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# HORN FLY CONTROL ON RANGE AND PASTURES

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The horn fly, *Haematobia irritans* (L.), is a common pest of range and pasture cattle throughout Idaho. Economic numbers of horn flies develop in June and the flies are abundant during July, August and September. Many Idaho cattlemen have found that chemical control of horn flies is essential for good herd management.

The small, blood-sucking horn fly clusters on the back, sides and underline of all cattle breeds. A thousand or more flies may infest individual bulls or cows. The flies' feeding on animals results in considerable discomfort and annoyance, in addition to the loss of blood. Tormented cattle toss their heads, switch their tails and rub through brush to fight flies. Heavily infested cattle do not graze during the day and brush up for long periods to avoid fly attack.

Single grazing season studies with yearling heifers and steers have shown weight gains of 15 to 50 pounds per animal when horn flies are controlled. When cows

are heavily infested with horn flies, milk production may be reduced 10 to 20 per cent.

Spraying or dipping is not always a practical method of horn fly control when cattle are on summer range or pasture. The time and labor required to gather widely scattered cattle, the weight loss incurred handling cattle, and the stress caused by treatment may outweigh the benefits of controlling horn flies.

Cattle rubbing against bags containing a horn fly toxic insecticide-dust provides a control method that avoids these problems. The insecticide-dust bag treatment is practical under Idaho conditions. This method is also economical compared to other methods of fly control.

## Identification

The horn fly is about half the size of the common house fly. It is light gray in color and about 3/16 inch in length. It has piercing-sucking mouthparts. At rest, the head of the horn fly usually points downward. The wings are held flat over the back at an angle of about 60°. The fly burrows among the hairs of the host to feed.

The flies are usually observed on the backs of cattle when the weather is cloudy or cool. During sunny weather the air temperature seems to determine their location. In the morning as the air temperature rises the flies are first observed on the sunny side of the animal, then on the shaded side and later on the underside along the animal's midline. The flies again move to the sides and back of the animal during the late afternoon and evening. When disturbed they will fly up in a swarm but return immediately to the individual animals.



Dust bags are simple, effective ways to control horn flies.

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## Life History

Adult flies spend their entire life on the host, except when the females leave to deposit eggs on fresh, undisturbed cattle droppings. The eggs hatch in approximately 24 hours, the maggots complete their development in the droppings within 4 to 5 days and the mature maggot transforms into an adult fly in 5 to 7 days. The life cycle from egg to adult usually takes 10 days to 2 weeks depending on temperature and moisture conditions. There are many overlapping generations each summer. Horn flies spend the winter as maggots or pupae beneath cattle droppings.

## Control

Although there are several methods for controlling horn flies, only self-applicating insecticide-dust bags and backrubbers will be discussed.

### Dust Bags

Dust bags are readily accepted when placed in an area where cattle congregate. If some animals in a herd refuse to use dust bags, forced use by placing the bags between pasture and water or salt frequently improves effectiveness.

Dust bags should hang level and be separated by a 6-inch space between bags. Use a strong cord to secure the bags to the pole. Allow 8 to 10 inches between the pole and the bags so the bags swing freely when cattle move under them. Hang the bag so the bottom edge is approximately 38 inches from the ground. This will permit the animal to treat its head and backline. Use a minimum of one dust bag for every 25 head of cattle.

Check the bags often when they are first put into use. Some animals may overwork bags in confined areas and waste dust. Only bags with an adequate supply of insecticide dust will allow the animals to properly treat themselves. Bags should contain 8 to 10 pounds of insecticide.

Continued use of insecticide dust bags will aid in preventing summer louse build-up, as well as controlling horn flies.

The following dusts can be used in dust bags:

<u>INSECTICIDE</u>	<u>MAY BE USED ON</u>
Ciodrin 3% dust	Beef and dairy cattle
Co-Ral 1% and 5% dust	Beef and dairy cattle
Rabon 3% dust	Beef and dairy cattle
Methoxychlor 10% dust	Beef cattle only

### CAUTION - - - POISON

All insecticides are poisonous and must be handled with care in order to protect the operator, livestock, adjacent property and the consumer. Read and follow the label carefully each time an insecticide is used. Keep accurate records of the pesticides you use and apply.

**PESTICIDE RESIDUES:** These recommendations are based on the best information currently available for each chemical

## Backrubbers

Backrubbers are less effective than insecticide-dust bags in fly control. Backrubbers are more difficult to install, require more frequent maintenance for recharging and repair and are more expensive. However, they may have a use if you have horned animals in the herd because horned animals will rip dust bags occasionally. Erect a backrubber when dust bags, spray and dust treatments are not practical to prevent horn fly attack.

Commercial models are available. Or you can construct an effective simple backrubber by installing braced posts 15 to 20 feet apart with an eye bolt 4 feet above the ground. String a cable, twisted wire or chain between the poles and wrap it with layers of burlap sacks to about a 3-inch thickness. Tie the burlap to the cable with twine at 6-inch spacings. The middle portion of the backrubber should be 18-20 inches above the ground. Soak the burlap sacks with a solution of insecticide and oil every 2 weeks.

The following mixtures can be used in backrubbers:

<u>Material and Dilution</u>	<u>Waiting period</u>	<u>May be used on</u>
Co-Ral 11.6% EC 1 gal to 13 gal oil	None	Beef and dairy
Delnav 26% EC 1 gal to 19 gal oil	None	Beef and dairy
Korlan 24% EC 1 qt to 7 gal oil	None	Beef and dairy
Malathion 57% EC 1 pt to 7 gal oil	None	Beef only
Ciodrin 25% EC 1 qt in 7 gal oil	None	Beef and dairy
Toxaphene 60% EC 1 qt in 4 gal oil	28 days	Beef only
Methoxychlor 25% 1 gal in 4 gal oil	None	Beef only

EC = Emulsifiable Concentrate

About 1 gallon of insecticide-oil mixed solution per 20 linear feet of cable will be needed to wet the sacks. Mix chemicals with No. 2 diesel fuel or furnace oil. Never use crankcase oil because it could cause severe blistering of the skin and excessive amounts could cause illness or even death. Backrubbers require recharging periodically.

Their use will also prevent louse build-up and aid in winter louse control.

listed. If followed carefully, residues should not exceed the tolerance established for any particular chemical. To avoid excessive residues, follow recommendations carefully with respect to dosage levels, number of applications and minimum interval between application and slaughter.

**THE CATTLEMAN IS RESPONSIBLE** for residues in his livestock, for residues in animal products, or for problems caused by chemical drift or drainage from his property to other properties.