

The Evolution of TAg

The Tactical Agriculture Program in New York State Innovations in Season-Long On-Farm IPM Training

What is TAg?

The Tactical Agriculture Program, nicknamed "TAg", is an experiential, hands-on, cooperative extension sponsored training program that provides on-farm Integrated Pest Management (IPM) and Integrated Crop Management (ICM) education to small groups of agricultural producers and agribusiness personnel for the duration of a growing season.

Components of a TAg Program

- Introduce, observe, and assess pest problems as they occur in the field
- Provide guidelines and resources for scouting
- Discuss, evaluate, and employ IPM solutions
- Conduct pre and post evaluations to assess program effectiveness and impacts

TAg: Based on Sound Educational Theory

Research in adult education demonstrates that producers are more likely to adopt targeted farming practices when the educational design promotes small groups, open discussion, and experiential hands-on learning on the farm, and is reinforced several times over the growing season.

Julianne Stavisky, Kenneth Wise, and J. Keith Waldron
Cornell University, NYS IPM Program

Highlights of TAg

- IPM principles are introduced in conjunction with crop production fundamentals to encourage integration into whole-farm decision-making
- Informal training sessions are held throughout the season in a small, neighborhood group setting to encourage information exchange and reinforcement of IPM concepts
- Hands-on activities, including direct observation and assessment of pests in the field, personalizes the learning process
- Training session locations rotate among participant farms
- Custom-made programs with a consistent IPM message meet unique local needs
- Impacts are readily demonstrated with the assessment of subject matter knowledge and IPM implementation

*TAg was initiated
in field corn and alfalfa*

TAg Timeline

1990

TAg grows throughout NYS in the '90's...

*Wheat TAg starts
Advanced TAg is offered*

Soybean TAg begins

Veg/Field Crop TAg will begin

2000

2004

2005

2006

Livestock and Field Crop IPM in NY
The Livestock and Field Crop Team in the NYS IPM Program provides guidance in the development of whole-farm IPM programs for dairy, field crop, and other livestock producers in NY. As members of Cornell Cooperative Extension (CCE), we work with CCE personnel and Cornell University faculty to design and implement season-long on-farm educational programs, and to conduct applied IPM research. Research and extension efforts focus on the development of sustainable ways to manage insect, disease, weed, and vertebrate pests and to help producers find and use methods to minimize environmental, health, and economic risks associated with crop production.

Success: TAg, You're It!

To date, we have trained 900 field crop producers that own, manage, and implement IPM and ICM practices on 180,000 acres of field crops.

Advantages for TAg Participants

- Increased knowledge of pest identification, scouting methods, and thresholds
- Exploration of management alternatives
- Practice gained in IPM decision-making
- Integration of IPM into whole farm planning
- IPM neighborhood team building and enhanced networking
- Resources for additional information become available
- TAg provides the motivation and the means to implement IPM



TAg meetings often start before it is warm or dry enough to plant!

Wheat TAg

- Since 2004 -

Why wheat TAg?

- Tight return on investment for small grain production
- Disease and potential risk of mycotoxin are cause for concern for crop management



Plant population assessment was the first order of business in this broadcast-planted wheat field.

Key Components:

- IPM and ICM decisions linked to plant growth stage
- Fundamentals of sound stored grain IPM
- Identification and assessment of disease pests, and preventive disease management

Impacts: 2,000 acres of wheat in 2 counties

Future: Targeting 1 county in 2006, focusing on organic production methods

Soybean TAg

- Since 2005 -

Why soybean TAg?

- Soybean acreage in NY has increased 6-fold since 1990 to 200,000 acres planted annually
- New destructive invasive pest species - soybean aphid and Asian soybean rust

Key Components:

- Identification and management of disease, insect, weed, and vertebrate pest threats
- Cultural control, variety selection, and other non-chemical means for managing common pest problems
- Timing of scouting and management linked to vulnerable stages of plant development

Impacts: 3,500 acres of soybean in 2 counties

Future: Targeting 4 counties in 2006



There's nothing quite like getting out into the field to see the pests up close and personal. Here's a TAg team out looking for soybean aphids and natural enemies.

Where TAg began...

Field Corn and Alfalfa TAg

- Since 1990 -

Why field corn and alfalfa TAg?

- Field corn and alfalfa are keystone crops for the 7,200 dairy operations and cash crop farms in NY
- Nearly 1.5 million acres of field corn and alfalfa are grown in NY

Key Components:

- Introduction to IPM principles
- Overview of managing the full spectrum of insect, weed, and disease pests (with special emphasis on potato leafhopper and corn rootworm)
- Efficient timing for weed management practices
- Crop management, including soil testing, tillage methods, nutrient management, crop staging, harvest quality and manure management.

Impacts: 174,000 acres in 30 counties

- 10 percent of all acres of field corn and alfalfa grown in NY have been impacted by TAg

Future: Targeting 5 counties in 2006

Flexibility of TAg

- TAg is easily adapted to meet unique needs of our clientele, including Amish and Mennonite communities and organic producers
- Programs can include livestock IPM components
- TAg resources and teaching modules have applications for other extension outreach efforts



Jeff Miller, Oneida County CCE, teaches soybean aphid identification with a hand lens.



Advanced topics in hay management are being discussed during a Triple P meeting

What have participants said about TAg?

- Looking at other farmers and different situations of planting and spraying opens your eyes to other ways of doing things.
- I like TAg because of the small size of groups and the opportunity to talk about various issues throughout the growing season.
- It's a very good program that has been very helpful to me this year and years to come. I would recommend this to anyone.
- TAg made me more aware of how important crop health relates to forage quality.
- TAg has made me more aware of what weeds and stages of crop growth in fields at specific times of the season.
- TAg helped me understand I can get more feed value per acre with lower investment.

For More Information, Contact Us

NYS Integrated Pest Management Program:

<http://www.nysipm.cornell.edu/>

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Advanced TAg: "Triple P"

Pests, Production, and Profitability

- Since 2004 -

Why Triple-P?

- Advanced IPM and ICM training for TAg graduates
- Opportunities to build on experiences gained during TAg training

Key Components:

- Soil health, including tillage methods, soil crusting, cultivation, and compaction
- Alfalfa harvesting and forage quality
- Management of stored grain pests
- Advanced weed identification and management
- Pest and crop record keeping

Impacts: 2,500 acres in 3 counties

Future: Targeting 1 county in 2006

Veg/Field Crop TAg

- Starting in 2006 -

Why vegetable and field crop TAg?

- Cross-commodity focus to address whole farm IPM
- Amish dairy producers in western NY are converting small acreage to fresh market vegetable production

Key components:

- IPM Concepts and their application to multiple crops
- Balancing field crop production needs unique to small farms while realizing high quality crop production and minimizing environmental impact



The Adirondack Mountains serve as a backdrop to this TAg discussion of organic soybean production.

Future: Targeting 2 counties in 2006