PennState Extension

Pennsylvania IPM Program

On-Farm Controls for Fly Reduction

Flies should not be, and do not have to be, just a part of farm life. Minimizing flies reduces transmitted diseases to or between livestock and poultry. When flies leave livestock and poultry buildings or freshly applied fields of manure and congregate in surrounding neighborhoods, farmers face bad publicity and poor neighborhood relations. Annoyed neighbors can put pressure on legislators to further regulate agriculture.
So what can you do to minimize flies?

Fundamentals of Integrated Pest Management (IPM)

- Scouting
- Measurement/assessment of fly levels
- Control measures based on levels/conditions
- Review and take action CONTINUALLY. This is not a once and done effort!

Controls for Flies on the Farm—Examples

Cultural

- Keep farm as clean, dry and sanitized as possible—this is critical!
- Keep weeds and vegetation well managed (4" or less high)
- Fix leaking watering systems and have adequate ventilation
- Proper grading and drainage around buildings, including functioning rain spouts
- Keep curbs, corners, cracks and crevices as clean and dry as possible
- Cover manure piles with tarps to cook fly larvae
- Compost manure (intentionally managed for internal temperatures, not just "piled up")
- Injection of liquid manure into soil

Biological

- Parasites that attach to flies
- Fungus and other plant-based controls
- Wasps
- Pheromone, feed stations and light traps

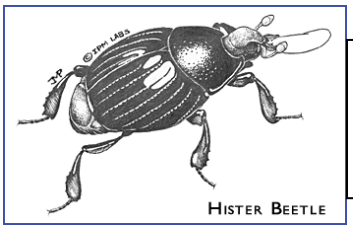

Illustration courtesy of and copyrighted by IPM Laboratories, Inc.

Hister beetles consume house fly eggs and small house fly larvae in poultry manure. They do not harm insulation or structures. They do not bother humans.

Photo: Jim Kalisch, Wes Watson, UNL Entomology

Muscidifurax raptor—a wasp that lays eggs inside fly larvae. M. raptor doesn't sting or bite other insects, humans or animals.

Predacious mites feed on eggs and young maggots.

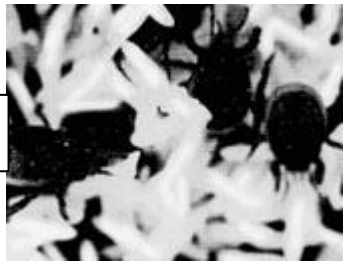

Photo from www.novartis.com

Beauveria bassiana is a fungus effective at killing fly larvae inside poultry houses. Flies get a white coating on them. Studies using the fungus in calf hutches haven't had as much success. Poultry litter with B. bassiana can be spread without concerns.

Chemical

- Sprays and Fogs-- remember "sticker" additives
- Larvicides (directly applied to manure or fed to animals)
- Insect Growth Regulators (IGRs) (e.g. Neporex)
- Sulfur Dust (pearlized sulfur)
- Rotate the use of organophosphates, carbamates, pyrethroids, and other classes of insecticides periodically.
- Do NOT overuse!

Space sprays provide quick knock-down of adult flies in enclosed air space. Space sprays have little residual activity, so they are pretty effective in the Northeast. Spray must contact the fly to be effective. With no residual value, they may have to be applied at two or three day intervals. Space sprays are not compatible with adult fly parasitoids.

Flies have developed a resistance to residual sprays, and therefore they should only be used as a last resort when other management techniques are not effective. Direct applications of insecticides to manure and bedding should be avoided because of harmful effects on natural enemies of flies. Rotate the use of organophosphate, carbamate, pyrethroid, and other classes of insecticides if necessary. Always follow label instructions.

Baits should be distributed along walls, window sills or other areas where flies congregate inside and outside buildings. Baits should be inaccessible to children and animals. Baits are more effective when used in conjunction with residual or space sprays. Baits are compatible with fly parasitoids.

Websites for purchasing parasitoids- *Where trade names or vendors appear, no discrimination is intended, and no endorsement by Penn State Cooperative Extension is implied.*

www.ipmlabs.com
http://spalding-labs.com/

Possible websites for purchasing fly control products- *Where trade names or vendors appear, no discrimination is intended, and no endorsement by Penn State Cooperative Extension is implied.*

www.saferbrand.com
www.victorpest.com
www.zoecon.com
www.valleyvet.com/ct_farm.html
www.tractorsupply.com/tsc/search/flycontrol

Diligent scouting is the key to good IPM for fly control. Be sure to log all average counts to help decide fly control needs and techniques. Using the proper level of control for each situation is KEY to fly control. Acting **BEFORE** fly levels climb is **CRITICAL**.

If you choose to use biological controls, a "once and done" application of the biologicals will not be adequate to continually control flies. Waiting until fly levels are extremely high also will make it harder to control flies, and may cause conflict with neighbors. Contact your local Cooperative Extension Educator or contact the insectaries that sell biologicals for additional guidance.

Additional instructions are available from Penn State Cooperative Extension and Cornell Cooperative Extension, Cornell University Veterinary Entomology, NYS IPM Program handouts and websites.

Gregory P. Martin, Ph.D., PAS
Extension Educator, Poultry – Southeast Region
gpm10@psu.edu

Shelly O. Dehoff (revision 2020)
PA Agricultural Ombudsman Program
shellydehoff@lancasterconservation.org

For more information on IPM, visit https://extension.psu.edu/ipm and http://www.nysipm.cornell.edu/