Management Strategies for Trichomoniasis in Breeding Cattle

ECONOMIC IMPACTS OF EXTENSION EDUCATION

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IMPACTS OF TRICHOMONIASIS

- Bovine trichomoniasis (Trich), a venereal disease of cattle caused by the protozoan Tritrichomonas foetus, causes early pregnancy loss and occasional late-term abortions. Beef cows can breed again, but that leads to a reduction in both pounds produced and profits through the extended breeding season.
- The introduction of Trich to unsuspecting cow herds can result in calf crops of 20% compared to 85% on average.
- Economic losses from Trich have been estimated at more than $150 million annually for Texas cow-calf producers.
- Because of the disease's impact, the Texas Animal Health Commission has placed restrictions on the sale of bulls at auction markets. Other states across the U.S. have established similar regulations.

AGRILIFE EXTENSION'S RESPONSE

AgriLife Extension developed educational programs about Trich that focus on defining the disease, transmission methods, surveillance, prevention, and management and treatment strategies.

- AgriLife Extension produced a list of biosecurity management principles for cow-calf producers to minimize the risk of Trich entering their breeding herds.
- Biosecurity management principles include maintaining perimeter fences to segregate cattle of unknown status for a quarantine period. Bull management practices include buying only tested bulls, having all bulls tested, managing a defined breeding season and culling all open cows. Best practices for cows include culling all nonpregnant females, not buying open or short-bred cows, managing risk for pregnant females and using best practices for culling nonbred cows
- Program evaluations indicate a significant increase in ranchers' perceived ability to implement Trich management practices after participating in AgriLife Extension programs.
- AgriLife Extension and the Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL) were instrumental in developing an improved diagnostic test (qPCR) for Tritrichomonas foetus. It was subsequently awarded a U.S. patent for the new test.
- Extension specialists have conducted extensive educational programs on Trich awareness and management principles. Since 2017, these educational efforts have reached approximately 5,600 beef cattle producers and 700 veterinarians.

ECONOMIC IMPACTS

The new AgriLife Extension and TVMDL diagnostic test and procedures were successfully used to eradicate Trich on several chronically infected Texas ranches that manage a combined 23,000 cows and 1,200 bulls.

- Adopting the new test and procedures resulted in a 21% increase in gross revenue, or $3.1 million annually on these ranches.
- Ongoing efforts in Trich education continue with producer groups across Texas. Expected regulations on Trich in cows will require more educational efforts. Ongoing Trich research addresses the economic benefits and costs of a vaccine and benefit-cost relationships for alternative management strategies when the disease is present in the herd and when it is not. Preliminary results show a Trichomoniasis prevalency rate of 4.8% with the majority of the cases located in east Texas.