

# Tackling mastitis head on

Individual problems require an individual approach and situation-specific solutions

**Spring 2009 will see the launch of DairyCo's Mastitis Control Plan – the result of several years of work and investigation into the depth and range of the mastitis challenges facing milk producers. And it's set to provide individual, situation-specific solutions.**

**P**roducers are going to be challenged to look at their mastitis problems and solutions in a completely new way. So says DairyCo research manager Charlotte Bullock, talking exclusively to CowManagement about DairyCo's Mastitis Control Plan, soon to be made available to producers.

"It's going to require hard work at times, but the possible results are really worth the effort – we've seen an average 22% drop in mastitis cases among farms taking part in pilot studies," she says.

The traditional five-point plan for mastitis prevention, which was developed in the 1960s, made large inroads into reducing the number of cases of contagious mastitis. But mastitis, both environmental and contagious, continues to cost the industry millions of pounds each year and it remains a serious animal welfare issue.

The new plan is set to make further inroads into mastitis control by encouraging an understanding of the key influences on individual herds, be they farm based, such as housing, cow management and staff, or cow based, such as breeding, somatic cell count or behaviour.

## Good results

Trails, where the DairyCo Mastitis Action Plan was tested on 26 farms and the results were compared to 26 control farms where no help was given on tackling mastitis problems, have yielded good results. On average, among those producers who implemented a plan, there was a 22% decrease in the number of mastitis cases during a 12-month

period. Those producers in the test group who really put the majority of the action plan in place, achieved up to a 36% reduction in mastitis cases during the same period.

Similar results were seen among the 20 pilot courses run this year. And cumulative positive effects on mastitis incidences have been seen on test farms working with the control plan beyond the 12-month period.

"The plan is about identifying the influences in individual herds that put the cows at risk of being infected by the pathogens, and providing a farm with a specific control plan," says Mrs Bullock. Steps to develop the plan began about five years ago when the then Milk Development Council (MDC) held a workshop involving producers, vets and researchers to find out what the real mastitis issues were at farm level and where the gaps were in existing knowledge that prevented these issues from being addressed.

"From this, a project was developed to identify the bacterial causes of clinical and sub-clinical mastitis and responses to different treatment strategies. It also aimed to identify the main risk factors for both clinical and sub-clinical mastitis for both the farm and the cow and develop farm management strategies to reduce these risks," says Mrs Bullock.

"We undertook a general survey of clinical mastitis in England and Wales to see what bugs we were dealing with and turned our attention to the risk

*Pre dipping teats could be more important on some units, compared to others, when trying to control mastitis*

factors that are present on our dairy units every day of the year." Mastitis is a problem that can best be tackled with the co-operation and expertise of producers working with their vets or advisers. "And at DairyCo we envisage a team working together to really address the problem on farm," she adds.

## Action plan

From April 2009 DairyCo, in collaboration with Quality Milk Management Services and the University of Nottingham, will be training interested parties, be they

producers, vets or consultants, to look at every aspect of herd management in order to identify the mastitis influences on individual farms.

It will be a thorough investigation that gathers information from all aspects of cow and farm management, including how and where the cows are calved, what the milking routine is, bio-security measures and cow nutrition.

Part of developing a farm action plan will also involve taking strategic milk samples from clinical cases across the herd, as well as from the 10 highest cell

## Mastitis treatment offers quick and broad action

A broad-spectrum antibiotic intramammary mastitis tube, launched in the UK in November by Boehringer Ingelheim, is the first to contain a unique combination of two highly effective antibiotics – cefalexin and kanamycin and offers enhanced microbial activity.

Ubrolexin's combination of cefalexin and kanamycin has proven 'synergistic' antibacterial action, according to the company.

Antibiotic combinations can sometimes offer significant advantages over monotherapy, says Kevin Kerr of Harrogate District Hospital's Department of Microbiology. "They do this by their ability to treat polymicrobial infections or infections of unknown aetiology, reduce the likely emergence of resistant strains and make use of chemical synergy." Andrew Bradley, from the School of Veterinary Science at Bristol University, agrees and cites a multi-centre trial carried out in cows from 192 commercial dairy farms in France, Germany and the UK, which compared the efficacy of first, third and fourth generation cephalosporin-containing intramammary tubes. Milk samples



Andrew Bradley: "Cows treated with Ubrolexin did well in trials"

were collected at various times post treatment and analysed for somatic cell count and bacteriology.

"Cows treated with Ubrolexin or cefquinome were shown to be significantly more likely to be pathogen free than those receiving cefoperazone treatment at the end of the trial period," he says.

Other laboratory trials have demonstrated the efficacy of a combination of cefalexin and kanamycin against the main mastitis pathogens. Results revealed that the combination delivers a complete kill of *Strep uberis*, *Staph aureus* and *E coli* in between four and eight hours.

count cows to give comprehensive information on the pattern of mastitis on that particular farm.

The plan will enable each producer to get a real picture of the mastitis situation on farm – whether they are dealing predominantly with an environmental or contagious pathogen – and where the problem mainly lies, be it with dry cows or milking cows.

"With mastitis control it is not a case of one plan fits all," stresses Mrs Bullock. "And the plan will allow producers to look at their farm situation and implement strategies that will meet its unique challenges.

"There may need to be some changes to herd management but, with the average cost per case of clinical mastitis at £200, it makes real economic sense."

And just to underline the economic benefits, there will be a cost benefit calculator to accompany the control plan on the DairyCo website.

If you are interested in receiving more information about the DairyCo Mastitis Control Plan training, please email Charlotte Bullock at [charlotte.bullock@dairyco.org.uk](mailto:charlotte.bullock@dairyco.org.uk).

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