New York State
Integrated Pest Management (IPM) Program

We encourage people to adopt a sustainable approach to managing pests, combining methods that minimize economic, health, and environmental risks.

The IPM strategy integrates the use of several pest-suppression technologies, including

- Biological control: beneficial organisms, such as insect predators
- Cultural techniques: practices such as crop rotation, sanitation
- Mechanical and physical methods: screens, traps, cultivation, and temperature modification
- Chemical control: judicious use of pesticides and other chemicals
- Genetic control: traditional selective breeding and new biotechnology practices that produce pest-resistant varieties
- Regulatory control: state and federal regulations that prevent the spread of pest organisms.

The New York State IPM Program funds projects to improve IPM strategies and offers educational programs and resources.

Many organizations and individuals assist in the effort. The New York State Department of Agriculture and Markets, New York State Department of Environmental Conservation, Cornell University, and Cornell Cooperative Extension jointly fund the NYS IPM Program.

New York State
Agricultural Experiment Station
Geneva, NY 14456 • (800) 635-8356 • FAX: (315) 787-2360
http://www.nysipm.cornell.edu/

Cornell Cooperative Extension provides equal program and employment opportunities.
Identification

**Adults** are light brown beetles with a long snout and a band of darker brown down the center of their back.

**Females** lay eggs in alfalfa stems or in henbit early in the spring.

**Larvae** are light green with white stripes down their back and a dark brown head. There are four *larval instars* (or molts).

Larvae are the *chief cause* of damage.

**Early feeding symptoms** appear as small pinholes in the leaves.

**Excess feeding** causes dry matter yield loss and protein reduction.

Growers can predict larval development by monitoring growing degree-days (GDDs). The warmer the temperatures, the faster the larvae development (see table).

**Pupae** are the dormant life stage of the weevil that occurs just before the adult stage. *Presence of numerous pupae* indicates larval feeding is declining.

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Sampling

- Start **sampling the field** in early May (about 350 heat units; base 48°F). Repeat scouting every 7 days.
- Pick **50 stems randomly** throughout the field. Record the percentage of stems showing feeding in the top 3 inches.
- Determine **predominant weevil stage**.
- Check for signs of **parasitoids**.

**Degree days for peak occurrence (50%) of alfalfa weevil life stages**

<table>
<thead>
<tr>
<th>stage or event</th>
<th>degree days</th>
</tr>
</thead>
<tbody>
<tr>
<td>eggs hatch</td>
<td>280</td>
</tr>
<tr>
<td>first instar</td>
<td>315</td>
</tr>
<tr>
<td>second instar</td>
<td>395</td>
</tr>
<tr>
<td>third instar</td>
<td>470</td>
</tr>
<tr>
<td>fourth instar</td>
<td>550</td>
</tr>
<tr>
<td>cocooning</td>
<td>600</td>
</tr>
<tr>
<td>pupa</td>
<td>725</td>
</tr>
<tr>
<td>adult emergence</td>
<td>815</td>
</tr>
</tbody>
</table>

**48 degree base temperature**

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Management Alternatives

**Early harvest of alfalfa** can provide effective control. Clean harvest the entire field.

Chemical control is sometimes necessary when you exceed threshold **and harvest is delayed** or when larvae attack **early in the second cutting**. For selection of an insecticide consult the *Cornell Guide for Integrated Field Crop Management*.

**Always...**

Read the insecticide label for harvest and feeding restriction intervals. Don’t lock yourself out of a timely harvest.

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Implementation

Avoid leaving stubble or uncut alfalfa that may serve as *haborage sites*.

**Document** all actions taken.

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Reevaluation

**Recheck fields** to evaluate how well your management plan worked.

Weevils are generally not a problem beyond the first few weeks after first harvest (early June).

For additional help contact your local Cornell Cooperative Extension Educator.