



Newsletter 2023, Q3

Aug 2023

DHHPS vet wanted

We are recruiting for an additional vet for the DHHPS team. If you are interested, please call the office to speak to one of the team. Or go to www.ed.ac.uk/jobs Position Reference 6449 Closing date 14th August 2023.

Assessing colostrum intakes in calves

The importance of ensuring adequate colostrum intakes in calves within the first 24 hours of life is well understood. As well as providing the necessary immunoglobulins (IgG) that the newborn calf lacks, there are additional benefits of colostrum for the newborn calf such as high levels of nutrients and fluids, as well as a variety of immune factors that operate independently of absorbed IgG. There are now a number of studies that have shown that calves that do not receive adequate amounts of colostrum have higher mortality and treatment rates.

However, although mortality rates have fallen on US calf rearing units, there remain significant numbers of calves that require treatment. **Indeed, around a third of US dairy calves are treated for scour and/or respiratory disease according to a 2014 study.** There is therefore discussion as to whether the current methods used for the assessment of colostrum intakes are correct, and whether we need to alter the methods and/or thresholds that we use. Given the undoubted benefits of colostrum, should we be advising on high colostrum intakes?

The table below shows the consensus recommendations from a large group of researchers in North America, aiming to standardize the assessment of passive transfer in dairy calves using four categories.

Passive Transfer	Serum IgG (g/L)	Serum Total Protein (g/dL)	% of calves in sample group
Excellent	> 25	> 6.2	> 40 %
Good	18 – 24.9	5.8 – 6.1	30%
Fair	10 – 17.9	5.1 – 5.7	20%
Poor	< 10	< 5.1	< 10%

Table from: Lombard, J. et al. Journal of Dairy Science 103(8), 7611 – 7624

Acknowledging that colostrum intakes need to be considered on a group basis, this study proposed recommendations for the percentage of calves that fall into each category (right hand column). For example, **less than 10% of the calves sampled should fall into the “Poor” category with serum IgG less than 10 g/L IgG.** The most recent study from the USA in 2014 showed that 12% of dairy calves were in this category.

The Radial Immuno-Diffusion (RID) assay for IgG is considered the “gold standard” test for colostrum quality and intakes in the newborn calf as it directly assesses the amount of IgG present in colostrum and the calf. However, lack of availability and cost have restricted UK use.

Indeed, commonly used proxy assessments such as calf serum Total Protein, ZST and BRIX are only indirect evaluations, and prone to significant variation. For example, sick calves that are dehydrated will have elevated Total Protein values. Use of artificial colostrum or colostrum replacers may increase Total Protein levels, but may not contain sufficient IgG antibodies.

Whatever method is used, the following are critical when sampling for colostrum intakes:

- **Sample a minimum of 12 calves** (ideally 20 calves) per farm to ensure an accurate picture.
- Sample calves at 24 – 72 hours of age
- Do **not** sample sick calves
- This is **not** an individual calf test. It is used to assess colostrum intakes in the group.

In conjunction with SCCL in Canada, the DHHPS is pleased to offer IgG testing for both calf serum and colostrum samples using the “gold standard” RID assay. The current cost is £15 per sample, discounted to £12 per sample for more than 10 samples per batch from a single farm. Please contact the DHHPS office for submission forms.

DHHPS at UK Dairy Day

We will have a stand in the Sharing Knowledge Space at UK Dairy Day on the 13th September at Telford, Shropshire. Pop along and see us if you are coming to the day.



Body Condition Scoring in Sheep

The simple technique of Body Condition Scoring (BCS) can contribute significantly to good husbandry. For example, a beef cow or ewe at the correct target BCS at the start of the breeding season and then maintained in the correct condition throughout the year is much more likely to be healthy and productive.



Points for BCS

- Condition scoring is a physical rather than a visual examination.
- In the sheep, this assessment is made over and around the backbone in the loin region.
- Use the same hand to BCS all the ewes to reduce variability which can occur when using both hands.
- The usual scoring scale used is 1 to 5, with 1 being thin and 5 being very fat. Half or quarter scores can be used as intermediate points.

A given animals' current BCS gives a clear indication as to whether the nutrition of the animal in the recent past has been adequate.

As many sheep farms are approaching weaning, now is one of the key times to BCS the ewes. If BCS is not on target, then interventions should be made. This may involve checking ewes for disease conditions such as broken mouth or mastitis, or getting your vet to take samples to check for diseases such as liver fluke. Another option is to group ewes according to BCS at weaning, and give the leanest ewe group the best grazing. BCS should then continue to be monitored monthly, with feeding adjusted accordingly to get the ewes in correct BCS by tupping time

It is worth remembering that BCS cannot be altered rapidly, and it will take around eight weeks to modify body condition score by one unit. Clearly the best time to attempt to modify body condition score is at weaning or, at the very latest, eight weeks before tupping.

Different farm systems have slightly different BCS targets at key points in the annual farm calendar. The table below gives suggested targets for breeding ewes:

Body Condition Score Targets - Breeding Ewes			
	Hill ewe	Upland ewe	Lowland ewe
Weaning	2	2	2 ½
Tupping/mating	2 ½	3	3
Mid-pregnancy	2 ½	3	3
Lambing	2 ½	3	3

DHHPS Summer Pre-Mating Sheep Profile – Another Tool in the Box!

For ewes, rams and post-weaning lambs, blood sampling for trace element and disease status can be invaluable in late summer. The focus at this time of year is on **groups of ewes and rams** to assess whether they are in optimum condition for mating. **For lambs**, it is of benefit to ensure trace element or disease problems are not affecting growth rates.

What is included in the DHHPS Summer pre-mating sheep Profile? Glutathione Peroxidase (long term selenium status), Copper, Vitamin B12 (cobalt), Albumin and Globulin.

Two lithium heparin (green) vacutainers are required from each sheep. A minimum of ten ewes per test is required, with at least five animals sampled from each group. For each summer sheep profile test comprising 10 animals, the current cost is £320. Please do not hesitate to contact the DHHPS office with any queries.

RoMS mobility scoring course
 We are running a RoMS accredited dairy cow mobility scoring course on Tuesday 5th September at Langhill Farm, Roslin, Midlothian.
 To register, please contact the DHHPS office.