

VEGETABLE RESEARCH AND DEVELOPMENT REPORT FOR IPM 1997

PHEROMONE TRAPPING SYSTEMS:
REFINEMENT OF PROTOCOLS FOR MONITORING
EUROPEAN CORN BORER IN SWEET CORN;
AND
DEVELOPMENT OF AN EFFECTIVE PHEROMONE TRAPPING SYSTEM FOR
EUROPEAN CORN BORER IN POTATO, PEPPERS AND SNAP BEANS

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ABSTRACT:

Development of a simple and successful pheromone trapping protocol requires a trap design that catches moths efficiently, a pheromone lures with the correct chemical composition and load rate, and the proper trap placement in the field. The goal of this research project was to identify or refine the pheromone trapping system for monitoring Lepidopterous insect pest, the European corn borer – *Ostrinia nubilalis* (ECB), in sweet corn, potato, pepper, and snap beans. Monitoring ECB has been confounded by the complexity of the mating biology of ECB. In New York, ECB exists as three distinct races differing only in their pheromones, voltinism characters, and host plants (bivoltine E, bivoltine Z, univoltine Z). Recently, we discovered that two of the races and their hybrid cross exhibit different levels of specificity for ratios of pheromone components. New pheromone blend and release rate were evaluated that are specific for the E-race of ECB in the field. Due to the increase in damage to potatoes, peppers and snap beans from ECB over the last years, the pheromone trapping system developed for ECB in sweet corn was tested in these cropping systems. One purpose of this research was to provide a more accurate and reliable monitoring systems for extension personnel, growers and private pest consultants to use in defining the action thresholds. A successful pheromone system aids in making pest management decisions, such as timing of sprays, and thus helps reduce crop loss and the misuse of insecticides.

For a printed copy of the entire report, please contact the NYS IPM office at:

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