YEASTSOLUTIONS

ISSUE 26 - AUTUMN - BEEF SPECIAL

ACTISAF AND SAFMANNAN SUPPORT PRODUCTION OF FANTASTIC HOME-GROWN BEEF

The McKee family has been farming at Strangford View Farm in the Craigantlet Hills outside Newtownards, Northern Ireland since 1922. Nowadays, the farm is run by husband and wife, Colin and Linda McKee, who farm around 350 acres producing home-grown beef, lamb, chicken and eggs for sale through their on-site country store and restaurant. And they must be doing something right, as people come from far and wide to buy produce in their farm shop, with the restaurant serving around 500 people every day, six days a week!

To cater for this demand for high quality meat, Colin now finishes around 600 mainly continental cattle a year, which are all butchered and sold through the farm shop and restaurant.

"You just can't beat home-grown food, and the flavour and texture makes all the hard work worthwhile," explains Colin. "We know that our customers care about the origin of their food, and know that home-grown is best."

Cattle are bought in as stores at around 480kg and Colin prefers Charolais heifers, although he has a mix of different continental and native bred cattle on the farm at any one time. Cattle are batched as they come on to the farm and are fed on home-grown barley; highly digestible, energy-dense and protein rich grass silage and a home mix that incorporates maize, distillers, bread and straw.

"We aim to put on around 120kg in about 70-80 days to finish the cattle at about 600kg live weight, which should give a carcass of around 340kg," Colin said. "We take three cuts of leafy, young grass silage each year, which is highly digestible and has high dry matter and high protein, and when this is fed with our home-grown barley it really is rocket fuel for the cattle."

Given the high quality of feeds used, it is important to Colin that rumen function is maintained to provide an easy and quick transition on to the finishing diet when cattle arrive on the farm and consistent performance throughout the finishing period.

"We add Actisaf live yeast to our home-mixed ration to protect rumen function and add Safmannan to support the immune system during the housing period," Colin explained. "Since we've been using these feed ingredients we find that cattle get going quicker when they arrive on the farm, are more content, dung consistency has improved considerably and we get a faster finish – we've definitely noticed a difference."

"It is really important that we get cattle finished when we expect them to be, as we need a steady flow of 10-12 beasts a week to slaughter to meet the demand from the shop and restaurant. Actisaf and Safmannan help ensure that we don't get any upsets through the finishing period and so I wouldn't want to be without them now," Colin concluded.

Phileo
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DRIVING FEED EFFICIENCY IN BEEF CATTLE

This summer, Kevin Doyle from Phileo UK and Ireland (pictured right) was invited to speak at an AHDB Beef and Lamb event in Dorset. The theme of the day was 'Driving feed Efficiency in Your Beef Enterprise' and Kevin presented a session on nutrition, looking at practical ways for beef farmers to get the most effective results from their farm's most costly input - feed.

Whilst nutrition is a key element to get right, Kevin urged farmers to take a holistic view of farm management and also focus on environmental and health factors, in order to ensure that animals achieve their full potential.

"Barriers to optimum feed efficiency can often be lifted quite simply, by removing areas of stress such as abrupt pen moves or bullying at the feed barrier," explained Kevin.

Increasing head space at feed barriers can result in increased intakes and lying times, with animals spending less time and energy standing and waiting for feed. Farmers operating total mixed ration feeding systems or forage plus concentrates (for liveweights of 400kg-650kg) should aim to provide 55-65cm of head space per animal, and those running ad lib, hopper-based feeding systems, 28cm of space. Providing a smooth trough surface, with good footing and consistently fresh feed (and with rejected feed regularly removed), were some of Kevin's other recommendations for helping to achieve optimum intakes.

Kevin warned that, management-wise, there are many invisible areas on the farm where profits can disappear under the radar. It could be a silage clamp where unseen losses are occurring due to aeration, or a poorly ventilated building causing respiratory disease challenge to the herd. In terms of the former example, research in Ireland from Teagasc (P. O'Kiely, 2014) has estimated that 15-30% DM silage never reaches the animal due to losses in the field, the clamp, the face and in the trough. Similarly, ventilation-wise, research by Westpoint Vets found that dairy crossbred calves with severe lung damage caused by pneumonia displayed a 0.2kg/day reduction in liveweight gain from birth to slaughter.

From a nutritional standpoint, looking after the rumen is critical for obtaining the best growth rates in beef animals. Here a consistent diet, appropriate to the breed, sex and age, is hugely important, as Kevin explained: "Every diet should have a roughage element which for finishing cattle should ideally be straw & preferably wheaten, chopped between 2-4 inches/muzzle width to avoid sorting. Also, ensure cattle do not run out of feed when on ad lib rations or high levels of concentrate feeding, as this can lead to gorging and increase the risk of rumen upset."

"Any ration changes should be made over a two to three-week period to allow the rumen microbes to adapt gradually. Always change diets slowly, building up every three days if there is no sign of digestive disturbance. For cattle coming from grass it can be beneficial to introduce the finishing ration whilst still grazing to ease the transition onto the new diet.

Rapid diet changes can cause digestive disorders such as acidosis as the rumen bugs don't have time to adapt, resulting in long-term damage to rumen papillae, which are vital for nutrient absorption which will negatively effect feed efficiency.

"The diet needs to include balanced energy sources, such as digestible fibre in the form of beet pulp/soya hulls etc., as well as starches and sugars, e.g. forages, cereals & byproducts. It is important to test home-grown forages regularly and formulate diets accordingly. Protein-wise it is essential to tailor the protein level to the type of cattle you are feeding with young, fast growing animals having the highest requirements and mature cattle the

Common diet targets - beef cattle

	Growing cattle	Finishing cattle
Dry matter intake (DMI)	2-2.5% bodyweight	~2% bodyweight
Target daily liveweight gain (DLWG) kg	0.7-1.2	>1.3
Metabolisable energy (MJ ME / kg DM)	10.5-11.5	>12.2
Crude protein (CP) %	12-16	12-14 (16% young bulls)
Starch & Sugar %	<20	>20-25

AHDB (2016)

lowest. As with all ruminants, always ensure that there is a clean, palatable supply of water available - finishing cattle can require as much as 80 litres of water/day."

A key point that Kevin highlighted was that animals of different breeds and genetics will respond differently to the same management.

"Every animal brings with it a package of genetics, which determine its feed efficiency potential. Genetics and animal factors include breed but also whether the animal is a heifer, steer or bull and its age and stage of maturity. If you take a native breed, such as an Aberdeen Angus or Hereford, they are much more genetically predisposed to lay down fat. Diets for these animals should also contain less starch to prevent heifers in particular becoming over fat at an early age, this can be easily achieved through an increased utilisation of grass/forage in the diet. Remember fat gain is four times less efficient than lean gain and we should be targeting the minimum required to hit the desired specification. Similarly, bulls are more feed efficient than steers, which in turn are more efficient than heifers. The way we manage each animal determines how much of the genetic potential we realise," said Kevin. With feed efficiency decreasing with age, he reminded farmers that it is essential to maximise high feed efficiency early in life and be very clear on the length of time an animal remains economically feed efficient on the farm: "Maintenance is largely a function of weight, so a heavier animal requires more feed to maintain itself. Furthermore, for a fixed rate of liveweight gain, the feed energy required to achieve this gain is higher for heavier animals.

"Feed efficiency is therefore better in lighter, fast growing animals, which in turn help producers avoid overly long finishing periods and ensure that animals achieve optimum carcass fat score without impairing carcass value."

As well as being feed efficient, however, Kevin stressed that diets must also be cost effective and fit with the farm system (i.e. make use of ruminant's propensity to consume by-products, forages etc.)

When animals are ready to move on and the time has come to sell cattle, Kevin urged farmers to be pragmatic in their decision making and get cattle off farm as soon as they have hit their target weights, irrespective of market conditions. When looking to sell cattle, it never pays to keep animals beyond their optimum weight," concluded Kevin. "Even if prices are low, let cattle tell you when they are ready to go, rather than the markets."

Comparison of feed efficiency

	Bulls	Steers	Heifers
Start weight (kg)	130	148	135
Slaughter age (months)	13.6	13.0	13.1
Daily liveweight gain (kg from birth)	1.29	1.23	1.12
Carcase weight (kg)	317	283	261
FCR (kg Feed DM: kg liveweight gain)	5.43	5.69	5.81

S. Marsh (1997)

SUMMARY

To improve feed efficiency:

- **Provide a balanced diet**
- **Tailor diet to the type of animal**
- **Be consistent from feed to feed**
- **Minimise opportunities for animal stress**
- **Maximise growth in early life**
- **Finish animals earlier**

ATTENTION TO DETAIL PRODUCES UNIFORM, HIGH QUALITY CATTLE

Always keeping an eye on what the customer wants is key to success for Powys suckler to store beef producer, Russell Williams, who farms on 900 acres at Red House Farm near Trefeglwys.

"Customers are looking for a uniform group of healthy calves, showing the potential of the animal they will grow into," says Russell. "The animals only have a couple of minutes in the ring to attract a buyer and I need them to look their absolute best at this point. Buyers will come to market with a lorry and are looking to buy a number of animals. I want to provide a group of very similar size and condition that they can purchase in one lot."

It's with this in mind that Russell has developed both breeding and feeding management at Red House Farm. He uses four bulls, with different traits, across the cows in order to maintain uniformity of calves. A Limousin is used on heifers and a selection of Charolais bulls are used on older cattle, and all bulls are purchased on EBV traits.

When it comes to feeding, Russell is again keen to help calves express their natural potential; "When the calves are about nine to 10 months old they hit a stage where they just look right. You can see the well rounded potential in the animal and it is at this stage that I want to present my cattle to customers. Any earlier or later and cattle can be going through a growth stage and not look so attractive."

After talking to Mike Evans, from Bibby's, Russell has included Actisaf Live Yeast in the calves' creep feed. Calves are weaned at eight to nine months old and are creep fed ad-lib on a bespoke calf rearing blend from August onwards, to help them get used to their new diet before housing. They are housed in October or November and in the winter calves have their own creep feeding area and receive 4kg/head.

"Within six weeks of starting the Actisaf yeast I noticed a bloom to the cattle," says Russell. "I think rumen health is crucial to the calves. If cattle aren't right on the on the inside they don't look right on the outside. The calves need to make the best use of the feed they eat, the Actisaf aids digestion so that the feed isn't just passing through the gut."

Mike Evans from Bibby comments; "Actisaf Yeast helps rumen function in a number of ways. It stabilises rumen pH, ensuring maximum feed utilisation and efficient digestion. It also helps to manage and reduce the negative effect of transition between diets, such as when calves are brought indoors and off grass. It looks after those bugs in the rumen that do all the hard work in the gut."

The results speak for themselves in Russells' high quality cattle, with buyers returning time and again to buy. Steers were sold at market at an average weight of about 410 kg, at 9-10 months of age and made in the region on £950 - £1050. Heifers were sold at a weight of approximately 400 kg and averaged £870 in 2016.

"The right genetics and the right feed is the best way to realise that potential and provide quality across the group. I'm always trying to provide the customer with what they are after and a group of attractive, uniform, well grown calves, has great potential to the buyer," Russell concludes.

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