



SPECIAL REPORT

MANAGING POTATO LEAFHOPPER

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While some new alfalfa varieties offer resistance to the potato leafhopper, most varieties do not so managing leafhoppers remains very important in producing alfalfa in Pennsylvania. As spring approaches, warm air will begin to move into the northeast and bring with it spring showers. These spring showers that originate in the Gulf of Mexico can also bring the potato leafhopper.

The potato leafhopper is a migratory insect that overwinters in states along the Gulf of Mexico. It cannot survive the cold winter conditions and then fly into updrafts created by strong storms systems developing in the Gulf of Mexico. The insects are drawn into the storm system and carried hundreds of miles north and eastward. Computer simulations of storm movement have predicted that potato leafhoppers can move from the Gulf of Mexico to Pennsylvania in as little as five days.

By understanding this behavior of

the potato leafhopper, its arrival into Pennsylvania can be anticipated. In the spring, beginning around late April, major storms from the Gulf of Mexico begin to move north and east into Pennsylvania. The frequency and intensity of these storm fronts influence the timing and number of leafhoppers reaching the northeast United States.

In years when few storms arrive early, the arrival of leafhopper is later and the numbers arriving are lower, resulting in reduced pressure from the insect. Under these conditions, only a few second cutting alfalfa field typically need an insecticide application. However, the numbers build-up during the second cutting and a greater number of third cutting field require an insecticide application. In years when early spring storms originating in the Gulf of Mexico are frequent, potato leafhoppers in general arrive earlier and damage from the insect is greater. Under these conditions many second and third cutting alfalfa fields require an insecticide application to prevent damage.

As the second cutting of alfalfa reaches about 2 to 4 inches in height, scout the field once a week. If a storm has just moved through the area there is a good chance that new leafhoppers have moved into the field. Arriving leafhoppers prefer the new regrowth before it takes on the dark-blue green color of maturing alfalfa. The wavelengths of light reflected from the young alfalfa plants that are yellow-green is very attractive to leafhoppers flying over the field. To a leafhopper this indicates that the plant is succulent and rich in the nutrients it needs for proper egg development and growth and development. Older plants have harder stems and leaves and a lower protein content. Besides providing a good diet for the leafhoppers the

younger plants are more tender, making it easier for females to penetrate the stem to deposit their eggs in the stem.

In summary, by watching the spring storms that move into Pennsylvania beginning in late April, the arrival of leafhoppers can be anticipated. Scouting after regrowth of the first cutting has reached 2 to 4 inches will help identify economic infestations of leafhopper before significant injury occurs. It is particularly important to check fields after a storm originating in the Gulf of Mexico has just passed through, since leafhoppers are transported northward in the spring on these storms into Pennsylvania.

Evening Grazing Is More Efficient

Research from Great Britain shows that dairy cows on pasture consume the greatest amount of pasture four to five hours before dark.

About 40 percent of the cows; daily pasture intake occurred in the period between evening milking and dark. Cows put on pasture after the morning milking grazed for less time (2 to 3 hours) and consumed less pasture than the evening grazing group. In the last five weeks of the research trial, cows on pasture after the evening milking produced 5 percent more milk than cows allowed on pasture only after the morning milking.

Forage Variety Trials Report Available

The 1998 Penn State "Forage Variety Trials Report" is available, for free, at your county extension office. This year's report contains variety performance information on alfalfa, red clover, and many cool-season grass species. If you will be sending forages during the next year, this report will be a valuable asset in your species/variety selection process.

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