



AGRICULTURE

# Dairy Bulletin

Edition 8



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# Get your dry cow system right this Winter



By Adam Clay,  
NWF Technical Director

**A significant proportion of any herd's health and welfare costs can come from the three weeks before calving to the three weeks after calving. This is the period where the cow lays down the building blocks for the coming lactation, minimising metabolic disease. Implementing a system to reduce negative energy balance and maximise post-calving dry matter intakes can be very profitable.**

Poor feeding and management during the transition period can result in a host of problems around calving such as dystocia (difficult calving), retained placenta, milk fever (hypocalcaemia), lameness, rapid weight loss and ketosis. Many of these issues are related, as one may lead to the manifestation of other conditions, often as a result of reduced feed intake.

Feed intake tends to decline as calving approaches and does not peak until about 10 to 12 weeks after calving. This is the opposite of cow requirements as nutrient demands increase in the latter stages of pregnancy, and cows achieve peak milk yields about 6 to 8 weeks after calving. Any calving or metabolic issues can be the final insult resulting in downer cows and the consequent effects.

For example, when a cow experiences a case of milk fever, she is then far more likely to experience ketosis (negative energy balance), displaced abomasum (twisted stomach), retained cleansings and even higher cell counts. The same can also be said for sub-clinical milk fever which by its nature, is very difficult to see and treat but can have a similar effect and so must not be ignored.

Milk fever is considered the gateway disease, and the above symptoms should also focus attention towards milk fever prevention.

## So, what are the key points to focus on?

- 1. Body condition score** – The ideal calving condition score is 3 – 3.25, calving thinner will reduce lactation and peak yield, calving overweight will reduce early dry matter intakes and increase chances of milk fever and ketosis. For cows calving overweight, have post-calving drenches available for the inevitable issues.
- 2. Nutrition** – High dry matter intakes will help to keep the rumen expanded and drive intakes post-calving, but high energy intakes will drive dangerous weight gain. Therefore, forage should be clean, fresh and palatable but low in energy, that's where chopped straw can be a useful tool. If straw is used however, it must be chopped to approx 2cm to enable intakes of 3-5kg.
- 3. Minerals** – Potassium is generally high in green forage (grass, grass silage and hay) but low in cereal silage. Higher potassium in dry cow diets will increase milk fevers due to its relationship with magnesium and calcium. Reducing potassium should be the first job, after this feed magnesium through magnesium chloride flakes and/or dry cow minerals as this will counteract the potassium in the diet, DCAB products may also be required.
- 4. Monitor and react** – Speak to your feed advisor as soon as symptoms show, small changes can have big effects. For example, a change of silage could shift the potassium levels, if retained cleansings increase this can be a sign of sub-clinical milk fever so increasing magnesium can help. Low colostrum levels could be lower starch in the close up group or an impact of milk fever. Reacting to such symptoms could pay dividends through lactation.

# Investing in your Youngstock Environment

by Louisa Lloyd, NWF Technical Formulator



**While there are various housing options for calves, all must be tailored to the needs of the animal, with the goal of maximising performance, optimising health, and adhering to welfare standards. Calf housing must meet certain fundamentals: being dry, draught-free, clean, and comfortable.**

## Hygiene

Effective hygiene is a basic design requirement for calf pens and calf buildings. All materials used within the area of the calf (i.e. floor, pen walls, drains) should be easy to clean and maintain.

## Feed & Water

The preferred method of milk feeding for calf health and productivity is through a teat feeder. Group pens with teat feeders should permit easy access for the stockperson to help all calves in the group to access a teat. The choice of milk feed system should define the optimum group pen size for any particular farm.

Dry feed is best presented to individual calves in shallow bowls or buckets, so that quantities can be kept low, daily intakes are easy to see and spoilage is limited. A trough for dry feed should be located more than 2m from a drinker to reduce the amount of feed that ends up in the drinking bowl.

A calf system can be designed with a feed preparation and cleaning area as an integral part of the system. A calf kitchen is an obvious component to support calf health and growth. It should also serve to improve the effectiveness of labour and make a routine task more pleasant.

## Temperature

Regardless of the housing system, a newborn calf will feel cold when the temperature drops below 10–15°C. The temperature felt by a calf is a combination of the ambient air temperature, airspeed and relative humidity.

When calves feel cold, they will spend more time lying down, which reduces the external body area exposed to the atmosphere, so it's important to consider lying space and bedding when designing your calf shed.

The link between temperature and humidity is described as the Temperature Humidity Index (THI), which is normally used to describe warm and hot conditions. When THI reaches 72+, calves start to exhibit signs of heat stress.

Stagnant air can be contaminated with dust, moisture, ammonia and viruses, which can cause pneumonia. Cobwebs in buildings and condensation on the underside of roofing are signs of poor ventilation. Many buildings used to accommodate calves can be improved by modifying the sidewall cladding or inlet ventilation to improve the natural airflow.

**It's important to take the time to understand your needs in the planning process of your youngstock housing to help make sure that the design chosen is right for your system.**

### 1. What will be the maximum number of calves on milk at any one time?

- Check your calving records
- Include a two-week post-weaning period
- Consider the need for empty pens for effective cleaning
- Allow for flexibility in the event that movements are restricted (e.g. adverse weather or tuberculosis restrictions)

### 2. What are your future plans for the business?

- Is this a stop-gap or a 10-year investment?
- Will your cow numbers increase?
- Might the system need to adapt, e.g. to different calving systems?

### 3. What is the preferred feeding system?

- Individual buckets, trough feeders, automatic calf feeder etc.?

### 4. What is the likely pen size?

- Your pen size should fit your preferred feeding system and be dictated by your calf group size



## Rumen Development and setting up your herd for a successful future

By Katie Smith, NWF Technical Formulator

**To maintain a highly successful, healthy, and productive dairy herd, good youngstock management is key. The fundamentals of a strong, healthy dairy cow are established within the first 24 hours of a calf's life. From birth to approximately four weeks of age, calves do not have a functioning rumen. To ensure successful digestion, milk production, fertility, and ultimately herd longevity, efficient rumen development is vital.**

Feeding good quality colostrum quickly and efficiently is imperative to producing a strong calf. Within the first four hours post-birth, four litres of clean, antibody-rich colostrum should be fed. This should then be followed up by a further two litres within 12 hours of birth. The efficiency of antibody absorption from colostrum declines rapidly after birth; therefore, feeding colostrum as soon as possible is crucial for passive transfer. When feeding colostrum, the temperature must be around 38-40°C.

### What is rumen development?

Rumen development is the process by which a calf transitions from solely using the abomasum to efficiently utilising all four stomachs to successfully digest food. The length of this process is highly dependent on the feeding regime. If milk or milk replacer is exclusively available for extended periods, concentrate feed intake will reduce, and rumen development will be slow. By offering quality concentrates early on, rumen development is enhanced, and a fully functional

rumen will develop between 8-12 weeks. To enable the successful growth of rumen papillae and the thickening of the rumen wall, starter concentrates should be introduced from seven days old.

When feed enters the rumen, it enters an anaerobic environment. In combination with the intake of unlimited fresh drinking water, the bacteria in the rumen will ferment the feed, producing fatty acids. The rumen bacteria digest starch and crude fibre, which produce propionic and acetic acids that are absorbed into the bloodstream and directly used as an energy source for the young calf.

It is also important to offer a source of ad-lib structural fibre, such as clean chopped straw or hay, from the third week of life. For optimum intake, the concentrate and forage should not be mixed. To avoid sorting, the forage should be chopped to at least 5 to 6 cm. Feeding a structural source has important functions, such as stabilising the rumen pH and stimulating the rumen wall, causing rumen wall contractions, and encouraging the calf to ruminate. At this point, starter/concentrated feed will be the calf's main source of nutrition, and the rumen will have expanded to 70% of the total digestive tract. The rumen should be able to digest feeds similar to that of adult cattle. This is dependent on the age of weaning and the type of compound feed consumed. This is crucial at weaning; the animal must compensate for the nutritional value lost by ceasing milk or milk replacer. By increasing concentrate feed intake during the weaning period, the calf should maintain the same daily live weight gain (DLWG) pre- and post-weaning.



# Improving Performance from the Ground Up



By Howard Brown, NWF Ruminant Nutritionist

**Located just outside Uttoxeter in Staffordshire is Bank Top Farm run by third-generation farmers Don and Sue Capewell, and fourth-generation son Simon and his wife Claire. Purchased in 1938, Bank Top Farm now operates an efficient Holstein/Friesian milking herd and spans 180 acres of highly productive cutting and grazing grassland.**

*"Since working closely with our ruminant nutritionist, Howard Brown over the last six years, we've taken the herd from averaging 6,000 litres to over 8,500 litres through incremental improvements in our herd and farm management. We have focused on three key elements; Dry cow management, herd management and grassland management,"* says Simon and Claire.

## Dry Cow Management

Since making the switch to NWF Drytime, a specifically formulated compound designed for the dry cow, Bank Top Farm has improved on a multitude of factors, resulting in significant

benefits into lactation. NWF Drytime feed contains Rhesure, a protected choline shown to reduce metabolic diseases, along with high levels of minerals and magnesium to support calving.

*"Historically, we kept the herd together, however listening to the advice from Howard, we split the dry cows from the milking herd to allow us to focus more on their requirements during this critical period. Since the split, we have found a reduction in ketosis, milk fever incidences and a reduction in retained cleansings."*

Since working with NWF on their dry cow management, a conception rate of 39% rate has been achieved, females reaching second calving has risen to 72% with a calving interval running at 374 days.

## Cow and Calf Management

Starting with the future herd, Simon and Claire took a step back to review the youngstock enterprise, with a slightly alternative method of weaning. Calves are reared on NWF Ultra

Life milk replacer from day 1, then quickly weaned onto straw for rumen development, followed by a heifer rearer nut, rather than pellets, again to maximise rumen development and DLWG.

The herd is fed NWF's Fusion Pro, a soya and palm kernel-free compound utilising the uniquely manufactured protected rape meal, **Ultra Pro R**.

*"We've found milk yields have continued to rise since using Fusion Pro, the protected rape meal has proven to more than support our herd's protein requirements for high-yielding cows,"* states Simon.

Switching from a blanket feeding approach to a tailored regime has stopped the 'overfeeding' of later lactating cows allowing a focus on those cows that require it. Since splitting the dry cows into a separate shed, feed space has increased up to the recommended 75cm per cow, reducing competition and improving intakes. Reviewing the Cow Signals concept with Howard has helped improve cow comfort with more space in the walkways and freed up cubicle space for cows to walk, drink and rest with ease. Following on with improving the cubicle spacing, have improved the depth of sawdust bedding, not only improving rest periods, which has a direct link to increased milk but also reducing cases of mastitis.

*"Looking into 2025, we'd like to invest in fans to keep the sheds ventilated and fresh. With seemingly hotter summers each year, the investment will help keep the herd cooler reducing cases of heat stress,"* adds Simon.

## Grazing and Forage Management

Fundamentally, grazed grass and forage make up the majority of a dairy ration, so harnessing homegrown forage will make a difference to both the farm's bottom line and herd performance. It is advised that 10%

of grassland fields should be reseeded every year, something that is strictly carried out by Bank Top Farm. You wouldn't want to eat limp cornflakes – neither would your herd! Tired, weed-heavy leys will not provide the DM, protein and energy the dairy herd desperately needs, whether it's fresh grass or silaged.

Reseeding with NWF's Cut & Graze every Autumn, taking 3 cuts from end of April through to mid-September, Bank Top averages 13,000KG of grass silage per acre before grazing for 8 weeks prior to turning in. Howard takes both fresh grass and silage samples throughout the year to ensure what is being cut is worthwhile and silage can be paired with the diet for an all-around ration. To support the ensiling process, NWF Ultra Guard is used to optimise the fermentation process and maintain good palatability.

Regular soil samples are taken to identify any nutrient deficiencies or weaknesses in the soil. With the recent spike in fertiliser prices, a more targeted approach to fertiliser usage incorporated with their slurry application was undertaken. A slurry additive has been used successfully over the past 3 years, resulting in a 15% reduction in their fertiliser bill.

## Other Key Notable Improvements

- Installation of additional water troughs in all grazed fields to reduce walking distance and support water intake.
- Working closely with the genetic company – focus on bull selection to improve genetic potential.
- Herd is supplemented with the NWF Techmix range to support calving, off-feed events and rehydration in youngstock.
- Addition of molasses to boost milk production during a year of poorer MYFG.

**NWF Agriculture would like to thank Bank Top Farm for their continued business and their insights into their dairy operation.**

# Dealing with Digital Dermatitis

By Heather Millward, Oakhill Farm Vets



Since it first appeared in the 1970s, bovine digital dermatitis (DD) has become endemic within the UK dairy herd. Alongside being a great welfare concern, the economic consequences of DD are substantial and include significant reductions in milk yield and reproductive performance.



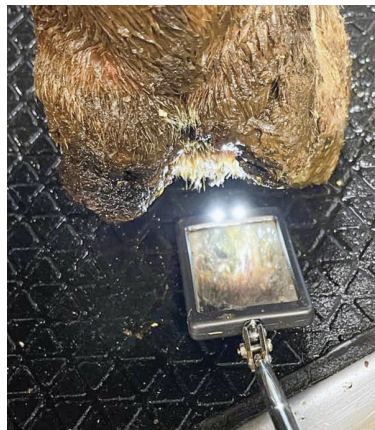
The family of bacteria known as the treponemes have been identified as important aetiological agents in DD. These bacteria are highly contagious and are found within ulcerative lesions typically occurring between the heel bulbs at the heel-horn junction. Once DD lesions are established the host often remains infected for life, even if the lesions appear to heal. Chronic lesions may revert to the active stage and become a source of infection for other cattle. Digital dermatitis lesions can be classified by the M-stage scoring system (Dopfer et al., 1997; Berry et al., 2012).

## Two things increase the likelihood of a foot becoming infected with DD:

- 1) Damaged skin.** The bacteria can only enter and become established in the deeper layers of the skin if the skin is damaged. This includes damage from being in contact with slurry. Skin which is in constant contact with slurry is more permeable and is more likely to become infected. Foot conformation, particularly having a lower heel height may increase slurry contact.
- 2) Contact with DD bacteria.** The bacteria associated with DD can survive in slurry for up to 24 hours. A higher prevalence of active DD lesions will increase the likelihood of feet coming into contact with infected slurry.

## Treatment and control of DD

The cornerstone of controlling DD is to quickly identify and treat active lesions. This requires regular visualisation of the feet. Lameness is an unreliable indicator of infection as studies have shown that only 39% of cattle with active lesions are lame. Clean hind feet can be visualised using the "mirror stuck to a spatula" method in the parlour, as an alternative to lifting feet in a crush. Treatment consists of washing the foot, removing any loose scabs, drying the lesion, and spraying with topical oxytetracycline spray. Lamé cattle should also receive non-steroidal anti-inflammatories. It is useful to adopt a unique method to visually identify treated cattle, such as using different coloured marker sprays so that they each get the required number of repeat treatments (for best results, repeat treatment daily for 3-4 days). Disinfect gloves and hoof



knives between cows and between feet. DD bacteria have been shown to survive for at least 2 hours on hoof knives. Suitable disinfectants are 1:100 FAM30®, 2% Virkon® and 2% sodium hypochlorite. A contact time of 20 seconds will remove DD bacteria. Clean, dry conditions promote healthy skin which is resistant to infection.

## Improve Floor Hygiene

- Minimise slurry pooling and avoid slurry cross-contamination between adults and youngstock.
- Run automatic scrapers at a frequency which prevents slurry and urine pooling excessively.
- Robotic slurry vacuums can help to minimise slurry pooling and avoid slurry waves which often occur in front of automatic scrapers.
- Improving cubicle comfort will encourage the proper use of cubicles and promote increased lying times, reducing the contact of heels with slurry.
- Clean, dry conditions promote healthy skin which is resistant to infection.

## Footbathing

A good footbath should ensure good cow flow and be 3.5m long and 12cm deep, with a non-slip surface. It should be easy to fill, empty and clean. The floor of the bath should be at the same level as the approach and exit floor. Automated footbaths avoid the need to handle chemicals and save time. As a general rule, allow 1 litre of solution per cow passage. A separate footbath should be incorporated into the heifer housing or management areas. The frequency of foot-bathing depends on the prevalence of DD, the type of lesions, and the cleanliness of the feet. It is better to increase the frequency of footbathing, than to increase the concentration of the footbath solution. Be sure to follow the manufacturers instructions as to the chemical concentration needed

The genetic heritability for the risk of DD is relatively low (0.40), although it is still advantageous to select bulls with positive DD index values, as genetic improvement is cumulative.

As always, maintaining good biosecurity is essential to avoid bringing in different strains of the causal bacteria.

[www.oakhill-vets.com/farm](http://www.oakhill-vets.com/farm)



# Feeding for Success this Winter

Our extensive dairy compound feed range has been formulated with high quality raw materials to help achieve specific goals on farm. Focusing on high by-pass protein to help achieve an efficient and cost-effective diet, particularly for early lactation and high yielding cows. As well as rumen health, which is key to achieving feed utilisation, reducing the rate of 'quick fizz' in the rumen

<p><b>High quality starch diets to drive recovery from negative energy balance, fertility and yield.</b></p>	<ul style="list-style-type: none"> <li>• Octane (WM)</li> <li>• Dairy Supreme (WI)</li> <li>• Pioneer (WM)</li> <li>• Northern Pioneer (LT)</li> <li>• Goldstar (WM, WI)</li> <li>• Fusion Pro (WM, WI)</li> <li>• Dairy Fusion (LT, WM, WI)</li> </ul>
<p><b>High Starch diets with good energy levels designed to balance fibrous forages.</b></p>	<ul style="list-style-type: none"> <li>• Gold Stellar (LT, WM)</li> <li>• Gold Standard (LT, WM, WI)</li> <li>• Foragemaster (WM)</li> <li>• Galaxy (LT)</li> <li>• Empire (LT, WM, WI)</li> </ul>
<p><b>High digestible fibre diets to promote rumen function and drive butterfats.</b></p>	<ul style="list-style-type: none"> <li>• HDF Octane (WM, WI)</li> <li>• Milkline (LT, WM)</li> <li>• Imperial (WI)</li> <li>• Butterline (LT, WM, WI)</li> </ul>
<p><b>Digestible fibre feeds with good energy levels designed to balance high starch/low fibre rations.</b></p>	<ul style="list-style-type: none"> <li>• HDF Empire (WM, WI)</li> <li>• Lakeland HDF (LT)</li> <li>• Senator (WM, WI)</li> </ul>
<p><b>Youngstock Range</b></p>	<ul style="list-style-type: none"> <li>• Calf Pellets (LT, WM, WI)</li> <li>• Fusion Rearer 16 and 18 (LT, WM, WI)</li> <li>• Deluxe Rearer (WM, WI)</li> <li>• Vital Rearer (WM, WI)</li> </ul>
<p><b>Robot Ultra 17 (WM, WI, LT)</b></p>	<p>Specifically designed for high-yielding cows being milked through a robot system. It has been formulated to be highly palatable and robust to encourage cows to visit the robots.</p>



The NWF feeds are available from the production sites as noted by initials.

**WM** – Wardle Mill, Cheshire  
**WI** – Wixland Mill, Devon  
**LT** – Longtown Mill, Cumbria

# Feeding for Success this Winter

By Bell Richardson, NWF Technical Formulator



**As an industry that utilises by-products to produce food for a growing population, the agricultural sector already has strong sustainable credentials. NWF Agriculture; as a carbon contributor and as a feed manufacturer, our activity can start with the best possible feed options.**

'Fusion' is our concept surrounding all things sustainability. It incorporates four pillars; Operations, Raw Materials, Diet & Formulations, and On-Farm Support to help you achieve your goals.

NWF Agriculture offers a range of diets called 'Fusion' which contain no Soya, Soya Hulls or Palm Kernel. This range is formulated to a lower Co2 equivalent, utilising British grown raw materials where possible.

The NWF Fusion Dairy feed range uses **Ultra Pro-R** and **Ultra Starch-W** as a more sustainable alternative to soya and maize. Unique protected rapeseed meal and wheat manufactured by NWF, to ensure the nutritional make-up of the diets are not compromised.

## Benefits of Ultra Pro-R

- Improvements in yield potential when replacing RDP sources.
- Reduction in dietary costs when replacing soya.
- Reduced food miles.

## Benefits of Ultra Starch-W

- High glucogenic energy.
- Reduced acid load.
- Cost effective alternative to maize grain.
- Reduced food miles.





## NWF Blends: Driving flexible performance from day one

The use of blends in dairy systems can offer significant benefits to dairy farmers looking to feed their herd a nutritionally balanced, cost-effective diet whilst reducing the overall costs of feeding. NWF can formulate specific blends making use of a wide variety of top quality raw materials, sourced from around the world which are then accurately blended together in our fully UFAS approved facilities.

### Amino-Mixes

Amino-Mixes are a range of blends that have been designed with carefully balanced protein levels to aid rumen function and maximise forage utilisation. The amino-mix range can be used to complement maize and whole-crop diets or or when feeding with home grown cereals.

### Equa-Mixes

The Equa-Mix range is designed to be used in situations where energy and protein levels need to be maintained. The range is particularly well suited to complement grass silage based diets. The blends also promote an optimal environment for rumen bugs resulting in healthy cows and maximum milk yield.

### Gluco-Mixes

Gluco-Mixes are a range of high energy blends designed specially to help close the energy gap in early lactation and maintain performance in high yielding herds. Containing high levels of starch they complement grass silage diets. The wide range of energy sources ensures an even release of energy, promoting efficiency forage utilisation.

### Keto-Mixes

Keto-Mixes are formulated with carefully selected raw materials designed to promote rumen health and improve fibre digestion. The Keto-Mix range is specially designed to be used in situations where butterfats need to be improved or maintained. Containing a large proportion of highly digestible fibre the keto-mixes ensure the efficient utilisation of grass and can be used to balance high starch feeds or acidic forage.

## Technical services to support your dairy business



Request your **FREE** Costings Calendar

**NWF Agriculture provide a comprehensive portfolio of services for your dairy farm.**

### Rationing and Diet Formulation

Through precise rationing using modern formulation models, NWF can fine-tune feeding strategies with greater accuracy whilst keeping animal health and rumen stability in mind. Using NutriOpt, NWF can formulate nutritionally balanced, bespoke blends and utilising a wide range of compounds to complement home grown forages.

### Forage & Feed Analysis

The NWF accredited laboratory analyses over 8,000 silage samples each year operating a two day turnaround to help ensure diets are balanced accurately. In addition, raw materials and finished products are regularly analysed to ensure the highest level of quality control is achieved.

### Costings and Milk Production Forecasting

Farm costings can play an important role in profitability, enabling attention and actions to be focused on the areas in most need. NWF works with Kingshay Dairy Manager to ensure accurate data is collated and reported.

### Dung & Diet Sieving

Rumen health is closely linked to fibre and feed utilisation, both of which are key to ensuring optimum milk yield from forage is achieved. The NWF sales team are fully trained in using dung sieves to help determine fibre utilisation and Penn State Separators which can show how physical diet composition can affect rumen dynamics.

### Other Services

- Youngstock Tools and Training
- Interherd Plus
- Body Condition Scoring
- Mobility Scoring
- Cow and Calf Signals
- Mineral Analysis
- Soil Testing
- On Farm NIR



# Cost-Effective Protein: NWF Protected Feeds

by Joel Wade, NWF Straights and Commodities Trader



## The What...?

Optimising dairy cow diets is becoming more crucial for maximising milk production, improving cow health, and ensuring economic efficiencies on farm. One approach is using protected feeds, specifically, protected proteins and starch. These specialised feeds are designed to withstand degradation in the rumen, delivering essential nutrients directly to the small intestine, where they are more effectively absorbed.

## The How...?

NWF's range of rumen-protected feeds, **Ultra Pro-R**, **Ultra Soy** and **Ultra Starch-W** are formulated to deliver exactly the above. In a typical diet, proteins and starches are degraded by rumen microbes before reaching the small intestine, reducing their nutritional value. Using our unique protection process, NWF's Protected feeds range safeguards nutrients and results in up to 50% more nutrients being available post-rumen than conventional material, delivering Protein and Energy directly to the animal's foregut where she has a natural deficit.

## The Why...?

The primary benefit of feeding protected feeds is increased milk production, as cows can convert the additional energy and protein into higher milk yield. Additionally, cows fed with protected feeds often show improved body condition and reproductive performance, as they receive a more balanced supply of nutrients. This can lead to a reduction in metabolic diseases, lower veterinary costs, and improved longevity in the herd.

Moreover, the use of protected feeds can contribute to more sustainable farming practices. By improving feed efficiency, farmers can reduce overall feed consumption, lower methane emissions, and decrease the environmental footprint of dairy operations where Ultra Pro R is used in place of Hipo Soya.

## The Where...?

Charles Ravenscroft of Simmonds Green Farm, Cheshire milks 120 Holstein-cross cows on a mixed system. The high-yielding fresh cows are housed all year & zero grazed fresh grass in the summer while pregnant low-yielding animals are grazed through the summer months.

High-quality multi-cut silage is made over six cuts a year, often analysing at over 12ME and 17% CP and fed in conjunction with maize silage. **Ultra Pro-R** is fed to the high yielders to complement the highly readily available protein supplied by the fresh grass and high-quality grass silage.

*"When fed in unison with high protein forages & grass, we are not seeing the depressed milk constituents that usually occurs when a high fresh grass diet is fed",* comments Charles.

*"Fertility rates on the farm have also remained at an impressive figure of between 32-36% pregnancy rate on a 12-month rolling basis. Working closely with NWF sales specialist, Howard Brown, we were recommended to feed the dry cows NWF's dry time compound feed, containing **Ultra Soy**. The protected soya fed inside the Dry Time rolls is supplying our dry cows with the essential nutrients and amino acids. Since feeding protected feeds to our dry cows we have seen colostrum quality significantly increase and days to conception reduce drastically",* adds Charles.

# Mobility & Body Condition Scoring 101

By Louisa Lloyd, NWF Technical Formulator



**Body condition scoring (BCS) is a practical means to assess the effect of negative energy balance on cows during early lactation. The scoring system ranges from 1.0 to 5.0 increasing in increments of 0.25, with the majority of focus aimed at scores 2.0 to 4.0. Scores that fall outside of this range are recognised as extreme, with those under 2.0 severely underconditioned, and those over 4.0 severely over conditioned.**

Body condition scoring is an important management tool that can be used to aid decisions, providing information on health and productivity.

## Calving in at the correct BCS will maximise production and reproduction

Cows that are either too fat or too thin at calving are more susceptible to metabolic disorders.

## BCS has a significant impact on Dry Matter Intake

Over conditioned cows have smaller appetites in early lactation, this will extend the period of negative energy balance (NEB) making her prone to metabolic problems such as fatty liver or ketosis.

Excessive BCS loss, caused by an extended NEB period, between calving and first insemination is associated with poor reproductive performance.

## When to body condition score:

Stage of lactation	Target
Calving	2.5-3.0
60 days post calving	2.0-2.5
100 days before drying off	2.5-3.0
At drying off	2.5-3.0

(AHDB, 2023)

## What is Mobility scoring:

Mobility scoring is a scale used to determine the percentage of the overall herd that is lame. The 4 point scoring system ranks the mobility of cows in the herd from good to bad. Cows scoring 0 have very good mobility and show no signs of lameness whereas cows scoring 3 have severely impaired mobility and need urgent treatment.

## Why we mobility score:

There are a number of benefits to mobility scoring your herd, most importantly mobility scoring allows early detection of mobility issues, which when combined with prompt effective treatment can reduce the severity of lesions and the development of chronic changes within the foot.

- Identifies new problems at an early stage and monitor mobility trends
- Provides figures to benchmark performance
- Increases your awareness of cow foot health
- Motivates farm staff to improve herd mobility and overall herd health

## When to mobility score:

To detect any new mild cases, it is important to score every two weeks so that effective treatment can be promptly given. Aim to have an independent scorer every three to six months to monitor the whole herd so that you can review that you're capturing and monitoring all score 2 and 3 cases.

Score	Mobility
0	Good mobility
1	Imperfect mobility
2	Impaired mobility
3	Severely impaired mobility

**For further information on NWF's technical services to support your dairy business, please speak to your local NWF sales specialist, or scan the QR code.**



# Maize Harvest Tips 2024



by Kim Stuart, NWF Central Regional Sales Executive



**As we approach maize harvest 2024, it is important to start taking some time to consider the practical best practice to optimise the quality of the crop and to ensure forage is at its highest quality possible to maximise its returns. 2023 harvest had big challenges with heavy rain causing many fields to be very saturated and for some impossible to get onto for harvest.**

## Pre-harvest Checklist

- **Dry matter check:** The optimum time to harvest is when dry matter is at 32-35%. Lower will lead to nutrient loss in the effluent, higher will mean it is harder to get a good anaerobic seal in the clamp and will be harder to chop.
- **Chop length:** Ensure that harvest equipment is calibrated correctly to get the optimum chop length. The optimum chop length is 1-1.5cm. Too long and it is likely that cattle will refuse to eat and more will be wasted from sorting. Longer chop lengths will also be more difficult to ensile anaerobically.
- **Cutting height:** There is a fine balance between cutting high enough to avoid contamination from soil and weeds but low enough to maximise yield. Taking time to walk around the maize pre-harvest to check weed growth and find the optimum cutting height is recommended.
- **Assess Cob Ripeness:** Grain should be a firm dough consistency producing a tiny drop of moisture when squeezed.
- **Get your additive ready to use:** Use a maize specific additive to ensure you minimise nutrient loss when ensiled.

## During Harvest

- **Packing of the clamp:** Getting the balance right between taking the time and care to compact the pit whilst not taking too long and allowing aerobic spoilage is a balancing act, good communication is key to ensuring this is done as efficiently as possible.
- **Sealing of the clamp post-harvest:** It is worth considering using an added oxygen barrier underneath the main sheet and that the clamp is sheeted around, with weights to give the tightest seal possible to ensure the pit is sealed as airtight as possible.

## Why use NWF Ultra-Guard PLUS?

Biological additives are the most advantageous as they are more natural products making them safer and more environmentally friendly. They are easy to use and non-corrosive on machinery.

Key ingredient, *Lactobacillus buchneri* produces high levels of antifungal metabolites, aiding aerobic stability and inhibiting spoilage organisms both in the clamp and when opened, which is important as maize silages are more susceptible to aerobic yeast than grass.

The inhibition of yeasts and moulds ensures maximum energy levels are preserved and also the risk of further mycotoxin contamination is minimised.

**For further information on maximising your maize forage this year, please speak to your local NWF sales specialist or contact our experts on 01829 797100.**

# Is your housing Winter ready?

Winter housing can be a costly time on farm but preparing and implementing a plan allows your cattle to perform to their maximum. Cow Signals is the concept of reading cow behaviour to identify areas for improvement in their surroundings or routine. Whilst originally developed for dairy units, many of the principles can be applied to beef units too.

This concept enables farmers to meet their cows' needs, leading more closely to increased production and lower costs. Cow Signals revolves around six freedoms: feed, water, light, air, rest and space.



## FEED

Ensure cows have access to fresh, accurately mixed feed. Healthy cows eat 10-12 times a day for 30-45 minutes, totalling an eating time of 6 hours. NWF can provide guidelines on feed barrier measurements to ensure cows can reach the feed easily. More space will lead to a higher feed intake; large Holsteins should have 75cm of feed space per cow. When feed space is short, increasing push ups to 10 times per day will benefit the heifers, quiet or lame cows in the herd. With the most important push up being 45 minutes to 1 hour after feed-out once the dominant cows have had their fill.

Emma Vance, who has a robot herd in Dumfries and Galloway, increased the number of push ups they provide to one per hour after a cow signals workshop. Emma said, "The change has been brilliant, cows dry matter intake from forage increased and milk yield followed with the biggest difference seen in the heifers".

## LIGHT

Sufficient light for lactating animals can increase feed intake and encourage heat signals. 16 – 18 hours light (>200 lux) with 6 – 8 hours dark (<50 lux) is recommended for lactating animals with the opposite for dry cows.

## AIR

The air should be as fresh as outside the shed. Wet floors, mattresses, cobwebs and condensation are all signs of a lack of ventilation.

## WATER

Over 85% of milk is water, so accessibility is paramount for milk yield. Water should be fresh, and troughs cleaned out regularly. The number of cows per trough, trough height, water depth and speed of refill are just as important.

15

The number of litres a cow can drink in a minute

60

A cow will drink most of her daily intake within 60 minutes of milking

30

The number of minutes a cow will drink in a day

120

The number of litres a 30L cow will drink in a day

## REST

The optimum lying time for health and production in a 24 hour period is 14 hours. To achieve this, cubicles need to be of the correct design so that cows can enter, stand and lie squarely in them, and have adequate lunge room when standing. The difference between 9 hours lying time and 14 hours is an extra litre of milk production for each extra hour (Grant, 2003), with 30% more blood circulating through the udder.



## SPACE

Does your shed have adequate room for passing cows around water troughs, cow brushes, feed barriers and outer parlours?

To minimise stressful events, nothing should prevent cows from having access to food, water or a bed (no dead-end alleys). Cows should be able to socialise and exhibit signs of heat without problems and walk securely on a non-slippery floor.

## THREE IMPORTANT MESSAGES

1. Every cow has a comfortable bed
2. Every cow has a space to feed and drink
3. Every shed has free cow flow



**High yielding cows can be compared to someone completing an Ironman, with a metabolic output of three times their maintenance. Dairy cows must do this on a daily basis, so we need to provide them with an environment in which they can reach their potential.**

# Visit an NWF Trade stand this Autumn

## UK Dairy Day

Wednesday 11th September

## Westmorland County Show

Wednesday 11th & Thursday 12th September

## Brailsford Ploughing Match

Wednesday 2nd October

## The Dairy Show

Wednesday 2nd October

## Borderway Agri Expo

Friday 1st November

## AgriScot

Wednesday 13th November

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