



Every producer sets goals for his farm. These goals may differ, but the herd is always at the heart of the business. In this six-part series we set out to help you to improve your herd. Our fifth article focuses on breeding to improve longevity.

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Breeding cows that last is essential to dairy business sustainability

# Taking the long view

Longevity is vital for any herd looking for long-term economic success. And breeding has a pivotal role to play in increasing lifespan and the number of lactations completed by individual cows. We spoke to an organic producer to find out more

text **Rachael Porter and Julie Scanlon**

**T**he longevity or life span of a dairy cow determines how many productive lactations she completes within a herd – and how happy a producer is to have her in the milking herd. “Many traits will determine a culling policy, such as production, fertility, health and workability,” says CRV Avoncroft’s David Matthews. “Replacement may be based on unsatisfactory production – voluntary culling – or other issues, mastitis, fertility or hoof problems – involuntary culling. But, in practice, replacement is seldom due to only one of these two.”

A 100-tonne cow study, carried out by CRV, revealed that sires’ breeding values are crucial in achieving high lifetime production, NVI, longevity, udder health and conformation.

“All 100-tonne cows show certain traits,” adds Mr Matthews. “They are quick off the blocks and, in fact, they often show a strong increase in production that continues until their fifth lactation.

“Good legs and feet are more important than udders and both udder shape and udder health help to determine the longevity of the cow.”

He says that, with slightly above average volume or capacity, they will quickly reach the 100-tonne goal: “And good functional traits enable them to live a long and healthy life. Their lifetime production and longevity are two components that are inextricably linked, with equal influence. So a high average daily yield and good longevity will result in a higher final life-time production.”

The research clearly demonstrated that bulls’ breeding values for the crucial components are the deciding factor in high lifetime production. “So producers who breed consistently for the main breeding values – such as NVI, longevity, udder health and legs – will establish those traits in their herds.

“Legs, in particular, are noted among the conformation components because these are the most important factor in promoting longevity.”

The Dutch breeding value for longevity is a figure that indicates how satisfactory the daughters of a certain bull perform. It is a measure to rank bulls for the ability of their daughters to avoid culling. “By using the highest longevity bulls, cows will remain longer in production,” stresses Mr Matthews.

## Sustainable future

After 11 years of managing the herd at Manor Farm, near Cheltenham in Gloucestershire, Rob Richmond believes he is on track to maximise the unit’s potential. A major overhaul of the business has seen the farm convert to organic, introduce all year grazing, change calving pattern and adopt a

specific breeding policy to produce cows that are built for longevity.

When Rob first arrived at the unit, it carried a 100-cow autumn-calving British Friesian herd and relied heavily on contractors for land work. However what you find today is a completely different business. Significant changes to the management system have been made with Rob focussing on efficiency and the sustainability of the business. Today's herd numbers 210 cows, managed on a spring-calving organic system and most of the land is utilised for grassland. The herd is outside all year and with that move have come some major changes in its breeding policy.

"Each farm is different," explains Rob. "You need to consider the resources you have available, know where you want to take the business in the future and find a system that complements them both. "I firmly believe in sustainability, in terms of cows and land," he explains. "I wanted the farm to have a long-term future and, as a result, I've worked hard to improve the soil, the grassland and the cows."

### Robust cows

With the aim of improving soils, and the introduction of herbal leys and mob grazing, Rob soon realised that he needed a specific type of cow for this system. "You need a robust cow, with good feet and legs, that is easy to care for and has the capacity to maximise intakes of grass," he says. "I felt I needed to look to New Zealand for genetics as this is a farming system they excel in. "Around four years ago, I started to use New Zealand bulls from CRV Avoncroft.

*Rob Richmond: "I need robust and long-life cows that suit my organic system"*



## How can you improve herd longevity?

Breeding for longevity and tackling the causes of involuntary culling are key, so steps include:

- Lowering the replacement rate and rearing fewer calves (lower costs)
- Tackle problems including fertility, lameness and mastitis
- Focus on functional conformation – particularly feet and legs, and udders
- Use SiryX/beef bulls for best/worst heifers/cows
- Increase the average age of cows
- Making use of the durability breeding goal in CRV's SireMatch mating program

life span bulls	life span (UK – lactations)	longevity (The Netherlands – days)
Topspeed Kodak	0.7	597
Paek Tango Paisley	0.6	427
Apina Norman	0.6	527
Bouw Rocky	0.5	622
MS Riverboy	0.4	722
Texel Beauty Debutant	0.4	492
Vekis Chevrolet	0.4	631
Vero Pianoman	0.4	580

Table 1: CRV Avoncroft's top sires for longevity

I then started using CRV Ambreed bulls from CRV Avoncroft, particularly Pascal and Philosopher.

"The index used for these bulls didn't focus strongly on production, as so many countries' indexes do, but considered the management and conformation traits needed for a long-life cow. To me, this is back to basics – common-sense genetics for milk from grass.

"Our system is based on producing milk from grass and our management aims to do this efficiently. That's why we've changed the calving pattern to spring calving, as this maximises the use of the grassland."

The herd is averaging 6,000 litres, at 3.8% fat and 3.4% protein, using less than a tonne of concentrate fed through in the parlour.

"We sell milk to Organic Milk Suppliers Co-operative on a liquid contract, so milk constituents are not a big factor in our breeding policy. Our cell count is 150,000cells/ml, which I think reflects that they're not at all stressed."

### Farm efficiency

"This will ultimately increase longevity," he says. "This is a cost to a dairy business that I feel is often neglected. However, the financial implications of a cow's life and, therefore productivity, is significant. Replacements are a huge expense to a dairy business. Every extra lactation per cow will increase farm efficiency and, therefore, profitability.

"I really feel the business is in an exciting place," he adds. "All the changes that have been made are now coming together. The pastures have improved and the capacity of the cows and their ability to convert their intakes to milk has increased.

"Since I've been here, I've seen yields increase by 10% while the use of concentrates has reduced by a third. I have a milk buyer that is going from strength to strength and fully supports my farming system.

"And young stock are showing great potential for capacity and strength. I am looking forward to a great future with this herd." |