Sample fields this fall for SCN to figure out 2007 or plan for 2008

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Abstract
The soybean cyst nematode (SCN) is a serious, widespread pest of soybean in Iowa and most soybean-producing areas of the Midwest. The nematode infests more than 70 percent of the fields in Iowa. However, SCN usually causes no obvious aboveground symptoms for many years after being introduced into a field. Consequently, many SCN-infested fields in Iowa may go undiagnosed. The lack of symptoms and subsequent missed diagnosis are unfortunate because the key to effective management of SCN is early detection, before large nematode population densities develop. It is much easier to keep low population densities low than to drive high population densities down. Large nematode population densities can cause severe damage to soybeans, especially in very dry years.

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Sample fields this fall for SCN to figure out 2007 or plan for 2008

by Greg Tylka, Department of Plant Pathology

The soybean cyst nematode (SCN) is a serious, widespread pest of soybean in Iowa and most soybean-producing areas of the Midwest. The nematode infests more than 70 percent of the fields in Iowa. However, SCN usually causes no obvious aboveground symptoms for many years after being introduced into a field. Consequently, many SCN-infested fields in Iowa may go undiagnosed. The lack of symptoms and subsequent missed diagnosis are unfortunate because the key to effective management of SCN is early detection, before large nematode population densities develop. It is much easier to keep low population densities low than to drive high population densities down. Large nematode population densities can cause severe damage to soybeans, especially in very dry years.

SCN can be detected in soil samples, and fall is an ideal time to sample fields for this pest. For fall sampling, it is most logical to sample corn fields in which soybean will be grown in 2008. But samples also can be collected from fields in which soybean was grown in 2007 if unusual plant growth was observed during the season or if unexplained low yields were obtained. Also, fields should be checked for SCN if sudden death syndrome (SDS) occurred in the field in 2007, as SCN predisposes soybeans to developing SDS.

Soil samples can be collected throughout the fall, until a significant snowfall or a hard freeze occurs. Following are some guidelines for sampling fields for SCN:

- Ideally, fields should be sampled using a soil probe.
- Soil cores should be collected to a total depth of 6 to 8 inches.
- Collect soil cores from 15 to 20 places in a zigzag pattern in a sampling area.
- Collect a separate set of soil cores for each 20 acres or so.
- Combine and mix soil cores, and fill a sample bag with one cup or more of soil.
- Label the outside of each sample bag with a permanent marker.

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. The mailing address of the clinic is 327 Bessey Hall, Department of Plant Pathology, Iowa State University, Ames, IA 50011-1020. The current fee for SCN analysis 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.

Additional information about the biology, scouting, and management of SCN is available on the Internet at www.soybeancyst.info. Also, a great explanation of various aspects of scouting fields for SCN is available on the North Central Soybean Research Program Plant Health
Results of SCN-resistant soybean variety testing become available
November 12, 2007
SCN females on roots signal infestations and possibly ineffectiveness of resistance
June 25, 2007
Winter annual weeds and SCN: What's the connection?
April 23, 2007
Soybean cyst nematode: Still a major threat to soybean production
March 26, 2007
SCN-resistant soybean varieties: Not all are created equal
February 26, 2007
How to interpret SCN soil test results
December 18, 2006
What's your type?: An HG type test for SCN populations
November 13, 2006

Initiative's website.

Fall soil sampling of harvested soybean field to test for presence of SCN. (T. Schultz)
Fall soil sampling of field with harvested corn to test for presence of SCN. (T. Schultz)

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

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