

INSIDE GRUNDY COUNTY
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Scout for Sudden Death Syndrome in Soybeans

In past years, sudden death syndrome (SDS) has appeared during the last week of July or the first week of August in Iowa. Therefore, researchers at Iowa State University (ISU) anticipate symptoms of SDS will begin appearing in the state now. Although researchers do not expect SDS to be as widespread or as severe as the 2010 growing season, there have been some counties within the state that have received higher-than-normal precipitation. Scientists expect the risk of SDS in these counties to be higher since disease development is favored by wet conditions.

The first symptoms of the disease are usually found on more compacted and low areas of the field. First symptoms are seen on the leaves of infected plants as scattered, yellow spots between leaf veins. Large sections of leaf tissue between veins turn yellow as spots grow together. These yellow blotches soon turn brown, but the veins remain green. Eventually, the leaves die and drop, but the petioles remain on the stem. Infected plants are also easily pulled from the soil because the roots are rotted. When split lengthwise with a knife, the internal tissue of the main or tap root will be gray to reddish brown, not healthy white.

ISU researchers emphasize that, while there are no in-season management options for SDS, scouting is still important for several reasons. First, this is a good time to evaluate soybean varieties for resistance to SDS. Growing resistant varieties, or avoiding very susceptible varieties, is the most effective way to reduce losses to SDS. Also, identifying fields or parts of fields with SDS can help with future management practices. These management tactics include reducing soil compaction since the disease has been associated with compacted soil; planting fields with a history of SDS towards the end of a planting schedule when soils may be warmer and drier; and testing for the presence of soybean cyst nematodes.

Soybean cyst nematode (SCN) is usually, but not always, associated with SDS and may increase its severity, especially in varieties that are SCN-susceptible. Therefore, management practices to reduce SCN populations, including SCN-resistant variety selection and preventing the spread of soil from field to field, may delay onset and spread of SDS.

“Several Iowa State University pathologists and agronomists continue research to improve our understanding the biology of the fungus that causes SDS and develop improved management options for the disease,” said Alison Robertson, ISU Extension plant pathologist. “The ISU soybean breeding program continues to develop and release germplasm with improved resistance to SDS that is available to all private soybean breeding companies. ISU scientists collaborate with scientists at other universities.”

The above information came from an article written by Alison Robertson, ISU Extension Plant Pathologist. For more information on SDS, contact the Grundy office of ISU Extension at 319-824-6979.