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Be on the Lookout for Brown Stem Rot in Soybean

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Be on the Lookout for Brown Stem Rot in Soybean

Abstract

Soybean diseases are starting to show up in Iowa fields this growing season. In an [On-Farm Network](#) trial in north central Iowa, brown stem rot (BSR) was recently found. This disease is caused by the fungus *Phialophora gregata*, and infection can result in yield loss for Iowa farmers.

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Be on the Lookout for Brown Stem Rot in Soybean ICM News

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Soybean diseases are starting to show up in Iowa fields this growing season. In an [On-Farm Network](#) trial in north central Iowa, brown stem rot (BSR) was recently found. This disease is caused by the fungus *Phialophora gregata*, and infection can result in yield loss for Iowa farmers.

Foliar symptoms of BSR are interveinal chlorosis and necrosis (yellow and brown discoloration) of leaves (Figure 1 and 2). Leaves can then curl and die. Inside the soybean stem, vascular and pith tissue turns brown (Figure 3). Foliar symptoms of BSR can easily be mistaken for sudden death syndrome (SDS), which is also being found in Iowa at this time (Figure 4). In order to tell them apart, split the stem and look at the pith tissue. If

the pith is brown and not the normal white color, then the plant likely has BSR. Not all BSR-infected plants show foliar symptoms, however.



Figure 1. Soybean plant showing foliar symptoms of brown stem rot.



Figure 2. Leaf of brown stem rot infected plant showing necrosis and chlorosis of tissue.



Figure 3. The internal stem browning of plants with BSR can help distinguish it from SDS. Courtesy Alison Robertson.



Figure 4. Foliar symptoms of SDS.

Management: During the season nothing can be done to control BSR, but it is important to know if it is present for future management. The main control of BSR is selecting soybean varieties that have resistance. Also, crop rotation and tillage can help reduce BSR. Soybean cyst nematode (SCN) often occurs with BSR, and SCN may "break" the ability of resistant varieties to reduce disease.

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