New, Safer, Feed-Through Fly Control Products for Horses and Cattle

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It’s springtime and you notice the first few flies land on your fence, barn, or cow. You utter a low growl and begin pondering about how to fight the war against flies this year. Fortunately there are new solutions to managing these pesky companions of livestock. This month I will discuss the new chemical products that may be added to feed or mineral rations which go through the animal, passing out with the manure to control developing fly larvae. Feed-through fly control is not a new method for use in livestock, but new products have been developed with chemicals that are safer, less toxic alternatives to organophosphates such as tetrachlorvinphos, found in feed-through products such as the Rabon® block.

The fly goes through a life cycle consisting of different stages in this order: egg, larva (maggot) stages, pupa, adult (see Figure 1). Molting occurs between larval stages during which the fly must shed its “skin”, also known as the cuticle. On freshly deposited manure, adult flies lay eggs which hatch into larvae soon thereafter. Once in the manure, feed-through chemicals work to prevent the development of fly larvae so that they will not become adult flies. There are at least three chemicals that have been formulated into feed-through products. The chemical methoprene is classified as an insect growth regulator because it interferes with the normal function of a hormone called juvenile hormone which regulates the progression through the different life stages. Two other chemicals, diflubenzuron and cyromazine, are classified as chitin synthesis inhibitors because they interfere with the manufacture of chitin which is the major component of cuticle. All of these chemicals effectively halt the molting process of insects which puts a big kink in the insect’s life cycle, and the fly larvae die before reaching the adult stage. Because humans and livestock do not have insect growth hormones or chitin, they are very safe to use and apply.

Feed-through fly control products for horses that are currently available include SimpliFly™ (Farnam) which contains 0.24% diflubenzuron and Solitude IGR™ (Pfizer Animal Health) which contains 2.12% cyromazine. (Solitude IGR™ was called Serene™ (Triad Specialty Products), a product available only through veterinarians, before it was sold to Pfizer AH). Both products target house flies and stable flies. SimpliFly™ should be top dressed with the normal grain ration to each horse individually at a dose of 6.8 mg diflubenzuron per 100 pounds body weight. That amounts to giving your typical 1000 pound horse one ounce of SimpliFly™ daily. Solitude IGR™ should also be a top dressing to the normal ration fed to each horse individually, at a dose of ½ ounce containing 300 mg of cyromazine daily. Studies with Solitude IGR™ have shown that this product is safe for horses, other mammals (including humans), beneficial insects, and
other nontarget organisms such as minnows and birds. For best results, you should start feeding either of these products just before the beginning of fly season (late March) and continue to feed until the first hard frost in the fall. Application of either product should be integrated with a fly management program that includes removal of manure, old hay and feed spills, and wet bedding from horse barns/stables, all of which could serve as potential fly breeding grounds.

There are numerous feed-through fly control products available for beef and dairy cattle; the new formulations of interest contain (S)-methoprene, an insect growth regulator that mimics a substance called juvenile hormone. Look for products containing Altosid® IGR (Wellmark International) which are labeled for horn fly control on all cattle, including breeding and lactating cattle and calves. Note that there are other branded products that contain (S)-methoprene; I am providing information on one particular brand. Altosid® IGR comes in different formulations; some are designed to be mixed with mineral supplements. For effective horn fly control, the recommended dose is 34 mg of (S)-methoprene per 100 pounds of body weight per month. For best results, begin feeding this product just before the beginning of horn fly season (late March to early April). These feed-through products should be used in conjunction with a regular manure management and sanitation program in the pastures and feedlots. Sometimes, there will be considerable migration of adult flies from neighboring untreated herds, and Altosid® IGR does not kill adults. Cattle may need to be treated with an approved chemical to kill adult flies if fly numbers exceed 200 per animal.

I have used a number of brand names throughout this article to make it easier to find these new products at your local feed store or pharmaceutical supply. However, always read the label before purchasing and using because manufacturers change labels frequently. For more information on the products mentioned above, go to these web sites:

www.altosidigr.com
www.simpliflyfeedthru.com
www.pfizerah.com

Disclaimer: Always read the product label. Use pesticides with care. Apply them only to plants, animals, or sites listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin thoroughly. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.