

10-1-2007

Soybean rust found in an Iowa field

Daren S. Mueller

Iowa State University, dsmuelle@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

Mueller, Daren S., "Soybean rust found in an Iowa field" (2007). *Integrated Crop Management News*. 979.
<http://lib.dr.iastate.edu/cropnews/979>

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 Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user.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 rust found in an Iowa field

Abstract

Soybean rust was found in a field in Dallas County, Iowa, on Tuesday, September 25, 2007. The soybean rust infection initially was identified via visual observation. On Wednesday, three Iowa State University plant pathologists visited the field and collected additional leaves, and we observed newly formed soybean rust pustules and spores on those leaves to confirm the infection.

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(24) -- October 1, 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

Fungicides for soybean: Considerations for 2008
December 10, 2007

Soybean rust: A year in review
December 10, 2007

Summer scouting in soybean: Top dieback and other diseases
August 6, 2007

[Soybean rust update](#)

Soybean rust found in an Iowa field

by Daren Mueller and Christine Engelbrecht, Department of Plant Pathology

Soybean rust was found in a field in Dallas County, Iowa, on Tuesday, September 25, 2007. The soybean rust infection initially was identified via visual observation. On Wednesday, three Iowa State University plant pathologists visited the field and collected additional leaves, and we observed newly formed soybean rust pustules and spores on those leaves to confirm the infection.



Soybean rust was found in this Dallas County, Iowa, field on September 25, 2007. (Daren Mueller)

This finding should not be much of a surprise. We knew that soybean rust spores were landing in Iowa and the source of the spores was probably Texas, Oklahoma, or Arkansas, which means that they did not travel too far and had a good chance of still being viable once in Iowa. Iowa State University plant pathologist X. B. Yang's predictive models suggested that there was a strong possibility of finding soybean rust in Iowa sometime in September this season.

and outlook
July 23, 2007

Soybean rust update
and outlook - July 2,
2007

July 2, 2007

Another fungicide
approved for soybean
rust in Iowa

June 25, 2007

Iowa State plant
pathologists detect crop
diseases from satellites

June 25, 2007

Soybean rust update
and outlook, June 2007

June 11, 2007

Monitoring soybean rust

Iowa officials find no
additional evidence of
Asian soybean rust

May 21, 2007



Xun Li, a postdoctoral researcher in plant pathology, takes a closer look at soybean leaves in the infected field. (Daren Mueller)

What is the impact?

With harvest here or just around the corner, the impact of soybean rust is negligible with regard to soybean yield. This find does prove that soybean rust can infect soybean plants in Iowa, reminding us to pay close attention to the movement of rust in the following years.

Why the big jump to Iowa?

The best answer for this question is to consider how close we are to harvest. The infected field happened to have a few leaves remaining, although even these were sparse. We think that if the last remaining leaves in fields between positive finds were closely scouted, which would include collecting leaves, incubating them, and examining them using a powerful microscope, there may be additional finds that would bridge this geographical gap.

How widespread was the infection in the field?

The infection incidence, the percent of leaves with rust pustules, in the field was very low (<1%). The severity of the infection (percent of the leaf area affected by rust) also was very low. In fact, of the few leaves that had soybean rust, there were fewer than 10 pustules on each leaflet. It was very difficult to identify soybean rust pustules among the brown spot lesions and other spots on the leaves. Once leaves were incubated for a day and examined with a microscope, the pustules became easier to spot.



Spores from a positive soybean rust sample as seen under a microscope. (Christine Engelbrecht)

Where else has rust been found this season?

Like the last few Septembers, soybean rust has picked up some frequent-flier miles. In this past month, first rust infections have been reported in Kansas (first time ever), Missouri, Kentucky, Illinois, and South Carolina. Rust also has spread in states that already had rust, especially Arkansas, Mississippi, Georgia, Florida, and Alabama. To date, there have been 156 counties in 14 states that have reported soybean rust, which is 73 counties more than 2006.

What about next year?

The soybean rust fungus cannot survive over winter in the upper Midwest. So control of late-season soybean rust infections in Iowa is not needed. The fungus survives during the winter months on the alternative weed host, kudzu, in the southern United States. It also may survive on susceptible plants in Central America. So, after the first hard freeze, the slate will be wiped clean, and we will start over again next year!

Daren Mueller is an extension plant pathologist with the Iowa State University Corn and Soybean Initiative and the Pest Management and the Environment Program. Christine Engelbrecht is an extension program specialist and plant diagnostician at the Plant and Insect Diagnostic Clinic.

This article originally appeared on pages 265-266 of the IC-498(24) -- October 1, 2007 issue.

Updated 10/04/2007 - 9:24am