Quick, easy and hassle-free system breeds uniform and easy-to-manage milkers

Precision breeding

Using a computerised breeding program has not only freed up more time for herd management but it's also increased the rate of genetic gain on one Cumbria-based unit. We explain how and why this win-win solution works.

text **Rachael Porter**

Adam Chippendale: "Cows are more uniform and have greater dairy strength"

More precise breeding and improvements in genetic gain are just two reasons why one Cumbria-based producer is pleased that he's now using a computerised mating program.

In a bid to breed trouble-free, easy-to-manage and 'uniform' herd, Adam Chippendale has been using SireMatch for eight years. And today he wonders how he managed without it.

"I knew that there was more that we could do to improve the rate of genetic gain in our herd," says Adam.

"But I simply didn't have the time or expertise to match cows, heifers and sires more precisely. I was also worried about in-breeding. So SireMatch seemed like a good solution."

Adam isn't afraid of adopting technology on his unit, based at Wharton Hall near Kirkby Stephen, which is home to his 190-cow Holstein herd. Six years ago he installed three Lely A3 robots to milk the expanding herd and he's just invested in a fourth. Breeding is also playing a key role here by optimising teat placement and milking speed for automatic milking.

Breeding had previously focused on using high PLI bulls. But cows milked through robots need slightly longer teats that are further apart, and udders still need to be high with good attachment, according to Adam.

"So that's something we've been able to select for using SireMatch and already we're seeing a difference in the heifers that are coming through.

"I'm not sure that we'd have seen that rate of progress if sire selection had been left solely to me," says Adam.

Feet are important too – cows must have good locomotion to ensure that they visit the milking robots regularly.

Adam admits that longevity has been a problem in the past, so it is another key selection criteria when deciding which sires to use on his herd.

Long-life cows

"Cows were simply not completing as many lactations as I'd have liked. That was brought into sharp focus when I first visited the Netherlands.

"I saw many herds with long-life cows and I was impressed by their robustness. There are a lot of 100-tonne cows in Holland and that's something I aspire to. I haven't produced one yet, but I'd like to think that there are now a few cows and heifers with the potential to achieve that milestone in my herd."

Adam has also recently started using sexed semen on his best cows: "If they're good enough then I want heifers from them," he says, adding that 70% of the semen in his AI flask is SiryX.

"I'm also looking to expand the herd a little more, to around 200 milkers. But I want to do it gradually and with my own replacements."

His herd is currently averaging 10,700kg, at 4.08% butterfat and 3.40% protein. Adam saw a 10% increase in milk yield when he switched to an automated milking system. Cows are milked, on average, 3.5 times a day.

Apart from economies of scale and greater milk production, Adam says that expanding cow numbers will also help to produce more waste to 'feed' the micro anaerobic digester plant that he installed on his unit in April 2017.

"It's a small 44kW plant and I'm still trying to gauge how much manure I need to run it. I won't know until it's all up and running. But more cows will help there too. I must stress, though, that the AD plant is not a key driver."

Sire knowledge

With so many aspects of his dairy unit to juggle, it's little wonder that a program that takes the guesswork and hassle out of matching cows and heifers to the best sires is proving invaluable.

CRV Avoncroft's Alan Mason helps here. The starting point for using SireMatch is defining the herd's breeding goals.

Alan and Adam have regular and in-depth discussions about the type of cow that Adam wants to breed and milk.

"So teat placement and longevity have figured high on my list of priorities. And, for the past few years, we've also be

paying more attention to fat-and-protein yield," says Adam, explaining this his milk buyer, Arla, pays a premium for high butterfat. "All the key breeding parameters are considered and entered into the computer program.

"I couldn't do it better myself – even if I had the time. Alan also has the expertise and he knows the sires that are available too," says Adam.

Daughters milking in the herd include: Classic, Fidelity, Kodak, Big Winner, Cricket, Crown, Fantasy and Goli. And sires in the AI flask today include: Clown, Magister, Abel, Ticket, Whatsapp, Kodak, Webmail and Ranger.

Any cow that Adam doesn't want to breed replacements from is served with conventional black-and-white semen: "And any poor cows are served with Belgian Blue. My best cows and maiden heifers are served using SiryX semen."

Heifer testing

At some point in the future Adam also wants to start genomically testing his heifers. He believes that this will allow him to be even more selective in his use of sexed semen and it will also mean that he breeds heifers from only the very best animals in his herd. This will speed up the rate of genetic gain even further.

"We could even sell some surplus heifers too – and that's certainly the plan. We'd welcome the additional income stream and it would be nice to able to be choosier about the heifers we keep as replacements for our herd."

It's becoming more difficult to choose between heifers at the unit now. "I can now line them up and they're all uniform in size and they definitely have more strength.

"They also have good teat placement. I'm certainly very pleased with what I see and it's not taken many generations of breeding to get here.

"I'm not sure I'd be looking at a line of heifers like that, particularly so soon, if I didn't use SireMatch." |

AI flask: just a handful of sires are used on the herd at any one time