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Control of Scabies on Cattle

C. D. McNeal, Jr. Integrated Pest Management Coordinator R. L. Stoltz Extension Entomology Specialist

Extension Entomologist

H. W. Homan

Scabies is a skin condition caused by the feeding of tiny, parasitic mites in the skin of cattle and other animals. The disease takes its name from the scabby appearance of infested animals. Body fluids ooze from the feeding wounds caused by the mites and an obvious dermatitis develops. Mites are active on cattle all year, but the scabby condition they cause is most severe in winter.

Another reaction of the cattle to mite infestation includes a generally unthrifty condition. Up to 100 additional days feeding may be required to bring infested cattle to marketable condition. Cattle stressed by a mite infestation also tend to be more prone to respiratory problems, such as pneumonia. When infested cattle are slaughtered, scars on the hides result in lower hide prices.

Scabies is quarantinable and cattle exposed to infested livestock or facilities may also be quarantined. Quarantine regulations require cattlemen not only to dip infested cattle but also to disinfect and clean corral facilities and trucks used to haul infested animals. Complying with overall quarantine regulations is a burden that is costly to the cattlemen.

Detection

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You should be constantly watching for signs of scabies in your cattle. Generally you will see the scabby condition of animals only in advanced cases, so be alert for some early signs that indicate infested animals. Rubbing and scratching against a corral fence or other object is typical. Constant tail switching or licking areas of the body may also indicate a scabies infestation. When hair on an animal is obviously disturbed from licking or rubbing, or when you find hair patches on fences, examine the cattle for mites as well as lice.

You can see cattle lice easily when you hold cattle in a squeeze chute and pull the hair back to expose their skin. Scabies mites, however, can only be detected by a thorough examination of skin scrapings by an experienced person. The examination requires special preparation of the scrapings and a microscopic diagnosis.

Quarantine and Eradication

Cooperative state-federal programs have reduced the incidence of scabies through quarantine and eradication. All cases of scabies reported to state regulatory agencies are investigated to determine the source of the infestation and the possibility of contact of infested animals with noninfested animals. When an infestation involves movement of animals across state lines, the Animal and Plant Health Inspection Service of USDA determines the proper course of action for management of a potential outbreak. Veterinarians from state and federal regulatory agencies can provide specific information on quarantine and eradication programs.

Types of Scabies

Three types of cattle scabies occur in the West and each is caused by a different mite — the psoroptes, sarcoptes and the chorioptes. Cattle may be infested with any 1 of these tiny mite species or with combinations of 2 or 3. These mites are large enough to be visible to the unaided eye only against a black background. Each requires 10 to 12 days to complete a life cycle and each lives within the skin tissues of the animal where feeding and reproduction occurs.

The most severe form of scabies is caused by psoroptic mites. The initial infection site for psoroptic scabies is usually where the hair is thick, as along the top-line of an animal from the withers to tailhead. Sarcoptic mites frequently will first infest an animal above the rear portion of the udder or scrotum or on the inner surfaces of the thighs where the hair is very thin. Chorioptic mites, the cause of the most common form of scabies, also have a tendency to produce their first lesions in these same areas.

Control

Dipping vats and spray-dip machines provide the only effective control of scabies in cattle. Pour-ons will not adequately control scabies. Using a dip vat is the preferred method of treating cattle infested with scabies.

Two types of dip vats are common. One is the common swim-through vat, usually metal, concrete or portable. Cattle enter one end of the vat and swim to the other end, where they can walk out. During treatment, the cattle must be fully submerged at least once. The other type of cattle dipping vat is the cage vat. In this device the cattle are driven individually into the cage and the captive animal is completely immersed into the solution by hydraulic or mechanical means.

Spray-dip machines are difficult to operate, waste a great deal of the spray solution and have a tendency to plug with hair and extraneous materials that enter the recirculation system. Most people who have used spray-dip machines feel that they are not a desirable method to use.

Only 4 insecticides are allowed for treatment of scabies in quarantine programs: lime-sulfur, toxaphene, phosmet (GX-118) and coumaphos (Co-Ral). Lime-sulfur is seldom used but it is the only registered product which can be used on lactating dairy cattle. It is difficult to use and usable formulations are difficult to obtain. The temperature of the dipping solution must be maintained at 95 to 105° F. Toxaphene is fairly inexpensive to use when charging a vat for scabies eradication. It gives adequate control of lice and flies on cattle, but gives no systemic grub control. Both phosmet and coumaphos control cattle grubs as well as lice, flies and scabies mites. The mandatory period between treatment and slaughter is 28 days for toxaphene, 21 days for phosmet. Coumaphos and lime-sulfur have no withholding period.

Dipping cattle is an effective control only if you prepare carefully. First, install the dip vat properly and keep it maintained. You must also maintain proper insecticide concentrations in the dip vat solution and ensure adequate mixing of the dip vat solution before treating the animals. Clean and disinfect corrals, fences, work areas and trucks that have been used by scabies-infested animals. And when cattle are dipped in extremely cold weather, you should drive them a moderate distance to dry them after they have been dipped to prevent chilling.

Cattle showing symptoms of scabies should be given special handling during the dip process. Lesions on the animals may be hand-treated with the dip solution immediately before dipping to insure that they get a very thorough treatment. Hard scabs should be broken up so that the dip can reach the mites below the scab.

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