Pinkeye, infectious bovine keratoconjunctivitis, is a contagious bacterial eye disease found in cattle. In the United States, losses of $150 million are estimated from decreased weight gain, milk production, and treatment as a result of pinkeye. Pinkeye is second to scours as the most prevalent condition affecting unweaned beef calves over 3 weeks old while pinkeye and footrot were the two most prevalent conditions affecting all breeding beef females (replacement heifers and cows), according to a report of the National Animal Health Monitoring System of the USDA: APHIS Veterinary Services.

Pinkeye is characterized by a reddish inflammation of the eyeball, swollen eye membranes, tearing, frequent blinking and sensitivity to light. Left untreated, the entire cornea becomes thickened and opaque, resulting in a white color and blindness. Pinkeye is caused mainly by a bacterium, Moraxella bovis. Recent work has shown that some cattle may be carriers of the bacterium, never showing signs of infection, but still able to spread the disease.

Face flies are the main culprit for the spread of pinkeye. Irritated eyes produce excessive tears which attracts face flies. The fly then picks up the bacterium and transfers to other animals. Face flies, unlike horn flies, spend very little time on the animal and can spread to several animals in one day. The house fly and stable fly can also spread pinkeye infections.

Other contributing factors are eye irritants such as UV light, dust, tall pasture grasses, and awns on small grains seed heads. Rough forages such as fescue, hybrid Sudan grass and other forage sorghums mechanically irritate the eyes. Weeds and brush produce air-borne irritants, pollen and chaff. Keeping pastures clipped will help reduce eye irritation. Cattle with pink eyelids, such as Hereford and Hereford crosses, were more susceptible to pinkeye than Angus and dark-faced breeds, possibly because more UV light rays enter the eye. Some researchers recommend using bulls with fully pigmented eyes as herd sires, since eyelid pigmentation is moderately heritable (26-34 percent).
I’m sure that all of us have seen the type of cattle I’m talking about: they often keep fuzzy, off-colored coats or just don’t perform as well as you’d expect. While this can be a description of cattle affected with fescue toxicity, another scenario is that they may be experiencing mineral deficiencies. When we talk about mineral deficiencies, it is easy to think about cattle that look like they are on death’s door or herd-wide spontaneous abortions, but often the signs can be subtler. Copper deficiency is the most often observed deficiency in grazing cattle. The most obvious signs are a rough hair coat and black-haired cattle’s coats fading to a reddish color. The more clinical signs include reduced fertility and lower immune system function. It can be difficult to notice these subtler signs without a good record-keeping system, which highlights the importance of being able to go back and see if a cow is consistently breeding back and calving late or skipping calving altogether. Herd health and calf growth can also be tracked with a record keeping system. These can be as elaborate as special software or as simple as a trusty composition notebook. The most important aspect of a record system is that it works for you and your farm.

A good place to start in preventing copper deficiency is by having a good mineral program. The foundation of a good mineral program is a free-choice mineral that suits your needs and is being consumed at an appropriate rate. The proper absorption of copper may be influenced by the amount of molybdenum and sulfates in the diet, which is important to keep in mind when feeding high-sulfate feed products or keeping cattle in over-grazed areas where they may be at risk of ingesting large amounts of soil while trying to graze. North Carolina Cooperative Extension recommends that free choice minerals should contain 2,600 ppm of copper for free-choice minerals consumed at 2 ounces per day and 1,300 ppm for those consumed at 4 ounces per day. Target consumption for the mineral that you are using should be listed on the bag and levels will be included as part of the feed label.

With all of the different options, choosing a mineral can feel intimidating at times. Weather-shielding technology, tubs that supplement protein, and mixes that tout special claims are all widely available, adding more components to make a decision on. When selecting a mineral supplement, a couple of important questions to ask may be: “Is this going to be cost-efficient?” and “Will this product be functional on my farm with my schedule?” Mineral tubs containing protein should be inspected to be sure that they are indeed supplying adequate levels of minerals in addition to protein. They may be a good option for someone utilizing lower-quality forage, while a lower-cost loose mineral may be all that someone with access to high-quality feedstuffs may need. With all of the different options, it is possible to find a product that best suits your specific needs. Any type of mineral should be offered in a way that all animals have access, even if that may mean investing in another feeder. Feeder design should also be functional. Ideally, minerals will be sheltered from weather and the feeder will be sturdy enough to not be continually knocked over or damaged. Some farmers have taken a do-it-yourself approach and have made cost-effective feeders out of old tires and barrels. Your local extension agent can provide instructions for building these if you are interested.

If you suspect that you are having issues with mineral deficiencies in your herd or would like to get a second opinion on your mineral program, your local extension agent or your veterinarian are both able to assist with this aspect of cattle husbandry.
The first step in controlling pinkeye is to control flies, whether through fly tags, pour-ons, dust bags, or back rubbers or any combination thereof. Get aggressive about fly control as soon as you suspect pinkeye, since they are how the disease spreads.

The key to treating pinkeye is to catch it early. Using over-the-counter aerosol sprays and powders often further irritates infected eyes. Eye drops or ointments are better alternatives for mild or early cases of pinkeye. Most strains of M. bovis appear to be sensitive to tetracyclines, penicillin, erythromycin and neomycin. Injection of a mixture of antibiotics under the lining of the affected eyelids is recommended in herd outbreaks where repeated treatments are impractical.

General recommendations include housing affected animals in shaded areas to avoid direct sunlight; provision of adequate feed and water; reduction of dust, flies and other physical causes of eye irritation. While many optical antibiotics are available for pinkeye, treatment is not always successful in saving vision. That depends on finding and treating cases early and complete recovery may take 3 to 5 weeks. If pinkeye tends to be a problem in your herd, be sure to talk to your local veterinarian about vaccinating for pinkeye, it is the best protection against multiple strains.

To deal with pinkeye, the key is to get ahead of it using fly control, vaccination, pasture management and reduction of eye irritants.

### Feeder Calf Sale Schedule & Requirements

**Feeder Calf Sale:** Calves weighing over 300 lbs, properly castrated, dehorned and healed, and one dose of Blackleg vaccination.

**Value-Added BQA Protocol:** Follows specific health protocol Merck or Zoetis, see insert. 2 doses modified live respiratory, 2 doses blackleg, weaned 45 days, minimum weight 400 lbs, properly castrated, dehorned and healed. Consignors must be BQA Certified in the state of North Carolina and must produce vaccination records to the Norwood Stockyard office. Calves tagged on farm.

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<tr>
<th>Date</th>
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<tbody>
<tr>
<td>July 13th</td>
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<td>July 20th</td>
<td>Value-Added BQA Sale</td>
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<td>August 17th</td>
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<td>September 7th</td>
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<tr>
<td>September 14th</td>
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**Consignments for ALL sales should be made to Jessica at 704.694.2415 or Brooke Harward at 704.322.9770**
Upcoming Events

Anson County Cattlemen’s Association Meeting ................. ................. June 13th
7pm, Anson County Extension Center
Pesticide Credits Offered—Anson Co Agri-Civic Center...............June 30th
1pm–3pm, 2 hrs A,B,D,G,H,I,K,L,M,N,O,T,X

Wool Pool ................................................................................. July 5th
Stanly Co. Agri-Civic Center, 2-4pm

Feeder Calf Sale ................................................................. July 13th
Stanly Co. Livestock Market, Calf Drop Off 7am-3pm, Sale at 6pm

Value Added BQA Feeder Calf Sale ..................................... July 20th
Stanly Co. Livestock Market, Calf Drop Off 7am-3pm, Sale at 6pm

Persons with disability or persons with limited English proficiency can request accommodations by contacting Jessica Morgan, Extension Agent, 704.694.2415, Fax 704.694.2248, or e-mail jessica_morgan@ncsu.edu at least five days prior to any event listed in this newsletter.

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