2009 REGIONAL SCN TESTS

SCN SCREENING

Illinois SCN greenhouse test: Seed of each entry is germinated in germination paper placed in an incubator at 27° C for three days. One healthy seedling of each entry is then placed in an individual container of sterilized sandy soil and inoculated with 1,000 eggs. Each entry is replicated three times. Infected seedlings are grown in a greenhouse in a water bath system that maintains a constant 27° C soil temperature. After 30 days, female cysts are washed from the roots of each seedling and counted. A female index (FI) is calculated for each entry by dividing the mean number of cysts on the entry by the mean number of cysts on the susceptible check Lee 74 and multiplying by 100. Entries are then rated as highly resistant (HR), resistant (R), moderately resistant (MR), low resistance (LR) or no effective resistance (NR) based on the FI number as follows:

HR = FI of < 10
 R = FI of 10 to 24
MR = FI of 25 to 39
 LR = FI of 40 to 59
NR = FI of > 60
 nd = not determined FI>10, CV>35

Heterodera glycines **(HG) Type testing:** Cooperators submit soil samples taken in the spring from SCN infested locations. Initial egg counts are made on a 250cc soil sample. Samples containing fewer than 1,000 eggs/100cc soil are planted to Essex for cyst increase. Seed of each indicator line is germinated in rag dolls and placed in an incubator at 27° C for three days. One healthy seedling of each line is then placed in an individual container of sterilized sandy soil and inoculated with 1,000 eggs. Each line is replicated six times. Infected seedlings are grown in a greenhouse under 16 hour light in a water bath system that maintains a constant 27° C soil temperature. After 30 days, female cysts are washed from the roots of each seedling and counted. A female index (FI) is calculated for each indicator line by dividing the mean number of cysts on the entry by the mean number of cysts on the susceptible check Lee 74 and multiplying by 100. A FI greater than or equal to 10 is considered a positive (+) response on each indicator line. HG Type classifications of the SCN populations are determined using the following table:

Indicator line	0	1	2	3	4	5	6	7
				HG Type				
PI 548404 (Peking)		+						
PI 88788			+					
PI 90763				+				
PI 437654					+			
PI 209332						+		
PI 89772							+	
PI 548316 (Cloud)								+