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## Video Offers Guidance for Coping with Soybean Sudden Death Syndrome


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# Video Offers Guidance for Coping with Soybean Sudden Death Syndrome

## **Abstract**

As soybean sudden death syndrome (SDS) continues to ravage Iowa fields in one of the worst outbreaks in many years, Iowa soybean growers are increasingly worried about the damage the disease will cause, while others are unsure whether their plants have been infected. To help answer questions and offer guidance in managing the disease, Iowa State University has produced a video that explains why SDS is so severe this season; tells how to assess and manage SDS; offers practical advice growers can follow now to prepare for next year; and highlights new and ongoing ISU research on the problem.

## **Keywords**

Plant Pathology

## **Disciplines**

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### Video Offers Guidance for Coping with Soybean Sudden Death Syndrome

by Alison Robertson and Leonor Leandro, Department of Plant Pathology

As soybean sudden death syndrome (SDS) continues to ravage Iowa fields in one of the worst outbreaks in many years, Iowa soybean growers are increasingly worried about the damage the disease will cause, while others are unsure whether their plants have been infected.

To help answer questions and offer guidance in managing the disease, Iowa State University has produced a [video](#) that explains why SDS is so severe this season; tells how to assess and manage SDS; offers practical advice growers can follow now to prepare for next year; and highlights new and ongoing ISU research on the problem.

In the [video](#), we explain how a perfect storm of early planting and wet weather at key points during the growing season created the ideal circumstances for SDS to thrive.

#### Highlights from the video

This year we've had particularly severe SDS due to a combination of early planting into cool, wet soils and the continuation of a wet season with a wet July during reproductive stages that is also thought to favor the disease. We also see the disease moving north and west year to year, probably as a result of an increase in the pathogen density in the soils that's building up over the seasons.

A fungus infects soybean plant roots soon after planting, producing a toxin that later moves up the plant damaging soybean leaves and eventually causing them to die and drop. Survival of the fungus on corn debris may be another reason why SDS is so widespread this year.

Recent soybean checkoff-funded research at ISU has shown the fungus can survive on corn kernels and corn stalks. The corn debris is likely allowing the fungus to carry over from year to year.

Growers are unaware plants have the disease until yellow patches start to appear on soybean leaves. The yellow patches will extend, turn brown and eventually (the leaf will) die, falling off and leaving a bare stem.

Other SDS symptoms include severe root rot, and sometimes the blue color of the fungus may be visible growing on the outside of the root. If uncertain, one way to definitively diagnose SDS is to cut into the soybean plant taproot and observe its color. The inside of the root is discolored brown. It's not a creamy white color like you would see with a healthy soybean plant.

Plants that have the disease are likely to experience some yield loss, though the extent will depend on how early SDS appeared during the reproductive stages of plant growth.

### Additional Resources

For more information on soybean sudden death syndrome (SDS) visit these websites:

[North Central Soybean Research Program Plant Health Initiative](#)

[Iowa Soybean Association – Production Research](#)

While SDS can't be treated, it can be managed with appropriate variety selection and improved field drainage. In addition, Iowa State has developed germplasm with resistance to SDS that has been released for seed companies to develop commercial varieties.

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