SDS is spreading in Iowa

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SDS is spreading in Iowa

Abstract
For the last two years, sudden death syndrome (SDS) has been spreading across Iowa rapidly. Last year, the disease occurred in many soybean fields in southeastern Iowa. This year it has been found in several soybean fields in central, eastern, and southeastern Iowa, and in one northern Iowa field. In Illinois this disease causes production problems, and colleagues there have reported SDS epidemics this year.

Keywords
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Although the current yield damage caused by this disease is not comparable to that caused by white mold in Iowa two years ago, the rate of spread of this disease certainly is a concern. In 1994, the disease was only spotted on a few soybean plants in four Iowa counties. By the end of August 1998, the disease had been found in 29 Iowa counties. Four years ago, the disease, if present, was spotted only in one or two growers’ fields. Current surveys indicate very high infestations in areas where SDS incidence was low a few years ago. Defoliation of soybean plants in patches as large as 20 acres was observed in fields in eastern Iowa. Even in central Iowa, a field east of Ames suffered a 2- to 3-acre defoliation by SDS.

A 2-year study of risk assessment by Iowa State University, which was presented at last year’s annual meeting of the American Phytopathological Society, suggested that the disease shows a trend of spreading north and may cause more damage in some north central states than in southern states. Current disease maps seem to support this prediction. Earlier this year, plant pathologists in Agriculture Canada reported the occurrence of this disease in Ontario for the first time.

SDS is still in its early stages in Iowa. Preventing the spread of SDS should be effective in controlling this disease in Iowa even in fields that have small patches of this disease. Scouting can provide useful information in taking preventive measures. For example, Lee Fraise, agronomist in Asgrow Seed Company, reported SDS in three new counties this season. Many of these fields, which I visited, were planted with soybean varieties from different companies and had small disease patches, an
SDS is spreading in Iowa

indication of SDS invasion at its early stages.

Counties with SDS in 1994 (above). Below, counties with SDS in 1998

The SDS pathogen is spread with soil; thus, the methods used to prevent soybean cyst nematode spread are also applicable to SDS. To prevent spread of SDS, scouting is important. SDS symptoms are easy to identify. Leaves on infected plants initially show scattered yellow or white 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.

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. Sometimes bluish fungal colonies can be seen on the roots if soil moisture is high. Keep in mind that brown stem rot sometimes
produces SDS-like foliar symptoms. Brown stem rot, however, does not have root rot. For a more detailed description, see ISU extension publication Pm 1570, *Soybean Sudden Death Syndrome*. This publication can be ordered from the ISU Extension Distribution Center [3] by calling 515-294-5247.

Roots with blue fungal colonies sometimes seen if soil moisture is high.

With support from checkoff dollars, soybean pathologists in the north central region are in high gear to develop effective control methods for SDS. I will compile the information that develops and provide it in an upcoming ICM issue.

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