DAIRY HERD HEALTH & PRODUCTIVITY SERVICE

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Target survival of suckler calves

With spring calving fast approaching, it is a good time to consider the factors that improve the survival of newborn suckler calves. More importantly, ask yourself which of these factors are under your control.

There are certain factors that at this stage of pregnancy are already locked in, such as frame of the heifer/cow, many infectious diseases and sire genetics. That said, there are things that we can do now that will improve the chances of rearing more calves this year …

1) Talk to your team about calving – is everyone in agreement as to when to assist or call the vet? Is it clear what treatments will be administered to sick calves? Are the team comfortable performing lifesaving tasks such as stomach tubing calves?
2) Look at your facilities – is there anything that could be done to help make your life easier at calving time? Are calving gates set up in all pens? Would CCTV improve supervision?
3) Body condition score (BCS) your cows. Whilst no attempt should be made to reduce body condition in the last month of pregnancy, thin cows would still benefit from additional support. Any cows under BCS 2.5 out of 5.0 should be separated and offered additional feed. If you have a small herd, then thin cows can be grouped with heifers and any cows known to be carrying twins. All three groups need additional feed and supervision. Taking some faecal samples from any unexpectedly thin cows to check for liver fluke and blood sampling for Johne's Disease would also be worthwhile.
4) Check forage quality – poor quality forages will need supplementing in the last month of pregnancy, however, you won't be able to plan for this unless you have analysed your grass/maize silage or wholecrop. Reviewing forage analysis now will allow you to plan and purchase the most cost effective feeds.
5) Discuss vaccination and treatments with your vet. Are your protocols up to date and could vaccines help address problems faced in previous years?

Management in the last month of pregnancy is particularly important with respect to calf survival. Work in both beef and dairy herds has shown that survival is improved when cows are kept clean and in stable groups in the run up to calving, whilst cows should be fed to meet their *current* nutritional requirements. At 3-4 weeks off calving, consider the following:

1) Set the final management groups and do not move cows between groups until after calving (paddock changes are fine if using the Sandhills calving system).
2) Bed cows regularly – herds that bed cows when they look visibly dirty report higher levels of calf mortality.
3) Start supplementary feeding if indicated by forage analysis. Remember that suckler cows can meet all their requirements from good intakes of average quality grass silage.
4) You can check what the cows think of their diet by blood sampling 6 cows per feeding group and testing them for energy, protein and mineral status. Magnesium intakes during late pregnancy are particularly important, with low levels commonly reported in suckler cows.

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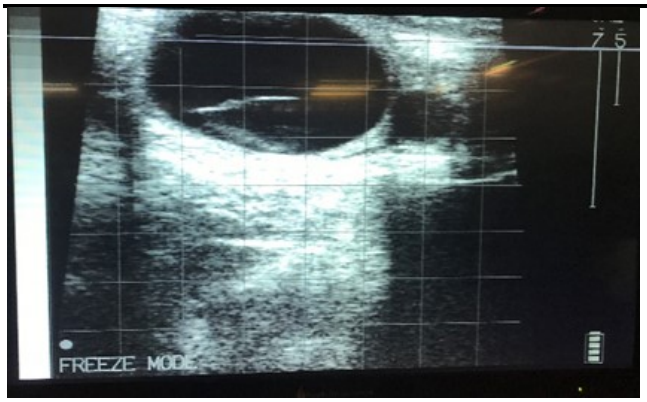

Cystic Ovarian Follicles

Cystic ovarian follicles ("Cysts") develop when one or more follicles fail to ovulate, and then do not regress but maintain growth.

Cysts can be defined as: "follicle-like structures, present on one or both ovaries, with a diameter of at least 2 cm that are present on one or both ovaries in the absence of any active luteal tissue that clearly interfere with normal ovarian cyclicity".

Ovarian cysts are one of the most common ovarian dysfunctions in dairy cattle, which can lead to considerable economic loss through their high incidence and effects on reproductive performance. For post-partum dairy cattle, especially high yielding cows, the development of anovulatory ovarian cysts during the early lactation period is a significant cause of anoestrus, which can result in an increase in the number of days open and an increase in the number of days to first service.

The incidence of ovarian cysts in dairy cattle varies widely from 2.7% to 30%. Typically the diagnosis of cystic ovarian follicles is made during the first 60 days post-partum, with cows presented at routine fertility visits for Oestrus Not Observed or passed their service deadline.

A genetic predisposition exists for cystic ovarian follicles, with heritability shown to be in the region of 0.07 to 0.12. The genetic correlations between ovarian cysts and yield traits highlight that ongoing selection for production is likely to increase the incidence of ovarian cysts.

The exact mechanism behind the development of ovarian cysts in dairy cattle is not yet fully understood, but it is generally accepted that cystic follicles develop due to a dysfunction of the hypothalamic-pituitary-ovarian axis, where the release of luteinizing hormone (LH) is altered. This dysfunction has a multifactorial cause, in which genetic, phenotypic and environmental factors are all involved. Environmental factors such as nutrition, feeding management and housing type are associated with the risk of developing ovarian cysts.

Some studies have implied that higher milk yield in dairy cattle can increase the risk of developing ovarian cysts, yet other studies contradict this suggestion. Although a consensus is lacking from all published literature on this subject, it seems highly likely that a link exists between cystic ovarian follicles and the magnitude and/or duration of excessive negative energy balance a cow experiences as a "close-up" dry cow and in early lactation. Thus poor energy balance is likely to be a more important risk factor for cystic ovarian follicles than milk yields *per se*. Monitoring through body condition scoring and metabolic profiles will help identify issues before they result in long-term harmful effects on fertility.

DHHPS services during COVID-19

We continue to operate as close to normal a service as possible during the current coronavirus situation, including blood sample analysis and reporting. DHHPS@ed.ac.uk is the best way to contact us, and this email address is looked at daily.