

6-11-2001

Soybean damping-off this season

Xiao-Bing 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](#), [Meteorology Commons](#), and the [Plant Pathology Commons](#)

Recommended Citation

Yang, Xiao-Bing, "Soybean damping-off this season" (2001). *Integrated Crop Management News*. 1907.
<http://lib.dr.iastate.edu/cropnews/1907>

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 Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user.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 damping-off this season

Abstract

Excessive moisture this planting season has promoted damping-off problems. ISU Extension has received numerous reports on damping-off across Iowa, especially in southern Iowa. Both preemergence damping-off and postemergence damping-off have been found. This year seedling diseases are more complicated than in past years because of the alternating warm and cool weather. If the soil temperature is warm (70-80°F), damping-off by *Phytophthora* or *Rhizoctonia* is more likely to occur. If the soil temperature is cool (60°F or below), *Pythium* or *Fusarium* are more problematic.

Keywords

Plant Pathology

Disciplines

Agricultural Science | Agriculture | Meteorology | Plant Pathology

INTEGRATED CROP MANAGEMENT

Soybean damping-off this season

Excessive moisture this planting season has promoted damping-off problems. ISU Extension has received numerous reports on damping-off across Iowa, especially in southern Iowa. Both preemergence damping-off and postemergence damping-off have been found.

This year seedling diseases are more complicated than in past years because of the alternating warm and cool weather. If the soil temperature is warm (70-80°F), damping-off by *Phytophthora* or *Rhizoctonia* is more likely to occur. If the soil temperature is cool (60°F or below), *Pythium* or *Fusarium* are more problematic.



***Pythium* damping-off.**

[Enlarge](#) [1]

The second and third weeks of May were warm, with air temperatures above 80°F. Samples of damping-off sent to the ISU Plant Disease Clinic following this warm weather were infected with *Phytophthora* and *Rhizoctonia*. Damping-off from fields planted in early May or late April was likely to be caused by these fungi. In the past 2 weeks or more, cool temperatures have returned (up to 14° below normal). The cool temperatures with excessive moisture are ideal for *Fusarium* and *Pythium* infection.

The disease incidence is further complicated by other factors such as insects, hail injury, and herbicides. Several damping-off samples received at the clinic have shown insect wounding (probably by bean leaf beetles) on the hypocotyls or hail injury on stems. Wounds by insects or hail create entry sites for fungi. Fungal infection may occur when soybean plants experience herbicide stress due to weather. In all these situations, fungal infections are secondary. Furthermore, *Pythium* infection is enhanced when soil crust delays soybean emergence.

If you decide to replant, check previous ICM newsletter articles on seed treatment decisions or order a copy of ISU Extension publication PM 1851, [Soybean Replant Decisions](#) [2], from the Extension Distribution Center on campus (call 515-294-5247). If seed treatment is to be used, keep in mind that fungicides effective against *Phytophthora* are also effective against *Pythium*. If a variety with *Phytophthora*-resistance genes (Rps1k) has damping-off, you may want to determine the causal agent because *Phytophthora* damping-off indicates the occurrence of new races in the field. Send diseased samples to the ISU Plant Disease Clinic, 323 Bessey Hall, Iowa State University, Ames, IA 50011, if you cannot determine the causal

agent. Call 515-294-0581 with questions on preparing samples.

This article originally appeared on pages 104-105 of the IC-486(13) -- June 11, 2001 issue.

Source URL:

<http://www.ipm.iastate.edu/ipm/icm//ipm/icm/2001/6-11-2001/dampoff.html>

Links:

[1] <http://www.ent.iastate.edu/imagegal/plantpath/soybean/dampoff/1303.7soydampoff.html>

[2] <http://www.extension.iastate.edu/Publications/PM1851.pdf>

IOWA STATE UNIVERSITY
University Extension