

# IOWA STATE UNIVERSITY

## Digital Repository

---

Integrated Crop Management News

Agriculture and Natural Resources

---

12-18-2012

## Soybean Cyst Nematode Reproduction High in 2012

Gregory L. Tylka

Iowa State University, [gltylka@iastate.edu](mailto:gltylka@iastate.edu)

Follow this and additional works at: <http://lib.dr.iastate.edu/cropnews>



Part of the [Agricultural Science Commons](#), [Agriculture Commons](#), and the [Plant Pathology Commons](#)

---

### Recommended Citation

Tylka, Gregory L., "Soybean Cyst Nematode Reproduction High in 2012" (2012). *Integrated Crop Management News*. Paper 105.  
<http://lib.dr.iastate.edu/cropnews/105>

This Article is brought to you for free and open access by the Agriculture and Natural Resources at Digital Repository @ Iowa State University. It has been accepted for inclusion in Integrated Crop Management News by an authorized administrator of Digital Repository @ Iowa State University. For more information, please contact [digirep@iastate.edu](mailto:digirep@iastate.edu).

[ICM Home](#)[ISU Extension Calendar](#)[Publications](#)[Extension News](#)[County Offices](#)[Contact Us](#)

search

Subscribe to Crop  
News

## Archives

[2014](#)[2013](#)[2012](#)[2011](#)[2010](#)[2009](#)[2008](#)[Previous Years](#)

## ISU Crop Resources

[Extension Field  
Agronomists](#)[Crop & Soils Info](#)[Pesticide Applicator  
Training](#)[Agronomy Extension](#)[Entomology Extension](#)[Plant Pathology  
Extension](#)[Ag and Biosystems  
Engineering Extension](#)[Agribusiness  
Education Program](#)[Iowa Grain Quality  
Initiative](#)[College of Agriculture  
and Life Sciences](#)[ISU Extension](#)

# Integrated Crop Management NEWS

-  PRINT STORY
-  EMAIL STORY
-  ADD TO DELICIOUS
-  ATOM FEED
-  FOLLOW ON TWITTER

## Soybean Cyst Nematode Reproduction High in 2012

By Greg Tylka, Department of Plant Pathology and Microbiology

The amount of damage caused by the soybean cyst nematode (SCN) is determined, in large part, by the population densities or numbers of the nematode present in the field. More severe yield losses generally occur in fields with high SCN population densities compared to damage in fields with low or moderate numbers of SCN. Long-term, profitable soybean production in fields infested with SCN requires growing SCN-resistant soybeans and nonhost crops, such as corn, to keep nematode population densities in check.

### Research assesses yields and nematode control of SCN-resistant varieties

Soybean checkoff funds from the Iowa Soybean Association support the Iowa State University SCN-resistant Soybean Variety Trial Program, the most extensive and longest-running program of its kind in the nation. Hundreds of SCN-resistant soybean varieties are studied for effects on SCN population densities and for yield at numerous locations throughout Iowa annually. Intensive soil sampling of every research plot at planting and again at harvest in all nine experiments (see Figure 1) reveals how SCN numbers change throughout the season.



**Figure 1. Locations of the field experiments conducted by the Iowa State University SCN-resistant Soybean Variety Trial Program in 2012.**

The overall results of the nine 2012 Iowa State University SCN-resistant Soybean Variety Trial Program experiments will be compiled in a report distributed in the January 19, 2013, issue of the Iowa Farmer Today. Results of individual variety trial experiments are currently posted online at

[www.isuscntrials.info](http://www.isuscntrials.info).

## Yields were good, but SCN reproduction on resistant soybeans was high in 2012

Yields of the SCN-resistant soybeans in the 2012 experiments were greater than expected, considering the dry growing season. An earlier [ICM News article](#) explained how damage due to SCN is greater in dry soils. The article also explains how there may be increased feeding of SCN on vascular tissue in dry years, leading to greater SCN reproduction, perhaps through better nutrition.

There were high levels of SCN reproduction on SCN-resistant and susceptible soybean varieties in the 2012 variety trial experiments. Normally, SCN may increase in numbers from three- to five-fold during the growing season on susceptible (non-resistant) plants and numbers generally stay the same or increase only slightly on SCN-resistant soybean varieties. In 2012, there were 10-fold or greater increases in SCN numbers on resistant soybeans and 25- to 30-fold or greater increases on susceptible soybeans in the variety trial experiments. It is not clear why dry soil conditions result in greater SCN reproduction than in soil with adequate or excess moisture. More research is needed to understand what is occurring.

## Prospects for 2013

The effects of increased SCN reproduction in 2012 will not become immediately apparent because fields cropped to soybeans in 2012 will not likely be cropped to soybeans again next year. But similar extreme increases in SCN reproduction may occur in 2013 because dry conditions are likely next year (see ICM News article [here](#)).

Farmers should continue to be vigilant about SCN. It would not be wise to grow an SCN-susceptible soybean variety in a field infested with the nematode in 2013. Also, considering the high SCN reproduction that occurred on resistant soybean varieties in 2012, farmers are advised to look for resistant varieties that control nematodes well, which includes some varieties with PI 88788 SCN resistant and most all of the varieties with Peking SCN resistance. There are more than 750 SCN-resistant soybean varieties from which Iowa soybean farmers can choose for 2013 (see earlier ICM News article [here](#)), and the results of the ISU SCN-resistant Soybean Variety Trial Program experiments reveal how well the varieties control SCN reproduction.

More information about the biology and management of SCN is available online at [www.soybeancyst.info](http://www.soybeancyst.info).

*Greg Tylka is a professor with extension and research responsibilities in management of plant-parasitic nematode in the Department of Plant Pathology and Microbiology at Iowa State University. He can be reached at [gltylka@iastate.edu](mailto:gltylka@iastate.edu) or 515-294-3021.*

---

This article was published originally on 12/18/2012. The information contained within the article may or may not be up to date depending on when you are accessing the information.

---

Links to this material are strongly encouraged. This article may be republished without further permission if it is published as written and includes credit to the author, Integrated Crop Management News and Iowa State University Extension. Prior permission from the author is required if this article is republished in any other manner.

