

Annual Report to Northeast Sustainable Agriculture Research and Education

Project # LNE07-263
Coop Agreement # 2007-38640-17935

Project title: Developing farmers' skills and confidence in the use of *Trichogramma ostriniae* 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 ostriniae* (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.

Growers who are trying T.ost for the first time benefit from technical support to help make the decisions needed to get good results. An understanding of pest and beneficial biology, crop phenology, and proper release rates is needed, as well as the organizational skills to make decisions, order and release wasps, and monitor success in a timely

manner. We will work closely with a minimum of 30 farmers growing sweet corn, peppers, and/or potatoes in New York, Massachusetts, Pennsylvania, and Virginia. Project staff will visit collaborating farmers each week to work with farmers to track crop phenology, decide on wasp needs for the following week, and decide where and how the releases will take place. Wasps will be supplied by the project for the first year, with farmers sharing costs the second year. Wasps are currently available commercially through IPM Laboratories in Locke, NY.

Performance Target: Of the 35 growers who collaborate with the project during the two years of demonstrations, 25 will purchase and release *T. ostriniae* 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. ostriniae* on their farm.

Milestones— Sweet corn, pepper, and potato growers were interviewed during the winter of 2006/07 to determine their interest in participating in this project. During the growing season collaborating growers released *Trichogramma ostriniae* (T.ost) in sweet corn on 20 farms in New York and Massachusetts, in peppers on six farms in New York, Massachusetts, Pennsylvania, and Delaware, and in potatoes on 4 farms in Virginia. Sweet corn fields were scouted by farmers or project personnel to determine if European corn borer (ECB) infestation levels were below threshold, and levels of ECB infestation were determined at harvest for peppers and sweet corn, and in the field for potatoes. Information about the project and the use of T.ost was presented at 12 grower meetings. We are currently developing a grower survey with which we will visit collaborating farmers during January through March to determine the impacts of the wasp releases on ECB management on their farms.

Outcomes—At this stage of the project we do not have any outcomes to report.