

Cathy Thomas Uses Wasps To Help Tomato Growers

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 —Cathy Thomas, research associate with the department of entomology for Penn State University, has found very positive results using biological pest control.

She is monitoring the population of the whitefly on hydroponically grown tomato plants in cooperation with a Mennonite farm family in Cumberland County. They grow the tomato crop from January to July. Tomatoes are often plagued with the whitefly. The goal, when beginning to reduce the population of the pest, was to have 80% control; they have exceeded the goal by achieving 90% control.

The secret to the success lies in the balance of nature. Cathy ordered a type of wasp, *Encarsia Formosa*, from Europe to keep the whitefly population in check.

The way the wasp works is fascinating. The *Encarsia Formosa* is the size of a head of a pin. The wasp neither stings humans nor has other detrimental side effects. A mature wasp injects its eggs into the larvae of the White Fly found on the back of a tomato leaf. As the wasp's larvae matures, it then replaces the larvae of the White Fly. It keeps the White Fly in check through its reproductive cycle.

Cathy shared two ways she checks on the population of the whitefly. First, she places sticky yellow cards in the Greenhouse. White Flies are naturally attracted to the yellow color. She counts the population on each card. Another way is to scout 25 tomato plants a week, or 3% of the crop. This enables her to look at the way the *Encarsia Formosa* is following the whitefly. When the larvae on the back of the leaf look black instead of the original white color, it's clear that the wasp has replaced its eggs. When they are white, the original White Fly larvae remain.

This is something new for most American Farmers as chemical pest control is ordinarily used rather than biological pest control. Cathy prefers working with the biological methods rather than the chemicals for several reasons. It's safer for the environment and for humans.

Since whiteflies have become more and more resistant to certain chemicals as a form of pest con-

trol, stronger and stronger chemicals are needed to control them. When insects are controlled biologically, consumers don't have the residue of chemicals when eating their product. Greenhouse workers at work and children who may be in the greenhouse aren't exposed to high levels of the chemicals.

Cathy took a course in integrated pest management earlier in her career. She finds it exciting to see the reality and the successfulness of her classroom studies.

Cathy's use of the wasp to control the white fly in tomatoes is the first experiment in the Cumberland area. The *Encarsia Formosa* is being used not only on tomatoes in Cumberland County but also on poinsettias in Cumberland and York Counties. All of the research is with actual growers and with saleable crops. There hasn't been one failure. Cathy sees biological pest control as the future in crop management.

She'd like to see expanded research and ways of using biological pest control on more plants. Her goal is to help other growers use the new methods. She's currently developing a video showing



Cathy Thomas examines tomato plants to see if the wasp is doing its job.

grower's reactions that will be used to entice other growers to use the techniques. She hopes that next year's grant will be funded to research other insects and further biological pest control.



Lancaster Society 25

The Society of Farm Women 25 met May 11 at the home of Mary Roland, Lancaster. Eleven answered roll call by naming a flower with the first letter beginning with the first letter of the individual's name.

Members made favors for a rest home.

The next meeting will be held June 8 at the home of Emma Goss, Millersville. Members will need to answer roll call by telling how or where they met their spouse.

Lancaster Society 14

Lancaster Farm Women Society 14 traveled to Pittsburgh on April 8 for a two-day visit. They learned that the city has 1,730 bridges. Members visited the National Classroom of the University of Pittsburgh.

When members planned their itinerary to include a visit to the Heinz Memorial Chapel, they did not expect to see Senator Heinz's body would be laying in state. Members paid their respects to Heinz's family members.

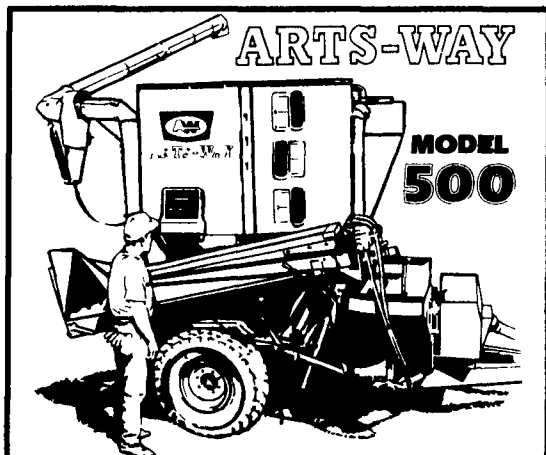
Sightseeing included the Duquesne Incline, dinner at the

Grand Concourse Restaurant, the annual spring flower show at Phipps Conservatory, Gateway Clipper boat ride, Sherms Edwards Candy Factory, and shopping.

On May 7, members held a mother-daughter banquet at Yoder's Restaurant. Entertainment included Professor Drake and the Quack-Quacks. This unique group of ladies are 70 to 88-years old. They sing, recite, and play slide trombones.

On June 12, members will meet at the Farm and Home Center, Lancaster.

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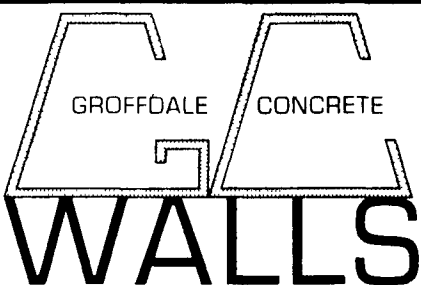
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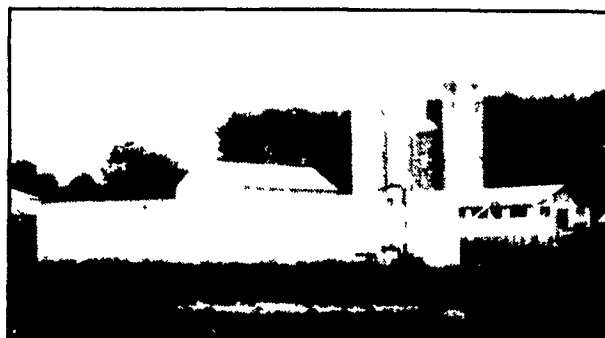


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