

### MANAGING PYRETHROID-RESISTANT HORN FLIES

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Development of insecticide resistance in horn fly populations is the result of a selection process similar to that used to improve herds. Cattle producers can cull horn flies that are susceptible to a certain group of insecticides by using products with the same mode of action year after year. Surviving or resistant flies are left to breed and produce resistant offspring. As a result, products that once gave good control may no longer kill flies or may lose their effectiveness earlier in the season. Insecticide resistance has become a problem in some areas of Kentucky, particularly with the use of insecticide ear tags containing active ingredients with the same mode of action – attacking the same site in the insect.

Specific steps can be taken to manage resistance, including:

- 1) Target treatment to lactating cows and growing calves because they have the greatest potential for loss to horn flies and the greatest chance for a return from the cost of treatment.
- 2) Rotate among insecticides with different modes of action. ENT-11, Insecticide Recommendations for

Beef Cattle, provides information on products and application alternatives.

- 3) Wait to treat until there is an average of 200 or more horn flies per animal. This may not occur until early to mid-June. Treating too early, especially with ear tags, may mean poor control in late summer when the flies are most abundant.
- 4) Use alternative insecticides and application methods late in the season to reduce the percentage of overwintering flies with resistance.
- 5) Remove insecticide ear tag as soon as horn fly numbers begin to decline in the fall. This reduces the amount of time that flies are exposed to a product and allows the number of susceptible flies to increase late in the season.
- 6) Change application methods regularly. Use dust bags, back rubbers, pour-ons, or sprays rather than relying continuously on ear tags. Continued use of insecticides from the same class in a slow release form (ear tag) may lead to resistance.

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