

New Infestations of Alfalfa Snout Beetles Found in Jefferson County

By: Mike Hunter October, 2006

Alfalfa Snout Beetle (ASB) is a very serious root-feeding weevil that is found only in nine counties of New York State and southern Ontario. The alfalfa snout beetle is widely distributed over Central and Northern Europe. It was first found in America in 1896 in Oswego. The ASB became a major pest in portions Jefferson County in 1933. Until now, the alfalfa snout beetles *were not* found throughout Jefferson County with most of the known infestations located south of the Black River. The loss of many alfalfa stands in NNY are blamed on winter kill, however, many of these fields are killed by undetected alfalfa snout beetle infestations.

From 1980 to 1990 the New York State Department of Agriculture and Markets conducted statewide field surveys to determine exactly where the ASB was located. In 2005, the Northern New York Agricultural Development Program funded a two year field survey to determine if the ASB have spread to new areas in NNY. As a result of this survey, the Cornell Cooperative Extension field staff found new infestations of alfalfa snout beetle in several areas of Jefferson County, including the towns of Alexandria, Antwerp and Philadelphia.

Adult ASB feed on leaves and stems, and the larvae feed on the roots of alfalfa. The larva causes the most serious damage. ASB is one of the few pests that can completely destroy an alfalfa field. Some farmers have been forced to grow other forages than alfalfa because of the destructive damage by this insect to alfalfa and certain clovers. Adult ASB are dusty black in color, wingless, have a hard shell and a snout. The adult beetle is $\frac{1}{2}$ to $\frac{3}{4}$ inch long. Every beetle is female and capable of reproducing parthenogenetically, which is reproduction without mating.

Adult ASB emerges in the spring to feed on new shoots from the alfalfa crown. The ASB lives under the soil surface for about 2 years. When adults emerge in the spring they migrate in mass numbers often in a northeast or northwest direction. Legless white larva, are a $\frac{1}{2}$ inch long, can be found within a foot of the soil surface in late summer to early fall feeding on alfalfa roots. Larvae feed on side roots, and girdle the main taproot causing death to the plant. In late October and early November the larvae move deeper in the soil where they spend the winter. The following spring the larvae move 10-12 inches from the surface, pupate by mid-summer and become inactive adults, which remain in the soil until the following spring.

It is not possible to control alfalfa snout beetles with an insecticide. Currently, the only way that a farm can control this serious alfalfa pest is to stop growing alfalfa completely or use a crop rotation with susceptible and non-susceptible crops. Essentially this will involve growing alfalfa in the same field for only 3 years and then plowing it up and planting a non-host cultivated crop such as, corn, wheat, oats or soybeans. Crop rotation limits the ASB from developing large infestations in field. ASB has host plants other than alfalfa that make eradication impossible. Host plants for ASB are alfalfa, red clover, dock, wild carrot, quackgrass, and white clover. New infestations can be caused by

transporting ASB to other farms or fields. Farmers must take precautions to limit artificial transport of ASB by cleaning equipment between fields and farms.

For several years, the Northern New York Agricultural Development Program has funded local research to develop a biological control method for alfalfa snout beetles. Current local Cornell University research includes using nematodes and fungi to destroy beetle larva, developing beetle resistant alfalfa plants and the investigation of microsporidia as a possible control. To learn more about these research projects there is a series of fact sheets available at your local Cornell Cooperative Extension office and online at www.nnyagdev.org.