Pre-tup nutrition: re-thinking our strategic feeding

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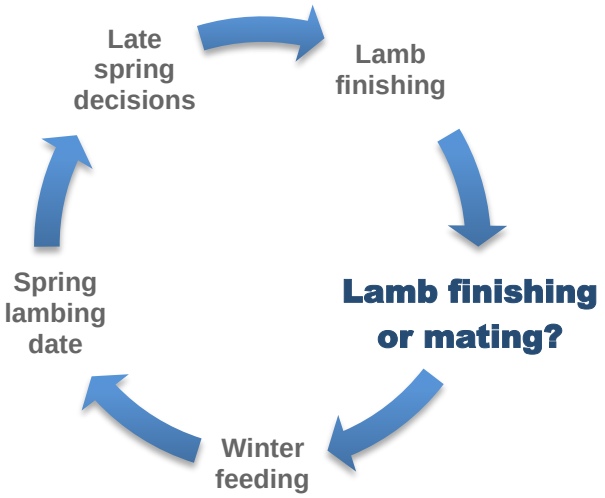
An annual cycle



Decisions to be made in the autumn

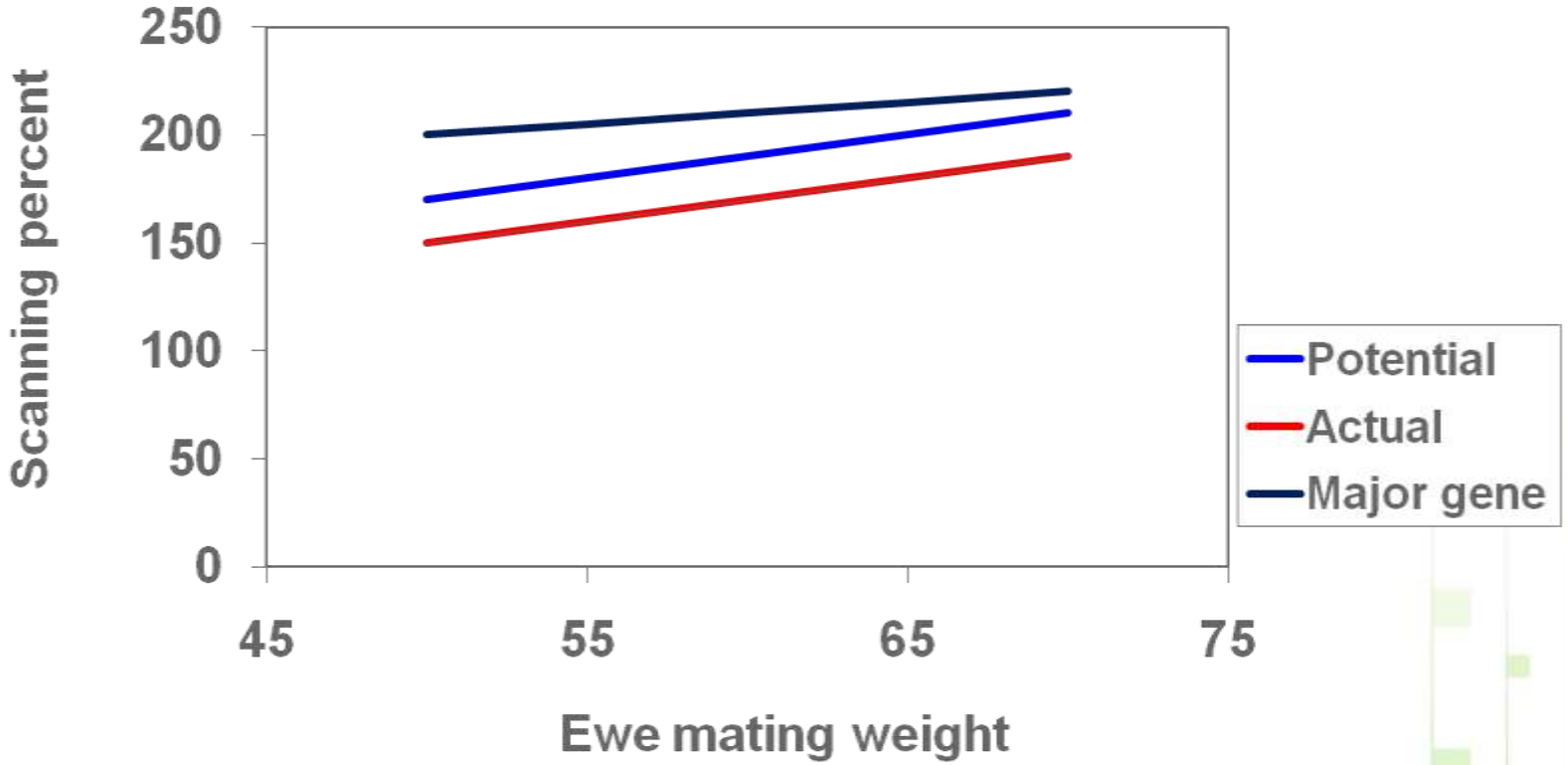
- When do the last of the lambs go?
- Do I flush my ewes?
- How much feed do I need to take into the winter?

Other Influences

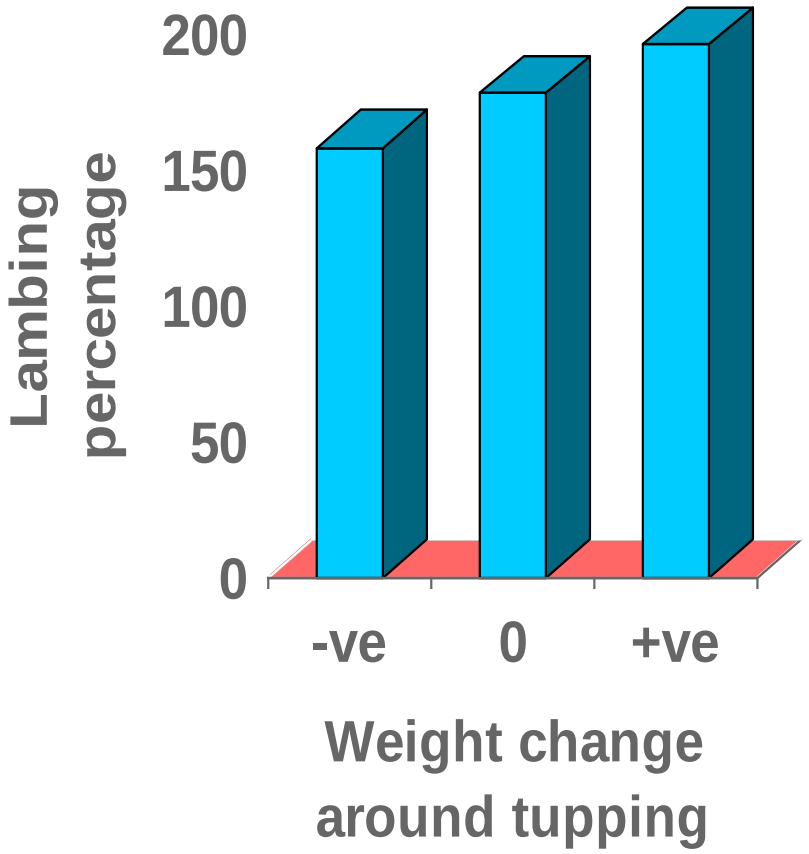
- Feed supply
- Lambing percentage
- Hogget mating
- Ewe condition
- Winter feed
- Ewe genetics

Influencing scanning percentage

Ovulation rate is related to liveweight and genetics

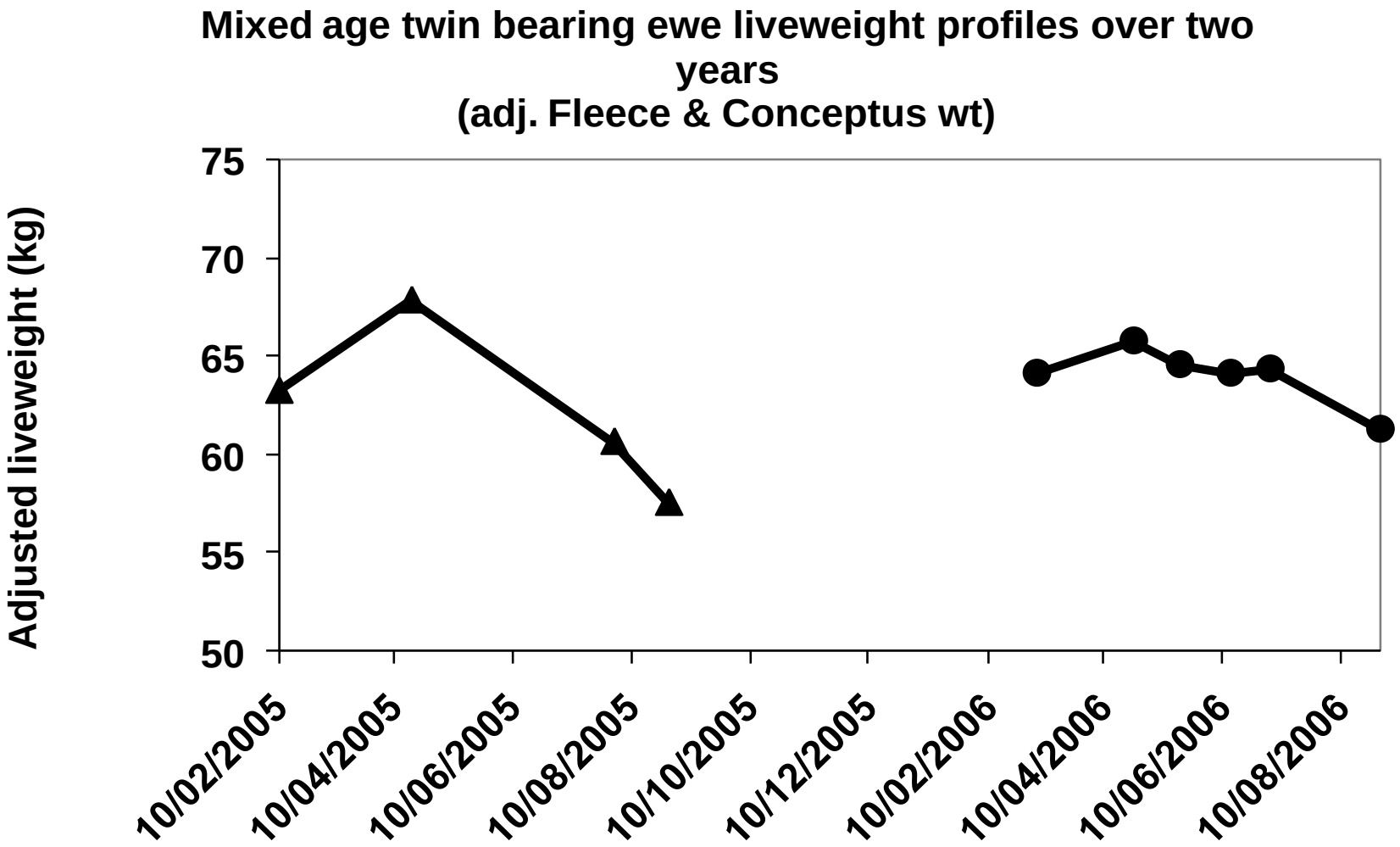


Effects of within flock variation on embryo numbers



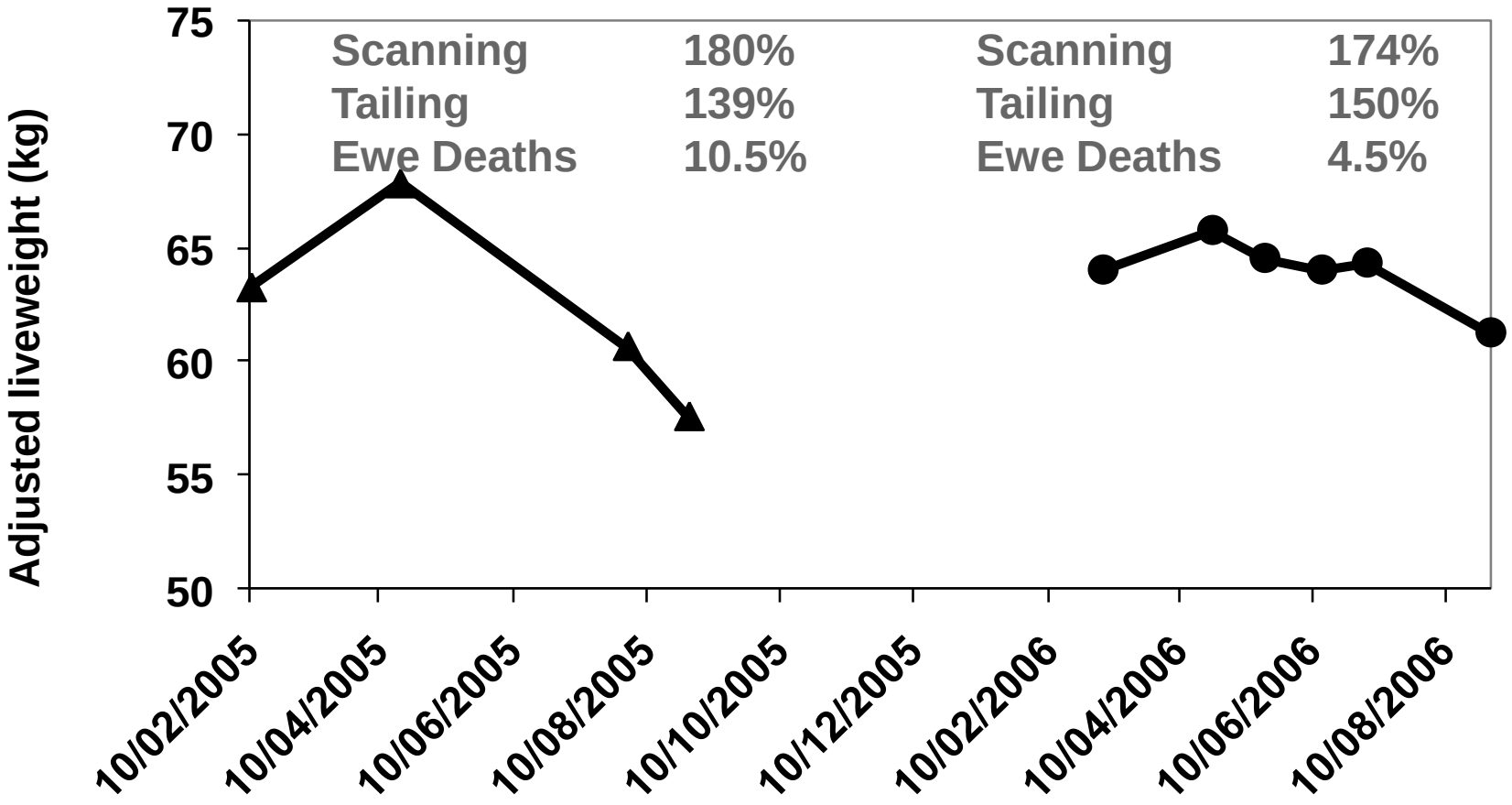
- 70 kg ewes
- relatively small changes in ovulation rate
- most of the difference due to implantation and embryo loss

Flushing – are we doing the right thing?



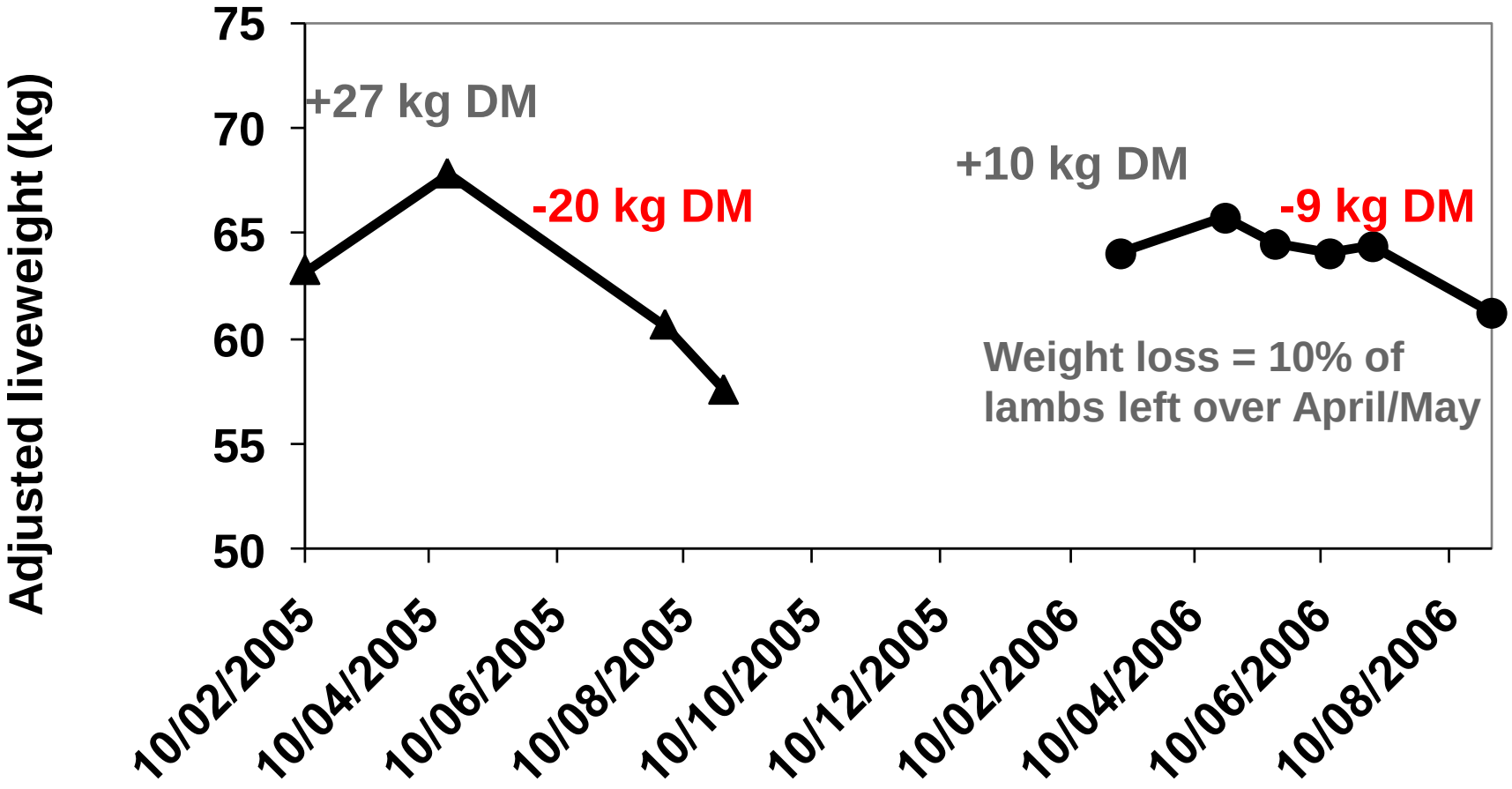
Flushing – are we doing the right thing?

Results from variation in mixed age twin bearing ewe liveweight profiles



Flushing – are we doing the right thing?

Feed required to flush the ewes and that gained back by losing weight over winter



Flushing- are we doing the right thing

- **Often the feed we need for winter is already on the farm and we choose to use it in autumn instead**
- **More stable liveweight profiles can help improve lamb and ewe survival**
- **We need to balance flushing feeding with the need for winter feeding**
- **Autumn and winter feed planning begins at weaning**

Supplementing ewes around tupping

Principles:

- **The way you feed the ewes will depend on the type of feed available**
- **Feeding will depend on the condition of ewes**
- **Ewes should be separated on condition score and fed according to need**
- **Feeding should start before tupping and continue through at least two cycles (three would be better**
- **Remember to balance feeding needs now with those later in winter and early spring**

Supplementing ewes around tupping

Principles of nutrient balancing:

- **Feedstuffs are of different qualities and thus have different rates and efficiencies of digestion.**
- **By balancing a ration, significant gains in both efficiency and rate of digestion can be made.**
- **This principle is most important when either very low or high quality feedstuffs are being used.**

Nutrient Balancing

- **Case 1: Low quality dry feeds such as straw .**
  - **Protein can be improved by providing a readily available nitrogen source such as urea.**
  - **Urea should be added at no more than 15g urea per 50kg of liveweight. Generally**
    - **Protein < 8%, use 15g/50kg body weight**
    - **Protein 8-12% use 10g/50kg body weight**
    - **Protein >12% use 5 g urea if required**

Nutrient Balancing

- **Good efficiency of digestion can be gained by the further addition of a soluble sugar like molasses.**
- **Molasses can be added at up to 20% of the diet, though is usually used at much lower levels.**
- **Mixtures of 1 urea to 5 molasses (at for example 10g urea/head) can be safely used to improve digestion efficiency.**
- **Feed Blocks with these ingredients are available and easy to use.**

Nutrient Balancing

- **Case 2: Fibre requirements when feeding grain.**
  - **With sheep generally only up to 350g grain per animal is fed.**
  - **The balance should be roughage of any kind, including straw, baleage, silage or hay (or pasture if you have some).**

Nutrient Balancing

- **Case 3: Silage or baleage with <15% protein.**
  - **The fermentable energy in silage and baleage is only 50 to 70% of the metabolisable energy.**
  - **Therefore the actual protein yield to the animal is only 50 to70% of the crude protein of the feed.**
  - **To capture the rest of the crude protein in the feed, a readily digestible energy source like grain or molasses is needed.**
  - **Otherwise, a high protein feed may be required, especially if feeding before tupping.**

Mineral Requirements

- **The key is to remember that hard feed may not have the minerals you put on your pasture.**
- **When feeding your own hay or baleage it will generally have a mineral content similar to the pasture it was made from.**
- **When feeding large quantities from elsewhere then supplementation may be required.**

Mineral Requirements

- **Grain generally requires 700g limestone/tonne to keep calcium levels up.**
- **Trace elements such as selenium, cobalt and iodine may all be required, especially pre-mating and pre-lambing.**
- **If silage, baleage, hay and grain are to be fed as a sole diet for over three months, then a supplement of vitamins A and E will be beneficial.**

Timing of Supplements

- **Timing of expensive supplements can have a critical impact on production.**
- **Flushing can be achieved by the use of grain for as little as two weeks before the ram goes out.**
- **Recent Australian research suggests that 5 to 10 days may be enough if a high protein diet is fed.**
  - **Possible options are soy bean meal, peas, rape seed meal and white lupin seed.**

Summary

- Know your sheep, including weight and condition score
- Separate them into like lines to ensure that feeding can be accurate
- Analyse the need for flushing compared to winter feed
- Choose supplements that can be fed for long enough to get a good response
- Start planning early (February)
- Remember that you may have to balance the feed to get a good result