

David Hallauer
District Extension Agent, Crops & Soils

Soybean Sudden Death Syndrome

During a recent visit to the Kansas River Valley Experiment Field near Topeka, I passed by the Soybean Sudden Death Syndrome (SDS) rating plots. While no symptomology was readily apparent, it's the time of year when they begin to, increasing concern about this disease.

Foliar SDS symptomology is easy to recognize and includes small, pale green to yellow circular spots on leaves early on. Over time, the leaf area between the veins turns bright yellow, then brown, with veins remaining green. The loss of green leaf tissue (or leaf tissue altogether...) can not only look bad but result in flower/pod abortion or reduced filling. Below ground issues include everything from root discoloration to root and crown rot.

Like any year, the SDS 'forecast' for this year is highly variable. Since infection occurs in young soybean roots shortly after germination, planting conditions play an important role in whether SDS becomes an issue. If soybeans are planted in cool/wet soil conditions, young roots can be affected, with the fungus remaining in said roots until the late vegetative or early reproductive stages when it produces a toxin that moves upward through plant leaves producing the aforementioned foliar symptoms. It also prefers high soil moisture during the vegetative growth period and unseasonably cool temperatures prior to or during flowering and pod set. If those are the conditions your soybean crop has seen this year, it's good to keep an eye out.

Unfortunately, there's not lot you can do about SDS during the growing season. Sudden Death Syndrome is caused by a fungal pathogen, but since it remains in the plant's root system, fungicides won't have any affect on it.

What you *can* do is take note of how the disease looks differently across farms or across a single farm. Evaluate varieties for any notable differences between varieties planted under the same conditions. If a seed treatment was used – how did it work? If not, should you think about one the next time soybeans are planted on a farm?

Other factors to consider include soil compaction and the level of corn kernels left from the previous crop. Higher compaction levels favor SDS and since corn kernels are pretty good for harboring the SDS fungus, minimizing kernel loss can reduce pathogen levels. If you haven't tested for Soybean Cyst Nematode (SCN), consider that as well. There have been well documented associations between the presence of SCN in a field and SDS development.

Want to learn more about SDS? The 2024 Kansas River Valley Experiment Field Fall Field Day will include an update on SDS management based on recent research. This year's field day will be Tuesday August 13th at Rossville starting at 5:00 p.m. If you are interested in more details, contact me via any Meadowlark Extension District Office or dhallaue@ksu.edu.