AGRICULTURE

Youngstock Bulletin

Edition 2

Inside this issue

Collaborative approach yielding results

(Case Study: Steve & Carolyn Cope at Bawhill Farm)

The team at Bawhill Farm have put significant investment into their new youngstock unit. Collaborations with their vet, the NWF Youngstock Team and discussion groups alongside the implementation of new software have all proved beneficial; to improve management and traceability of the health and performance of the livestock on the farm. Ultimately, kick starting their journey to maximising genetic progress and production from their homebred heifers.

Bawhill Farm is home to Steve, Carolyn, their 4 daughters and 1,100 milking Holstein Friesian cows with 650 replacement heifers split between the new unit and their heifer rearer, Andrew Brisbourne at Painsbrook farm. The NWF Youngstock Team visited Bawhill in January, the housing was awkward with poor ventilation and next to the older cattle, which was having health implications on the calves in early life. Calves were trough fed and management was disjointed due to the unit's constraints; something which Steve and Carolyn were determined to make best practice. An opportunity arose to purchase a unit just down the road and so the plans to develop a second farm to improve calf health, performance, and therefore profitability started.

The new calf unit consists of a large space for the individual pens with a further 8 group pens supplied with a Urban milk feeder - installed and maintained by Mark Bayley Ltd. Before any calves were introduced, a ventilation system was installed with guidance from Rob Hall at LLM Farm Vets, in addition to panels and windbreakers to stop drafts. Calves are kept in the individual pens for 10-14 days to ensure they are free from disease and drinking well before entering the group housing. Once on the automatic feeders, calves are gradually increased to a maximum of 10L of NWF's LifeStart approved Ultra Life Skim calf milk replacer mixed at 150g to make 1L; the ideal choice to make the most out of early life nutrition, to reach the full genetic potential of their calves. At 69 days, calves are fully weaned following a step-down weaning process. Throughout the milk feeding stage, calves are offered straw in racks, water, and NWF's Deluxe Rearer 21.

The new unit has provided them with an opportunity for dry cows; a new shed for the close to calving cows. NWF's cow signals master trainer, Abbi England says "*It is the ultimate stress-free calving line. Situated away from the hustle and bustle of a typical working farm, cows are relaxed and comfortable in the deep bedded straw which is lovely to see*". With a mobile milking machine to hand, harvesting colostrum is done quickly and cleanly. Back at Bawhill, the original calf shed has been utilised to provide more space for fresh cows, the cubicles are being installed with deep bedded sand and animals will have ample feed space to ease them into lactation.

Time savings have been made, allowing new protocols to be implemented; all colostrum is now being tested with a refractometer, and the quality and quantity fed to each calf recorded. Bill May and Dan Stephenson are the team's routine vets, with Hannah Batty and Sarah Gibbs supporting the youngstock units. The Vet tech team assist with information gathering, including the success of passive transfer. This then allows traceability of the quality and quantity of colostrum.

Cleanliness is another top priority for the team, Egils the calf rearer does a brilliant job keeping equipment clean. Colostrum feeding equipment was swabbed and assessed using a luminometer, by LLM Farm Vets. This assessed the amount of bacterial ATP present. Results showed that the cleaning was being carried out a really high standard with an incredibly low count that is not unheard of in food preparation- no mean feat in a farm environment.

Technology pulling it all together

John Cook, Technical Consultant at World Wide Sires-Global, and the implementation of BoviSync is a key piece to the collaboration puzzle. Bovisync is a cloud-based advanced herd management software package that integrates with all the other on-farm management systems. It allows the farm staff to access real-time data for each animal on a mobile app, ensuring compliance with the farm's management and treatment protocols. It also provides accurate recording for farm assurance and most importantly ensuring every cow receives the care she needs every day, and that the needs of no cows are overlooked because of human oversight.

Currently, as part of the service, the NWF Youngstock Team visit every two weeks, digitally weighing all of the heifer calves. Not only do the NWF Youngstock team provide detailed reports after each visit, but raw data is then imported into BoviSync allowing for further analysis. This enables Steve and Carolyn to ensure traceability through the lifespan of every animal on the farm, and will soon offer the full ability to be selective when it comes to choosing which heifers to maintain as replacements.

Since using LifeStart accredited NWF calf milk replacer, introducing the new unit and protocols, the heifer calves have improved between 200-300g/day in Daily Live Weight Gain. Since seeing the improvements in the heifers' growth rates, combined with the desire to make management simple with the theory all calves are to be treated the same, the decision was made to move the beef calves onto the same milk replacer. The results speak for themselves; beef calves are now being collected 7 days sooner and up to 13kg over the minimum weight which of course they are paid for.

Both Steve and Carolyn were adamant the new system needed to allow the team to individually manage calves in a group housing scenario. The changes so far are giving them the ability to do this. It is a privilege to be involved with such a forward thinking unit with such a collaborative approach to achieve the ultimate goal of producing the most efficient, productive and healthy herd they can from homebred heifers. With further protocols and procedures still left to implement over the winter, NWF are looking forward to following the heifer's success as they develop and enter the milking herd at Bawhill.

NWF Agriculture would like to thank Steve and Carolyn Cope, John Cook from WWS, and LLM Farm Vets for featuring in this case study.

Passive Transfer & Colostrum Quality: Working together to achieve the best start

Colostrum and colostrum management is a well-discussed topic but less so is how working with multiple key stakeholders can increase calf health and have a positive impact on any calf rearing enterprise.

Passive transfer is the result of the introduction of antibodies from another source. For the new-born calf, this immunity comes from the dam's colostrum, maternal antibodies are absorbed across the small intestine in the first 24 hours of life. Failure of passive transfer occurs when a low level of, or no antibodies have passed through the gut wall into the bloodstream before gut closure.

Working closely with your vet can ensure that calves are tested at the correct age (1-7 days) to get accurate results. Blood samples will be taken, and the serum analysed for either IgG g/L content or equivalent serum total protein levels g/dL. Testing can help to identify any shortfalls in the colostrum protocol.

The minimum levels in at least 90% of animals should be 10g/L of IgG and if using serum total protein, 5.1g/dL. Research suggests the higher this level, the more likely the calf is to survive. In the US, new targets are being set with the aim of over 40% of animals achieving results of >25g/L of IgG or >6.2g/dL if using serum total protein *(Godden et al., 2019)*

It is important to not take samples from sick or dehydrated calves as they can give false high readings.

Quality: One of the 4Qs of colostrum management

Even if all the 4Qs are done correctly, if the colostrum is low quality, the calf is still at a high risk of disease. When colostrum is harvested, it should be tested with a Brix Refractometer to check the quality.

It is generally considered that most colostrum should contain at least 50 IgG per litre, the calf needs at least 200 IgG from the first feed for good passive transfer to occur.

Cleanliness is an aspect of **quality** that is often overlooked. If the bacterial load of the colostrum is high this can affect antibody absorption. Colostrum can be contaminated during harvesting from the cow, storing colostrum in unclean vessels, or using incorrect storage temperatures.

Pasteurising colostrum can reduce the bacterial load and increase the absorption rate of the antibodies. Pasteurising colostrum should be done by heat treating at **60 degrees for 60 minutes, any longer or warmer risks a significant drop in quality. Active heating and cooling of pasteurised colostrum are important to keep the bacteria level low.*

The table demonstrates the results and how they correlate to IgG:

Brix Refractometer Reading	Quality	IgG Concentration
25%+	Very Good	75mg/ml
22%	Good	50mg/ml
20%	Poor	<50mg/ml
Colostrum for first feed should be 22% over		

Colostrum Quality Starts with the Cow

By Beth Howells, NWF Technical Development Co-Ordinator

There is a multitude of reasons why quality of colostrum differs between cows, we discuss in the table below how working with your vet, staff and nutritionist can help mitigate poor quality.

	Actions
Dry Cow Vaccinations The time of administration is key to ensuring the antibodies are produced and passed over in the colostrum.	Active discussions with vets and staff to ensure the appropriate vaccines are administered correctly.
Dry Cow Ration The ration can affect quality as well as volume. Ensuring the close to calving group are receiving enough energy and protein are important for the cow and calves health.	Communication and ensuring your nutritionist or feed supplier is on board with your aims, to ensure that the ration is formulated to meet requirements. Staff communication is also key to ensure what is rationed is provided.
Length of the Dry Period A short dry period often leads to health problems for the cow throughout the next lactation as well as a reduced yield. It can also mean that the cow hasn't had enough time to produce good quality colostrum.	Working with staff, nutritionists and vets is key to determine the length of the dry period. This includes the procedure, products and management.
Minimise Stress Whether that be overcrowding in the dry cow group, heat stress, or a sudden change in weather, studies have shown that stress can be detrimental to many aspects of cow health and impact on colostrum production.	Similarly, to the above, this involved all parties involved in the herd; from the individual employee to the external advisor. Looking at ways to minimise stress should be a continued priority for all livestock.
Harvesting Milking the freshly calved cow 1-2 hours (or at least within 4) post-calving ensures that the quality of the colostrum hasn't started to drop before it can be fed to the calf. The longer the gap between calving and milking the dam, the lower the quality of the colostrum as it begins to be diluted.	Training and communication between farm advisors, vets and staff is key to devise clear protocols on harvesting. Contamination can happen at various stages, from the cleanliness of the cows teat and milking equipment to the stomach tube or bottle used to feed the colostrum to the calf.

NWF Ultra Milk Calf Replacers...

The NWF range of calf milk replacers are formulated to provide outstanding nutrition using high quality, traceable ingredients. They enable fast cost effective growth and development at this critical stage in life.

- Carefully selected milk solids with maximum nutritional value.
- Balanced blend of oils, homogenised and emulsified for maximum digestibility.
- Full supplement of vitamins, minerals and trace elements.
- Selected additives to help meet growth rates and support the health status of calves.
- Easy to mix and suitable for most automated and manual systems.

NWF ULTRA LIFE - SKIM
LIFESTART SETS LIFE PERFORMANCE
24% Protein, 20% Oil
A Life Start accredited skim-based milk replacer containing the full additive pak. It is suitable for accelerated heifer rearing programmes.

NWF ULTRA MILK YELLOW
22% Protein, 18% Oil
A top quality, 100% milk protein skimmed milk replacer also containing the full additive pak. It is ideal for many systems, particularly those wanting something special from their youngstock.

NWF ULTRA MILK GREEN
22% Protein, 18% Oil
A skimmed milk based replacer, ideal to promote early bloom and a healthy-looking calf.

NWF ULTRA LIFE - WHEY
LIFESTART SETS LIFE PERFORMANCE
24% Protein, 20% Oil
This is a Life Start accredited whey-based milk replacer. It is suitable for accelerated heifer rearing programmes. This replacer contains the full additive pak.

NWF ULTRA HI PRO HEIFER
26% Protein, 17% Oil
This high protein, whey-based milk replacer is suitable for accelerated heifer rearing programmes. This replacer contains the full additive pak.

NWF ULTRA MILK BLUE
22% Protein, 19% Oil
NWF's most popular milk replacer. High specification formulation on a whey powder base. A generally good all-rounder calf milk replacer.

ULTRA MILK GOLD
22% Protein 19% Oil
A superior quality, highly digestible skim milk replacer which has high levels of milk proteins. This replacer contains the Greenguard package.

ULTRA MILK EMERALD
21.5% Protein 18% Oil
A skimmed milk-based replacer, containing Greenguard additive package ensuring that early bloom and healthy calves is promoted.

ULTRA MILK RUBY
24% Protein 20% Oil
A superior quality, whey-based calf milk replacer, with elevated levels of oil and milk protein to promote accelerated growth and development at this critical stage of life. This replacer contains the Greenguard package.

ULTRA MILK SAPPHIRE
22.5% Protein 18% Oil
A high-quality whey-based milk replacer, a good all-rounder replacer which has the addition of Greenguard to support digestive health and performance.

Youngstock Compound & Blends

	Compounds	Blends
 PRE-WEANING	**Calf Pellets** High quality starter pellet, suitable from birth until weaning.	**NWF Sweetstart** Premium starter mix, excellent for promoting early intake. **NWF Coarse Calf** High-quality calf starter ration available as a 16% or 18% protein mix. Contains high levels of hipro soya, sugar beet pulp & micronized flakes.
  POST-WEANING & HEIFER DEVELOPMENT	**Super Rearer** Specialist diets, to complement a grass silage-based diet, available as 16% and 18%. **Vital Rearer** Cost effective diet, to complement grass or silage-based diet, available as a 16% and 18%. **Deluxe Rearer** Specialist diet with elevated protein levels to suit straw systems.	**NWF Coarse Calf** High-quality calf starter ration available as a 16% or 18% protein mix. Contains high levels of hipro soya, sugar beet pulp & micronized flakes.
 HEIFER DRY COWS	**Drytime*** A comprehensive dry cow ration fit for first calving heifers. Feed something that contains Reashure (protected choline chloride) to help with colostrum quality and post calving health. **Available as nut, nuggets and blend.*	

For more information on NWF Youngstock feeds, contact the NWF Youngstock Team on 0800 756 2787.

5 Myths of Calf Rearing

By Elysha Chell, NWF Youngstock Specialist

Myth 1

Calves should only be fed up to 2 litres per meal

As the calf's rumen develops it becomes less desirable for the milk to enter as it can change the pH and microbiota, causing digestive problems and potentially reducing growth. Many farmers assume the capacity of the abomasum is around 2 litres and that feeding more risks abomasal overload with liquid feed entering the rumen. However, the science does not back this up; higher rates of feeding can be achieved even if only feeding twice a day.

Data from Ellingsen et al. (2016) showed three-week-old calves will voluntarily consume up to 6.8 litres in one meal without milk entering the rumen or any indications of abdominal pain or discomfort.

Other data confirms that the abomasum can accommodate much more than 2 litres of fluid. Calves slow down the rate of abomasal emptying to control blood glucose, so exaggerated rises in blood glucose and associations with insulin resistance are not a problem when feeding larger meals.

Myth 2

Feeding more milk solids costs more

Feeding more milk solids costs more than starter feeds, but the return on investment needs to be considered when evaluating overall cost-effectiveness. Feed conversion efficiency is much higher during the first weeks of life than at any other point in the growth cycle. This economic benefit is largely due to the link between improved growth and the associated benefits for reproductive and lactation performance.

Professor Àlex Bach showed that every 100g of average daily gain in the first two months of life, gives approximately 250kg of extra milk in the first lactation. Reproductive performance improves as faster maturing heifers can be bred earlier. Increased longevity means cows produce more milk and are more resilient to disease, staying in the herd longer reducing your cull rate.

Myth 3

Cow's metabolism cannot be permanently changed

Variations in metabolism mean some cows produce more milk whilst others are more prone to disease, but it is a misconception that these variations are only determined by genetics.

Metabolic Programming means external factors can alter gene expression over time without affecting the gene sequence. This underpins the LifeStart heifer rearing approach, which optimises calf nutrition in the first 60 days to achieve greater performance later in life by maximising their genetic capacity.

The first two months of life is the optimal time to programme the metabolism. Research shows a high plane of nutrition improves calf growth rates and organ development and has a long-term influence on many of the metabolic pathways that underlie productive processes as well as the development of the immune system and the gut microbiome.

Myth 4

Elevated planes of nutrition has no effect on health post-weaning

It seems logical that if you feed calves more, they will grow more. But what is the effect on their health?

Nutrition can influence the development of the gastrointestinal tract and its immunity, both vital for short term health and longer-term resilience to disease. In one study Holstein calves fed a higher plane of nutrition of milk solids had better hydration and faecal score improvement following Cryptosporidium parvum challenge at three days of life. (Ollivett et al., 2012)

Another study looking at effects on post-weaning health; cows previously fed a low plane of nutrition pre-weaning had a decreased ability to kill E.coli a month after weaning, compared to those fed a high plane (Ballou, 2012). Similarly, Ballou et al (2015) showed that calves fed higher levels of milk solids before weaning had improved resistance when challenged with Salmonella one month after weaning.

The data suggest that feeding a high plane of nutrition pre-weaning can improve immune development and the health of calves before and after weaning if implemented correctly.

Myth 5

Feeding elevated planes of nutrition gives calves scour

Many farmers are reluctant to feed a higher plane of nutrition believing that the increased milk solids cause scouring.

However, studies show that looser faeces when feeding more milk solids does not usually mean a calf has a disease. Liang et al. (2016) showed although calves fed a higher plane of nutrition had higher faecal scores than those fed a restricted diet, there was no difference in the faecal dry matter content. There was no difference in energy digestion and protein digestion and retention were higher in those calves fed more milk solids.

The benefits of a high plane of nutrition for average growth, development, resilience to disease and lactation performance are well documented. Nutritional diarrhoea may occur if certain nutrients like lactose are oversupplied so it is vital to focus on the quality and formulation of the milk replacer to ensure it is suitable to feed at high levels.

Getting Rehydration Right

By Dr. Michael Reid, Ruminant Health Business Manager at TechMix

Rearing calves and replacement stock can determine the future profit and sustainability for a farm. The first 50 days of life is arguably the most crucial period in the development of the calf and future longevity, health and performance. There are many factors associated with calf rearing, specifically relating to the environment, nutrition, and management.

Calves must get the best possible start in life, and this can be achieved through optimum intake of good quality colostrum. This boosts the calf's immune system in the early weeks of life. Disease pressure should also be kept to a minimum, with calves housed in clean, dry, well-ventilated sheds that are sheltered from draughts and extreme temperatures.

Diarrhoea is a common health challenge, it is the result of an altered gut function, which increases the amount of fluid in the manure. It's the most common cause of death pre-weaning, and while it is multifactorial, management plays a big role in its prevention. Diarrhoea results in dehydration, metabolic acidosis, electrolyte abnormalities, negative energy balance and the increase in populations of gram-negative bacteria in the small intestine.

The treatment of calf diarrhoea needs to be immediate and effective to give the calf the best chance of recovery. These calves have unique nutrient requirements needed to re-establish their health. Using products to stimulate feed intake, restore beneficial bacterial and enhance the immune response is important, as well as the use of oral electrolytes. Oral electrolytes should contain alkalinizing agents and should provide energy, as well as being palatable for the calves. The future of the herd depends on calf recovery, performance, and productivity. Following events that cause diarrhoea in calves, the use of nutritional support is recommended.

Calf Renova®

Calf Renova® is a capsule which contains naturally occurring probiotics and antimicrobial agents. This helps to cleanse the gut of pathogens which cause diarrhoea. It contains powerful antioxidants to support the immune system, and the probiotics feed the beneficial bacteria which facilitates competitive exclusion of pathogens. Calf Renova should be used at the first sign of diarrhoea and followed up with an electrolyte to recover their hydration status. Alternatively, Calf Renova can also be included in your protocol as a preventative treatment. TechMix has two options when it comes to oral electrolytes, that are advised to be mixed with water and fed between milk feedings. The use of either depends on the severity of diarrhoea and personal preference on the application.

Bluelite® C HydraTabs

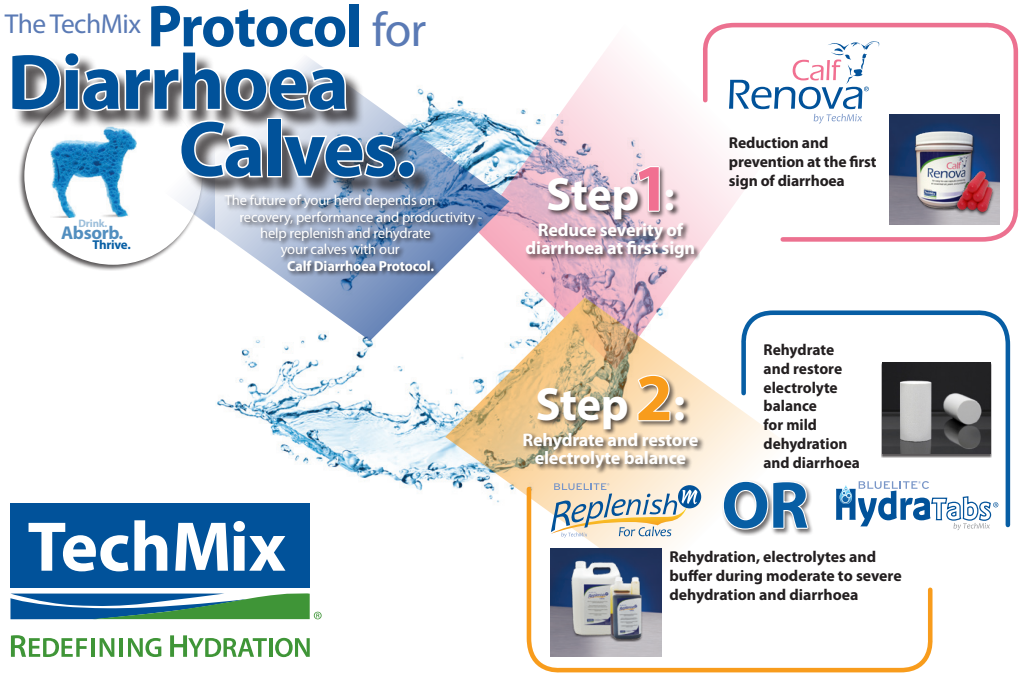
In times when the diarrhoea and dehydration are mild to moderate, Bluelite® C HydraTabs can be used. Bluelite C HydraTabs is an electrolyte with multiple energy sources that can be given to help rehydrate calves and promote a healthy digestive environment. In an innovative, individually wrapped effervescent tablet, Bluelite C HydraTabs are convenient to use and require no mixing. Formulated to be highly palatable even for the fussiest of calves.

Bluelite Replenish M

For moderate to severe dehydration and diarrhoea, Bluelite Replenish M should be used following Calf Renova application. Bluelite Replenish M is a palatable liquid buffered electrolyte that has been designed to meet the specific recommendations for an oral rehydration product (Dr Geoff Smith, North Caroline State University). It contains three recommended alkalizing agents including Sodium Acetate addressing all five side effects associated with diarrhoea and reaches optimum osmolality desired in an oral rehydration product when mixed with water.

Farmer from Cheshire:
Steve and Carolyn Cope kindly trialed the new, Techmix Bluelite® C HydraTabs. The feedback was positive, and they are incorporating this in their protocols. They are very impressed with the results she had found. *"The smell, ease of use and the dissolving ability in 1-2L of water works a treat!"*

Farmer from Bodmin, Cornwall:
"We get on well with the Renova boluses, they are useful products which we give to calves which have signs of scour. Calves which have one, have a positive reaction and it certainly helps them out! It is something we trust".



Reducing feed costs with

ecofeed

Feed Efficient Genetics

cogent™

To create a sustainable future, the dairy industry must work to increase production with fewer inputs, while simultaneously working to reduce their environmental impact. Feed represents the largest variable input cost of production, accounting for up to 50% of total production costs, and is related to enteric methane emissions.

This means that the greatest potential to improve profitability and environmental sustainability is to improve the ability of dairy cattle to efficiently convert feed into consumer products.

What is Ecofeed?

Ecofeed is a feed conversion index based on information from over 5000 Holstein female progeny born from over 700 Holstein sires. Animals are tested based on body size and performance.

The RFI value calculated for each female is the difference between actual and expected feed intake. A bull's Ecofeed value is determined from the growing heifer RFI values of his daughters.

The average, or base, of the population is 100 with each 10 points above 100 equating to 0.45kg less feed (as fed) that the bull's progeny can expect to consume each day whilst maintaining production.

How do we define feed efficiency conversion?

The Ecofeed programme utilises a measure of Feed Conversion Efficiency known as Residual Feed Index (RFI). Residual Feed Index measures the Expected Feed Intake against the Actual Feed Intake which gives us the RFI used to calculate Ecofeed. A lower RFI = more feed efficient.

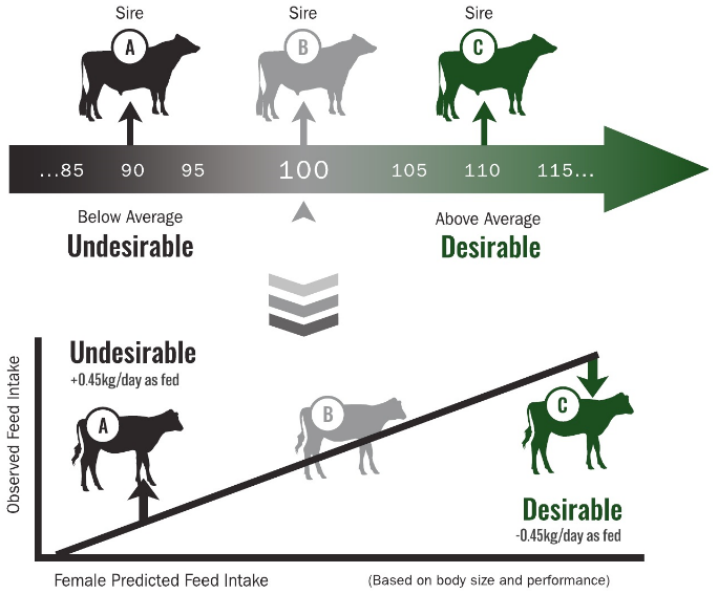


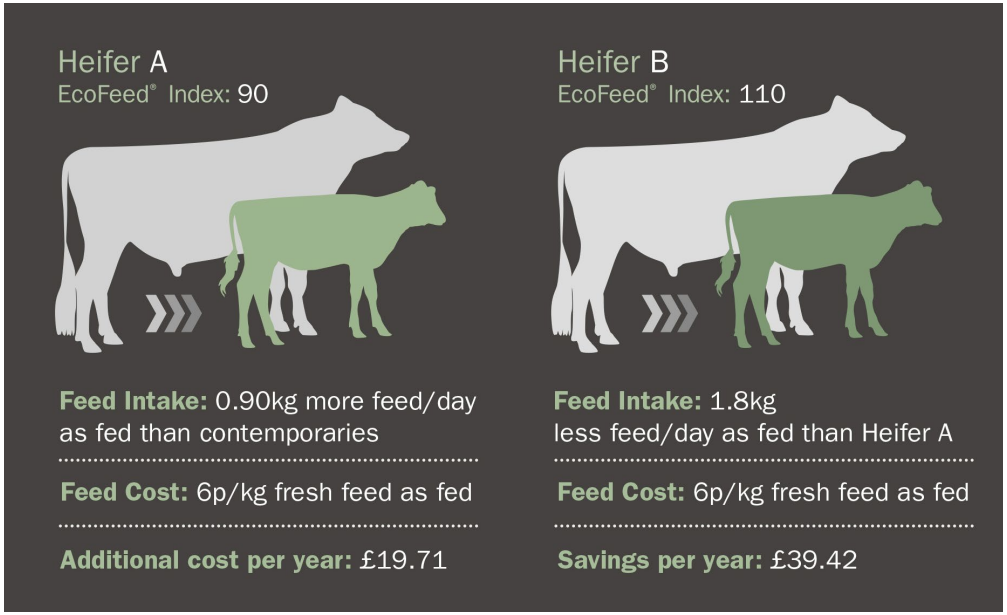
Figure 1. Female A consumed 0.45kg more feed (as fed) per day than expected based on her body size and performance and has a sire with an EcoFeed® score of 90. Female B consumed the predicted amount of feed per day based on body size and performance and has a sire with an EcoFeed® score of 100. Female C consumed 0.45kg less feed (as fed) per day and has a sire with an EcoFeed® score of 110.

Did you know....High Ecofeed heifers can consume up to 24% less feed per day (4.7kg/day as fed)?

When selecting for high Ecofeed heifers in combination with other economically important traits, you can expect to save on feed costs while maintaining body weight and average daily gain. Currently Ecofeed is not currently correlated to any other known trait in the Holstein breed.

Ecofeed values are presented as a Breeding Value (eg 110). To determine the PTA (predicted transmitting ability) halve the RFI of the female (eg an animal who's RFI is 0.90kg would have a PTA of 0.45kg).

Heifer A will consume on average 0.90kg more feed per day (as fed) than her contemporaries which translate to £19.71/kg as fed/pa. Heifer B will consume 1.8kg less feed per day (as fed) than Heifer A, resulting in annual savings of £32.85/kg as fed/pa. For a 200 cow dairy rearing 60 heifers (30% Replacement Rate) this could translate into savings of £2365.20/pa as fed fresh feed.



FACT BOX:

- Feed costs represent between 37-50% of the total milk price received on UK dairy farms
- Efficient feed conversion by dairy cattle has a direct impact on the animal's carbon footprint
- The dairy industry must work to increase production with fewer inputs
- The global population is growing with 2 billion more mouths to feed by 2050

Winter Feeding Management

By Dr Laura Tennant, Ruminant Technical Advisor for Trouw Nutrition

Lower ambient temperatures during the Winter months increase calf energy requirements as they use more energy to maintain body temperature. Calves less than three weeks of age are the most vulnerable to changes in temperature, so when it gets cold outside, it is vital to have a strategy in place to help support calf performance.

It is well known young calves have limited energy reserves and lipid stores in newborn calves are extremely low; sufficient for a maximum of 15 hours of survival without feed. *(Okamoto et al.,1986).*

If milk or milk replacer supply, and therefore total nutrient intake, is not increased to compensate for lower temperatures, both growth rate and energy available for the immune system will be compromised.

The best practice is to limit maximum concentration to 150g of milk replacer made up to 1 litre with water, as this will manage the overall osmolality levels in the mixed milk replacer. Osmolality measures the concentration of particles in a solution and is calculated by adding the concentrations of sugars and minerals. Calf milk replacers with elevated levels of osmolality can damage gut integrity, increase the risk of abomasal bloat or exacerbate diarrhoea severity in sick calves.

Before the ambient temperature starts to drop it is worthwhile double-checking feeding practices, for example, check the weight of the grams of milk replacer in a jug or recalibrate the automatic calf feeder, this will support the correct feeding curves.

If volume intake is limited due to the feeding system, increase concentrations carefully.

Increase feeding rates by no more than 100g over 6-8 litres/day, whilst keeping an eye on calf performance. An alternative option, depending on labour availability, is to consider increasing feed frequency by moving from two to three feeds a day being mindful of time between feeds.

Calf jackets can be used to help keep calves warm and dry when temperatures fall below 15°C. Maintaining the hygiene of jackets is important, making sure they are washed between calves is critically important to calf health as it reduces the risk of any cross-contamination. Ensuring the jackets are high quality and breathable ensure calf comfort. Calves must be dry before adding a jacket, wet hair cannot insulate the calf. A trial run by Harper Adams University found that using coats on calves born between December and February added more than 5kg to calves' overall weight gain to 12 weeks.

Alongside calf jackets, increasing available bedding material for nesting and eliminating draughts is a useful strategy. Do not mistake drafts for ventilation. Good ventilation and adequate stocking density rates are key to successful winter housing conditions.

trouw nutrition
a Nutreco company

Heads up for Heifer Development

By Erin Wray, NWF Technical Co-Ordinator

A smooth transition from the milk feeding phase to a predominantly forage base diet requires careful management to promote heifer health and performance. Although growth slows, we want heifers to maintain a consistent steady growth with the aim to calf down at 24 months.

Rationing heifers

Once weaned, calves should remain on a starter for a couple of weeks before transitioning onto a grower ration. It is important this age group of heifers are not forgotten and merely fed the cows "leftovers", if not carefully managed it can lead to inconsistent growth which can very easily result in a delayed age at first calving. Grouping of heifers and allowing for adequate space is key to promote intakes, in addition to freshwater.

Introduction into the herd

Once a heifer reaches 60% of mature body weight, and is successfully served, it is time to start thinking about how to merge her into the herd. This is where cow signals and planning comes into play. These heifers should be transitioned onto the dry cow ration 3-4 weeks prior to calving. Moving in-calf heifers to the close-up group can help both farmer (to keep a close eye on calving progression) and the heifer to integrate into a new social group.

In both the dry cow and lactating groups shed space and lighting is key to promote animal health. Pushing feed up regularly, throughout the day can also help heifers; allowing them to have access to feed once the more dominant cattle have finished their feed. 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 with one of our master trainers. 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*".

Costings

Raising replacements represent a significant investment, accounting for 15-20% of expenses on farm. Kingshays Costings have highlighted that reducing the age of first calving can have significant positives to the bottom line, reducing rearing costs by 30%.

Heifer Rearing Costs for Calving at 24, 30 and 36 months

Cost Summary (£ per Heifer Reared)	Calving at 24 months	Calving at 30 months	Calving at 36 months
Calf Value	£166.00	£166.00	£166.00
Purchased Feed	£197.00	£174.00	£88.00
Forage Cost*	£565.00	£801.00	£1091.00
Vet and AI	£104.00	£105.00	£122.00
Bedding	£67.00	£97.00	£97.00
Labour	£142.00	£189.00	£202.00
Other Overhead	£170.00	£255.00	£255.00
Adjustment for Mortality	£66.00	£72.00	£115.00
Interest on Capital	£24.00	£30.00	£35.00
Total	**£1501.00**	**£1889.00**	**£2171.00**

Source: Kingshay Costings, 2020

NWF Milk Replacer Offer!

Order NWF Milk Replacers to receive NWF merchandise!

Order 1.00-2.99 Tonnes = **2 NWF Beanies**
Order 3.00-3.99 Tonnes = **2 NWF Beanies & 1 NWF Fleece**
Order 4.00-4.99 Tonnes = **1 NWF Fleece & 1 NWF Calf Jacket**
Order 5+ Tonnes = **1 NWF Fleece & 5 NWF Calf Jackets**

To hear more about NWF Milk Replacers or the NWF Youngstock team, speak to your local NWF Sales Specialist, or call 0800 756 2787.

Offer is valid from orders delivered between 26th October – 30th November 2020 (while stocks last)

THANK YOU British Farmers

This year has been incredibly challenging for everyone, we would like thank you for your continued support and business with NWF Agriculture.

Enquiries: **0800 756 2787** | Orders: **0800 262397**
E Mail: **nbteam@nwfagriculture.co.uk**

www.nwfagriculture.co.uk

SUPPORTING BRITISH FARMERS SINCE 1871