

Beetles, Parasites Can Reduce Poultry House Flies

ANDY ANDREWS

Lancaster Farming Staff
MANHEIM (Lancaster Co.) —
There's hope for egg producers who have difficulty controlling flies in layer houses if they use the hister beetle (scientific name: *carcinops*) and keep controls on pit moisture, according to a Penn State entomologist.

Dr. Charlie Pitts, Department of Entomology at Penn State, spoke about university studies of the hister beetle and the use of parasites that can be effective in controlling the common house fly in layer houses.

Pitts told about 50 poultry producers and related agri-industry representatives that the hister beetle "is one friend we ought to take care of" when using integrated pest management (IPM) for fly control. The beetle can be a big player in a successful IPM fly control program and has the "potential to be an augmentation to other controls," said Pitts, for layer house pests.

Pitts spoke Monday at the Penn State-sponsored Poultry Management and Health Seminar at Kreider's Restaurant.

Researchers are looking at different techniques to identify and

monitor flies in poultry houses. The Penn State study observed fly populations through the use of spot cards placed in layer houses and pullets.

One, a 120,000 layer house, looked at mulching as a possible control. Another looked at a parasite that scientists call *Mucidifurax vaptorellus*.

First, researchers had to find a way to thoroughly identify fly type and population. An effective way, according to Pitts, is through the use of spot cards. But a quick and easy way for producers to do a rough fly type and population check is by using simple sticky tape fly traps. The tape can be attached to a stick and a producer can move through the house to see approximately how many flies emerge from the pits.

The study compared one untreated house to a beetle-treated house. In the untreated house, common house fly populations peaked at week 6-7 and again at 9-10 weeks, then fell off. In the treated house, "a very wet house," according to Pitts, the hister beetle was released the first week. The beetle eats the common house fly pupae. The surge in the amount of beetles corresponded with a rapid decrease in fly population in the

house, proving that the beetles were dramatically effective in controlling flies.

What is surprising is that the beetles even survived adversely wet conditions. Normally, according to Pitts, dry conditions must be present for the beetles to thrive.

Used in conjunction with other spray control methods, hister beetles can prove useful as an option for house managers.

"The key is to get the pits as dry as you can as quickly as you can to get activity as early as possible," he said.

Also, producers should show some restraint on spraying to ensure that the beetles aren't totally eliminated from the program. And while some producers carry over beetles from the previous manure in a house, Pitts cautioned that this can violate good biosecurity practices. It is best to clean out a house entirely, keep the pit moisture low, and release fresh beetle populations by the first 3-4 weeks.

"The beetle is a key player and can save you money if you protect it," he said.

If using parasites in addition to spray programs, it is best to make use of local types of parasites, which will do better than the ones from California. Parasites work



Dr. Charlie Pitts, Department of Entomology at Penn State, left, spoke about university studies of the hister beetle and the use of parasites that proved effective in controlling the common house fly in layer houses. Here, he talks to Jack Vanderwende, quality assurance manager for PMS Inc. Heritage, at the poultry meeting.

like the hister beetle to eat the fly larvae.

Pitts reviewed some of the other work under way at Penn State to control house flies:

- This summer, entomologists will be studying how tillage practices reduce fly populations after manure applications. At the Lancaster County research site, plots measuring 20 feet by 500 feet had manure applied at the rate of three tons per acre. Researchers used 10 traps per plot to collect flies in pint-sized jars. Using no tillage, there was an average of 320 flies collected per trap for a total of 10.97 million flies per acre. Discing the manure proved of little effectiveness, bringing the population to an average of 219 per trap and a calculated per acreage total of 7.54 million flies per acre. Chiseling the manure had some effect, reducing the average per trap to 74 and a calculated average of about 2.53 million per acre. However, the best practice was mold-board plowing, from which 34 flies were collected per trap for a total of only 118,331 flies per acre.

- Entomologists are looking at ways to use microwave equipment to kill insects in the field.

- Electrical "zapper" studies will determine how effective they are in reducing house fly populations.

- Studies are examining the use of photoactivated dyes that are absorbed through feed into flies. Once the flies go into sunlight, the "photoactivation" process kills them.

HERNIA?

No hernia is unrepairable, even after several previous failed attempts. We specialize in outpatient hernia repairs, and most patients are able to return to full work within several days.

PLEASE CALL COLLECT OR WRITE
FOR MORE INFORMATION
**MID ATLANTIC SURGICAL
SERVICES**
217 Harrisburg Ave., Suite 201
Lancaster, PA 17603
(800) HERNIA 8
MOST INSURANCE ACCEPTED

NEED YOUR FARM BUILDINGS PAINTED?

Let us give you a price!

Write:

Daniel's Painting
637-A Georgetown Rd.
Ronks, PA 17572

(or leave message)

(717) 687-8262

Spray on and Brush
in Painting



A Lesson In Pennsylvania History

Workers' Compensation

Q. Who formed the first safety group for farmers?

A. Agri-Service Agencies, April 1, 1994

Q. What have farmers saved?

A. The first year, more than \$100,000!

Q. Who can join?

A. Virtually all classes of production agriculture in Pennsylvania

Q. What's next?

A. The maximum allowable discount of 14.4% for all participants for April 1, 1995-96, GUARANTEED.

**Agri-
Service
Agencies, Inc.**

Call 1-800-654-8840