Insect Pests

With soybean aphid suddenly on the scene, the rule of thumb about insect pests seldom causing yield loss on soybeans in New York may no longer apply. A couple of other insect pests have the potential to cause crop injury, too.

**Soybean aphid:**
Aphids are small, yellow, with distinct black cornicles, or “tailpipes,” on its hind end.
Colonies of tiny yellow aphids on soybean are indeed soybean aphid, as no other aphid species colonizes soybean in North America.
Buckthorn, a shrub or small tree, is the fall, winter, and spring host for aphids.
Soybeans are the summer host. Only females are present in the summer. These generations are born live and quickly grow to bear their own young within 7 days—producing up to 15 generations per season.
Populations may double in as little as 2-3 days.
The wingless form predominates. Winged aphids develop when they are crowded or the plant loses its food quality. Winged aphids fly en masse to other soybean plants or fields.
Soybean aphid can transmit several viral diseases. We don’t yet know what the potential losses—or thresholds—are.

**Seed corn maggot**
Maggots are 1/4 inch long, tapered, legless, pale yellowish-white, and appear to be headless. They burrow into germinating seeds, which may fail to germinate; seedlings are weak and often die.
Associated with high organic matter, as in heavily manured fields. Damage is more severe in cool, wet spring weather that delays emergence of seedlings.

**Japanese beetle**
Shiny metallic green or greenish-bronze beetles, about 1/2 inch long, have reddish-brown wing covers with white tufts of hair on sides and tip of abdomen.
Adults skeletonize leaves, which turn brown. This damage may be conspicuous but rarely causes yield loss.
Indeterminate soybeans can tolerate up to 35% defoliation until bloom, about 20% while pods are small and soft, and about 35% when pods are hardening.
Treatment for damage below these percentages isn’t recommended.

**Two Spotted Spider Mite**
Mites are tiny, about 1/60th inch long. They live in colonies in a thin web on lower leaf surfaces. Feeding injury makes leaves look speckled; then they yellow, curl, and turn brown; plants often die.
Two spotted spider mites may cause problems during hot dry years. (Rain reduces risk.)

Soybean “best management practices” discourage pests:
- Plant on fertile, well-drained soils, pH 6.5 or above
- Plant end of May
- Planting soybeans after soybeans is discouraged
- Survey to detect weed escapes, diseases, and other pests, and to evaluate crop condition

**Other Arthropod pests**

- **Two Spotted Spider Mite**
- **Soybean aphid**
- **Japanese beetle**
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 this 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.

For pesticide recommendations please consult the current issue of Cornell Guide for Integrated Field Crop Management.

Always remember to read the pesticide label.

For additional help contact your local Cornell Cooperative Extension Educator.

Cornell Cooperative Extension provides equal program and employment opportunities.