

Sound nutrition is the best defence against sub-clinical mastitis

Feed your herd's immunity

The economic impact of sub-clinical mastitis is huge and the penalties levied by milk buyers for excessive somatic cell counts can really dent the milk cheque. So what advice can the experts offer producers on how to reduce the cost of mastitis.

text **Allison Matthews**

Unfortunately in the case of subclinical mastitis time is not a great healer and, like an unpaid bill, the problem only gets worse. That's the view of vet Mark Little of Portadown-based Willow Veterinary Clinic.

"Where clinical mastitis is present the producer has the visible signs to flag up a problem at every milking. Vet treatment, discarded milk, time and fatalities all contribute to the spiralling costs. With subclinical mastitis the problem is not so black and white, but the impact is just as damaging," he says.

With potential charges of at least 2ppl – or £50 per day for a 100-cow herd – EU Legislation on the SCC levels of milk intended for human consumption has made producers take notice.

Hidden costs

"A recent Dairy Co survey concluded that the average herd saw between 47 and 65 cases of mastitis per 100 cows each year, at a total cost of £8,000 per 100 cows, it's surprising that this topic is only getting the interest it deserves now," points out Intervet Schering Plough's vet Mairead O'Grady. "Previous attempts have been made to educate producers about both the hidden and visible costs of mastitis, but only now

James Black: "Ensure milk sold is maximised without compromising cow health"



is the message getting across," she adds. "Sub-clinical mastitis is an invisible threat to all producers and the only way to tackle it is by starting with the milk records. If producers are serious about controlling mastitis within their herd they must milk record," says Mark Little. In a healthy udder white blood cells are on 'stand-by'. They are the first line of defence and multiply rapidly when aggravated by infection. Strep uberis and Staph aureus are the most common

bacterial culprits, which can both be spread during milking but Strep uberis can also be picked up from the environment. The impact of Staph aureus is only sub-clinical, but Strep uberis is more versatile and may result in clinical symptoms.

"The key to identification of the cows responsible for increased SCC is milk record analysis," says Ms O'Grady. "These

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Mark Little: "The role of trace elements should not be underestimated"

individuals often do not show signs of clinical mastitis. If the cow identified has had repeated elevations in SCC it is essential that veterinary advice is sought to ensure prompt, accurate identification of the causative agent. This allows for informed decisions to be made regarding treatment and control programmes on individual farms.

Depressed yields

"With a rise in SCC to just 400,000 cells/ml producers will see a 5% loss in production. At this point they may also see a penalty from their milk buyer. Unfortunately a lot of money is lost once bulk milk samples cross 150,000/ml as

milk is being lost due to bacterial infection. Many milk recording summary sheets will generate a 'loss' figure which is a realistic hidden cost," she adds.

Penalties, depressed milk yields and endless frustration are just some of the unfortunate consequences associated with mastitis. So what other steps can producers take to tackle a subclinical mastitis problem?

"The susceptibility of a herd to infection is affected by the immune status and keratin production ability of each cow. Conditions such as excessive negative energy balance, ketosis and milk fever are all detrimental to the efficacy of the cow's immune system," warns Thompsons' nutritionist James Black.

The effectiveness of the dairy cow's immune system is a vital issue, particularly when associated with high production levels and health risks. So what practical steps can producers take? "The role of trace elements such as vitamin E, copper, zinc and selenium should not be underestimated in their ability to function as antioxidants, which support the cow's immune function," adds Mr Little.

"Although mastitis is caused by many factors, the response of the herd to this

The five-point plan

- Thorough teat dipping
- Treatment and recording of clinical cases
- Routine use of dry-cow therapy
- Cull chronically infected cows
- Servicing and maintenance of milking machine twice yearly

challenge has been shown to improve through trace mineral supplementation. "Copper and manganese are needed for the production and function of the key components of the somatic cell response to a bacterial challenge in the udder. "Trials carried out by Zinpro have shown a 33% decrease in SCC where cows were supplemented with between 180 and 400mg/d of zinc. Zinc, copper and manganese can all help reduce SCCs as they play key roles in the immune response," adds Mr Black.

Dry-cow period

Management during the dry cow period is crucial in ensuring measures are in place for the control of mastitis.

"Studies have shown that getting the fresh cow nutrition correct in early lactation can help to reduce the animal's negative energy balance.

"The ripple effect of this silent shift in the cow's health status is huge and starts with a reduced risk of ketosis. "This in turn will ultimately result in higher dry matter intakes and therefore improved performance by increasing milk yield. The key is to ensure that milk sold is maximised without compromising cow health," adds Mr Black.

"And, as part of the five-point plan for mastitis control, dry-cow therapy is a proven, effective means of curing the problem.

"It is crucial that the dry cow treatment selected provides broad spectrum protection and is licensed to reduce SCCs," says Ms O'Grady.

The onus is on milk producers to adequately utilise readily available tools such as milk recording. Involving vets and nutritionists to help interpret the data produced from milk recording not only ensures that the advice given is tailored to each herd but that it also effectively tackles any problems.

"Keeping a close eye on SCCs and spotting any signs of increase early will ensure that the vet has every opportunity to control the impact of mastitis within a herd," concludes Mr Little. |

