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FACT SHEET

L-919

SELF-TREATMENT DEVICES FOR HORN FLY CONTROL

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The horn fly, a bloodsucking insect about one-half the size of the house fly, is one of the most persistent, annoying external parasites of Texas cattle. This pest actively reproduces from early spring through late fall, and during favorable seasons may develop large populations of several thousand flies per animal. Cattle constantly fight the flies, wasting calories and energy that could be utilized for beef and milk production. Fly annoyance and irritation interferes with normal grazing and feeding, further reducing animal efficiency. In addition, heavy horn fly infestations often cause digestive upsets which lower the utilization of consumed feed and forage.

Blood losses to horn flies also affect animal performance. Adult flies stay on the animal almost continually and suck blood intermittently, perhaps during 20 or more short periods each day. Assuming that each fly extracts one drop of blood per day, a moderately heavy infestation of 5,000 flies can extract $\frac{1}{2}$ pint of blood, or about 1 percent of a 1,000-pound animal's blood volume each day.

Ranchers and dairymen recognize the loss of cattle "condition" caused by horn flies, but specific losses are difficult to measure and assess. Some authorities estimate losses of up to $\frac{1}{2}$ pound of beef or 1 quart of milk per day from uncontrolled horn fly infestations on beef and dairy animals.

Effective control of horn flies during peak infestation periods requires regular spraying or dusting every 2 to 3 weeks. In many operations, this necessitates gathering and penning the animals to apply control measures. This disturbs the cattle, but also it requires time, labor and equipment—commodities not always readily available.

Self-treatment Devices

In recent years, various labor-saving devices have been developed which provide for self-treatment with insecticide preparations. Cable-type back rubbers charged with insecticide-oil solutions have provided good horn fly control, as well as some louse reduction, when properly installed and maintained. More recently, burlap bags containing insecticide dust and installed for self-treatment have been employed.

The simplest oil-type back rubber consists of a chain, cable or two or three strands of barbed wire twisted together, wrapped with several layers of securely tied burlap sacks and anchored between posts or trees several feet apart, figure 1. The burlap is kept moist with an insecticide-oil solution which provides horn fly control when cattle regularly rub against the device. Several types of commercially manufactured cattle rubbers, some with automatic insecticide dispensers, are available and provide satisfactory horn fly control when properly serviced and maintained.

A dust bag can be made from two burlap sacks, one placed inside the other, containing 5 to 10 pounds of insecticide dust. Grommets fitted into the top of the bag for hanging increase the strength of the bags but are not necessary. Shelter usually is necessary to protect the dust bags from rain, figure 2.

Commercially manufactured dust bags, some containing dust and ready to hang, are also available. Some commercial bags are encased in or partially covered with vinyl or polyethylene for moisture protection and can be installed in the open.

Dust bags are usually preferable to back rubbers since they require less maintenance and servicing and are easily replaced or replenished with dust.

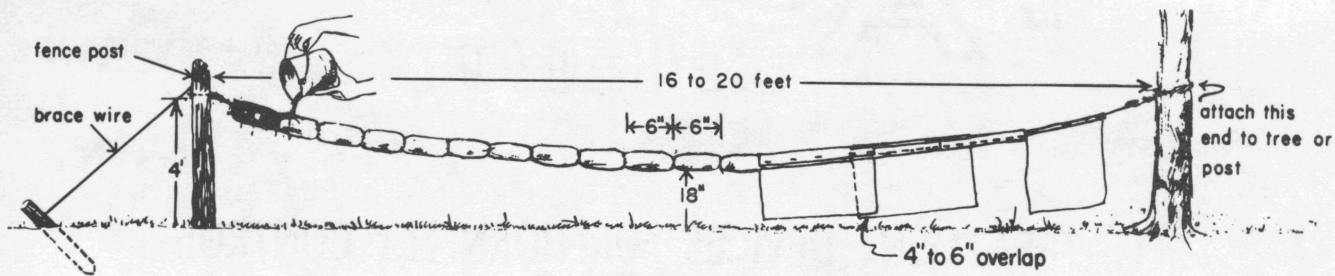


Figure 1. Simple type of homemade back rubber.

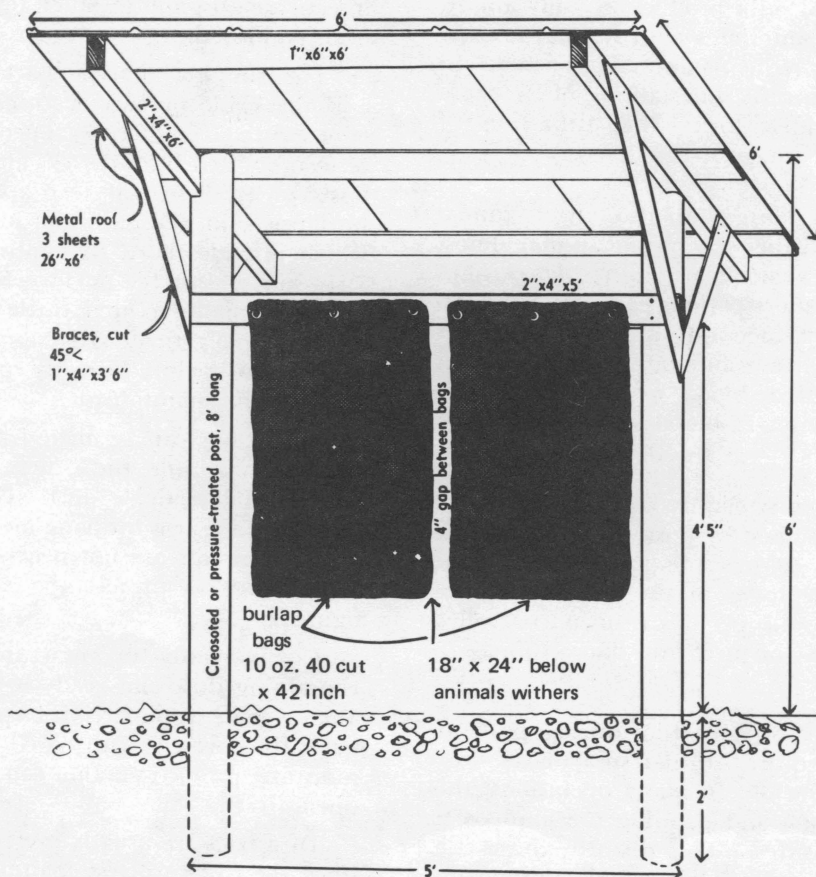


Figure 2. Small shelter for dust bag station.

Installation

Dust bags and back rubbers should be installed where regular usage is assured. The effectiveness of horn fly control is directly related to frequency of usage. For best results, cattle must contact the devices at least every 2 to 3 days, preferably daily. Some success has been achieved when the devices were installed near loafing areas, mineral feeders or water with no provision for forced usage; however, good results from such free-choice installations cannot be assured.

Installing self-treatment devices in gates or gaps where animals travel routinely to water or feed works effectively. If such installation is inconvenient or unavailable, the devices can be installed across the entrance to fenced mineral, salt, feed or water, figure 3. In dairy operations, dust bags can be hung on a swingaway arm in the milking parlor exit chute for self-treatment after the morning milking, figure 4.

Install oil-type back rubbers by anchoring the cable ends to posts or trees about 4 feet high. Allow the middle to sag about 18 inches above the ground. Dust bags should be hung in groups of two or more, spaced about 5 inches apart and positioned so that the bottom of the bag hangs 18 to 24 inches below the withers of grown animals.

Provide at least 20 feet of back rubber or two dust bags for each 50 to 60 animals. Recharge back rubbers every 2 to 4 weeks, or as necessary to keep burlap moist. Replenish dust in bags as necessary and replace worn bags when needed.

Dust bag or back rubber treatment normally costs about 20 to 60 cents per head per month, depending upon insecticides used, frequency of use and other factors. This compares favorably with the usual cost of one and a half to two treatments per month with sprays or dusts required to maintain horn fly control and requires much less labor.

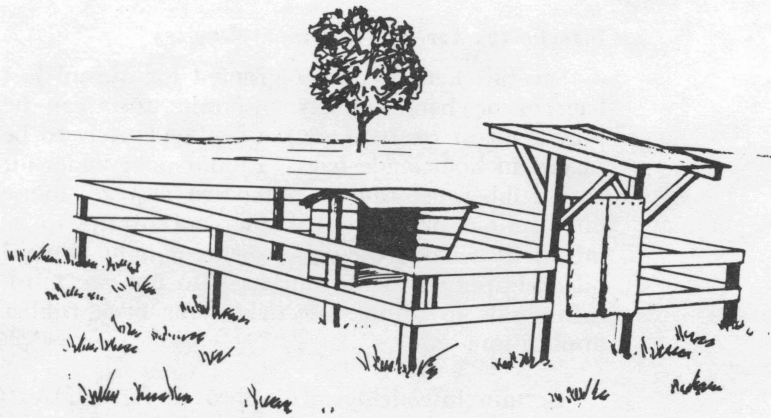


Figure 3a.

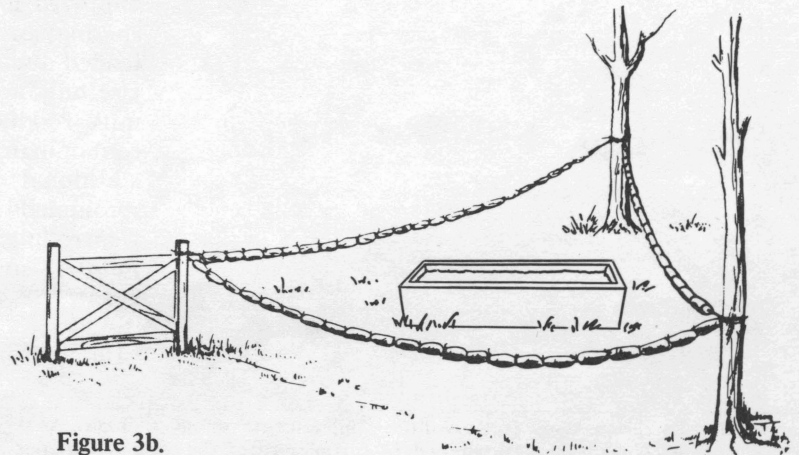


Figure 3b.

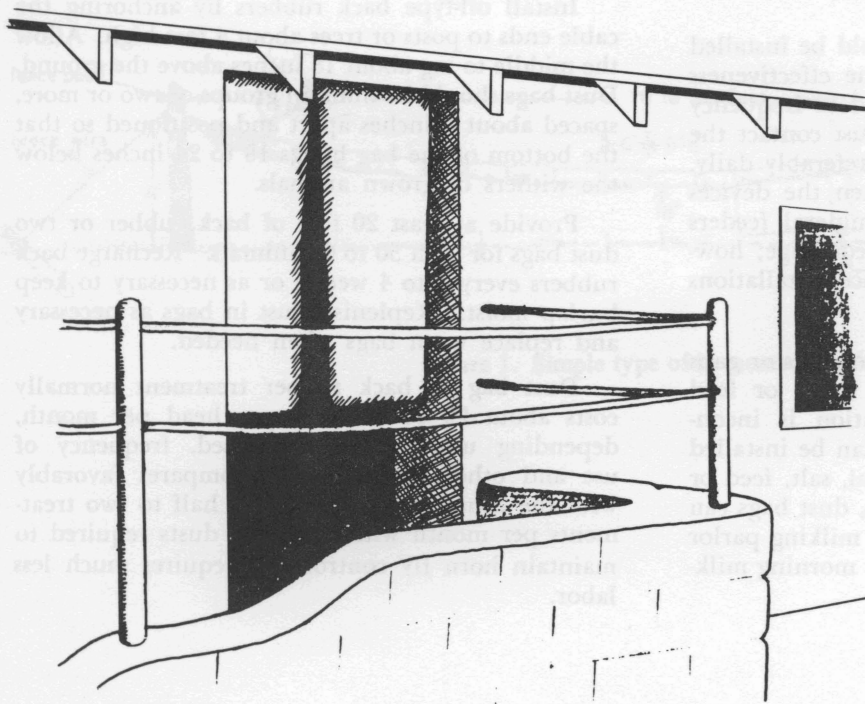


Figure 4.

Insecticides for Self-treatment Devices

Several chemicals are registered for use in dust bags or on back rubbers. Certain dusts can be purchased in ready-to-use bags or separately to be placed in homemade bags. Liquid insecticides for back rubber use can be purchased as ready-to-use oil solutions or as emulsifiable concentrates to be mixed with No. 2 diesel, kerosene or light mineral oil and applied to the burlap. Do not use lubricating oils to dilute insecticides for back rubber application.

Certain insecticides are approved for self-treatment on both beef and dairy animals; others are approved for use only on beef cattle. When purchasing an insecticide, make certain that its intended use is clearly recommended on the label. Use only according to directions to avoid meat or milk residue hazards or animal injury. Do not contaminate feed or water with insecticides. For additional information and current insecticide recommendations, see MP-691, *Texas Guide for Controlling External Parasites on Livestock and Poultry*, available from your county Extension agent.