

Self-Treatment Methods for Livestock—Backrubbers¹

E. N. I. Weeks and P. E. Kaufman²

Back rubbers are a method of pesticide self-treatment for cattle. When bothered by insects or other pests, cattle tend to rub against objects. Backrubbers provide a rubbing surface that is treated with a pesticide. Cattle self-treat during rubbing, which reduces the number of flies, particularly horn flies, and parasites such as lice, on the animal. Backrubbers may be purchased commercially or constructed from easily available materials. A properly designed backrubber that supplies pesticide reliably to the animal can be a valuable addition to an integrated pest management program. Pesticide regulations differ by animal type and may differ between states. Therefore, check local labeling for your state. Local or University Cooperative Extension Service sites are excellent sources of such information. Florida residents should refer to pest management guidelines for their species of livestock. Livestock-specific guidelines can be found at: http://edis. ifas.ufl.edu/topic_in_pet_and_livestock_pests

The position of the backrubber is of highest importance. Positioning should "force" animals to use the devices frequently so that they will be effective. Backrubbers should be installed in high-traffic areas where animals travel through frequently, such as between mineral and salt stations, or feeding and watering areas and pastures (Figure 1). To ensure treatment of the head, the backrubber should be positioned low enough so that the animals are forced to drop their heads to pass under. Underbrush often will compete with backrubbers for scratching, so locations with shrubs should be avoided. Placement of devices between feed, water, or supplement improves fly control, but use should be monitored. Each animal must contact the backrubber every two to three days to be effective.

Materials needed for a cable-type backrubber

- Two four-inch eyelets or eyebolts
- Hog rings and pliers, as needed
- 15 to 20 feet of 9-gauge cable or chain
- 18 to 20 burlap bags (can be new or used)
- Two eight-foot by six-inch-diameter posts, pressure treated
- 30 to 40 strands binder twine (15 inches long)
- 20 to 25 strands baling wire (12 inches inches long)

Construction of cable-type backrubbers (see figure 2)

- 1. Attach bags lengthwise on the chain using hog rings at ten-inch intervals (Fig. 2-1).
- 2. Roll bags tightly and tie securely around the chain with binder twine (Fig. 2-2).
- 3. Wrap the rolled bags with a second layer of burlap, making sure to overlap the areas between bags (Fig. 2-3).

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. U.S. Department of Agriculture, Cooperative Extension Service, University of Florida, IFAS, Florida A&M University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Thomas A. Obreza, Interim Dean

This document is ENY-279 (IG134), one of a series of the Entomology and Nematology Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Reviewed: December 2005. Revised September 2012. Please visit the EDIS Website at http://edis. ifas.ufl.edu.

^{2.} E. N. I. Weeks, assistant research scientist; and P. E. Kaufman, associate professor/Extension entomologist. First published in 2005 by P. G. Koehler, professor/extension entomologist; and J. F. Butler, professor, Entomology and Nematology, Cooper Extension Service, Instituteof Food and Agricultural Sciences, University of Florida, Gainesville, Fl 32611



Figure 1. Backrubbers correctly positioned in high traffic areas. Credits: P. E. Kaufman (top two photos) and J. F. Butler (bottom left photo), University of Florida; C. Sheppard, University of Georgia, Bugwood. org (bottom right photo).

- 4. Twist baling wire every 8 inches along the backrubber. Clip the wires and push the cut ends into the burlap (Fig 2-4).
- 5. Hang the backrubber between the posts so that it will sag to within $1-1\frac{1}{2}$ feet off the ground (Fig. 2-5).
- 6. Pour one gallon of recommended pesticide on 15–20 feet of backrubber (Fig. 2-6).

Use of cable-type backrubbers

- Backrubbers may be modified to suit the management practices of any farm. The treated backrubber may be attached to trees or braced with wire and/or posts (Figure 3).
- Approximately one gallon of recommended pesticide should be used to treat a 15- to 20-foot backrubber.
- The backrubber should not be dripping; adjust volume added accordingly.

- One-gallon oil cans work well for applying the pesticide oil suspension to the backrubber.
- Re-treat the backrubber every 2–3 weeks.
- One 15- to 20-foot backrubber should be available for every 50–75 animals.
- The addition of 18-inch strips of cloth at 4- to 6-inch intervals increases the area of contact and can increase insect control.
- Use livestock-grade mineral oil unless otherwise recommended on the pesticide label.
- Consult the Florida Insect Control Guide for recommended pesticides and rotate insect classes between treatments.
- DO NOT use wettable powder formulations. They are unsuitable for backrubber use.

- DO NOT use diesel or kerosene because they evaporate quickly, which means that transfer of the pesticide will be low. These oils also may irritate the animals' skin.
- DO NOT use motor oil, transformer oil, or oil of unknown origin.
- DO NOT use vegetable oil because it encourages licking and accidental ingestion of the pesticide.
- DO NOT spray pesticide oil suspensions directly onto animals.



Figure 2. Construction of a cable-type backrubber. Credits: E. N. I. Weeks, University of Florida, and L. J. Weeks.



Figure 3. Methods for securing backrubbers. Credits: J. R. Strayer and J. F. Butler, University of Florida.

Selected References

Harvey, T. L., and J. R. Brethour. 1986. Dust bag and backrubber applications of insecticides for control of pyrethroid resistant horn flies, *Haematobia irritans* (L). Prev. Vet. Med., 3: 537–540.

Iowa State University. (2009). Fly control measures. http:// www.cfsph.iastate.edu/BRMForProducers/English/Route-SpecificInformation/fly_control.pdf (14 May 2012).

Johnson, G. (2009). Horn flies on cattle: biology and management. http://msuextension.org/publications/Agand-NaturalResources/MT200912AG.pdf (14 May 2012).

Kessler, H., and W. L. Berndt. 1971. Comparison of dust bags to backrubbers for control of horn flies and face flies Diptera-Muscidae on beef cattle in East-Central South Dakota. J. Econ. Entomol., 64: 1465–1466. Mock, D. E. (1987). Managing insect problems on beef cattle. http://www.ksre.ksu.edu/historicpublications/Pubs/C671.pdf (14 May 2012).

Palmer, W. A., and D. E. Bay. 1984. A computer simulation model for describing the relative abundance of the horn fly, *Haematobia irritans irritans* (L.), under various ecological and pest management regimes. Prot. Ecol., 7: 27–35.

Strayer, J. R. and J. F. Butler. 1972. External parasite control for livestock. University of Florida Cooperative Extension Service, Gainesville, Florida. Circular 354, pp 1-22.