Focus mastitis control on subclinical cases in dry cows

NEWARK, Del. - There's nothing new about mastitis. It's been around as long as people have been milking cows - even before the invention of the milking machine. This piece of equipment has been blamed by some for mastitis - sometimes with justification. But, says University of Delaware extension dairy specialist - George Haenlein, the problem predates the milking machine and occurs regardless of the brand or procedure used.

Mastitis occurs in other species - sheep, goats, sows, mares, and even humans. Over the years, it's been treated in many ways. Yet despite all efforts, it's still a major problem in every U.S. dairy herd as well as in those of other countries.

"Antibiotics are our most potent weapon against mastitis," says Haenlein. But producers have been using them for almost 40 years now, with no letup in either chronic or acute cases.

Are dairy farmers wasting their time - and money - when they follow the present practice of waiting to treat until the clinical stage appears during lactation? It's certainly a possibility worth considering, the specialist says, particularly in light of recent FDA regulations regarding treated milk. These regulations say:

IF YOU TREAT,
DON'T SHIP!
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"In other words," says Haenlein, "producers must guard against treatment residues in milk and meat. These residues are not allowed to enter the market. The milk of treated cows must be discarded for three days at least, and carcasses of treated cows can't be sold for meat unless the animals were slaughtered at least 30 days after the last treatment. So, if a cow may be a cull candidate anyhow and is on the standby list for shipment, the FDA is telling us, DO NOT TREAT, even if she has mastitis. Instead, ship her right away, while you can still sell the meat."

By shipping residue-free cows, producers are protecting future meat sales. They're also saving money by avoiding treatments which may have dubious results, and they're culling animals with a possible disposition toward mastitis - the most costly disease in dairying today. In the process, says Haenlein, they may even be selecting genetically against mastitis.

Instead of investing in a battery of rescue treatments for mastitis after it develops clinically in lactating cows, he suggests dairy farmers start tackling this disease from some other angles.

"By now," he says, "you know plenty about mastitis from all the reports and articles you've read about it in the publications that reach your farm every day. You know the names of the most prevalent microorganisms which cause it. And you know that when milk samples are cultured, there are going to be many pathogens, like E. coli, which penicillin won't kill.

"And yet," he continues, "without culturing these samplles, we can't be at all sure we're using the right antibiotic. We're only guessing - shooting in the dark."

According to Haenlein, mastitis treatment failures usually are due to one or more of the following causes:

* Using the wrong antibiotic.
* Waiting too long before treatment.
* Using too low a dosage.
* Stopping treatment too soon.
* The presence of microorganisns resistant to treatment.
* Failure of treatment to reach the walled-off site of infection.
* Chronic cases with poor recovery chances.
* Dirty cows which quickly become reinfected.
* Wet udders during milking which easily transmit infection.
* Careless or inexperienced milking procedures.

Research shows that three-fourths of all mastitis cases start not at the beginning of lactation, but during the dry period. Eighty percent of all clinical cases are preceded by subclinical infections detectable through elevated somatic cell levels.

Based on this information, Haenlein thinks it's time dairy farmers focused their control efforts on treatment of subclinical mastitis in dry cows.

"Of course," he says, "we must start with clean cows, get rid of muddy barnyards, milk only dry udders and handle milking machines properly - with the right level of vacuum, without vacuum fluctuations, overmilking, rough take-off, and backflushing to prevent possible disease transfers between quarters and between cows. Even the most sophisticated equipment won't protect cows under these conditions."

But aside from correcting such problems, he says it would be best to attack mastitis at the subclinical level.

"Dry cow treatments have at least twice the cure rate as those for lactating cows," Haenlein says. "And no milk is wasted. What's more, you can expect an average increase in production of 1,000 pounds of milk per cow per year for an added income of approximately $120 (1,000 x 12 cents = $120.00) - all for about $10, the cost of dry cow treatment.

For every mastitis case in a dairy herd, there are at least 12 subclinical cases. In order to combat these subclinical cases, trouble-causing cows must be identified. Routine milk testing will frequently do this, the specialist says.

Two testing procedures are available and the specialist suggests dairy farmers use them regularly. One is the California Mastitis Test (CMT), which comes in an inexpensive, easy to use kit form. This test gives immediate results on somatic cell levels.

Cows can also be tested monthly through the DHIA system for little additional cost.

Research has shown that increased somatic cell levels in the milk mean the presence of subclinical mastitis in the udder and milk already being lost. These tests allow producers to identify problem cows early, before they become clinical cases, so animals can either be treated promptly or culled.

"Most state DHIA organizations now offer routine somatic cell testing," Haenlein concludes. "If the one you belong to doesn't, it's time to gear up testing equipment to provide this vital test."