch

INCREASING LAMB SURVIVAL

MURRAY LONG
CLEAR VIEW CONSULTANCY

CONCEPTION AND SURVIVAL

EFFECT OF A 10% INCREASE

+1.8 - 6.2 %

GROSS MARGIN ($/Ha)

+3.6 - 12.1%

Source: MLA/AWI report McEachern et al 2008.

NATIONAL AVERAGES

- 40.3 MILLION EWES
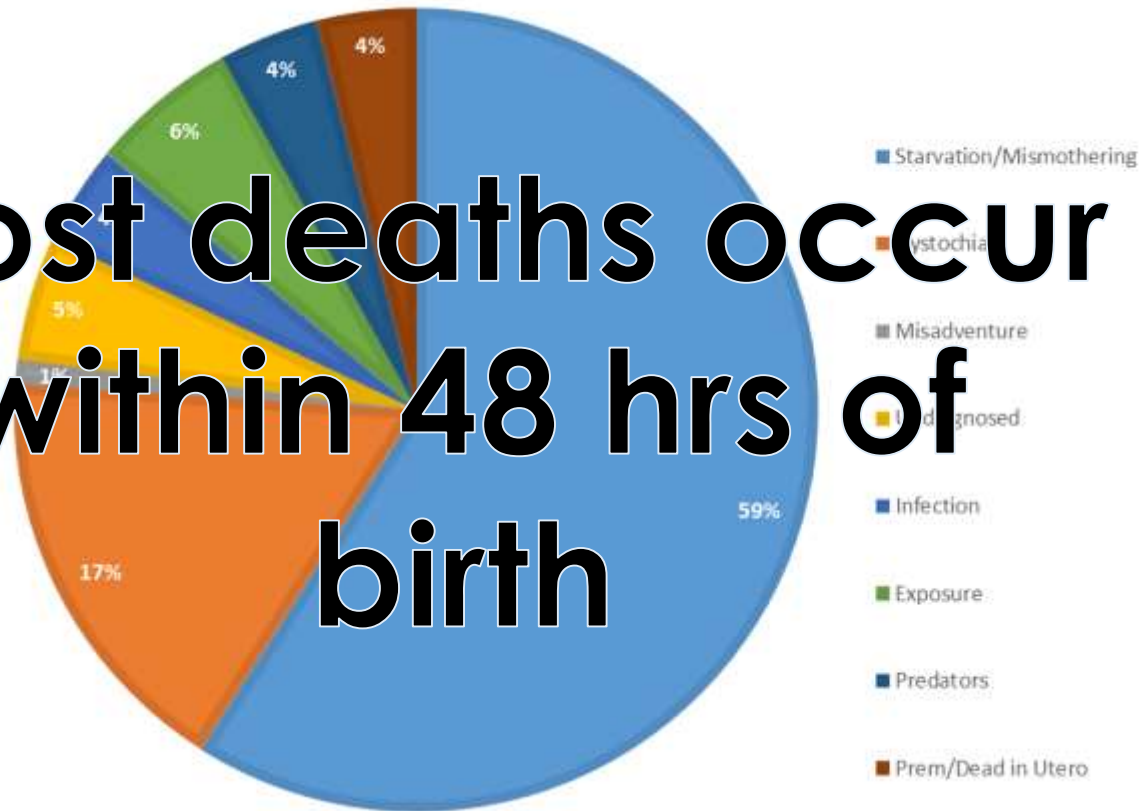- Av 130% CONCEPTION
- 60-90% MARKING RATES

15 FT DEEP

X 45

CAUSES OF LAMB MORTALITY

Most deaths occur within 48 hrs of birth

>80%

Starvation/Mismothering
Dystochia
Misadventure
Undiagnosed
Infection
Exposure
Predators
Prem/Dead in Utero

59%
17%
5%
6%
4%
4%

SOLUTIONS

- **GENETICS**

- **MANAGEMENT**

GENETICS

- BREED/GENES

INCREASING SURVIVAL WITH ASBV's

HIGHER GROWTH, MORE MUSCLE and FAT = MORE LAMBS

per unit; **8% + 6% + 25%**
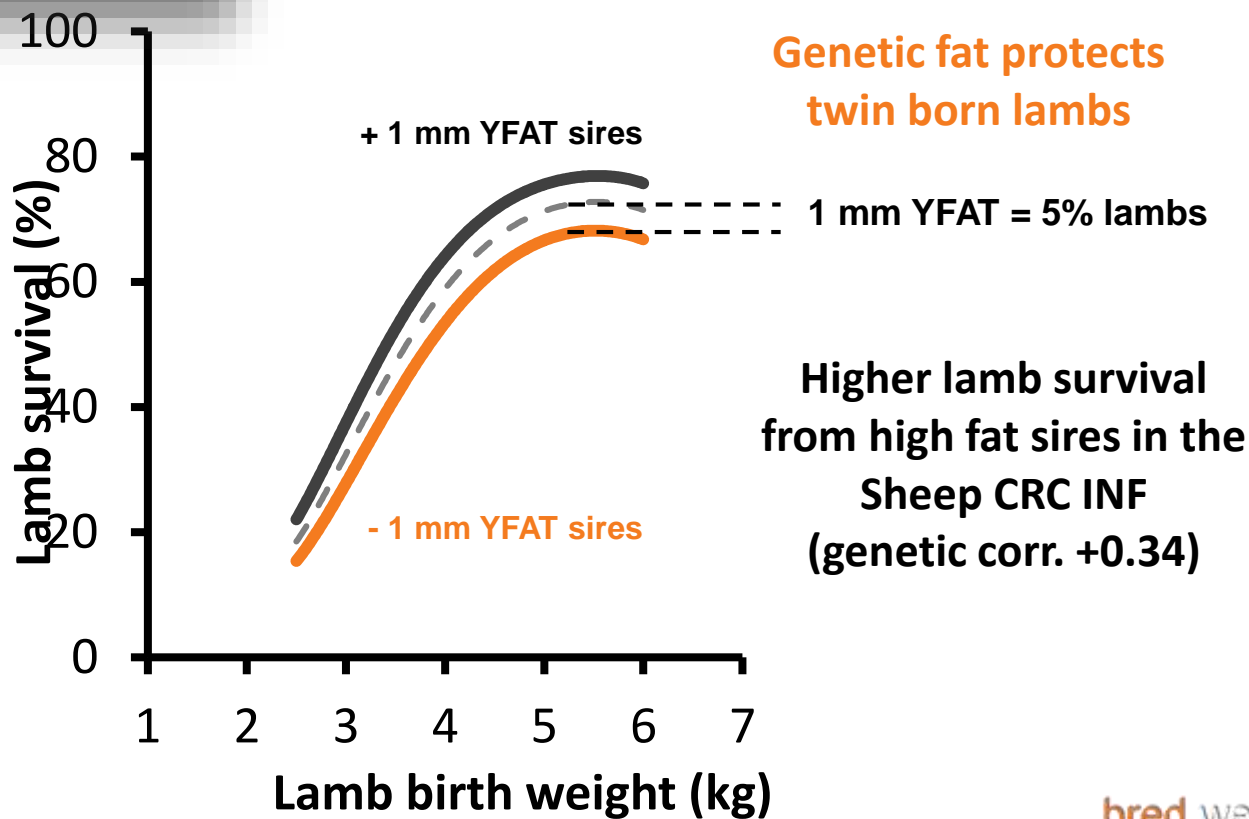
GENETIC FAT IS AN EXCELLENT GENETIC INSURANCE POLICY...
NOT A SELECTION CRITERIA TO MORE LAMBS

MORE LAMBS..
ALIVE TO WEANING

Genetic fat protects twin born lambs

1 mm YFAT = 5% lambs

Higher lamb survival from high fat sires in the Sheep CRC INF (genetic corr. +0.34)

+ 1 mm YFAT sires

- 1 mm YFAT sires

Lamb survival (%)

Lamb birth weight (kg)

bred well fed well

IN A TOUGH YEAR

2009 - EWES SCANNED WITH 163% LAMBS IN UTERO

SIRES WITH ASBV's LEANER THAN -0.6

75% SURVIVAL
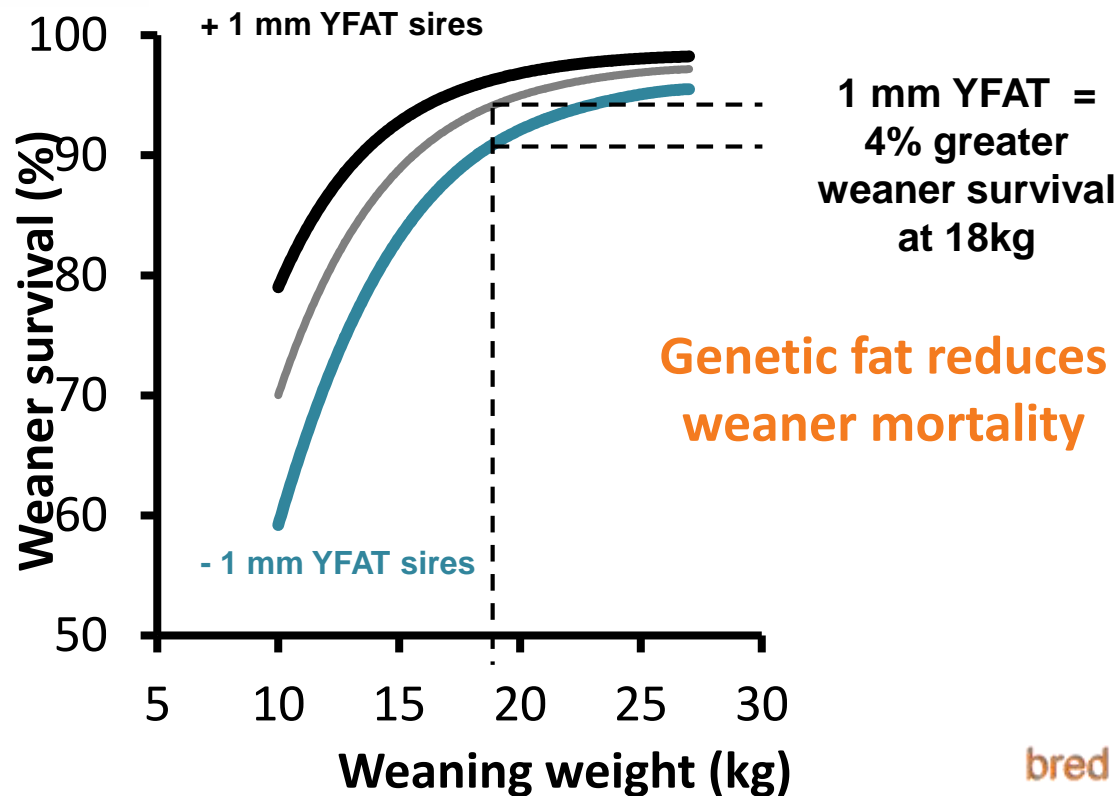
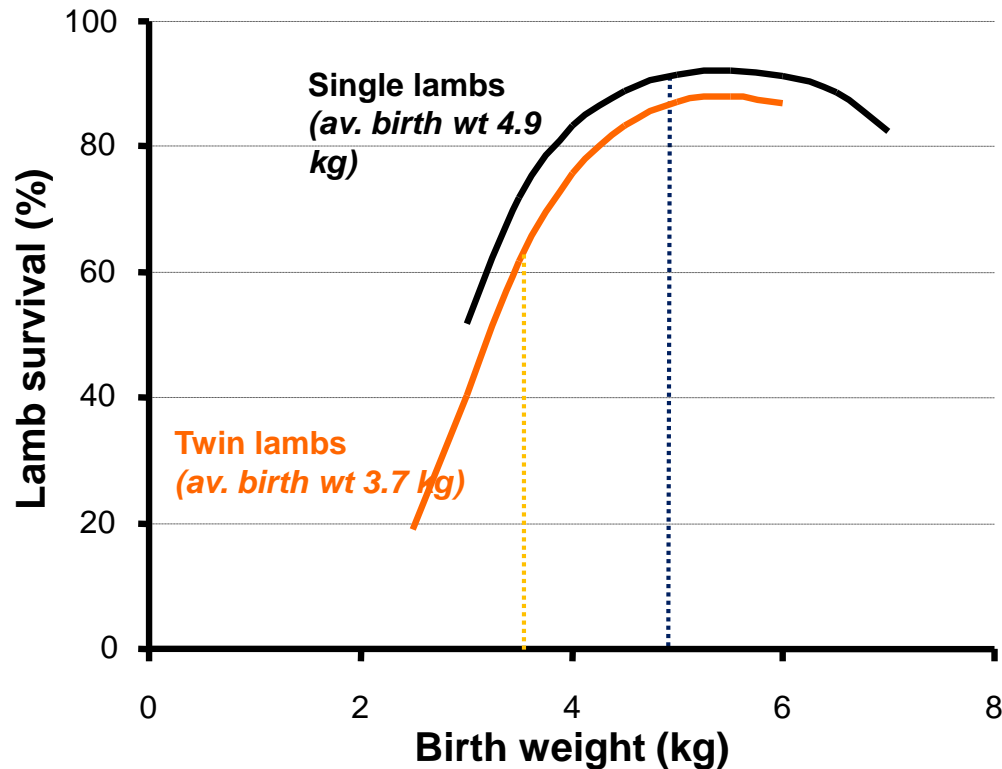**SIRES WITH ASBV's FATTER THAN -0.6**

87% SURVIVAL

MORE LAMBS SURVIVE AFTER WEANING

+ 1 mm YFAT sires

- 1 mm YFAT sires

Weaner survival (%)

Weaning weight (kg)

1 mm YFAT = 4% greater weaner survival at 18kg

Genetic fat reduces weaner mortality

bred well fed well

LAMB BIRTH WEIGHT DRIVES SURVIVAL

70% OF LAMB SURVIVAL DRIVEN BY LAMB BIRTHWEIGHT

bred well fed well

GENETIC FAT AND BIRTH WEIGHT

GENETIC FAT

CONCEPTION RATES

EWE RECOVERY

FEED EFFICIENCY

LAMB BIRTH WEIGHTS

LAMB RESILIENCE

= $$$$$

LAMB BIRTH WEIGHT

Sire group	Birthwt	Growth (PWWT)	PFAT (post weaning fat)	PEMD (eye muscle depth)
Lambplan	0.36	14.2	-0.15	1.4
Non Lambplan	Unknown	Unknown	Unknown	Unknown

2010 – Dennis & Geoff Hogan Glen Innes NSW

Source: Brent McLeod & Ashley White

BIRTH WEIGH – DYSTOCIA?

	LAMBPLAN ASBV		UNKNOWN
	0.36		?
	0.7%	LAMB ASSISTS	2.6%
	0.7%	EWE DEATHS	2.7%

Source: Brent McLeod & Ashley White

MANAGEMENT

- SCANNING

- CONDITION SCORE

- FLOCK SIZE

- SHELTERING

TRENDS IN AVERAGE MARKING RATE

Enterprise sector	Average marking rate (1990-1999)	Average marking rate (2000-2009)
Prime lamb specialists	**New Zealand 130% and increasing ~1.5%/yr How ???**	**Average lamb marking percentages ~90% for 2010-2014**
Sheep specialists		
Mixed sheep enterprises		
Sheep Industry Total		

(ABARE Survey data for all sheep regions of Aus)

SCANNING FOR MULTIPLES

- SCAN 40 DAYS AFTER RAM REMOVAL
- IDENTIFY MULTIPLES AND SEGREGATE
- 70% FOETUS GROWTH IN LAST TRIMESTER
- RULE OF THUMB - TWINS +25%
  - TRIPLETS +45%
- MULTIPLES NEED HIGH ENERGY
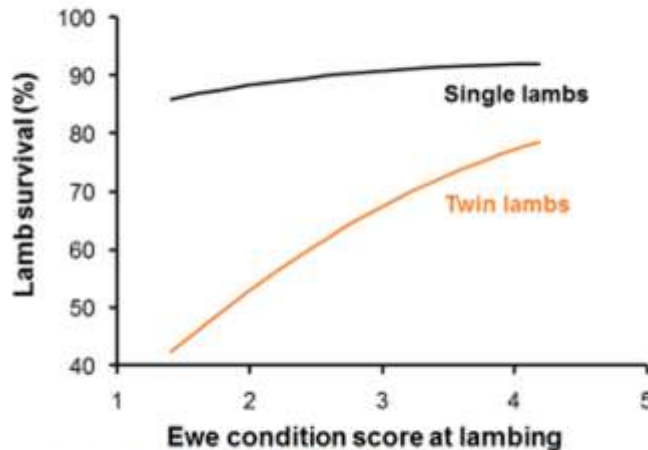- DIFFICULT TO OVERFEED MULTIPLE BEARERS

CONDITION SCORE

** CONDITION SCORE AT LAMBING IS THE MOST CRITICAL CONSIDERATION **

Higher condition at lambing improves twin survival

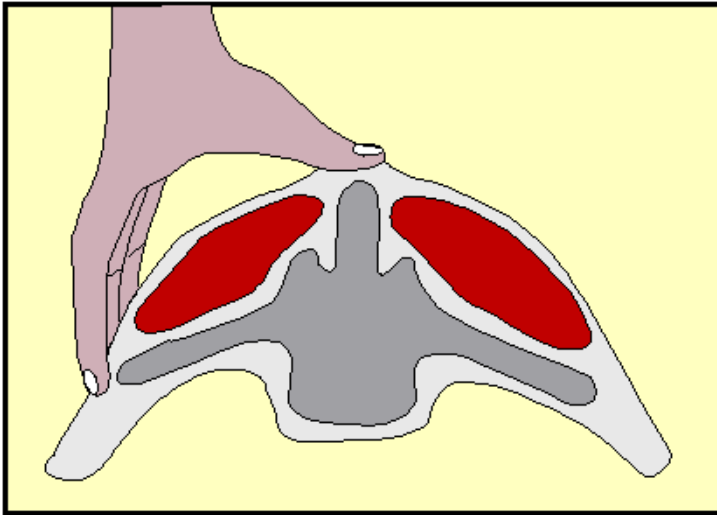**IT IS NOT A LAST MINUTE DECISION**

To prevent 1 kg wt loss ~ 3 kg grain

To increase 1 kg bodyweight ~ 7 kg grain
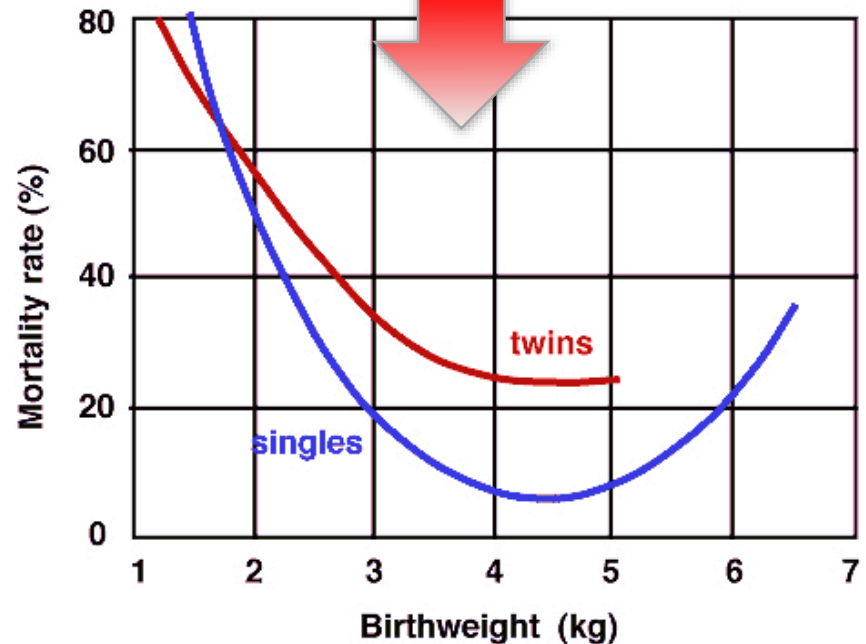
10 Kg loss in ewe resulted in 0.8 Kg lower Bwt

10 Kg gain only gave 0.5 Kg gain in Bwt

Feeding to maintain weight will pay
Feeding to increase weight will not pay

CONDITION SCORE

- CONDITION SCORE – NOT BODY WEIGHT
- BIRTH WEIGHT DRIVES LAMB SURVIVAL
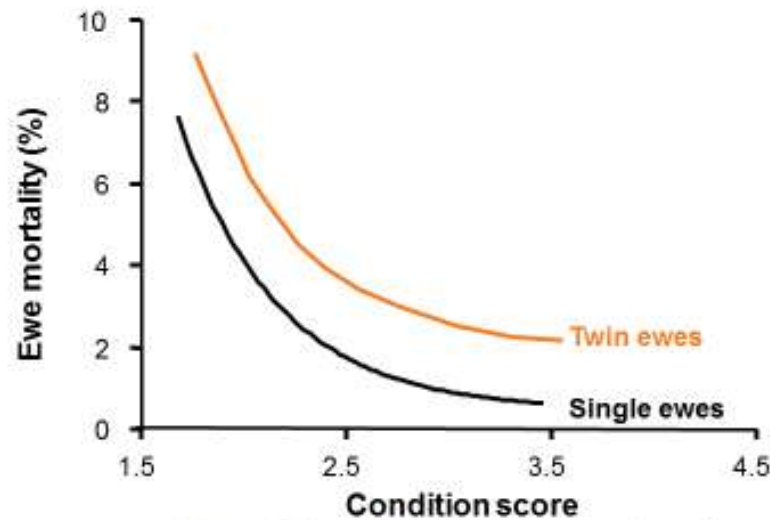- CONDITION SCORE AFFECTS EWE MORTALITY

EWE MORTALITY

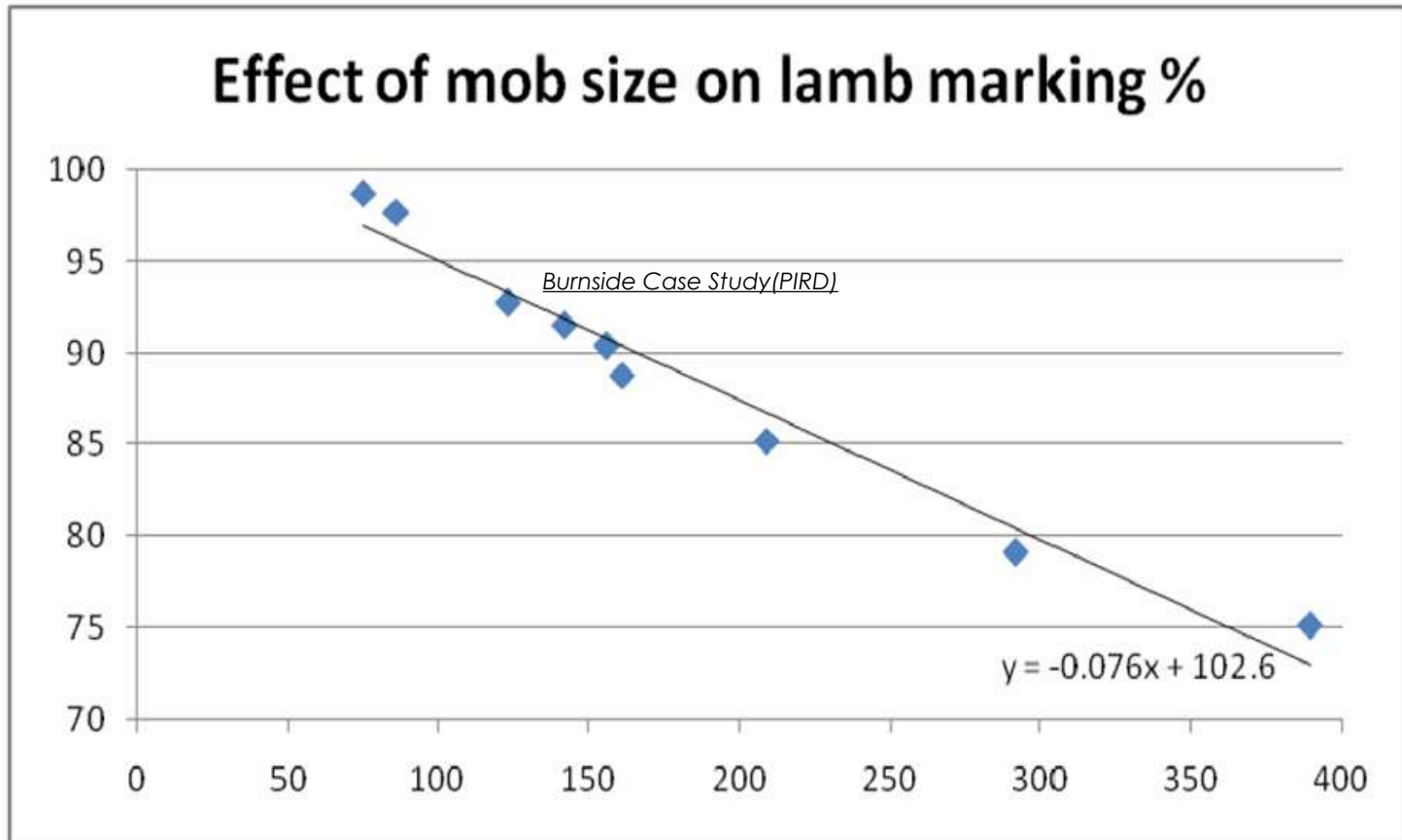Ewe mortality in late pregnancy in relation to condition score

FLOCK SIZE

Effect of mob size on lamb marking %

Burnside Case Study(PIRD)

$y = -0.076x + 102.6$

SINGLES	MATURE EWES	400
SINGLES	MAIDEN EWES	300
MULTIPLES	MATURE EWES	200
MULTIPLES	MAIDEN EWES	150

SHELTER

- SHELTERING CAN REDUCE MORTALITY BY UP TO 40%
- GREATER BENEFIT WITH MULTIPLES IN BAD WEATHER
- LAMBS WITH SHELTER HAVE HIGHER WEANING WEIGHTS
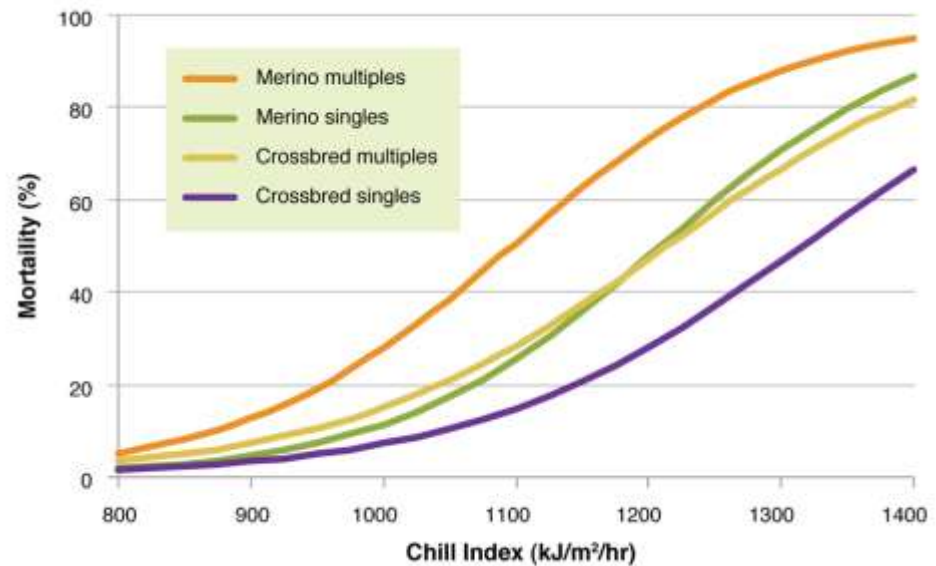
EFFECT ON SURVIVAL

EFFECT OF SHELTER ON LAMB SURVIVAL AT HAMILTON
Behrendt and Friend (2010)

SURVIVAL	WITH SHELTER	WITHOUT SHELTER
SINGLE LAMBS	82%	78%
TWIN LAMBS	87%	76%
TRIPLET LAMBS	96%	50%

BENCHMARKS
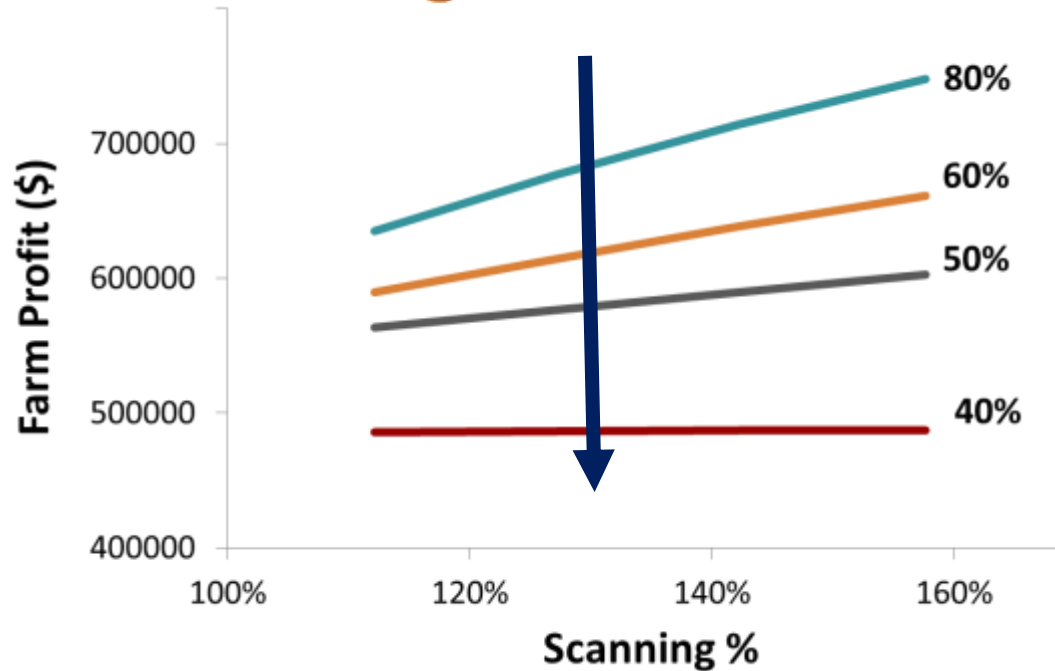
- **90% IN SINGLES**

- **75-85% IN MULTIPLES**

I'M HAPPY WITH A HEALTHY SINGLE !

Scanning x Twin survival

ONE IS NOT ENOUGH!

$$ profit

40mill

ewes