DAIRY HERD HEALTH & PRODUCTIVITY SERVICE

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Dwarf calves

Have you ever come across calves that look like the photograph above in 2022? The condition is known as "dwarf calves" (also called Congenital Joint Laxity and Dwarfism [CJLD] or chondrodystrophy). It occurs worldwide, although it has been reported more commonly in Australia, Canada and Scotland.

In the UK, the condition is almost always seen in spring calving suckler herds that are fed grass silage over the winter housing period. The mothers are well and have no illness, but the calves are born with the following classic signs:

- Gross shortening of long bones in the leg
- "Domed" head
- Loose tendons around the joints, so the back legs become "sickle shaped". This often improves in the first week of life, such that some mildly affected calves will walk normally.

In affected herds, there is often a range of signs that might occur, with some calves only mildly affected. However, severely affected calves require to be euthanased.

Exactly what causes this condition is still not precisely known. Multiple bulls and locations have reported similar calves, making a genetic effect unlikely. Whilst Schmallenberg Virus (SBV) and other viruses can cause bone defects in calves, they appear to be different to dwarf calves. The most likely possible cause is a nutritional deficiency and/or toxicity.

This condition is usually related to feeding grass silage or haylage during mid gestation (around the 3 – 6th month of pregnancy). This means that in the UK, it is almost always associated with spring calving suckler herds. It is seen occasionally in spring calving dairy herds under low input systems, where again the cows are fed grass silage only in late lactation and the dry period. Interestingly, in Australia, it is associated with drought conditions, again as this is the time when cows are fed conserved forages.

The current thinking is that the condition is a result of either secondary manganese deficiency (where levels of manganese in the diet are adequate but absorption is reduced by other elements) and/or toxins such as mycotoxins.

Trials in South West Scotland showed that feeding a straw and silage mix was successful in reducing cases, presumably by "diluting out" the problem silage. This resulted in the recommendation to feed no more than 75% DM silage in the ration during pregnancy, using straw or other forages to reduce silage intakes. However, this can be costly on some farms with low straw availability.

We have also encountered farms with cases that have fed wholecrop or treated straw, and so it would appear that there may be other factors involved in producing dwarf calves.

Feeding a suitable mineral to cows during mid pregnancy with sufficient manganese is advisable, although it should be noted that this is not fully protective due to the possible role of antagonists in the diet.

We have an RDSVS vet student (Lauren Bell) undertaking a survey to assess the prevalence of "dwarf calves" and associated risk factors in the 2022 calving season. Regardless of whether your farm has had affected calves or not, we would be grateful if you could complete the survey. The link to the survey is below, or get in touch with the DHHPS office if you require a hard copy.

https://edinburgh.onlinesurveys.ac.uk/dwarf-calf-questionnaire-copy-3

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Looking for a different vet role?

We are looking for a new vet to join us in the DHHPS. Please feel free to ring the DHHPS office to discuss with Alastair, Julie or Alex. To apply, please go to www.ed.ac.uk/jobs and search for Reference 4514. Closing date is 4th August 2022.

Selenium deficiency in sheep at grass

With all commercial sheep now out at grass with no supplementary feeding over the summer, this is the main time that trace element deficiencies often occur in sheep – especially cobalt and selenium deficiency. This is because large areas of the UK have soils that are deficient in cobalt and selenium, which means that the amounts of these minerals in grazed grass can be low.

Selenium is an essential trace element, and works in combination with Vitamin E to protect against cell damage. Grazed grass is typically high in Vitamin E, and so animals at grass will usually have sufficient Vitamin E, meaning that selenium deficiency is the greatest concern in animals out at grass.

The classic sign of selenium deficiency is White Muscle Disease in young lambs and calves, often after gathering for dosing or weighing. However, in the late summer and autumn, the most common clinical signs are non-specific, including weight loss and ill-thrift, failure to reach target weights in growing lambs, and an increased susceptibility to other diseases. There are many other conditions with similar vague clinical signs (including lack of grazing given the recent dry weather in many parts, or gutworm infections), and so it is important that your vet is involved in achieving the correct diagnosis.

In adult ewes, selenium deficiency at mating can result in early embryonic death, associated with failure of implantation at 3-4 weeks after conception. Whilst this may be picked up by an increasing number of repeat breedings when raddle marks are used, the effects are often not seen until scanning time or later, when there may be high numbers of barren ewes or reduced lambing percentage figures. It is therefore important that any issues are picked up and corrected prior to the start of mating.

Supplementing with trace elements in sheep at grass is not straightforward. Unlike copper, there is no long-term storage of selenium (or cobalt) in the body, and so animals require continuous intakes to ensure that their trace element requirements are met. Therefore whilst free access mineral tubs or licks in the field are easy to put out, intakes can be very variable, which means that not all of the animals will get their required share.

Oral drenches (on their own or often combined with wormers) can provide more reliable intakes, but need to be repeated regularly (often every 3-4 weeks), and the amounts provided may not be sufficient. Injections and boluses can provide longer-term supplementation (up to 6 months in the case of some of the boluses), but require handling of the sheep, and may not be appropriate in all circumstances. Overseas, selenium fertilizers are often used on pastures to provide long-term supplementation.

A last word of warning is that just because a little bit of something is good, does not mean that even more is better! Selenium is toxic, and so care should be taken to avoid over-supplementation, especially if using more than one route of supplementation. If you are unsure, always check with your veterinary surgeon.

The DHHPS "pre-mating" sheep test is designed to check on the most common issues affecting lamb growth and ewe fertility in late summer and early autumn. As well as checking for disease status (using albumin and globulin levels), we also check for trace element status (looking at plasma copper, Vitamin B12 for cobalt status, and GSHPx for selenium status). The package includes up to 10 sheep per test, and we are more than happy to discuss your testing requirements further if necessary.

DHHPS prices

From August 2022, annual DHHPS blood testing membership will increase to £720 per year (paid as £180 every 3 months). "One off", dry cow and beef test prices are frozen for 2022-23. Price lists are available on the website or from the DHHPS office on request.