More Than 800 SCN-resistant Soybean Varieties Available to Iowa Growers

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Abstract
Soybean varieties that are resistant to the soybean cyst nematode (SCN) are extremely important for managing this damaging pest. In general, SCN-resistant soybean varieties yield greater than susceptible varieties in SCN-infested fields, and resistant varieties keep SCN population densities from increasing, which ensures profitable soybean production in future years.

Keywords
Plant Pathology

Disciplines
Agricultural Science | Agriculture | Agronomy and Crop Sciences | Plant Breeding and Genetics | Plant Pathology

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More Than 800 SCN-resistant Soybean Varieties Available to Iowa Growers

By Greg Tylka, Department of Plant Pathology

Soybean varieties that are resistant to the soybean cyst nematode (SCN) are extremely important for managing this damaging pest. In general, SCN-resistant soybean varieties yield greater than susceptible varieties in SCN-infested fields, and resistant varieties keep SCN population densities from increasing, which ensures profitable soybean production in future years.

With soybean checkoff funding from the Iowa Soybean Association, Iowa State University has updated their annual list of SCN-resistant soybean varieties and published it as Soybean Cyst Nematode-Resistant Soybean Varieties for Iowa, PM 1649. There is information in the publication about more than 800 SCN-resistant soybean varieties from 45 different seed companies and three universities. The publication was compiled in October 2010 and lists information on pure varieties, but not blends or mixtures of varieties. Information about the varieties includes relative maturity, herbicide resistance, iron deficiency chlorosis tolerance and source of SCN resistance.

Iowa State University recommends growing soybean varieties with varying sources of SCN resistance in a rotation, if possible, to maintain effectiveness of the different sources of resistance. The publication can be downloaded from the ISU Extension Online Store.

The 813 SCN-resistant varieties listed in the 2010 version of the publication are the most ever included in the publication (see figure below). However, almost all of the SCN-resistant varieties in the publication have resistance from the breeding line PI88788. Less than two percent of the varieties in the 2010 list have a specific source of SCN resistance other than PI88788, including 13 varieties with the Peking source of SCN resistance - three in maturity group 1 and ten in maturity group 2. The number of SCN-resistant soybean varieties with a specific source of SCN resistance other than PI88788 has decreased markedly from a high of 15 percent in 2004 (see figure below).

There are 21 SCN-resistant soybean varieties in the publication that were developed by Iowa State University scientists, all with soybean checkoff funding from the Iowa Soybean Association. Two of the varieties contain sources of SCN resistance that have not been used in varieties in the list before. Variety "IAR2101 SCN" (maturity group 2) has SCN resistance from PI88788 in combination with PI507354. And variety "IAR3001 Phyto SCN" (maturity group 3) has SCN resistance from PI438489B and PI90363.

Iowa State University has management recommendations for SCN available online in a downloadable format, Soybean Cyst Nematode (SCN) Management Recommendations, IPM 63. Additional information about the biology, scouting and management of SCN can be found at www.soystan.org.
SCN-resistant Varieties Available for Iowa
1991 - 2010

Number of SCN-resistant soybean varieties available to Iowa soybean growers 1991 to 2010.

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

This article was published originally on 11/1/2010. The information contained within the article may or may not be up to date depending on when you are accessing the information.

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