

# Burrus Buzz

*Delivering more than just seed!*

August 20, 2015



## SDS is Showing up Throughout the Burrus Footprint: Time to Scout Soybeans

by Stephanie Porter

Unfortunately, due to the heavy amounts of rain during the vegetative growth stages of soybeans, we are now starting to see the above ground symptoms of Sudden Death Syndrome (SDS). It shows first in compacted or wet areas of the field. If the pathogen is present, As we all know, there are other diseases that cause similar foliar symptoms that could be confused with SDS. Any disease pathogen, herbicide, or even flooding that blocks the vascular system of the soybean plant can cause similar foliar symptoms to SDS. Here are some soybean diseases that could be mistaken for SDS. Please be careful to examine and cut open the lower stem when scouting.



White mold is also starting to show up in some fields as far south as Springfield, IL. Check the base of the plant for white mycelium or split the base of the plant to check for small, black survival structures of this fungus in the center of the stem.



No brown stem rot has been spotted yet, as it usually shows up after SDS; however, split the stem and check to see if the center of the stem is dark. If the center of the stem is brown, it is brown stem rot.



Even root rots, often found earlier in the season, can cause leaves to have similar foliar symptoms to SDS. The soybean symptoms above are foliar symptoms and reddish cankers on the base of the plant caused by Rhizoctonia.



Charcoal rot can be found here and there within the soybean canopy if fungal survival structures are in the field. Split the lower stem and check for streaks of gray. The center of the base of the plant may be dark.



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We have not spotted any stem canker on soybean yet, but it too can be confused with SDS. Check the stem of the plant for cankers with tiny, dark specks (signs of the fungus) near stem nodes and at the base of the plant.



When you split the stem of a soybean plant infected with the pathogen that causes SDS, the base will be light brown, but the center of the stem will be white.



Here are the first signs of SDS foliar symptoms showing on soybean leaves. Symptoms will begin to appear after a heavy rain, when the fungal toxin of this disease is carried up the vascular system of the plant to the leaves.



Foliar symptoms of SDS. Picture taken by Austin Kochoer, Burrus Intern.



There are no foliar fungicides that can be used as rescue treatments for SDS. The SDS pathogen favors soils that are cooler, compacted, or not as easily drained. Depending on soil types, compaction can be reduced by practicing no-till, because there are fewer passes over the field with equipment. On the other hand, significant tillage can also help to break up field compaction and allow vertical drainage to occur. Improving soil drainage and eliminating compaction will also help to reduce risk of the onset of SDS.

Ultimately, soybean yield loss will depend on SDS onset and severity. SDS is usually more severe when symptoms appear before soybean podfill. When symptoms occur this early, yield loss occurs by way of reduced seed number, because flowers and pods can be aborted. Unfortunately, SDS symptoms can become more severe over time, and soybeans stressed by SDS can be more vulnerable to other root, stem, and seed diseases. Soybeans that show symptoms after podfill can suffer yield loss due to reduced seed size, reduced pods, and seed weight, because seed quality could be at risk. As soybeans reach the later growth stages, such as R6, the final yield loss can be observed.

For now, if soybeans are showing SDS symptoms, we can focus on future disease management. Many, like Burrus/Hughes are evaluating the new ILeVO® seed treatment in side by sides across the country. More information on the observations and soybean yield results of the Burrus/Hughes PS SDS (PowerShield seed treatment with ILeVO) will be coming in the future. Some consider planting soybeans later into warm, dry soils to help reduce SDS risk; however, if you need to plant early, consider using PS SDS treated soybeans. All soybeans are susceptible to SDS, but planting soybeans with higher level of resistance to SDS and SCN will also prove to be helpful. A rotation from soybean to corn will not help to combat SDS, because the fungal pathogen that causes SDS has also been found to survive on corn roots.

In 2016, the high rate (.15 mg/seed) ILeVO® seed treatment will be introduced as PS SDS seed treatment and will be optional on selected soybean varieties -- Power Plus® 25A5™\*, 26Z6™\*, 30B5™\*, 36J3™\*, 39R5™\*, Hughes 285LL, Hoblit 384LL, and 405LL. ILeVO is a unique compound from Bayer Crop Science that brings both fungicidal and nematicidal activity within the seed zone and protects against Sudden Death Syndrome (SDS) disease symptoms above and below the soil.