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Diversification of host resistance for managing the evolving soybean cyst nematode  
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Soybean cyst nematode (SCN, *Heterodera glycines*) is the most serious yield-limiting pathogen on soybean (*Glycine max*), which is most effectively managed by host resistance. However, about 95% commercial SCN-resistant cultivars in the USA were developed from a single source of resistance PI 88788 and a few from Peking and other sources. In Minnesota, SCN-resistant soybean cultivars have been used for more than two decades. The frequent use of the limited number of resistance sources has shifted virulence phenotypes of SCN populations (HG Types) to new types that can overcome originally resistant cultivars. Two surveys conducted in 1997-1998 and 2002 showed that most SCN populations in Minnesota were HG Type 0- (race 3) before 2002, while in another two surveys conducted in 2007-2008 and 2013, HG Type 2-, which is virulent to PI 88788, was predominant and represented 72.6% and 75% of the populations, respectively. An aggressive breeding effort using new sources of SCN resistance has been initiated to diversify host resistance for effective management of the evolving SCN populations. A number of breeding lines with the new sources of resistance have entered the regional yield trials, and their potential for commercial use in SCN management will be evaluated.