

AGRICULTURAL GUIDE

Published by the University of Missouri-Columbia Extension Division

Insect Control

JUL 24 1987

Beef cattle lice control

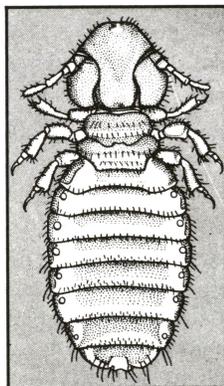
Robert D. Hall and Flernoy G. Jones,
Department of Entomology,
College of Agriculture

Two types of lice may be found on cattle in Missouri—chewing lice and sucking lice.

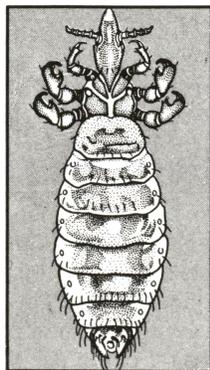
Chewing lice feed on hair, scabs and excretions from the animal's skin and irritate the skin with their sharp claws and mandibles. Chewing lice infestations weaken the animal, interrupt normal feeding activities and make the animal more susceptible to diseases.

The **cattle biting louse** is the only species of chewing louse occurring on cattle in Missouri. It is yellowish white with a reddish head and may be found all over the animal's body and when full grown will be about $\frac{1}{12}$ inch long. It is a pest of both young and mature cattle.

Sucking lice feed by piercing the animal's skin with their sharp mouthparts and withdrawing blood. The loss of blood stunts growth and reduces weight gain. The irritation caused by lice also hinders the animal's feeding activities which may reduce the growth rate. Continued heavy infestations weaken the animal to the point that stress from disease or extreme cold weather may cause death.



Biting louse



Bloodsucking louse

Three species of sucking lice may be found on cattle in Missouri. Sucking lice may be found on the head, neck, withers, around the base of the tail, brisket, and along the inner surfaces of the legs. The **longnosed cattle louse** is generally a pest of young cattle and is about $\frac{1}{10}$ in. long. The **shortnosed cattle louse** is about $\frac{1}{16}$ inch long and is more often a pest of older cattle. The **little blue louse** is about $\frac{1}{16}$ inch long. It is generally a pest of older animals and is more common around the animal's head.

Life history

The eggs (nits) are glued to the hair and hatch in one to two weeks. The nymphs that hatch from these eggs become full-grown and start to lay eggs in about two weeks.

Both chewing and bloodsucking lice are most abundant during the winter. Infestations are usually light during the summer and early fall but increase rapidly in the winter and spring. Some animals may be continuously infested with lice throughout the year. You may notice that certain animals are particularly prone to lice infestations. Schedule these "carrier" animals for disposal.

Control

Just because cattle are scratching or rubbing against solid objects during the winter and early spring doesn't mean they are lousy. Examine them before applying control measures. Part the animal's hair where lice are most likely to be, and look for lice or for eggs attached to the hair.

Cattle lice may be controlled with insecticides applied by sprayers, backrubbers, dust bags, "pour-on" or injection methods. Insecticide sprays will not affect the eggs; therefore, a second spray in 14 to no more than 18 days later will be necessary to kill the nymphs that hatch following the first spray.

Missouri Insect Control Recommendations are revised annually and are subject to possible change during the season. No discrimination is intended and no endorsement is implied.

Method of Control

Beef Cattle Lice Control

Sprays

1. Coumaphos (Co-Ral) - use a spray containing 0.06% coumaphos made by mixing 2 pounds of 25% Co-Ral wettable powder in 100 gallons of water or 1 ounce in 3 gallons of water. Or mix 2 quarts 11.6% Co-Ral emulsifiable concentrate in 100 gallons of water or 4 teaspoons in 1 gallon of water.
- *2. (RU) Dioxathion (Delnav) - make a spray containing 0.15% dioxathion by mixing 2 quarts of 30% Delnav livestock emulsifiable concentrate in 100 gallons of water or 4 teaspoons in 1 gallon of water.
3. Fenvalerate - make a 0.05% spray by mixing 1 quart Ectrin 10% water dispersible liquid in 50 gallons of water (4 teaspoons/gallon). Wet animal thoroughly.
4. Malathion - use a 0.5% spray made by mixing 1 gallon of 57% malathion livestock emulsifiable concentrate in 100 gallons of water or 7 teaspoons in 1 gallon of water.
5. Permethrin - make a .01% spray by mixing 1 pint of 5.7% emulsifiable concentrate in 50 gallons of water. A second spray at 14 to 21 days is recommended.
6. Ronnel (Korlan) - use a 0.25% spray made by mixing 1 gallon of 24% Korlan emulsifiable concentrate in 100 gallons of water or 8 teaspoons in 1 gallon of water.
7. Amitraz (Tactic) - use a 0.025% spray made by mixing one quart of 12.5% amitraz in 100 gallons of water. Use up to 2 gallons per head, and repeat treatment in 2 weeks. Amitraz is not systemic and will not control cattle grubs. There are no breed restrictions on the use of this material.

Restrictions: No preslaughter interval is required with dioxathion (Delnav) ronnel (Korlan) or permethrin, but **do not** treat more often than once every two weeks. No preslaughter interval is required with coumaphos (Co-Ral) or malathion.

The species of lice present and the area of body infested will determine the amount of coverage needed. For complete body coverage, apply one to two gallons of spray per animal depending upon size of animal and density of haircoat. Use smaller amounts of spray on calves 3-6 months old and **Do not** treat calves less than three months old.

Use a sprayer that will produce at least 200 pounds of pressure so as to wet the skin, not just the hair. The first spray should be applied about November 1. Make a second application 14 to 18 days after the first application.

Backrubbers

1. Ronnel (Korlan) - Charge the backrubbers with 1% ronnel, made by mixing 10 tablespoons 24% Korlan emulsifiable concentrate in 1 gallon of fuel oil.
2. Permethrin - Use .15% solution made by mixing 1 pint 5.7% permethrin emulsifiable concentrate to 5 gallons diesel oil.

Restriction: No preslaughter interval is required with ronnel (Korlan) or permethrin.

If a backrubber, as used for horn fly control, is used all year long, the cattle should not become lousy enough to need spraying. If necessary, relocate the backrubber to where cattle loaf during the winter. Apply 1 to 2 quarts of solution to cable-type backrubber or fill reservoir of oiler type to capacity every 10 days to two weeks or as needed. The initial charging of cable-type backrubbers will require approximately 1 gallon of solution. **Do not** apply entire amount at one time. Allow backrubber to soak up material by making split applications until the backrubber is soaked. **Do not** locate backrubbers where drippage or spillage will contaminate water supplies. **Do not let cattle use a backrubber that is dripping with the insecticide mixture.** See UMC Guide 7012, "Making and Using Cattle Backrubber," for suggestions on constructing backrubber.

Dust Bags

Use tightly woven or multiple layer burlap bags containing:

1. Coumaphos (Co-Ral) - Use a 1% coumaphos dust.
2. Stirofos (Rabon) - Use 3% Rabon livestock dusting powder.

Restriction: No preslaughter interval is required with these self-treatment applications.

Lice should not build up on cattle using dust bags containing one of the above insecticides, if the bags are located where cattle will use them regularly. Place the bags near salt and mineral blocks, in alleyways, feed lots, and loafing sheds. Keep the bags as dry as possible. A simple tin roof is effective and easily constructed.

Pour-on Method

Starting at the shoulders, pour the required amount of insecticide along the backline for a distance of 18 to 24 inches.

1. Chlorpyrifos (Dursban-44) - apply 43.2% chlorpyrifos at the rate of 2 cc per 100 pounds of body weight up to 800 pounds, not to exceed 16 cc. **Do not** apply to animals under 200 pounds. **Note:** This product can be used any month of the year because it does not control cattle grub. Read the label carefully because of restrictions on exotic breeds of cattle.
 2. Famphur (Warbex) - Use 13.2% ready-to-use, pour-on. Apply 1/2 ounce per 100 pounds of body weight, but **no more than 4 fluid ounces per animal.** **Do not** repeat treatment. Swine should be eliminated from areas where run-off occurs.
 3. Mix one part 7.6% fenthion (Lysoff) with 8 parts water or use commercially available 3% fenthion (Tiguvon) without dilution. Apply Lysoff at rate of 1 fluid ounce of final mixture per 100 pounds of body weight. Apply Tiguvon at the rate of 1/2 fluid ounce per 100 pounds of body weight.
-

Pour-on Method, continued

Restrictions: On native Missouri Cattle, **do not** apply famphur (Warbex) or fenthion (Lysoff, Tiguvon) as pour-ons during October, November and December unless applications were made earlier for grub control. Follow label restrictions for use on cattle imported from other states. **Do not** treat with famphur (Warbex) or fenthion (Lysoff, Tiguvon) within 35 days of slaughter. **Do not** apply famphur (Warbex) to Brahman bulls.

Precautions

Do not apply in conjunction with oral drenches of other internal medication, such as phenothiazine, or with natural or synthetic pyrethroids or their synergists, or with other organic phosphates.

Brahman and Brahman crossbred cattle are sensitive to most organic phosphate insecticides. Read and heed label restrictions when using organic phosphate insecticides on Brahman cattle.

Do not contaminate feed, water, or feed and water utensils. **Do no** locate backrubbers where excess insecticide or spillage will contaminate water supplies. Observe required time interval between applications of any insecticide and slaughter of treated animal. **Read and follow** all restrictions and precautions printed on the container label.

Injection Method

Use a 16 gauge, ½ inch to ¾ inch needle and veterinary syringe. Inject subcutaneously under the loose skin in front of or behind the shoulder. Use sterile equipment and sanitize the injection site by applying a suitable disinfectant. Use clean properly disinfected needles to reduce the potential for infection. No special handling or protective clothing are required.

1. Ivermectin (Ivomec) - inject ready-to-use sterile solution containing 1.0% ivermectin, 40% glycerol formal, and propylene glycol, q.s. ad 100%. The recommended dose level is 200 mcg ivermectin per kilogram of body weight; this is given subcutaneously at the rate of 1 ml ivermectin solution per 50 kg (110 pounds).

Body weight (pounds)	Ivomec dose (ml)
110 - 220	2
220 - 330	3
330 - 440	4
440 - 550	5
550 - 660	6
660 - 770	7
770 - 880	8
880 - 990	9
990 - 1,100	10

Restrictions: **Do not** use ivermectin within 35 days of slaughter and **do not** use during October, November, and December. Cattle treated with ivermectin in August or September may be retreated with ivermectin during the winter for internal parasites, mange mites, or lice without danger of grub-related reactions.

An asterisk () preceding any insecticide means that all or some uses of the product have been restricted by the Environmental Protection Agency. Applicators must be certified before they may purchase restricted products.

