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Check fields for SCN to prepare for 2007

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Abstract

The soybean cyst nematode (SCN) continues to be an extremely damaging and widespread pest of soybean in Iowa and many other Midwestern states. The nematode infests more than 70 percent of the fields in Iowa and more than 80 percent of the fields in Illinois. Often there is no obvious stunting or yellowing of soybean plants in infested fields. Consequently, many SCN-infested fields in Iowa have not been diagnosed.

Keywords

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Plant Diseases

Check fields for SCN to prepare for 2007

by Greg Tylka, Department of Plant Pathology

The soybean cyst nematode (SCN) continues to be an extremely damaging and widespread pest of soybean in Iowa and many other Midwestern states. The nematode infests more than 70 percent of the fields in Iowa and more than 80 percent of the fields in Illinois. Often there is no obvious stunting or yellowing of soybean plants in infested fields. Consequently, many SCN-infested fields in Iowa have not been diagnosed.

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. Current management strategies (growing resistant soybean varieties and nonhost corn) are very effective at keeping SCN population densities from increasing but will not decrease population densities rapidly. It is relatively easy to keep low SCN population densities low, but very difficult to drive high SCN population densities back down.

SCN can be detected in soil samples, and fall is an ideal time to check fields for this pest. Soil samples can be collected any time 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.

For fall sampling, it is most logical to sample corn fields in which soybean will be grown in 2007. But it also makes sense to sample fields in which soybean was grown in 2006 if unusual plant growth was observed during the season or if unexplained low yields were obtained. Also, note that one set of soil cores can be collected for both soil fertility and SCN testing.



A soil probe is used to collect soil samples throughout the fall until a significant snowfall or a hard freeze occurs. (Tom Schultz)

Numerous private soil testing laboratories in Iowa offer SCN analysis of soil samples. Additionally, the Iowa State University Plant Disease Clinic tests soil samples for SCN. The mailing address of the clinic is 323 Bessey Hall, Department of Plant Pathology, Iowa State University, Ames, IA 50011-1020. The current fee for SCN analysis is \$15 per sample.

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