

## **PINKEYE**

We held a sale for pedigreed Utah dairy cattle last week. One of the consignments had to be disqualified because of pinkeye. The peak incidence for pinkeye in Utah usually occurs in July and August. It is also the period when many cattle are out on pasture and very difficult to handle for individual treatment.

Pinkeye is the common term for Infectious Bovine Keratoconjunctivitis (IBK). This is a disease condition of cattle which is infectious in nature and 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 herd outbreak can be severe. Pinkeye results in lost weight, reduction of gains and reduced value as feeder cattle or breeding stock. The incidence is usually higher in calves, but breeding age animals are also affected.

The bacteria (*Moraxella bovis*) is the infectious agent usually involved in outbreaks of pinkeye. It may be transferred from cow to cow by several methods. Close animal-to-animal contact and face flies typically are blamed for the spread within a herd. Nutrition, dust, grass 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, squinting of the eyelids, 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.

Commercial vaccines are available and have been shown to be beneficial in the prevention of pinkeye. 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. Calves can be vaccinated in the spring when handling them for branding, dehorning, etc. It is also recommended that the breeding herd be vaccinated at this same time, prior to the beginning of “fly season”. The vaccine can be used in the case of an outbreak but it will be much less effective then. Many of the animals will already have been exposed and will be in the incubation stage when vaccinated, so will still be affected with IBK before they develop an adequate immunity.

Control of flies, especially the face fly, is another important preventive technique that should be considered. Use of ear tags impregnated with insecticide is of benefit. These tags aid in reducing the fly population and also in keeping them away from the eyes. However, with repeated use, the development of a resistant fly population will likely occur. This makes it necessary to rotate the pesticide used. Insecticide dust bags 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 aid in IBK prevention. This involves control of dust and clipping of old pasture to aid in preventing eye injuries. Provision of shaded areas will aid in IBK prevention as well as making the cattle more comfortable.

Treatment strategies start with frequent observation and prompt medication of animals that show squinting and tearing of the eyes. The goals of treatment are to protect the eye and provide a localized antibacterial which can act against the bacteria involved. The challenge in using antibacterial products is to get one to remain in the eye for a sufficient period of time. The tearing process will wash any free medication out of the eye within a few hours. If the eye is just treated topically the medication should preferably be repeated at least every 12 hours. A single intramuscular injection of a long acting form of oxytetracycline has also been shown to be an effective treatment. The *M. bovis* organism is usually sensitive to this antibiotic and the specific formulation will maintain an effective blood level for 3 days.

Following the antibiotic treatment most producers either put a patch over the affected eye or have their veterinarian suture it shut. Each of these methods protects the eye from sunlight, dust, and flies, and prevents their interference with the healing process. Patches are available commercially which are ready to apply. It is recommended to isolate treated animals from the unaffected cattle in the herd. It also helps to have those cattle handy for follow-up treatments.

Recovery is slow and may take from two to three 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 repair previous damage and replace scar tissue.