

2013 Soybean Cyst Nematode Demonstration Site Summary

Variety	Description	Yield (bu/A)				
		Herman ¹	Newman Grove ²	Peru ³	Waverly ⁴	Mead ⁵
Latham L290R2X	Cyst-X	73.7 bc	63.8 ef	52.3 bcd	55.0 b	71.8 b
Latham L3184R2	PI 88788	76.4 ab	67.5 bcd	68.3 a	60.9 ab	77.4 ab
Latham L3157R	Susceptible	66.2 c	64.3 def	57.2 bc	64.6 ab	71.1 b
NK S34-Z1	PI 88788	81.6 a	67.7 bcd	68.2 a	65.2 ab	78.6 ab
NK S28-K1	Susceptible	73.6 bc	69.0 bc	48.3 def	51.1 b	80.8 a
Asgrow 3231	PI 88788	75.7 ab	73.0 a	65.4 a	65.1 ab	69.4 b
Asgrow 2431	Susceptible	76.9 ab	70.8 ab	44.7 f	65.8 ab	77.7 ab
Hoegemeyer 2511NRR	Peking	82.4 a	63.2 f	51.4 cde	62.7 ab	72.3 b
Hoegemeyer 2993NRR	PI 88788	72.1 bc	66.9 cde	58.5 b	69.6 a	75.6 ab
Hoegemeyer 2707RR	Susceptible	73.4 bc	67.3 cd	45.7 ef	57.9 b	74.4 ab
LSD ($\alpha=0.10$)		7.8	3.4	6.6	11.4	7.5
Average of all Susceptible Varieties		72.5	67.9	49.0	59.9	76.0
Average of all PI 88788 Resistant Varieties		76.5	68.8	65.1	65.2	75.3
Cyst-X Resistant Variety		73.7	63.8	52.3	55.0	71.8
Peking Resistant Variety		82.4	63.2	51.4	62.7	72.3
Average of all Susceptible Varieties Across all Infested Sites						62.3
Average of PI 88788 Resistant Varieties Across all Infested Sites						68.9
Average of the Cyst-X Variety Across all Infested Sites						61.2
Average of Peking Resistant Varieties Across all Infested Sites						64.9

¹ Center pivot irrigated field. Average spring SCN population was 1,685 eggs/100 cc's soil.

² Rain fed field location. Average spring SCN population was 2,162 eggs/100 cc's soil.

³ Rain fed field location. Average spring SCN population was 687 eggs/100 cc's soil.

⁴ Rain fed field location. Average spring SCN population was 137 eggs/100 cc's soil.

⁵ Non-infested, linear pivot irrigated field.

Average Egg Count for All Infested Sites¹

	Spring ²	Fall ²	Rf ³
Average of all Susceptible Varieties	1,223	3,252	2.7
Average of all PI 88788 Resistant Varieties	1,112	906	0.8
Cyst-X Resistant Variety	1,165	2,080	1.8
Peking Resistant Variety	1,238	1,700	1.4

¹ Data are averages of table values from each site and not including individual plot values

² Number of SCN eggs per 100 cc's soil.

³ Nematode reproduction factor (Rf) = Average Pf (final population) / Average Pi (initial population).

Pi (initial) = # eggs/100 cc's soil (spring)

Pf (final) = # eggs/100 cc's soil (fall)

Rf 1.0 = no change in SCN population density over the growing season

Rf 0.5 = SCN population density decreased by 50% over the growing season

Rf 2.0 = SCN population density doubled over the growing season

HG Types and Sources of Resistance

HG Type ¹	Source of Resistance
1	PI 548402 (Peking)
2	PI 88788
3	PI 90763
4	PI 437654
5	PI 209332
6	PI 89772
7	PI 5484316 (Cloud)

¹ If SCN is HG type 1 then it will reproduce on soybeans with Peking resistance, if SCN is HG type 1.2 then it will reproduce on soybeans with Peking or PI 88788 resistance. If a number is not listed in the HG type, that source of resistance held SCN reproduction to 10% or less of the reproduction that occurred on a standard susceptible variety.

2013 Herman Soybean Cyst Nematode Demonstration Site

Variety	Description	Maturity Group	Spring SCN Population ¹	Fall SCN Population ¹	Rf ²
Latham L290R2X	Cyst-X	2.9	1,110	610	0.5
Latham L3184R2	PI 88788	3.1	1,410	460	0.3
Latham L3157R	Susceptible	3.1	1,690	1,760	1.0
NK S34-Z1	PI 88788	3.4	2,267	800	0.4
NK S28-K1	Susceptible	2.8	1,380	3,200	2.3
Asgrow 3231	PI 88788	3.2	1,580	900	0.6
Asgrow 2431	Susceptible	2.4	1,490	2,890	1.9
Hoegemeyer 2511NRR	Peking	2.5	1,580	340	0.2
Hoegemeyer 2993NRR	PI 88788	2.9	2,090	580	0.3
Hoegemeyer 2707RR	Susceptible	2.7	2,490	3,110	1.2
LSD ($\alpha=0.10$)			1,201	1,444	-
Average of all Susceptible Varieties			1,763	2,740	1.6
Average of all PI 88788 Resistant Varieties			1,837	685	0.4
Cyst-X Resistant Variety			1,110	610	0.5
Peking Resistant Variety			1,580	340	0.2
HG Type³	2.5.7				
Irrigation Method	Center Pivot				
Soil Texture	Silty Clay Loam				
Soil Organic Matter (%)	3.8				
Soil pH	6.7				

¹ Number of SCN eggs per 100 cc's soil.

² Nematode reproduction factor (Rf) = Average Pf (final population) / Average Pi (initial population).

Pi (initial) = # eggs/100 cc's soil (spring)

Pf (final) = # eggs/100 cc's soil (fall)

Rf 1.0 = no change in SCN population density over the growing season

Rf 0.5 = SCN population density decreased by 50% over the growing season

Rf 2.0 = SCN population density doubled over the growing season

³ See HG Types and sources of resistance table for explanation of HG Type



2013 Newman Grove Soybean Cyst Nematode Demonstration Site

Variety	Description	Maturity Group	Spring SCN Population ¹	Fall SCN Population ¹	Rf ²
Latham L290R2X	Cyst-X	2.9	2,730	6,930	2.5
Latham L3184R2	PI 88788	3.1	2,190	1,810	0.8
Latham L3157R	Susceptible	3.1	2,450	11,900	4.9
NK S34-Z1	PI 88788	3.4	1,520	1,295	0.9
NK S28-K1	Susceptible	2.8	2,800	6,740	2.4
Asgrow 3231	PI 88788	3.2	1,350	1,410	1.0
Asgrow 2431	Susceptible	2.4	1,480	5,760	3.9
Hoegemeyer 2511NRR	Peking	2.5	2,630	5,120	1.9
Hoegemeyer 2993NRR	PI 88788	2.9	2,550	1,600	0.6
Hoegemeyer 2707RR	Susceptible	2.7	1,920	6,890	3.6
LSD ($\alpha=0.10$)			1,653	2,988	-
Average of all Susceptible Varieties			2,163	7,823	3.7
Average of all PI 88788 Resistant Varieties			1,903	1,529	0.8
Cyst-X Resistant Variety			2,730	6,930	2.5
Peking Resistant Variety			2,630	5,120	1.9
HG Type³	1.3.6				
Irrigation Method	Non-Irrigated				
Soil Texture	Silty Clay Loam				
Soil Organic Matter (%)	3.0				
Soil pH	7.4				

¹ Number of SCN eggs per 100 cc's soil.

² Nematode reproduction factor (Rf) = Average Pf (final population) / Average Pi (initial population).

Pi (initial) = # eggs/100 cc's soil (spring)

Pf (final) = # eggs/100 cc's soil (fall)

Rf 1.0 = no change in SCN population density over the growing season

Rf 0.5 = SCN population density decreased by 50% over the growing season

Rf 2.0 = SCN population density doubled over the growing season

³ See HG Types and sources of resistance table for explanation of HG Type



2013 Peru Soybean Cyst Nematode Demonstration Site

Variety	Description	Maturity Group	Spring SCN Population ¹	Fall SCN Population ¹	Rf ²
Latham L290R2X	Cyst-X	2.9	700	430	0.6
Latham L3184R2	PI 88788	3.1	740	890	1.2
Latham L3157R	Susceptible	3.1	700	1,980	2.8
NK S34-Z1	PI 88788	3.4	700	530	0.8
NK S28-K1	Susceptible	2.8	670	2,970	4.4
Asgrow 3231	PI 88788	3.2	460	1,320	2.9
Asgrow 2431	Susceptible	2.4	1,270	1,350	1.1
Hoegemeyer 2511NRR	Peking	2.5	620	450	0.7
Hoegemeyer 2993NRR	PI 88788	2.9	370	680	1.8
Hoegemeyer 2707RR	Susceptible	2.7	640	1,560	2.4
LSD ($\alpha=0.10$)			546	999	-
Average of all Susceptible Varieties			670	1,965	2.7
Average of all PI 88788 Resistant Varieties			568	855	1.7
Cyst-X Resistant Variety			700	430	0.6
Peking Resistant Variety			620	450	0.7
HG Type³	2.5.7				
Irrigation Method	Non-Irrigated				
Soil Texture	Silt Loam				
Soil Organic Matter (%)	3.1				
Soil pH	7.3				

¹ Number of SCN eggs per 100 cc's soil.

² Nematode reproduction factor (Rf) = Average Pf (final population) / Average Pi (initial population).

Pi (initial) = # eggs/100 cc's soil (spring)

Pf (final) = # eggs/100 cc's soil (fall)

Rf 1.0 = no change in SCN population density over the growing season

Rf 0.5 = SCN population density decreased by 50% over the growing season

Rf 2.0 = SCN population density doubled over the growing season

³ See HG Types and sources of resistance table for explanation of HG Type



2013 Waverly Soybean Cyst Nematode Demonstration Site

Variety	Description	Maturity Group	Spring SCN Population ¹	Fall SCN Population ¹	Rf ²
Latham L290R2X	Cyst-X	2.9	120	350	2.9
Latham L3184R2	PI 88788	3.1	170	110	0.6
Latham L3157R	Susceptible	3.1	180	1,140	6.3
NK S34-Z1	PI 88788	3.4	170	320	1.9
NK S28-K1	Susceptible	2.8	110	470	4.3
Asgrow 3231	PI 88788	3.2	160	1,350	8.4
Asgrow 2431	Susceptible	2.4	140	210	1.5
Hoegemeyer 2511NRR	Peking	2.5	120	890	7.4
Hoegemeyer 2993NRR	PI 88788	2.9	50	430	8.6
Hoegemeyer 2707RR	Susceptible	2.7	150	90	0.6
LSD ($\alpha=0.10$)			98	818	-
Average of all Susceptible Varieties			145	478	3.2
Average of all PI 88788 Resistant Varieties			138	553	4.9
Cyst-X Resistant Variety			120	350	2.9
Peking Resistant Variety			120	890	7.4
HG Type³	7				
Irrigation Method	Non-Irrigated				
Soil Texture	Silty Clay Loam				
Soil Organic Matter (%)	3.7				
Soil pH	7.0				

¹ Number of SCN eggs per 100 cc's soil.

² Nematode reproduction factor (Rf) = Average Pf (final population) / Average Pi (initial population).

Pi (initial) = # eggs/100 cc's soil (spring)

Pf (final) = # eggs/100 cc's soil (fall)

Rf 1.0 = no change in SCN population density over the growing season

Rf 0.5 = SCN population density decreased by 50% over the growing season

Rf 2.0 = SCN population density doubled over the growing season

³ See HG Types and sources of resistance table for explanation of HG Type

