

## **PINKEYE**

We've enjoyed several wonderful rainstorms in recent weeks. That abundant moisture and cooler weather has been perfect for grasses. Anyone who got behind on mowing their lawns knows just how quickly grass has grown. Rangelands and pastures have also responded to these conditions. Cattle, sheep and wildlife have an abundance of grass for grazing. That is a blessing we did not anticipate only a few weeks ago.

As temperatures increase we anticipate moist soils quickly turning dry and dusty. Warm days also bring an increased exposure to sunlight and an abundance of flies. That combination, along with tall grass, where plant awns may get caught in the eye, may lead to a bad season for pinkeye in livestock. The peak incidence for pinkeye in Utah usually occurs in July and August. It is also the period when most livestock are out on pasture or rangelands and very difficult to handle for individual treatment.

Pinkeye is the common term for Infectious Bovine Keratoconjunctivitis (IBK). This is an infectious disease of cattle which causes an inflammation of the transparent cornea, the sclera ("white") of the eyeball and the conjunctiva (inside lining membrane) of the lids. The economic effects of a pinkeye include weight loss, reduced weight gains and increased treatment costs.

The bacteria (*Moraxella bovis*) is the infectious agent usually involved in outbreaks of pinkeye. It may be transferred to other animals by close animal-to-animal contact and by face flies. Marginal nutrition, dust, grass and weed seeds and bright sunlight may also be contributing factors. An animal recovering from pinkeye usually develops some immunity against *M. bovis*, but this immunity is relatively weak and of short duration.

The clinical signs of infection include wetness of the face due to excess "tearing" from the affected eye, reddening of the conjunctiva and the occurrence of an ulceration on the transparent cornea which results in a discoloration or loss of transparency of the cornea. Blood vessels may also become evident within the cornea. The specific signs depend on the stage to which the disease has progressed. There is also evidence that younger cattle are more susceptible than mature animals. Blindness may occur if pinkeye is not quickly diagnosed and properly treated.

Commercial vaccines are available and have been shown to be quite beneficial in the prevention of pinkeye. Ideally, stockmen will vaccinate their animals at least 4 to 6 weeks before the time when the first pinkeye cases are typically anticipated. Although some animals may still be affected with IBK the incidence is much lower in vaccinated than in unvaccinated animals. Some vaccine products are effective with a single dose while others require two doses for initiation of immunity.

Ranchers may also consider trace mineral supplementation for their beef herd by paying special attention to selenium and copper. These two elements are vitally important to the overall immune health of cattle. Adult cattle and calves need these trace elements in order to develop adequate immune responses to *Moraxella* antigens. The immune system can only function

appropriately against foreign invaders when the body has an adequate supply of essential minerals.

Control of flies, especially the face fly, is another important prevention technique. Use of ear tags impregnated with insecticide is of benefit. These tags aid in reducing the fly populations and also in keeping flies away from the eyes. With repeated use however, the development of a resistant fly population will likely occur. This makes it necessary to rotate the insecticide used. Insecticide dust bags or cattle oilers to control flies on the animals and feed-through products that kill the face fly larvae in the manure pats should also be considered. Proper pasture management will also aid in IBK prevention. This involves controlling dust and clipping pastures to aid in preventing eye injuries from tall grass. Provision for shaded areas will aid in IBK prevention. Shade also makes cattle more comfortable.

A single intramuscular injection of a long acting form of oxytetracycline (BIO-MYCIN 200 or LA-200) and tulathromycin (Draxxin) are labeled for the treatment of pinkeye in cattle. Experimentally, florfenicol (Nuflor) has also been shown to be effective too. The use of this drug is considered “off label” and would require a veterinarian’s prescription. Another very common pinkeye treatment is the injection of penicillin under the bulbar conjunctiva. Whenever giving penicillin injections at this site, individuals should wear latex gloves and have the animals head safely restrained.

Since the tearing process often wash medications out of the eye, it is difficult to get antibacterial products to remain in the eye for a sufficient period of time. Eye patches can help and keep an animal with pinkeye more comfortable in bright sunlight. When using an eye patch, it is important to leave the area at the bottom open for drainage. In addition, producers should check the eye under the patch at least two or three times a week. It is recommended that treated animals are isolated from the unaffected cattle. It also helps to have those cattle near handling facilities for regular follow-up treatments.

Care must be taken to prevent the spread of bacteria from one animal to another through tainted hands, clothing or equipment. Always wear disposable gloves and use new disposable needles when treating or examining infected eyes. It is also recommended that handlers wear a plastic apron or change clothes after handling pinkeye cattle.

Recovery is slow and may take weeks. However, the eye of the bovine species has great healing power and can repair much damage that may occur to it. When the excess tearing has stopped it usually indicates the repair process is well underway. Further treatment is generally not required but a long period of time may be needed for the body to fully repair previous damage and replace scar tissue.

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