Those Persistent Problems

Warts and Ringworm

by Dr. Carla Chenette, Beef Cattle Breeding Extension Specialist
and Dr. Duane Miksch, Extension Veterinarian
University of Kentucky

Although the economic impact of warts and ringworm on a herd basis may not be all that important compared to a disease like brucellosis, these two skin problems are prevalent and persistent in many herds of cattle. Both certainly detract from the appearance of cattle and both are difficult to eliminate once established in a herd.

Because of the contagious nature of these diseases, cattle with warts or ringworm are often not eligible for entry in shows, fairs or other places cattle are brought together such as central bull test stations. Warts and ringworm spread rapidly through direct and indirect contact. Both also have fairly long incubation periods which prolongs problems. These diseases are easily transferred from one animal to another by basic management practices such as eartagging and tattooing. For example, if a calf with ringworm is clipped and the clipper blades are not disinfected prior to use on the next calf, the disease may be transmitted. Here we take a closer look at these two persistent cattle problems, explaining mode of action, some possible treatments and preventative procedures.

Warts, an Infectious Virus

First, let's consider warts. Warts are caused by an infectious virus that is host specific, or in other words, is not passed from cows to pigs to humans under natural conditions. On cattle, warts appear as large cauliflower-like lesions or small, horny bumps. Most of the infective virus lives at the surface of the warts; this explains why they spread so quickly on an animal or through a herd of cattle. The virus is spread through direct animal contact or through indirect sources such as animal to feedbunk to next animal. Skin wounds frequently lead to infections in "clean" animals if the wart virus is present. Susceptible skin wounds are produced by routine management practices such as tattoos, eartags or injections. If an infected animal is tattooed, for example, the next animals tattooed with the same instrument are exposed to the virus and have a good chance of developing warts.

Once warts are established, they can last on an individual animal for over a year and may become a total herd problem. Normally, infected cattle show warts about two months after initial exposure to the virus. So, although isolation of cattle with warts is recommended, they easily could have infected other animals before the disease was diagnosed.

Warts is a self-limiting disease since infected cattle build up natural immunity to reexposure, but this immunity may be lost in time.

No Clearcut Treatment

Unfortunately, there is no simple treatment for warts that is always effective. Surgical removal is one option, but timing is important. If warts are removed in the early growing stages, additional wart growth may be stimulated. Conversely, when a few warts are surgically removed from an animal with extensive lesions, recovery sometimes seems to be hastened. Therefore, warts should be removed only in totally developed or regressing stages.

Ringworm is most severe and persistent in cattle under nutritional stress.

Commercial vaccines are sometimes used, but they have had limited success. A herd vaccine (autogenous vaccine) made from material collected from your cattle can be obtained through your veterinarian. The vaccine is made from a suspension of ground wart tissue in which the virus has been killed with formalin. Regular use of the vaccine as prescribed should continue for at least one year after the last wart has disappeared.

In addition to direct treatment and vaccination of cattle, the problem of contaminated fences, feeders, etc. should be addressed. Formaldehyde fumigation at high humidity and high temperature will help to disinfect these indirect sources of wart infection. Brushes, combs, clippers, tattoo instruments, etc. must be adequately cleaned and disinfected before reusing.

Same Holds True for Ringworm

If warts are a problem, it seems ringworm is usually worse. Anyone who has treated ringworm on cattle knows it can be a never-ending chore.

Ringworm is not associated with any kind of worm at all, but is a skin infection due to a fungus (aerobic actinomycete is the fancy name). It is a world-wide problem affecting domestic animals and wild animals as well. In cattle, younger calves seem to be more susceptible, but all ages may be affected. Ringworm takes two to four weeks to appear after exposure. Then the hair falls out or breaks off in the affected area. By two to three months, scaly, round, asbestos-like plaques form. The head and neck areas are most often affected on cattle, but if left untreated no area on the body is immune. Ringworm seems to be at its worst during the winter, especially for cattle in confinement. Summer sun appears to help clear up infections.

Ringworm is tough. It can survive up to four years in the dry scabs and scales shed by cattle, plus it is easily transmitted by direct and indirect contact. It is contagious from cattle to most other animals, including people. Ringworm is not host specific.

Treatment is Time-Consuming

Several different treatments are recommended, but none are 100 percent effective. Any treatment must be persistently applied to control ringworm and all are time consuming. For local treatment of ringworm, first remove the thick scabs with a brush and mild soap. The infected areas should bleed slightly when the scales are removed. A few of the several recommended treatments for ringworm follow:

1) Daily application of equal parts of tincture of iodine and glycerin.
2) Daily application of a 20 percent solution of sodium caprylate (for these remedies to be effective, all lesions must be soaked thoroughly each treatment).
3) Tincture of iodine or Lugol's Solution applied every other day.
4) Thiabendazole (TBZ) applied directly to the infected area at least three times over a period of 7 to 9 days.

Disinfection of equipment and instruments to prevent spread of ringworm is equally as important as in control of warts. At times, ringworm infections become widespread and seem out of hand. Your veterinarian may prescribe systemic treatment, such as an intravenous solution of sodium iodine in water or oral griseofulvin. Griseofulvin, by the way, is an expensive treatment to use in cattle.

Ringworm is most severe and persistent in cattle under nutritional stress. While poor nutrition is a contributing factor, sunlight seems to be nature's treatment.

Ringworm and warts are both common, irritating cattle problems that constantly try the patience of many producers. It takes determination, patience and persistence to control either. Just be thankful they are seldom severe or fatal. AJ