

Saskatchewan Pulse Growers Long Season and Short Season Soy Variety Trial

Project duration: May 2021 – October 2021

Objectives: To evaluate long and short season soybean entries for the Saskatchewan Pulse Growers (SPG)

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Background

(Adapted from the [SPG website](#)): Soybeans are photosensitive and latitude greatly affects day length. For this reason, varieties are bred for specific north-south ranges of adaptation, typically in a range of 150 to 250 kilometres. Growing a variety north of its maturity band may delay maturity and it will be at a great risk of not reaching full maturity prior to frost. The test examines long and short season (i.e., most northern-adapted) glyphosate-tolerant soybean lines.

Results

The average yield for long-season soybean entries is shown in Figure 1 and the average yield for short-season soybean entries is shown in Figure 2. The average height for long-season soybean entries is shown in Figure 3 and the average height for short-season soybean entries is shown in Figure 4. Numbered, non-registered varieties are provided for tracking purposes only. The results are for one site-year only, and should be interpreted with caution. Consult a seed guide for multi-site-year data for available varieties.

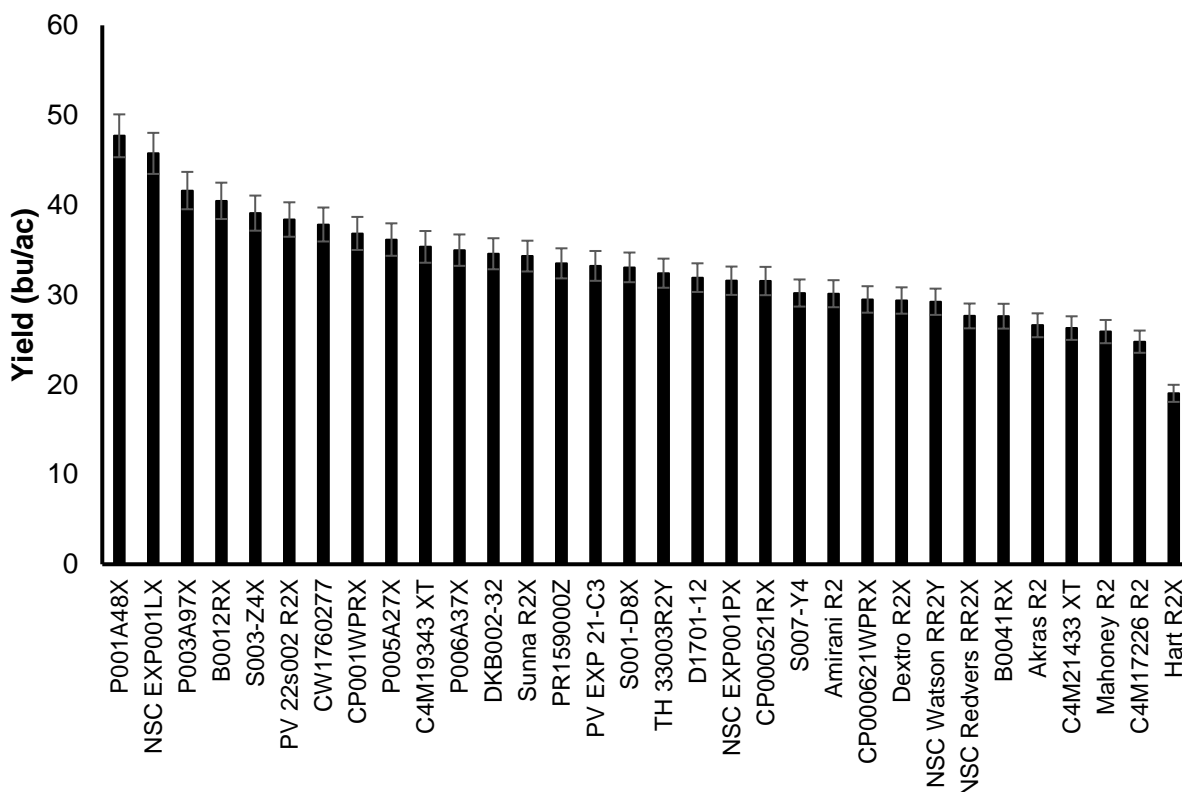


Figure 1: Average yield for long season soybean

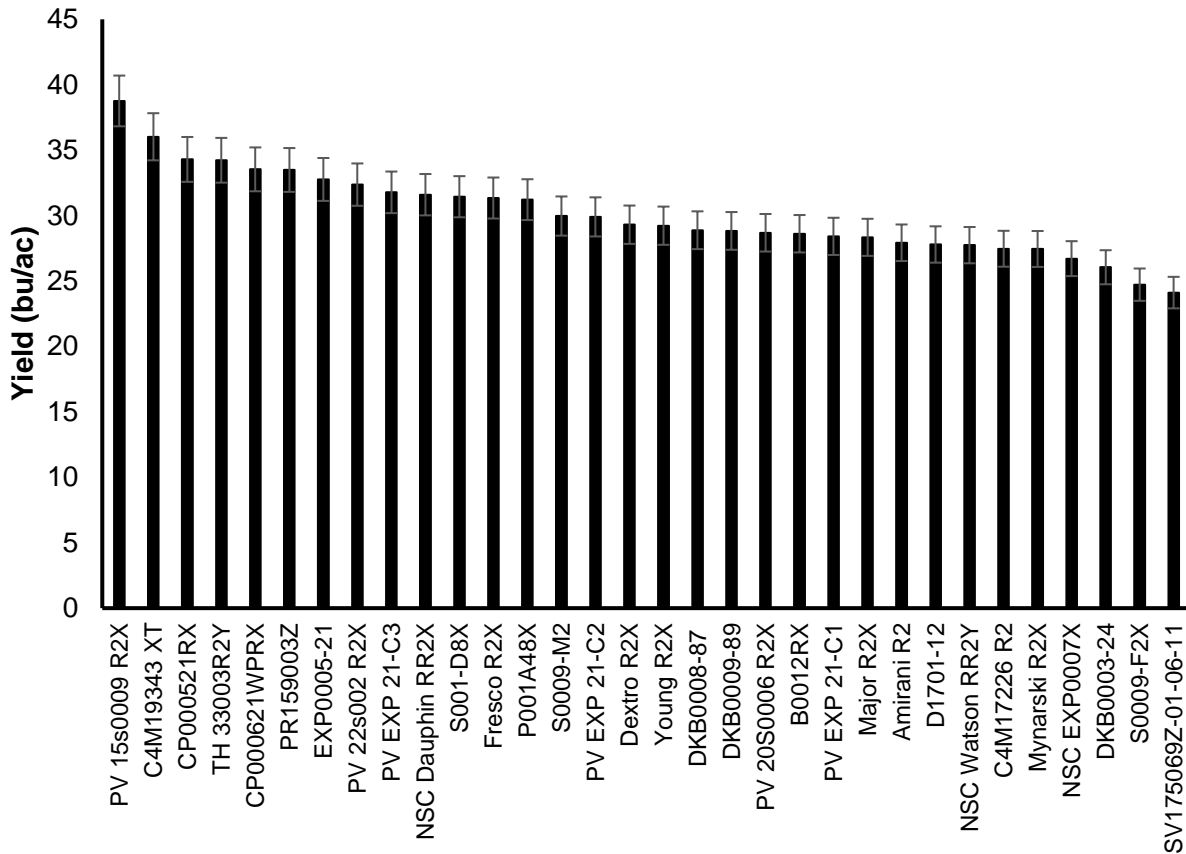


Figure 2: Average yield for short season soybean entries

Table 1: Comparison of yield means and statistical difference for long season soybean entries (varieties connected by the same letter are statistically significant)

Variety	Statistical significance for yield							Yield (bu/ac)
P001A48X	A							47.70
NSC EXP001LX	A	B						45.74
TH 33003R2Y	A	B	C					42.19
P003A97X	A	B	C	D				41.60
S001-D8X	A	B	C	D	E			40.60
B0012RX	A	B	C	D	E			40.46
CW1760277	A	B	C	D	E	F		37.82
CP001WPRX	A	B	C	D	E	F		36.83
P005A27X	A	B	C	D	E	F		36.15
S007-Y4	A	B	C	D	E	F		36.01
C4M19343 XT	A	B	C	D	E	F		35.34
P006A37X	A	B	C	D	E	F		34.97
PV EXP 21-C3	A	B	C	D	E	F	G	34.62
DKB002-32	A	B	C	D	E	F	G	34.57
PV 22s002 R2X	A	B	C	D	E	F	G	32.76
D1701-12		B	C	D	E	F	G	31.91
S003-Z4X		B	C	D	E	F	G	31.77
NSC EXP001PX		B	C	D	E	F	G	31.56

PR159000Z		B	C	D	E	F	G	31.54
CP000521RX		B	C	D	E	F	G	31.53
Sunna R2X		B	C	D	E	F	G	31.13
Amirani R2			C	D	E	F	G	30.12
CP000621WPRX			C	D	E	F	G	29.48
Dextro R2X			C	D	E	F	G	29.36
NSC Watson RR2Y			C	D	E	F	G	29.22
NSC Redvers RR2X			C	D	E	F	G	27.65
B0041RX			C	D	E	F	G	27.62
Akras R2			C	D	E	F	G	26.61
C4M21433 XT				D	E	F	G	26.29
Mahoney R2					E	F	G	25.90
C4M17226 R2						F	G	24.78
Hart R2X							G	19.03
LSD								15.62
% CV								30.24

Table 2: Comparison of yield means and statistical difference for short season soybean entries (varieties connected by the same letter are statistically significant)

Variety	Statistical significance for yield								Yield (bu/ac)
PV 15s0009 R2X	A								38.76
C4M19343 XT	A	B							36.03
PV EXP 21-C3	A	B	C						35.48
S001-D8X	A	B	C	D					35.26
Young R2X	A	B	C	D	E				34.95
CP000521RX	A	B	C	D	E	F			34.30
CP000621WPRX	A	B	C	D	E	F	G		33.53
PR159003Z	A	B	C	D	E	F	G		33.49
EXP0005-21	A	B	C	D	E	F	G	H	32.76
TH 33003R2Y	A	B	C	D	E	F	G	H	32.62
PV 22s002 R2X	A	B	C	D	E	F	G	H	32.37
NSC Dauphin RR2X	A	B	C	D	E	F	G	H	31.59
Fresco R2X	A	B	C	D	E	F	G	H	31.34
P001A48X	A	B	C	D	E	F	G	H	31.22
S0009-M2	A	B	C	D	E	F	G	H	31.20
Dextro R2X		B	C	D	E	F	G	H	29.30
DKB0008-87		B	C	D	E	F	G	H	28.88
DKB0009-89		B	C	D	E	F	G	H	28.83
PV 20S0006 R2X		B	C	D	E	F	G	H	28.69
B0012RX		B	C	D	E	F	G	H	28.61
PV EXP 21-C1		B	C	D	E	F	G	H	28.41
Major R2X		B	C	D	E	F	G	H	28.34
Amirani R2			C	D	E	F	G	H	27.93
S0009-F2X			C	D	E	F	G	H	27.82
D1701-12			C	D	E	F	G	H	27.79
NSC Watson RR2Y			C	D	E	F	G	H	27.74

SV175069Z-01-06-11				D	E	F	G	H	27.73
C4M17226 R2					E	F	G	H	27.47
Mynarski R2X					E	F	G	H	27.45
NSC EXP0007X						F	G	H	26.71
DKB0003-24							G	H	26.05
PV EXP 21-C2								H	25.67
LSD	7.75								
% CV	16.75								

Materials and methods

Experimental Design: Random Complete Block
 Entries: 32 long season entries and 32 short season entries; 3 replications
 Seeding: May 4
 Harvest: Sept 22

Data collected: Date collected
 % Plant Stand: Jun 16
 Maturity: Sep 22
 Yield: Oct 26
 Moisture: Oct 26

Agronomic info

Previous year's crop: Oat Silage
 Soil Type: Erickson Clay Loam
 Landscape: Rolling with trees to the east
 Seedbed preparation: Vertical tilled

Table 3: Spring 2021 Soil Test

	Available	Added	Type
N	120 lb/ac	-	-
P	48 ppm	10 lb/ac	11-52-0-0
K	674 ppm	-	-

Inoculant added with seed; P banded with seed

Table 4: Pesticide Application

Crop stage	Date	Product	Rate
Pre-emerge	May 26	RoundUp	640 ml/ac
		Heat	28.0 g/ac
In-crop	Jul 22	UAN 28%	800 ml/ac
		Viper	400 ml/ac
Desiccant	Sep 22	Reglone	670 ml/ac
		LI700	250 ml/ac