



in detail the Bradley unit

Who: Graham, Kate, Peter and Ann Bradley
 Where: Tregray Villa, near Camelford in Cornwall
 Herd size: 480 commercial milkers
 Farm size: 205 hectares
 Average yield: 9,700 litres at 4.45% butterfat and 3.30% protein
 New parlour: installed summer 2007, completed December 2007

Parlour specification:

- 60-point rotary
- Cow retention bars
- Auto ID, which feeds individual cows to yield
- Automatic dump line
- Five-way drafting gate
- 'Scraper' backing gate
- ACRs
- Approximate cost: £260,000 installed
- Platform width: 19 metres
- Parlour guaranteed for 10 years
- Parlour building dimensions: 25 metres x 37 metres
- Milking rate: 240 cows per hour (one-man operation)

One man, 480 cows and just four hours of milking per day.

A 60-point rotary has reduced the time spent milking on one Cornish unit by 75% and offers plenty of capacity for further herd expansion.

Take a look at our in-depth report to find out more.

A parlour for the future – in more ways than one. That's how Graham Bradley describes the new rotary set up that he and his family have installed at their 205-hectare dairy unit at Tregray Villa, near Camelford in Cornwall. He runs a 480-cow commercial herd in partnership with his wife Kate and his mother and father, Peter and Ann, with help from full-time staff member John Frayne. And Graham's three young sons – Sam, Harry and Luke – are already keen to get involved with the business (see photo 2). It's partly with this in mind that the decision, to expand the herd and build new facilities to accommodate increasing cow numbers, was made. The unit was home to a herd of 70 Ayrshires back in 1989, but after heavy culling – the result of BSE – Peter and Graham built numbers back up again

and bought in some Holstein Friesians to do this. Although there are still some Ayrshires in the herd today, it's predominantly black and white. Cow numbers began to creep up in the mid 1990s – a mixture of bought-in and home-bred stock. The herd's replacement rate was a low 16% and buying and renting a substantial area of additional land – about 75 hectares – and switching to contract rearing of heifers away from the farm, freed up space for more cows.

14 hours milking

The only tight squeeze, as the milking herd edged closer to today's size, was in the milking parlour. "We were milking the cows through a 16:16 herringbone parlour that was installed in 1979. And we began thinking about a new parlour



The Bradley family are working together to build a business for the future

The centre, or 'hub', of the parlour is completely enclosed



in the summer of 2006 after a considerable jump in cow numbers meant that each milking was taking five hours – we realised that that was not sustainable in the long term and we also wanted to push cow numbers even higher."

The partners reached a decision in December 2006, after looking at several different parlours all over the UK. "Shortly after this, we bought another 126 cows and rented an additional 51 hectares from a neighbouring dairy unit. And the milking time in the old parlour increased to seven hours per milking – 14 hours a day," says Graham.

Temporary arrangement

Enough to make you dizzy, but he says that it wasn't too bad as they knew that there was 'light at the end of the tunnel': "We knew this was a temporary arrangement and the site for the new parlour and facilities, including 450 cubicles with a larger collecting yard and a 'scraper' backing gate, was already being cleared – we had just six months to wait for our new rotary." (See photographs 4 and 9.)

And it was well worth the wait. They

The new rotary parlour, cubicle housing and collecting yard set up in action at Tregray Villa. One man can milk 240 cows in an hour

began milking through the new parlour in December 2007 and today it takes just one and three-quarter hours to milk 400 cows, shaving a massive five and quarter hours – 75% – off each milking time. "We'd seen a similar rotary parlour milking a 400-cow herd in Wales with ease, so we knew that we'd see a huge reduction in milking time once the new parlour was up and running – that's what kept us going," explains Graham.

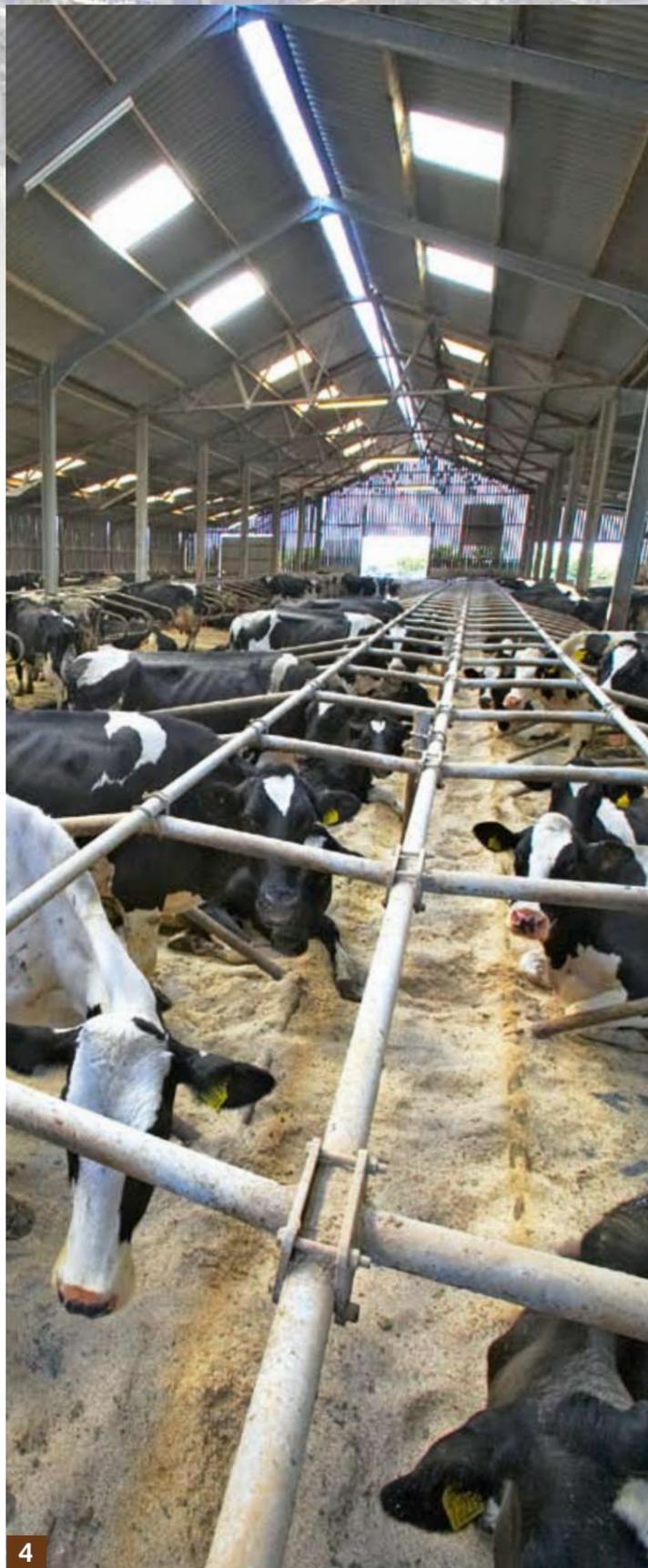
The 60-point Dairymaster Swiftflo Revolver parlour is unusual in its design at the centre is completely enclosed – the cows can't see into the middle and the NMR milk recorder, for example, can't see the cows.

There's just a computer – which is the hub of the parlour – in the centre, with milk pipes coming through allowing the recorder to take the milk samples from here (see photo 3).

The parlour has auto ID, ACRs and automatic pre- and post-milking teat

Rotary runs rings around old herringbone parlour on large Cornwall-based dairy unit

Wheel of fortune



4

The new set up also comprises cubicle housing for 450 cows



5

In a bid to speed up the milking operation and maximise udder health, cows' teats are automatically pre-sprayed as they enter the parlour. They're then wiped and foremilked by the milker before cluster attachment. Teats are also automatically sprayed after milking with a post milking spray, to further save on labour, as cows exit the parlour. Both are labour-saving devices that cut milking time without compromising udder health and milk quality



6

Individual cows can be 'held back' in the parlour or diverted to one of five groups after milking



8

Drafting gates allow the herd to be split into five groups to aid management



7

The rotary has auto ID and ACRs, again to speed up milking time and aid herd management



9

A 'scraper' backing gate automatically carries out one of the most back-breaking jobs that needs to be done after milking

spraying – all labour-saving devices that also aid herd health management (see photographs 5 and 7). Individual parlour also has 'retention' bars. These prevent the cows from leaving the parlour if they haven't milked as expected. She does another circuit so the milker can check her.

Drafting gates

There are also drafting gates, offering a five-way split of the herd. So the two herd groups – high and low yielders – can be brought in together and mixed at milking and then automatically split back into their respective groups as they exit the parlour. This is another labour-saving device.

Graham also uses these gates to allow him to milk any mastitic or high SCC cows at the very end of milking to avoid cross contamination. They're not milked on their first 'circuit' of the parlour – they're allowed to exit again into a holding area and then allowed to enter the parlour a second time to be milked. Any cows requiring AI or treatment can also be separated out from the rest of the herd as they exit the parlour.

"It truly is a parlour that works with the operative – not against them. Its design and the use of technology means that it's almost like having a second person there to help with milking," says Graham.

The reality is that just one man can milk 240 cows in an hour. And if there are

two people milking, this increases to 300 cows per hour – that's 100 cows every 20 minutes. One man can comfortably milk the entire herd single handed – vital in these times of labour shortage, according to Graham. And what's more, if the Bradley family decide to expand their herd even further, there will be plenty of parlour capacity.

"I'm reluctant to say just how many cows I think that the parlour could cope with, but we know that it takes 20 minutes to milk 100 cows, so if we added another 100 cows to the herd we know we'd be pushing the milking time up to about two hours. So the parlour won't be a limiting factor in the future." (See photographs 6 and 8.)

Substantial investment

Graham says that it has been somewhat of a quantum leap for the business and involved a substantial, but undisclosed, investment.

"A larger, modern herringbone would have cost less to install and would have still done the job, but it wouldn't have allowed for a possible further increase in cow numbers in the future.

"We felt that the ideal solution was to put in a parlour that could cope with anything that we threw at it," he says.

Graham, his father and relief milker Sam Uglow are all happy with the new set up. And Graham says that the cows are happy too and quickly settled in to their new parlour. "They're certainly more contented – there's less rushing around and disruption for them," he says, adding that yields are a steady 9,700 litres at 4.45% butterfat and 3.30% protein.

For him, milking is still the most important job of the day – it's just doesn't take all day. "And we're not rushing them through anymore due to time pressure, so that's good for the cows and good for us.

"There's certainly less stress – we're up to date with foot trimming and other areas of management that previously we had to let go since we were strapped for time.

"But we've got more time now – and due to the type and size of the parlour that's set to last, even if we do decide that we want to milk more cows."

Rachael Porter