VETERINARY ADVICE

Targeted hygienic care for cows is key to success

DRY COW PROTOCOL

Miles Middleton BVSc MRCVS, of Bishopton Veterinary Group, looks at the benefits of selective dry cow therapy

What is selective dry cow therapy?

SELECTIVE dry cow therapy is where the dry cow protocol used is focused on the individual cow rather than blanket treating the entire herd.

It involves looking at her somatic cell count (SCC), clinical case history and herd data to decide if she is a suitable candidate to receive a teat sealant alone, or whether either narrow or broad spectrum antibiotics are required.

Are there any benefits to the health of the cow from using selective dry cow therapy?

From a cow health point of view, there is now strong evidence that suggests that treating cows with low SCCs with antibiotics when they are dried off may actually make them more susceptible to mastitis and likely to increase the severity of mastitis cases when they do acquire one.

What about the economic considerations?

There are obvious cost benefits of selective therapy such as not having to buy as many dry cow antibiotic tubes. More significantly, however, bigger costs will be saved as the chance of severe cases will be reduced in most herds.

The debate about antibiotic usage in production animals also remains a hot topic and selective dry cow therapy offers an opportunity to reduce the amount of antibiotics used routinely on farm. This area is also something that is becoming a greater focus with milk processors.

So, how come cows with low somatic cell counts don't get infected when antibiotics are not used?

The exact mechanism that prevents low cell count cows from developing mastitis is still not fully understood, but it is based around the principle that the udder must not be considered as a 'sterile bag', and like other mucosal surfaces, such as the mouth or vagina, it has its own 'normal' bacterial population.

These 'normal' bugs maintain a low level of stimulation to the immune system within the udder and so can prevent infection with other bacteria. If these 'normal' bacteria are removed it can be easier for certain invading bugs to not only establish an infection in the udder but they can quickly multiply and cause severe infection.

ADVICE: Miles Middleton, of Bishopton Veterinary Group, is keen to spread the word

So, what actually happens when we dry off a low somatic cell count cow with antibiotics?

If we were to use antibiotics in these low somatic cell count cows, we may kill off these normal bacteria and destroy the natural barriers to infection that they create and so leave the cow at a higher risk of picking up subsequent infections.

What kind of herd is most likely to benefit from using selective dry cow therapy?

The kind of herd most likely to benefit from selective dry cow therapy is one with a low bulk tank SCC but with some environmental mastitis issues. For these farms, a slight increase in bulk SCC is of little consequence but a reduction in the risk of E. Coli and other environmental infections in early lactation would be a significant benefit.

What about herds with higher somatic cell counts?

For herds with a higher bulk tank SCC, selective dry cow therapy may still be applicable but the selection thresholds used to decide if a cow receives sealant alone or still requires antibiotics may be different. There is also the decision to be made whether the cow gets a targeted narrow spectrum tube or a broad spectrum tube.

Is drying a cow off with a teat sealant alone a risk?

Possibly, but this risk can be mitigated against by selecting appropriate cows for this course of action and by ensuring correct administration of the product.

Your vet can provide further advice on when, and how, to administer a teat sealant. The small risk is far outweighed by all of the positive aspects of SDCT. Drying-off an infected quarter with a teat sealant alone will not induce a more severe response in the udder, if any infection is present.

However, problems can occur if new bacteria are introduced into the teat end during drying-off, this can be from dirty hands, dirty teats, tails, splashes etc. If we give antibiotic at the same time this provides a safety net for these sources of contamination.

Drying cows off with sealant alone should be done with the utmost of care – good hygiene is critical. If in any doubt about how to go about this, then consult your vet before using sealant alone.

So, as one size doesn't fit all, it's important to get bespoke advice from your vet. The need for responsible and sustainable use of antibiotics in livestock farming is only likely to increase as concerns over resistance increase.

We can be certain that there are clear potential benefits to the farmer from using selective dry cow therapy and that there will be external pressure applied on farmers to adopt this approach in one guise or another.

It is a practice that is becoming increasingly common with our clients and some now have several years of data and experience to reflect upon.