

Newsletter 2025, Q4

Nov 2025

Agriscot

The DHHPs will be part of the RDSVS stand at Agriscot on Wednesday 19th November at the Royal Highland Centre, Ingliston. Please come and see us if you are around on the day.

Does late pregnancy feeding affect calving difficulty?

One of the questions that we are often asked is whether increasing the energy supply of a [dairy or beef] cows' diet in the last month prior to calving results in bigger calves and more calving difficulties. Like most things in life, answering this question is more complicated than it seems! Some research studies have provided evidence to show a **positive linear relationship between energy intake in late pregnancy and calf birthweight**. Gao and others (Journal of Dairy Science 2012, 95; 4510-4518) fed three groups of ten Holstein cows a high energy, medium energy and low energy diet for the last 21 days prior to calving. The average calf birthweights were 43.90 kg on the high energy, 42.05 kg on the medium energy, and 39.15 kg on the low energy diet. Whilst this difference was statistically different, the biological significance of any difference is likely to be minimal.

Waldon and others (Journal of Animal Science 2023, 101, 1-6) recently reviewed the existing literature regarding energy and protein restriction in beef cows in late pregnancy, highlighting the **contradictory** data on this subject. One recent example is Chen and others (Scientific Reports 2022, 22, 12(1); 4828) who fed three groups of 30 Aberdeen Angus cows diets that supplied 110%, 100% and 90% of their energy requirements for the last 45 days of pregnancy. Calf birthweights were 39.62kg, 37.17 kg and 33.68kg respectively, due to differences in the bull calf birthweights (heifer calves showed no difference in birthweights). **Again, these differences in calf birthweights would be unlikely to be biologically significant.**

Indeed none of these calf birth weights are extreme, even after six weeks of over-feeding energy in beef cows!

However, there are **no** studies (as far as we are aware) that show any link between **increased energy and protein supply in late pregnancy and more difficult calvings**. Admittedly, some of this is because most of the studies did not look at calving difficulty, mainly as there were not enough animals to see any statistical differences! Either way, any differences in calf birthweight due to **late pregnancy** nutrition are minimal. Indeed, it is not possible to feed a cow enough in late pregnancy to increase birthweight beyond the calf's genetic potential.

Whilst calf size influences calving difficulty, there are likely to be **more important risk factors** involved, such as calf sex (male calves), twins, genetics and gestation length.

There is also evidence that under-feeding cows in late pregnancy will lead to potentially harmful effects on both the cow and calf. **Prolonged under-feeding of first calving heifers** will reduce their bodyweight at calving, and therefore actually increase the risk of calving difficulty. **"Fetal programming"** is the process whereby maternal stress during critical stages of pregnancy can have long-term harmful effects on offspring health and development, and has been well described in humans and other animals such as pigs. Although yet to be fully researched in cattle, there are papers indicating that under-feeding cows in late pregnancy may result in reduced calf immunity and reduced supply of nutrients to the calf via the placenta. There are of course plenty of other reasons to feed both dairy and beef cows to their nutrient requirements in late pregnancy. This will ensure that cows do not lose excessive amounts of body condition around calving, which may affect milk production, cow health and future fertility. The message is clear: **under-feeding cows in late pregnancy will not reduce calving difficulty, and will likely cause more harm than good.**

Reducing Lameness Prevalence in UK Dairy Herds

The GB Dairy Cow Lameness Manifesto, developed by the Dairy Cattle Mobility Steering Group and supported by Ruminant Health & Welfare and the Agriculture and Horticulture Development Board (AHDB), outlines 21 action points to reduce the number of cases of lameness in the national dairy herd.

This manifesto commits the collective British dairy industry to incrementally reduce dairy cow lameness over the next 20 years, so that it becomes minimal across all herds. This will improve cow welfare, reduce carbon footprint and safeguard the social license of dairy farming. The objective of the manifesto stated on the Ruminant Health and Welfare website is:

“To incrementally reduce lameness by at least 10% year-on-year, until at least 95% of all British dairy herds achieve a lameness prevalence of under 5% by 2044”.

Lameness is defined as Mobility Score 2 or 3, using the Register of Mobility Scorers (RoMS) accredited scoring system.

With a current estimated 30% lameness prevalence in the UK dairy herd, it is essential that farmers, veterinarians, and advisors utilise all available tools to reduce this costly and welfare-compromising condition. A comprehensive approach involves regular review and improvement of current herd management practices. Some key areas for consideration include:

- **Early Detection and Prompt, Effective Treatment (EDPET):** Rapid identification and treatment of lame cows to prevent progression and long-term damage.
- **Maximizing Cow Comfort:** Ensuring adequate lying times, comfortable cubicles or bedding, and good cow flow to minimise stress and standing times.

- **Routine Foot Checking and Trimming:** Implementing regular foot inspection and trimming protocols carried out by trained and competent personnel.
- **Consistent Footbathing Protocols:** Maintaining effective footbathing routines using appropriate disinfectant solutions to help control infectious causes of lameness such as digital dermatitis.

Genetic selection to help reduce lameness is another tool. Although the heritability of lameness is relatively low, substantial genetic variation exists in the predisposition of animals to develop lameness. This means that genetic selection can play a valuable role, alongside management-based approaches.

In the UK, the **Lameness Advantage genetic index** provides an estimate of an animal's genetic predisposition to lameness. Research has shown that cows with higher Lameness Advantage indices have a reduced incidence of common foot disorders such as sole lesions and digital dermatitis, resulting in an overall reduction in lameness cases. Consequently, increasing the average Lameness Advantage value within a herd through breeding can yield measurable improvements in foot health.

This improvement can be achieved by selecting sires with Lameness Advantage values above the herd average when breeding replacement animals. Such a strategy represents a low-cost, readily implementable approach that many dairy farms can adopt to enhance herd lameness resilience over time.

However, it is essential to maintain a balanced breeding strategy, where the primary selection of breeding animals is based on overall profitability indices—such as £PLI (Profitable Lifetime Index), £SCI (Spring Calving Index), or £ACI (Autumn Calving Index)—followed by secondary selection on specific traits like lameness. This ensures that genetic progress in foot health complements, rather than compromises, improvements in other economically important traits.