



## 2016 NNY Alfalfa Snout Beetle Biological Control Program Nematode Cost and Rearing Opportunities

### **Background and Bio-Control**

Alfalfa snout beetle remains the key limiting factor to alfalfa stand life in the Northern NY region and frequently kills out entire stands or large portions of stands in a single year.

Since 2007, the Shields' Lab has assisted NNY farmers in inoculating alfalfa fields using insect-attacking nematodes (bio-control nematodes) to suppress the spread of this insect with the long-term support of the Northern New York Agricultural Development Program (NNYADP). In 2015, NNYADP funded a cost-sharing program to promote farmer adoption. The program was a success with:

- 22 farms applying bio-control nematodes for the first time,
- approximately five NNY-based commercial applicators treating 986 acres,
- a total of 4,300 acres receiving nematodes throughout five NNY counties,
- bringing the estimated acres treated with biocontrol nematodes to 14,000 (77 farms), and
- one Franklin County farm enterprise developing plans to open a nematode-rearing lab.

For 2016, there will be no cost-sharing program, however, to continue the positive momentum. The Shields' Lab will continue to offer farmers the option to purchase bio-control nematodes or assist farmers interested in rearing their own nematodes on their own farm with their own labor.

### **\*\* Timing is Key**

Farmers interested in applying biocontrol nematodes for alfalfa snout beetle control need to realize that this project is time-limited with about a 5-year window remaining. It requires 3-5 years to totally inoculate a farm with nematodes and reduce snout beetle populations to a manageable level.

### **\*\* Agribusiness Development Opportunity**

The Shields' Lab is very interested in assisting individuals interested in rearing biocontrol nematodes as a business so this biocontrol agent remains available to NNY farmers after 2021 since alfalfa snout beetle will remain a potential threat as long as alfalfa is raised in the region.

### **Application Recommendations**

- In 2016, participating farms will not be limited to the number of acres they wish to treat. We recommend that bio-control nematodes should be applied on alfalfa fields in their seeding year, or 1<sup>st</sup> production year for the best economic impact.
- If farmers choose to apply biocontrol nematodes to more established alfalfa fields, the biocontrol nematodes will establish and attack snout beetle larvae present, but will not assist with stand retention of the alfalfa stand.
- Nematode applications need to be made before September 1.

- Nematodes should be applied using the “skip nozzle” method, leaving every third nozzle open and nematodes will be applied to 33% of the acreage covered by the application equipment (based on nozzle separation of 22-24”).

### **Nematode Cost: Purchase from Cornell Shields’ Laboratory**

- Farmers will need to contact the Shields’ Lab no later than **45** days prior to a planned application based on their cutting schedule.
- Nematode costs using the 33% skip nozzle application method will be **\$26/acre** if the nematodes are purchased from Cornell (Shields’ Lab).
- Two discounts will be made available to all farmers participating this year:
  - Cost of bio-control nematodes will be discounted **10%** for any farm who places an order and has worms delivered for application by June 15.
  - Cost of bio-control nematodes will be discounted **10%** for all participants who pay upon delivery of biocontrol nematodes.

**\*\* Farmers interested in taking advantage of the bio-control nematode discount for worms ordered and delivered by June 15, need to contact the Shields’ Lab no later than April 29.**

### **Nematode Cost: Farmer-Reared Nematodes**

- If growers choose to rear their own biocontrol nematodes on their farm using their own labor, cost can be reduced to around \$15 per acre. Interested farmers will need to contact the Shields’ Lab no later than **60**-days prior to a planned bio-control nematode application based on their cutting schedule to review the steps required to have a successful rearing and application process.
- On-farm rearing requires the farm to purchase their own wax moth larvae used to rear biocontrol nematodes and the Shields Lab will provide a list of reputable worm suppliers to choose from. Farms will receive biocontrol nematodes from the Shields’ Lab for inoculation of the worm cups based on continuous dialogue on anticipated arrival date of worm delivery and proposed application date. The Shields’ Lab will provide specific instructions for dosing the insect larvae and temperature requirements for incubating the nematodes. Assistance for rearing your own nematodes will be provided by the Shields’ Lab, Cornell Cooperative Extension specialists, or agribusiness individuals with knowledge of the techniques involved upon request.

### **Sign-Up Information**

If you are interested in participating in the bio-control nematode program in 2016, the Shields’ Lab will need to know of your intent at least **45 days before** a planned application. The earlier we are notified of your desire to participate the better, so we can plan accordingly. Please contact Tony Testa by phone (607) 591-1493 or by email at: [at28@cornell.edu](mailto:at28@cornell.edu), or your local CCE specialist:

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