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More Choices of SCN-Resistant Soybean Varieties for Iowa for 2015

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Abstract

An effective way to manage the soybean cyst nematode (SCN) is to grow SCN-resistant soybean varieties. Resistant varieties can yield well in fields infested with the nematode and can keep SCN population densities (numbers) from greatly increasing. With soybean checkoff funding through a grant from the Iowa Soybean Association, Iowa State University personnel compile an annual list of SCN-resistant soybean varieties available to Iowa farmers. Soybean cyst nematode-resistant soybean varieties in Iowa, PM1649, was recently updated for the 2015 growing season. The 26-page publication is available at no-charge in PDF format online at the Iowa State University Extension and Outreach Online Store.

Keywords

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Disciplines

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More Choices of SCN-Resistant Soybean Varieties for Iowa for 2015

ICM News

October 21, 2014

By Greg Tylka, Department of Plant Pathology and Microbiology

An effective way to manage the soybean cyst nematode (SCN) is to grow SCN-resistant soybean varieties. Resistant varieties can yield well in fields infested with the nematode and can keep SCN population densities (numbers) from greatly increasing.

With soybean checkoff funding through a grant from the Iowa Soybean Association, Iowa State University personnel compile an annual list of SCN-resistant soybean varieties available to Iowa farmers. Soybean cyst nematode-resistant soybean varieties in Iowa, PM1649, was recently updated for the 2015 growing season. The 26-page publication is available at no-charge in PDF format online at the Iowa State University Extension and Outreach Online Store.

More choices than ever before

The updated list of SCN-resistant varieties contains information on 818 varieties from 36 different companies and two universities. This is the largest number of SCN-resistant soybean varieties ever included in the publication, which dates back to 1991 (see Figure 1). There are 180 varieties in maturity groups 0 and I, 343 varieties in maturity group II, and 295 varieties in maturity group III. The total number of varieties in the updated publication is 145 more than in last year's list.

All but 15 of the varieties in the updated list have PI 88788 as a source of SCN resistance (see Figure 1); 14 varieties have SCN resistance genes from the Peking source of resistance. Most, but not all, of the SCN-resistant varieties also have resistance to glyphosate or Liberty® herbicide.

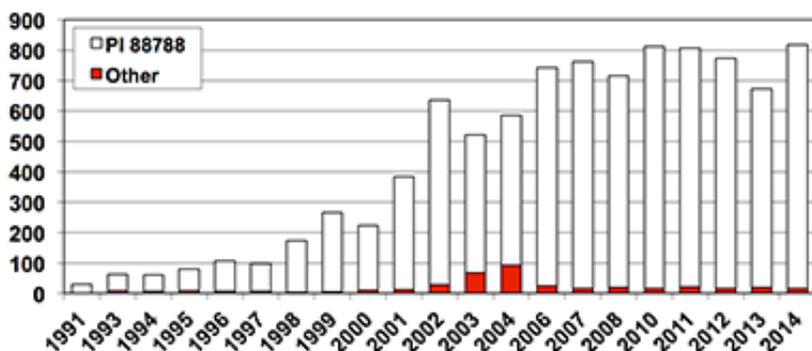


Figure 1. Number of SCN-resistant soybean varieties in maturity groups 0, I, II, and III available to Iowa farmers from 1991 through 2014 and the proportion of the varieties with PI 88788 or other sources of resistance used in the varieties.

Not all SCN-resistant soybean varieties perform the same

Several genes are required for full SCN resistance in soybean. Varieties that do not receive all of the resistance genes during the breeding process will have less than full resistance to SCN. Even varieties having the same source of resistance, such as PI 88788, will vary greatly in how well they control SCN reproduction because not every variety with PI 88788 in the genetic background will possess all of the genes needed for full SCN resistance.

Iowa State University evaluates the yield and nematode control provided by hundreds of SCN-resistant soybean varieties at nine locations throughout Iowa annually. This work is supported by soybean checkoff funds through a grant from the Iowa Soybean Association. The results of the annual field evaluations are posted online at www.isuscntrials.info in November and December each year. And a printed report of the results is mailed to Iowa farmers in mid January as an insert in an issue of the Iowa Farmer Today.

More information about managing SCN

For more information about the biology and management of SCN, visit www.soybeancyst.info/ and www.soybeanresearchinfo.com/diseases/scn.html. Iowa State University's management recommendations for SCN by downloading Soybean Cyst Nematode (SCN) Management Recommendations, IPM 63.

Greg Tylka is a professor with extension and research responsibilities in management of plant-parasitic nematodes in the Department of Plant Pathology and Microbiology at Iowa State University. He can be reached at gtylka@iastate.edu or 515-294-3021.

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