

7-9-2007

July soybean disease scouting

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](#), and the [Plant Pathology Commons](#)

Recommended Citation

Yang, Xiao-Bing, "July soybean disease scouting" (2007). *Integrated Crop Management News*. 1018.
<http://lib.dr.iastate.edu/cropnews/1018>

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 Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user.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

July soybean disease scouting

Abstract

Each season in Iowa is different and different seasons have different diseases. After soybean passed the flowering stages, soybean root and foliar diseases began showing up. First, came the report of viral disease being found in the last week of June, which was much earlier than in the past. Then, *Fusarium* wilt showed up. With weather like we're experiencing, this season appears to be a mixed bag of soybean diseases. This article discusses some soybean diseases that occur in Iowa and that you may see while scouting in July.

Keywords

Plant Pathology

Disciplines

Agricultural Science | Agriculture | Plant Pathology

INTEGRATED CROP MANAGEMENT

Search

Get the latest research-based information on crops. [Sign up to be notified](#) when new content is available!

ICM > 2007 > IC-498(18) -- July 9, 2007

Current Newsletter

You are viewing **archives** for the newsletter from 1993-2007. For current news, see [Integrated Crop Management News](#).

Archives 1993-2007



Announcements



Crop Production



Insects and Mites



Pesticide Education



Plant Diseases



Soils



Weed Management

[Image Gallery](#)

Printable Version

Printable version of this page

Related Articles

Scouting seedling diseases and making replanting decisions
June 4, 2007

Manage soybean diseases with planting
April 2, 2007

Check seed quality at harvest
October 4, 2004

Soybean

July soybean disease scouting

by X. B. Yang, Department of Plant Pathology

Each season in Iowa is different and different seasons have different diseases. After soybean passed the flowering stages, soybean root and foliar diseases began showing up. First, came the report of viral disease being found in the last week of June, which was much earlier than in the past. Then, *Fusarium* wilt showed up. With weather like we're experiencing, this season appears to be a mixed bag of soybean diseases. This article discusses some soybean diseases that occur in Iowa and that you may see while scouting in July.

Fusarium wilt

Last week, the Iowa State University Plant and Insect Diagnostic Clinic received a sample of one-foot-high soybean plants and diagnosed Fusarium wilt. Patches of soybean plants infected with this disease also were observed in fields in central Iowa. Previously, this disease was reported in 1999 and 2003 (when early summer was cool and wet), with sporadic and isolated occurrences. The disease could be misidentified with several diseases, although the importance of this disease in Iowa currently is minor.

Fusarium wilt, also called Fusarium blight, is caused by *Fusarium oxysporum*, a very common soilborne fungus. In July, wilting patches of affected plants can be seen in the distance (see photo below). Plants killed by this disease appear to have Phytophthora root rot and may be scattered or appear in small patches in the field. Upper leaves are wilted and seem to be scorched. The middle or lower leaves turn yellow or have pale yellow spots, then wither or drop prematurely upon splitting the stems of these plants from base up, like brown stem rot. In the root system, fine roots are rotten with purple discoloration evident on the lateral roots.

<i>Cercospora</i>
diseases show up
July 26, 2004

Soybean seedling
diseases in 2004
May 10, 2004

Brown stem rot or
Fusarium wilt?
August 4, 2003

Soybean brown spot and
bacterial blight
July 28, 2003

Soybean root rot in 2003
July 14, 2003

Scouting for soybean
seedling diseases in
2003
May 26, 2003

Scouting alfalfa diseases
in spring
May 12, 2003



Fusarium wilt symptoms were evident in 2003. (Steve Barnhart)

Fungal root rot

Fungal root rot has been found in many soybean fields. Early in the spring, *Rhizoctonia* was prevalent and now *Rhizoctonia* root rot. *Fusarium* root, which is different from Fusarium wilt, also is part of fungal root rot. Patches of diseased plants in lower areas are yellowing. Affected plants lack lateral roots with discoloration (dark to red-brown) on taproots. Generally, the disease samples come from fields that also have other problems, such as soybean cyst nematode or iron chlorosis in high-pH fields. Consider cultivation to promote root growth if affected areas are large; cultivation generally helps soybean overcome such problems.

Bacterial blight

A week ago, many Iowa State University field agronomists reported bacterial blight because there was plenty of rain in June and temperatures were relatively cool in many areas. This disease occurs in Iowa every year without causing significant yield losses. It is caused by the bacterium *Pseudomonas syringae*. Lesions (small, angular, water-soaked, yellow-to-brown spots) of bacterial blight are normally first observed on top leaves. The lesions enlarge in rainy weather and merge to produce irregular dead areas. Sometimes, brown spot can be mistaken for bacterial blight, but the two diseases are easy to separate: bacterial blight occurs on upper, new leaves, and brown spot infects lower, aged leaves.

Brown spot

Another foliar disease commonly seen in July is brown spot, caused by the fungus *Septoria glycines*. Like bacterial blight, this disease occurs every year. Disease symptoms occur on the lower leaves of soybean plants. The fungus spreads by splashing rain, thus, current warm weather conditions may arrest the development of this disease. Symptoms include many irregular, dark brown spots on both upper and lower leaf surfaces. Adjacent lesions frequently merge to form irregularly shaped blotches. Brown spot usually does not cause damage unless the disease progresses due to frequent rains later in the season.

If you are considering applying fungicides for plant health treatment, a practice recently

promoted and interesting to some growers, watch the two foliar diseases together with **frogeye leaf spot**, which also has been found in central Iowa. Development of these diseases is associated with rainfall later in the summer, and these diseases, when severe, could affect yield by causing premature defoliation late in the season.

X. B. Yang is a professor of plant pathology with research and extension responsibilities in crop diseases.

This article originally appeared on page 223 of the IC-498(18) -- July 9, 2007 issue.

Updated 07/27/2007 - 11:59am