

Control Pinkeye Before It Affects Summer Gains



DR. JEREMY POWELL

FAYETTEVILLE, ARK.

Pinkeye is a common problem plaguing cattle during the summer months. It can affect cattle of all ages, but younger cattle tend to exhibit a higher incidence of disease. Cattle suffering from the disease have noticeable economic losses associated with decreased weight gains, treatment expense, lower market prices and poor performance. Estimates of total production losses may vary from year to year, but some estimate the beef industry loses as much as \$150 million annually to this disease. One scientific study conducted in Kentucky reported 205-day weaning weights were lowered by 36 lbs in bull calves and 40 lbs in heifer calves that had experienced an episode of pinkeye prior to weaning. The same study also reported that after weaning, male calves that had experienced disease before weaning continued to be affected, and they exhibited lower average daily gain and lower 365-day weight compared to calves that had not experienced disease.

Pinkeye is the common name for a bacterial disease caused by *Moraxella bovis*. Multiple strains of *M. bovis* exist, and each strain may be capable of leading to infection. Several factors can contribute to predisposing cattle to pinkeye. These factors include UV light, face flies, tall forage, a dusty environment and plant seed heads. Any of these factors can increase the likelihood of disease onset due to their ability to cause irritation or injury to the eye. Even though all breeds of cattle are susceptible to pinkeye, cattle lacking pigmentation around the eye have an increased prevalence of this disease. Unpigmented eyelids and white hair on the face does not absorb UV light, which may increase the irritation from sunlight.

The most important method of transmission for pinkeye is the face fly. Increased eye irritation often leads to increased lacrimation (tears), which attracts face flies. Unlike horn flies, face flies spend very little time on the animal. Therefore, face flies move from animal to animal spreading the bacteria. Pinkeye bacteria may remain viable for up to three days on the fly's mouthparts once they are picked up from an infected animal.

Cattle affected by pinkeye may exhibit a variety of clinical signs depending on the severity of the disease. Initial symptoms associated with pinkeye include swelling, increased tear flow and squinting. A small ulcer (white spot) may also be evident in the center of the cornea. Progressive signs of the disease include redness along the eyelids, conjunctivitis (inflammation of the lining of the eye), decreased productivity and an increased cloudiness of the eye. In severe cases, the corneal ulcer that develops may rupture. This could lead to a stalk-like projection in the center of the eye or a protruding eyeball. If this occurs, permanent blindness is usually inevitable, so early recognition of pinkeye and early treatment is most rewarding.

Treatment typically targets the offending bacteria and also provides protection to the affected eye from further irritation. Long-acting oxytetracycline is typically effective against *M. bovis*.

It can be injected subcutaneously (under the skin of the neck) at labeled dosages (4.5cc/100 lbs of body weight). Penicillin can also be administered into the affected eye by injecting it under the outer lining of the eye. Multiple treatments of antibiotics may be required and could be repeated every 3 days. Occasionally, antibiotic resistance can occur. In such cases, consult your veterinarian to conduct antibiotic sensitivity testing and provide recommendations about antibiotic treatment choices.

Providing protection to the affected eye may improve treatment results. The use of an eye patch can eliminate repeated irritation by flies, dust, plant seeds and sunlight. Another alternative would be to have your veterinarian suture the lids shut to protect the eye from further irritating factors.

Keys to Prevention

Prevention of pinkeye should focus on controlling the predisposing factors for the disease



(flies, tall grass, etc.).

Fly control – Since face flies play such an important role in transmission of the disease, attempts should be made to control fly populations. Many insecticides are available for controlling flies with multiple administration options, such as ear tags, dust bags, sprays or pour-ons.

Vaccinations – Vaccines are available for use in preventing pinkeye. Vaccine should be administered a few weeks ahead of fly season in order to have high antibody levels before disease exposure occurs. Some vaccines may require a booster dose to be effective. Vaccination will help limit the number of cases in a herd and severity of disease, but may not completely eliminate this disease from occurring. Consult your veterinarian to determine which vaccine works best for your area.

Pasture management – Mowing tall grass in the pasture will help decrease the opportunity for cattle to suffer from abrasive irritation and reduce the potential to get grass or weed seeds in their eyes, thereby reducing the likelihood for development of disease. Shade should be available for animals during the summer months. Bright sunlight will only exacerbate problems with pinkeye.

Controlling pinkeye can definitely benefit your herd's health and overall performance, which will add to your operation's economic efficiency. For more information about pinkeye, consult your veterinarian or contact your county extension office. Δ

DR. JEREMY POWELL: Associate Professor/DVM, University of Arkansas