



LAKEVIEW ORGANIC GRAIN

Box 361, Penn Yan, NY 14527

315-531-1038 www.lakevieworganicgrain.com

Oh Those Pesky Flies!

**Based on information from Cornell University, ATTRA
MOFGA and University of Guelph, Ontario**

Can you imagine a summer without flies? If you live on a farm, especially a dairy farm, in the Northeast, that does seem impossible. The best we can hope for is FEWER flies, both for the comfort of our animals and ourselves. As any dairy farmer knows, flies are more than just a nuisance. When they are numerous, they can reduce milk production by 15-30%, and weight gain by 25%. They can also transmit many different diseases, including pink eye. So, adequate fly control on organic farms is very important.

WHO'S OUT THERE?

There are 3 primary types of flies that cause problems with livestock in the Northeast. **Face flies**, become a production problem when there are more than 10 flies on the face at one time. They feed on the protein in the mucus around the eyes and nose. If there isn't enough mucus they will poke around the eyes, irritating them and causing them to tear, which is what the fly is after. This feeding behavior is how pink-eye is spread.

Horn flies are found on the animals back and belly area. They become a problem when they exceed 50 per side in dairy animals and 100 per side in beef animals. Both sexes have biting mouthparts which they use to pierce the skin to obtain blood meals. You may notice horn flies billowing up from the backs of cows as they enter the barn, since horn flies don't like dark areas.. Both the face and horn flies lay eggs on undisturbed cattle dung. Female horn flies wait by the tail head or lower rear of the animal so that they can lay their eggs in the fresh pattie.

Both of these flies affect only animals on pasture since they are outdoor insects. Control of face flies is difficult if other animal owners in the area don't have a program in place, since the face fly females leave the host daily and can fly up to 5 miles each day. Horn flies are more likely to stay with a single herd.

The stable fly is a pest both on pastured and confined animals. Usually found on the legs of cattle, they are considered to be an economic problem when there are more than 10 flies per animal, counted on the legs of 15 animals. Like the horn fly they are blood feeders. If you see your animals stomping, or standing in water or muddy areas, they are likely seeking relief from stable flies.

WHAT DO WE DO NOW?

Effective fly control takes a multi-pronged approach, hopefully attacking the flies before they become a problem. To better understand this, let's break our strategies into 3 main categories – the physical, biological and chemical approaches.

SANITATION! The most economical and practical method of controlling flies is to reduce their ability to reproduce. A substrate high in organic matter that is 70% or more water seems ideal for breeding - and that includes lots of things and many areas around most farms, such as manure, wet bedding, spilled feed, clogged drains, large round bales stored on the ground, open or spilled silage etc. Fly populations can be greatly decreased by keeping barns, yards and animal bedding clean and dry, repairing leaks, cleaning up spilled feed, keeping drains running free, and eliminating areas of stagnant standing water. Providing good ventilation in the barn helps, as will screens on barn windows. Clean out clogged drains and ditches, keep drinking water fresh and clean, and don't let manure accumulate in gutters, piles close to the barn, or calf hutches. Properly composting manure and wet straw helps control fly larvae. Straw bedding seems to support greater fly breeding than wood chip bedding, and cedar chip bedding appears to be most repellent. Adding diatomaceous earth or ground limestone to bedding helps control flies, but certifiers generally frown on using hydrated lime for this purpose.

On pasture, intensive rotational grazing is effective, by keeping cows moving to fresh pasture, away from old manure, every day. Dragging a pasture to break up and dry out manure patties helps a lot, especially early in the season before flies multiply. Dung beetles also break up manure before larvae mature - and because we do not use Ivermectin on organic farms, our dung beetle population should be in better shape than on our neighbors' farms.

TRAPS! Traps indeed do work, but probably will not provide enough control without adequate attention to sanitation. For inside the barn, most farmers prefer long sheets of fly paper that can be unrolled to frequently get fresh sticky areas. Bug zappers can also be effective inside barns. Outside, there are fly traps that lure adults with pheromone or other irresistible scents into a container where they cannot escape. There are also walk-through traps that dislodge flies from the cows' bodies and then trap them - this type of trap is most effective against horn flies.

PREDATORS! There are wasps and beetles that feed on fly eggs, larvae and adults. These can be purchased and released according to supplier directions. Releasing predators around prime fly breeding areas, such as manure piles, water tanks and round bales, will increase their effectiveness. You will probably need to make numerous releases over the season, and be careful that the conditions are suitable for your predators - this can be critical for successful establishment. Installing bird (especially purple martin and swallow) and bat houses around barnyards and pastures can also increase predation - birds can consume hundreds of flies each day. Incorporating geese or pastured poultry as a clean-up species in rotationally grazed pastures will eliminate both adult and larval flies.

FLY SPRAY/REPELLANTS! All synthetic pesticides and insecticidal ear tags are prohibited by organic standards, but there are several good fly repellent products, available. Again though, they will probably not provide sufficient control without attention to sanitation. These products contain highly fragrant essential oils and botanical extracts. Please note - these products are fly repellants, not insecticides. They do not kill the flies, they only encourage the flies to go elsewhere. These products include Crystal Creek No Fly and AgriDynamics EctoPhyte. Generally these come as concentrates that you then dilute them with either oil (vegetable or mineral) or water, or both. The amount of dilution directly affects the effectiveness. Most people find that oil dilution results in a spray that lasts longer, but water dilution is much easier. Spraying the animals frequently, especially around the face and neck, can provide important relief when flies are numerous. There are also other organically approved fly control sprays available, made from natural pyrethrins, but always check with your certifier for approval before use.

