



We take a look at how two new indexes are helping producers to select for, and breed, easy-to-manage cows. This can improve the health, fertility and efficiency of dairy herds – vital in today's volatile dairy market.

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Selecting for reduced negative energy balance and increased feed efficiency

Get more milk from herd rations

The December 2014 proof run will offer producers a glimpse of the impact of two new breeding values. Producers will have the opportunity to select for better health and efficiency in their herds by using two new and improved indexes.

text **Andrea Haines**

Imagine managing and milking your herd, with full confidence that it is genetically in better health. Take a step further and imagine that those same cows are bred specifically to cut down on your feed bill while, at the same time, putting more milk into the bulk tank. CRV Avoncroft has been working hard to make that a reality for many producers and has broken the mould by introducing the Better Life Health and Better Life Efficiency Indexes.

Because feeds costs, like many other input prices, can be volatile more dairy producers are looking to other ways to reduce that uncertainty and keep costs as low as possible. And it's important to remember, with regard to the environment, the ever-watchful eye of society looming over the industry is another motivation to cut back on greenhouse gases.

"This is a new era of thinking for the dairy industry," explains Wageningen University's livestock researcher Roel Veerkamp.

"These traits are now more important for the future of the industry because, as the cost of feed rises, lower intake of feed and higher production is better for dairy businesses' bottom lines and, ultimately, their continued viability."

Feed intake

Genomic testing has opened the door for more intensive research. "In the 1990s, data focused on selecting for feed efficiency alone. But this is not the correct path," says Mr Veerkamp. "Feed

efficiency is a more complex trait. Breeding values are now available for health, fertility and longevity thanks to genomic testing. If you want to select for feed efficiency then you start by developing a genomic breeding value for feed intake." Genomic predictions for feed intake are estimated based on feed intake data that has been collected from 3,000 cows from several herds in the Netherlands. "Since the study is taking place in Europe this data has, so far, only been tested on Holstein cattle," explains CRV's Joost Klein Herenbrink. "In the December bull proof rankings, feed intake and negative energy balance values will be published for all of CRV Avoncroft's Holstein bulls, as well as being included in the Better Life Indexes."

Data gathered by CRV shows that just a 5% increase in lifetime efficiency generates £185 more profit per cow – that's almost £28,000 for a 150-cow herd.

"These traits are universal in nature because they can be used effectively in many countries and dairy management systems," adds Mr Klein Herenbrink. Feed intake is expressed by the number of kilogrammes of dry matter intake per day and represents the average dry matter intake during the cow's first three lactations.

"The reason we need to be more efficient in our food production

bull	ketosis	feed intake
Debutant-Red	100	3.09
Ubrox	103	1.69
Danno	99	3.15
Cricket	108	2.16
Rocky	99	2.59
Atlantic	103	2.17

Table 1: Feed intake and ketosis values for CRV bulls

methods is because various predictions show us using more than one planet's resources by the year 2050."

Healthier cows

The Better Life initiative set forth by CRV also considers overall herd health. Cow health is key to good herd fertility, which is why the company has also introduced Better Life Health by offering producers a 'negative energy balance' ketosis breeding value. Ketosis is a significant issue in early lactation for most, if not all, dairy cows. While this has a relatively low heritability value, it stands to reason that many environmental factors influence the length and severity of a cow's negative energy balance. If the management of environmental challenges is good, then producers will be able to predict which cow families have a significant problem with this new breeding value and can then use selective breeding as a way to prevent this problem in their herd.

The study, conducted by the CRV team, is based on the ratio of fat and protein

Atlantic offers health, fertility and reliability



Producers wanting to improve both health and fertility need look no further than CRV Avoncroft's team of young 'InSire' genetically selected bulls like Chevrolet, Rocky and Norman. Also, for a good example of a bull with firm guarantees and high reliability, they will definitely need to put Delta Atlantic – who was widely used as an InSire bull – on their list.

Atlantic is currently, by far, the most

Delta Atlantic

widely used CRV bull because he produces trouble-free daughters with height and style and fine udders.

He has eye-catching health traits, a sky-high score for longevity, conformation that helps cows to live for a long time and, as an extra bonus, daughters are also easy calving and the calves themselves are also born strong and healthy. These are all important traits that help to ensure good longevity.

His very convincing and reliable figures, make him very popular with producers.

percentages in milk, as well as the milk acetone and beta-hydroxybutyrate levels recorded. This research has shown that these traits signify a higher risk for ketosis.

This value allows producers to build a herd with a stronger genetic base

"This is just the beginning of a new era," adds Mr Klein Herenbrink. "I am happy with the first results of our research and we will continue to work hard to improve both traits for the future."

As of the December proof run, CRV Avoncroft will introduce the two new

breeding values as a part of the Better Life Indexes. Feed intake and ketosis values will be available to producers in the UK and across the world to help them breed specifically for efficient, easy-to-manage cows that stay healthy as they age. |

Easy-care cows: new indexes mean that breeding a trouble-free herd is now within reach for all producers

