# Flexibility of forage wagon an asset for open air dairy

A farm business on tenanted land in Dorset has taken a novel approach to keeping down farm costs while successfully managing 800 cows housed outside, mainly on grass.

It's nearly a century ago that Arthur Hosier came up with the idea of milking cows out in the field with his mobile bail. Today the concept has been resurrected with a Dorset dairy enterprise putting 820 cows through a pair of tractor-towable herringbone parlours.

When Tom Foot and Neil Grigg took on the tenancy of Longlands Farm near Dorchester in 2011, the land was predominantly down to arable with a modest set of livestock buildings that weren't really suitable for milking.

Keen to develop a dairy business, but cautious of investing huge sums of capital in the fixed plant required on rented ground, the pair decided the best option



Tom Foot with the 820-cow dairy herd at Longsands Farm.

was to look down the route of mobile milking.

"We were reluctant to invest

substantially in buildings being tenants. We considered a number of options but decided that we could get started by hiring in some temporary milking bails," explains Mr Foot.

"Although they were far from ideal, being time-consuming to move and manual to operate, they proved the concept would work in our situation. With my self-taught spannering skills, we decided to have a crack at building something easier to shift, and with greater throughput."

Over the course of six months with the help of local engineering firm MJ Fry, he put together a 20:40 herringbone set-up that would comfortably handle the 460 cows in milk at the time. With standard Fullwood milking equipment, a containerised generator and milk cooler plus a bulk tank mounted

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### **OPEN AIR DAIRY HERD**



The forage wagon is used to clear some 324ha (800 acres) each season as well as being used to feed out silage to the cows when required.

on a six-wheel-drive ex-army lorry, the set-up worked.

But as cow numbers grew milking times began to stretch, requiring a second 20: 40 rig to be built. The two now run in tandem, enabling 820 cows to be milked in around four hours.

Having received a lot of interest in the mobile parlours, Mr Foot is now building them for other producers.

"Because everything was new with this approach we were very much feeling our way initially. To start with we thought once-a-day milking was the right thing to do but after a few years it became apparent that we weren't making the most of the cows' potential and so two years ago we switched to twice a day and immediately saw a 25% to 30% rise in yields."

Predominantly New Zealand crossbreds, the herd is calved in February and March and by early December everything is dried off. With a 274ha (677acre) grazing platform the aim is to make the most of the available grass with silage fed in the field when grass growth slows up. Through the winter the cows run on stubble turnips with silage and straw bales to provide

### Farm facts: The Open Air Dairy at Longlands Farm

**Farmed area:** 396ha (980 acres) plus separate 174ha (430 acres) youngstock and beef unit in Devon.

**Cropping:** 274ha (677 acres) grazing platform, 122ha (303 acres) arable cropping and support cutting/grazing.

Soils: Predominantly chalk downland. Livestock: 820 NZ Friesian crossbreds, 350 NZ Friesian crossbred heifers, 150 Longhorn cross and 50 NZ Friesian crossbred steers, 15 Longhorn bulls plus 50 Red Devon suckler beef cattle.

Parlours: Two home-built 20:40 swing-

over herringbones.

**Staff:** Tom Foot and Neil Grigg plus six other full-timers.

some roughage.

"Making silage is critical to our system in managing the grass at times of peak growth and because we inevitably have to buffer feed the cows at certain times," says Mr Foot.

"When we first started out our silaging bills were around £25,000 a year. Being a very young business, cashflow was tight and that seemed like an area where we could save some costs.

"We already had a number of tractors

and a mower so we decided a forage-wagon was a sensible option. We looked around and found a four-year-old Strautmann Super Vitesse with a 25 cubic metre capacity that fitted our tight budget.

"I liked the strong build quality of the machine and it had one huge bonus for us—a rear feed-out belt."

With a rubber cross-conveyor and horizontal beaters, Mr Foot could see the Strautmann wagon doubling up as a dual purpose machine, being used to pick-up grass and haul it to the clamp and then later being used to feed out the silage to the cows in the field.

Five years later the nine-year-old Super Vitesse has proved more than capable in both roles, harvesting an average of 324ha (800 acres) each season and then feeding out around 2,000 tonnes including wholecrop cereals and some bought-in silage as required.

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#### **OPEN AIR DAIRY HERD**

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"We really like the way the Strautmann chops the grass. Because the rotor draws it across the blades it is slicing it rather than trying to snip it down to length. That means it uses very little power for the job. Our 140hp tractors have plenty of power to run the wagon but we generally hitch up it to the 155hp Deere for our steep ground. Compared to a self-propelled forager we're hardly burning any diesel per tonne of grass harvested.

"And because of the longer chop lengths we can get away with picking it up slightly wetter. We'll generally leave the grass untouched on the deck for 24 hours and harvest it at 25% to 30% dry matter."

It's rare that buffer feeding and harvesting grass overlap but with rapid growth in early summer there can be a need to switch between the two jobs fairly rapidly. Converting the Strautmann from forage-wagon to feed-out duties is a relatively quick, straightforward task. The pick-up and feed rotor drive chains are removed so the



The Open Air Dairy's 820 milkers run across a 274ha (677 acre) grazing platform with the two home-built, tractor-towable 20:40 herringbone parlours moved from field to field to avoid the cows walking too far.

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pto then only powers the rear beaters and the cross-conveyor slides out on runners from its stowage position under the body to catch the silage as the hydraulically driven bed chains propel it rearwards. The change-over takes about 15 minutes.

Because the same body capacity isn't required when carting out clamped silage, the picket-style extensions can be removed to make loading easier. That's an hour long job.

"If you're going to have a dual purpose machine, chopping and changing between jobs has to be easy," says Mr Foot.

"In truth it actually does three jobs because we occasionally use it to zero graze the ground that is too far away to walk the cows to. In that role we're using both the pick-up and feed-out conveyor."

With the vast majority of milk generated from forage, Mr Foot is very focused on avoiding damage to the grass swards. If the weather comes in wet at a time when the herd is being buffer-fed, he'll avoid sending the wagon out, preferring instead to send the cows on into fresh growth a little bit quicker to avoid creating ruts.

"With a grazing based system

you have to look after the soil. Although we have wide flotation tyres on the wagon we don't want to make a mess.

"It's not a big machine compared to a lot of contractors' wagons but even so it'll easily carry 10 to 12 tonnes—it's not worth doing a load of damage for short-term gain."

#### Multi-use machine

Overall the Super Vitesse has been a success, fulfilling two—if not three—roles at a fraction of the cost of having dedicated machines for each task. It has a lot asked of it being used as a harvesting tool as well as a feed-out wagon and does significantly more hours in a year than a one-job machine might. Despite that, it's done nine years service and I am confident that it should do another three or four years' work with us.

"Low input milk production isn't all about cutting corners—it's about making the most from what you've got. The reality is that here in the UK we'll have to buffer feed at some point in the season and so having a wagon that can feed out the silage as well as harvest the grass is a great cost saving."