

“Final Project Report to the NYS IPM Program, Agricultural IPM 2003–2004.”

1. Title: Fostering the Use of Predacious Mites for Western Flower Thrips Control in Commercial Greenhouses.

2. Project Leader(s): Gary Couch, Ornamentals IPM Specialist - Hudson Valley.

3. Cooperator(s): Stephanie Mallozzi, Extension Educator CCE Dutchess Co., Commercial Horticulture; John Sanderson, Associate Professor, Entomology

4. Type of grant:

- Biological control and pest biology

5. Project location(s): Westchester and Dutchess counties

6. Abstract:

Growers in the Hudson Valley will gain greater familiarity and confidence in using predacious mites for managing thrips populations through hands-on experience and the guidance of the regional IPM Specialist and county extension educators.

7. Background and justification:

The successful use of the predacious mite, *Neoseiulus cucumeris*, for control of western flower thrips has been demonstrated in two production greenhouse operations in the Hudson Valley. Surveys conducted after presentations on this topic at both the Hudson Valley and Capital District Bedding Plant Schools in 2001 indicated a strong level of grower interest in trying biocontrol of thrips in their operations. According to those surveys, one of the obstacles to implementing the practice is a lack of individual experience, and hence familiarity and confidence, with using live biologicals versus traditional pesticides. Introducing more growers to the practice under the guidance of experienced educators should lead to greater adoption and a resulting decline in pesticide applications.

8. Objectives:

- 1) Have more growers in the Hudson Valley gain hands-on experience with using predatory mites.
- 2) Fine tune release protocols.
- 3) Evaluate the results and the program.

9. Procedures:

- 1) Recruit four growers through personal contacts, the regional Bedding Plant Schools and the Greenhouse PWT. Conduct initial site visits at participating growers to evaluate current thrips situation, including cultural conditions

and growing methodologies known to affect thrips levels. Thrips levels will be monitored weekly by the grower, scout, extension educator or specialist. When scouting indicates the predetermined threshold has been reached the grower under the direct supervision of the regional specialist and/or county extension educator will release predacious mites. Scouting and follow-up releases will be the responsibility of the grower and monitored by the project leaders via weekly phone contacts. Onsite assistance after the initial release will be on an as-needed basis.

- 2) The information gathered on thrips populations and mite releases in a diversity of production settings will provide a broader picture for determining release rates and timing.
- 3) At season's end a formal face to face meeting is held with each participant to get their input on specific aspects of the program.

10. Results and discussion:

Conducted initial site visits with the three participating growers to evaluate current thrips situation, including cultural conditions and growing methodologies known to affect thrips levels. Growers were supplied with yellow sticky cards and instructed in their use as needed. Thrips levels were monitored weekly by the grower, scout, extension educator or specialist. When scouting indicated the predetermined threshold has been reached the grower, under the direct supervision of the regional specialist and/or county extension educator, released predacious mites. Only one grower experienced thrips levels requiring releases.

Scouting and follow-up releases were made by this grower and monitored by the project leader. This grower also monitored and discovered thrips in her outdoor mum beds and made two releases, one under the supervision of the project leader and the second on her own. No insecticides were needed in the greenhouses and only one application, of the least-toxic material; Conserve, was used in the outdoor mums prior to the release.

The grower felt she had not only reduced her spray program but had achieved an improvement in plant quality. Her greenhouses are in the midst of a residential neighborhood and directly across from a public school so she is very motivated to reduce her pesticide usage and she is now interested in expanding her use of biologicals to manage other pests.

11. References: (if applicable)

12. Samples of materials: (if applicable)



Grower Laurie Smith applying predatory mites to outdoor mums.



With a school directly across the street, Laurie is sensitive to pesticide risk issues.