



## Newsletter 2021, Q1

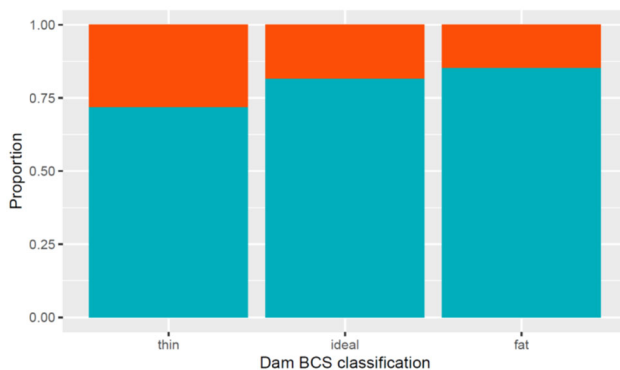
Feb 2021

### Improving calf survival

With calving fast approaching for many suckler herds, it is worth reviewing the factors that affect the performance of calves. Without a doubt, **the first week of life represents the time where we can make the biggest impact on calf survival.**

One of our residents, Rachel Bragg, has been tracking the health and survival of over 1,000 calves born on 84 GB farms in 2018. In one of her analyses, she has looked at the factors that influenced whether cows required assistance at calving. In her study, around 1 in 6 of the calves required at least some assistance at birth. As you would expect, **being born to a heifer, being a twin, being sired by a Charolais bull and being male were all risk factors for calves requiring assistance.** What was surprising from her data was that **calves that were born to cows that were classified as thin (under condition score 2.5 out of 5.0) were nearly twice (Odds Ratio 1.92) as likely to require assistance at calving** than calves born to cows who were classified as being in ideal body condition (2.5-3.5 out of 5.0).

There is some evidence from dairy cows that body condition loss in late pregnancy increases the number of cows that require assistance at calving, and it is interesting to see this association between thin cows and calving assistance in suckler calves.



*The proportion of calves requiring assistance at birth (red box) based on dam body condition score (BCS) at calving. Green box is cows that did not require assistance. Cows were classified as thin (BCS <2.5 n=102), ideal (BCS 2.5-3.5, n=920) or fat (BCS >3.5, n=75).*

It is important to note that **her analysis did not include calves that died at or shortly after calving or those calves born by Caesarean section,** and so the study does not exclude obesity in suckler cows being a risk factor for calving assistance. Reassuringly, only 7% of the cows in the study were over body condition 3.5 out of 5.0, and only 4 of 1097 cows were severely obese i.e. over body condition score 4.0 out of 5.0. This would suggest that **obesity in 2018 on the study farms at least was relatively uncommon.**

In a separate analysis of the same calves, assistance at calving was identified as a significant risk factor (Odds Ratio 1.91) for failing to absorb sufficient colostrum antibodies (i.e. failure of passive transfer), and that these calves with poor colostrum antibodies are significantly more likely to require antibiotic treatment or die prior to weaning.

**So how can we make use of this information to improve calf survival this calving season?**

- Go and body condition score your cows now.** Spring calving cows that are under body condition score 2.5 out of 5.0 should be grouped together and provided with supplementary feed
- If the cows are still more than two months away from calving, you could attempt some controlled body condition loss for fat cows. However, **no attempt should be made to reduce body condition in the last month of pregnancy**
- If you have cows scanned with twins,** group them with your thin cows so that they can also benefit from additional feeding
- Pay particular attention to these thin and twin carrying cows at calving time – they are significantly more likely to require help
- Don't risk colostrum supply at calving.** If you've calved a cow, strip off all her colostrum and feed it to the calf using a bottle or stomach tube. If there is less than 4 litres, supplement the calf with colostrum from another cow of known good disease status.



## Liver fluke in dairy herds

We have had a number of blood tests through the DHHPS laboratory so far this winter with cows not milking to expectation, despite apparent good forage quality. The results have been varied, with some tests showing energy or ERDP issues. However, there have been a couple of tests that have stood out after highlighting concerns over liver fluke.

Classically, **liver fluke occurs in late autumn and winter**, in cows that have been grazing wet marshy areas in the autumn (which is needed for the snail intermediate host which is part of the liver fluke life-cycle). This can include those herds where the milking cows are fully housed, but only the **pregnant heifers or “far off” dry cows get out to graze on poor quality pasture**.

Clinical signs of liver fluke vary considerably. The classic signs reported in the textbooks include **thin cows with poor milk production and diarrhoea**. However, not all cows read the textbooks! In dairy cows, an **increase in metabolic diseases** such as milk fever or ketosis may occur, due to the liver damage and/or altered liver metabolism caused by fluke. SAC Veterinary Services reported sporadic **downer cows in early lactation** that did not respond to treatment. One of the recent suspicious herds reported **sporadic milk drop cases**, with some cows milking poorly whereas other cows were milking to expectation.

Suspicious of liver fluke are often aroused by metabolic profile blood tests that throw up a number of cows with **unexplained low albumin and/or high globulin results**, indicative of disease issues. We ask that these cows are checked for identifiable clinical diseases such as lameness or a high cell count. If there is nothing immediately obvious, then doing further testing is advised.

However, testing for liver fluke is not straightforward, and needs to be discussed in conjunction with your vet. If cull cows go direct to slaughter, then **abattoir feedback on cull cows** (or post-mortem of dead cows on farm) can provide information on liver damage and adult fluke presence. However, feedback is often not

provided if cattle go through markets or through dealers. **Dung sampling to detect fluke eggs** is another option, although cows may shed fluke eggs intermittently. **Blood or milk sampling for antibody levels** is also possible, but levels remain elevated for many months and so may indicate historic rather than current infections

One question that often arises is **whether cattle (or sheep) can be infected with liver fluke from silage**. In theory, the risk should be low as grass silage is usually cut in the spring or early summer, well before infective liver fluke metacercariae levels rise in the autumn.

However, a recently published study by the University of Liverpool (John et al. (2020) *Vet Parasitology* 285, 109218) showed that regardless of grass DM content, **liver fluke metacercariae ensiled under anaerobic conditions were not viable from two weeks after silage making**. However, **poor quality aerobic spoiled grass silages did have viable liver fluke metacercariae in them, with lower DM silages (20%) having viable liver fluke present for up to 10 weeks**. It should be noted that the poor quality silages were very poor (no lactic acid detectable, pH 9!). However, poor quality spoiled forages may present a risk for liver fluke infection when fed to housed cattle.

**Control and treatment for liver fluke needs to be discussed in conjunction with your veterinary surgeon**. There are a number of flukicide drugs available, but their use in dairy cattle is restricted by milk withhold times, and certain products cannot be used in milking animals at all. Treatment at drying off will remove any fluke that are present, but their lack of persistence means that cows can then pick infections back up again the next day from pasture. An integrated control strategy is needed, with vet involvement.

### 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](mailto:DHHPS@ed.ac.uk) is the best way to contact us, as this email address is monitored daily.