



UNIVERSITY OF
SASKATCHEWAN

VEGETABLE CULTIVAR AND CULTURAL TRIALS 2008

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Saskatchewan
Agriculture
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Potato Variety Trials

This long term trial evaluates the yield and quality of standard potato varieties relative to some recently introduced types under Saskatchewan growing conditions. Trials are conducted on irrigated land in Saskatoon. Varieties are planted side-by-side in 20 m long rows with an in-row spacing of 25 cm and 1 m between rows. Nitrogen is applied 50:50 preplant and just prior to row closure (150 #/acre total). Phosphorus is band-applied at seeding (120 #/acre total). Standard pest control measures are employed. The trial is planted in mid-May and harvested 90 (early) and 120 (final) days later. Crop vigour and disease reactions are monitored throughout the season. The crop is graded and rated for yields, appearance, disease reactions and specific gravities.

Long term average data is based on at least 6 site years of tests conducted from 1991 onwards.

The growing conditions during May and June of 2008 were cooler than normal while conditions for the remainder of the season were more favorable. Yields at the 90 day harvest were about normal in 2008, while yields at 120 days were above normal.

Performance of SSPGA varieties and other new releases

Pacific Russet - this new release from the Prairie Potato Breeding Consortium is targeted at the fresh market. Although Pacific Russet normally out yields Norkotah at both 90 and 120 days, it did not perform up to expectations in the 2008 trial.

Peregrine Red - this SSPGA exclusive line continues to show exceptional yield potential at both 90 and 120 days. Peregrine has a very dark red skin color, small uniform tubers and superior storage characteristics. Peregrine appears to be more scab sensitive than Norland but more resistant than Pontiac.

GemStar - this new processing variety released by the potato improvement program of Washington State appears to be well adapted to SK growing conditions, producing exceptionally high yields of uniform large tubers if it is allowed to bulk through until early September.

This trial is supported by the Agriculture Development Fund of Saskatchewan Agriculture and Food.

U of S Potato Cultivar Trials

	LONG-TERM AVERAGE		2008 RESULTS				LONG-TERM AVERAGE				
	Marketable Yield (t/a)	Specific Gravity	Marketable Yield (t/a)		Specific Gravity		Uniformity	Eye Depth	Skin Colour	Flesh Colour	Scab %
			Early	Final	Early	Final					
RUSSETS											
Pacific Russet	18.7	1.083	13.7	15.8	1.080	1.084	Good	S	R	W	trace
Amisk / Ranger	18.0	1.092	16.5	22.4	1.095	1.096	Good	S	R	W/Y	10
Russet Burbank	16.9	1.086	10.9	16.9	1.079	1.084	Medium	M	R	W/Y	5
Gemstar	20.0	1.091	11.2	20.0	1.086	1.090	Good	S	R	W	trace
Goldrush	18.9	1.083	15.8	19.3	1.080	1.092	Good	S	R	W	trace
Norkotah	18.4	1.081	15.8	17.3	1.071	1.075	Very Good	M	R	W/Y	8
Shepody	18.3	1.082	12.9	17.2	1.078	1.078	Good	S	L R	W/Y	21
Umatilla	19.9	1.090	13.1	16.9	1.081	1.086	Good	S	R	W/Y	trace
REDS											
Peregrine Red	22.9	1.083	20.2	23.2	1.075	1.081	Good	S	D Red	W	25
Cherry Red	19.7	1.088	16.2	17.4	1.088	1.091	Medium	S	D Red	W	18
Chieftain	21.8	1.079	11.7	23.1	1.062	1.076	Good	M	Red	W	14
Norland	20.7	1.072	18.8	22.6	1.063	1.075	Medium	M	Red	W	12
DR Norland	20.3	1.074	18.7	19.5	1.071	1.073	Medium	M	D Red	W/Y	8
Pontiac	24.1	1.075	-	-	-	-	Medium	D	Red	W/Y	32
Sangre	21.5	1.076	12.1	17.5	1.070	1.078	Good	M	D Red	W	15
Viking	21.2	1.074	8.8	23.3	1.074	1.078	Medium	S	Red	W	14
CHIPPERS											
Atlantic	21.0	1.095	-	-	-	-	Good	S	L R	W/Y	20
Snowden	19.3	1.095	-	-	-	-	Medium	M	L R	W/Y	14
OTHER											
AC Ptarmigan	22.7	1.073	12.9	26.3	1.065	1.069	Good	S	L R	W/Y	15
Alpha	17.5	1.098	5.5	16.3	1.095	1.103	Medium	S	L R	Y	14
Bintje	20.2	1.088	17.0	19.1	1.075	1.091	Good	M	W	Y	12
Yukon Gold	20.8	1.093	15.9	23.3	-	1.094	Good	M	W	Y	12

Early and Late = 90 and 120 days respectively.

Eye Depth : S=Shallow, M=Medium, D=Deep

Colour: D Red=Dark red, R=Russet, W=White, Y=Yellow, L=Light

Marketable Yield/Specific Gravity: Early=90 days after planting, Late=120 days after planting

Scab % = % of surface area of tuber affected on average