6-19-2006

Soybean cyst nematode females now apparent on roots

Gregory L. Tylka
Iowa State University, gltylka@iastate.edu

Soybean cyst nematode females now apparent on roots

Abstract
The soybean cyst nematode (SCN), *Heterodera glycines*, is a widespread, destructive pest of soybeans in Iowa and much of the Midwest. Fortunately, SCN can be managed successfully by growing nonhost crops, such as corn, and resistant soybean varieties. But plants in many infested fields may not be stunted and yellow, at least not until SCN population densities (numbers) develop to high levels. It may take several years before noticeable symptoms of SCN damage become apparent.

Keywords
Plant Pathology

Disciplines
Agricultural Science | Agriculture | Plant Pathology

INTEGRATED CROP MANAGEMENT

IC-496 (16) 177 June 19, 2006

Plant Diseases

SCN females now apparent on roots

by Greg Tylka, Department of Plant Pathology

The soybean cyst nematode (SCN), *Heterodera glycines,* is a widespread, destructive pest of soybeans in Iowa and much of the Midwest. Fortunately, SCN can be managed successfully by growing nonhost crops, such as corn, and resistant soybean varieties. But plants in many infested fields may not be stunted and yellow, at least not until SCN population densities (numbers) develop to high levels. It may take several years before noticeable symptoms of SCN damage become apparent. Unfortunately, yield loss can occur even in the absence of obvious symptoms. The key to successfully managing the nematode is to keep SCN population densities low, rather than trying to drive high population densities back down. This is done by identifying SCN infestations when population densities are low, and then beginning management strategies to keep population densities in check.

There are two effective ways to scout fields for SCN: collecting soil samples to be tested for SCN or looking for the presence of SCN females. Soil samples can be collected at any time of the year except when the soil is frozen or very wet. Send the soil samples to a laboratory that is trained to extract the cysts and eggs of SCN. Most soil testing laboratories in Iowa and the Iowa State University Plant Disease Clinic can test soil samples for SCN.

To check soybean roots for SCN, look for small, round, white SCN females. It takes 4 to 6 weeks for the first SCN females to appear on soybean roots in the

Several SCN females on roots of infected soybean plants. SCN females are smaller and lighter in color than the two nitrogen-fixing nodules on the roots. ***(Greg Tylka)***

In this issue:

IOWA STATE UNIVERSITY
University Extension

beginning of the growing season. Thereafter, through August, the SCN females can be observed on infected soybean roots. John Holmes, ISU Extension field crops specialist in north central Iowa, observed SCN females the week of June 5–9 on roots of soybeans that were planted in early May. This indicates that fields now can be scouted for SCN by digging roots and looking for SCN females.

To scout for SCN in fields where the nematode has not yet been found, dig under soybean plants about one foot deep and gently shake the soil from the roots that are dug up. SCN females will appear as small, round, white objects about the size of a period at the end of a printed sentence. You may target fields in which soybean has been grown frequently in the past and fields where soybean yields have declined over time for no apparent reason. SCN is more prevalent in greater numbers in areas of fields with high pH (greater than 7.5). And because SCN is spread by the movement of infested soil, checking roots of plants near the entrance of fields where farm equipment enters and along fence lines where windblown soil accumulates also may increase the likelihood of finding SCN-infected plants.

ISU Extension publication IPM 47s, *Scouting for Soybean Cyst Nematode,* illustrates the recommended procedures for scouting for SCN. Additional information about SCN can be found on the Web at **www.soybeancyst.info**. A pdf of IPM 47s can be found at **https://www.extension.iastate.edu/store/ListItems.aspx?Keyword=ipm47**.

Digging the roots to check for the presence of SCN females. ***(Greg Tylka)***

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

Weed Management

Make sure you know what you are spraying!

by Mike Owen, Department of Agronomy

Given the difficulties in getting POST herbicides applied and the aggressive weed growth that is effectively reducing crop yields, it seems that due consideration of the "details" has been avoided. This has resulted in costly unintended consequences: loss of fields due to herbicide treatments contaminated with other herbicides or the application of the wrong herbicide (e.g., glyphosate applied to Liberty Link® corn). It is important that sprayers and nurse tanks be safely and thoroughly rinsed prior to switching herbicides and/or crops. Also, take the time to check and make sure you are spraying the correct field, corn hybrid, or soybean variety with the appropriate herbicide.

Fields damaged by contamination of spray mixtures.

Mike Owen is a professor of agronomy and weed science extension specialist with responsibilities in weed management and herbicide use.