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SDS prevalent this summer

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SDS prevalent this summer

Abstract

Numerous reports have been received on the occurrence of soybean sudden death syndrome (SDS) in August in eastern and central Iowa. Reports came from producers, Iowa State University (ISU) extension staff, and agronomists of seed companies. As usual, the earliest reports were from eastern and southeastern Iowa; however, unlike in the 2000 growing season, more infected fields were found in central Iowa this year, with some reports from as far north as the Fort Dodge area. In central Iowa, some fields with SDS-infected plants are visible along highways. Fields planted in late April and early May seem to have higher disease incidence than later planted soybean.

Keywords

Plant Pathology

Disciplines

Agricultural Science | Agriculture | Plant Pathology

INTEGRATED CROP MANAGEMENT

SDS prevalent this summer

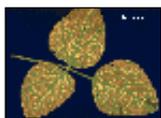
Numerous reports have been received on the occurrence of soybean sudden death syndrome (SDS) in August in eastern and central Iowa. Reports came from producers, Iowa State University (ISU) extension staff, and agronomists of seed companies. As usual, the earliest reports were from eastern and southeastern Iowa; however, unlike in the 2000 growing season, more infected fields were found in central Iowa this year, with some reports from as far north as the Fort Dodge area. In central Iowa, some fields with SDS-infected plants are visible along highways. Fields planted in late April and early May seem to have higher disease incidence than later planted soybean.

Planting date and SDS. Research repeatedly confirmed that fields planted earlier have higher SDS risk. SDS fungus infects soybean plants when soil temperature is low and soil moisture is high.



Scattered yellow spots are early signs of sudden death syndrome in soybean.

[Enlarge](#) [1]



Sudden death syndrome in an intermediate stage showing interveinal necrosis.

[Enlarge](#) [2]



Bluish sudden death syndrome fungus on infected soybean root.

[Enlarge](#) [3]

In Iowa, the fungus attacks soybean at the seedling stage when soil conditions are favorable. The fungus then colonizes the roots without causing leaf symptoms until August. Studies at Iowa State University show that fungus requires much higher temperature to cause leaf

symptoms. Therefore, fields with earlier planted soybean are more likely to have SDS, and later planted soybean in warmer soil has less disease.

Scouting for SDS

SDS is still spreading in Iowa. Detection of the disease before it causes yield damage is important to protect profit. SDS symptoms are easy to identify. Leaves on infected plants initially show scattered yellow spots between leaf veins. These spots eventually coalesce to form brown streaks between the veins (interveinal necrosis). Only the midvein and major lateral veins remain green. Leaflets drop eventually.

Diseased plants have deteriorated taproots and lateral roots. The root cortex is light gray to brown, and the discoloration may extend up into the stem 2 inches above ground. Sometimes bluish fungal colonies can be seen on the root if soil moisture is high.

What to do for next year's soybean crop

If you find light SDS in your fields, the disease may or may not develop into a severe problem in the future. If the disease is light (no hot spots with severe defoliation), scout for the disease in the next soybean crops. If the disease already causes damage in your fields, avoid planting soybean early to reduce disease risk.

Do not use susceptible varieties if severe defoliation is found in some areas of a field. It would be safer not to use susceptible, high-yielding varieties for the next soybean crop because the disease can spread to other portions of the field. Many tolerant varieties are available for many seed companies in Iowa and resistance is under development.

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Links:

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

[2] <http://www.ent.iastate.edu/imagegal/plantpath/soybean/sds/1303.96sdsnecrosis.html>

[3] <http://www.ent.iastate.edu/imagegal/plantpath/soybean/sds/sdsrootwblue.html>

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