

## **Field Crop Growers Receptive to New IPM Strategies**

**Who Cares and Why:** In recent years, reduced crop prices, drought conditions, deer damage and migratory insect outbreaks have resulted in economic losses for field corn and soybean producers. Delaware producers and private consultants have expressed an interest in new insect management technology, deer management strategies and regional information on pest occurrence to help reduce input costs and reduce risk from pest infestations.

**What Has Been Done:** In 2002, regional field crop IPM efforts continued in the areas of multi-state pest management recommendations, IPM workshops, CCA training workshops and regional CCA IPM exam. New innovations in field crop insect management focused on the use of new treatment thresholds and management options for aphids, the evaluation of new seed treatment technology to reduce soil insecticide use in field corn, the early detection of a migratory insect pest, the beet armyworm (BAW) and a new insect pest, the soybean aphid. Since BAW did reach outbreak status in soybeans in Sussex County and this insect is resistant to currently labeled insecticides, a combination of efforts by the Department of Agriculture and Delaware Cooperative Extension resulted in a Delaware label for a new insecticide, Steward, within 2 days of the detection of economic levels. New management strategies were introduced to producers and consultants at in-season field meetings, over the IPM web site, on biweekly recorded messages, through county based pest alerts and as part of the Weekly Crop Update newsletter.

**Impact:** Results from on-farm research on seed treatment technology indicates that growers could save \$12 per acre in reduced soil insecticide use for wireworms in field corn. Soybean aphid was detected in Delaware for the first time in 2002 as a result of a weekly statewide survey funded by the Delaware Soybean Board. Although this pest can cause up to 15 percent yield loss, the pest incidence was low and no economic losses occurred in Delaware. As a result of multi-state surveys for this pest, entomologists in the Mid-Atlantic region (Maryland, Delaware and Virginia) now agree that in most years, soybean aphid populations will arrive late in the season and therefore have little, if any, impact on yield. A combination of in-state and regional monitoring and communication efforts prevented a 20 percent yield loss on 30 percent (30,000 acres) of the soybean acres in Sussex County.

**Primary Impact Areas:** Extension

### **Funding Sources:**

Federal Smith Lever 3-D IPM Funds  
State IPM Funds  
Delaware Soybean Board Grants  
Industry grants

**Contact Information:**

Joanne Whalen

Extension IPM Specialist

Department of Entomology

University of Delaware

Newark, DE 19717-1303

Phone: 302-831-1303

Fax: 302-831-8889

e-mail: [jwhalen@udel.edu](mailto:jwhalen@udel.edu)

## Impact Statement Fly Management on Dairy Farms

**Who Cares and Why:** Fly management on dairy farms was identified by producers in Delaware as a key pest management issue on their farms. If not controlled, fly problems can contribute to 5-25 percent loss in milk production. In addition, lower profit margins, loss of pesticides, resistance management, and increased residential development are all factors that point to the need for the development of an IPM program for flies on dairy farms.

**What Has Been Done:** In 2002, whole farm surveys were again conducted on each farm at the beginning of the program (May) to determine possible breeding areas in and around the farm and identify the best locations to release parasites. Adult fly populations were monitored using spot cards placed on key fly resting surfaces in multiple locations on cooperating farms. In general, cards were monitored on a weekly basis from May through early September. Management practices used to manage flies included: use of fly tapes and bait applications for adult fly populations; residual space sprays (dimethoate and Tempo) for threshold levels of adult flies; parasite releases in calf barns; hister beetles for maggot control; use of citric acid as an edge treatment and alternative beddings including peanut hulls and sand.

**Impact:** The use of alternative beddings provided improved adult fly control. The White Fly Tape and Fly Baits provided excellent knockdown of adults. They work well in combination and are safe to use with parasite releases. Parasites again provided approximately 10 percent control. Reductions in insecticide use varied with producer: 10 percent for two producers; 25 percent for one producer and 60 percent for one producer for an average reduction of 21 percent for the 4 cooperators

**Primary Impact Areas:** Extension

**Funding Sources:** Federal Smith Lever 3-D IPM Funds, State IPM Funds, Grower and Industry grants

**Contact Information:**

Joanne Whalen  
Extension IPM Specialist  
Department of Entomology  
University of Delaware  
Newark, DE 19717-1303  
Phone: 302-831-1303  
FAX: 302-831-8889  
e-mail: [jwhalen@udel.edu](mailto:jwhalen@udel.edu)

## IPM Program Keeps Spidermites Out of Melon Fields

**Who Cares and Why:** Current watermelon IPM programs focused primarily on insect management strategies. Private consultants and agribusiness expressed an interest in developing a multi-state approach focused on a total crop management system including input from county Extension staff, Extension specialists and Research faculty from the Universities of Delaware and Maryland.

**What Has Been Done:** In 2002, watermelon IPM programs were delivered to producers through private and agribusiness consultants. A partnership was developed with these consultants where scouting reports were shared on a weekly basis and management decisions were made as a group. A multi-state approach in cooperation with the University of Maryland's Extension plant pathologist and consultants was implemented to develop and evaluate a total crop management system for insect, diseases and nutrient management in watermelons. Innovations included the development and implementation of an alternative disease management program using varietal selection, disease scouting, and a weather based disease forecasting system to time fungicide application (University of Maryland/ Delaware); the incorporation of leaf petiole sampling into nutrient management programs (consultants); and the development of alternative mite management strategies (University of Delaware).

**Impact:** New spider mite management strategies in watermelons including refined thresholds, reduced risk insecticides and weed management in rye strips were identified resulting in a saving of \$ 20 per acre in reduced miticide use on 200 acres. In 2002, 2100 acres of watermelon used the Melcast Disease Forecasting System. On 650 acres, growers reported better results from timing fungicide applications and savings of \$15 to \$30 in reduced fungicide applications. Leaf petiole testing was expanded and was used to improve timing of nitrogen applications.

**Primary Impact Areas:** Extension

**Funding Sources:** Federal Smith Lever 3-D IPM Funds, State IPM Funds, Grower and Industry grants

**Contact Information:**

Joanne Whalen  
Extension IPM Specialist  
Department of Entomology  
University of Delaware  
Newark, DE 19717-1303  
Phone: 302-831-1303  
FAX: 302-831-8889  
e-mail: [jwhalen@udel.edu](mailto:jwhalen@udel.edu)