



## Pinkeye

Infective bovine keratoconjunctivitis

Pinkeye is an ulceration of the surface of the eye caused by the bacterium *Moraxella bovis*.

### Clinical signs of Pinkeye.

The disease starts with eye(s) tearing. Tear streaks are usually evident from the inner corner of the eye and cattle often keep affected eyes closed. Usually within a day of the start of tearing, close examination of the eye will reveal pits (1/16 inch or larger) called ulcers on the surface of the eye. During the next few days these will enlarge, become very painful, and the eye will turn blue, then white. There may be a blood red border around these ulcerations. In severe cases the surface of the eye may rupture. Animals infected in both eyes are usually blind. Pinkeye normally starts in one or two animals and is quickly spread by face flies or direct contact. Usually within two weeks of the initial cases the herd outbreak is at its most severe stage. Recovered cattle will sometimes have enlarged or misshapen eyes with bluish to white scars on the surface.

### Where do cattle get the Pinkeye organism?

The introduction of new cattle into a herd can serve as a source of the organism, *M. bovis*. However, this organism is often found as part of the resident bacterial population in a herd. *M. bovis* can reside in the eyes and upper respiratory tract and not cause disease until predisposing factors are present.

### Predisposing factors.

Pinkeye predisposing factors fit into two classes. One class would be anything that interferes with the immune response of the animal and includes such things as:

- Cattle are not getting enough energy (poor feed quality or insufficient feed amounts).
- Vitamin and/or mineral imbalances and/or shortages, particularly Vitamin A.
- Water sources that are not clean or contain intoxicants such as nitrates.
- Concurrent disease such as fescue endophyte poisoning, IBD, BVD, etc.
- Stress.

The second class of predisposing factors includes anything that irritates eyes, such as:

- Excessive ultraviolet light (lack of shade).

- Dust and pollen irritation.
- Long dry grass stems and seeds.
- Face flies.

### What is the economic significance of Pinkeye?

Pinkeye causes a significant decrease in weight gain and may result in the loss of an eye. Several independent studies on nursing calves indicate reduced weaning weights of 25 to 40 pounds. Although cows are not infected as readily as young animals, they do get Pinkeye and milk production is severely reduced. It is estimated the U.S. cattle industry loses over \$150,000,000 per year from this disease (this loss does not include treatment costs).

### Preventing Pinkeye.

Pinkeye is prevented by management to eliminate or reduce exposure to as many predisposing factors as possible and the use of a good vaccination program.

"Over the last ten years, our practice has used four different commercial vaccines. Of these vaccines we have found MAXI/GUARD® Pinkeye bacterin to give the best results in terms of efficacy, safety and ease of administration. This vaccine, when combined with reasonably good management, will achieve well over 95% protection." K. Fronseck D.V.M.

### Treating Pinkeye.

Pinkeye treatment recommendations may vary somewhat between veterinarians. We would make the following recommendations:

1. Consider Pinkeye a contagious herd disease.
2. Vaccinate the entire herd with MAXI/GUARD® Pinkeye bacterin to stop the spread of disease.
3. Give injectable Vitamin A to the whole herd. We find Vitamin A enhances the health of the eye tissues and also enhances the immune response we get to Pinkeye vaccine.
4. Use long acting oxytetracycline, at least on the infected animals.
5. Many veterinarians will also inject the eye lid of infected eyes with antibiotic and suture eye lids on severely infected eyes.
6. Clip long stemmy pastures. On fescue this also reduces the intake of endophyte which concentrates in the stems and seeds.
7. Administer some form of fly control if flies are present.
8. Try to eliminate other predisposing factors including stress.

K. Fronseck D.V.M.



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