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Understanding Nematode SPIT is Key in Fight Against Virulent Nematodes: Transcript

Waukesha, Wis. (March 15, 2021) – Media can use the following transcript to personalize the accompanying “understanding the nematode spit” press release issued by The SCN Coalition.

The following quotes can be attributed to University of Georgia Nematologist Richard Hussey:

“Just like humans have salivary glands in their mouth to aid in digestion, the nematode produces proteins that are secreted through the stylet to modify the plant tissue so it’s able to infect and penetrate the soybean root and suppress the immune response to establish a feeding site. Over the course of several decades, we determined the function of the salivary glands in the nematode were different than we thought. This opens up a whole new source of genes that can be targeted for resistance to protect soybean yields.”

“Only 10% of nematodes are plant parasites. What makes SCN and SRKN plant parasites are the secretions it uses to set up a feeding cell in roots. Now that we know more about the tools the nematode uses to infect the plant, we can design novel resistance genes to block that because we want to keep it from setting up a feeding site or suppress the immune response of the plant. When we do that, the nematode is not going to be able to develop and survive.”

“The eggs produced by SCN will survive in the soil in the absence of a host for several years. As a result, when we talk about actively managing SCN, we don’t think about tomorrow or even next year. We need to think four to five years down the road because these eggs are still going to be there.”

The following quotes can be attributed to University of Georgia Nematologist Melissa Mitchum:

“If you planted PI 88788, 30 years ago, it was very effective for the grower to bring down populations below an economic threshold. Decades later, repeated planting of the same type of resistance by our growers has resulted in the development of virulent nematode populations.”

“SCN goes through multiple generations in a single growing season. The only way to know whether or not SCN has adapted to the current source of resistance in a soybean field is a soil test, specifically a HG (SCN) type test. If you know your SCN population has increased in virulence on the current source of resistance, you can rotate different sources of SCN resistant varieties. Peking would be a good choice to rotate with PI 88788 because the nematodes are not going to be able to reproduce as well on that type of resistance.”

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