

Common Soybean Diseases

Note:

Soybean mosaic is **uncommon in New York**. Soybean cyst nematode, a major pest of soybeans in many other states and Ontario, Canada, **has NOT been detected in New York**.

White Mold (*Sclerotinia sclerotiorum*)

When and where is it a problem?

- under cool, moist conditions
- in soybeans planted directly after dry beans (or other *Phaseolus spp*) OR
- after sunflower or canola crops where white mold has been a problem

What to look for:

- white cottony growth and small, dark, round- to elongate-shaped bodies on or within the stem
- stems and pods are pale brown and appear water soaked
- infection typically occurs at stem nodes, usually 4–10 inches above the soil line

What to do before you plant:

- reduce relative humidity in canopy by increasing row width to 30 inches and reducing plant density

Long term, you can:

- rotate to a non-susceptible crop (corn, wheat, oats) for two or more years

Resistant varieties may be on the horizon.

No rescue treatments exist

Downy mildew (*Peronospora manshurica*)

When is it a problem?

- under cool, moist conditions

What to look for:

- pale green to light yellow spots enlarging to pale to bright yellow spots of indefinite size and shape on the upper surface of young leaves
- lesions on the lower surface of leaves are covered with a gray to purplish fungal mass
- severely infected leaves may curl, brown, and drop prematurely
- pod infections may occur without external symptoms

What to do before you plant:

- rotate crops

No rescue treatments exist

Pod and stem blight (*Phomopsis spp.*)

Why is it a problem?

- reduces yield: seeds have low test weights or are lost at harvest
- spoiled seeds may have poor appearance, lower viability, and produce lower quality flour or oil, leading to lower grade and price
- late harvest due to wet weather favors rapid spread

How does it spread?

- infected seed (to seedlings) or infested plant debris (to larger plants)

What to look for, and when:

- series of black dots in straight rows on dead stems, pods, or petioles of dropped leaves as pods start to fill
- no signs visible on stems and leaves of living plants

What to do:

- plant certified disease-free seed
- plant late-maturing cultivars
- use planter box fungicide
- rotate with corn or other non-host

Weed Management Program

Minimize early season weed competition to protect yield potential.

Spring and fall weed surveys

- identify and assess troublesome weeds;
- improve information to tailor and time weed management programs.

Along with pre and postemergence herbicide options, consider:

- placing a 10-inch band of herbicide over rows at planting;
- timely cultivation(s) to minimize weed pressure;
- using herbicide resistant varieties in rotation

Research with soybeans in 30-inch rows shows favorable yields compared to conventional herbicide or cultivation-only weed control.

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 and other pests, and to evaluate crop condition

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.



*New York State
Agricultural Experiment Station*

Geneva, NY 14456 • (800) 635-8356 • FAX: (315) 787-2360

<http://www.nysipm.cornell.edu/>

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.

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program and employment opportunities.*

soybean pests

*diseases and
weeds*

management guide