

## Sudden Death Syndrome

### Overview

Sudden death syndrome (SDS) is caused by the soil-borne fungus *Fusarium virguliforme*. It infects soybean roots and produces a toxin that spreads throughout plants, killing the leaves. It is one of the most detrimental diseases in soybeans, because there is no treatment and limited management options.

### What you should know

- Sudden death syndrome fungus infects soybean plant roots one week after emergence. Above-ground symptoms aren't seen until midseason.
- Rain during soybean's reproductive stage can cause SDS to produce toxins that are transferred to the leaves, killing them.
- Because the fungus is limited to the root system, and fungicides do not transmit to the roots, there is no cure for SDS.
- Early symptoms include mottling or mosaic patterns on leaves. Leaf tissue then turns yellow. Finally, leaflets will die and shrivel. These early symptoms can mimic chemical burn and other diseases, so it's important to examine the stem and taproot. Split the stem—if it's tan to brown with the central pith remaining white or cream, the plant is infected.
- Freshly dug SDS-infected plants may also display a blue mold.
- Correctly diagnosing SDS can help manage its spread in the next season.

### Action steps

1. **Monitor this year:** Observe fields and keep detailed SDS infection records.
2. **Plan for next year:**
  - Identify fields where you will plant soybeans next year and review past SDS infestation.
  - Soil compaction leads to poorly drained soils and saturated field conditions, which promotes SDS development. Tillage can lessen soil compaction.
  - Select soybean varieties with tolerance to SDS.
  - Early planting may predispose soybeans to SDS, so plant fields with SDS history last.

For more information, contact:



[www.nutechseed.com](http://www.nutechseed.com)  
1-888-647-3478



SDS infects soybean roots and produces a toxin that spreads throughout plants to kill the leaves.



### 30-Second Summary

- Diagnosis of sudden death syndrome (SDS) is key to future prevention.
- Keep records of SDS infection in your fields.
- Symptoms can mimic other blight, so inspect stems to confirm SDS.
- Tillage can help prevent field conditions that promote SDS.
- Plant fields with a history of SDS last.

### NOTES:

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