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SCN Weather Impacts: Transcript

Waukesha, Wis. (October 6, 2020) – Media can use the following transcript to personalize the accompanying “weather impacts” press release issued by The SCN Coalition. The quotes can be attributed to Iowa State University Nematologist Greg Tylka.

“Over the years, it’s been observed that SCN reproduces more frequently in hot, dry years. Researchers wondered if there was more yield loss because the plants were stressed from drought as well as SCN, or was there something up with the nematode? Now we have data verifying that SCN is worse in hot, dry years not just because plants are stressed from drought, but also because the nematode is reproducing much quicker, raising population densities.

One of the most [convincing papers](#) was published out of Iowa State University in 2017. Over 15 years of data was compiled from more than 25,000 variety trial plots. It was a landmark paper also showing that reproduction of SCN on PI 88788 had increased over those 15 years and yields of resistant varieties had decreased. But a hidden gem in that research was a significant reproduction effect with soil moisture and soil temperature. As soil moisture went down and soil temperature went up, soybean cyst nematode numbers throughout those plots increased linearly.

During a hot and dry growing season, soybean growers would certainly want to keep an eye on fields that had experienced drought stress, and those might be prime fields to sample for SCN. They might not only find SCN, but find it at fairly high levels.”

Other soil factors

“Soil pH and texture also impact SCN reproduction. Our first inkling that SCN reproduced well in high pH soils came after ten years of grid mapping on a central Iowa farm. That data revealed the highest pH spots in the fields had the highest nematode numbers. When you laid the soil pH and SCN maps side by side, they were in agreement nearly 85% of the time. At the time, it was counterintuitive because SCN is an obligate parasite, meaning it needs healthy plants to get the most nutrition. To have increased SCN reproduction on high pH soils where the plants are suffering from iron chlorosis was somewhat of a surprise.

Soybean growers with sandy soil or sandy spots within fields should also consider those spots for soil sampling. Because those fields are so well-drained, we always see higher reproduction in sandy soil.”

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