Check Soybean Roots for SCN Females

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Abstract
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Check Soybean Roots for SCN Females

By Greg Tylka, Department of Plant Pathology

The soybean cyst nematode (SCN) is widespread throughout Iowa and surrounding states, and as much as 40 percent yield loss can occur from SCN damage without symptoms appearing. Symptoms typically are not apparent when temperatures are moderate and rainfall is adequate to excessive during the growing season.

Symptoms generally begin to appear starting in mid-July and last through most of the growing season. Symptoms of SCN damage include stunting of plants, yellowing of foliage (not just leaf margins or areas between leaf veins) and mid-day wilting.

Slight stunting and yellowing (in the background) that occurred in mid-July was caused by soybean cyst nematode feeding.

The only way to check for SCN in the field is to dig roots, gently remove soil from the roots, and look for the egg-filled, round, white SCN females on the roots. The females are about the size of the head of a straight pin or a period at the end of a sentence in a newspaper or magazine, and for most people, can be seen with the unaided eye.

The first SCN females of the growing season appeared several weeks ago (June 7, 2010 Integrated Crop Management News), and SCN females should be apparent on infected roots through August.

Carefully observing soybean roots for SCN females is a good way to check fields for infestations that have not yet been discovered. It also is effective to assess how well SCN-resistant soybean varieties are controlling nematode reproduction in fields known to be infested with SCN. There should be only a few, 10 to 20, SCN females on the roots of a resistant variety if the variety is effectively controlling the nematode.
This number of SCN females on such a small amount of roots indicates poor control of the nematode by the resistant variety.

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

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