2-10-2014

Be Wary of High SCN Numbers in 2014

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Abstract
It is hard to think about planting crops with the brutally cold weather we have been experiencing in Iowa the past several weeks. But warm weather and planting season will be here in a matter of weeks.

As plans are being made for the 2014 crops, farmers and agronomists should be aware that fields planted to soybeans this year may have unusually high soybean cyst nematode (SCN) numbers if soybeans were grown in the fields in 2012. The number of SCN eggs in the soil at the time of planting is a major factor determining how much damage and yield loss SCN will cause.

Keywords
Plant Pathology and Microbiology

Disciplines
Agricultural Science | Agriculture | Plant Pathology

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Be Wary of High SCN Numbers in 2014

By Greg Tylka, Department of Plant Pathology and Microbiology

It is hard to think about planting crops with the brutally cold weather we have been experiencing in Iowa the past several weeks. But warm weather and planting season will be here in a matter of weeks.

As plans are being made for the 2014 crops, farmers and agronomists should be aware that fields planted to soybeans this year may have unusually high soybean cyst nematode (SCN) numbers if soybeans were grown in the fields in 2012. The number of SCN eggs in the soil at the time of planting is a major factor determining how much damage and yield loss SCN will cause.

Extremely high SCN reproduction was observed in Iowa in 2012 on both susceptible soybean varieties and SCN-resistant soybeans with the PI 88788 source of resistance. The very large increases in SCN numbers in 2012 are believed to be somehow related to the extremely dry soil conditions that occurred that year. The situation was discussed in an ICM News article, Soybean Cyst Nematode Reproduction High in 2012, in December 2012.

Won’t extreme winter temperatures kill SCN?

It’s intuitive to think (and hope) that extreme cold temperatures might cause increased death of SCN over winter. But unfortunately, that is not what happens. There is almost 100 percent survival of SCN over the winters here in the Midwest - no matter how cold. The nematode seems to survive extreme low soil temperatures very well.

What to do?

What should farmers do if they fear that SCN numbers may be unusually high in fields slated for soybean production in 2014? There is no reason to shift planting plans from soybeans to corn. It’s extremely valuable for pest management purposes to have soybeans and corn rotated in fields.

In order to grow soybeans profitably in fields infested with medium or high population densities of SCN, one must use good SCN-resistant soybean varieties with high yield potential and good nematode control. Nematode-protectant seed treatments may provided added yield and/or protection from nematode feeding on the resistant soybean varieties.

To help with decisions on what SCN-resistant soybean varieties should be grown, the annually updated list of SCN-resistant soybean varieties for Iowa is available online. There are more than 670 varieties listed in the publication for 2014.

Also, the results of the Iowa State University SCN-resistant Soybean Variety Trial program are available online, too. The results of these experiments, funded by the soybean checkoff through a grant from the Iowa Soybean...
Association, show the agronomic performance and nematode control provided by many different SCN-resistant varieties in a set of locations throughout Iowa. Results of SCN-resistant soybean variety testing from 2013 and previous years also are available at www.isuscntrials.info.

More information about SCN

Additional information about the biology, scouting, and management of SCN is available at www.soybeancyst.info and www.planthealth.info/scn_basics.htm.

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