

**Project Type:** Implementation

**Title:** Integrated Pest and Crop Management TAg Team in Lewis County

**Project Leader:** Jennifer Beckman, Field Crops Extension Educator

**Cooperators:**

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**Abstract:**

The Tactical Agriculture (TAg) Team uses a unique hands-on approach for farmers to learn about IPM. Farmers who participate in the TAg Team select 2 fields (alfalfa and corn) that are scouted weekly for insects and other problems. Regular meetings are held in the field where we teach farmers how to scout (using proven IPM methods) and discuss management options. The impact of this hands-on approach is obvious – farmers are always astonished at the amount of insects, both beneficial and detrimental, in their fields. Usually they have heard of the insects that we find but actually seeing the insect and the damage it can do really helps participants learn and remember. These field meetings often lead to discussions about other crop management topics, thus a wide variety of issues are covered in these meetings.

**Background and Justification:**

In an effort to reduce unnecessary pesticide use, the IPM Program has established economic thresholds for insects and reliable scouting methods to help farmers assess the risk of damage to their fields. In Lewis County, many farmers are unaware of the damage that insects can cause and are also unaware of the scouting methods that can be used to determine need for selective insecticide use or other control methods. Producers are interested in learning more about crop damage, especially as technology advances and the array of available control options becomes more confusing. The TAg Team provides a memorable, hands-on opportunity to learn more about crop protection. It also provides the farmers with a forum to discuss their experiences with farmers from other areas of the county.

**Objectives:**

1. Continue to expand the TAg Team that was started in 2004
2. Encourage growers to take soil tests and PSNTs from necessary corn fields

3. Make growers and agribusiness representatives aware of the insects, weeds, and diseases that can be damaging to field crop production.
4. Educate growers and agribusiness representatives about integrated pest management, sampling, treatment thresholds and treatment options.
5. Develop a TAg Notebook to serve as a reference guide
6. Expand the use of scouting data so that it can be used by other growers in the county
7. Evaluate the program.

### **Procedures:**

1. Area consultants (crop and nutritional consultants) were contacted to form a list of farmers who may be interested in joining. Word of mouth and advertisements in the monthly newsletter published by the Extension Office also helped to generate interest.
2. Farmers learned to interpret soil tests for the purpose of determining appropriate fertilizer applications.
3. Regular scouting reports and in-field identification of the insects and the damage caused was a memorable way for farmers to become aware of potential crop loss.
4. Sampling protocols and treatment thresholds were explained, demonstrated and practiced by the participants at the field meetings.
5. Developed a notebook that included timely reference articles and pictures, topics were based on weekly scouting reports
6. Findings from our weekly scouting trips were reported on the CCE-Lewis County website so that they were readily available to growers throughout the county. Links to pest management information were also included on the website.
7. The pre and post tests provided by the IPM Program (available on their website) were used to evaluate gain of knowledge and skills. The post TAg Participant Survey (also available on the website) was used to help evaluate impact and to collect participant feedback and suggestions.

### **Results and Discussions:**

Traditionally, pest management practices in Lewis County are very limited. Often, crops are planted and not looked at again until harvest, especially in the case of corn. This is often the result of the labor shortage that is common on small, family run dairy farms. All the grower participants this year (as in previous years) were owner/operators of dairy farms with 60-100 farms and 90-350 acres (total acres involved in the 2006 TAg Team = 1280).

Before participating in TAg, most of the members had heard of the various insects and weeds but were not really sure what kind of damage they caused. This is evidenced by the average score of 35% on the pre-test (taken by all participants prior to the first TAg meeting). After TAg, members are much more aware of the potential damage and yield loss. As a result, post-test scores improved to 83%. The participants expressed appreciation for making the insect world less confusing. Especially with all the remedies

and treatments that they hear about from various salesmen, they appreciate learning about the insects and the discussion of management practices. They especially appreciated the setting – it is much easier to learn in the field where you can actually see the insect and the damage.

As far as implementation, due to labor shortages, it is unlikely that the farmers will actually begin scouting their own fields. Though, having become more aware, the farmers are more willing to pay someone else to scout for them. Unfortunately, few scouting services are available in Lewis County. Hopefully, increased awareness among farmers will increase demand and more scouting services will become available. Previous TAg members often call our office to ask if we have found any fields with insects over threshold.

In comparing pest management practices of participants and non-participants, non-participants are much more ignorant about the threats posed by pests. They are easier influenced by salesmen and are more likely to purchase seed protection they do not need (corn rootworm protection) and less likely to spend extra money on crop protection that they do need (potato leafhopper resistant alfalfa). Participants who understand the threats posed by different insects are likely to increase their yields and reduce costs by avoiding unnecessary insect protection.

The TAg Team is advertised to growers in the monthly newsletter published by Cornell Cooperative Extension (CCE) of Lewis County. Weekly scouting results are published on the CCE website. The program is also described in the CCE Annual Report that is written for the County Legislators.

This project has definitely benefited the local CCE effort. Several of the current and past participants had not traditionally participated in CCE programming. They were attracted to the TAg Team by the hands-on application and, having found the program to be beneficial to their operation, have become faithful supporters and frequent participants in other CCE programs.

**Project Locations:** Lewis County, NY

**Samples of Resources Developed:**

Each farmer received a binder. At each meeting, attendees received information to store inside the binder. Information included the IPM brochures for potato leafhoppers and corn rootworm. Other information included weekly scouting reports and handouts with colored pictures that describe the life cycle of alfalfa weevil, potato leafhoppers and corn rootworm. Samples of these are attached.



**TAg members learning how to scout for potato leafhopper.**