

meatup

FORUM

For the latest in red meat R&D



Optimising reproduction with ewe lamb joining

James Lines

neXtgen Agri



- Joining ewe lambs can increase lamb production over lifetime
- No effects on ewe longevity at least to 5 year old (% culled)





- It can be profitable
- Need to make sure there is not lower hanging fruit

Success factors

- Only some sheep and some years
- Firm targets and attention to detail from the day they are born

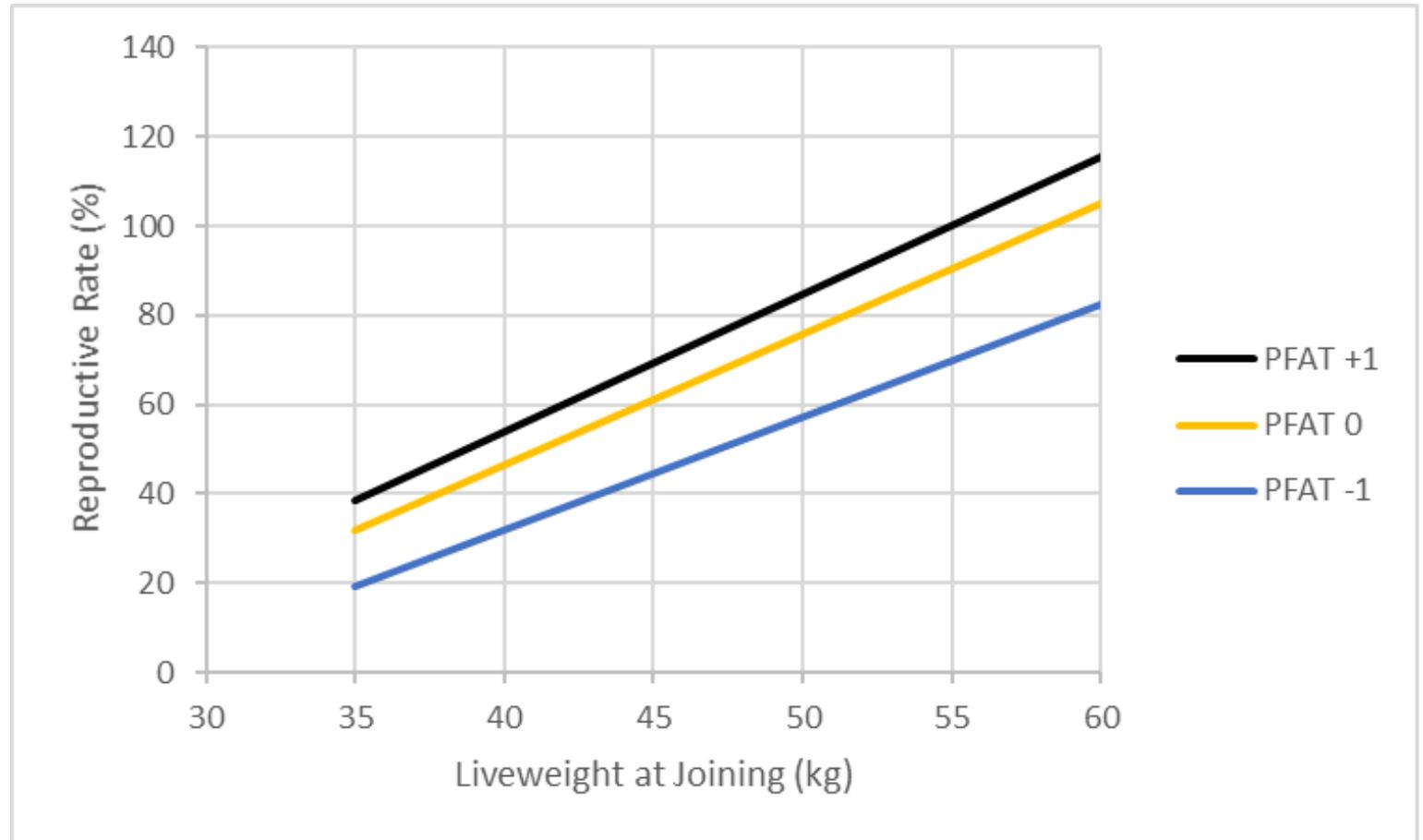


The right type of ewe

- **High WR** + 0.5% WR per 1%
- **High PWT** + 2.6% NLB per 1 kg
- **High PFAT** + 3.2% NLB per 1 mm*
- **Low EBWR** +13.2% NLB per -1 unit

PFAT

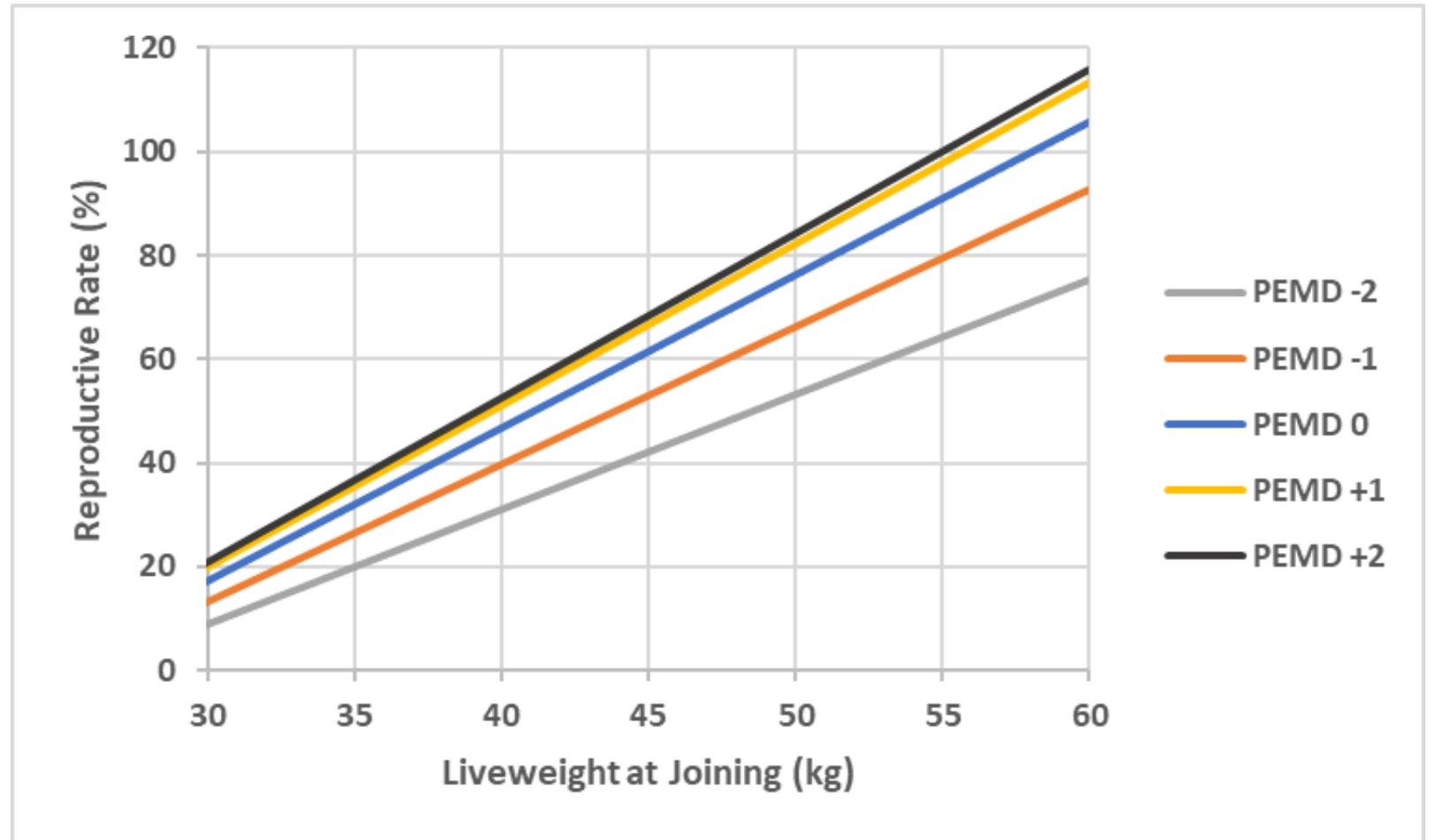
Higher sire PFAT at same live weight can increase NLB or reduce live weight targets for mating



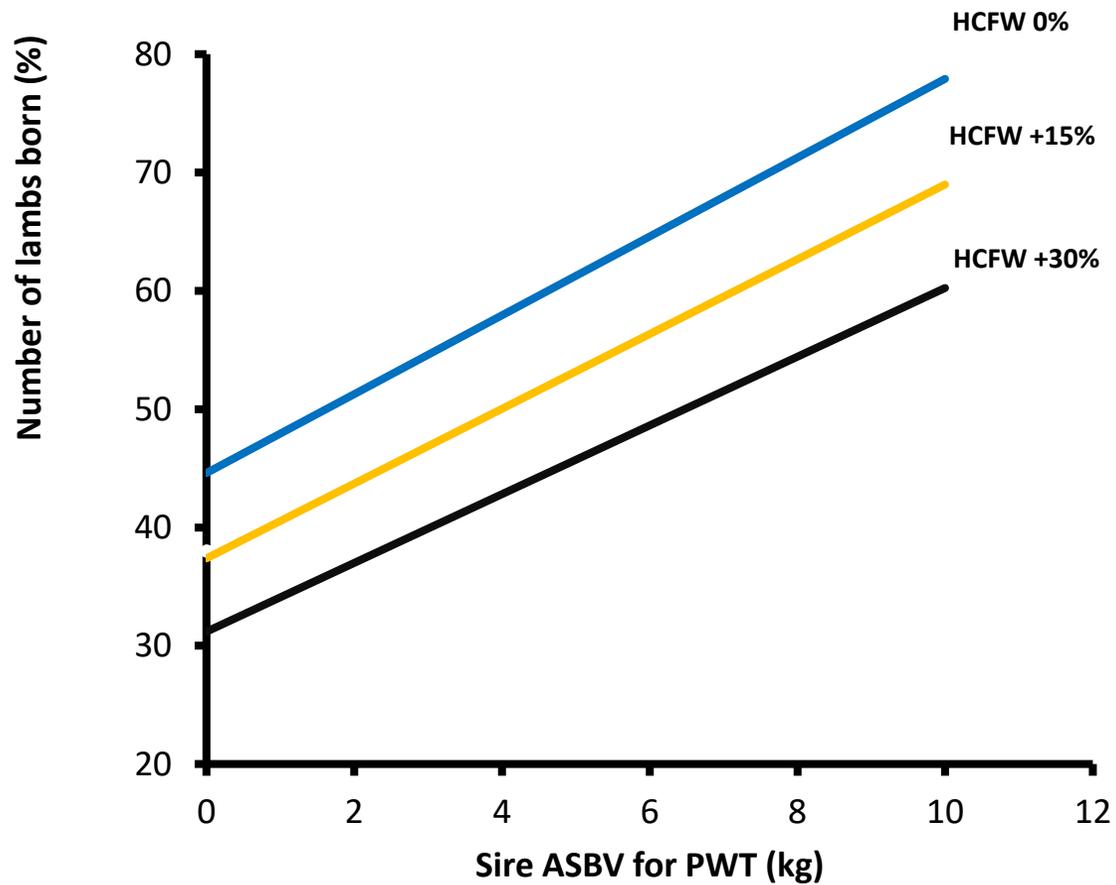
Source - Thompson

PEMD

- Extra 1mm PEMD → 6% more lambs
- Higher sire PEMD at same live weight can increase NLB or reduce live weight targets for mating



Source - Thompson



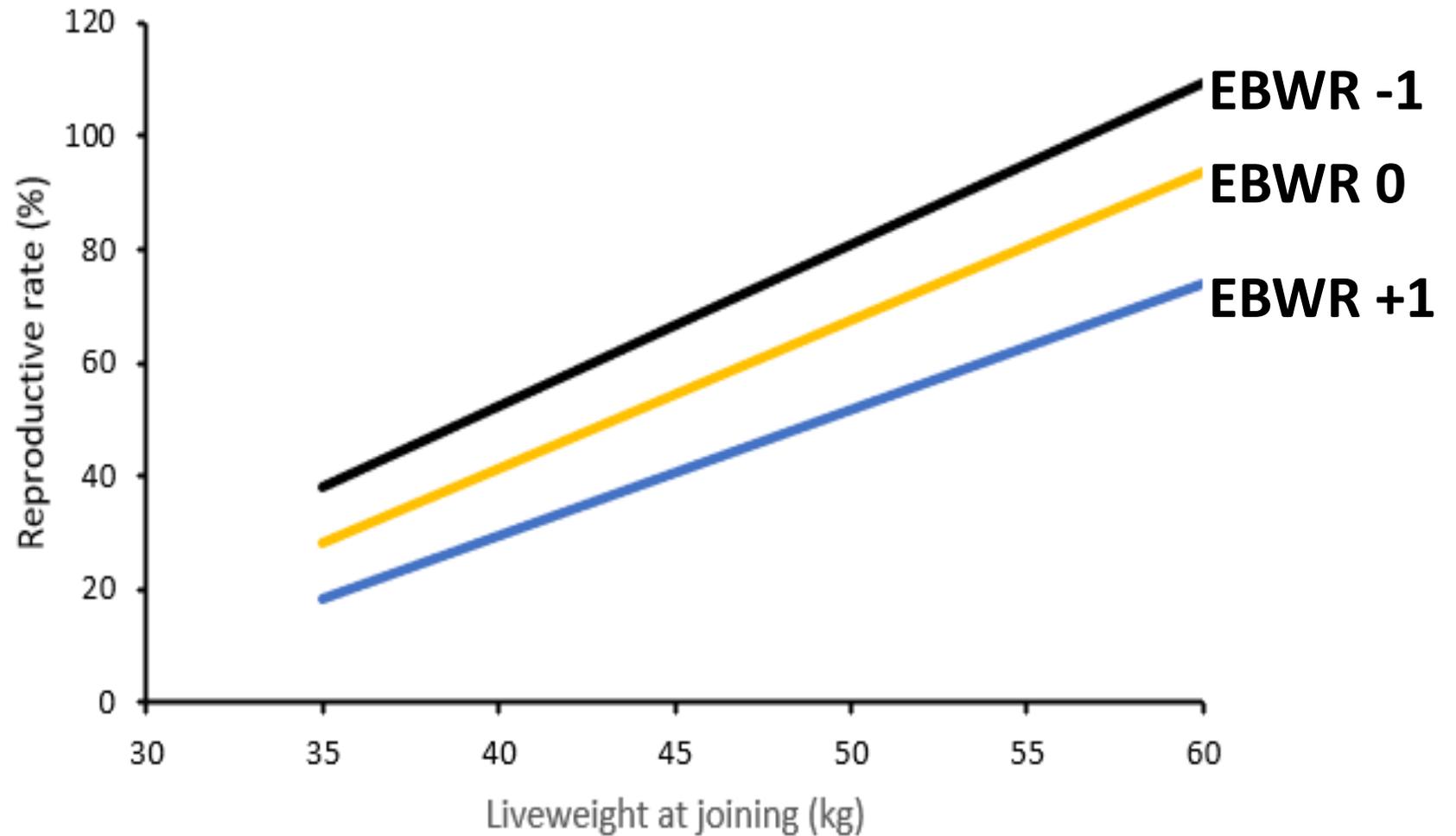
Source - Thompspon

What about fleece weight

- -0.5% NLB per +1%
- Balance with PWT
- Equal NLB if +10% CFW and +2 kg PWT

EBWR

- 1 Wrinkle Score Plainer → 13.2% more lambs

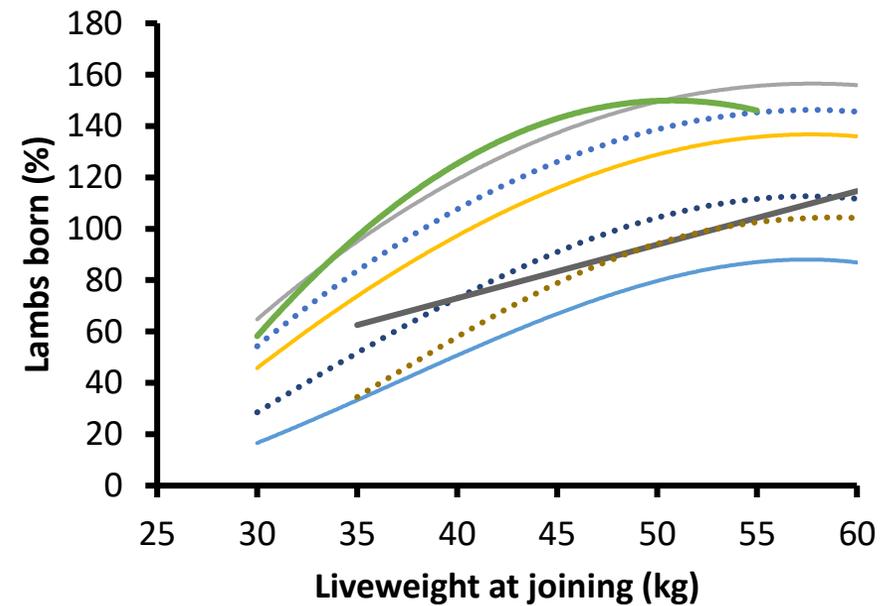


Source - Thompson

Joining live weight



- Variable responses
- Critical weight 45 to 50kg
- 3 to 5% scanning /kg at join
- 2 to 3% weaning /kg at join



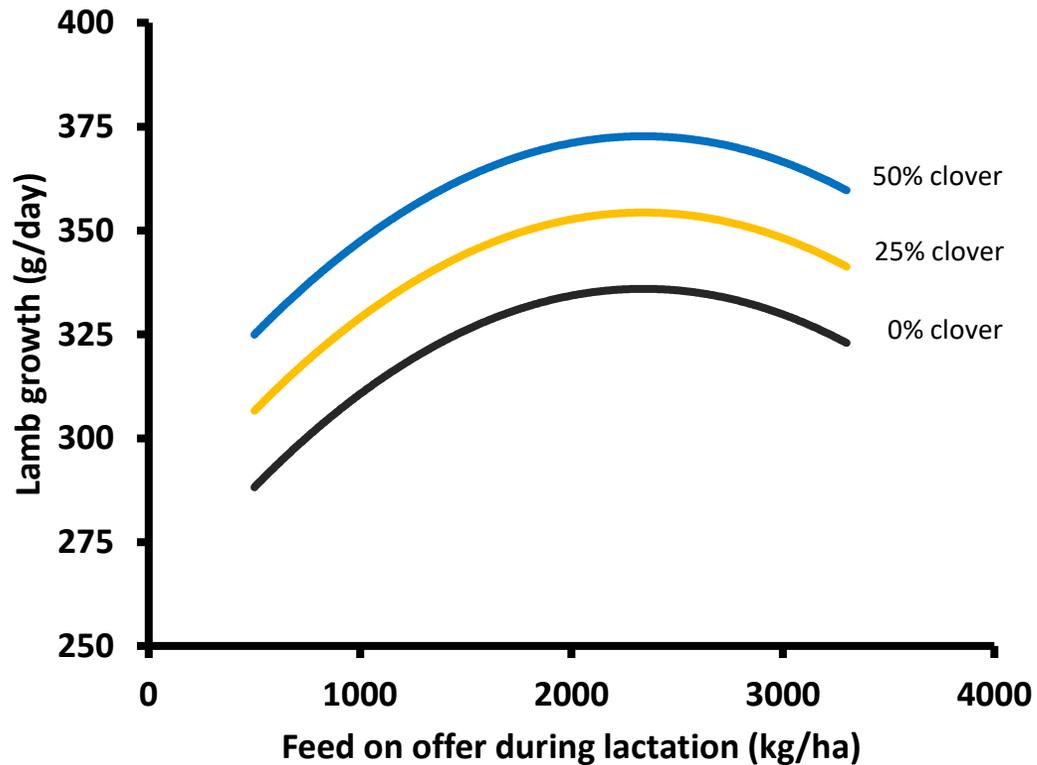
Joining targets and management

Single versus twins

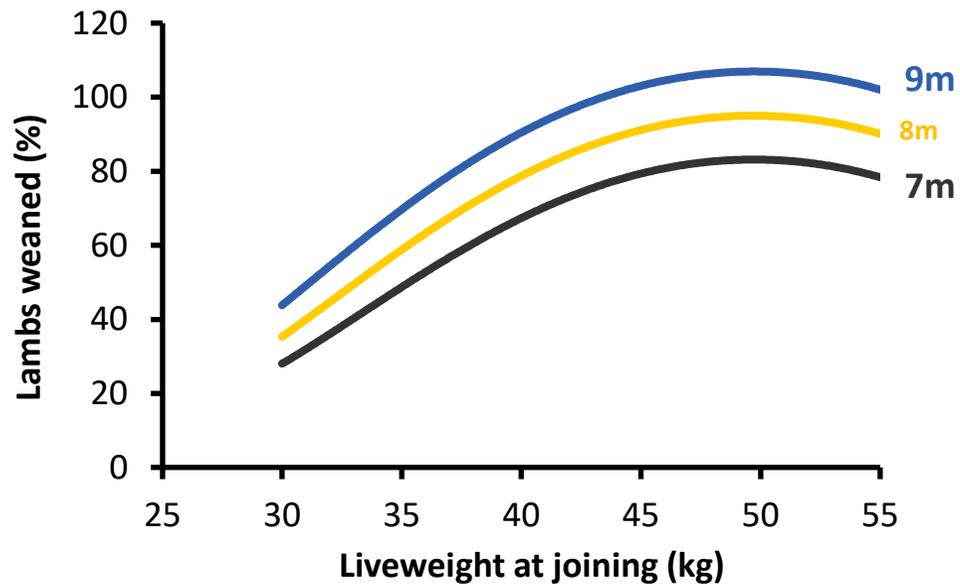
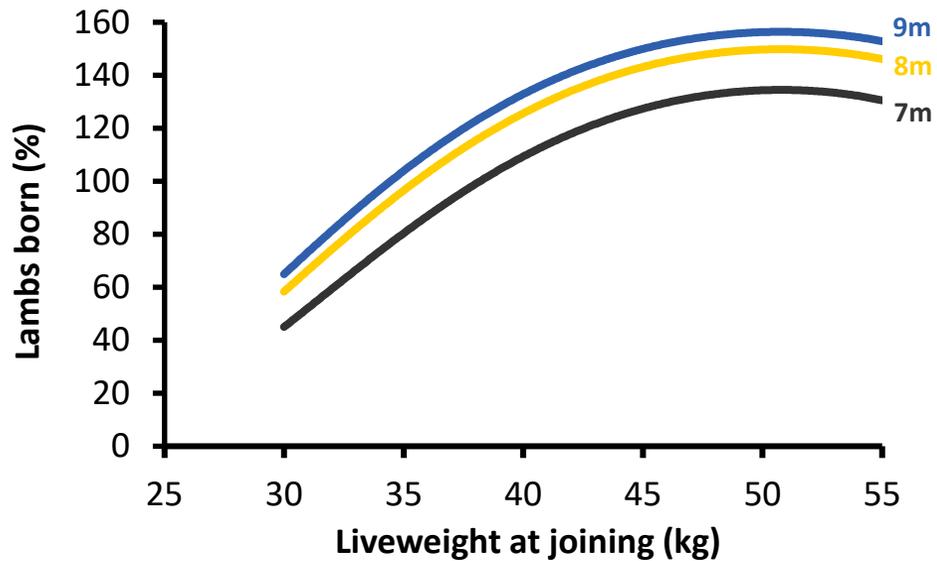
Birth type	Weight (kg)	Born (%)	Weaned (%)
Single	42.3	110	69
Twin	39.7	116	76

(Source Cashmore Oaklea, Thompson et al. 2021)

High growth rates to joining



- FOO targets
- High clover
- Early weaning
- Feed budget & monitor post weaning

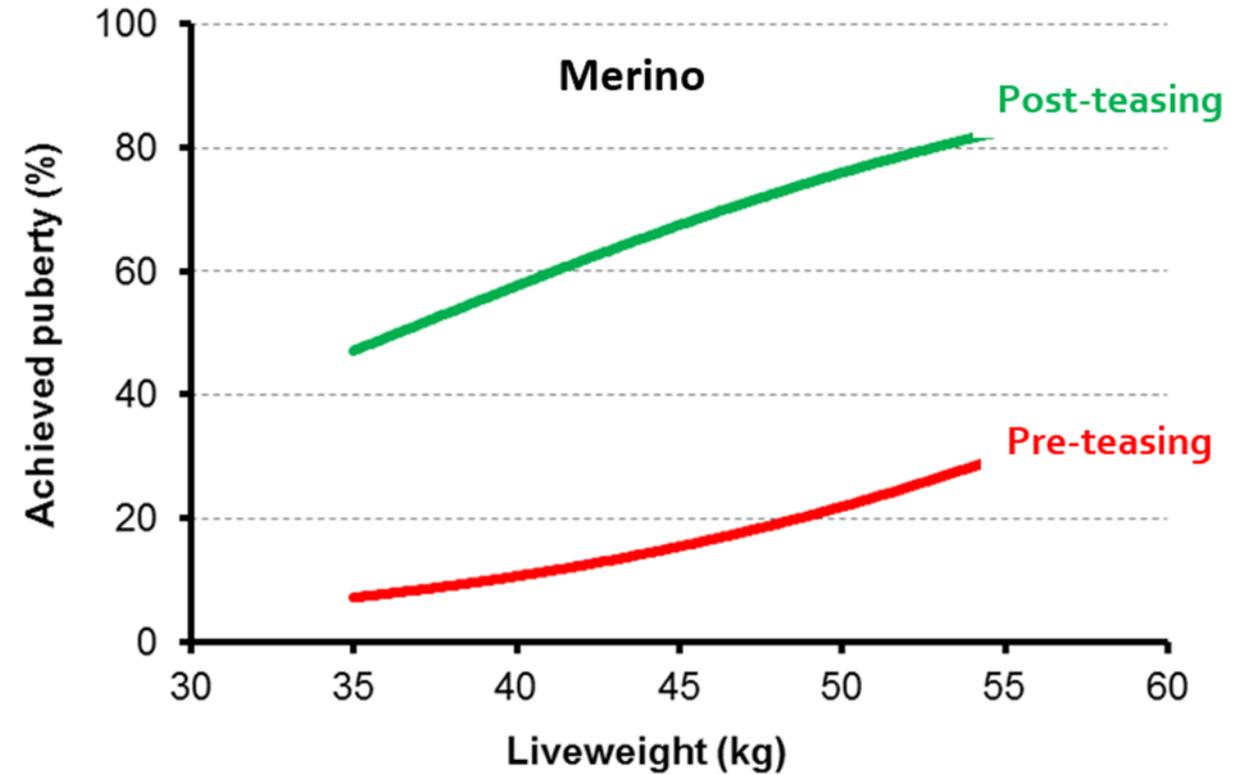


Age also important

- Differences in getting pregnant and rearing
- Trade-off - feed on 2kg more weight to join 2 weeks early
- Around 8 months recommended

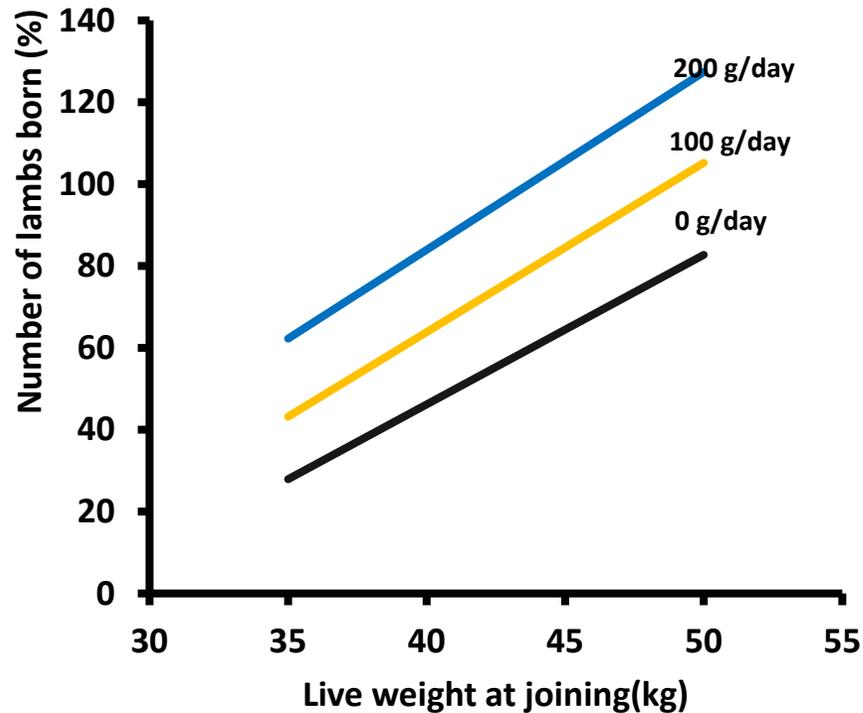


Teasers work



(Source Paganoni et al. 2014)

Gain live weight during joining



- 20% increase reproductive rate/100 g/day
- Flushing
- Economic optimum generally 100 to 150 g/day during joining

.....and if they don't get pregnant

- Some of the extra feed costs are paid back in extra wool
- Value of extra liveweight depends on whether sold or retained
- If retained, 2-tooths heavier at joining & potential for lifetime benefits



Recovery to next joining

- Date-based weaning rather than lamb weight
- Same or better condition when next joined than animals not mated

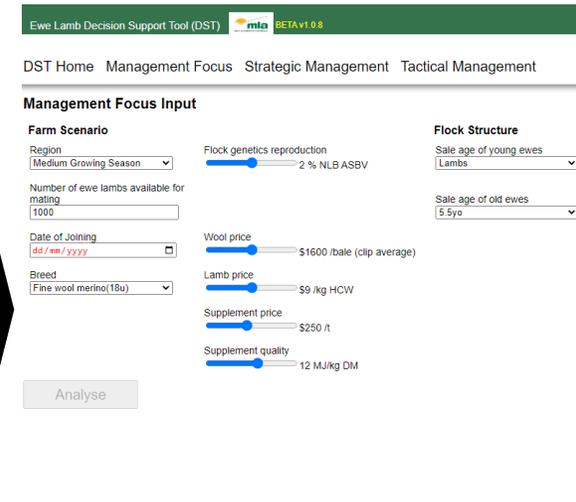
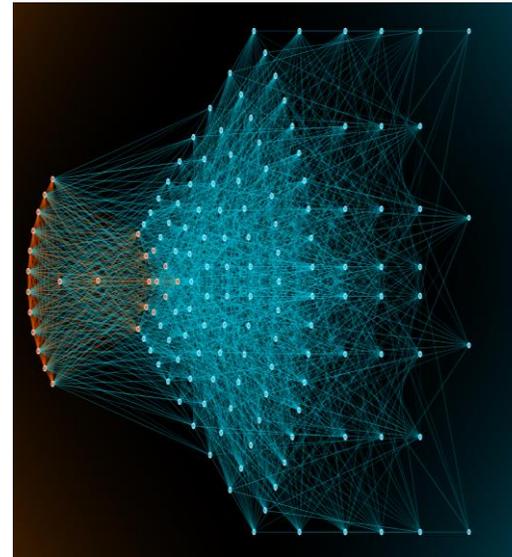


- Heavier and Older = more lambs
- Aim for about 75% of mature live weight
- Growth rates during joining
- Use Teasers
- Know the Genetic Potential of your ewes



The decision support tool

The latest in technology



**100 million potential
on-farm
combinations**

**Complex bioeconomic
modelling**

**Trained neural
network**

**Webpage
immediately
responding to your
individual inputs**

DST use cases

Not mating ewe lambs: Comparing mating ewe lambs vs improving older sheep

Mating ewe lambs: Comparing current management vs optimum management

Mating ewe lambs: Adjust management based on seasonal conditions

DST Home Management Focus Strategic Management Tactical Management

Welcome to the ewe lamb mating decision support tool. This tool has been designed to help you make informed decisions around ewe lamb mating. The popularity of mating ewe lambs has continued to grow, and many producers are considering or already implementing this management practice. There are three different ways that you can use this tool.

- **1. Management Focus**

If you are considering whether it would be worthwhile to start mating ewe lambs, the first tab called 'Management Focus' allows you to determine whether it would be more profitable to mate ewe lambs or to invest in increasing reproduction in your 2-tooth and adult ewes.

- **2. Strategic Management**

If you are currently mating ewe lambs, this tab allows you to assess the profitability of your current mating strategy compared with the optimum management. It provides guidance on the areas that are likely to provide the greatest improvement in profit.

- **3. Production Properties**

The tactical management aspect of the tool is designed to help you decide whether you will mate ewe lambs in a given season. It will help you to optimise the profitability of mating ewe lambs (or not mating ewe lambs, depending on the scenario) taking into account the seasonal conditions.

The development of this tool is a collaborative project between Murdoch University, Farming Systems Analysis Service and neXtgen Agri. It is funded by Meat and Livestock Australia.

To provide feedback, make a comment or ask a question visit: [neXtgen Agri Calculated Ewe Lamb Joining](#)

User case one

Management Focus Input

Farm Scenario

Region

Medium Growing Season

Number of ewe lambs weaned

1000

Date of Joining

01/02/2022

Breed

Fine wool merino(18u)

Flock genetics reproduction

2 % NLB ASBV

Wool price

\$1700 /bale (clip average)

Lamb price

\$8 /kg HCW

Supplement price

\$270 /t

Supplement quality

12.5 MJ/kg DM

Flock Structure

Sale age of young ewes

Lambs

Sale age of old ewes

5.5yo

Livestock Management

Adult weaning percentage

110 %

2-tooth ewes weaning percentage

90 %

Analyse

User case one results

Management Focus Results

Farm Scenario

Region
Medium Growing Season

Number of ewe lambs weaned
1000

Date of Joining
2022-02-01

Breed
Fine wool merino(18u)

Flock genetics for reproduction
2 % NLB ASBV

Wool price
\$1700 /bale (clip average)

Lamb price
\$8 /kg HCW

Supplement price
\$270 /t

Supplement quality
12.5 MJ/Kg Dry Matter

Flock Structure

Sale age of young ewes
Lambs

Sale age of old ewes
5.5

Livestock Management

Adult NLW
110 %

2-tooth ewes NLW
90 %

Results

Increase in profit from mating Ewe Lambs
\$1,000

Increase in profit from improving adult reproduction to target level
\$-3,800

Increase in profit from improving 2-tooth reproduction to target level
\$400

User case two

Strategic Management Input

Farm Scenario

Region

Medium Growing Season

Number of ewe lambs weaned

1000

Date of Joining

01/02/2022

Breed

Fine wool merino(18u)

Flock genetics for reproduction

2 % NLB ASBV

Wool price

\$1700 /bale (clip average)

Lamb price

\$8 /kg HCW

Supplement price

\$270 /t

Supplement quality

12.5 MJ/kg DM

Flock Structure

Sale age of young ewes

Lambs

Sale age of old ewes

5.5yo

Livestock Management

Proportion of ewe lambs mated

100 %

Age of ewe lambs at joining

8 Months

Liveweight of ewe-lambs at joining

80 % of SRW

Liveweight change during joining

100 g/hd/d

Liveweight change during pregnancy

5 kg

Liveweight of 2-tooth ewes at joining

100 % of SRW

Management of dry ewe lambs

Retained

Analyse

User case two results

Results

Expected increase in profit from adopting optimum management

\$180 400 / farm

Increase in weaning percentage
35%

Increase in total lambs born in the flock
1408 hd

Increase in supplement fed
200 tonnes/farm

Management Options

Proportion of ewe lambs mated
100% \$14 300

Age ewe lambs are joined
8.1 months \$140 800

Liveweight of ewe lambs at joining
89% of SRW \$ 22 000

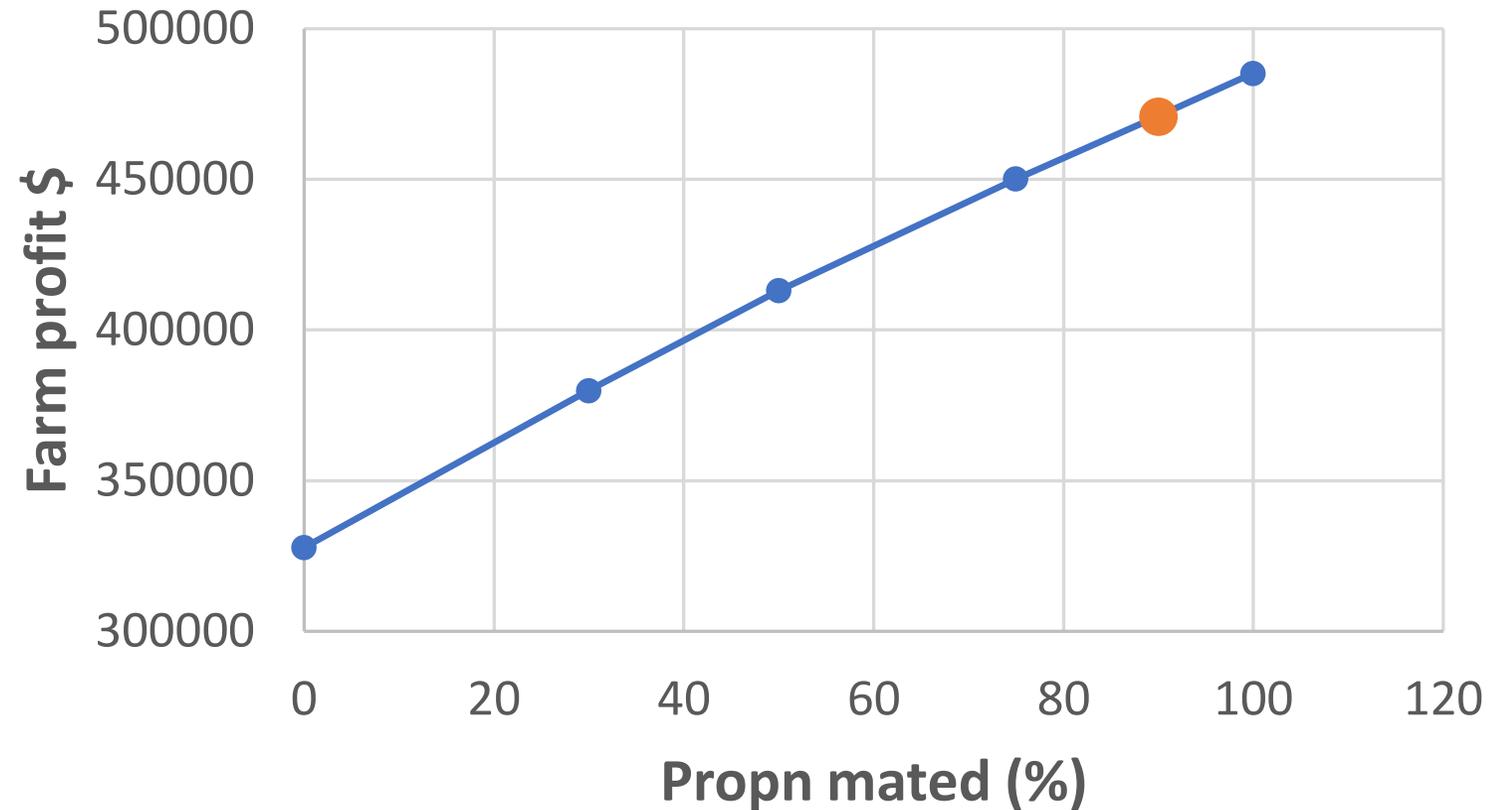
Liveweight change during joining
5 g/hd/d \$ 13 200

Liveweight change during pregnancy
2.8 kg \$ 5 100

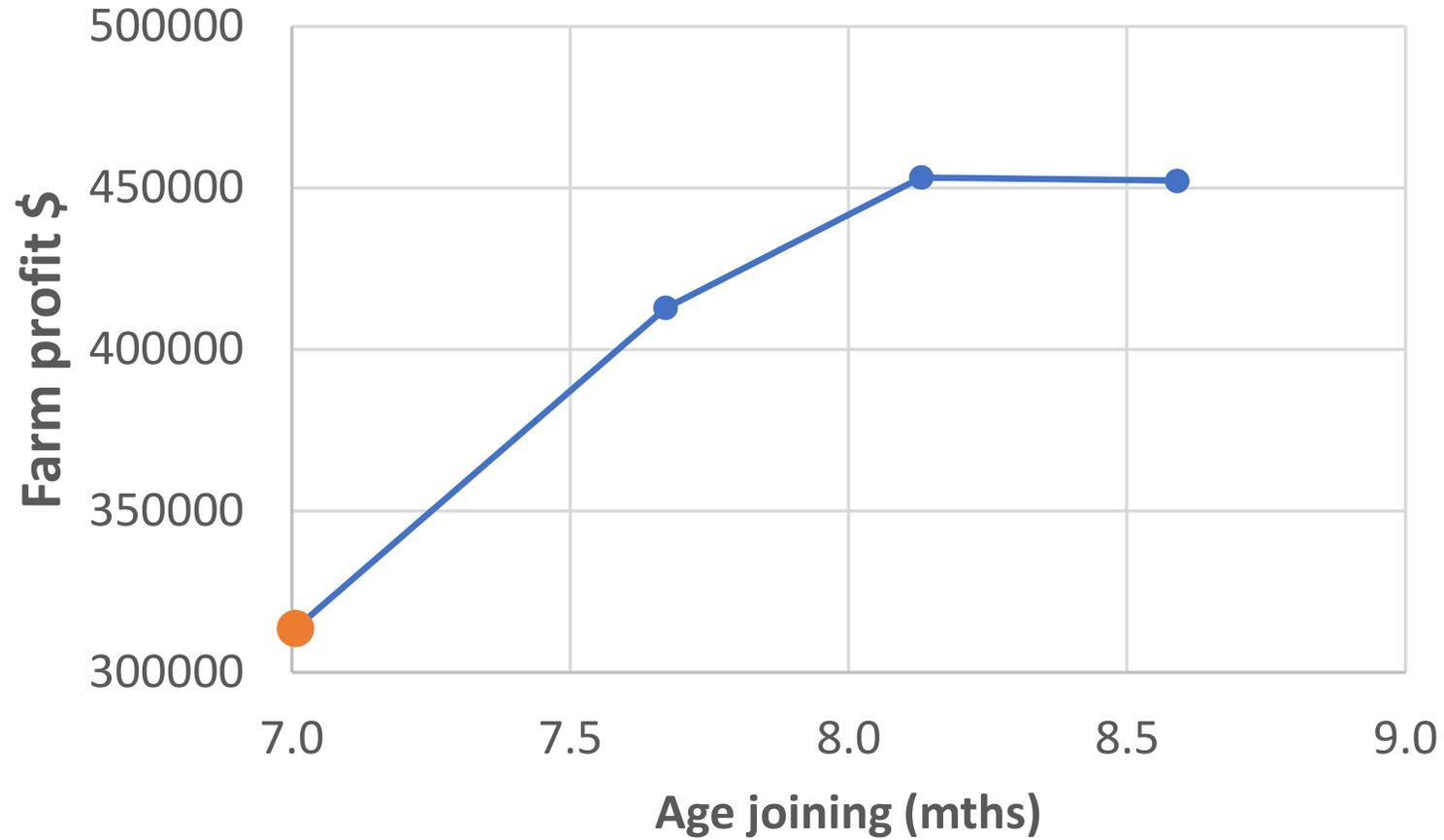
Liveweight of the 2-tooth ewes at joining
95% of SRW \$ 2 200

Management of the dry ewe lambs
Sold \$ 0

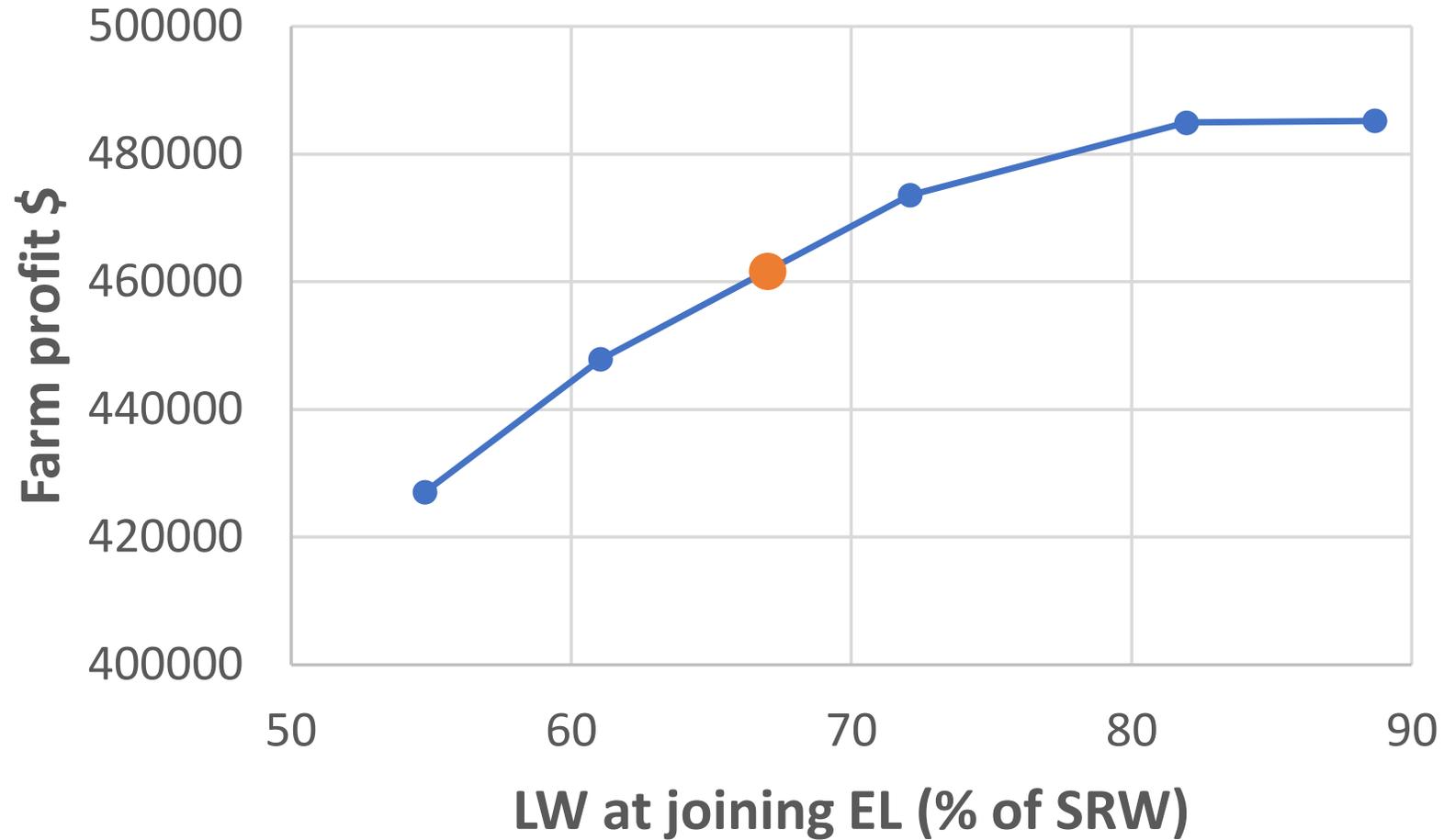
A look under the hood – Proportion mated



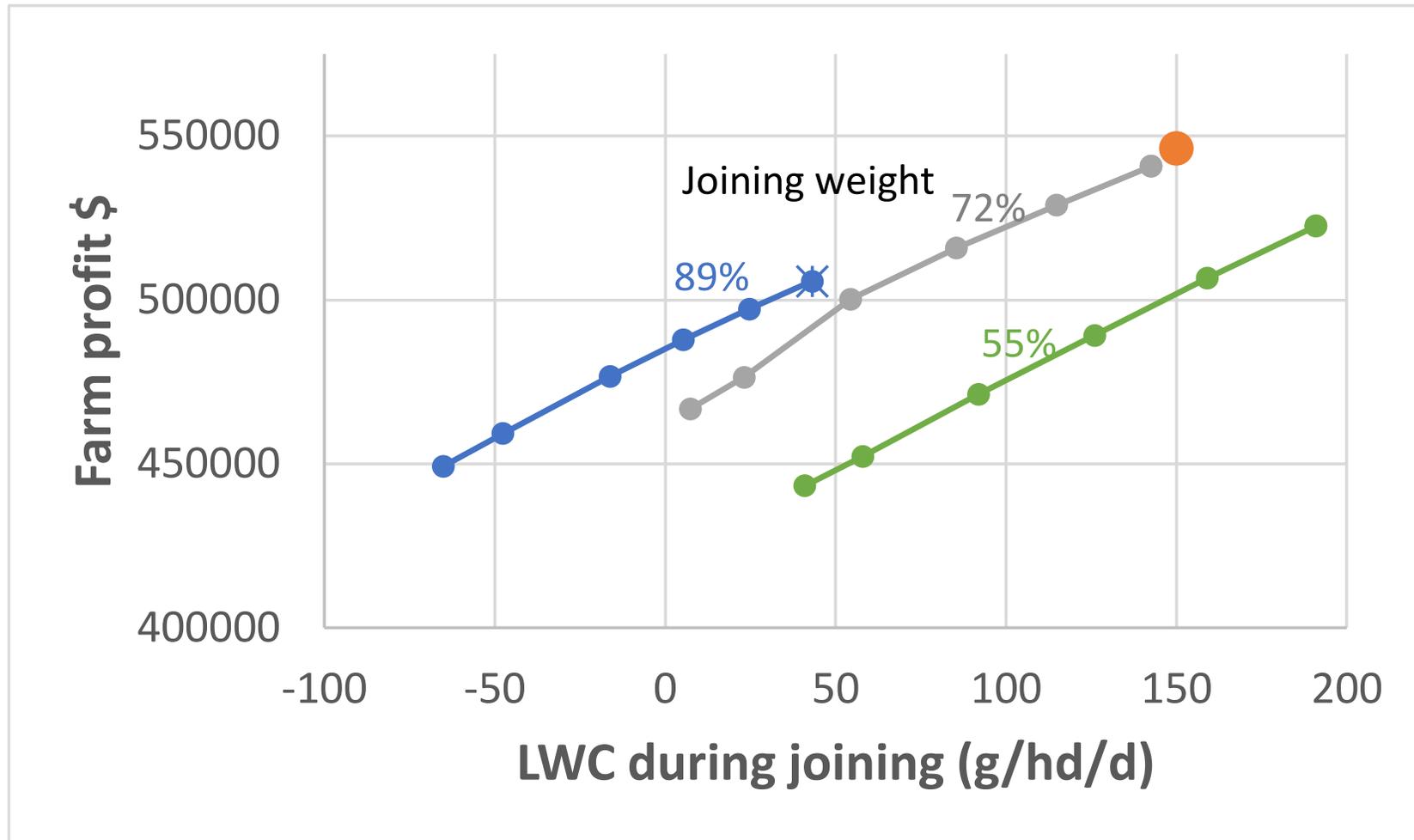
A look under the hood – age at joining



A look under the hood – LW at joining



A look under the hood – LW change at joining



Take home messages

- Ewe lamb joining is complex
- Make sure your management is the best it can be
- Utilise the decision support tool

Tools and resources

- Lifetime ewe management
- Towards 90 (T90) program