Post Rock Extension District Column

By Blaire Todd
K-State Extension-Post Rock District
Livestock Production Agent

A Winter Guide to Keeping Lice in Check

Although most healthy cattle can manage lice burdens without intervention, some animals may require insecticide intervention. Lice populations are most active from December through March, with numbers naturally declining as we move into the warmer summer months. Lice can be divided into two broad groups based on their feeding biology. Biting lice (also called chewing lice) feed on hair, skin, and/or skin secretions. This feeding activity causes irritation, and animals often scratch and rub, which can cause significant damage to facilities and fences. Notable patchy hair loss may occur in animals with high lice burdens, which increases animal stress as they struggle to insulate, leaving them susceptible to frostbite. Sucking lice are blood feeders with specialized mouthparts that tap directly into blood vessels, similarly to mosquitoes. Severe infestations can result in anemia and production losses, especially in calves. Infestations of sucking lice can also cause rubbing, scratching, and increased self-licking. Long-haired animal breeds with dense, thick coats provide extra insulation and protection from lice, and these breeds can be especially prone to infestations.

Identifying which lice type you have can be important, as it may direct your insecticide choice. As a general rule, biting lice have large, dome-shaped heads while sucking lice have more narrow, tapered heads. Only one species of biting louse affects cattle (the cattle biting louse), and females can reproduce without mating. This is the most prevalent lice species affecting cattle and is commonly found on adult animals, especially along the backline and around the wither area. Four species of sucking lice impact cattle in the US, three of which are not common on the Great Plains region (little blue cattle louse, shortnosed cattle louse, and cattle tail louse). The fourth species of sucking lice (long-nosed cattle louse) can transmit Theileria orientalis, an infection that causes the disease theileriosis and can cause significant mortality, reduced milk production, and reduced calf gains. This species can reach high numbers on calves but is found infrequently on adults. Special attention should be paid to the dewlap, neck and shoulders, as this is a preferred feeding site. By maintaining vigilant management and biosecurity, producers can protect their herds and flocks from lice, ensuring healthier and more productive livestock year-round.

Lice are host-specific, meaning that the cattle lice are not shared with sheep, pigs, or horses, and vice versa, but multiple species of lice can infest the same animal. As wingless insects, lice require direct body contact to move from animal to animal. Inspect new animals entering the herd to avoid lice introductions. The economic threshold for lice infestations is ten lice per square inch. To do this, part the hair of the animal, and if more than ten lice are found per

square inch, the animal should be treated. Good lighting can help, as lice are often lighter in color than the darker fur. If treating individual animals, keep treated animals separate until the treatment course is complete to prevent them from transferring lice to untreated individuals. Tough egg casings protect the developing lice (also called nits) from insecticides, requiring that treatment be given twice, usually two to three weeks apart. This will kill any nymph lice emerging from eggs before they reach sexual maturity and lay eggs.

Several pyrethroid-based pour-ons are available, which effectively control both sucking and chewing lice. Those that also contain diflubenzuron, an insect growth regulator, need only be applied once, as it targets the egg stage and emerged lice. Macrocyclic lactone products (moxidectin, ivermectin, eprinomectin, etc.) are available as both pour-ons and injectables and provide extra coverage for nematodes. While a pour-on will target both sucking and chewing lice, injectables will only control sucking lice since biting lice do not feed on blood. Spinosad pour-ons offer a third chemical class for rotation but, like pyrethroids, will require a second application to be effective. Although organophosphate chemicals are effective at killing lice, they are mainly available as sprays or dusts, which may not be as practical to use in winter. If using a duster or a self-application oiler, place it in a spot where animals often frequent.

Do not use the same chemical group year after year; instead, use a single chemical group for a year (pyrethroid, spinosad, or macrocyclic lactone) before moving onto the next chemical group the following year. This rotation will prevent you from using the same chemical group more than once every 3 years, slowing the rate of insecticide resistance. Always check withdrawal periods and apply insecticides according to the manufacturer's label. Thanks to Cassandra Olds for sharing information related to lice control in cattle. For further information, please contact me at any of the Post Rock Extension District Offices in Beloit, Lincoln, Mankato, Osborne, or Smith Center.

Post Rock Extension District of K-State Extension serves Jewell, Lincoln, Mitchell, Osborne, and Smith counties. Blaire may be contacted at blairet@ksu.edu or by calling Beloit 738-3597, Smith Center 282-6823, Lincoln 524-4432, Mankato 378-3174, or Osborne 346-2521. Join us on Facebook at "Post Rock Extension" along with our website www.postrock.ksu.edu.