

June 06

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## Rethinking Clinical Mastitis Therapy could save \$10,000 a year.

Recently, Northwest Veterinary Associates has taken a renewed interest in culturing mastitis cases. When the Vet comes for your next herd health clinic, request to plug your herd's numbers into a spreadsheet that shows an amount of money that the dairy is wasting by infusing antibiotic tubes into all mastitis cases of undiagnosed cause.

On most farms, if abnormal milk is detected, the cow is separated and the herds person tries to decide if the cow should be treated. Unfortunately, this is often the point where treatment decisions are based on experience and opinions rather than good scientific guidelines and protocols. If the cause of infection is known, a more effective clinical protocol can be devised, which can result in reduced use of antibiotic and fewer days of unsaleable milk.

If ten mastitis cases are cultured, we usually report no growth on four of the samples. No growth means that the bacteria are in too low numbers to find, or Yeast or Mycoplasma caused the case. Since antibiotics do not affect Yeast or Mycoplasma and bacteria cannot be found in the other no growth cases, the farm's veterinary dollar is wasted on treating no growth cases with intramammary tubes.

Three of the mastitis cases will be reported as gram negative. Despite the introduction of a new treatment last summer, insufficient evidence exists to justify intramammary antibiotic treatment of *E. coli* and *Klebsiella*, which are the most common gram-negative bacteria. So again, the farm's veterinary dollar is wasted on treatment.

The remaining three mastitis cases test for gram-positive bacteria, which have been proven to be cured by intramammary antibiotic treatments. So, it is justifiable to spend money on treatment, throw away unsaleable milk, and jeopardize antibiotic residue on these cases.

**Therefore, only three cases of ten should be treated with mastitis tubes.**

In a 250 cow herd which suffers about 10 mastitis clinical cases every month, we propose the dairy farm could save around \$10,000/year by adopting the practice of culturing cows before treatment. Of course, treatment will not be delayed when toxic cases occur, when the cow is depressed, off feed, and running a high fever. The farm and vet will design a treatment protocol for these life-threatening cases. But in the cases of moderate to mild flare-ups, this approach could save veterinary drug cost and reduce unsaleable milk, without jeopardizing the long-term productivity of the animal.

In a 2001-2 Michigan State study in a large commercial dairy milking 3200 cows:

1. Antibiotic use was reduced 80% when limited to gram positive cases.
2. 55% cultured no growth and 25% were Gram-negative that did not require the use of intramammary antibiotic.
3. Very few of the clinical cases were ill or had fever that required systemic treatment.
4. Treated cows in the no growth category did not return to normal milk quicker and did not have fewer quarters loss, than no growth cases that were not treated.
5. When treatment was with-held for 24 hours awaiting the culture results there was no difference in milk production, than if the cow was treated immediately upon detection.