

A Strawberry IPM Systems Comparison Demonstration 1998

Joe Kovach and Dave Combs, IPM Program, NYSAES, Geneva

INTRODUCTION

In New York, weeds, slugs, *Botrytis* fruit rot, and the tarnished plant bug (TPB) consistently cause problems to strawberry growers each year. Results from several individual research projects over the last several years have been encouraging and it may now be possible to grow strawberries in New York with little or no herbicide, fungicide, or insecticide use. By using such cultural methods such as cover crops and/or interplanting with rye or sudan grass, herbicide use can be reduced or eliminated. Acceptable disease control can be obtained using cultivar selection, avoidance of spring nitrogen, narrowing rows and using *Trichoderma harzianum* as a biological control agent for *Botrytis* control. Insect injury can also be reduced through cultivar selection, and biological control agents. However, all of these experiments were conducted in isolation and there is a need to test these practices in combination with one another before full implementation can be expected. Therefore the primary objective of this project is to conduct a system comparison trial to evaluate three different strawberry pest management systems (transitional organic IPM, future IPM, and conventional IPM) for managing the New York pest complex.

This project is a long term project that began in the summer of 1995 with cover crop plantings on approximately two acres of land located at the New York State Agricultural Experiment Station. In 1996, the strawberries were planted. The first full fruiting year was in 1997 and it is anticipated that data will be collected through the year 2000. Results from earlier studies of alternative control tactics in this experiment were mixed. Planting a rye cover crop did provide good weed control in the year of planting but this control did not carry over into the first fruiting year. The ribbon row planting system that was used resulted in lower yields compared to the matted row planting system with herbicides. It is currently unclear whether this yield reduction was due to the rye cover crop, the increased weed pressure, or just the rows being too narrow in this planting system. Spraying Mycotrol (*Beauvaria bassiana*) 3 times and vacuuming strawberries (3 times) for TPB control did reduce the number of TPB damaged berries compared to the untreated check but these TPB levels were still higher than the grower standard of one malathion spray. Finally, there were fewer TPB nymphs on 'Honeoye' strawberries than the other cultivars in this experiment and this resulted in fewer damaged berries at harvest.

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

IPM House
630 W. North St.
New York State Agricultural Experiment Station
Geneva NY 14456
315-878-2353