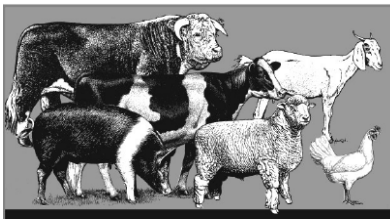

Pinkeye in Cattle

Christine B. Navarre, DVM

What is it?

Pinkeye, also known as infectious bovine keratoconjunctivitis (IBK), is a common disease of cattle that causes redness and ulcers in the eye. It is very painful and causes significant economic losses due to decreased weaning weights and cattle value.

Pinkeye is primarily caused by the bacteria *Moraxella bovis*, but other bacteria and viruses may be involved. These organisms can be found in normal eyes and don't necessarily cause pinkeye unless there is underlying irritation to the eye and/or problems with the immune system of the cattle. Excessive ultraviolet light (sunlight), flies (especially face flies), tall grass, dust and wind are common irritants that lead to pinkeye. The number of cases and severity are also influenced by anything that depresses the immune system, such as stress and deficiencies of protein, energy, vitamins (particularly vitamin A if the forage is lower quality) and/or minerals (particularly copper and selenium).

Pinkeye is known to occur at all seasons of the year and in all breeds of cattle, but it is most common in summer months and in cattle with no pigment on their eyelids. It's more common in calves than older cattle and in bull calves more than heifer calves.

Pinkeye results in mild to severe symptoms and even permanent blindness. Excessive tearing and squinting of the affected eye are the two signs most commonly observed. As the disease progresses, the cornea becomes cloudy or white, and an ulcer (a round indention) frequently develops near the center of the cornea. Cattle with pinkeye keep the affected eye or eyes closed because of pain and to avoid bright sunlight.

How is it treated?

Early treatment is essential not only in limiting the production impacts but also in preventing spread in the herd. It's best to gather and treat only the affected animals. Congregating cattle in corrals and running them through the chute increases the chance of dust irritation and contact between animals, which increases the chance of spreading the disease. If more than 10-20% of animals in a herd are affected, it may be beneficial to treat all cattle. Care should be taken to minimize dust exposure and stress. This is a situation where low-stress cattle-handling techniques are extremely beneficial.

The best treatment for pinkeye is an injectable antibiotic. As of this writing, the approved products to treat pinkeye in beef cattle include long-acting tetracycline products (for example, LA-200®, Biomycin 200®, etc.) and tulathromycin (Draxxin®). There may be resistance in some

herds to these treatments, especially to oxytetracycline, and a veterinarian may need to conduct a culture and sensitivity test to determine which antibiotic to use. Treatment of dairy cattle should be under the direction of a veterinarian.

Placing a patch over the eye following treatment is also recommended. It protects the eye from sunlight and keeps flies away from the eye. This should decrease spread of the disease in the herd and increase animal comfort and therefore grazing activity.

How is it prevented?

Preventive measures are also very important in either keeping pinkeye outbreaks from occurring or in minimizing the impacts when they do. Providing both shade and adequate nutrition are important for overall health of cattle but also help minimize pinkeye outbreaks. Keeping pastures clipped, especially once seed heads start to appear, as well as controlling dust will also help. Reducing stress associated with handling, weaning, increased stocking density and exposure to other infectious agents may decrease disease incidence.

In many cases, the biggest culprit in pinkeye outbreaks is face flies. They are also the hardest to control. Face flies irritate eyes, which leads to excessive tearing that attracts more flies. They then pick up the causative agent and transfer it to other animals. In comparison to horn flies, face flies actually spend very little time on one animal but go from animal to animal. Getting aggressive in controlling all flies, but particularly face flies, is a must in prevention and control of outbreaks. Several options for fly control include fly tags, pour-ons, sprays, dust bags and back rubbers. For more information on flies and fly control go to https://www.youtube.com/watch?v=PB6ClVzzWIM.

Both commercial and autogenous vaccines are available for pinkeye control. The nature of *Moraxella bovis* and the other bacteria involved in causing pinkeye make development of a highly effective vaccine difficult. This leads to variable results from ranch to ranch. They are rarely effective in preventing outbreaks alone, but may decrease number and severity of cases in some herds. The herd veterinarian can help with decisions about pinkeye vaccine protocols and the cost effectiveness of pinkeye vaccination.

Author

Christine B. Navarre, DVM, MS
School of Animal Sciences
Louisiana State University Agricultural Center

Clare M. Scully, DVM, MS
Department of Clinical Sciences
Louisiana State University School of Veterinary Medicine

June 2020