

Wide variation in **feed efficiency**

Breeding cows that convert feed into milk more efficiently is interesting from a financial perspective. Breeding can reduce feed costs by 10% and this is just one of the reasons why CRV invests heavily in feed intake data collection.

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In the feeding passage in the cow house based at Melkveehouderij van Gastel near Nispen, in The Netherlands, it's difficult to miss the large blue feed troughs. With a slight hissing sound, adjustable panels move up and down to give cows controlled access to a complete feed ration. And digital displays show how much feed each cow eats from the trough. "We have been studying the feed-intake pattern of individual cows for several months, with help from CRV," explains producer Thijs van Gastel. He runs the 150-cow unit in partnership with his parents Gré and Anne-Marie. The cows are milked through a robotic system and produce a rolling annual average of 12,087kg of milk, at 4.14% fat and 3.60% protein.

Maintenance requirement

"We have always had the impression that certain cows convert feed into milk far more efficiently than others," he says. "You see the production of some cows really go into a downward spiral as the concentrate ration is reduced at the end of lactation, whereas the performance of other cows is unchanged.

"We don't have any firm figures on feed conversion rates just yet, but the first raw data certainly seems to back up our ideas. Within the group, the feed intake varies between 40kg and 80kg a day.

"But there is no direct correlation with milk production. I see cows that produce more milk on a ration of 55kg of forage than animals of a similar age and at a similar stage of lactation but that consume 75kg of forage."

CRV is investing several million euros in systems that measure the feed intake of daughters of CRV bulls on five dedicated test farms, says Mr Pieter van Goor (see box). Breeding for feed efficiency will result in cows that require less feed for maintaining their body condition, for supporting movement and digestion. This leaves more feed to convert into milk production and, as a result, the feed conversion rate will rise.

Environmental benefits

Since 2008, the Van Gastel family's farm has been a test unit for heifers in CRV's Delta nucleus programme. On a yearly basis, the producers purchase around 15 high-genetic-merit animals, after they have been used as a donor for the breeding



Thijs van Gastel:
"Breeding for feed efficiency is interesting from a financial perspective and beneficial for the climate"

programme. These cattle also tend to have the highest genomic breeding values in the herd.

"It is great that we now also gain insight into the performance of bull mothers when it comes to feed conversion," says Thijs.

"Feed conversion will certainly become an important feature in breeding in the future. Cows that are more efficient at converting feed into milk are good for producers' wallets, but also for the environment, and they also produce less greenhouse gas per kilogramme of milk. Breeding for feed efficiency is a good story to share with consumers," he adds. |



Pieter van Goor:
"Breeding alone, can reduce feed costs by 10%"

World leader in breeding for efficiency

CRV began measuring individual feed intakes at a dairy unit in July 2017. Today there are five dairy units where it collects data about feed intake and this makes CRV the world leader in gathering data to facilitate breeding for efficiency. CRV breeding specialist Pieter van Goor supervises the data collection. So far, the company has invested more than £1.75m. "No other breeding organisation in the world invests on this scale in collecting feed

intake data," says Mr van Goor, adding that CRV already has data from research farms, but wants faster and more data in order to increase the reliability of the breeding value.

"Through breeding alone, you can reduce your feed costs by 10%."

Mr van Goor says that the most efficient cows perform well on all systems. "They produce the most, are not too heavy and, most importantly, they not only utilise concentrates

but also forage in the most efficient way."

Data on feed intake behaviour, milk production, water intake and weight are collected on the five units. "We also record hoof health and other health and fertility data. With all this information, we are able to select cows that are long-lasting, healthy and produce milk efficiently."

To view a video on CRV's feed intake research visit www.facebook.com/Avoncroft/