

## Vet Call

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### Control of horn flies and face flies on beef cattle

When it comes to flies, horn flies and face flies are considered to have the greatest economic impact on grazing cattle. Horn flies are biting flies and feed by piercing the animal's skin with their sharp mouthparts and sucking blood. The feeding activities of the flies are annoying and may cause a reduction in forage/feed consumption. Horn flies feed 20-30 times a day, primarily on the shoulders and backs of cattle. Generally, they feed in large numbers and "swarm" when disturbed.

Face flies feed mainly around the face of the animal, particularly around the eyes, nose and mouth. The rasping of the adult fly's mouthparts may injure the eye tissue of cattle. As opposed to the swarming horn flies, only a small percentage of face flies are on the cattle at any one time. This fact makes control of face flies much less effective with current control options.

#### METHODS OF CONTROL

The basic premise for fly control is sanitation in combination with chemicals and/or biologic control. As far as sanitation is concerned, one should keep the premises as dry as possible so the flies have no moist egg-laying habitats. Any moist, decaying vegetation should be spread to dry. Areas around feed bunks should be kept dry. Manure in feeding areas should be removed.

#### CHEMICAL TREATMENT

Two chemical classes are used for the control of flies on cattle: pyrethroids and organophosphates. Horn-fly resistance to pyrethroid insecticides occurs in scattered cases. For example, horn flies may be controlled very effectively using pyrethroids for one producer. Yet, his neighbor may get very poor control with the same product.

Organophosphate insecticides give good control of horn flies with no evidence of resistance; however, producers may not see the level of "knock down" that they experience with pyrethroids. Any control

method that keeps horn-fly populations below 200 flies per animal gives the same economic performance regardless of the level of control.

Generally, organophosphates provide poor control of face flies. Face flies are not resistant to pyrethroids. Therefore, these insecticides give fair control (as good as any method) of face flies by acting as a repellent.

#### METHODS FOR INSECTICIDE DELIVERY

##### Insecticide ear tags

Ear tags (either organophosphate or pyrethroid) can be highly effective in controlling horn flies, and pyrethroid tags are as effective as any other method for suppression of face flies. Due to resistance patterns, if pyrethroid tags failed to control horn flies on your herd last year, it's unlikely they will perform satisfactorily this year. If pinkeye is a problem in your herd, but pyrethroid tags are not effective against your horn-fly population, consider tagging cattle with pyrethroid tags for face-fly control, then using an alternative strategy (backrubber, dust bag, sprays or bolus) to deliver organophosphate insecticide for horn-fly control.

##### Backrubbers

Both organophosphate and pyrethroid insecticides are available for use in backrubbers. Apply 1-2 quarts of insecticide solution to a cable-type backrubber or fill the reservoir of oiler-type backrubbers every two weeks or as needed. Initial charging of cable-type backrubbers will require about 1 gallon of solution. Recommendations for using backrubbers include:

1. Rather than applying the entire amount at one time, split the applications to allow the backrubber to become thoroughly soaked;
2. Locate backrubbers where normal drippage won't contaminate surface water supplies; and
3. Don't let cattle use a backrubber that is dripping with insecticide.

##### Dust bags

Place bags in gateways, loafing sheds or other areas where cattle congregate and the bags will be kept dry. Placing the bags so cattle are forced to use them daily will result in increased control. Do not hang bags over feed, mineral or water troughs.

##### Sprays

For horn-fly control, apply 1-2 pints of spray on the back of each animal (40 psi—does not have to be a high-pressure sprayer). Use a similar quantity applied to the legs and belly for stable-fly control. For face-fly control, apply about 1 cup of spray to the face of each mature animal. For control of all these pests, use 1-2 quarts per animal. Do not apply insecticides to calves less than 3 months old, and use light applications on calves 3-6 months old. Do not spray animals in a confined, nonventilated area or animals under stress. Depending on the insecticide used, spraying should not be repeated more frequently than once every one to two weeks.

##### Feed-through or bolus treatment

A feed additive or bolus formation of an insect growth regulator can be used to interrupt the horn-fly life cycle by inhibiting the development of larval stages in the dung pat. Additives to free-choice mineral for feed-through control of horn flies have given inconsistent benefits due to inconsistent intake. Boluses provide consistent levels of insect growth regulator in the dung pat, and therefore have given control of horn flies for eight to 12 weeks on relatively isolated herds. If the cattle are exposed to horn-fly populations from other herds, the effect of treatment on fly numbers on the herd is decreased.

##### Avermectins

Avermectins will kill hornflies on contact. Therefore, the pour-on formulations of avermectins have a label claim for control. Avermectins are also secreted into the digestive tract and passed into the manure and provide control against the larval stages of horn flies in the dung pat.

