

3-14-2005

Soybean rust and organic soybean production

Kathleen Delate

Iowa State University, kdelate@iastate.edu

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

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

Recommended Citation

Delate, Kathleen, "Soybean rust and organic soybean production" (2005). *Integrated Crop Management News*. 1396.
<http://lib.dr.iastate.edu/cropnews/1396>

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 Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user.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

Abstract

The Iowa State University (ISU) Organic Ag Program has been asked to respond to the discovery of Asian soybean rust in the United States and how it relates to organic growers. The United States Department of Agriculture (USDA) announced the discovery of rust in Louisiana on November 10, 2004, and in the following weeks, the disease was found in eight additional states in the southern United States (see Figure 1). Iowa has approximately 60,000 acres of organic soybeans and all soybean growers are concerned about the prospect of rust appearing in Iowa in 2005.

Keywords

Horticulture, Agronomy

Disciplines

Agricultural Science | Agriculture | Agronomy and Crop Sciences | Horticulture | Plant Pathology

INTEGRATED CROP MANAGEMENT

Soybean rust and organic soybean production

The Iowa State University (ISU) Organic Ag Program has been asked to respond to the discovery of Asian soybean rust in the United States and how it relates to organic growers. The United States Department of Agriculture (USDA) announced the discovery of rust in Louisiana on November 10, 2004, and in the following weeks, the disease was found in eight additional states in the southern United States (see Figure 1). Iowa has approximately 60,000 acres of organic soybeans and all soybean growers are concerned about the prospect of rust appearing in Iowa in 2005.

Varietal screening done in quarantine by the USDA reveals that virtually all the existing commercially grown soybean cultivars are susceptible. Sources of resistance to the prevalent natural populations of soybean rust have been identified. A number of different synthetic fungicides are known to be effective in rust management, but organic management has not been sufficiently studied due to the absence of the disease in the United States.

In May 2005, all available organically approved materials (copper, sulfur, hydrogen peroxide, and other naturally based materials) will be tested for efficacy against soybean rust. Tests will be conducted at the University of Florida where the disease was detected in 2004. The chances of finding a material as effective as the already-identified synthetic fungicides is not good, however. Organic farmers will need to identify the use of any fungicide in their organic plans for their certifying agency. Organic farmers, like conventional soybean farmers, will need to do a risk/benefit assessment and determine if economics favor spraying any materials if the disease is found in Iowa. Iowa State University will determine costs of materials for organic producers and help in developing best methods for dealing with this disease if it is found. Longer crop rotations and compost applications can assist with general disease management--the long-term effect of these strategies for soybean rust is not known at this time.

Soybean rust may or may not find its way to Iowa organic soybean fields this year. "Soybean rust will not overwinter in Iowa. We will have to wait for the spores to travel from the South every season. It's too early to make predictions, but we need to make predictions based on spring rust occurrence in the South and early summer weather systems, such as tropical storms, that may influence its travel," said X. B. Yang, plant pathologist at ISU.



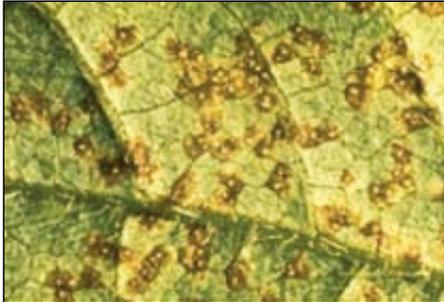
Asian soybean rust.

[Enlarge](#) [1]



Soybean rust lesions.

[Enlarge](#) [2]



Foliar symptoms with lesions.

ISU has developed a rapid analysis system if you find a suspicious leaf. The Iowa Fast Track System was developed to speed up reporting of soybean rust. Producers submit samples to first detectors at no cost. First detectors send suspect samples to triage personnel, who are Iowa State Extension field staff, for further diagnosis. The triage person then forwards suspect samples to the Iowa State University Plant Disease Clinic. There is no charge to producers for samples submitted through this system.

Extensive surveys of soybean and various legume hosts for Asian soybean rust will be carried out in Iowa, beginning in 2005. The Iowa State University Organic Ag Program will continue to provide updates as information is gained through USDA, ISU, and other university sources. Additional information about the [Iowa State University Organic Ag Program](#) [3] is available.

Visit <http://www.soybeanrust.info> [4] to learn more about Asian soybean rust.

This article originally appeared on pages 39-40 of the IC-494 (4) -- March 14, 2005 issue.

Source URL:

<http://www.ipm.iastate.edu/ipm/icm//ipm/icm/2005/3-14-2005/orgsoyrust.html>

Links:

[1] <http://www.ent.iastate.edu/imagegal/plantpath/soybean/asianrust/asianrustleafxb.html>

[2] http://www.ent.iastate.edu/imagegal/plantpath/soybean/asianrust/asian_soyrust_lesions.html

[3] <http://extension.agron.iastate.edu/organicag/>

[4] <http://www.soybeanrust.info>