



Banishing feed lorries to drive down costs

Somerset beef and arable producer, Richard Coles, has substantially reduced his costs of production by cutting out expensive, bought-in ingredients and replacing them with home-grown feed, including high protein beans.

Banishing feed lorries from his Somerset farm has been a goal for arable and beef producer, Richard Coles for many years as he says each vehicle-load of feed would invariably cost thousands of pounds.

However, this has meant upping his game when producing home-grown feed, including improving the quality of his grass silage and adding home-grown beans to boost the protein of his rations.

Today, as feed prices soar and self-sufficiency and sustainability become ever more important, he is glad he started this drive around five years ago. He says with the help of Kelvin Cave's Michael Carpenter (Technical Director) and David Warner (Southern Area Sales Manager), he has been able to cut costs of production and feed around 400-500 head of cattle at a lower cost today than in 2017.

Farming over 700 acres with his sons, Ed and David, at Abbey Farm near Bath, this achievement (in actual as well as real cost) is all the more remarkable in the face of recent rates of inflation.

But reaching this point has involved pushing against the might of the feed industry itself, which can be quick to denigrate the value of home-grown ingredients and raise the prospect of potential problems.

For Mr Coles this meant ignoring his former feed company nutritionist, who said that beans would provide the 'wrong sort of protein'.

It also meant investing in improved on-farm feed production and processing, ranging from high quality grass reseeders, better silage preservation and improved machinery for milling.

A key part of the process was an investment in a Murska 350 mill around five years ago, which has the capability



Edward Coles by the Murska 350 mill which grinds the beans.



Richard Coles (right) with Michael Carpenter (centre) and David Warner from Kelvin Cave Ltd.

of rolling around 6-7 tonnes of grain per hour.

He says: “We had an old mill with dimpled rollers which worked adequately for wheat and barley but would just spit out the beans. The Murska 350 has double the throughput of the old mill and its fluted rollers will somehow grab the beans and pull them through.”

This opened the way for Michael Carpenter to formulate a new beef ration which would achieve good rates of growth and maximise the use of home-grown inputs, including the beans.

He said: “Like virtually all legumes, beans contain low levels of toxic compounds including tannins and for this reason, it’s important not to use them at more than the recommended rate.

“However, at around 29 per cent protein, they can be an excellent home-grown alternative to bought-in protein products and can be used in almost any ruminant ration.”

Michael reformulated the ration by cutting out urea and removing protected fat, which was a relic of Mr Cole’s former dairy farming days. In their place would be high quality maize and grass silage, alongside barley and the beans.

Today, the finisher ration is formulated to achieve freshweight intakes of 6.5kg grass silage, 6.0kg maize silage, 1.65kg beans and 3.25kg barley for an average 500kg animal. The only unavoidable bought-in ingredients are 0.07kg limestone flour and 0.10kg minerals including Actisaf live yeast.

The ration provides a metabolisable energy of 11.98MJ/kg DM, crude protein of 14.05% and starch of 33.51%.

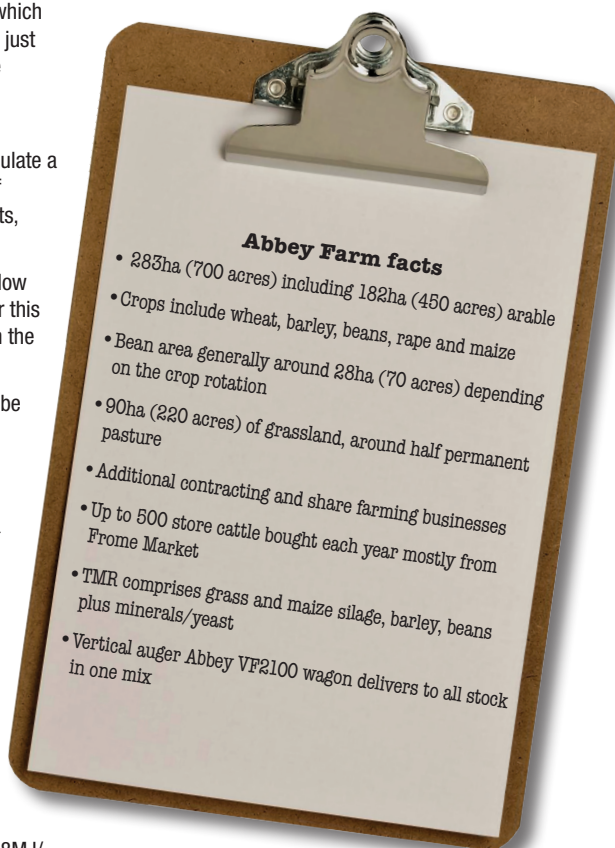
It is formulated to achieve an average dry matter intake

per head of 8.18kg, average growth rates of 1.17kg/day at an average cost of 112.18p per kilo of liveweight gain (2021 prices).

“The truth is we didn’t cost each kilo of liveweight gain before Michael did the rations but we were certainly spending far more on feeding our cattle five years ago than we are now,” says Mr Coles.

Furthermore, he says the cattle look far better and more content on the new total mixed ration and have been remarked upon for consistency and quality by the local abattoir.

Purchased between 10 and 14 months, ideally of continental without dairy breeding, and sold at liveweights of over 600kg (deadweights from 350kg to 420kg), they typically grade at R3 and R4, with some reaching U.



Abbey Farm facts

- 283ha (700 acres) including 182ha (450 acres) arable
- Crops include wheat, barley, beans, rape and maize
- Bean area generally around 28ha (70 acres) depending on the crop rotation
- 90ha (220 acres) of grassland, around half permanent pasture
- Additional contracting and share farming businesses
- Up to 500 store cattle bought each year mostly from Frome Market
- TMR comprises grass and maize silage, barley, beans plus minerals/yeast
- Vertical auger Abbey VF2100 wagon delivers to all stock in one mix

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Quality grass and maize silage

The quality of both grass and maize silage is considered an important factor in the livestock performance, with little wastage adding to profitability.

Mr Coles says: “We use Safesil Pro on maize silage and Safesil Challenge on all grass silage, including round bales, and that’s where you can really see how well the product works.

“Previously, if you had had crow or rat damage it could make the bales quite bad but when they’re preserved with Safesil, the damage won’t spread and you don’t have to discard the bale.

“This year we’ve bought bird nets to further limit the damage as we’ll have to make more bales now we’ve run out of clamp space,” he says.

The same keeping-quality is found in the clamp silage, which remains stone cold at the face. And with around 50% of grass now cut from newer leys – whether short-term Italian ryegrass or longer-term, clover-rich swards – its quality is generally higher than before in both energy and protein. More of this is retained in the clamp

with the use of the Safesil preservative which rapidly achieves stability and has been proven to cut dry matter losses.

“The cattle now really complement the arable – with wheat, barley, beans, maize, straw and muck,” says Mr Coles. “The financial figures tell me things are better; it’s also a gut feeling – you can just tell when things are going well, although this summer’s drought has meant eating into winter feed stocks, which could take the shine off that this year.

“I don’t think what we were doing before was wrong but since we bought the mill we now look at things in a different way and it has encouraged us to grow as much as we can at home,” he says.

“However, it’s very important to get the right team around you,” he adds. “Before, I’d suggest that feed company nutritionists could be more concerned with their own margins than my own, whereas today, David and Michael have become integral members of our team who want to help you make the most of what you’ve got on the farm. It’s just a shame they didn’t come along earlier than they did!”

Below: Cattle at Abbey Farm are now finished on a largely home-grown ration.

Inset: Farmer Richard Coles.

