

## Understanding pinkeye; a laboratory overview



Real-time PCR (polymerase chain reaction) testing has shifted the way veterinarians and farmers use diagnostics. PCR is used in outbreak situations and with pathogens that can be tough to culture. It is also used in routine disease monitoring programs. Infectious bovine keratoconjunctivitis (IBK), also known as pinkeye, is one of the more common eye diseases in cattle. Several pathogens are associated with IBK, however, *Moraxella bovis*, *Moraxella bovoculi*, *Mycoplasma bovis*, *Mycoplasma bovoculi* and *bovine herpesvirus type 1* (BHV-1) are most frequently observed <[link](#)>.

Addison Biological Laboratory provides laboratory and autogenous services used by veterinarians and cattle producers to identify the source of various infections, including IBK. The consistent prevalence of *Moraxella bovoculi* led us to develop the first USDA conditional licensed commercial *Moraxella bovoculi* Bacterin in early 2017 <[link](#)>.

Over the past four to five years laboratory results have been steady, identifying ***Mycoplasma bovoculi*** when requested with samples submitted for testing. *Mycoplasma sp.* laboratory results from 2019 will help animal health professionals understand the consistent immunosuppressive presence of *Mycoplasma bovoculi*. Testing for this pathogen is encouraged since ***Mycoplasma bovoculi*** is prevalent in breaking herds. Samples submitted by breaking herds are more than twice as likely (70/30) to be positive for *Mycoplasma bovoculi* than not.

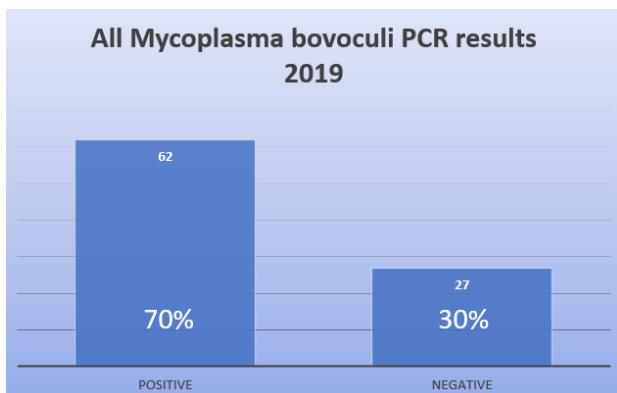


Table 1: All 2019 cases with samples submitted and electing to test for *Mycoplasma bovoculi*.

***Mycoplasma bovoculi* does NOT cause pinkeye.** Instead, it is locally immunosuppressive, which may severely compromise protection induced by vaccination. To date, there are no effective bacterins available (commercial or autogenous) for the prevention of *Mycoplasma bovoculi*.

2019 cases submitted from herds that broke with pinkeye, were vaccinated with both *Moraxella bovis* and *Moraxella bovoculi* and elected to be tested for *Mycoplasma bovoculi*.

Cattle properly vaccinated with *Moraxella bovis* and *Moraxella bovoculi* that are *Mycoplasma bovoculi* positive are not considered vaccine failures.

The most effective treatment for *Mycoplasma bovoculi* positive herds appears to be high-powered antibiotics, along with aggressive mineral support.

### ***Mycoplasma bovoculi* PCR results from herds vaccinated with BOTH *M. bovis* & *M. bovoculi* vaccine**

\* Veterinarian reported as a mineral deficient herd



Table 2: 2019 cases submitted from vaccinated herds that broke with pinkeye