

FOR IMMEDIATE RELEASE

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Soybean Sudden Death Syndrome

FOR IMMEDIATE RELEASE: Sudden Death Syndrome (SDS). This dramatic sounding disease can quite possibly warrant the name as SDS can really hurt yield and leave large areas of your soybean field black and withered. Sudden Death Syndrome is fairly common and can be problematic in wet years during the flowering period, especially in river bottoms and low areas of the field. The higher the yield potential of the soybean the more likely SDS will be an issue. What is SDS? Sudden Death Syndrome is a soil borne fungus *Fusarium virguliforme* that infect plant roots and sends a toxin to the upper part of the plant. Soybeans with the disease start to form chlorotic leaves that looks a little bit like iron chlorosis, but also has dying leaf margins and brown streaks. A big tell sign is if you can see the blue green fungus growing on and within the root. Usually infested soybeans pull out the ground easily as the lateral roots have decayed away.

Management options for SDS are both cultural and genetic. Some varieties of soybeans have a genetic resistance to the SDS fungus and there is a big variation between soybean varieties and their resistances. Research has shown the earlier planted soybeans are more likely to have issues but often it is still the earlier planted soybeans that have the better yields, despite the increase prevalence in SDS. Crop rotation can help reduce fungus prevalence in severely infected fields but it takes at least 4 years between soybean crops, which is often a longer rotation than most are comfortable with.

Sudden Death Syndrome is strongly correlated with the presence of soybean cyst nematode (SCN) but managing the nematode doesn't necessary give management of SDS. The relationship of SCN and SDS is not fully understood and not all fields with SCN will have SDS problems as well. If a field has been shown to have the SDS fungus, then samples should also be taken for the nematode. There are varieties with resistance to Soybean Cyst Nematode and some with resistance to Sudden Death Syndrome but they aren't necessary the same varieties.

The seed treatment ILeVO from Bayer CropScience is a new product that has been shown to be effective in reducing SDS. The difference in yield the product gives is only substantial on soybean varieties that are susceptible to SDS and on years with a high degree of severity but this product can be useful in some high production cases and with irrigated fields that commonly have problems with SDS.

Research has shown proper phosphorus nutrition is also important to soybean resistance to SDS and other fungal diseases. “Improved phosphorus nutrition seems to be very important for the soybean plant to have good tolerance, good resistance, and stronger tissues to some of these root pathogens,” states K-State plant pathologist Chris Little. Chris Little also says that this has been shown to be true for diseases like charcoal rot as well. The reasons for phosphorus’s role in fungal resistance is not fully understood but more research is being done.

To learn more about soybean production, we will be having a Soybean School on January 15th from 3 p.m. to 7 p.m. at the Southeast Area Extension Research Station on 25092 Ness Rd. in Parsons, KS. This will be a full afternoon of all things soybeans including soil fertility, current markets, insects, and weeds. The event is free and dinner is provided. Please call 620-724-8233 for more information on soybean diseases or to register for the event.

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