Livestock Production

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Winter Pinkeye? Yes, It's Possible

Classic pinkeye is thought of as a summer and autumn disease. The organism that causes pinkeye, *Moraxella bovis*, is usually transmitted by face flies active in the warm months.

However, a variation of *Moraxella bovis* can cause an outbreak of pinkeye in the winter when there is little fly activity. The nonhemolytic version of *Moraxella bovis* and a virus called ocular IBR are the chief causes of "winter pinkeye."

Let's review classic pinkeye, which is prevalent in warm months. *Moraxella bovis* will generally cause a white opacity in the eye's center with excessive tear production and reddening of the conjunctiva. In a classic outbreak, the yearling cattle in their first grazing season are most severely affected. English breeds, particularly Hereford cattle, seem to be the most susceptible. Many observers have said that Zebu-type cattle (Brahman or cattle with humps over their shoulders) rarely suffer from pinkeye. *Moraxella bovis* will hibernate in the nostrils of carrier animals over the winter, waiting for the flies' reemergence in the spring.

When observing cattle closely through the winter months, it is common to find several animals with excessive tearing and reddened eyes. Many farmers will immediately turn to long-acting antibiotic treatment for what appears to be pinkeye. In many cases, the reddened eyes and tearing are a result of a virus, Infectious Bovine Rhinotracheitis (IBR). The virus is soon recognized by the immune system and destroyed over a fairly defined period of time. A common example of a virus displaying a limited life span is the 24- or 48-hour flu many of us battle in winter. With IBR, the period of time for the immune system to clear the infection is 10 to 20 days. No treatment would be indicated if IBR is present. However, IBR can lower the defense mechanism and bacteria, like *Moraxella bovis*, can cause more severe damage.

How can you differentiate the virus from the bacteria? It is important to determine if the bacteria is present to avoid unnecessary treatment costs. The bacteria will generally cause a white pinpoint lesion at the center of the eye and move to the outside. The virus will start with the reddening and excessive tearing at the outside of the eye. When IBR is present alone, it will usually not cause the very obvious white scarring that the bacteria causes. When in doubt, treat the eye. However, remember the virus will run a course that is unaffected by the presence of an antibiotic. If the problem does not
improve or worsen, it is likely that the virus is just running its course.

**Look at your vaccination program**

This is also the time to take a close look at your vaccination program. It should be remembered that IBR causes many other more severe problems on a cow-calf farm. Middle to late-term abortions and pneumonia are common disorders associated with the IBR virus.

The ocular form of IBR should serve as a warning that this virus is present in your herd. Although vaccination in the middle of a "pinkeye" outbreak is generally not indicated, take note to modify your existing program. A common recommendation on farms with a history of winter pinkeye is to use an intranasal vaccine in late fall. Never use this vaccine when the eye problems have already started--it may make them worse. Vaccines directed specifically against *Moraxella bovis* have been tried; however, many farms report mixed success at preventing herd outbreaks of pinkeye with these vaccines.

Winter pinkeye should serve as a warning that IBR protection may need to be enhanced by changing timing, frequency or type of vaccine used. Although pinkeye causes significant economic loss, abortion and pneumonia from IBR can have a very crippling effect on a cow-calf farm. In the winter when you observe excessive tearing, suspect IBR first. Then get consultation on your vaccination program and avoid unnecessary financial loss.