Soybean Diseases Taking Off in Iowa

Daren S. Mueller  
Iowa State University, dsmuelle@iastate.edu

Tristan Mueller  
Iowa Soybean Association, tmueller@iasoybeans.com

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Abstract
Several soybean diseases have popped up over the past several weeks across Iowa. While some diseases are quite severe in certain fields, others are only scattered problems in parts of the state. Regardless, it is important to scout and identify what diseases are present and to keep track of where the diseased spots are occurring in the field. This can help with variety selection and possible management of these diseases in the future.

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Soybean Diseases Taking Off in Iowa

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By Daren Mueller, Department of Plant Pathology and Microbiology, Iowa State University and Tristan Mueller, Iowa Soybean Association

Several soybean diseases have popped up over the past several weeks across Iowa. While some diseases are quite severe in certain fields, others are only scattered problems in parts of the state. Regardless, it is important to scout and identify what diseases are present and to keep track of where the diseased spots are occurring in the field. This can help with variety selection and possible management of these diseases in the future. Some of the more common diseases found in our field scouting over the past few weeks include:

**Sudden death syndrome (SDS)**

Severity of SDS has increased in many parts of the state. While it is still mostly pockets within a field, it is the cause of many of the yellow spots observed in soybean fields...
(Figure 1). Remember to check your soybean cyst nematode (SCN) counts this fall in fields with SDS to see if SCN is contributing to the SDS problem. In July 2014, we discussed the increased risk of SDS in 2014 in this article

Figure 1. Yellow patches of sudden death syndrome in a soybean field. Leaves of infected plants can fall off but petioles will stay attached to the plant.

Brown stem rot (BSR). This disease is still mostly only in northern Iowa but has also been reported in parts of eastern Iowa. Remember to split stems to distinguish between SDS and BSR. This article from earlier in the season explains more about how to tell SDS from BSR, as well as discusses BSR management issues.

Top dieback

While the cause of top dieback is unknown, many yellow spots in fields are the result this disease. Top dieback appears as yellowing on the outside margins of leaves in the upper
canopy (much like potassium deficiency, but in the upper canopy). The cause of this
disease is still up for debate, but potassium deficiency, SCN, and the
Phomopsis/Diaporthe disease complex (fungi associated with stem canker and pod and
stem blight) may be culprits. Several years ago, a very thorough article was written
about top dieback.

Downy mildew

This foliar disease is becoming more common as the season goes on. Downy mildew can
be identified by the light green, irregular shaped lesions on the top side of the leaf and
fluffy white growth on the under side of the leaf (Figure 2).

![Downy Mildew Image]

**Figure 2. Fluffy white growth on the leaf underside is a sign of downy mildew
infection.**

Frogeye leaf spot

Another foliar disease that is showing up in parts of Iowa, especially in the southern
counties, is frogeye leaf spot. Frogeye is fairly easy to identify by the gray lesions with
purple borders.

Stem canker

There have been a few isolated reports of stem canker, which is another disease that is
more common after very wet springs. Look for distinct lesions on the stem to identify this
disease (Figure 3).
Figure 3. Stem canker can be identified by examining stems for sunken, gray-brown lesions with reddish margins. Note green tissue below lesions. Photo courtesy Craig Grau.

White mold

There have been reports of white mold across most of Iowa; however, most cases have been fairly low incidence of the disease. Additional information on white can be found in this article.

Other diseases seen in Iowa include Septoria brown spot and bacterial blight (both have been around for most of the growing season), soybean vein necrosis virus (SVNV) in southeast Iowa, and possibly soybean dwarf virus (Figure 4).

Many soybean diseases have similar symptoms to other diseases. If diagnosis is proving to be difficult, samples can be submitted to the Plant and Insect Diagnostic Clinic at Iowa State University. See this article for instructions on how to do so.
Figure 4. Possible symptoms of soybean dwarf virus. Samples are being tested for confirmation that this virus is the cause.

Daren Mueller is an assistant professor in the Department of Plant Pathology and Microbiology; he can be reached at dsmuelle@iastate.edu or (515) 460-8000.

Tristan Mueller is the Operations Manager for Iowa Soybean Association's On-Farm Network and can be reached at tmueller@iasoybeans.com. or (515) 334-1075.

Category: Plant Diseases

Crop: Soybean

Tags: Diseases Soybean sudden death syndrome brown stem rot
downy mildew top dieback frogeye leaf spot stem canker
white mold

Author: Daren Mueller Assistant Professor

Daren Mueller is an Assistant Professor and Extension Plant Pathologist at Iowa State University (ISU). He is also the coordinator of the ISU Integrated Pest Management (IPM) Program. Daren received his B.S. from the University of Wisconsin-Madison in 1996 and his M.S. and Ph.D. in Plan...