



## Dairy Pipeline

Department of Dairy Science

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## Understanding *Mycoplasma mastitis*

Authored by Christina Petersson-Wolfe, Extension Dairy Scientist, Milk Quality & Milking Management; [cspw@vt.edu](mailto:cspw@vt.edu)

Several producers have called recently to learn about *Mycoplasma mastitis* after finding positive results either in individual cows or in bulk tanks. This article addresses their questions, decisions and our current understanding.

### Origin of *Mycoplasma* spp.

Along with *Staph. aureus* and *Strep. agalactiae*, *Mycoplasma* species are contagious mastitis organisms that can be passed from cow to cow at the time of milking. *Mycoplasma* can be cultured from multiple body sites of both healthy and sick cattle including the udder, respiratory tract, reproductive tract and joints. In particular, *Mycoplasma bovis* is most commonly associated with bovine mastitis. Aside from mastitis, *M. bovis* is also an important cause of respiratory disease in calves and feedlot cattle as well as occasional abortions and ear infections in young calves.

### Detection of *Mycoplasma* spp.

The classic symptoms involved with *Mycoplasma* mastitis include multiple quarters involved, dramatically decreased milk production, cows appear otherwise healthy but have severe mastitis, milk secretion has sandy or flaky sediments in watery or serous fluid. However, standard milk culture will not identify *Mycoplasma* spp. because these bacteria require special media and environmental conditions for growth. Bacteriologic culture under anaerobic conditions of milk is required to diagnose *Mycoplasma* mastitis. I start to suspect *Mycoplasma* as a possible cause of mastitis when a producer has cultured clinical cases with the majority reporting “no growth” results.

When *Mycoplasma* is suspected as a source of mastitis, the best way to confirm is by culturing suspect cows. When a negative test result is obtained from an individual cow, this generally means the organism is not present. However, intermittent shedding of *Mycoplasma* has been reported and may lead to false negative results. Many operations will also monitor bulk tanks for *Mycoplasma* spp. which is an excellent proactive policy. However, if an outbreak of *Mycoplasma* mastitis is suspected, culturing bulk tanks may not be sensitive enough to detect the organisms. If a farm only has a couple positive cows, finding those cases once diluted in the bulk tank may prove difficult. Therefore, sampling groups of cows may be warranted. If you need to perform *Mycoplasma* culture, be sure to specifically ask the laboratory you are working with because not all laboratories are setup for this type of culture. These organisms require not only specialized media for growth, they also require different environmental conditions for growth in the incubator.

### Sources of *Mycoplasma* spp.

*Mycoplasma* is most often associated with the introduction of new cattle to the herd. In order to control this organism, a strict sampling procedure should be put in place prior to the purchase of animals. Bulk tank cultures from the herd of origin should be requested prior to the purchase of non-lactating animals or calves and individual SCC and milk cultures should be requested prior to the purchase of lactating animals. Feeding waste milk to calves can also be a source of transmission.

### How to treat *Mycoplasma* infections

*Mycoplasma* bacteria lack a cell wall which makes treatment with antimicrobials unsuccessful. Therefore, prevention is key. As discussed, diligent testing of new cows is a major step in prevention. In the case that a positive cow is introduced to the herd, the infected animal should be promptly culled to avoid spread within the herd. If this is not

economically feasible, a strict segregation plan should be devised and followed.

**Summary**

*Mycoplasma* infections are contagious, do not respond to antimicrobial treatment and can spread through a herd during milking time. Introduction to a herd is often associated with the purchase of new animals, therefore *Mycoplasma* spp. testing prior to purchase is extremely important. Although bulk tank monitoring is a good surveillance program, to eliminate this organism from a herd, individual cow testing is required.

## What are your farm's goals?

Authored by Jeremy Daubert, ANR, Dairy Agent and Unit Coordinator, Rockingham County; [jdaubert@vt.edu](mailto:jdaubert@vt.edu)

Do you have goals set for your farm or your family? Have you written them down and communicated them with someone else? Setting goals can help keep your business and your life on track. They can give you a plan and steps to follow to achieve your objective.

Set SMART goals:

- S – Specific**
- M – Measurable**
- A – Attainable**
- R – Relevant**
- T – Trackable**

Make your goals specific and keep them positive. Make them defined so that you have something to work toward. Keep them measurable, you cannot evaluate your goals if they can't be measured. They should be things that you want or need and should be realistically attainable. Have goals for short, intermediate and long terms. Having periodic check-ins and a review of your goals is important. Have you met your short-term goals? Do you need to re-evaluate your long-term goals? Are they still realistic?

Don't panic if you are not meeting your goals! During periodic reviews of your written goals, find out why you did not meet them. Were they not

realistic? Did circumstances out of your control change? It is ok to change goals, change timelines or sometime go in a completely different direction. As long as you have a direction and a way to measure and evaluate, you will have better success.

Make goals for yourself, for your family, and for your farm business. Involve anybody who could be affected by your plan, can help you evaluate your progress, keep you on task and help you stay motivated.

<u><i>Don't set goals like:</i></u>	<u><i>Do set goals like:</i></u>
“Have a high herd average”	“Reach a herd average of 1500 pounds of fat by December of 2021”
“Land a cow on the moon in 2020”	“Travel to Germany to see dairy farms by 2022”
“Grow more silage next year”	“Increase silage yield by 2% each year for the next 5 years”
“Still be in business next year”	“Pay off mortgage in 10 years, purchase 100 more acres in 15 years, retire in 25 years”

## Upcoming Events

**September 29-October 1, 2020**  
2020 Annual Meeting and Professional Improvement Conference of the National Association of County Agricultural Agents

**October 5, 2020**  
Pesticide Test Prep - Zoom Meeting

**October 10, 2020**  
Dairy Skillathon, Rockingham County Fairgrounds

If you are a person with a disability and require any auxiliary aids, services or other accommodations for any Extension event, please discuss your accommodation needs with the Extension staff at your local Extension office at least 1 week prior to the event.



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**Dr. Christina Petersson-Wolfe,  
Dairy Extension Coordinator &  
Extension Dairy Scientist,  
Milk Quality & Milking Management**

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