

7-26-1999

## Soybean foliar diseases in July

X. B. Yang

Iowa State University, xbyang@iastate.edu

Follow this and additional works at: <http://lib.dr.iastate.edu/cropnews>



Part of the [Agricultural Science Commons](#), [Agriculture Commons](#), and the [Plant Pathology Commons](#)

---

### Recommended Citation

Yang, X. B., "Soybean foliar diseases in July" (1999). *Integrated Crop Management News*. 2212.  
<http://lib.dr.iastate.edu/cropnews/2212>

**The Iowa State University Digital Repository provides access to Integrated Crop Management News for historical purposes only. Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user. Users should make their own assessment of the information and whether it is suitable for their intended purpose. For current information on integrated crop management from Iowa State University Extension and Outreach, please visit <https://crops.extension.iastate.edu/>.**

---

## Soybean foliar diseases in July

### **Abstract**

As we head into the mid-season of crop growth, some foliar soybean diseases are visible. Based on my observations and reports from growers and agronomists, the following foliar diseases are relatively common in Iowa soybean fields. Bacterial blight has been observed in some soybean fields. The disease is caused by the bacterium *Pseudomonas syringae*. Lesions associated with this disease are normally first observed on younger, top leaves of soybean plants. The lesions are small, angular, water-soaked, yellow-to-brown spots. The angular lesions enlarge in rainy weather and merge to produce large, irregular dead areas. The bacteria also can infect pods and seed quality may be affected when this disease is severe.

### **Keywords**

Plant Pathology

### **Disciplines**

Agricultural Science | Agriculture | Plant Pathology

# INTEGRATED CROP MANAGEMENT

## Soybean foliar diseases in July

As we head into the mid-season of crop growth, some foliar soybean diseases are visible. Based on my observations and reports from growers and agronomists, the following foliar diseases are relatively common in Iowa soybean fields.

### Bacterial blight

Bacterial blight has been observed in some soybean fields. The disease is caused by the bacterium *Pseudomonas syringae*. Lesions associated with this disease are normally first observed on younger, top leaves of soybean plants. The lesions are small, angular, water-soaked, yellow-to-brown spots. The angular lesions enlarge in rainy weather and merge to produce large, irregular dead areas. The bacteria also can infect pods and seed quality may be affected when this disease is severe.



[1] **Bacterial blight on soybean.**

Normally, bacterial blight occurs in Iowa every year without causing significant yield losses. This disease is more frequently observed in areas that have received a lot of rain because the bacteria are disseminated by rain and wind. If you find severe infection this season, you should not use the seeds for next year because this disease can be seedborne. To reduce the risk of bacterial blight, avoid the use of susceptible cultivars.

Rotation with corn also reduces disease risk.

### Brown spot

Brown spot is common in soybean fields this season. It is caused by the fungus *Septoria glycines*. Even plants in the V2 growth stage are showing symptoms. The fungus spreads by splashing rain from residue in the soil onto the leaves of soybean plants. Symptoms of the disease are many irregular, dark brown spots on both the upper and lower leaf surfaces, which is different from bacterial blight symptoms. Adjacent lesions frequently merge to form irregularly shaped blotches. Sometimes, brown spot can be mistaken as bacterial blight but the two diseases are easy to identify because bacterial blight occurs on upper new leaves and brown spot infects aged leaves, or leaves on the lower portion of plants.



[2] **Brown spot on soybean.**

No remedial measures for problems caused by brown spot are recommended because I cannot predict the development of this disease. Brown spot normally does not affect plant growth, and soybeans can outgrow the disease in most years. However, if the weather this summer continues to be rainy, this disease will progress from lower leaves to upper leaves and cause premature defoliation.

## Soybean mosaic virus (SMV)

Last fall I reported on seed infection by soybean mosaic virus in Iowa. This summer, the incidence of foliar symptoms of this disease was higher in Iowa State University experimental plots than the last 2 years, and this disease also was reported by agronomists in production fields. Leaves of infected plants have a mosaic appearance consisting of light and dark green areas. The leaves curl and crinkle longitudinally along the veins. Sometimes, the symptoms of herbicide injury are similar to those of soybean mosaic virus and misidentification can occur. SMV infection is systematic and new leaves of plants show more drastic symptoms of infection than other leaves. Plants with herbicide injury outgrow the problem and symptomatic leaves occur in the middle of plants. Keep in mind that reaction of soybeans to SMV varies with genotype. For some varieties, infected plants may not have foliar symptoms.



[3] **Foliar symptoms of soybean mosaic virus.**

In Iowa, the damage of SMV on yield generally is not a concern; major damage by this disease is on seed quality. It is recommended not to save SMV-infected soybean for seeds. If you plan to save seed from plants that showed SMV-like symptoms, check the seed at harvest. For some varieties, SMV-infected seed will have mottling on the seed coat. Because there were a number of reports of mottled seed coats last year, I will keep a close watch on this disease in the fall.

This article originally appeared on pages 145-146 of the IC-482(20) -- July 26, 1999 issue.

---

### Source URL:

<http://www.ipm.iastate.edu/ipm/icm//ipm/icm/1999/7-26-1999/soyfoljuly.html>

### Links:

[1] <http://www.ipm.iastate.edu/ipm/icm//ibactblight.html>

[2] <http://www.ipm.iastate.edu/ipm/icm//ibrownspot.html>

[3] <http://www.ipm.iastate.edu/ipm/icm//ismv.html>

**IOWA STATE UNIVERSITY**  
University Extension

