

# Detecting and Controlling Trichomoniasis in Beef and Dairy Cattle



Trichomoniasis (or "trich") is a venereal disease of cattle, meaning the infection is spread during mating. It is caused by a protozoan parasite, *Tritrichomonas foetus*. Evidence suggests that the disease is fairly widespread throughout the Western United States—and that it's on the rise in Oregon. "Trich" is difficult to detect in a herd and equally hard to treat once it is discovered. The estimated loss to the U.S. beef industry is over \$100 million per year.

There are no signs of infection in the bull, but the organism lives in the tissue lining of the penis, prepuce, and sheath. At breeding, "trich" can be transmitted to the vagina of the cow and allow infection to develop in the reproductive organs. The initial infection does not usually interfere with conception; rather, it causes the death of the embryo approximately 50 days later. That's why "trich" is often called the "calf-robber."

Typically, infected cows or heifers return to estrus 1 to 3 months after breeding. This infertility may persist for 2 to 6 months, after which an immune response eliminates the infection in most females and pregnancy can be reestablished.

Some infected cows develop pus in the uterus, and others may abort. Some cows remain infected but are able to deliver a normal calf.

Diagnosis of "trich" in a herd is often difficult. In an infected herd, the symptoms appear as an increasing number of open cows or heifers or a calving interval that is spread over several months. Several factors other than "trich" may also result in reduced reproductive efficiency in a herd—so a definitive diagnosis is necessary.

This means a direct microscopic examination of preputial smegma samples from the bulls and/or from pus collected from infected females. Your veterinarian is the person most qualified to collect samples and make the diagnosis.

The collection, culture, and examination procedures are still fairly crude by today's standards. So confirmation of trichomoniasis infection in a herd may take more than one sampling session—especially when you try to diagnose the disease in a small herd or when you sample only a limited number of bulls.

The diagnostic procedures are more efficient in a herd or battery of bulls than

with a single bull. There is a chance of missing the organism (and falsely identifying a bull as negative) if you take only one sample.

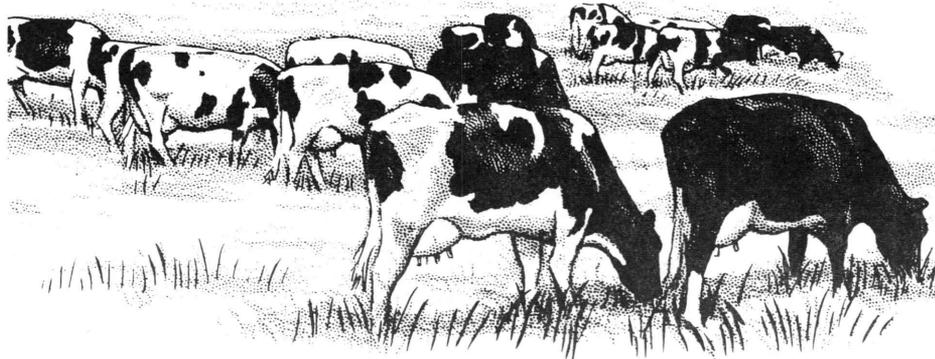
To eliminate other factors that may be contributing to the reproductive failure, it is recommended that you test all bulls if your herd has less than 20 and that you complete a breeding soundness exam at the same time—that is, a physical exam and a semen exam for each bull tested for "trich."

Treatment for "trich" is available. However, the high cost of labor and drugs—plus the questionable efficacy and unknown withdrawal time requirement of the drugs used—may limit the usefulness of treatment.

Further, neither of the drugs currently used for control is approved for use in food-producing animals. Therefore, either one of them requires a specific veterinarian-owner-patient relationship and agreement for its use in a herd.

The following recommendations are for the management of a trichomoniasis-infected herd:





## Bull management

1. Separate bulls from cows as soon as possible after the breeding season. Culture bulls for diagnosis. If you find trichomoniasis, treat all bulls under 4 years and *cull the remaining bulls*.
2. Rest bulls a minimum of 1 month *after treating* before returning to breedings.
3. Rest young bulls a minimum of 3 months before reuse if not treated—the longer the rest period, the better. (This rest period is not effective in older bulls.)
4. If a pen of bulls has been rested for a few months or treated, *do not* allow other bulls recently pulled from cows to be penned or pastured with the rested bulls. Bulls can pick up trichomoniasis by riding one another.
5. Do not allow new bulls or bulls that run with heifers to mix with older bulls unless they are treated and rested 1 month before being penned or pastured together.
6. If a new or treated bull gets back with the cows, treat him and separate him for 1 month before returning to the original pen of bulls.
7. Vaccinate bulls with four doses of an oil-base vibrio vaccine before breeding. New bulls should have two vaccinations of four doses of vibriosis vaccine, at least 2 weeks apart, before use. (Vibriosis becomes much worse in a trichomoniasis herd because of the spread-out breeding season.)
8. The older a bull becomes, the more likely he is to become a chronic carrier. It is recommended that you *save* only *bulls under 4 years* of age for reuse. If you establish workable treatment, your older bulls may be more acceptable.

## 9. New bulls

- a. When purchasing new bulls, be sure they have only been run with virgin bulls and not previously exposed to cows or run with breeding bulls.
- b. Rental bulls or traded bulls are not recommended.
- c. Buying used bulls is not recommended—many ranches have trichomoniasis and do not realize it.

## Heifer management

1. Only allow new or clean bulls to breed heifers.

2. Vaccinate heifers with two separate shots of an oil-base vibrio vaccine, at least 2 weeks apart, before breeding, since vibriosis runs with and looks like trichomoniasis.
3. Separate bulls from heifers after the breeding season of 3-4 months.
4. Examine heifers for pregnancy and sell any nonpregnant heifers.

## Cow management

1. Allow bulls to be taken from the cows after the breeding season of approximately 4 months and do not put them back until the next breeding season.
2. Under range conditions, try to breed as many cows as possible before mixing with other herds. Promote better cattle management with other permittees.
3. Examine *all* cows for pregnancy and take out nonpregnant cows.

## Finally . . .

Remember that vibriosis remains a threat in some herds, even after vaccination. There is some risk in relying on vibrio vaccines that contain aluminum hydroxide. The duration of immunity to vibriosis with aluminum hydroxide is short, and resistance to vibrio infection may not carry over to the next breeding season. Be sure to use a vibrio vaccine with an oil base.

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