Know Your SCN Numbers

Greg Tylka
Iowa State University, gltylka@iastate.edu

Follow this and additional works at: https://lib.dr.iastate.edu/cropnews
Part of the Agricultural Science Commons, and the Agriculture Commons

Recommended Citation
https://lib.dr.iastate.edu/cropnews/2469

The Iowa State University Digital Repository provides access to Integrated Crop Management News for historical purposes only. Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user. Users should make their own assessment of the information and whether it is suitable for their intended purpose. For current information on integrated crop management from Iowa State University Extension and Outreach, please visit https://crops.extension.iastate.edu/.
Know Your SCN Numbers

Abstract
Soybean farmers have kept the soybean cyst nematode (SCN) “in check” for decades simply by growing SCN-resistant soybean varieties. Unfortunately, prolonged use of varieties with SCN resistance genes from a breeding line called PI 88788 has resulted in SCN populations building up increased reproduction on resistant varieties. Almost all (97%) soybean varieties available to grow in Iowa have SCN resistance genes from PI 88788. This situation has led to dramatic and often unnoticed increases in SCN numbers in fields.

Disciplines
Agricultural Science | Agriculture
Soybean farmers have kept the soybean cyst nematode (SCN) “in check” for decades simply by growing SCN-resistant soybean varieties. Unfortunately, prolonged use of varieties with SCN resistance genes from a breeding line called PI 88788 has resulted in SCN populations building up increased reproduction on resistant varieties. Almost all (97%) soybean varieties available to grow in Iowa have SCN resistance genes from PI 88788. This situation has led to dramatic and often unnoticed increases in SCN numbers in fields.

Now more than ever, farmers need to know if their fields are infested with SCN and what the numbers are. The higher the number of SCN eggs in the soil, the greater the yield loss - even with resistant soybean varieties.

SCN is a consistent soybean yield reducer every year, not “hit or miss” depending on the weather as is the case with many pathogens and pests. The nematode survives very well in the soil, even through a few years of nonhost corn, and SCN will reduce yields every year that soybeans are grown in infested fields, regardless of weather.

Fall is a perfect time to sample for SCN
It is relatively easy to determine SCN numbers in fields. All it takes is collecting a soil sample to be tested for the nematode. And fall is a prime time to collect samples from fields in which soybeans will be grown in 2018.

**Sampling guidelines:**

- It is best to use a soil probe, not a spade, to collect soil cores.
- Collect soil cores to about 8 inches deep.
- The more soil cores collected from the smaller the area, the more accurate the results will be. Collecting 15 to 20 soil cores from every 20 acres often is recommended.
- Combine all soil cores in a bucket and mix well before placing the mixed soil into a soil sample bag.
- Most private soil-testing labs in Iowa can process samples for SCN.
- SCN samples also can be sent to Iowa State’s Plant and Insect Diagnostic Clinic, room 327 Bessey Hall, 2200 Osborn Drive, Iowa State University, Ames, IA 50011.
Example sampling pattern in a field with different management zones. Each “x” represents the location from which a soil core was collected.

Options for managing SCN

Managing SCN should involve coordinated use of multiple tactics. Management options include growing nonhost crops (such as corn), growing SCN-resistant soybean varieties, and using nematode-protectant seed treatments when soybeans are planted. Also, farmers should try to grow SCN-resistant soybean varieties with different sources of resistance and to rotate varieties within a resistance source to slow the development of resistance-busting SCN populations.

More information about SCN


Links to this article are strongly encouraged, and this article may be republished without further permission if published as written and if credit is given to the author, Integrated Crop Management News, and Iowa State University Extension and Outreach. If this article is to be used in any other manner, permission from the author is required. This article was originally published on October 28, 2017. The information contained within may not be the most current and accurate depending on when it is accessed.

Category: Plant Diseases
Crop: Soybean
Tags: checking field for SCN, fall sampling, sampling for nematodes, SCN

Author:
Dr. Greg Tylka is a professor in the Department of Plant Pathology and Microbiology at Iowa State University with extension and research responsibilities for management of plant-parasitic nematodes. The focus of Dr. Tylka's research program at Iowa State University is primarily the soybean cyst n...