

## Monitoring network for beet armyworm, a serious pest new to Ohio

A vegetable team mini-grant project funded by the Ohio IPM Program  
Final report, 24 November 2003

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**Background:** Beet armyworm is one of the most important vegetable pests in the southern USA but it is not usually found as far north as Ohio. Serious infestations of beet armyworm were found in southern and northern Ohio in September 2002 in peppers and tomatoes. Although this pest had not been previously reported in Ohio, it has been a consistent problem in Kentucky for the past few years. Beet armyworm larvae are difficult to control with insecticides once an infestation is well established, but can be controlled if detected early and diagnosed correctly. Pheromone traps are available for this pest and are useful in detecting arrival of migratory moths so that scouting can be initiated for larvae on leaves. We have had a network of vegetable pest trap cooperators in Ohio for the past 15 years but have never included beet armyworm as a target species for trapping. To address the need for trap data on this pest, this project was done to expand our network to include this species. The objectives were to determine if beet armyworm moths were detected in Ohio in 2003, and to educate trap cooperators on beet armyworm identification and seasonal activity patterns.

**Methods:** The trap type selected was the standard tri-color universal moth trap, baited with pheromone lures made by Trécé Inc., with DDVP strips as the fumigant to kill trapped insects. Twenty-four traps were purchased and twelve cooperators were identified who agreed to set up and monitor one to three traps each, in pepper or tomato fields. Cooperators were crop consultants (3), county agents (2), extension program assistants (1), research farm managers (2), and research assistants (4). Trap locations were: Racine in Meigs County; Devola, Lowell, and Beverly in Washington County; Hamilton in Butler County; Hillsboro in Highland County; Port William in Clinton County; Springfield in Clark County; Columbus in Franklin County; Wooster, Moreland, and West Salem in Wayne County; Copley in Summit County; Celeryville in Huron County; Old Fort in Seneca County; Ballville, Riley, Fremont, and Gibsonburg in Sandusky County; Genoa in Ottawa County; and Hoytville in Wood County. Traps, lures, fumigant, instructions, photographs of beet armyworm moths and larvae, and trap record forms were shipped to cooperators in mid-May 2003. Cooperators were requested to send a trap report via e-mail once per week. Reports were posted at OSU's IPM web site and in weekly VegNet newsletters. Traps were monitored until the host crop was harvested.

**Results:** Beet armyworm moths were reported from traps in Meigs, Washington, and Clinton Counties in southern Ohio, Clark and Franklin Counties in central Ohio, and Huron, Sandusky, Ottawa, and Wood Counties in northern Ohio (Table 1). No beet armyworm moths were caught in traps at the remaining locations. Most beet armyworm moths were trapped starting in late July at southern sites and in late August at northern sites. The largest weekly catch was 13 moths at Meigs County in mid-September. Cooperators had been alerted that trap catch of less than 25 moths per week usually indicates a negligible population, but crops should be scouted for larvae if any target moths were trapped. There were no reports of infestations of beet armyworm larvae at sites where moths were caught, although insecticide programs were modified at some sites so that beet armyworm larvae would have been controlled by preventive sprays. A problem at many sites in many weeks was that a moth was trapped but positive identification was impossible due to poor condition of the specimen. Because of poor condition, identification was often based on moth size and shape rather than wing markings. In late summer when corn earworm moths were abundant, this species was occasionally caught as a non-target in beet armyworm traps. Despite the frustration of uncertain identification, most cooperators found the traps to be a valuable addition to their monitoring program and most will continue to use traps in the future.

