Trichomoniasis

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Trichomoniais or "trich" is a disease of cattle and an important cause of early pregnancy loss and open cows. This disease is becoming a more frequent diagnosis when evaluating reproductive problems within a herd. Many states currently have or are contemplating regulations to control the entry and spread of the disease. Trich is caused by a parasite that is transmitted from a bull to a female or from a female to a bull during the act of mating. The disease does not produce any signs of illness in the bull but can occasionally cause obvious reproductive tract infections in females.

The first signs of trichomoniasis is often noticed when cows and heifers resume cycling one to three months after breeding. Producers observe cows showing signs of heat and more cows cycling late in the breeding season. The infection in the female and associated infertility may last for two to six months. In infected herds the number of females that calve can be reduced by twenty to forty percent and a producer will experience a spread out calving season with more calves being born proportionally later in the calving season.

Infection in the female occurs by exposure to an infected bull at breeding. Initial infection of the female does not cause immediate loss of the pregnancy. Rather the pregnancy progresses for a couple of weeks to a couple of months at which time the embryo/fetus dies and is resorbed or aborted. If a cow is infected the parasite is generally eliminated from the reproductive tract within six months. Immunity to the parasite is not permanent and the female can be re-infected in the next or future breeding seasons. Some females may remain infected longer than six months and if pregnant can deliver a healthy calf. These chronically infected females are a significant reproductive health risk for the herd because they remain as a source of infection for the herd.

Infection in the bull is inapparent and does not affect their fertility. The organism in an infected bull lives in the microscopic folds present on the tissue covering the penis and lining prepuce. Historically it was generally considered that bulls less than four years of age will clean an infection while bulls four years and older are infected for life. Currently any non-virgin bull exposed to infected or carrier cows should be considered as being potentially permanently infected a carrier of the organism and able to transmit the disease.

At this time there is not an effective and legal treatment to clear the infection in females or bulls. With no treatments available producers should work to prevent infected bulls and cows from coming into contact. Prevention and control measures vary depending on the disease incidence. Common management strategies or biosecurity measures for control of the disease are: utilization of artificial insemination, testing of non-virgin bulls prior to the breeding season, limiting the breeding season to ninety days or less, culling open cows, isolate the herd from potentially infected herds, vaccination of females against the disease. If breeding animals are added to the herd, cows or bulls, they should be from a know source free of the disease. In herds where previous trich

infection was confirmed it is recommended calving cows should be allowed to have at least two cycles between calving and the start of the next breeding season to increase the likelihood of the cow clearing the carrier state prior to being exposed to a bull.

Testing bulls for the presence of the organism is an important part of a control program. In order for a bull to test negative three samples collected at weekly intervals should be culture negative. Even with this program there is still the possibility of an infected bull testing as a false negative. Any bull with a culture positive should also be further tested using the PCR test to confirm that the organism isolated is associated with the disease trichomoniasis and is not a contaminant. Any bull that is diagnosed with trichomoniasis should be sent to slaughter. None should be sold with the potential to re-enter a herd as a breeding animal.

Vaccines are available which are labeled for use in healthy cattle as an aid in the prevention of disease caused by Tritrichomonas foetus. These vaccines are not one hundred percent effective. The initial vaccination is given eight weeks prior to breeding, and the second four weeks prior to breeding. Cows vaccinated previously should receive an annual vaccination four weeks prior to breeding. Vaccination against trichomoniasis does not prevent infection, rather it helps exposed cattle produce an immune response quicker than unvaccinated animals aiding in the elimination of the organism. Vaccination of cows has been shown to aid in the reduction of open cows in exposed herds. However it does not prevent all losses.

Vaccination of the herd against trichomoniasis is one of the tools which aids in control of the disease however without utilizing other control measures such as, artificial insemination, purchase virgin bulls, testing of exposed bulls, culling open females, and a limited breeding season, vaccination alone may be of very limited aid in control of the disease. Trichomoniasis can be an insidious disease with economically devastating affect upon a herd. Biosecurity measures to prevent the entry of the organism into a herd are preferable, as elimination of the disease from a herd is difficult. If trich has been diagnosed in your herd or in your area producers should work with their veterinarian to design control strategies for their herd.