UNIVERSITY OF SASKATCHEWAN

VEGETABLE CULTIVAR AND CULTURAL TRIALS 2006

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Saskatchwan Agriculture and Food

POTATO VARIETY TRIALS

This 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 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 through early July of 2006 were excellent, resulting in good early yields. Consistent heat in August and early September reduced yields at 120 days but increased tuber dry matter content. The 120 day harvest of some varieties was pre-empted by plot raiders. Scab ratings are trending down - reflecting the move to a less scab infested site as of 2003.

Performance of SSPGA varieties

AC Pacific Russet - This new release from the Prairie Potato Breeding Consortium produced good yields at the 90 day harvest. The 120 day harvest was lost, but in adjacent trials this variety out-yielded Norkotah by 10% at 120 days. Pacific Russet is targeted at the fresh market.

AC Peregrine Red - This SSPGA exclusive line continues to show exceptional yield potential, red skin color and quality if grown to maturity (120 days).

This trial is supported by the University of Saskatchewan

U OF S POTATO CULTIVAR TRIALS

	LONG-TERM AVERAGE		2006 RESULTS				LONG-TERM AVERAGE				
			Marketable Yield (t/a)		Specific Gravity						
	Marketable Yield (t/a)	Specific Gravity	Early	Final	Early	Final	Uniformity	Eye Depth	Skin Colour	Flesh Colour	Scab %
RUSSETS											
AC Pacific Russet	19.0	1.081	13.9	n/a	1.073	1.084	Good	S	R	W	trace
Amisk	17.8	1.091	13.6	n/a	1.081	n/a	Good	S	R	W/Y	16
Burbank	16.9	1.086	9.9	19.8	1.075	1.093	Medium	M	R	W/Y	5
Gemstar	20.8	1.092	10.1	n/a	1.079	1.097	Good	S	R	W	trace
Goldrush	19.0	1.082	14.2	21.5	1.079	1.100	Good	S	R	W	trace
Norkotah	18.5	1.081	12.6	18.2	1.073	1.084	Very Good	M	R	W/Y	11
Shepody	18.6	1.081	10.1	19.9	1.069	1.089	Good	S	L R	W/Y	28
Umatilla	21.6	1.091	17.9	n/a	1.080	1.081	Good	S	R	W/Y	trace
REDS											
AC Peregrine	23.4	1.083	14.8	25.5	1.078	1.091	Good	S	D Red	W	21
Cherry Red	19.9	1.086	18.7	19.9	1.085	1.095	Medium	S	D Red	W	16
Chieftain	22.1	1.079	11.8	22.8	1.076	1.091	Good	M	Red	W	18
Norland	20.7	1.071	18.5	20.2	1.072	1.076	Medium	M	Red	W	10
DR Norland	21.0	1.073	19.1	n/a	1.073	1.076	Medium	M	D Red	W/Y	8
Pontiac	23.6	1.074	15.4	25.8	1.063	1.085	Medium	D	Red	W/Y	37
Sangre	21.7	1.075	16.3	21.0	1.066	1.076	Good	M	D Red	W	19
Viking	21.5	1.074	18.3	24.6	1.074	1.086	Medium	S	Red	W	14
CHIPPERS											
Atlantic	21.2	1.095	13.9	22.7	1.086	1.112	Good	S	L R	W/Y	20
Snowden	19.8	1.095	18.5	22.9	1.091	1.108	Medium	M	L R	W/Y	14
OTHER											
AC Ptarmigan	22.6	1.073	13.6	19.3	1.067	1.077	Good	S	L R	W/Y	19
Alpha	17.6	1.097	9.7	23.2	1.078	1.101	Medium	S	L R	Y	14
Bintje	20.3	1.088	24.2	26.7	1.077	1.085	Good	M	W	Y	12
Yukon Gold	21.4	1.093	15.6	17.7	1.084	1.096	Good	M	W	Y	19

n/a = **Final yields in 2006 lost to theft.**
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