

# Dairy Details

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Editor:

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NORTHERN VALLEY DAIRY PRODUCTION MEDICINE CENTER

## Why Do We Culture Mastitis Cows?

Some time ago I tried to calculate the percentage of cows in our practice that lived on farms where clinical mastitis cases were cultured before treatment. I came up with around 70%. This included farms that practiced on farm culture as well as farms that brought samples to our laboratory.

Why do farmers culture before treatment? There are really two major reasons. The first is money. Treatment is expensive, mostly because of discarded milk, but also because of drug cost and cost of labor for treatment, separation and so on. **A 500 cow dairy with a 3% total monthly case rate (15 cases) could easily be throwing away \$20,000 per year in milk and treatment costs versus a culture based treatment system.**

The second is responsible antibiotic use. Farmers understand that the vast majority of antibiotic treatments given to dairy cows with grade one or two mastitis (not toxic) today are for mastitis. Behind both of these reasons is the startling fact that on most dairies, only about one third of cases of mastitis are likely to improve following treatment. **Thus overtreatment is expensive and may not represent responsible antibiotic use in today's world. Culture mostly is used to identify the cows not to treat.**

It can also be used to more appropriately treat those that might benefit from treatment, because the research is clear that treatment of mastitis caused by some organisms makes economic sense. That is why our doctors create mastitis treatment protocols specific to each farm that are based on culture results. Some organisms may require different treatments or duration of treatment.

On farm culture typically is not able to identify organisms to the same level of specificity as what we do in our laboratory. However, there have been multiple studies that show clear economic benefits of using on farm culture to put cases into three specific categories: no growth, gram positive, or gram negative. Only gram positive cases should be treated in most cases.

There are also cows who get clinical mastitis that do not need to be cultured because it is pretty clear from their records that they are unlikely to respond. They can represent a significant proportion of cases on a dairy. Some farms have systems to identify and mark or code these cows so that they do not get treated. We can help get a system in place to do this for your farm if you do not have one.

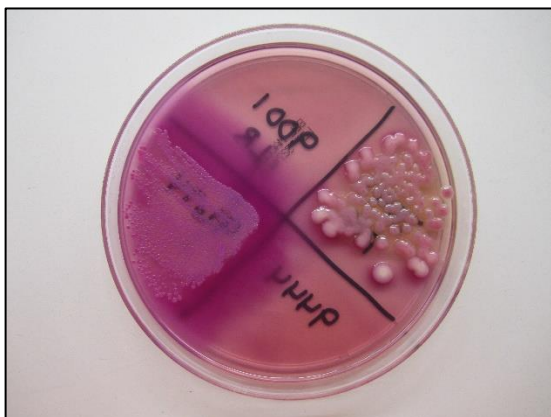
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Producers may be reluctant to not treat cows because they have seen that some cows just do not get better. Milk may never return to normal, or it may intermittently be normal and abnormal. However, research shows that most cows' milk will return to normal in a few days following the beginning of clinical signs, treated or not. **The appearance of milk does not have a lot to do with actual infection.** This is a hard concept to accept, but it is true. There will always be cows that do not get better, but many studies have shown that culture based treatment, where most cases go untreated, does not change the percentage of cows that do not cure or get culled for mastitis.

Some farmers are reluctant to not treat cows because they do not want to wait a day or two for results, fearing that waiting will result in poorer results. This too has been shown not to be true by research. With the exception of sick and toxic cows, there is no harm to waiting for results. In fact, many cases of clinical mastitis do not actually show abnormal milk for weeks after infection, so one may have already "waited" some weeks for results before submitting the sample.

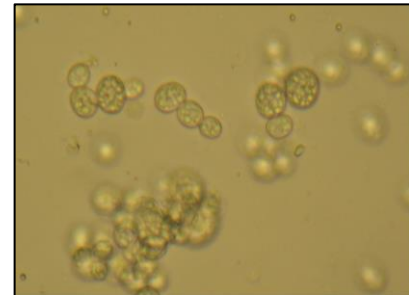
If you are not currently practicing culture based treatment of grade one and two mastitis, we are here to help you get started. Whether you want to culture on farm, or use our lab, we will get you the tools you need to get started, and give you the support you need to keep the system working correctly!



*E.coli infection on left and Klebsiella on right*

### Current Backorder Items

- SulfaMed (Sulfadimethoxine) Injection 40%, Antibacterial, 250mL
- Clostridium Perfringens Types C and D Antitoxin Vaccine, 250mL
- Exam Gloves (XLarge) Nitrile Blue - Textured / Powder Free
- Sulfadimethoxine (Concentrated Solution 12.5%), Antibacterial, 1 Gallon
- VetriPen G (Penicillin G Procaine) Injectable Suspension, 100 mL
- Tetanus Antitoxin, 15000 Units, 20mL
- Dexamethasone – limited supply
- Strong iodine gallons – limited supply
- Predef 2X – limited supply but product is discontinued for future
- Bovine Ecolizer +C20 discontinued
- Lutalyse Hi-Con – 50 dose
- Inforce 3 trays of 25
- Bovishield Gold 5L5 - 5 dose and 10 dose



*Prototheca under microscope (above) and on blood agar plate (below)*



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