



## SCN Sampling Guidelines from United Soils

### SCN Detection Sampling

Identifying the problem is the first step in managing Soybean Cyst Nematodes (SCN).

Soybean producers should be familiar with SCN symptoms and should suspect SCN where yields are reduced without explanation, even without stunting or visual leaf yellowing.

The best way to determine if SCN is present and to determine population densities is to collect a soil sample and submit it for analysis.

SCN samples can be taken at any time of year; however, a preferred time to sample is in the fall, after harvest, so that analysis for SCN densities will provide timely information for planning the next growing season. (SCN numbers tend to be highest when the plants are almost mature to shortly after harvest.) However, samples may be collected anytime during the growing season for the reason of confirming the presence of SCN.

Soil samples should be collected to a depth of 6 to 8 inches. Collect samples using a zigzag pattern, collect 12 to 24 soil cores (using a soil probe). Large fields may be subdivided into sections and a single composite sample from the different sections submitted for analysis. If the soybean crop row is identifiable, place the soil probe within 2 inches of the row when collecting the soil core. Placement of the soil probe is not important for samples collected from cultivated fields, fields where soybeans were drilled or fields in which non-host crops had been grown. ***The importance of getting a representative soil sample of the area under consideration (whole field, section of field, area where plants show symptoms of crop injury) cannot be overemphasized.*** Place cores from each 10 to 20 acre set into a bucket, mix thoroughly, and submit about 1 1/2 pints in a plastic bag to the lab, and keep the sample out of direct sunlight!

When submitting samples for screening, be sure to include your contact information including name, address, telephone number, email address, and the field name where sample was collected, date of collection, number of acres represented by the sample, and cropping history for previous 4 years.

### SCN Sampling for Management Decisions

If you have known SCN infestations and are working to manage the problem, more intensive sampling may be necessary to evaluate the success of your management strategies.

### How to deal with suspected SCN hot spots

Soil samples should be collected from the area between the most severely damaged plants and the “healthy” plants (in the transition zone). Do not collect the sample from the center of the hot spot because these plants usually have severely stunted root systems that cannot support SCN. A sample collected from dead or severely stunted plants may show that SCN numbers are low when in fact there are high numbers present in the areas where plants appear “healthy.”

Crop rotation to non-host crops and the use of SCN resistant soybean varieties are appropriate management practices to address an SCN infestation. You will never eliminate SCN from your fields once they are infected. Management is the only approach. Be sure to rotate the source of SCN resistance (when possible) and rotate varieties from the same source of resistance since all varieties do not exhibit the same level of resistance from the same SCN resistance source. PI-88788 is the source of SCN resistance in well over 98% of all SCN resistant varieties.

Step 1. If the SCN egg count is low, choose a high-yielding, SCN-resistant soybean variety from VIPS (Varietal Information Program for Soybeans) from the Illinois Soybean Association and skip steps 2 and 3—you're already protecting your crop from SCN.

Step 2: IF the SCN egg count is moderate to high AND you've been growing SCN-resistant varieties, find out your SCN Type. Take a soil sample exactly as directed above and send it to the University of Illinois Nematology Lab or Southern Illinois University Nematology Lab for an SCN Type test.

Step 3: Use the results from the SCN Type test to choose high-yielding varieties resistant to the SCN Type you have. SCN resistance levels and sources of resistance are available in VIPS. The VIPS information can be found at: [www.vipsoybeans.org](http://www.vipsoybeans.org)

## SCN Types

What is an SCN Type? The SCN Type test tells you which source of SCN resistance your SCN population will attack.

SCN Type 0: Does not attack any SCN-resistant soybean. To manage this SCN Type, use any SCN resistant variety.\*

SCN Type 1: Attacks SCN-resistant soybeans with the Peking type of resistance (also known as PI-548402). To manage this SCN Type, avoid soybean varieties with Peking-type resistance.

SCN Type 2: Attacks SCN-resistant soybeans with the PI-88788 type of resistance. To manage this SCN Type, avoid soybean varieties with PI-88788-type resistance.

SCN Type 3: Is not a concern in Illinois.

SCN Type 4: Attacks SCN-resistant soybeans with the PI-437654 type of resistance (also known as Hartwig or CystX®). To manage this SCN Type, avoid soybean varieties with the PI-437654 source of resistance. Grow a nonhost (such as corn) for two or more years to reduce the numbers of this SCN Type.

\*Not all varieties labeled "SCN-resistant" are actually resistant! Check VIPS to be sure.