

## University of Missouri Extension

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# Beef Cattle Lice Control

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Two types of lice may be found on cattle in Missouri

- Chewing lice
- 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. It can be found all over the animal's body and when full grown will be about 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 mouth parts and withdrawing blood. The loss of blood can stunt growth and reduce weight gain. The irritation caused by lice also hinders the animal's feeding activities, which can reduce the growth rate. 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. Continued severe infestations weaken the animal to the point that stress from disease or extreme cold weather may cause death.

Three species of sucking lice can be found on cattle in Missouri. The longnosed cattle louse is generally a pest of young cattle and is about 1/10 inch long. The shortnosed cattle louse is about 1/16 inch long and is more often a pest of older cattle. The little blue louse is about 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 usually are small 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 lice-infested. Examine them before applying control measures. Part the animal's hair where lice are most likely to be found 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 will be necessary to kill the nymphs that hatch following the first spray.

## Control methods

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

- **Coumaphos (Co-Ral)**

Use a spray containing 0.06 percent coumaphos made by mixing 2 pounds of 25 percent Co-Ral wettable powder in 100 gallons of water or 1 ounce in 3 gallons of water. Or mix 2 quarts 11.6 percent Co-Ral emulsifiable concentrate in 100 gallons of water or 4 teaspoons in 1 gallon of water.

- **\*(RU) Dioxathion (Delnav)**

Make a spray containing 0.15 percent dioxathion by mixing 2 quarts of 30 percent Delnav livestock emulsifiable concentrate in 100 gallons of water or 4 teaspoons in 1 gallon of water.

- **Fenvalerate**

Make a 0.05 percent spray by mixing 1 quart Ectrin 10 percent water dispensable liquid in 50 gallons of water (4 teaspoons per gallon). Wet animal thoroughly.

- **Malathion**

Use a 0.5 percent spray made by mixing 1 gallon of 57 percent malathion livestock emulsifiable concentrate in 100 gallons of water or 7 teaspoons in 1 gallon of water.

- **Permethrin**

Make a 0.01 percent spray by mixing 1 pint of 5.7 percent emulsifiable concentrate in 50 gallons of water. A second spray at 14 to 21 days is recommended.

- **Amitraz (Taktic)**

Use a 0.025 percent spray made by mixing one quart of 12.5 percent 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) or permethrin, but **do not** treat more often than once every two weeks. No pre-slaughter 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 to 6 months old and **do not** treat calves less than 3 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 around Nov. 1. Make a second application 14 to 18 days after the first application.

## Backrubbers

- **Coumaphos (Co-Ral)**  
Use a mixture of 1 gallon Co-Ral 11.6 percent EC and 13 gallons fuel oil or mineral oil.
- **Permethrin**  
Use 0.15 percent solution made by mixing 1 pint of 5.7 percent permethrin emulsifiable concentrate to 5 gallons diesel oil.
- **Malathion**  
Charge the backrubber with a mixture of one-half pint of malathion 57 percent EC and 1.5 gallons of fuel or mineral oil.

### Restrictions

No preslaughter interval is required with permethrin.

If a backrubber, as used for horn fly control, is used all year long, the cattle should not become louse-infested enough to need spraying. If necessary, relocate the backrubber where cattle loaf during the winter. Apply 1 to 2 quarts of solution to cable-type backrubber or fill the reservoir of the 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.

## Dust bags

Use tightly woven or multiple-layer burlap bags containing:

- **Coumaphos (Co-Ral)**  
Use a 1 percent coumaphos dust.
- **Stirofos (Rabon)**

Use 3 percent Rabon livestock dusting powder.

### Restrictions

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

Lice should not build up on cattle using dust bags containing one of these 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.

- **Chlorpyrifos (Dursban-44)**

Apply 43.2 percent chlorpyrifos at the rate of 2 cubic centimeters 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.

- **Famphur (Warbex)**

Use 13.2 percent 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 runoff occurs.

- Mix one part 7.6 percent fenthion (Lysoff) with 8 parts water or use commercially available 3 percent fenthion (Tiguvon) without dilution. Apply Lysoff at a 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.

- **Permethrin (DeLice)**

Apply 1 percent permethrin at the rate of 1/2 fluid ounce ready-to-use pour-on per 100 pounds body weight, up to 5 fluid ounces per animal. Repeat treatment as needed, but not more often than every two weeks.

**Note**

This product can be used any month of the year because it does not control cattle grubs. Use on calves and lactating and non-lactating dairy cattle.

### 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 medications, 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 not** 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, 1/2-inch to 3/4-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.

- **Ivermectin (Ivomec)**

Inject ready-to-use sterile solution containing 1 percent ivermectin, 40 percent glycerol formal, and propylene glycol, q.s. ad 100 percent. The recommended dose level is 200 micrograms ivermectin per kilogram of body weight; this is given subcutaneously at the rate of 1 milliliter ivermectin solution per 50 kilograms (110 pounds).

Body weight	Ivomec dose
110 to 220 pounds	2 milliliters
220 to 330 pounds	3 milliliters
330 to 440 pounds	4 milliliters
440 to 550 pounds	5 milliliters
550 to 660 pounds	6 milliliters
660 to 770 pounds	7 milliliters
770 to 880 pounds	8 milliliters
880 to 990 pounds	9 milliliters

990 to 1,100 pounds	10 milliliters
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### 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 re-treated with ivermectin during the winter for internal parasites, mange mites or lice without danger of grub-related reactions.

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### Related MU Extension publications

- G7012, Making and Using a Cattle Backrubber  
<http://extension.missouri.edu/publications/DisplayPub.aspx?P=G7012>

Order publications online at <http://extension.missouri.edu/explore/shop/> or call toll-free 800-292-0969.



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