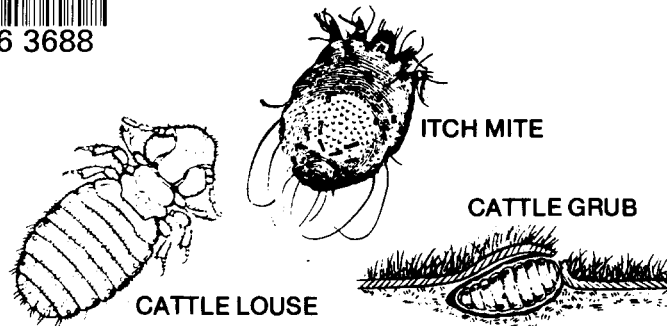


Insect Pests of Cattle



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An effective year-round insect control program is a must for profitable livestock production, yet control practices are ignored on many farms.

Each year insects take their toll of profits through reduced weight gains, decreased milk production, damage to hides and meat, disease transmission and even losses through death of infested animals.

Effective control of the major insect pests of cattle can be obtained through timely treatments with approved insecticides. The suggested treatments outlined in this circular are designed to provide the most effective and safe control with the least possible danger of injury to animals and chance of chemical residues in the meat or milk.

KINDS OF INSECTICIDES TO USE

The insecticidal formulations most frequently used are: dusts, wettable powders, emulsion concentrates and oil solutions.

Dusts are particularly useful during cold weather or when only a few animals are to be treated.

Wettable powders are mixed with water to form suspensions. They are designed to use as sprays although some formulations can also be used as dips. Wettable powders may cause some trouble in "settling out" when used in sprayers without mechanical agitation in the spray tank.

Emulsion concentrates are mixed with water and can be used in any type of spray applicator. Many agricultural formulations used in crop spraying are not

suitable for treating livestock. Make sure livestock are listed on the pesticide label before using.

Oil solutions are used primarily in self-treating devices. These are available in ready-to-use form or as concentrates to be diluted with oil.

Pour-on formulations are available for both cattle grubs and lice. These pour-on formulations have become widely accepted by the livestock industry because they are quick and easy to apply. These products are systemic insecticides which are readily absorbed and distributed in the animal's body; therefore, special care should be taken when using them. Applicators should wear appropriate protective clothing to avoid contact with these pour-on insecticides.

TYPES OF APPLICATION EQUIPMENT

Small hand dusters or sprayers will work satisfactorily when treating a few animals for cattle lice. However, high-pressure sprayers which develop 300 pounds of pressure or above are best for treating for cattle grubs and cattle lice. Pour-on formulations are readily applied with a calibrated dipper or application devices purchased with the particular product.

HOW TO TREAT

Effective control can be attained for most cattle pests when spray applications wet the hair coat. However, when treating for grubs and lice, it is important to get the spray through the hair coat and on to the skin.

Treat only a few animals at a time and apply the spray against the hair coat. Spray all parts of the animal's body. Use a coarse spray; a coarse spray has more force and penetrating power than a fine spray. The size of the spray droplets can be regulated by the openings in the spray nozzle. Keep the insecticide properly agitated during the spraying operation.

CATTLE LICE

SYMPTOMS: Infested animals rub and scratch against fences, feed bunks and other objects. Areas of the skin will be scurfy and the hair will come off in patches. Infestations are usually most severe during the late winter and spring months.

KINDS OF LICE: **Chewing lice**, commonly known as "red lice," feed by chewing the skin. They are small, yellowish-white with red heads and dark bands across their bodies. **Sucking lice**, often called "blue lice," are larger than the chewing lice and are bluish-slate color. They feed by piercing the skin and sucking blood. Lice hatch from eggs or "nits" which are attached to the hair. They breed continuously upon the animals with a new generation about every 30 days.

CATTLE GRUBS

Cattle grubs infest the backs of animals. The adults are bumblebee-like flies that dart from animal to animal laying eggs on the hair of the legs near the heels. Upon hatching, the grubs burrow into the skin and work through the muscles and tissues until they finally reach the animal's back in late winter.

MANGE MITES AND SCABIES

Beef animals may become severely infested with sarcoptic mange and scab mites. Infested animals will continuously scratch or rub. The skin becomes inflamed, scurfy, scabby and raw about the eyes, ears and along the top of the neck. Treat infested animals twice at 10 to 14 day intervals with the following:

LINDANE: 2½ pounds 25% wettable powder or 2 pints of 20% emulsifiable concentrate in 100 gallons water (**spray or dip**). Do not apply within 30 days (**spray**) or 60 days (**dip**) of slaughter.

Psoroptic scabies in cattle is a disease of national concern that infrequently has been diagnosed in North Dakota livestock. When diagnosed, this disease must be reported to state and federal livestock inspectors and requires quarantine and supervised treatment. This is a curable but highly contagious disease and rapid supervised treatment is required for the protection of the affected animals as well as the livestock industry.

The disease is caused by small psoroptic mites which burrow into the animal's hide causing infested animals considerable discomfort. The hide roughens and infected animals rub and scratch the affected area to the point of hair loss and bleeding.

Toxaphene dips have been used to treat psoroptic scabies and two dips 14 days apart were required before animals would be allowed out of quarantine. Ivomec® is now registered for the treatment of psoroptic scabies. This is an injectable pesticide applied by veterinarians that kills the mites and controls the disease.

RECOMMENDED LOUSE CONTROL MEASURES

WHEN TO TREAT	INSECTICIDE TO USE	TREATMENT	REMARKS
BEEF CATTLE			
		SPRAYS	
FALL AND WINTER MONTHS	Anchor 10% EC	1 pt. per 50 gals. of water	Spray to run-off or fog or mist using 1 gal. spray mix per head.
	Atroban 11% EC	1 pt. per 50 gals. of water	Apply directly to animals at the approximate rate of 1 qt./animal.
	Ciodrin 14.4% EC	2 gals. per 100 gals. water	Approved for use on dairy cows. Do not spray more often than once every 7 days.
	Coumaphos 25% WP (Co-Ral)	2 lbs. per 100 gals. water	Repeat as necessary. Do not treat sick animals or calves under 3 months old, or dry dairy cows within 14 days of freshening. No waiting period is required on slaughter animals.
	Dioxathion (Delnav) 30% EC	2 qts. per 100 gals. water	Do not treat animals under 3 months of age. Do not apply to dairy cows.
	Ectiban 5.7% EC	1 qt. per 100 gals. of water	Spray until entire animal thoroughly covered. No time limitation on slaughter of beef.

WHEN TO TREAT	INSECTICIDE TO USE	TREATMENT	REMARKS
BEEF CATTLE			
SPRAYS			
FALL AND WINTER MONTHS	Ectrin 10% WDL	1 qt. per 50 gals. of water	Apply to wet all animals thoroughly. Use up to ½ gal. of spray per animal depending on size and hair coat.
	Lindane 25% WP	2 lbs. per 100 gals. water	1 to 2 treatments at 2 week intervals. Do not dip animals within 60 days of slaughter or spray animals within 30 days of slaughter.
	Lindane 20% EC	2 pts. per 100 gals. water	Repeat applications at 2 week intervals. No restrictions on slaughter. Do not use on dry dairy cows within 14 days of freshening. Do not apply to lactating dairy cows.
	Malathion 25% WP	16 lbs. per 100 gals. water	1 to 2 applications at 2 week intervals. No restrictions on slaughter. Do not use on dry dairy cows within 14 days of freshening. Do not apply to lactating dairy cows.
	Malathion 57% EC	1 gal. per 100 gals. water	
	Methoxychlor 50% WP	8 lbs. per 100 gals. water	
POUR-ON FORMULATIONS			
	Dursban 44 (For use on beef-breed cattle only)	Read to use formulation. Follow label directions for dosage and treatment.	Do not treat: —Dairy breed cattle of any age. —Purebred continental or exotic breed cattle such as Simmental, Chianina, Charolais, or Gelbvieh. —Purebred Brahma bulls. —Bulls in artificial insemination centers, bull test stations or other penned bulls. —Cows within 21 days prior to or 14 days after calving. —Veal calves. —Beef breed calves under 12 weeks of age.
	Fenthion 7.6% (Lysoff)	Pour-on formulation to be mixed with water.	Follow label directions for mixing and restrictions
MILK COWS			
SPRAYS			
	Anchor 10% EC	1 pt. per 50 gals. of water	Spray to run-off or fog or mist using 1 gal. spray mix per head.
	Atroban 11% EC	1 pt. per 50 gals. of water	Apply directly to animals at the approximate rate of 1 qt./animal. Spray dairy only after milking is completed.
	Ciodrin 14.4% EC	2 gals. per 100 gals. water	Apply along backline, poll, neck and upper portions of the sides. Repeat as necessary but not more often than every 14 days.
	Co-Ral 11.6% EC	1 qt. per 100 gals. water	Do not exceed recommended rate per 100 gals. water.
	Co-Ral 25% WP	1 lb. per 100 gals. water	Repeat applications as needed.
	Ectiban 5.7% EC	1 qt. per 100 gals. of water	Spray until entire animal is thoroughly covered. A second treatment at 14-21 days is recommended.
	Ectrin 10% WDL	1 qt. per 50 gals. of water	Apply 1-2 pts. per animal with attention to head, neck, legs and down backline. Do not apply more frequently than weekly.
	Pyrethrins plus Synergist 0.025% EC plus 0.25% Synergist	Use as directed	No restrictions, use as often as necessary.

RECOMMENDED GRUB CONTROL MEASURES

(Beef Cattle Only)

INSECTICIDE TO USE	TREATMENTS	REMARKS
SPRAY TREATMENT		
Coumaphos 25% WP (Co-Ral)	12 to 16 lbs. per 100 gals. water	1 application per season only. Treat as soon as possible after heel fly activity has ceased.
Coumaphos 25% WP (Co-Ral)	8 lbs. per 100 gals. water	2 applications per season at no more than 3 month intervals. The second application should be soon after heel fly activity ceased.
(Co-Ral) No restrictions on slaughter animals. Do not apply to lactating dairy cows or dry dairy cows within 14 days of freshening. Do not treat sick animals under stress.		
Trichlorfon 80% SP (Neguvon)	10 lbs. per 100 gals. water	1 application per season only. Treat as soon as possible after heel fly activity has ceased.
(Neguvon) Do not treat within 14 days of slaughter or non-lactating dairy cows within 14 days of freshening. Do not treat lactating dairy cows, animals less than 3 months old or animals that are sick or under stress.		

POUR-ON TREATMENT

NOTE: Systemic spray and pour-on grub treatments should not be applied in conjunction with oral drenches or other internal medications, such as phenothiazine, nor with natural or synthetic pyrethroids or their synergists, or with organic phosphates.

Coumaphos 4% (pour-on) (Co-Ral)	½ oz. per 100 lbs. body wt. with a 4 oz. maximum per animal	Backline treatment. 1 application per season only. Treat as soon as possible after heel fly activity has ceased. Co-Ral pour-on restrictions same as for spray treatment.
Famphur 13.2% (pour-on) (Warbex)	1 oz. per 200 lbs. body wt. with a 4 oz. maximum per animal	Backline treatment. Treat during October for maximum control.
Fenthion 3% (pour-on) (Tiguvon)	½ oz. per 100 lbs. body wt.	Backline treatment. Treat as soon as possible after heel fly activity ceases, preferably during October.
Fenthion 20% (pour-on) (Spotton)	Treat in increments of c.c.'s rather than ounces	This product to be applied only with applicator gun. Use as directed. Do not treat within 45 days of slaughter.
Imidan 11.6% EC (Prolate)	Mix 1 part in 2 parts water. Apply 1 oz. per 100 lbs. body wt. with a 4 oz. maximum per animal.	Backline treatment. Do not treat dairy animals. Do not apply within 21 days of slaughter. Observe label precautions for use.
Trichlorfon 8% (pour-on) (Neguvon)	½ oz. per 100 lbs. body wt. with a 4 oz. maximum per animal	Backline treatment. 1 application per season only. Treat as soon as possible after heel fly activity has ceased. Neguvon pour-on should not be applied within 21 days of slaughter. Do not apply to dairy cows.

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