



FACT SHEET

Department of Animal Science, University of Connecticut

Effective Horse Management - Horse Management Series

What's "New" for Flying Insect Control

Jenifer Nadeau, M.S., Ph.D
Associate Professor, Equine Extension Specialist
Department of Animal Science

Flying insects are always a nuisance. The glory days of summer unfortunately also involve these pests. In preparation, any time is a good time to take a look at "new" fly control options where we are defining "new" as non-traditional.

The first new option is **feed through fly control**. The fly goes through its life stages as egg, larva (maggot), pupa, and adult. Molting occurs between larval stages and in this time the fly must shed its cuticle. When manure is freshly deposited, adult flies lay their eggs which shortly thereafter hatch into larvae. Once in the manure, feed through fly control chemicals that are added to feed or mineral rations pass out with the manure and work to prevent developing larvae from becoming adult flies.

There are at least two products out there for feed through fly control in horses. (Please note that there may be other products as well and the University of Connecticut and Dr. Nadeau are not endorsing or promoting the particular products found in this article, just offering a point of reference.) One is called SimpliFly™ by Farnam. It contains 0.24% diflubenzuron. Diflubenzuron is a chitin synthesis inhibitor and works by interfering with the production of chitin, a major component of the fly's cuticle. This essentially stops the molting process of the fly which causes the fly larvae to die before reaching the adult stage.

Another product is Solitude IGR™ by Pfizer. It contains 2.12% cyromazine,

which is also a chitin synthesis inhibitor. Because humans and other animals do not have insect growth hormones or chitin, these products are very safe to use and apply. Studies with Solitude show that it is safe for minnows, birds, and beneficial insects. For best results, these products should be fed as a top dressing on feed before the beginning of fly season (around late March) to the first hard frost in the fall.

Use of one of these products must be combined with a fly management program that includes cleaning up any feed or hay spills and regular removal of manure and wet bedding, all of which provide the proper environment for fly breeding. ~~If using these products be sure to follow label directions and only give them to animals listed on the label.~~ Follow all label directions and store them in their original containers and keep them out of reach of children, pets, and livestock. ~~If feeding these products, it is best to feed horses individually to ensure that each horse receives the correct dose of the product.~~

Another option for fly control is **parasitic wasps**. They parasitize fly pupa and prevent them from growing into adults. You can order them from a company such as Arbico or Organic Cowboy. They will send you a shipment of these parasitic wasps approximately every three to four weeks. Pricing and amount shipped depends on the number of horses you have, ~~and~~ when you start the program, and other factors such as severity of your fly problem and manure management. They will be shipped to you as parasitized fly pupae in wood shavings. Once a few have hatched, you put them into common breeding areas such as in your manure pile, under water troughs, at feeding sites, below bedding, and at the corner of pens and paddocks and cover them with dirt or manure to protect the pupa. ~~They will require periodic repopulation throughout the fly season; the company will ship you additional pupae as needed based on their evaluation of current conditions in your area.~~

An additional idea for organic fly control is **microbial inoculant**. I have not heard from any horse owners who have tried this method. Arbico has a product called EM-1™, which “consists of naturally occurring microorganisms that work together to decompose organic matter in soils, manure and compost.”

A second organic fly control is the use of **beneficial nematodes**. Nematodes are roundworms that are found naturally throughout the world. They are used in fly control to attack fly maggots and other subterranean pests. They enter through the larvae’s body openings and emit a toxin that kills the larvae within 48 hours. They are shipped in a clay formulation mixed with water. This solution can then be put into common breeding areas ~~such as in your manure pile, under water troughs, at feeding sites, below bedding and at the corner of pens and paddocks~~ identical to those used for parasitic wasps using a watering can, hose end, pump sprayer, backpack or through misting or irrigation systems.

Flies are pesky and a nuisance but with the use of these emerging ideas and good manure management, horse owners and enthusiasts can wage war in the battle on flies. Instead of scratching your head in despair, try one of these new methods and give an added boost to your fly arsenal. Best of luck in winning the fly wars!

Sources:

1. Ogg, B. Low Toxic Fly Control for Horses.
<https://lancaster.unl.edu/pest/resources/flycontrolhorses%28332%29.shtml>
Accessed 6/30/20.

Commented [HD1]: Wonder if prudent to add a sentence about individual feeding of horses necessary to ensure each horse receives correct dose of product. Either here or maybe in the next paragraph

Commented [JN2R1]: Fixed yay

Commented [HD3]: Redundant to same verbiage in previous sentence

Commented [JN4R3]: You’re right

Commented [HD5]: Sentence about periodically requiring repopulation throughout fly season?

Commented [JN6R5]: Great idea!

Commented [HD7]: Word for word same as sentence in parasitic wasp paragraph. If info is same you might point it out. “This solution can then be put into common breeding areas identical to those used for parasitic wasps including....”

Commented [JN8R7]: Ok great!

2. Penn State Microbiome Manipulation Lab. Microbial Inoculants for Agricultural Soils – Potential and Challenges. 2019. <https://extension.psu.edu/microbial-inoculants-for-agricultural-soils-potential-and-challenges> Accessed 6/30/20.

The University of Connecticut supports all state and federal laws that promote equal opportunity and prohibit discrimination.

Reviewed by:

Dr. Debra Hagstrom, Horse Extension Specialist
University of Illinois