

IOWA STATE UNIVERSITY

Digital Repository

Integrated Crop Management News

Agriculture and Natural Resources

11-11-2011

Fall Time to Sample for SCN—But Not for Nematodes That Feed on Corn

Gregory L. Tylka

Iowa State University, gltylka@iastate.edu

Follow this and additional works at: <http://lib.dr.iastate.edu/cropnews>

 Part of the [Agricultural Science Commons](#), [Agriculture Commons](#), and the [Plant Pathology Commons](#)

Recommended Citation

Tylka, Gregory L., "Fall Time to Sample for SCN—But Not for Nematodes That Feed on Corn" (2011). *Integrated Crop Management News*. Paper 277.

<http://lib.dr.iastate.edu/cropnews/277>

This Article is brought to you for free and open access by the Agriculture and Natural Resources at Digital Repository @ Iowa State University. It has been accepted for inclusion in Integrated Crop Management News by an authorized administrator of Digital Repository @ Iowa State University. For more information, please contact digirep@iastate.edu.

Subscribe to Crop
News

Archives

2014

2013

2012

2011

2010

2009

2008

[Previous Years](#)

ISU Crop Resources

[Extension Field
Agronomists](#)

[Crop & Soils Info](#)

[Pesticide Applicator
Training](#)

[Agronomy Extension](#)

[Entomology Extension](#)

[Plant Pathology
Extension](#)

[Ag and Biosystems
Engineering Extension](#)

[Agribusiness
Education Program](#)

[Iowa Grain Quality
Initiative](#)

[College of Agriculture
and Life Sciences](#)

[ISU Extension](#)

Integrated Crop Management NEWS

-  PRINT STORY
-  EMAIL STORY
-  ADD TO DELICIOUS
-  ATOM FEED
-  FOLLOW ON TWITTER

Fall Time to Sample for SCN – But Not for Nematodes That Feed on Corn

By Greg Tylka, Department of Plant Pathology and Microbiology

Plant-parasitic nematodes are microscopic worms that live in the soil and feed on plant roots. Nematodes that feed on corn occur in almost every field in Iowa, but most do not reduce corn yields measurably until they increase to high population densities (numbers). Fall is not a recommended time to check fields for damaging population densities of nematodes that feed on corn. The ideal sampling times and methods for nematodes that feed on corn were discussed in an [earlier article in ICM News](#).

The soybean cyst nematode (SCN) is considered by many to be the most damaging pathogen on soybeans in Iowa, the Midwest and the United States. SCN has a very unique biology that allows it to cause great yield loss (greater than 50 percent), to reproduce very quickly and to survive 10 years or more in the absence of a host crop.

Fall is a great time to sample fields for the presence and population densities of SCN. Specific reasons to sample fields this fall for SCN include to:

1. Discover if SCN is present before growing soybeans in 2012
2. Determine if SCN is responsible for lower-than-expected soybean yields in 2011
3. Monitor SCN population densities after growing SCN-resistant soybean varieties

General guidelines for fall sampling for SCN

- Collect samples from harvested cornfields to determine if SCN is present before growing soybeans in 2012 (figure 1).
- Collect soil cores from under the old crop rows if soybeans were grown this season (figure 2). There is no need to do this if corn was grown.
- If grid sampling, collect one or two extra soil cores from every grid cell sample and combine these extra cores from the number of cells that represent approximately 20 acres.
- If sampling conventionally (not grid sampling), collect 15 to 20 soil cores in a zigzag pattern from no more than 20 acres (ideally). The 20-acre sampling areas do not need to be square or rectangular; samples can be collected from zones according to the agronomic features of the field (see figure 3).
- In fields where SCN has not been discovered, high-risk areas where SCN may be first found include high pH spots, low spots, and near fence lines and other places where soil from other fields may have been introduced (figure 4).
- Soil cores should be a total depth of 8 inches.
- Do not sample if fields are frozen or wet and muddy.

Numerous private soil testing laboratories in Iowa offer SCN analysis of soil samples. Additionally, the Iowa State University Plant and Insect Diagnostic Clinic tests soil samples for SCN. Mail samples to:

Plant and Insect Diagnostic Clinic
327 Bessey Hall
Department of Plant Pathology and Microbiology
Iowa State University
Ames, IA 50011-1020

The current fee for SCN analysis at the ISU Plant and Insect Diagnostic Clinic is \$15 per sample for samples from Iowa. Samples sent to the Plant and Insect Diagnostic Clinic should be accompanied by a completed [Plant Nematode Sample Submission Form](#).

Greg Tylka is a professor of plant pathology with extension and research responsibilities in management of plant-parasitic nematodes.



Figure 1. Soil sampling in a harvested cornfield to check for SCN in advance of next year's soybean crop.



Figure 2. Collecting soil core from within the root zone of a harvested soybean crop to check for SCN.

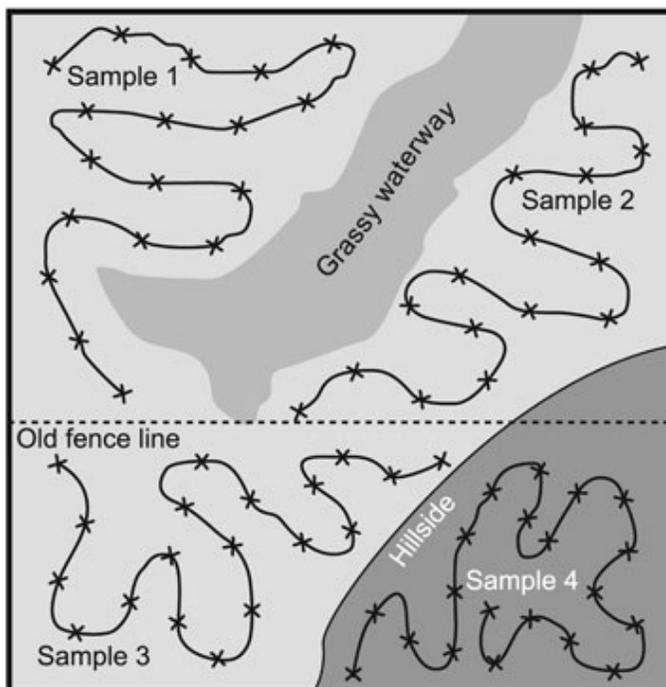


Figure 3. Sampling areas for SCN according to the agronomic features of the field.

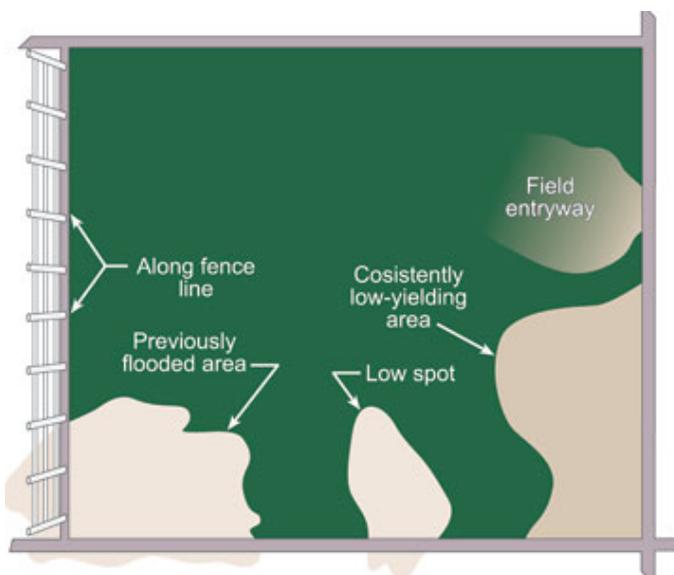


Figure 4. Areas of a field where soybean cyst nematode is more likely to be found for the first time.

This article was published originally on 11/11/2011. The information contained within the article may or may not be up to date depending on when you are accessing the information.

Links to this material are strongly encouraged. This article may be republished without further permission if it is published as written and includes credit to the author, Integrated Crop Management News and Iowa State University Extension. Prior permission from the author is required if this article is republished in any other manner.