Plan your disease scouting

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Abstract
As crop scouts, we know that detecting a disease in the early stages of its development is critical to disease management. Early detection of a disease can help us make management decisions to minimize disease risk or to prevent disease problems before they take place.

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As crop scouts, we know that detecting a disease in the early stages of its development is critical to disease management. Early detection of a disease can help us make management decisions to minimize disease risk or to prevent disease problems before they take place.

In the Iowa State University Scout School [2] or other disease classes, you can learn how to identify diseases for management recommendations. Because the occurrence of different diseases varies in a growing season and certain diseases may be important only in fields with the right disease conditions, a scouting plan tailored to crop stages and specific farms may be helpful. If you scout for a large acreage of soybean, a good disease scouting plan will help you efficiently manage your time and scouting efforts.

A preplanting scouting plan may integrate insects, diseases, and other agronomic components. The information in the table below will help you to integrate your scouting activities for soybean diseases into a scouting plan or schedule. It contains scouting information for major soybean diseases in Iowa, the growth stages when the disease symptoms are most representative and the best time to look for them, and areas in a field where a disease is most likely to occur. The latter information is useful for improving scouting efforts when a specific disease occurs in a field where it was not a problem previously.

Basically, with four or five visits you can cover all the major diseases. In the table, scouting for seedling diseases is listed according to the growth stage of the plant and the time of the year. Cold soil temperatures (<60° F) favor seedling blights caused by *Pythium* and *Fusarium* but warm soil temperatures (70-80° F) are necessary for severe damping-off by *Phytophthora* and *Rhizoctonia*. Therefore, times to scout for these seedling blights are different.

If necessary, white mold can be scouted in a season at two different times. One time is when the production of white mold apothecia (mushroom) occur; some growers use this information to determine whether or not to apply a fungicide to control the disease. A second time is when diseased plants show up; information collected at this time tells us how severe the disease is and how the disease is distributed in a field, which is useful for the next soybean
management.

As the season progresses, I will provide updates on the occurrence of important diseases and detailed disease identification information for scouting. The table does not include diseases that generally are minor problems but may be important in the future. I will report on such diseases if they become prevalent in the growing season.

Scouting information for major soybean diseases in Iowa.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Growth stage to scout</th>
<th>Best time to scout</th>
<th>Areas likely to find disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seedling blight by <em>Pythium/Fusarium</em></td>
<td>before V2</td>
<td>late May</td>
<td>low and wet spots</td>
</tr>
<tr>
<td>Seedling blight by <em>Phytophthora/Rhizoctonia</em></td>
<td>before V2 (late planted)</td>
<td>middle June</td>
<td>low and wet spots</td>
</tr>
<tr>
<td>Phytophthora root or stem rot</td>
<td>vegetative stages</td>
<td>July and August</td>
<td>various</td>
</tr>
<tr>
<td>Stem canker</td>
<td>flowering</td>
<td>after July</td>
<td>head field, thin stand</td>
</tr>
<tr>
<td>White mold mushroom</td>
<td>closed canopy</td>
<td>last week of June, 1st week of July, varies with row space</td>
<td>high soil moisture</td>
</tr>
<tr>
<td>White-mold-infested plants</td>
<td>pod setting</td>
<td>August-September</td>
<td>visible dead plants</td>
</tr>
<tr>
<td>Sudden death syndrome</td>
<td>pod setting</td>
<td>after mid-August</td>
<td>high-moisture areas in spring, fertile fields</td>
</tr>
<tr>
<td>Brown stem rot</td>
<td>full pod</td>
<td>late August</td>
<td>not specific</td>
</tr>
</tbody>
</table>

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