

Roundup Ready Soybean Variety Trial, Fisher and St. Hilaire Polk and Red Lake / Pennington Counties

Cooperator: Fisher: Jim and Jon Ross
St. Hilaire: Gary Novak

Nearest Town: Fisher
St. Hilaire

Soil Type: Fisher: Clay Loam
St. Hilaire: Sandy Loam

Tillage: Fisher: Fall Chisel plow, Spring Field cultivator
St. Hilaire: Fall and Spring Field cultivator

Previous Crop: Fisher: Sugar Beets
St. Hilaire: Fallow

Planting Date: Fisher: May 28, 2003
St. Hilaire: May 20, 2003

Row Width: 7 inches

Fertilizer: Fisher: (N-P-K) 0-30-0
St. Hilaire: (N-P-K) 0-30-20 (Broadcast in Spring)

Herbicide: Fisher: PPI Prowl, Pre-emerge Roundup 1 qt , POST Roundup 1 qt
St. Hilaire: POST Roundup 1 qt

Populations: Fisher: 157.000 plants/a established
St. Hilaire 147.000 plants/a established

Harvest date: Fisher: October 8, 2003
St. Hilaire: October 7, 2003

Experimental Design: Randomized complete block with 2 replications and 2 locations

Purpose of Study:

Producers have a large selection of Roundup Ready Soybeans. For the first time in NW MN a large number (60 varieties) of Roundup ready soybeans have been evaluated together in these experiments with the aim to evaluate iron chlorosis response, vigor, crop height, and yield.

Results:

Table 1 is organized by the company maturity rating from earliest material 002 to 009. Table 2 has varieties with maturity ratings 01 to 04. Within each maturity class varieties are organized according to the mean yield over the two environments. There were significant differences among all parameters evaluated. The Fishers site, although not selected for it, was a severe iron chlorosis environment. The varieties with higher iron chlorosis scores tended to have lower yields at the Fisher site. The St. Hilaire site was uniform but not a high yielding environment. Both locations received excessive rain during the first part of the growing season.



Funding:
U of M Extension Service and Croplan Genetics

For additional information:
Hans Kandel

Roundup Ready Soybean Variety Trial, Fisher and St. Hilaire (continued)

Table 1. Roundup Ready Soybean Variety Trial Fisher and St. Hilaire

PRODUCT	MAT	SOURCE	Fisher				St. Hilaire			Mean Yield (bu/a)
			Iron ¹ Chlorosis Mean	Vigor ²	Height (inches)	Yield ³ (bu/a)	Vigor	Height (inches)	Yield (bu/a)	
0027RR	002	NORTHSTAR	4.3	4.0	21.0	24.0	3.0	18.8	32.0	28.0
2200RR	002	THUNDER	4.0	3.5	19.3	26.9	3.0	18.5	27.7	27.3
RT0032	003	CROPLAN	2.3	2.0	22.5	43.7	3.0	16.0	18.0	30.9
RT0041	004	CROPLAN	2.5	2.0	30.3	42.0	3.0	20.5	29.3	35.7
RR Ramsey	005	HYLAND	2.3	2.5	30.0	42.5	3.0	20.0	27.8	35.2
BG0050RR	005	BIOGENE	2.0	2.0	29.0	45.0	2.5	19.5	24.3	34.7
K-0051	005	KAYSTAR	2.8	2.5	25.5	39.6	3.0	18.0	26.5	33.1
23005RR	005	THUNDER	2.3	2.5	26.8	35.7	3.5	19.0	28.9	32.3
DKB005-51	005	DEKALB	1.9	1.5	23.5	44.6	2.5	16.8	19.9	32.3
PB-0052	005	PRAIRE BRAND	2.8	3.0	25.5	37.8	3.0	17.5	23.6	30.7
RR Regency	005	HYLAND	4.0	4.5	22.0	18.9	3.5	21.5	32.2	25.6
RT0065	006	CROPLAN	2.3	3.5	26.0	42.0	3.5	19.0	28.8	35.4
PB-0072	007	PRAIRE BRAND	2.5	3.0	24.3	40.5	3.0	19.8	35.4	38.0
W 20073	007	WENSMAN	2.9	3.0	26.5	41.0	3.5	17.3	26.3	33.7
DSR-007	007	DAIRYLAND	2.5	3.0	27.0	38.8	4.0	19.5	25.9	32.4
RT0073	007	CROPLAN	2.8	3.5	25.5	36.2	4.0	20.0	26.1	31.2
S00-J4	007	SYNGENTA	3.8	3.5	18.5	27.1	3.0	19.8	27.5	27.3
5B008	008	MYCOGEN	3.0	3.5	23.5	33.3	3.0	19.8	30.5	31.9
LS 0082	008	LEGEND	3.3	3.5	24.0	31.2	3.0	17.5	28.7	30.0
030 008RR	008	PETERSON	3.5	3.5	20.0	24.7	3.0	17.5	32.3	28.5
23008RR	008	THUNDER	3.8	3.5	24.8	21.1	3.0	22.0	30.8	26.0
X3008R	008	SYNGENTA	5.0	4.5	15.0	5.9	2.5	19.8	34.9	20.4
PB-0094	009	PRAIRE BRAND	2.6	3.5	25.0	43.0	2.5	21.5	35.7	39.4
I 0095	009	INTERST/GARST	2.0	3.5	25.5	42.5	4.0	19.8	32.6	37.6
W 20091	009	WENSMAN	2.0	2.5	26.5	41.3	3.5	21.0	29.4	35.4
DG30D09	009	DYNAGRO	2.3	3.5	26.5	40.1	3.5	21.8	26.7	33.4
BG0090RR	009	BIOGENE	3.3	3.5	21.0	31.1	2.5	19.8	32.8	32.0
DSR-009	009	DAIRYLAND	2.5	2.5	27.0	38.4	3.5	27.8	23.9	31.2
LS 0091	009	LEGEND	3.5	3.5	23.0	31.3	3.5	18.5	29.0	30.2
Experimental Mean			3.1	3.3	24.1	32.6	3.1	20.4	29.0	30.8
LSD (0.05)			1.1	1.2	4.2	12.8	1.0	3.4	6.3	

¹ Iron Chlorosis score from 1-5, 1= no yellowing and 5 = severely chlorotic or dead. Mean over scores taken July 15 and August 5, 2003.

² Vigor rating 1-5, 1 = good and 5 is poor.

³ Yield bu/acre corrected to 13% moisture and 60 lb/bu testweight

Roundup Ready Soybean Variety Trial, Fisher and St. Hilaire (continued)

Table 2. Roundup Ready Soybean Variety Trial Fisher and St. Hilaire

PRODUCT	MAT	SOURCE	Fisher				St. Hilaire			
			Iron ¹ Chlorosis Mean	Vigor ²	Height (inches)	Yield ³ (bu/a)	Vigor	Height (inches)	Yield (bu/a)	Mean Yield (bu/a)
RG200RR	01	NDSU	2.8	3.5	28.0	35.7	3.0	21.0	34.1	34.9
933RR	01	GOLD COUNTRY	2.3	4.0	26.5	35.0	3.5	21.0	29.9	32.5
0107RR	01	NORTHSTAR	2.1	2.5	25.5	38.8	3.0	25.8	25.9	32.4
90B11	01	PIONEER	3.5	4.0	23.0	28.5	3.0	21.0	34.4	31.5
PB-0232	02	PRAIRE BRAND	2.5	3.0	23.3	46.2	2.5	18.5	31.4	38.8
DG34G02	02	DYNAGRO	2.0	3.0	26.5	41.9	2.5	17.8	31.1	36.5
M-023	02	MUSTANG	1.8	2.0	22.0	40.0	3.0	18.3	29.5	34.8
0206RR	02	NORTHSTAR	3.5	2.5	24.5	33.4	2.0	22.0	34.9	34.2
RT0255	02	CROPLAN	3.3	4.0	24.5	36.9	2.5	19.8	31.1	34.0
1300RR	02	GOLD COUNTRY	2.8	3.5	26.0	34.9	3.0	19.8	32.3	33.6
I 0211	02	INTERST/GARST	3.3	3.0	23.5	33.1	2.0	20.5	31.4	32.3
W 2020	02	WENSMAN	3.5	4.0	24.0	31.1	3.0	18.0	30.6	30.9
K-0255	02	KAYSTAR	3.5	3.0	23.5	27.8	3.0	18.8	28.7	28.3
RT0269	02	CROPLAN	2.8	3.0	28.5	32.0	3.0	28.3	17.7	24.9
LS 0201	02	LEGEND SEEDS	4.3	4.5	18.0	12.9	3.5	23.3	34.7	23.8
S02-G2	02	SYNGENTA	4.5	4.0	17.0	5.7	3.5	20.3	38.1	21.9
AG0301	03	ASGROW	2.4	3.0	30.0	50.7	3.0	23.0	33.3	42.0
0332121	03	PETERSON	2.5	3.0	24.0	42.2	3.0	17.8	26.9	34.6
M-033	03	MUSTANG	2.5	3.0	28.3	36.4	3.5	17.8	27.6	32.0
RT0396	03	CROPLAN	3.0	3.5	24.5	36.0	3.5	18.0	25.2	30.6
RR Rugged	03	HYLAND	3.9	3.5	24.5	21.8	3.0	24.8	34.9	28.4
RT0312	03	CROPLAN	4.3	4.5	27.0	26.5	3.5	29.0	30.3	28.4
DG39P03	03	DYNAGRO	3.0	3.5	24.5	29.2	3.5	17.8	24.3	26.8
0332125	03	PETERSON	3.8	4.5	21.5	24.4	3.5	21.3	29.1	26.8
W 2034	03	WENSMAN	2.8	3.5	26.0	29.3	4.0	18.5	22.4	25.9
K-0350	03	KAYSTAR	4.5	4.5	18.0	15.6	3.5	19.3	34.8	25.2
I 0300	03	INTERST/GARST	4.3	3.5	19.5	17.2	3.0	23.8	32.3	24.8
O314RR	03	NORTHSTAR	4.5	4.5	18.5	12.9	3.0	22.3	29.0	21.0
0417RR	04	NORTHSTAR	3.0	3.0	23.5	34.0	3.5	18.8	24.5	29.3
RT0476	04	CROPLAN	3.5	3.5	23.0	29.9	3.0	23.8	24.2	27.1
DSR-040	04	DAIRYLAND	3.0	4.5	26.8	26.5	4.0	23.3	16.7	21.6
		Experimental Mean	3.1	3.3	24.1	32.6	3.1	20.4	29.0	30.8
		L.S.D. 0.05	1.1	1.2	4.2	12.8	1.0	3.4	6.3	

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