Alfalfa Blotch Leafminer

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Introduction

The alfalfa blotch leafminer (*Agromyza frontella* (Rondani)) is a relatively new pest in Wisconsin alfalfa. It was first found in the state during the summer of 1996 with positive confirmations in five counties. A 1997 survey of the state showed that the alfalfa blotch leafminer had spread to an additional 34 counties. A 1998 survey shows that most, if not all, alfalfa producing counties in the state of Wisconsin had been infested at some time during the three-year survey.

Identification and Life Cycle

The alfalfa blotch leafminer may go through 3-4 generations/year in the upper Midwest. The adult is a black, approximately 1/8-inch long hump-backed fly. The maggots are small and pale yellow. Females will lay 1-3 eggs/leaf. When the maggots hatch, they feed between the leaf surfaces in a mining fashion. When development is complete, larvae will leave the leaf and drop to the ground to pupate.

Damage

Larval mines can usually be diagnosed through their comma-like appearance. Twenty-five to fifty percent of the leaflets may be mined during heavy infestations and this could result in loss of quality. Yield loss is not expected unless significant leaf drop occurs. Adults feed by puncturing tiny "pinholes" in the leaf. This type of damage is usually not considered a plant health problem.

Scouting and Damage Threshold

Decisions to treat must be made during the adult pinhole feeding stage. Scout fields on a weekly basic to determine the percentage of leaves with pinhole feeding. Control may be necessary when 30-40% of the leaflets show adult pinhole feeding scars.

Control

The need for chemical control is difficult to determine. Economic benefits will only be obtained if leaf drop occurs or if a high percentage of the leaflets show excessive feeding. Early cutting can be used to reduce damage and would be most beneficial during first cut. Subsequent cuttings may not coincide with peak larval damage. Biological control has been firmly established and has been very effective in the northeastern United States after the release the introduced parasite *Dacnusa dryas* (Nixon). Research is being planned to introduce this same parasite into the upper Midwest. Also, an indigenous parasitoid has also been found attacking Alfalfa Blotch Leafminer pupae in Wisconsin. Parasitism rates

of greater than 50% have been found. However, it is uncertain what degree of control this parasitoid may provide on an annual basis.