

Diversification and investment has 'future proofed' dairy business

# Renewable route to sustainability

One Derbyshire-based family has created a dairy business that's ready for the future. It has diversified and expanded, to include an arable enterprise, heifer and beef rearing units, and the next step has been to generate power through a new AD plant.

text **Lauren Chambers**

**D**avid Easom's business has changed beyond all recognition from when he first took on the tenancy of Broom House Farm, near Alfreton in Derbyshire, in 1946.

Since then the mixed unit, which numbered just 30 hectares, 12 cows, a sow and piglets, has transformed into a

large and sustainable farming business. Today it supports David, as well as his four sons and four of his grandsons. Between them, the Easom family now manages almost 300 hectares and a 350-cow pedigree Holstein dairy herd. They also rear around 300 young stock and fatten 200 bulls every year. Most recently



*Eric Easom: "We're ready for the future"*

they have installed an anaerobic digester (AD) plant that heats and powers the farm, as well as feeding electricity into the national grid. Together these enterprises are helping to create a sustainable farm business that will be there for future generations.



*Large herd: the Easoms have expanded cow numbers to 350 pedigree milkers*



Central heating: water generated by AD is used to heat calf housing    Power plant: Broom House Farm's anaerobic digester

The unit's high genetic merit, high health status and closed dairy herd averages 9,250 litres per cow. It's currently eighth in DairyCo's Profitable Life Index, and third for herds larger than 300 cows. Milkers are fed a flat-rate, home-grown forage ration comprising grass silage, wholecrop triticale and straw. This is fed with a ForFarmers' protein blend, as well as Lintec, Rumibuff and bespoke minerals. The diet is supplemented with bread and bakery co-products, which the Easoms collect from a local bakery and process on site. "The bread is a good, cheap source of additional starchy feed that helps to reduce the carbon footprint of our business," says David's son Eric. "We collect the co-products ourselves and have developed our own process to remove any wrapping and to chop the feed into cubes. We also get a small amount of dough from the same source, which we incorporate into the ration using our mixer wagon. It provides a good source of yeast and B12." Although the ration is consistent, it is still periodically reviewed with ForFarmers' Alison Ewing and 'tweaks' are made when needed.

### Bull-beef enterprise

Access to bread co-products has allowed the Easoms to develop its beef rearing enterprise. "We fatten 200 Holstein bulls every year," says Eric. "They are reared on an automatic milk machine using ForFarmers' milk replacer from the VITA range. After weaning they go onto a 50:50 mix of bread and home-grown triticale, along with ad-lib straw and protein to balance the ration." This diet allows us to sell the bulls at 12 months old into the rose veal market, and frees up housing for the next batch of bull calves.

Genomically selected and daughter-proven sires are used to AI cows and heifers. The herd is block calved from mid June through to August. "We set and

hit target growth rates, which ensures that the heifers calve at 23 months of age – earlier than the UK average," explains Eric. Calves are reared on ForFarmers' VITA Start Extra and then moved onto VITA Heifer 18. Replacements are kept for the dairy herd, with the surplus being sold privately to regular buyers.

### AD plant

With so many replacement heifers available, continuing to expand the herd seemed like a logical plan for the Easoms. "But our 20:20 herringbone parlour is a limiting factor, preventing us from increasing cow numbers further, and we felt it was a more sustainable investment decision to go down the renewable energy route," says Eric.

The unit's 250kW AD plant was installed 18 months ago, but it was something that he'd been thinking about for at least 15 years. "The AD makes use of waste you've already got and the output – energy – is a growing market and something that everybody needs. It's a completely different income stream from food production, but one that we feel is sustainable,"

The AD plant is positioned within the dairy unit, on a site that originally housed the slurry pit. It digests the slurry and waste material from the dairy unit, as well as the bedding and some muck from the beef unit, reducing the farm's green house gas emissions by more than 80%. Plant operation is supported by ForFarmers' specialist AD division, FM BioEnergy, which provides the additives to ensure efficient operation and maximum returns.

The beef and dairy herds are bedded on oat husks, a co-product from porridge production that provides good material for the AD. The digestate produced is then returned to the land.

The AD unit generates electricity and hot water. The farm uses around 20kW/hour of energy and the remaining 230kW/

hour is fed into the national grid. The hot water produced by the AD unit is also put to good use on the farm. "We have been exploring practical ways to use the hot water we are generating, and recently started using it to heat the calf housing," says Eric.

The ideal temperature for calf housing is between 15°C and 20°C, which allows the calves to grow at their optimum rate by maintaining body temperature and using feed for growth, rather than to stay warm. "We have developed a system of heat blowers and thermostats in the calf housing to help keep the air temperature constant," explains Eric.

"This encourages the movement of heat above the calves. The warm air rises and pushes the stale air out through the ventilated roof ridge, so cool fresh air is drawn in.

"The first calves that we have reared using the heating system have impressed us, achieving excellent growth rates and maintaining good health."

The hot water that's left is earmarked for dairy herd use. "Cows drink more when water is at body temperature, so we're looking at harnessing the hot water generated by the AD unit to heat the herd's drinking water," says Eric.

### Entrepreneurialism

This forward-thinking approach to their business seems to be in the Easom family's blood. David was one of the first producers in the area to convert his cow house into a cubicle shed and his entrepreneurialism, with the full support of his wife Edna, certainly seems to have been inherited by sons Eric, John, Mark and David, as well as his six daughters, including Helen, who works part-time on the farm.

By exploring all the options available to them and working together, the Easom's have created a business that is sustainable in the long term and can provide for their family for generations to come. |