

It's not just mix quality and feed efficiency (FCE) that count these days – the Keenan System also helps control fuel costs saving **£5,000/year versus a tub mixer**"

by Andy Collings

Larger herd sizes mean more work for mixer wagons and, as a result, fuel consumption has become a real issue. For one dairy company, the realisation that a tub mixer used a third more fuel than a similar sized paddle mixer was a real eye opener.

With 1000 cows and a herd average of 9000 litres, Trescove Farm based at Bodmin, Cornwall could be considered to be getting the job about right.

A true family-run business, the responsibility for the feeding and field work on this 1100 acre dairy farm is down to Richard Martin, while his sister Emma has the task of managing the herd. Their mother takes on all the office work and Mr Martin Senior oversees the whole operation – his vast experience in the dairy industry allowing him to identify problems, current or imminent.

"The cows calve all the year round with the exception of December when we like to ease the work load for the Christmas period," explains Richard.

As with many other dairy farms, there is an emphasis on home-produced feed. The farm has 100 acres of winter wheat for crimping and 300 acres of forage maize along with 25 acres of winter barley. A further 50 acres of winter wheat and 150 acres of forage maize are purchased from neighbouring farms which,



Richard Martin's Keenan 360 Mech fiber® diet feeder awaits the ingredients used to formulate the rations which feed their 1000 cows.

in a reciprocal deal, have liberal quantities of slurry transported to and spread on their land.

Two years ago, the farm's Keenan 160 diet mixer was replaced by the larger 360 Mech fiber® model – the largest which Mr Martin believes can be safely manoeuvred around his buildings.

"We have always been convinced that the Keenan horizontal paddle mixing system offers us the best mixing system for our cows' rations," he says. "But we have been tempted to try a few tub mixers – just out of curiosity to see what they could achieve."

Such demonstrations – some with larger capacities than the 360, some smaller – proved to be a real eye opener when it came to how much extra fuel they consumed. "The tractor we use on the mixer wagon has a fuel meter to record

fuel use and it was interesting – and somewhat alarming – to note that the tub mixer was using 72 litres per day, 22 litres more than the Keenan to mix the same quantity," he explains. "This equated to an extra £5,000 a year on fuel costs, which was not acceptable."

There was also the matter of mixing accuracy, consistency and ration quality which was often found to be wanting with the mixes produced by the tub machines.

"Our rations are based on clamped grass and maize silage with additions which include crimped wheat, blend, protein liquid plus wheat straw and baled grass haylage for fibre," explains Mr Martin. "Because the wheat for crimping is harvested with the stems still pretty green, we pre-chop the straw in 30 tonne batches – the Keenan could do it but we save time by pre-chopping this part of the fibre."

In the winter, when all the cows are housed, 11 loads are needed to be mixed and fed out and, in the summer months, when the low-yielders (in calf) are out during the day, nine loads are made. A slick operation, Mr Martin says he can produce a mixed load in about 20 minutes.

"One of the most useful features of the 360 is the Keenan PACE system which not only sequences the loading order of ingredients and tells me how much of each is required, but also provides a countdown on the number of paddle revolutions required to mix them," he explains. "It is a system which allows us to mix accurate rations to a perfect consistency and duplicate them every day of the year."

But there is more. Being something of a 'numbers' man Mr Martin and his sister regularly download the ration information stored in the mixer's on-board PACE control computer – a record of what has been fed and when. This is then sent to Keenan's computer bank where, with

added data concerning milk yields the farm can receive suggested changes or tweaks to the ration to ensure maximum production is maintained.

"There is also a UK league of milk producers who use the PACE system as part of their herd management," he says. "And I like to know just how we are doing when compared with other producers – it seems we are currently in the top 25%, which is encouraging."

For the mixer wagon, itself, there is no respite with there not being a day when it is not in use. Mr Martin estimates it has put together over 7,500 loads since it arrived – a tally which will continue to rise day after day.

"All I ask of a mixer wagon is that it produces an accurately mixed ration which has a good, fluffy consistency and one which the cows like to eat," he says. "And the mixer also has to be utterly reliable."

Like other mixer wagons in the 300 Series, the 360 employs a simple two-chain drive system which incorporates an automatic oiling system.

"There have been a few breakages – a chain broke, there was a bearing failure and we have had to replace some knife blades but I have to say we have always had the back-up and support from Keenan and there has never been a hint of us not being able to feed the cows their rations."



Mr Martin's cows



Richard with his sister Emma who manages the herd.

For more information on fuel economies visit www.keenansystem.co.uk