

## Alfalfa Snout Beetle Bio-Control – A Cost-Sharing Opportunity for NNY Farms

(Revised 24 March 2015)

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

Alfalfa Snout Beetle (ASB) is the major limiting factor in alfalfa production and stand longevity in all Northern New York counties. Uncontrolled, ASB can destroy a new alfalfa seeding in just a year or two. Field losses cost producers from \$250 to \$400 per acre from this insect. Over the past 25+ years, an ASB biological control program has been developed by the Shields' lab at Cornell University that uses native, insect-attacking nematodes (biocontrol nematodes). To date, approximately 8,000-10,000 acres of alfalfa have been treated with these ASB-biocontrol nematodes on about 65 farms.

Some farms have inoculated the majority of their alfalfa acres while a number of farms have only inoculated 1-2 fields. Early adopting producers, who have treated multiple fields within an area have reported a significant decline of ASB on their farm and have returned to growing alfalfa successfully. The decline in ASB population in an area has taken 3-5 years after multiple fields were treated. In contrast, farmers who have treated only a couple of fields in an area are not seeing much impact on their ASB populations. For these reasons, this cost-sharing program was developed to encourage more growers to treat fields within problematic ASB areas.



Damaged alfalfa roots and an alfalfa snout beetle larvae. St. Lawrence County, 2013.

On-farm research the past 7 years indicates that just a single application of biocontrol nematodes is required in a field because these biocontrol nematodes persist in the field for many years, including across multiple year rotations to row crops.

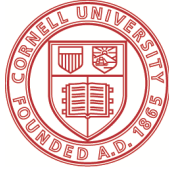
Many farmers are hopeful that planting the new ASB-resistant alfalfa varieties will solve their ASB insect problems, but these varieties are currently only moderately resistant and can be overrun by high ASB populations. For example, heavy ASB pressure wiped out all of Cornell's resistant alfalfa lines planted in a Lewis County field comparison in 2014.

To effectively control ASB, a dual management strategy must be used. ASB populations must be reduced using biocontrol nematodes before ASB resistant alfalfa can be used effectively.

### **Alfalfa Fields Targeted:**

Applications of biocontrol nematodes should be focused on either fields in their seeding year or fields in their 1st production year. In this cost-sharing program, biocontrol nematodes will be applied to new seedings after 1<sup>st</sup> (July) and 2<sup>nd</sup> (August) harvest or to 1st production year alfalfa

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stands after 2nd or 3rd cutting. Applications need to be made before September 1<sup>st</sup>. Specific application protocols have been developed and will be provided to participating farms.

### **The cost sharing program, available during 2015 only, is outlined as follows:**

1. Producer must request participation via their local Cornell Cooperative Extension Specialist, expressing an interest in biocontrol of ASB by May 15.
2. Producer enrolled fields must be seeded to alfalfa or an alfalfa-grass mix in spring 2015 or the spring of 2014.
3. Producers in an area known to be infested will be given preference.
4. Producers with no previously treated fields will be given preference.
5. Participating farms are limited to 100 acres each.
6. Cost of the biocontrol nematodes will be discounted by 50%. The cost of the nematodes in this application method is \$20/acre when purchased from Cornell. Under this proposed program, the farmer will purchase the nematodes from Cornell for \$10/acre and the NNYADP program will cover the remaining rearing costs of \$10/acre.
7. If the farmer has the equipment to apply their own nematodes through a commercial sprayer, the reduced price of the nematodes will be entire cost-sharing program. However, if the farmer requires a commercial applicator to apply the nematodes, the 50% cost sharing will extend to the cost of application (\$10/acre equals the maximum cost sharing reimbursement). The commercial applicator will bill the farmer 50% for the application and then send an invoice for the remaining 50% of the application cost (\$10 / acre max) to Cornell to be paid from NNYADP funds. Attempts will be made to distribute the opportunity for cost-sharing across all NNY counties proportionally depending on need and demand.
8. Nematodes will be applied using the "skip nozzle" method, leaving every third nozzle open and nematodes will be applied to 33% of the acreage driven over by the application equipment (based on nozzle separation of 22-24").

### **Sign up before June 1, 2015:**

This program was funded for 2015 by the [NNY Agricultural Development Program Small Grants Program](#) is being implemented by Cornell University Cooperative Extension Field Crops and Soils Specialists in Jefferson, Lewis, St. Lawrence, Franklin, Clinton and Essex Counties and the Shields' lab at Cornell University. For more information or to enroll, contact your local CCE Specialist:

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