A Lousy Situation

Discomfort, restlessness and time spent rubbing due to a lice infestation can interrupt normal feeding, hindering performance and, potentially, increasing susceptibility to disease.

by ***Troy Smith***

►Biting lice (pictured) feed on skin particles and skin excretions, while sucking lice feed on blood and serum.

Parasite MANAGEMENT

In much of cow country, this past winter/early spring was a bad one for cattle lice. Or, you might say, it was good for lice. What we mean is these parasitic insects could be found in abundance. According to producer reports, lice infestations seemed to be worse than usual. Considering the kind of winter it was, that comes as no surprise to Dee Whittier, Extension veterinarian and bovine specialist at Virginia-Maryland Regional College of Veterinary Medicine.

"In my experience as a dirty-fingered cow vet, it's weather-related," says Whittier. "Lice like cold weather. That's when they become active and populations multiply most rapidly. It just worsens until the weather warms up, unless producers have a really good control program. My approach is to plan for lice to be bad every year."

Chilly winters are common on the Northern Plains, and North Dakota State University veterinary pathologist Neil Dyer agrees that cattle lice thrive in cold weather, when animals have a heavy hair coat. Lice have legs adapted to clinging to hair and must remain on a host animal to survive. There can be animal-to-animal transfer, though, when cattle come into direct contact with one another while bunched during the winter, when lined up at a feedbunk or during shipping.

"Under perfect conditions, lice could produce 10-12 generations of offspring per year, but that is interrupted by the animal's self-grooming, by hormonal changes and by predation. A lot of environmental factors can have an effect, including weather," Dyer explains. "Lice can be present on cattle throughout the year, but much harder to find during the summer. Higher temperatures and more intense sunlight aren't as favorable for lice."

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►Lice have legs adapted to clinging to hair and must remain on a host animal to survive.

Cattle in the U.S. are subject to attack by multiple species of these bothersome external parasites. Biting lice feed on skin particles and skin excretions, while sucking lice feed on blood and serum. Species of the latter type are usually considered a greater threat to cattle performance and health, since they cause blood loss. Lice of any kind can be a nuisance.

Lice cause skin irritation and itching, prompting cattle to rub on trees, fences, feeders or buildings and cause costly damage. As a result of repeatedly scratching their itch, lice-infested cattle usually rub out patches of hair and may rub themselves raw. Discomfort, restlessness and time spent rubbing can interrupt normal feeding, hindering performance and, potentially, increasing susceptibility to disease.

According to University of Kentucky Extension (UK) entomologist Lee Townsend, the potential for economic loss becomes greater when lice and other factors combine for a cumulative effect.

"Moderate to heavy infestations add to the impact of cold weather, shipping stress, inadequate nutrition, or harm from internal parasites or disease," says Townsend. "The interaction between low levels of both lice and intestinal nematodes (worms) can reduce weight gains by more than 8%. The energy that lice 'steal,' coupled with other factors, can have a severe impact on animal health. Manifestations can be anemia, slow recovery from disease, poor gains, or general unthriftiness."

Persistent rubbing by cattle and loose hair should raise suspicion. Townsend says heavily infested cattle may also take on a "greasy" appearance caused by a combination of lice crushed by rubbing, feces from lice, plus blood and serum from wounds on the skin. But rubbing and restlessness can be caused by other factors, too, so confirmation of lice infestation should be made by close examination for the presence of the insects and eggs attached to animal hairs.

When you look closely, the small, flat-bodied insects aren't hard to spot, but their appearance does vary by species. The cattle biting louse, for example, has a yellowish-white body with dark bands and a dark, triangular head. It can be found anywhere on the animal's body, but most commonly in colonies located near the base of the tail, along the top line and on the shoulders.

Among the sucking lice, the short-nosed

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cattle louse may be the most common species. It has a gray-black body and typically prefers to feed along the top of the host's neck and around the dewlap and brisket. The long-nosed cattle louse has a narrow, pointed head, a blue-black body and is most often found on the dewlap and shoulders. This species only rarely is found, in large numbers, on mature beef cattle. Little blue cattle lice are most often clustered on the muzzle, neck and dewlap.

Controlling lice

All lice are fairly easy to kill with products labeled for that purpose. Timing of application and the type of lice control product largely determine whether control measures are successful. Endectocides are systemic products, such as those derived from avermectins, which are effective against internal and external parasites. Systemic products, applied as a pour-on and some as injectables, are absorbed by the host animal's body and are lethal to parasites that feed on the host — for a period of time.

However, producers need to remember that the best time to use an endectocide to rid animals of internal parasites may not be the best time to control external parasites, such as lice. Cattle might very well benefit for deworming in spring or early fall, but that time of treatment probably won't afford the most effective lice control.

Townsend reminds producers to also use caution when using an endectocide to clear up lice in mid-winter. That's when heel-fly larvae (grubs) may be migrating through the host animal's body. Killing grubs during migration can result in a dangerous host-animal reaction.

Nonsystemic insecticides, applied as pour-ons, sprays, or through backrubbers and dustbags, remain on the host animal's skin where lice come in contact with the active ingredient. Insecticidal ear tags also may aid in lice control.

Dyer also emphasizes the need for producers to know what kind of product they are using for lice control and how it works. While the live insects may be fairly easy to knock down with a variety of products, the lice life cycle must be broken to prevent reinfestation. The eggs lice leave behind are not affected by lice control products. Endectocides may have sufficient residual activity to kill the next hatch of lice, but nonsystemic insecticides do not. Generally, reapplication in three to four weeks is recommended. Wait too long and lice nymphs mature and produce more eggs.

"Late fall is usually a good time to apply treatment, but producers need to read the product label. Following label directions seems obvious, but it doesn't

An exceptional louse

There is an exception to the general rule — a louse that doesn't like winter. Commonly called the cattle tail louse, this tropical blood-sucking species was inadvertently introduced to the United States and has become a serious pest in Gulf Coast states.

According to Texas AgriLife Extension Entomologist Sonja Swiger, tail lice are most abundant during the summer. Adults tend to congregate on the tailhead and eggs are laid on tail hairs, but immature tail lice may be found anywhere on the animal. When a heavy infestation occurs, adults and eggs may also be found in the host's ears.

A heavy infestation may cause reduced weight gains, loss of vitality and reduced milk production. In the worst cases, anemia and abortion may occur.

"Treatment can be accomplished with

both timed treatments and self-treatment options," says Swiger. "Timed treatments need to be applied in two doses, given three weeks apart. The first treatment kills nymphs and adults present, and the second treatment kills lice that developed from eggs present at the time of the first application. For self-treatment, continuous use of insecticide dustbags or backrubbers are the most successful methods."

Swiger says tail lice treatment can be administered from early spring through fall. Treatment in the fall will prevent the build-up of eggs during the winter months. Early spring applications will control lice emerging from a winter egg build-up, while aiding in horn-fly control. The late-fall to mid-winter treatments generally recommended for other species of cattle lice are not practical for controlling tail lice.

always happen," notes Dyer. "Producers should treat every animal in the herd. If they can't do all of them at the same time, keep treated and untreated groups separate until all animals are treated. Any new animals introduced to the herd should be kept separate until they've been treated. Also remember to observe any product withdrawal times/periods specified on the label."

Producers sometimes report failure to achieve desired results. In most of those cases, Whittier suspects application of the lice control product wasn't quite right.

"Maybe they were in a hurry and dribbled the product down the animal's ribs instead of pouring down the middle of the back," says Whittier. "Maybe the dosage wasn't right, or the cattle were really dirty and not enough product reached the skin. Maybe it rained soon afterward and rinsed the product away."

Even when control measures are applied carefully, lice populations can persist on some "carrier" animals. Townsend says 1%-2% of the animals in a herd can be chronically infested and may transfer lice to other animals. Older cows and bulls are the most likely reservoir animals, but they can be sometimes difficult to detect.

"Good lice control requires a conscientious effort," states Townsend. "Total eradication isn't likely but timely treatment, applied correctly, can keep lice in check and greatly reduce animal stress." AJ