

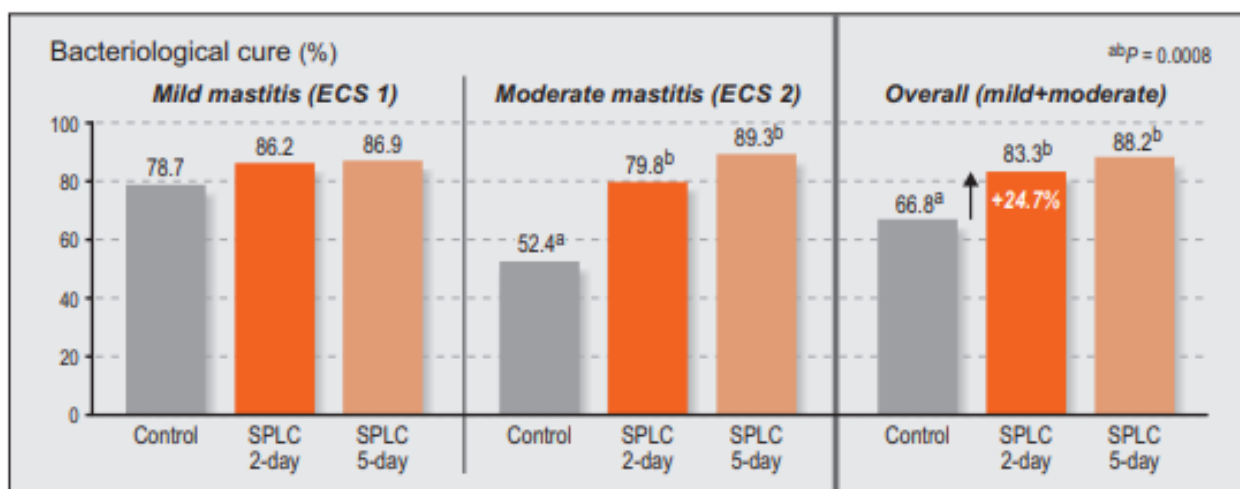
# MILK QUALITY

*Waupun Veterinary Services, LLC - Your Progressive Dairy Partner since 1958*

## Results from Study of Treating *E. Coli* Mastitis

Many farms have been using culture-based treatment protocols for mastitis cases. The common thought is to treat gram positive (Step sp & CNS Staph sp) cases of mastitis and not to treat gram negative cases unless systemically sick. A recent study was done on three herds in California where *E. coli* (a gram-negative bacteria) mastitis cases were divided into three groups: no treatment, 2 days of Spectramast LC, and 5 days of Spectramast LC.

The cows were divided into mild cases (cows eating and no swelling in the udder) and moderate cases (cows eating but swelling in the udder). The cows in the groups were cultured 14 days later to see if the bacteria was eliminated. Results from the study showed:



**Figure 2 – Mean rates of bacteriological cure at day 14, by ECS mastitis category and overall.**

- Two days of Spectramast LC treatment resulted in a 24.7% (P = 0.0008) relative increase in bacteriological cures at day 14 compared to controls, and boosted overall treatment success rate at day 14 by over 93% (P < 0.0001) relative to controls.
- The 2-day Spectramast LC program also provided a 46.8% (P = 0.0131) relative reduction in mastitis-related culls and deaths within 90 days of treatment vs controls.
- A partial budget analysis indicated that use of the 2-day Spectramast LC protocol reduced mastitis-related losses by approximately \$204/head compared to controls, representing an estimated 18:1 return on investment.
- The 5-day Spectramast LC treatment regimen provided no additional benefits over the 2-day treatment regimen, resulting in a recommended strategy of 2 days of treatment with Spectramast LC for mild to moderate Gram-negative mastitis of lactating cows.
- This study indicates that there is a substantial benefit to treating moderate cases of *E. coli* mastitis cases. Dairywomen should consult with their herd veterinarian if there may be a benefit to changing their treatment protocols.

### **Milk Quality Award Winners Announced!**

*There were 39 quality milk award winners announced at the National Mastitis Council Annual meeting in Dallas. Five of the winners are clients with Waupun Veterinary Service. Congratulations to F. W. Rahn and Sons, Theisen Family Farm, S&L Goebel Farm, Michel's Farm, and Dinnerbell Farms.*

# The Impact of Bedding on Quality Milk

Dr. Andy Johnson gave a talk at the National Mastitis Annual meeting in Dallas this year on, “Minimizing the Negative Impact of Bedding on Milk Quality.” According to Dr. Johnson the current thought is that environment is 70 percent or more of milk quality issues. The most important statement we must understand is that cows must be clean, dry and comfortable 24 hours a day, Dr. Johnson said.

All bedding types have their own list of issues and must be managed appropriately 24 hours a day to minimize milk quality issues. If cows are dirty on their legs or udders, there is an increased risk of milk quality issues. Even with the best of milking routines, the milkers are under pressure to work as quickly as possible and they do not have the appropriate time to get really dirty teats cleaned and properly sanitized.

The highest producing dairies with the best milk quality are now grooming every milking. Grooming tends to keep the bedding drier, but another real advantage is improved cow comfort. Many dairies have records that show 2 to 3 more pounds of milk per cow per day when they groom the stalls and keep the beds level from better lie down rates and improved comfort.

The best approach to bedding control is proper bedding culturing. For milk quality, Dr. Johnson thinks the number of environmental streps, gram negatives, klebsiellas and coliforms are the bacteria that relate the closest to clinical mastitis. When culturing bedding, Dr. Johnson likes to culture a new bedding source to make sure there are no big issues. Dr. Johnson has cultured new sand that was washed with bad water, which caused serious mastitis issues. The two samples that are the most important to Dr. Johnson when evaluating the bedding and milk quality are a sample of the bedding being used and the bedding prior to adding the new bedding. This gives the best- and worst-case scenario, which can help you determine the issues that need to be addressed. On dairies, Dr. Johnson suggests bedding cultures quarterly or more frequently if problems occur. Monitoring is an important tool for bedding.

The level of organic matter, along with bacteria level, is critical to know. If organic matter is higher than the higher the risk, new infections will be higher because the bedding can support more growth of bacteria. The industry’s goal is to have 3% or less organic matter in sand bedding with 4 to 6% organic matter being marginal risk and more than 6% organic matter being high risk. When using recycled sand, the level of organic matter is most important and needs to be monitored.

When evaluating manure solids, bacteria level is the most important factor to consider and dairies that actually dry the manure solids can reduce bacteria numbers significantly. Dr. Johnson did a trial on 3 dairies where the bacterial load and dry matter were tested on the same day. All three farms had the same dry matter level, but the huge difference was bacteria loads. Two dairies used heat to kill bacteria and one dairy used a fan to reduce dry matter, but the bacteria loads did not drop.

## Cleaning Tip for Mattress Herds



Instead of using scrapers for cleaning off the mattresses, it is suggested that brooms should be used. The scrapers will leave a film of manure on the mattresses while the brooms will get the surfaces cleaner.

## *WVS Milk Quality Services Available*

*For more information about our quality milk services, please contact the clinic. Several of our vets specialize in milk quality. We help dairy producers provide the highest quality milk, by offering services such as: milk culturing, milk records analysis, mastitis treatment protocols, milking procedure evaluation. WVS also has a bedding lab and can determine the cleanliness of the bedding.*

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