

Targeted use can help to protect delicate 'udder' balance

Selective approach pays dividends



Individual approach: SCC test data and udder health history are key to selecting cows that require antibiotic therapy at drying off

Selective dry-cow therapy is gradually being adopted on more UK units. We spoke to a producer, her milk buyer and a vet to find out more about a scheme that's set to increase the number of herds taking the selective-use route. And we look at the benefits of switching from a blanket-treatment approach.

text **Rachael Porter**

It's been seven years since Arla suppliers Angela and Douglas Rhodes began using dry-cow therapy selectively on their 320-cow herd. And the couple have not looked back since.

Today just 20% of the herd is dried off using both dry-cow therapy and teat sealant – rather than teat sealant alone. “And we may be able to reduce that even further,” says Angela, adding that getting it down to that level has been a gradual process and it's not a figure that herds could hope to achieve overnight.

“Less than 10% of our herd has a somatic cell count score of more than 200,000 cells per ml, on a rolling 12-month basis, so there is scope to get down to less than 10% usage of dry-cow therapy. But we started at around 70% back in 2008.”

Not only is the Warwickshire-based business saving money – always an attractive prospect regardless of milk price – but Angela says that they are also reducing the risk of losing cows to severe E coli infections in the following lactation.

“It costs around £8 to dry off a cow using antibiotics, so by using just teat sealant on 20% – that's 240 cows with a 25% replacement rate – we're saving around £1,500 each year. But that wasn't the key driver for us.

“Following advice from Nottingham University vets, we decided to take the selective dry cow therapy route. We'd contacted them about problems with acute E coli in low somatic cell count cows in early lactation. The suggestion was that the dry cow therapy was upsetting the udder flora and this was increasing the risk of E coli infection. Since following this advice we've seen far fewer cases of severe E coli mastitis in our very low somatic cell count cows.”

Teat sealant

The couple have been using teat sealant Orbeseal on their herd at Wormleighton Grange Farm since it was first launched, 11 years ago. And it's certainly added to their confidence when using dry cow therapy selectively. “It's a barrier to new

infection, which is vital during the dry period. Antibiotic dry-cow therapy is just that – it's ‘therapy’. It's to treat existing infection in the udder. If there's no infection, as in a low somatic cell count cow, then it makes no sense to infuse the udder with an antibiotic dry-cow tube.” Initially she and Douglas set their ‘threshold’ for selective use at 200,000 cells/ml and a strict ‘no cases of mastitis during the lactation’ prior to drying off. But confident that selective use has had only a positive impact on udder health and milk quality, the couple have recently ‘relaxed’ the ‘no mastitis’ rule. “We no longer dry-cow tube cows that had mastitis in early lactation, if their three monthly somatic cell count checks prior to drying off are below 200,000 cells/ml. Using NMR and Interherd plays a key role here.

“We also look at cows on an individual basis. If we know, for example, that a particular cow is ‘risky’ – perhaps, for example, she doesn't always lie in the cubicles – then we'll probably use dry cow therapy even if her somatic cell count is below the threshold.

“There are no fixed rules. Our approach is flexible and that's how it needs to be if it's going to work.”

The Rhodes' efforts pre-date Arla's quality assurance scheme – Arlagarden – which began in October and requires all Arla suppliers to demonstrate that they've either adopted selective dry cow therapy use or are developing a plan, in conjunction with their vet, during the next 18 months to start using dry-cow tubes selectively on their herd.

Thorough planning

“It's not something that producers can just start doing overnight. It requires a change of mindset – dry-cow therapy has been viewed, wrongly, as an insurance policy against new mastitis infection in the dry period for several decades,” she adds.

“But more and more producers are starting to think about it and are ‘putting their toe in the water’. As more producers adopt this approach and they see the results in terms of cost savings and udder health, their confidence – and that of other producers – will grow.

Getting your vet involved is absolutely vital according to vet James Breen, an associate at Nottingham University. And looking at both herd and individual cow somatic cell counts and mastitis incidence is also crucial. “All herds

Angela Rhodes: “We're saving money and reducing our E coli mastitis infection risk”





Therapy free: this low somatic cell count cow was dried off using just teat sealant

can look to using selective dry cow therapy successfully – without compromising udder health, milk quality and, ultimately, productivity. That's not to say that all cows are suitable candidates for being dried off with teat sealant alone. It really is key to look at the herd as well as individual cow data.

Dr Breen says that herd data will allow the producer and vet to set a 'threshold' for selective use, as well as understand the impact of current dry-cow management.

"Many producers assume that it's not something that a high somatic cell count herd should even consider, but there will be lower somatic cell count cows within that herd that would benefit from being dried off without dry-cow therapy. The key in these herds is to set a low threshold.

"Remember a high somatic cell count means that there is infection in the udder that can and should be treated with dry-cow therapy – tubes should be targeted where they can cure."

Delicate balance

It's certainly not a case of 'one size fits all' and that's why Arla has been careful not to set a threshold to be applied to all its suppliers' herds – and why the vets and producers involved in the scheme have also stressed that setting somatic cell counts limits for dry-cow treatment across all herds could be counter productive.

"Every herd is different. But what is key to the success of selective dry-cow therapy is individual somatic cell count tests. Other tests, like the California Milk Test or bacteriology at drying off, are just not suitable for this purpose."

He stresses that selective dry cow therapy is not just about making cost savings either. "It's more about protecting the delicate balance of microflora – the microbiome – in the udders of lower somatic cell count cows. A healthy udder is teaming with bugs, even in very low somatic cell count cows, and they're bugs that should be there.

"If we upset that balance by using antibiotic dry-cow therapy unnecessarily then that can leave the door open to new infection – typically E coli – in early lactation. What Angela was seeing in her herd has been seen in many herds in the UK and Europe. Dutch research reported an association between clinical mastitis rate and antibiotic dry-cow therapy use back in the 1990s, and UK research showed antibiotic dry cow therapy use in low cell count cows increased the risk of E coli mastitis, so it's nothing new." |

Arla scheme to reduce antibiotic use

Introduced on October 1, 2015, Arlagarden is the milk producer cooperative's global farm standard – a mark of quality assurance that applies to all its 3,000 UK members and 13,000 across the group.

The scheme's focus on selective dry-cow therapy is to promote the responsible use of medicines and to reduce antibiotic use among Arla's membership, which gives its

customers greater confidence in its milk and dairy products.

"We're introducing the selective dry-cow therapy element gradually and we're working closely with our members and vets, including some of the UK's leading cattle vets, to develop practical guidelines," says the company's Tim Hampton.

"We recognise that this isn't something that can be adopted overnight or that

can be applied with strict parameters to all herds. And for the first 18 months, before the second audit in 2017, we are asking our members to have either begun adopting a selective-use approach, which has been signed off by their vet, or we want to see evidence that they have begun planning a selective dry-cow therapy use policy in conjunction with their vet."