

*Abstracts of the 77<sup>th</sup> Annual Western Orchard Pest & Disease Management Conference*

Implementation

Reduced-risk pest management programs for MI apple, Year 1

Peter McGhee, Larry Gut, and Mike Haas  
Michigan State University, East Lansing, MI

*Abstract:* The goal of this 4-year project is to design and evaluate pest management systems utilizing reduced-risk tactics that are effective, sustainable, economically viable, and lead to enhanced biological control for eastern apple growers. The overall experimental design was a direct comparison of the effectiveness of an organophosphate-free vs. OP-based grower standard pest management program. In commercial orchards 10 acres were managed under the soft vs. standard pest management regime. OP free programs relied on IGRs, neonicotinoids, oxadiazines, naturalytes, biopesticides, and pheromone mating disruption. Grower standard programs relied on OPs, carbamates, and pyrethroids. Pheromone mating disruption was excluded from all grower standard programs. Each program was evaluated in three regions of MI and replicated on three farms within each region. Pest management programs without OPs were 2-3x more expensive than OP standard programs. Fruit injury at harvest caused by codling moth, obliquebanded leafroller and oriental fruitmoth varied in these two programs. Some of the most promising results were obtained in trials evaluating apple maggot and plum curculio control.