News Column

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Evaluating a new soybean seed treatment to control Sudden Death Syndrome in Kansas

Sudden Death Syndrome (SDS) is a disease that affects soybeans and is caused by a soil borne fungus. This fungus prefers wet conditions and thus is usually most severe in irrigated fields. SDS tends to be most severe on well-managed soybeans with a high yield potential. It also tends to be more prevalent on fields that are infested with soybean cyst nematode (SCN) or planted early when soils are wet and cool. Historical yield losses from this disease are generally in the range of 1 to 25 percent. While there are differences in susceptibility between hybrids, there are no hybrids that are completely resistant to Sudden Death Syndrome (SDS). Fortunately for the past several years, ILeVO (Bayer CropScience) seed treatment has shown to be effective at reducing the severity and yield loss to SDS, especially when used in combination with more tolerant hybrids. A new seed treatment for SDS, Saltro (Syngenta Crop Protection), will be available to farmers for the first time in 2020.

Testing different seed treatments to control SDS

K-State Research & Extension conducted a research study in 2019 to determine the effectiveness of different seed treatments, including Saltro, on SDS in soybeans. Irrigated soybeans were grown at Kansas River Valley Experiment Field near Topeka. The previous crop was corn that was vertical-tilled prior to planting. The field had a history of SDS.

The Soybeans were planted at 160,000 seeds/acre on May 16. Seed in all the treatments had been treated with CruiserMaxx Vibrance seed treatment.

Soybean cyst nematode (SCN) population at planting was very low. There were two irrigation applications & rainfall was above average every month of the growing season. Severity of foliar symptoms were rated every five to six days after onset of symptoms which occurred by August 16. The control plot had SDS severity of over 40%.

Summary of results were Saltro and ILeVO seed treatments greatly reduced the severity of SDS and increased soybean yield compared to the control. The control yielded an average of 60 bushels/acre Saltro 72 bu/acre & ILeVO 66 bu/ac.

Take home message

The addition of Saltro as another tool to combat SDS is great news for growers who need to manage SDS on a regular basis. It is not known from this study if Saltro will reduce Soybean Cyst Nematode as successfully as ILeVO has done in previous research. Regardless, this data

indicates that both products can significantly reduce the severity of SDS and increase soybean yields. Incorporating either of these two seed treatments, in combination with a partially resistant hybrid, has the potential to greatly reduce the yield loss due to SDS, and increase the profitability of soybean production.

This research and article were done by Eric Adee, K-State Agronomist at River Valley Experiment Field.

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