

Fly War

Build your arsenal for the annual battle against pesky pests.

by **Boyd Kidwell**

Fly control is a good news, bad news proposition for cattle breeders. The good news is that there are effective ways to fight flies. The bad news is that no magic bullet totally eliminates the little pests. In many situations, you'll actually need a combination of weapons to win the season-long battle, and spring is the perfect time to begin fighting your fly war.

"Proper management in early spring sets up your fly control program for the rest of the year," says Texas A&M University (TAMU) Extension Entomologist Jeff Tomberlin.

Several species of pesky flies annoy cattle, but horn flies and face flies cause the most widespread economic losses. Face flies irritate animals' eyes and carry the organism that causes pinkeye. A case of pinkeye can cause a calf to be severely discounted at market time, and the disease can spread through a herd.

Horn flies quickly breed into populations of thousands per animal, and each insect feeds 20-30 times a day. Research shows that effective horn fly control results in additional weight gains of 15-40 pounds (lb.) per calf during the grazing season. Even in the range country of western Nebraska, effective horn fly control boosts average weaning weights by 10 lb. per calf.

There's no doubt that the fly war is one that must be won. Here's an overview of fly control tactics.

Ear tags

For many years, insecticide ear tags were cattle producers' favorite weapons for fly control. Fly tags are a simple and economical way to control horn flies.

"Our fly control is fairly simple. We install one or two fly tags as recommended by the company in our cows in mid- to late May," says Angus breeder Larry Patterson of BoPat Farms at Bradford, Tenn. "To prevent resistance, we alternate insecticides in the ear tags. If there's a buildup of flies late in the season, we spray the cows when we get them up."

It would be nice if flies could be defeated that easily everywhere. However, control has become complicated in areas where horn

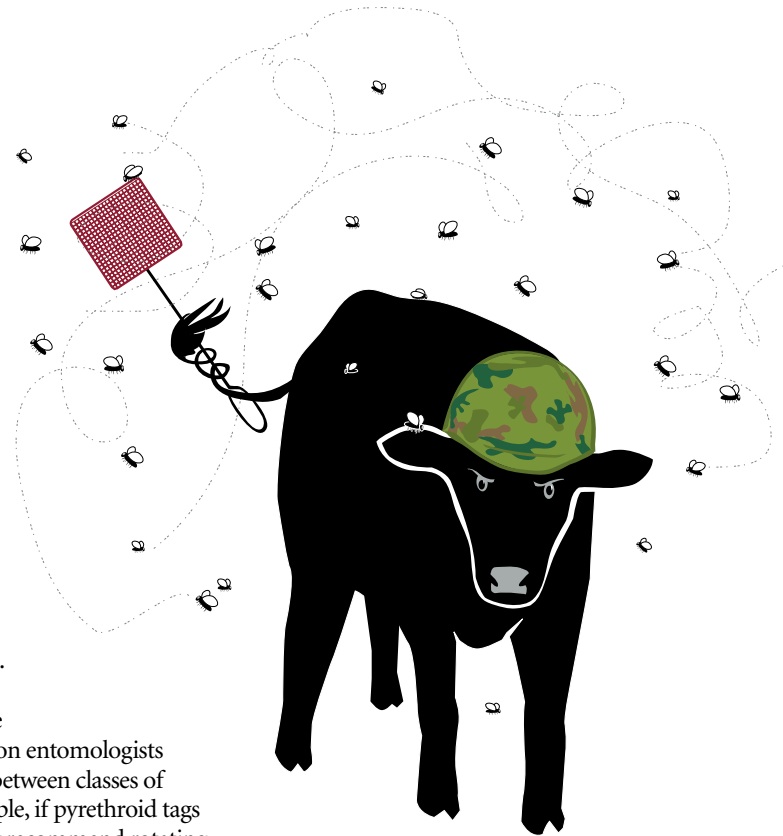
flies have developed widespread resistance to pyrethroid ear tags. Some resistance to organophosphate tags has also been reported.

To reduce the potential for resistance buildup, most Extension entomologists recommend rotating between classes of insecticides. For example, if pyrethroid tags are used one year, they recommend rotating to organophosphate tags the following year. Some entomologists recommend using organophosphate tags two years before switching back to pyrethroid tags.

"The key is to delay applying ear tags until you have a fly problem. If you can delay the tag application until May, you can get close to a whole season of fly control," says TAMU Extension Beef Specialist Jason Cleere. "If the label recommends a tag in both ears of each cow, follow those recommendations, and you'll be happier with the results."

Quick tips to enhance fly control

- Delay applying insecticide ear tags until horn fly populations reach 100-200 per animal.
- Rotate classes of chemicals from year to year. If pyrethroid ear tags are used one year, rotate to organophosphate tags the following year. Some entomologists recommend using organophosphates two years before rotating back to pyrethroid ear tags.
- Position backrubs and dust bags so cattle use them regularly.
- Use fly flips on backrubs to control face flies.
- Talk with a veterinarian about using endectocides for horn fly control.
- Use knockdown sprays late in the fly season to reduce overwintering flies.
- Remove insecticide ear tags at the end of the season to prevent building resistance.
- To control stable flies, clean up hay feeding areas and apply insecticides on animals' front legs.



If resistance isn't a problem, you can expect about 12-16 weeks of control from insecticide ear tags. To get the most value from this investment, delay tag application until horn flies reach an economic threshold of 200 flies per cow. Removing insecticide ear tags at the end of the fly season reduces the potential for resistance buildup.

"Insecticide ear tags were popular until horn fly resistance developed. Now we can get control from turnout (May 15) to early August. But, we usually need to come back with dust bags or oilers for the last few weeks of the fly season," says University of Nebraska Entomologist Jack Campbell.

Feed-throughs

Insect growth regulators (IGRs) are ingested by cattle in feed or minerals and pass through the digestive system into manure, where they prevent horn fly pupae from developing into flies. Methoprene is the IGR used in many fly control mineral mixes and blocks.

IGRs provide convenient fly control, but if horn flies aren't controlled in neighboring pastures, adult flies will cross fences for animal blood meals. If fly populations have a head start, knockdown treatments with sprays or pour-on insecticides may be needed before feed-through IGRs become effective.

Backrubs

Insecticide-treated backrubs are still reliable and economical tools for controlling flies. To be effective, backrubs must be positioned so that animals regularly use them as they travel to minerals or to water.

"We put up backrubs and try to locate

them where cattle have to use them as they pass through,” says Joe Wachs, who manages the Angus herd at Nutbush Farms in Durham, N.C. “We also use insecticide ear tags, but we wait as late as possible in the season to apply them. Ear tags don’t work as well as they used to for us, but some of the newest tags are pretty effective.”

Pour-ons

Usually thought of as dewormers, pour-on endectocides (doramectin, eprinomectin, ivermectin and moxidectin) also control horn flies, even those resistant to insecticides. Talk with your veterinarian about a strategy to maximize internal parasite control with horn fly control.

Elanco Animal Health has introduced a new product called Elector® that can be used as a pour-on or as a spray. Elector is the first product in a spinosyn class of insecticide that uses a unique mode of action to kill flies, including horn flies that are resistant to other insecticides. Other pour-on insecticides use the older classes of insecticides, but they can be effective as knockdown treatments.

Paul Hill uses a combination of tactics to fight flies at Champion Hill of Bidwell, Ohio. For 14 years, Hill has rotated insecticide ear tags and still receives acceptable horn fly control. However, face flies are a perennial

problem for his cattle in southeastern Ohio.

Early in the season, Hill depends on insecticide dust bags to control face flies. He’s designed a mineral feeder so cows come in contact with the dust bags as they eat the minerals. Later in the season, Hill uses backrubs equipped with fly strips that apply insecticide to an animal’s face. If the

fly population builds late in the season, Hill removes the old ear tags and replaces them with fresh fly tags. Even though it’s a constant battle, he considers fly control a sound investment.

“Cattle don’t do as well if they have to fight flies all of the time,” Hill observes.



Stable flies

Stable flies look like houseflies and have a similar life cycle. However, there’s a big difference between the two species. Houseflies have sponging mouthparts that make them annoying, but they lack the ability to inflict painful bites. Stable flies have piercing mouthparts that penetrate the skin for blood meals. They attack people and pets, as well as livestock.

Cattle under attack by stable flies bunch together as each animal tries to protect its front legs (the favorite feeding site) from stinging bites. As the animals try to dislodge stable flies, the constant stomping wastes energy. The time spent fighting flies instead of grazing reduces forage intake. Economic losses begin when stable fly populations reach two to four stable flies on each front leg.

“Stable flies are tough to control. Be sure to treat each animal’s front legs with an insecticide as you work them in the spring,” says Texas A&M University Extension Entomologist Jeff Tomberlin. “You also want to clean up any areas where hay is mixed with manure. Spring is the key breeding time for stable flies.”

Stable flies breed in damp areas, especially places where manure is mixed with decaying vegetation. In pastures, stable flies become serious problems where round hay bales are fed. The best defense is to frequently move round bale feeding areas and to keep round bale storage areas dry.

