Development of Multiple Nematode-Resistant Soybean Germplasm. (C01-shipe065329-Poster)

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Abstract:

Development of high yielding, multiple nematode-resistant soybean germplasm/cultivars is essential to improving production efficiency in the southeastern U.S.A. Three, non-glyphosate tolerant, elite lines are described with resistance/tolerance to three or more of the following nematodes: soybean cyst nematode (Heterodera glycines) (SCN), southern root-knot nematode (Meloidogyne incognita) (MI), peanut root-knot nematode (M. arenaria) (MA), Columbia lance nematode (Hoplolaimus columbus) (CLN), and reniform nematode (Rotylenchulus reniformis) (RN). SC94-1075, maturity group (MG) VI, is resistant to SCN race 3, MI, and tolerant to CLN. It produced 2 to 4% greater seed yield than check cultivars 'Boggs' and 'Dillon', respectively, in USDA tests, 1998-2000. SC94-1573, MG VII, resistant to SCN race 3, MI, RN, and tolerant to CLN yielded 3 to 4% more than 'Benning' and 'Haskell', respectively, in USDA tests, 1999-2001. SC95-771, MG VIII, resistant to SCN race 3, MI, MA, RN, and tolerant to CLN yielded 5% more than the check cultivar 'Cook' in USDA tests, 1999-2001. These lines provide adapted, nematode-resistant, high yielding germplasm for use in soybean breeding programs for the southeastern U.S.A.

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