

Sudden Death Syndrome in Soybean

Sudden Death Syndrome (SDS) is caused by the soil borne fungus *Fusarium solani*. Soil borne pathogens enter into host plants through the root system. Therefore, foliar fungicides would not control SDS.

Sudden Death Syndrome foliage symptoms begin in the upper canopy after reproductive development begins. Symptoms include yellow blotches between leaf veins that turn reddish brown in the center. The leaf veins will stay green (see photos). Leaf tissue will dry and leaves will curl upwards. Similar symptoms can be caused by stem canker and brown stem rot, but neither of these diseases are common in Missouri.

Conditions favoring Sudden Death Syndrome include high soil moisture during vegetative growth stages and frequently associated with below normal temperatures at or near bloom. SDS may be found in both upland and river bottom fields. However, do not hold off on irrigating beans that are filling pods. SDS is usually found in patches; therefore, manage the rest of the field for maximum yield. Infection is sometimes associated with fields that have Soybean Cyst Nematode (SCN). If you planted a variety susceptible to SCN or have never tested a field for SCN, consider sampling this fall after harvest.

Losses associated with Sudden Death Syndrome will range from trace losses up to 80% loss depending on variety and when symptoms first appear. The later it appears, less yield loss associated. Most common yield loss range is 5 – 15%.

Management options: variety selection, improving drainage, staggering planting dates, avoid continuous soybeans, manage SCN and timely harvest. New addition to management includes the seed treatment fluopyram (ILeVo). For more information contact University of Missouri Extension and ask for IPM Guide 1002, "Soybean Diseases."

