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PINKEYE TREATMENT

In previous columns we have discussed the cause of Pinkeye in cattle (***Moraxella bovis***, a gram negative bacterium) and we have also discussed prevention including face fly control and vaccination with the new Pinkeye vaccines. Before we specifically discuss treatment of Pinkeye cases, we'll review some the key factors in prevention. The cattle need to have good quality nutrition to have an optimum immune response. A lack of adequate energy, protein, and trace minerals such as selenium and copper are the most common problems seen in California with beef cattle nutrition. Some virus infections, such as IBR and/or BVD, cause cattle to be more susceptible to Pinkeye. Therefore, good vaccination programs to protect against IBR and BVD are also important in Pinkeye prevention. The available Pinkeye vaccines have ***variable*** effectiveness. The major consideration with Pinkeye vaccines is to be sure the cattle are vaccinated well **before** the summer season. If you are just now starting to think about ordering your Pinkeye vaccine, you are running late to have protection by the time fly season (and the Pinkeye season) arrives. Also, if your Pinkeye vaccine requires two doses to be effective (an initial dose and a booster dose) be sure to get that done. One injection of a two-dose vaccine **is not** one-half as good as the required two vaccine doses. Last but not least, face fly control is essential to preventing Pinkeye in cattle. Refer to the March 1996 column for the most recent information on face fly control products and the time to use them. Also, the Pinkeye prevention efforts (vaccination and face fly control) are most important for the calves, the animals most at risk for Pinkeye. Don't be surprised when Pinkeye occurs in the calves if only the cows have eartags and only the cows have been vaccinated. Once you see a case of Pinkeye, it is time to think about treatment. However, before you start treatment, remember "your prevention program has failed." Talk to your veterinarian about ways to make it better next year.

There are several items to consider before treating individual animals for Pinkeye. These are listed below:

1. Disposable latex examination gloves. Remember these gloves are disposable so after they are used-throw them away. See you veterinarian if you are having trouble locating a source of disposable gloves. Use these to examine animals with Pinkeye, particularly when examining the eyes and face area. If the Pinkeye bacteria gets onto your hands you will become a "giant face fly" and the source of new infections for cattle you contact. Additionally, these gloves can be used when applying insecticide eartags or pour-ons. These products have insecticides that are absorbed through your skin and can cause headaches, dizziness, diarrhea, or worse symptoms in people that mishandle them.

2. Sterile disposable needles. 20 or 22 gauge one inch needles for injecting underneath the upper eyelid. 16 gauge 1 half inch needles for intramuscular injections or subcutaneous injections. The needles should be disposed of after one use, particularly if

used for injections in the eye, as the needle becomes contaminated with the Pinkeye bacteria.

3. Restraint of the animal. This is a very important for successful treatment and humane handling of the animal-eye lesions are extremely painful. Put yourself in the animal's place and everything will proceed more successfully. If you use a halter or nose tongs, be sure to disinfect these between animals.

4. Disinfectant. Solutions such as Nolvasan® are excellent for chuteside use to disinfect equipment and other materials. This is important to prevent spread of ***M. bovis*** to be sure you don't end up infecting more cattle.

5. Syringes. Sterile disposable syringes: the 3 cc size works well for injections given under the upper eyelid. The outer surface of syringes used for injections into the upper eyelid will become contaminated by the Pinkeye bacteria and should be disposed of.

6. Disposal containers. A "sharps" container disposal of needles and syringes and a garbage container for the disposable gloves.

7. Flashlight or penlight. A bright light source is important for examining the eye.

8. Antibiotics and other drugs for treatment. Discuss which drugs should be used for Pinkeye treatment with your veterinarian. Make a plan before you need it. Write it down and keep track of successes and failures. If any of the drugs used for Pinkeye are going to be used in an off-label or extra-label manner, be sure your veterinarian writes a prescription and labels the drug(s) for Pinkeye treatment and puts a **withdrawal time on the label.** Some of the common drugs that are used for Pinkeye treatment include oxytetracycline, penicillin, ampicillin, and dexamethasone. Drugs usually are injectables, powders, or ointments.

9. **Records.** Use your pocket notebook or other method to keep track of treatments of individual animals and groups. Without records it is very hard to know if your treatments are successful or not.

One of the keys to successful treatment of Pinkeye cases is early detection. The damage to the eye starts in the **center of the clear part of the eye, the cornea**. At that stage there is tearing that causes the face to be wet and/or collect dirt. Also, the animal may begin to squint, particularly in bright light. Effective treatment at this stage is much more likely to be successful. For all Pinkeye cases, once the animal is restrained in the chute, examine the normal eye first to be sure it is not an early case. Handling the normal eye after treating the affected eye will simply spread the bacteria from the affected eye to the normal eye and subsequently cause disease in the normal eye. Check the eye for foreign bodies, like stickers, this is where

the gloves come in, as you will need to run your fingers under the lids to be sure a sticker is not hidden there. If a sticker is present, remove it with a tweezers or forceps (disinfect this instrument immediately after use, before using on another animal). Usually, eyes with stickers are treated in the same manner as Pinkeye. Commonly recommended treatments for the eye include antibiotic powders, ointments, or antibiotics injected under the upper eyelid. Also, many veterinarians recommend and prescribe steroids such as dexamethasone or cortisone be added to injections under the upper eyelid. Remember, if you are using drugs for treatment from multiple dose vials be sure to disinfect the top of the bottle and use only sterile single use needles. Use of contaminated vials, syringes, or needles may simply make the problem worse. Many veterinarians also recommend systemic (intramuscular or subcutaneous injections) treatment with oxytetracycline. The reason for this is that oxytetracycline circulating in the body accumulates in the tissue of the eye and helps fight the infection there. Treatment should result in a decrease in tearing and noticeable progress in 24-48 hours, if the condition worsens the eye should be treated again. If animals need many repeat treatments or if the number of cases exceed 5% of the group, you should contact your veterinarian and discuss the problem in detail. Also, when working around animals with Pinkeye try to avoid getting the secretions from the eye and nose from getting onto your clothes, as these can be transferred to susceptible cattle later in the day and cause infection in them.

Discuss the strategy for Pinkeye treatment with your veterinarian. Be sure all drugs that are not specifically labeled for Pinkeye treatment have your veterinarian's prescription and a withdrawal time specified on the label.

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