

Scientists breeding new disease-resistant soybeans to crack down on parasitic nematode

Soybean cyst nematode (SCN) [[a common soybean pest](#)] has overcome the main source of genetic resistance – PI 88788 – that accounts for 95% of resistance in SCN-resistant soybean varieties. Research scientists....have been developing new sources of genetic resistance and new SCN resistance management strategies.

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Ultimately, the goal is to identify alternative resistance genes and gene combinations that, when used in rotation, will reduce SCN population densities and slow selection pressure on SCN to adapt.

“It’s clear that SCN populations are shifting,” says Melissa Mitchum, a University of Missouri nematologist. “Every 10 years we conduct a statewide survey. Over the past 30 years we’ve seen a shift to populations that are able to reproduce on PI 88788.”

The good news is university researchers are discovering, stacking, and testing new resistance genes.

Brian Diers is a University of Illinois plant breeder. His team has identified two new resistance genes from wild soybean (*Glycine soja*) that have proven effective when bred into commercial soybean (*Glycine max*) varieties. These genes were then stacked with another resistance gene from PI 567516C, and also with the major gene *Rhg1* from PI 88788, to create a four-gene stack.

“We found that by combining genes from different resistance sources we could obtain much higher levels of resistance compared with using one source,” he says.

Read full, original article: [SCIENTISTS DISCOVER NEW SCN RESISTANCE SOURCES](#)