KNOW YOUR SCN NUMBERS

Test your soil regularly to know if your fields are infested with soybean cyst nematode.

Soybean cyst nematode (SCN) is a serious threat to soybean production, capable of causing significant yield losses. Those losses are usually hidden since plants do not exhibit symptoms unless there is heavy SCN pressure. Knowing your SCN numbers is the first step in managing the threat and protecting your soybean yields.

FAST FACTS:

- SCN is a parasitic nematode that feeds on soybean roots, damaging root systems and sapping vital nutrients from the plant.
- SCN is the most economically important pest in U.S. soybeans, with yield losses estimated at $1.5 billion annually.
- Most of the time, SCN infection causes no visible symptoms. Stunted, yellow plants may be observed with severe SCN infections or when plants are under stress, but yield losses begin to occur well before that level of infestation.
- SCN has been detected in all three counties in Delaware.
- SCN races that have been detected in Delaware fields include:
  - Race 1 (47 percent of infected fields)
  - Race 2 (20 percent of infected fields)
  - Race 5 (33 percent of infected fields)
- Planting resistant varieties and rotating crops to non-host crops, such as corn, sorghum and vegetables (except snap beans and edamame), can reduce SCN populations over time.
- Know your SCN numbers! Test fields every six years to document whether your SCN numbers are going up, down or remaining the same.

This soybean plant is infected with SCN, as indicated by the small, white cysts on the roots. Photo courtesy of G. Tylka, Iowa State University.

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SAMPLING FOR SCN

The only way to detect SCN in your fields is to take soil samples. SCN levels within a field should be monitored every third soybean crop. Compare with past test results to know whether the SCN population is growing.

When to sample:

Soil samples can be collected any time the soil is not frozen. Try to avoid sampling when soil is very wet or very dry. During the soybean-growing season, the SCN population density fluctuates; therefore, soil samples should be collected around the same time of the year every six years, such as shortly after harvest.

Where to sample:

In fields where SCN has never been reported, sampling should take place in areas where SCN is most likely to have been introduced first. These areas include:

- Areas where soybean yield was lower than in previous years
- Places subject to flooding
- Field entrances and along field borders
- Places where soil pH is greater than 7.0

Horacio Lopez-Nicora, Ohio State University, explains how to properly sample for soybean cyst nematode. Watch the video by scanning the QR code or find it on YouTube at

http://www.youtube.com/watch?v=FQgg-UPQdcs&feature=youtu.be

How to sample:

1. Use a 1-inch-diameter soil probe to collect cores that will make up the sample. Soil cores should be collected at a 6- to 8-inch depth. If a soil probe is unavailable, a shovel may be used, making sure to collect soil samples at the recommended depth of 6 to 8 inches.
2. Collect 20 to 25 soil cores from an area no larger than 20 acres. Place soil cores in a bucket and mix well.
3. Place approximately 2 cups of the mixed soil sample into a plastic bag. Do not use paper bags. Try to keep soil samples cool to avoid destruction of the nematodes by high temperatures and the sun. Keep soil samples in a refrigerator until sending to a nematology laboratory for analysis.

Where to send samples:

Print and fill out a sample form found on the University of Delaware website at *http://extension.udel.edu/ag/plant-diseases/nematology/.* Deliver the completed form and soil samples to your county extension office.

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