

# External Livestock Parasite Control

by Dr. Sharron S. Quisenberry

The cow-calf producer has a wide variety of external parasites that attack livestock but only a small number are considered economic pests. These few pests, insects and mites, can combine to reduce profit for livestock producers. Let's review major external parasites affecting beef cattle and discuss relevant control methods.

## General methods of control

Pest control methods are commonly categorized as follows: 1) legal control methods which can involve inspection, quarantine and enforcement of federal laws; 2) mechanical and physical control methods such as the use of sanitation, traps or water level manipulation; 3) biological control methods that release parasites, predators or sterile males; 4) chemical control methods where insecticides or acaricides are applied by sprayer, ear tag, back-rubber, dip-vat, dust bag or pour-on. All control methods are directed toward the suppression of pest populations below economic levels. As the major beef cattle pests are discussed, these control methods will be explained in greater detail.

## Cattle grubs

Cattle grub and northern cattle grub probably cause greater losses than any other cattle pest. Losses occur with grub-infested cattle marketed from December to April when grubs are encysted along the back. Tissue underlying the cyst or warble is yellowish and gelatin-like and must be trimmed from the carcass. The trimmed carcass is downgraded and the price lowered. The perforated hide is also less valuable. Heavy grub infestations can also adversely affect rate of gain. Cattle grub adults (heel flies) cause still further losses during the spring egg-laying period. Adult flies do not bite but cattle attempting to avoid the egg-laying activity may injure themselves, gain weight more slowly or lose weight.

Systemic insecticides are effective if timed correctly and applied properly. The systemic is absorbed into the blood stream which kills grubs migrating through tissue. Insecticide application, either as pour-ons or sprays, needs to be made while grubs are still small and before they reach the guttural or spinal canal region. Heavily infested animals treated late in the grub's life cycle may have serious side reactions. The guttural may swell, causing bloat and difficult breathing, or grubs may block nerves in the spinal canal, causing various degrees of paralysis. The best time to treat cattle varies from July to December, depending upon location. Most product labels are regionalized and include cut-off dates. Cattle under stress should not be treated with systemic insecticides.

## Lice

Chewing lice and sucking lice are two

types found on cattle. Louse infestations generally cause extreme irritation, hinder the animal's feeding activities, and may reduce growth rate. Stress caused by heavy infestations can cause cattle to be more susceptible to disease and cold weather.

Chewing lice feed on scabs, hair and skin excretions. Their biting and clawing irritates the skin. Sucking lice feed on the animal's blood. Three species of sucking lice may be found around the tail, brisket and along the inner surface of the legs.

Both chewing and sucking lice are most abundant during the winter and generally light during the summer and early fall. Animals particularly prone to lice infestations are carriers and should be scheduled for disposal.

Cattle seen rubbing against fences and feedbunks may be suffering from louse infestations. Examine cattle for lice by parting the hair where lice are most likely to be found.

Lice may be controlled with insecticides applied by sprayers, backrubbers, dust bags or pour-on methods. Insecticides applied by backrubbers and dust bags will suppress the population below economic levels if made available in the fall before heavy louse infestations appear. Backrubbers and dust bags must be kept in proper working order to be effective. Pour-ons should not be used if cattle did receive a grub treatment in the fall. Insecticides will not affect the eggs, therefore, a second spray application in 14 days will be necessary to kill the nymphs that hatch following the first spray.

## Mange Mites

Mange mite infestations are characterized by raised areas, hair loss and scabbing. Mites burrow in the skin and severely irritate their hosts. There is a federal scabies control and eradication law. Quarantine infested cattle and consult your local veterinarian concerning regulations on treating and shipping. Preferred treatment is by dipping or spraying with selected insecticides.

## Ticks

Cattle in wooded areas in some parts of the United States may become infested with the American dog tick. Feeder cattle may be infested with other kinds of ticks such as the ear tick from the southwest.

Ear ticks are controlled by dip-vat treatments or individually treating each ear with an insecticide. The American dog tick and winter tick can also be controlled with insecticide sprays.

## House flies and stable flies

House flies and stable flies attack and annoy beef cattle under feedlot conditions. Larvae of both species develop in decaying vegetation such as straw or hay, and manure mixed with straw or hay.

House flies are nonbiting flies that are more of an annoyance to cattle than a seri-

ous pest. Stable flies are considered to be economic pests of cattle. They feed on blood, and are generally found on the animal's legs and belly. Significant weight losses in cattle have been attributed to stable fly feeding.

Sanitation is very important if chemical control is to be effective in controlling house and stable flies. Good sanitation involves weekly removal of manure and cleaning under feedbunks and along fence lines where flies might breed. Methods of control include insecticide sprays applied directly to animals or as residual wall sprays.

## Face flies and horn flies

Face flies and horn flies are the most prevalent flies that attack and annoy beef cattle under pasture conditions. Adults of both species are active from early spring to late autumn. Adult female face and horn flies deposit eggs in fresh manure pats, principally in open pastures.

Face flies are nonbiting flies that feed mainly on mucous secretions around the eyes, nose and mouth. The flies annoy cattle and disrupt grazing. The fly feeding around the eyes may cause tissue damage which may create susceptible tissue for eye pathogen establishment.

Horn flies are biting flies that feed on blood. They are found around the animal's shoulders and back. The biting is annoying and grazing is interrupted. The loss of blood and reduced grazing can cause a decline in rate of weight gain and animal efficiency, particularly in calves.

Control of face flies is difficult because the face is hard to treat and flies spend a good deal of time away from the animal. Horn flies are easier to control because they remain on the animal's back.

Best control is obtained where animals are forced to come in contact with an insecticide on a daily basis or where animals are hand treated daily. Recommended insecticide control measures include insecticide impregnated ear tags, dust bags, self-treatment oiler devices, sprays or feed additives. A number of insecticides are recommended for use for each control measure.

## Summary

When and how external parasites inflict damage and how to control them is of particular importance to the beef producer. Effective control can lead to increased weight gains and profit potential. Observe all precautions and limitations described on the label when using pesticides. **AJ**

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**ABOUT THE AUTHOR:** Dr. Quisenberry, an assistant professor of entomology at Louisiana State University, received a bachelor's degree from Northeast Missouri and a master's degree and Ph.D. from the University of Missouri. Prior to joining the LSU staff she worked in Iowa on extension programs and applied research in livestock and forage crop insects. The above article is excerpted from a presentation given at the 1983 Cornbelt Cow-Calf Conference in Ottumwa, Iowa.