Breeding for efficiency is key to profitability

Improving feed efficiency reduces feed costs. And that is exactly what the Vroege family is striving for. The Dutch producers are enthusiastic about breeding and data and that's why they're collecting feed intake information from their herd, for CRV, using forage boxes.

TEXT FLORUS PELLIKAAN

Before the COVID-19 lockdown, the small car park at the Vroege family's dairy unit, based at Dalen in the northern part of the Netherlands, used to be overcrowded. That's not surprising, because local people, who want to take a closer look at how the 1,000 herd is managed, are always welcome at the farm.
"We are engaged in food production and I believe that it's important to be transparent," says Wilco Vroege. "People are quick to jump to conclusions if you keep the doors closed at such a large unit, so we want to prevent that and that's why we're happy to show what we do."

Feed efficiency

In winter 2019, forage control intake feeders were installed at the unit so the herd could participate in CRV's feed efficiency trial. These 'boxes' measure the feed efficiency of an ever-changing group of first-, second- and third-lactation cows.
So why did the family agree to become one of the five dairy units in the Netherlands to take part in the study?
"Breeding is our passion," says Wilco. "We try to make progress as quickly as possible and, for breeding, it is important that data are collected. We want to contribute to that. All animals have been examined for genomics here. Using the best animals helps us to speed up the rate of genetic progress."
Sexed semen is used on the top 70% of heifers, rated according to their genetic profile, with the rest inseminated with conventional semen. As for the milking herd, the top 5% are served with sexed semen, 25% are served with conventional dairy semen, and the remaining 70% is served with Belgian blue beef sires.

COMPANY PROFILE

Owner	**Vroege family (pictured: Wilco Vroege)**
Number of cows	**1,040**
Number of young stock	**800**
Average milk yield	**10,594kg of milk at 4.22% butterfat and 3.53% protein**
Milk production per year	**11 million kilogrammes**
Land in use	**600ha, comprising 290ha grassland, 70ha sugar beet, and 45ha woodland**
Other activities	**arable farming and farm contracting**
Labour	**25**

The family uses SireMatch to help with breeding decisions and they select sires on NVI, kilogrammes of fat and protein, longevity, Better Life Health and Efficiency, and functional type. Bulls in use include Delta Wirdum (BLE 8%), Delta Lunar (BLE 7%), Delta Mauro Red (BLE 8%), Velder Starmaker (BLE 9%), and Delta Abundant P rf (BLE 4%).

Financial advantage

Participating in the feed research also has a clear financial benefit. "Our feed costs make up more than half of all our costs, because we have to buy in a lot of feed. If we can save between 5% and 10% by milking and managing a more efficient cow then we should see an improvement in our profitability," says Wilco. "We are eager to see what the first feed efficiency figures for our cows will be."

The family disagree with the concerns that feed efficiency could receive too much 'weighting' and results in a fragile cow. "You have to place feed efficiency in the context of other indexes, as happens in Better Life Efficiency, for example. This is an economically composed index, which also takes into account the longevity, the health and the length of the calf rearing period. If it were up to us, this index is going to be the main one when it comes to selecting sires," says Wilco.

The herd's current feed efficiency fluctuates between 1.45 and 1.55kg of milk from 1kg DM of feed. The cows up to 300 days in lactation are all fed the same TMR, which comprises 5kg grass silage, 8.2kg maize silage, 2.6kg crushed barley, 1.3kg beetroot pulp, 0.7kg wheat yeast concentrate, 2.2kg soy meal, 1.5kg Blendix and minerals. The concentrate cost is, including by products, 6.1 pence per kilogramme of milk.

The progress made in breeding can be seen in herd performance. Milk production has increased by 1,700kg (see Table 1).

Cows are occasionally flushed on request. "We know that 80% of the animal's performance comes from management and only 20% from breeding, but we just like the breeding side of dairying," says Wilco's father Aart.

Table 1: Comparison of breeding performance December 2013 and February 2020

	December 2013	February 2020
number of cows	441	1005
milk (kg)	8,814	10,594
fat (%)	4.18	4.22
protein (%)	3.56	3.53
Better Life Efficiency cows	—	6
Better Life Efficiency calves	—	9

Herd expansion

The family has gradually expanded the herd from 500 cows during the milk quota era to the current 1,040 milkers. "We try to farm 'sharper' and are now trying to further optimise management. Milking three times a day has already pushed the herd's average yield to 10,600kg of milk and we are sure that can be increased even further. As a result, we are going to produce milk more and more efficiently," says Wilco.

New plans for the herd are already being made. "Young stock is housed in the old buildings, which isn't a pleasant environment – for the heifers or the staff. So we've purchased a small farm next door to our unit and the plan is to rear the 800-head of young stock there. That also means that there will be more space here for calving cows or for cows that need a little more attention."

The Vroege family also tries to be socially aware. For example, they open their 45 hectares of woodland with hiking and riding trails to the public. "An eye for the world around us is also a reason why we participate in the CRV feed test. We want to make efficient use of scarce raw materials and the trial helps. We are noticing appreciation for this, from both the government and our bank. There's definitely a benefit to our business' bottom line," says Wilco. |

Leanne 7 (by Rocky), is a herd favourite