

Management Is Key to



PHOTO BY SHAUNA ROSE HERMEL

Human nature often hampers efforts to control trichomoniasis, as producers often don't want to admit their herd is infected until ramifications are too large to ignore.

by **Troy Smith**, field editor

Herd Health



Most people don't like to talk about venereal disease. When their herds become infected with a sexually transmitted disease, some producers prefer to keep it quiet. Jeff Ondrak says trichomoniasis is one sexually transmitted disease that must be discussed. A clinical veterinarian at the University of Nebraska Veterinary Education

Center, Ondrak is about as well-versed in "trich" as cow doctors get. He says that despite efforts to raise awareness, many, if not most, cattle producers remain uninformed or misinformed regarding trich.

Most states in the western half of the United States have adopted regulations aimed at controlling the disease. Typically, before entering one of these states, breeding bulls must test negative for the protozoan parasite *Tritrichomonas (Trichomonas) foetus*, which causes the disease. Yet, even in regulated states, the prevalence of trich continues to ebb and flow.

Why does it persist? Ondrak says it's usually because of a breakdown in herd biosecurity. An infected animal gains access to the herd and the infection spreads. Bulls are the usual suspects, but it's possible for females to carry the disease much longer than many people realize. Regulations require only bulls to be tested, but there is room for error.

Ondrak says "human nature" is another reason trich is a problem that never quite goes away.

"Trich often goes unreported," explains Ondrak. "Some producers don't know they've got it in their herds. Some don't care, and some really don't care if it affects their neighbors."

Affects more than bulls

Often called self-limiting in females, the infection usually is eliminated from the female reproductive tract after three heat

What producers need to know about trichomoniasis

- ▶ It's caused by the protozoan *Tritrichomonas (Trichomonas) foetus*, the sexually transmitted disease is introduced to a herd by an infected bull, or a female that previously mated with an infected bull. Virgin bulls are unlikely to be infected, for the obvious reason.
- ▶ Infected bulls show no outward symptoms. There is no negative impact to semen quality or a bull's ability to service cows. Infected bulls act as a reservoir for the causative organism and, generally, remain carriers for the remainder of their lives. Identification of carrier bulls is critical to management of infected herds.
- ▶ In most cases, infection does not keep a cow from conceiving. Occasionally, an infected cow develops a collection of pus in the uterus (pyometra) and cannot conceive. Typically, reproduction is hindered due to an inability to maintain pregnancy. Embryonic death may occur early, or abortion may occur later — as late as the third trimester of gestation. Pregnancy losses in infected herds can run as high as 50%.
- ▶ Most cows clear the infection within a few months, but not always. Some cows carry the infection long-term and may infect "clean" bulls.
- ▶ The most effective means of controlling trichomoniasis is preventing its introduction to the herd. Take biosecurity measures. Test bulls coming into the herd. Be particularly cautious with leased or borrowed bulls. Testing the bull battery prior to each breeding season may be advisable. Be careful when purchasing females, especially open cows.
- ▶ There is no treatment for trich, and no way to tell definitively if a herd is infected without testing.
- ▶ Understand the limitations of trich vaccine. A veterinarian can help.
- ▶ Information about state regulations, including testing requirements, is available from a veterinarian or your state department of agriculture.

Controlling Trich



► “Trich often goes unreported. Some producers don’t know they’ve got it in their herds. Some don’t care, and some really don’t care if it affects their neighbors,” explains Jeff Ondrak.

cycles. In herds exposed to a long breeding season, an infected cow might abort an initial embryo, and then become pregnant later in the season. However, it is possible for a cow to become a long-term carrier.

“Cows don’t always clear the infection,” says Ondrak, citing instances where 300 days after breeding, cows remained positive for trich. In other cases, infected cows delivered their calves and were still trich-positive nine weeks later.

“If we’re going to propose legislation or regulation that will be effective, we need to know more about carrier cows,” opines Ondrak, noting there is more to be learned about trich-infected bulls.

There’s little doubt that bulls, once they are infected, are lifelong carriers. The *T. foetus* organism takes residence in the epithelia crypts (crevices and folds) of the tissue surface of the bull’s penis and prepuce. Testing of bulls involves analysis of smegma (shed skin cells and secretions) collected from the surface of the penis and prepuce. Ondrak says erroneous results can occur, though, due to diagnostic or reporting errors. Additionally, infected bulls can test negative because of how

the sample was collected and handled prior to analysis.

Also affecting test results are differences in trich-infected bulls. Ondrak’s own research shows that some bulls carry greater or lesser loads of the organism than others. That can affect the likelihood of collecting a positive sample, but so can the specific site where the sample is collected.

Traditionally, the preputial reflexion or fornix (that area of loose skin folds allowing the penis to retract or extend) was thought to be the best site for collecting samples. However, Ondrak says sampling is four times more effective when collection is made from the area ahead of the fornix, and seven times better when a sample is taken from the tip of the penis.

So what do you do if and when testing confirms the presence of trich in your herd? Ondrak says it’s mostly a matter of management. Trichomoniasis vaccine is available, but it does not stimulate immunity

to the disease, and it won’t cure carrier cows.

“Vaccination does not prevent infection,” emphasizes Ondrak. “It can speed up a cow’s ability to clear an infection. It probably offers some protection to a fetus, so there would be fewer abortions, especially in virgin heifers. But vaccination probably isn’t the answer to trich. Management is the better answer.

“Trich is something you need to keep in the back of your mind,” adds Ondrak, noting the very real need for more education to make producers trich-savvy. “If more producers paid attention to where they get their bulls and how they take care of their cows, trich wouldn’t be much of a problem.”



Editor’s Note: Troy Smith is a freelance writer and cattleman located near Sargent, Neb.

How bad can it be?

Guarding against trichomoniasis (trich) requires vigilance. A producer needs to watch for signs of potential infection. This might include seeing cows coming into heat when they should be pregnant, or an unusually high number of open females detected at pregnancy examination time. Things like that might spell trich-trouble, especially if you know a neighbor’s bull visited your breeding pasture, or your own bull didn’t spend all of his time at home. Infection could have been spread by that fence-hopping female that was traveling around last breeding season.

All kinds of events considered just part of the cow-calf business could turn into real horror stories. South Dakota State University veterinarian Russ Daly has heard plenty of true trich tales. Here are three summaries of case histories reported by colleagues in his state:

2,000-cow operation. When a group of breeding-age cows on this ranch were preg-checked, 20% were found open. Surprised and suspicious of trich, the veterinarian suggested trich-testing the herd, but the owner declined. The open cows were kept and managed with bulls over the winter.

Following the next breeding season, pregnancy examination revealed 25% open cows. Testing for trich revealed six positive cows. Seventy-five percent of the mature bulls and 10% of young bulls tested positive.

300-cow operation. This producer heard there was trich in a neighbor’s herd, but he has never knowingly had bulls or cows mix with that neighbor’s cattle. The producer’s pregnancy rate was 95%, but one cow did abort in November.

In the spring, three weeks before turnout, the producer decided

to have his bull battery trich-tested. Out of 22 head, three bulls tested positive. Each of the infected bulls had been in different pastures during the previous breeding season. However, all of the bulls wintered with cows that included the aborted female. After aborting her calf due to trich infection, she returned to heat and infected those three bulls.

140-cow operation. She was one of those “breechy” yearling heifers that wouldn’t stay home. Her owner knew she’d been back and forth to the neighbors several times. When the heifer came home and jumped in with his bulls, the rancher decided her wandering days were over. He loaded the heifer, hauled her to town and sold her.

The next year, this rancher’s cow herd posted a 50% calving rate. All eight of his bulls tested positive for trich.

Daly says that last account involved a stockman who had already reduced his cow numbers because of drought. The trich problem hit him hard. Daly suspects recent and ongoing drought conditions have or will result in increased opportunity for herds to become infected with trich. It’s a potential risk for producers seeking to relocate all or part of their herds to greener pastures.

“Drought does have an effect on the transmissibility of trich because it’s not uncommon for producers to summer their herds in two or three different locations,” explains Daly. “There could be many different opportunities to contact infected herds.”

Those producers really need to be on their guard. Relocating cattle temporarily, until the drought breaks, means some of them could come home with a nasty disease.