



BeefTalk 669: Good Biosecurity a Must for Beef Operations

SUPPORTING MATERIALS



We need to do our part as producers to maintain effective biosecurity within and across our herds.

The current discussion in cattle circles about bovine tuberculosis certainly brings up mixed emotions. Producers always are concerned when situations are discovered that impact individual herds of cattle.

Perhaps a discussion in broader terms would provide some background. Cattle are no different than other living creatures. They are a highly refined and well-organized package of living cells. These cells each have a function and must and will do what is expected for the lifetime of the cow.

Most cells are good and perform their expected function in life. Every day, each cell responds to signals that indicate what should be done. Cows have an assortment of cells, such as muscle, lung, brain, rumen, white and red blood, and many more that have specialized functions.

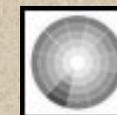
For example, skin cells hold all the cells together and help protect the other cells from harm and invasion by nonfriendly cells. This may sound a little like science fiction, but there is no science fiction here. Why? Because all living things, not just cattle, must deal with pathogens, which are cells in their own right that causes diseases.

Tuberculosis (TB) in cattle is caused by *Mycobacterium bovis*. TB bacteria are not welcome cells in cattle or other living creatures. Cells that protect the body form defensive barriers to prevent the mixing of good and bad cells. These cells manage to keep bad cells at bay most of the time. However, we also need to do our part to limit exposure.

In human terms, most of us have a natural aversion to others if our protecting cells are breached. In simple terms, we realize we do not want to spread an infection we might have to others or get infections that others might have. We



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simply do not want to spread germs to those around us, so we take precautions.

The first and most recommended precaution is to stay home or at least limit our contact with others. This is called good biosecurity. In addition, we are encouraged to wash our hands, use tissues or other germ-catching material or even use disinfectants when appropriate. We wash, dispose of waste products and clean our environment regularly.

When we fail to practice good biosecurity, there are cells in our bodies specially designed to react or police our systems. These cells attack to get rid of bad cells that infect our systems. If one has ever coughed or sneezed or had the displeasure of having to forcefully discharge bodily material, one should be happy because that means our body's system is working and expelling unwanted and perhaps harmful stuff.

What does this have to do with cows and TB? Well, when a cow is infected with *Mycobacterium bovis*, bad bacteria have taken up residence, which is not good. Treatment regimens in livestock are impractical, so the eradication of *Mycobacterium bovis* is the goal.

In the U.S. and throughout the world, the eradication of *Mycobacterium bovis* has been a priority, which has been very effective. When TB is located anywhere in the world, a harsh and aggressive offense is activated to further eliminate the bad bacteria. It's a war that the living are winning because quick and aggressive action is taken at the beginning of any outbreak.

As far as health goes, cattle and people are better off today than at any other time in history. TB is under control. The moral of this story is that we need to be more focused on future prevention.

Obviously, we need to do our part as producers to maintain effective biosecurity within and across our herds. We always must assume the worst and do everything we can to prevent exposure. The cow does everything she can to avoid harmful bacteria, which in this case is *Mycobacterium bovis*.

Unfortunately, even when everything is done to prevent exposure, TB can get by the body's defensive mechanisms. A cow can become an active host for TB and potentially spread TB within the herd. Cattle producers always must be vigilant and avoid cattle that may be at risk of being a carrier of TB or any other pathogen. The best and most effective control of any pathogen that can affect a cow herd is to make sure that the herd never is exposed.

However, even when everything is done right, bad things happen. Support is good and blame is not. An effective response to any bad cells will minimize the impact. That is good.

May you find all your ear tags.

Your comments are always welcome at <http://www.BeefTalk.com>. For more information, contact the NDBCIA Office, 1041 State Ave., Dickinson, ND 58601, or go to <http://www.CHAPS2000.com> on the Internet.

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