

Annual Report to Northeast Sustainable Agriculture and Education Program

Title: Developing farmers' skills and confidence in the use of *Trichogramma ostrinae* for European corn borer control in sweet corn, peppers and potatoes

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Summary—Numerous research and demonstration trials have shown that releases of the parasitic wasp *Trichogramma ostrinae* (T.ost) can be an effective management strategy for European corn borer control in sweet corn, peppers, and potatoes. It is time to put the use of T.ost into the hands of farmers. Organic farmers, farmers who do not use conventional insecticides, and high-level IPM adopters all stand to benefit from using T.ost releases as all or part of their ECB management strategy, through reduced crop damage, reduced use of insecticides, or both. We have worked with 44 farmers over three growing seasons to provide wasps, education, and technical support to help familiarize them with the use of the wasps. Interviews with growers indicate that all have experienced one or more performance target benefits from using the wasps. We were granted a no-cost extension to this project that moves the evaluation year forward to 2010. We will not be supplying wasps to farmers in 2010 but will provide collaborating growers and others with information support as needed to make the transition to purchasing and releasing on their own. Wasps are commercially available from IPM Laboratories in Locke, NY. We will survey collaborating growers and others who order T.ost in 2010 to determine whether they released wasps, benefits to their operation, how this project influenced their use of the wasps, and future needs to help them continue successful use of T.ost.

Performance Target: Of the 35 growers who collaborate with the project during the two years of demonstrations, 25 will purchase and release *T. ostrinae* for European corn borer control on their own during the third year. Of these growers, 20 will report at least two of the following changes with respect to sweet corn, pepper or potato: improved harvest quality or yield; reduced use of insecticide applications for European corn borer control; reduced labor, fuel, or other costs associated with European corn borer control; increased crop acreage; increased net income; improved customer satisfaction; reductions in European corn borer moth trap captures or infestations compared to previous seasons; increased integration of sweet corn as a rotation crop into vegetable/cover crop rotation plan.

Fifteen growers (of 150) who attend twilight or winter meetings will try *T. ostrinae* on their farm.

Milestones:

Forty-four farmers collaborated with the project team to release wasps in sweet corn, peppers, or potatoes over three growing seasons (2007-2009).

We met with collaborating farmers after each field season to learn about their experiences, successes, and challenges, and made adjustments to our protocols as needed.

Post-season interviews with collaborators indicate that all have experienced one or more performance target benefits.

Collaborating grower interest in continuing to use *Trichogramma* has been high during the course of the project.

Project team members shared information about using T.ost at 35 grower meetings.

A fact sheet on using T.ost for ECB management was developed and posted on the web as a downloadable .pdf document:

http://nysipm.cornell.edu/factsheets/vegetables/swcorn/trich_ost.pdf

In 2010 we did not conduct in-field demonstrations, but provided support as needed to help farmers make the transition to purchasing and releasing wasps on their own. A survey was developed and sent to in early December to the 85 individuals who purchased *Trichogramma ostriniae* from IPM Labs, the only commercial supplier of the wasps in the U.S., in 2010. The survey will provide us with the information we need to determine whether we met our performance targets.

Outcomes:

There are no new outcomes to report for 2010. Survey responses are trickling in and will be summarized in January. Survey results will be included in the final project report.