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Getting ready for tupping

It may seem like summer has only just arrived, but now is the time to think ahead and get ready for mating time. Reproductive performance in sheep is determined by 1) **ovulation rate** (which affects the number of eggs produced), 2) **fertilisation rate** (the role of the ram) and 3) **embryonic death** (the number of fertilised eggs that fail to develop into lambs). Nutrition can play a key role in all three of these areas, and getting it right is critical to getting more lambs on the ground at lambing time next year.

- Check the Body Condition Score of your ewes **now**. For lowland ewes, target BCS at mating is **3.0 – 3.5**. Hill ewes are slightly lower.
- Cull ewes with poor teeth, udders etc.
- If there are more than 5% thin ewes for no obvious reason (i.e. not lame, poor teeth), then speak to your vet about further investigation for potential causes such as gutworms or liver fluke.
- If the ewes are too thin and underlying disease is not a concern, then weaning the lambs early will reduce the energy drain on the ewes, and allow them longer to recover.
- The rule of thumb is that it takes 4 weeks for ewes to gain ½ unit of BCS on good nutrition, so plan ahead. Shed off thin ewes into a separate group, and give them better quality pasture or even some supplementary feeding to gain BCS.
- If you use **sheep abortion vaccines**, then these need to be administered well before the start of mating (at least 4 weeks in most cases).
- Give your rams an MOT to make sure they are up to the job. Target BCS for a ram at tupping is 3.5 – 4.0. Remember the three “T”s – **Teeth, Toes** and **Testicles**. If you are in any doubt about fertility in your rams, get your vet to give them a check over.



Trace element deficiencies can result in lower lambing percentages, and can be a risk at this time of year as most ewes will have been out all summer with no mineral supplementation:

- **Selenium deficiency** can result in early embryonic death at 3-4 weeks after mating, which is often seen as late returns to service.
- **Iodine and cobalt deficiency** have also been reported as potential causes of low lambing percentages. Lack of iodine can result in stillborn/weak lambs. Cobalt deficiency is a common cause of ill-thrift and poor growth rates in growing lambs
- Any potential fertility effects of copper deficiency in sheep are less clear.
- Mineral over-supplementation is not only expensive, but can be harmful: just because a little of something is good, does not mean that more is better! It is always better to check first. The **DHHPS has a pre-mating profile** to check blood samples for both disease issues such as fluke or worms (using albumin and globulin levels) as well as trace element deficiencies (copper, cobalt and selenium). The cost is £260 for 10 sheep, with a minimum of 5 animals per group. Iodine can also be added to the analyses at an extra cost. Please get in touch if you wish to discuss testing requirements further.



Teat Condition Scoring

Regular monitoring of the level of **teat end damage (hyperkeratosis)** and other teat lesions within a dairy herd is a useful tool for checking that A) the milking machine and B) the milking routine is working well for the cows. Teat end hyperkeratosis is the main area considered, although **other valuable information** includes:

- post milking teat colour
- firmness of the teat barrel
- openness of the teat orifice
- tissue ringing at the base of the teat
- dryness of the teat skin

If things are going wrong, any visible teat lesions and changes can help to pinpoint the areas in which changes should be made.

The cow's teat canal is the first line of defence against infections entering her udder from the environment. It therefore makes sense that when a teat end is in good condition and the teat skin is soft and supple, it provides a more effective barrier.



When carrying out teat condition scoring it is important that the milkers' typical milking routine, cow flow and behaviour is not altered, otherwise the results of

the scoring could be misleading.

There are a number of recommendations to follow when examining teats:

- **teat condition should be evaluated within 60 seconds of cluster removal** (and before the disinfectant is applied).
 - observe and record in a regular pattern
 - view the teats initially without handling (when handling teats clean gloves should be worn)
 - observe teats from the side and the end
- Score all teats of 80 cows or 20% of the herd**, taking into account stage of lactation and parity to ensure a representative herd sample.

For routine field evaluation, teat end hyperkeratosis falls into four classes:

Score N (no ring)	No ring. Teat end is smooth with a small even orifice
Score S (smooth ring)	Very slightly rough. No keratin fronds evident
Score R (rough ring)	Rough ring. Raised, roughened ring has fronds of keratin extending 1 – 3 mm from the orifice
Score VR (very rough ring)	Very rough ring. Keratin extends more than 4mm from the orifice. The rim of the ring is often cracked



If a cow has scored R or VR with hyperkeratosis, she is at increased risk of having a high cell count and/or getting mastitis.

Roughening of the teat end is an indicator of long term damage, but even short term changes such as discolouration,

oedema, congestion and teat end wedging (due to circulatory impairment) can be associated with an increased risk of subclinical mastitis.

Dry teat skin can lead to an increase in teat end hyperkeratosis, whilst the teat barrel becomes harder to clean leading to an increase in environmental mastitis problems. **The goal is for less than 20% of the teats scored to be classified as VR and R, and less than 10% classified as VR.** If this target is exceeded, further evaluation of the milking machine (for example excessive vacuum, low ACR threshold etc.) and milking routine (e.g. cluster on before milk let-down, bimodal milk let-down etc.) is needed to establish which potential factors are involved.

Regular and routine teat condition scoring allows any teat changes/deterioration to be noted early. Problems can be identified and resolved, to quickly reduce potential losses.