INSIDE ▸

Ensuring maximum growth rates for calves post-weaning

Weaning calves is a critical stage that sets the foundation for their long-term health and productivity. After investing in feeding over 1kg of milk powder per day...

Continued on page 3

TOMORROW'S FARMER

crediton milling company
Feeding Tomorrows Farmers Today

DECEMBER / 2024
ISSUE 70

YOUR **NEWSLETTER** FROM **CREDITON MILLING COMPANY**

Seafusion: optimising nutrient balances with slurry-based innovation

Balancing nutrients like nitrogen (N) and phosphorus (P) is a growing priority for UK dairy farms. With tightening regulations and environmental pressures, the need to efficiently manage these essential nutrients is more critical than ever.

FORAGE

Nitrogen losses, often from slurry and FYM, contribute to ammonia volatilisation, nitrate leaching, and Nitrous Oxide. Similarly, phosphorus losses, particularly through surface runoff, pose risks of waterway eutrophication.

Future farming systems will increasingly be evaluated on nutrient balance, including N and P, highlighting the importance of maximising nutrient use efficiency (NUE) and phosphorus use efficiency (PUE).

Unlocking the Nutrient Potential of Slurry

A bio stimulant is a substance or microorganism that stimulates natural plant processes to improve a plant's characteristics without adding nutrients.

SeaFusion, a slurry-applied bio stimulant, offers a dual benefit by optimising both nitrogen and phosphorus availability, using bioactive compounds derived from premium seaweed extracts with soil-activating agents which improves the availability of nitrogen and phosphorus in slurry, while minimising losses to the environment.

Seaweed extracts in SeaFusion are rich in alginic acid, mannitol, and trace minerals, which stimulate plant growth, enhance stress tolerance, and improve nutrient uptake. The non-chemical, low-temperature extraction process preserves these vital compounds, ensuring their effectiveness in boosting both nitrogen and phosphorus efficiency. This allows farms to make the most of on farm resources, significantly reducing the need for synthetic fertilisers.

Improving Phosphorus Use Efficiency (PUE) and Maximising Nitrogen Use Efficiency (NUE)

Phosphorus, while essential for plant growth, is often a limiting factor due to its tendency to bind with soil particles, making it less available to plants.

Continued on page 2

SeaFusion: Optimising Nutrient Balances with Slurry-Based Innovation *Continued from page 1*

Stimulating soil microbial activity helps release bound phosphorus and improve its uptake by plants. This improved phosphorus cycling not only enhances forage productivity but also mitigates the risk of phosphorus runoff into waterways. With increased PUE, farms can support both environmental and operational goals, contributing to better soil health and reduced water pollution.

In addition to its impact on Phosphorus, SeaFusion significantly enhances nitrogen use efficiency. It reduces nitrogen losses through leaching and volatilisation, keeping more nitrogen available within the farming system. This improved nitrogen efficiency also aligns with regulatory expectations, helping farms maintain compliance while reducing their environmental footprint.

Building Soil Resilience and Productivity

Bioactive compounds foster a thriving soil ecosystem by encouraging microbial activity and improving soil structure. These benefits are vital for nutrient retention and cycling, ensuring that nutrients are more effectively stored in the soil or in the soil microbial life itself and made available to plants as needed. Enhanced root development further boosts nutrient uptake, enabling plants to make better use of available resources.

The result is healthier soils that are more resilient to stress, such as drought or heavy rainfall, and better equipped to sustain long-term productivity.

A Sustainable Approach to N and P Management

Slurry and FYM are already a key component of the nutrient supply on livestock farms, but their contribution can be variable due to timing and spreading technique. Improving the soil and plant's ability to process and store using a bio stimulant will enable farms to reduce reliance on synthetic fertilisers, cut input costs, and lower their environmental impact. This contributes to a more balanced nutrient

economy on the farm, where losses are minimised, and productivity is maximised.

Meeting the Future of Nutrient Management

As nutrient balance metrics like N and P efficiency become central to farm assessments, SeaFusion provides a practical solution to these challenges. By integrating advanced bio stimulant technology into slurry systems, it empowers farms to Improve nutrient use, enhance soil health, and build resilience for the future.

SeaFusion offers a practical and science-driven pathway for farms striving to meet the challenges of tighter nutrient regulations and environmental responsibility, SeaFusion is a tool to unlock more of your on-farm resources while safeguarding productivity and sustainability.

MATT RANCE 07809 306571
FORAGE & NUTRITION SPECIALIST

Supplemental feeding for ewes in late pregnancy

Supplemental feeding is crucial in late pregnancy to support the ewe's rising nutritional needs, the rapid growth of lambs, udder development and the production of colostrum.

BEEF & SHEEP

By this stage, forage alone often falls short of providing sufficient energy and protein, especially for ewes carrying multiple lambs. Strategic supplementation can help bridge the gap, ensuring healthy lamb development whilst maintaining the ewe's condition.

Start by evaluating the quality of your conserved or grazed forage. Analyse your silage or hay for energy (metabolizable energy, ME) and protein levels, using results to plan supplementation accurately. Target an overall daily intake of 12-16MJ ME per kilogram of dry matter, with crude protein levels of at least 16%. High-energy concentrates are typically necessary, especially for ewes carrying twins or triplets.

Introduce concentrates gradually, starting with 200-300g per ewe per day and increasing by 100g weekly until twin bearing ewes are receiving 600-800g daily by lambing. For triplet-bearing ewes, higher intakes may be required. Higher levels may also be required if forage quality is low too.

Once more than 500g per ewe per day is reached, this needs to be split into two feeds to prevent acidosis and maximise utilisation. Using a high-quality concentrate containing digestible fibre and bypass protein, which are critical for lamb growth and ewe health is best for both sheep and farmer.

Ensure all ewes have sufficient feeding space (medium ewes need a minimum of 45cm of trough space per ewe) to reduce competition, particularly for those in lower body condition or carrying multiples. Always provide ad-lib access to clean water, as hydration is vital for nutrient absorption and milk production. Supplement diets with

Ensuring maximum growth rates for calves post-weaning

Weaning calves is a critical stage that sets the foundation for their long-term health and productivity. After investing in feeding over 1kg of milk powder per day to support strong early growth, your focus should shift to maintaining momentum during the post-weaning phase. Proper management of diet, environment, and feeding practices is essential to maximise growth rates.

DAIRY

Transitioning to Solid Feed

The weaning process can stress calves, particularly if they are not consuming sufficient solid feed beforehand. Ensure calves are comfortably eating at least 1.5kg of concentrate feed daily for three consecutive days before reducing milk feeding and eating 2kg before removing milk completely. This ensures their rumen is developed enough to digest solid feeds effectively.

For best results, provide a high-quality calf starter ration, ideally with 18-21% crude protein, to support muscle and skeletal development. Gradually increase concentrate feed intake post-weaning while monitoring weight gain and feed conversion rates.

Ad Lib Feeding: Benefits and Considerations

Ad lib feeding of concentrates offers the potential for calves to maximise their growth rates by allowing unrestricted intake of high-quality feed. However, managing roughage alongside ad lib feeding is critical to prevent issues such as acidosis.

Straw is the preferred roughage for ad lib-fed calves because it encourages rumination and promotes healthy rumen development. Unlike hay or silage, straw is low in fermentable carbohydrates, reducing the risk of excessive acidity in the rumen. It also avoids the overconsumption of energy-dense forage, ensuring calves maintain a balanced intake of roughage and concentrate.

Why Not Hay or Silage?

Hay and silage, though commonly available, are less suited for calves in this stage:

Hay: While palatable, hay has a higher energy density than straw and can lead to overfeeding when offered ad lib alongside concentrate. This can reduce concentrate intake, slowing growth rates.

Silage: Silage is more challenging for young calves to digest due to its higher moisture content and variability in fermentation quality. It can also introduce an increased risk of rumen upset and spoilage issues, particularly in smaller herds.

By contrast, chopped straw, offered in a separate feeder to prevent soiling, ensures a consistent and safe roughage source. Aim for straw lengths of 3-5cm to encourage chewing without the risk of impaction.

Environment and Monitoring

Maintain a clean, dry, and well-ventilated housing environment with sufficient space per calf to encourage feeding and minimise stress. Consistent monitoring of growth rates is essential; target daily live weight gains of at least 0.8-1kg during the post-weaning period. Use weigh bands or scales to track progress and adjust feed intake as needed.

Provide constant access to clean water, as dehydration can significantly impact feed intake and overall performance. Additionally, ensure calves are vaccinated and dewormed appropriately to avoid setbacks caused by disease or parasites.

Building a Strong Foundation

Post-weaning is a critical phase in calf rearing where attention to feeding practices and rumen health will pay dividends in the long term. By adopting ad lib concentrate feeding supported by straw as the sole roughage, you can maximise growth rates while laying the groundwork for healthy, high-performing adult cattle.

ED REDMAN 07734 605439
RUMINANT SPECIALIST

Supplemental feeding for ewes in late pregnancy *Cont. from page 2*

appropriate minerals and vitamins, focusing on magnesium, calcium, selenium, and vitamin E to support metabolic health and reduce the risk of issues like hypocalcaemia or weak lamb syndrome.

Regularly assess body condition scores (BCS) and adjust rations as necessary. Seek professional guidance if scanning shows a high proportion of multiple-bearing ewes, as their requirements will demand a tailored approach.

Consistent attention (and alteration if required) to supplemental feeding pays off in strong, healthy lambs and productive ewes.

DAVE SMALL 07711 780858

Trial into feeding larvae on farm


DAVID HOPE 07751 743080
POULTRY SPECIALIST

A customer is taking part in a trial feeding larvae to one house of birds and comparing the outcomes to the sister flock on the same farm, acting as a control group.

POULTRY

The trial is in collaboration with Harper Adams University and Flybox, who supply the larvae live, with 3 days' supply delivered to the farm at a time. Flybox have committed to supply the larvae until the end of the flock to ensure consistency for the birds to avoid stress.

The birds are fed the larvae once a day and at the same time each day, at 11am. The larvae are tipped into the scratch area and each feed provides 2g larvae per bird. The vast majority of birds jump down into the scratch area to eat the larvae which are consumed very quickly.

Harper Adams University visit the site to conduct lifecycle assessments and scientific measurements as well as reviewing flock data collected by the farm. These include the review of data, such as production, egg weight, egg mass, water intake and mortality, as well as observing the bird's behaviour, feather score and comparing these measures to the other house. Flybox are working towards regulatory approval to allow insect protein to be used in compound feed rations for poultry.

It is too early to draw any conclusions from this trial, but initial observations are that the birds fed the larvae very quickly learnt to anticipate being fed the larvae and as a consequence are noisier and not as relaxed as the control house.

It is clear that the birds love the larvae, and careful management is required to avoid stress. For example, it would not be possible to miss a day's larvae as the birds now expect it.

The farmer is hoping to see benefits to feather cover through this enrichment and reduced feed intake, although accepts this is unlikely feeding just 2g per bird per day.

It will be interesting to review the data at the end of the flock.