Dairy News

August 2016

www.dairylandvet.net

Selected Dry Cow Antibiotic Therapy (SDCT)

Blanket dry cow antibiotic therapy means treating every quarter of every cow that is dried off with a dry cow tube. This is a particularly effective method of preventing new cases of mastitis during the dry period, especially if coupled with the use of a teat sealant.

With the concern over antibiotic residue, antibiotic cost, and drug resistance, researchers have been studying if treating only cows with infections would give the same results. There is also research to determine if treating only infected quarters would have the same result.

The short answer is yes, but ONLY IF you still also use a teat sealant on every quarter of every cow that you dry up. However, there are issues that need to be discussed before adopting this strategy. First, how do you decide which cows or which quarters to treat?

Tests are available for cow level and quarter level:

At the cow level, the California Mastitis Test (CMT), On-farm culturing, and Somatic cell counts (SSC) are your best choices. Using the CMT, anything that tests "Trace" or greater should be treated. With the OFC, any cows whose milk produced growth on the media should be treated. With the SCC, a cut-off point of 200,000 could be used to determine which cows to treat. There is some research showing that using a lower cut-off point may give even better results. Using a SCC cut-off point of >50K for 1st lactation and >150K for 2nd and greater lactation shows good promise of narrowing the list of cows to be treated while also not treating cows that are not infected.

At the quarter level, either on- or off-farm culturing (either at our clinic or sent to a larger laboratory) can be used. A new culture plate with four sections is currently being developed by the University of Minnesota to try making culturing for SDCT easier.

The benefits of SDCT?

- Using selected dry cow therapy at the cow level can reduce antibiotic use by 20% on the average herd. If SDCT is used at the quarter level, it can reduce antibiotic use by 50%. The lower the level of mastitis in your herd, the fewer quarters that need to be treated, the greater the savings.
- Cows that need to be culled during the dry period or shortly after freshening that did not have infected quarters would not have a milk or meat withdrawal.

The disadvantages are only the extra work needed to determine which quarters need to be treated and the record keeping to track the treatments.

SAVE EVEN MORE!

ORDER YOUR DRUGS THROUGH OUR DROP SHIP CATALOG (GET A CATALOG FROM YOUR VET OR PICK ONE UP AT OUR OFFICE).

FROM SEPTEMBER THROUGH DECEMBER, ALL VACCINES ARE SPECIALLY PRICED!

Call us to reserve your spot at the next **Veterinary Feed Directive** meeting! Thursday, Oct. 27 @ 1:00 p.m.

On-Farm Culturing

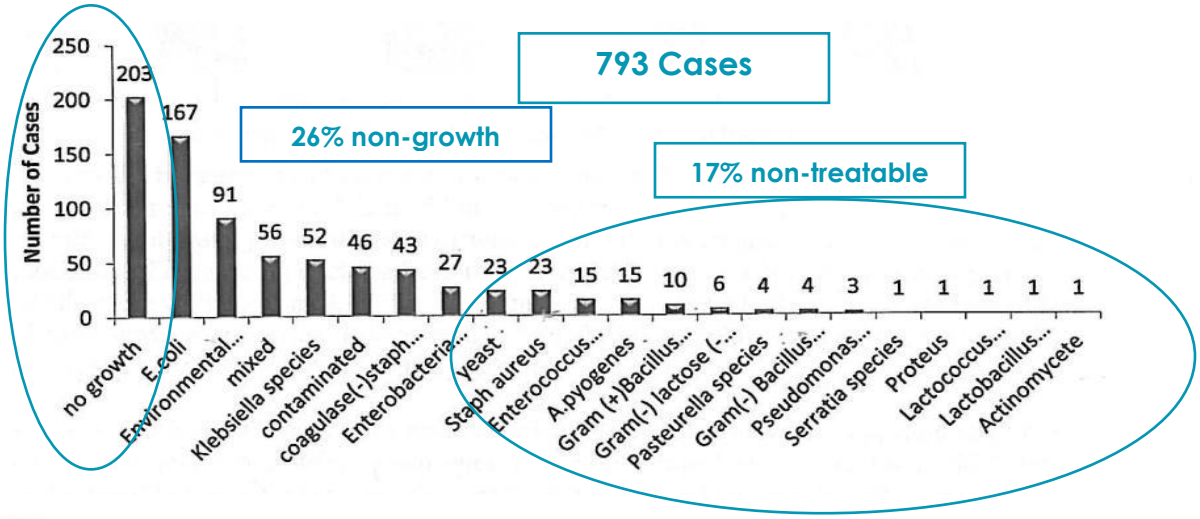
Approximately 80% of all antimicrobial drug use on a conventional Wisconsin dairy farm is for mastitis. (Pol and Ruegg, 2007). **A lot of money can be saved by determining which cows with mastitis actually need mastitis tubes.** About a 40% reduction in antibiotic treatment of mastitis can be obtained by using on-farm culturing and not treating cows with no-growth or Gram-negative results **(25-30% of these animals)**. "No growth" means that the milk no longer contains bacteria. The cow's immune response has successfully killed the bacteria. The abnormal milk or hard quarter we see is the result of the cow's immune response. The milk will return to normal in 4-6 days without the use of mastitis tubes. Remember that mastitis tubes contain an antibiotic used to kill bacteria that are not present in these animals. **This means that somewhere between 42-47% of our clinical mastitis cases do not require mastitis tubes.**

- When using on-farm culturing, it is important to use good technique to get the correct results. The order that the tri-plate culture media are swabbed out is important. Swabbing should begin on the Factor, then the MacConkey and finally, the MTKT. The reason for this is that antibiotics make the media selective. Plating should be done from the media that has the least antibiotics to the media that has the greatest level of antibiotics.
- Any milkfat or garget globules that get on the media should be circled with a marker from the outside of the plate. Otherwise, these could be confused as bacteria colonies that are growing.
- Plates should be checked at 24 hours for growth and again at 48 hours before being thrown away. Occasionally, slower growing bacteria need more time to show growth.
- To make treatment decisions, you need to be able to determine a "Growth" from a "No Growth" and a "Gram Negative" from a "Gram Positive". These two things will tell you if you should treat or not treat the quarter with antibiotics.
- Determining whether a Gram-positive growth is a "Staph" or a "Strep" is less important in deciding whether to treat, since both need treatment. It is important, however, if you are concerned about contagious mastitis.
- With practice, you can determine when a plate has "hemolysis" or "No hemolysis". Hemolysis is a characteristic of Staph. aureus and Strep. agalactia bacteria, which are contagious causes of mastitis.

We also find when culturing cows that **17% of the cows have an infection that does not respond to antibiotics**. This includes such infections as Staph aureus and yeast. Staph Aureus is a contagious mastitis that is very difficult to treat. These animals need to be milked last to prevent spread to other animals. Yeast is not a bacterium and therefore will not respond to mastitis tubes.

Do not forget to enter ALL mastitis results in your record system. Even the cows that did not get antibiotics should be recorded so that you can get a true indication of mastitis on your farm.

If you are interested in doing on-farm culturing, contact us at Dairyland Veterinary Service for assistance on obtaining equipment and training. We can also culture milk in-office at a cost of $8 per sample. For further information, the UW Milk Quality website is a great resource in understanding the benefits of on-farm culturing.



DAIRYLAND VETERINARY SERVICE
Wise Choices. Healthy Animals.
310 Main Street, Casco, WI 54205 ◆ (920) 837-7766 ◆ www.dairylandvet.net