Therapy of Clinical Mastitis in Tough Economic Times

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Mastitis is a common and expensive disease in the dairy industry. Money is spent on both prevention measures and treatment of the disease. The greatest monetary loss, however, results from decreased milk production and the discard of abnormal and antibiotic contaminated milk after treatment, as required by law. The best investment by the producer is clearly focused on prevention rather than treatment.

Treating clinical cases is an animal welfare issue as sick cows need good medical care. However, do all clinical cases need to be treated or can the costs of the antibiotics therapy and dumping of antibiotic laden milk be avoided if the animal is likely to cure on its own or the success of treatment is low? The average cost of a clinical case of mastitis has been estimated at approximately $140 per case and most of these losses result from discarded milk and decreased production. Accordingly, reducing the occurrence of discarding antibiotic contaminated milk, that would have been otherwise clinically normal, could reduce the costs of clinical mastitis.

Clinical mastitis is defined as the secretion of visibly abnormal milk, generally seen as clots or flakes in the milk of milder cases progressing to a grossly abnormal secretion accompanied by swelling of the mammary gland and a very sick cow in severe cases. In all instances, clinically abnormal milk must be discarded and must not enter the food supply. Three levels of severity are generally recognized:

Mild - A few clots in the milk,

Moderate - Clots in milk and swelling in the quarter, and

Severe - Grossly abnormal milk, swelling in the quarter and a physically ill cow.

Cows with severe cases need to be treated, and treatment should be targeted at reducing the effects of shock by controlling fever and hydrating the cow. Studies have shown that intramammary antibiotics have little impact on the outcome of these cases.

Moderate cases will likely benefit from appropriate intramammary antibiotic therapy. No antibiotic product is perfect. The cost of an antibiotic does not equate to how well it will work and extending therapy beyond label instructions will not significantly improve the outcome of treatment. Extending treatment beyond label instructions, however, greatly increases the cost of therapy. Contact your local veterinarian for assistance in designing appropriate treatment protocols that limit the use of antibiotics to cases that will really benefit from treatment.

Therapy of mild cases may or may not be cost effective. Herds with low bulk tank somatic cell counts (SCC) may be able to save money by not treating the mild cases and mitigating the losses associated with antibiotic treatment and discard of antibiotic contaminated milk. The producer must take into consideration any bonus dollars being received for SCC premiums and aware that milk from recently recovering clinical quarters, even those that were mildly clinical, will increase bulk tank SCC. The producer must also consider the possibility of mild mastitis cases progressing to moderate in weighing decisions to treat when designing a treatment protocol with their veterinarian.

 Bottom Line:

To reduce the need and occurrence of antibiotic treatment, focus on management practices that prevent mastitis and use of additional diagnostic tests (e.g., milk culture) may assist with treatment decisions. Antibiotics should only be administered to cows likely to benefit from antibiotic therapy as antibiotics are ineffective for some mastitis pathogens. Clinically abnormal milk, and antibiotic laden milk, must be discarded and cannot enter the food supply. Work with your local veterinarian to develop protocols to classify severity of clinical mastitis cases and to determine appropriate treatment regimens for these cases.

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