



UNIVERSITY OF
SASKATCHEWAN

VEGETABLE CULTIVAR AND CULTURAL TRIALS 2007

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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 and June of 2007 were excellent, however, July was exceptionally hot, which reduced yields and negatively affected tuber appearance. Yields at the 90 day harvest were above normal in 2007, while yields at 120 days were below normal.

Performance of SSPGA varieties

Pacific Russet - this new release from the Prairie Potato Breeding Consortium is targeted at the fresh market. Pacific Russet out-yielded Norkotah at both the 90 and 120 day harvests.

Peregrine Red - this SSPGA exclusive line continues to show exceptional yield potential, red skin color and small uniform tubers. Sloughing and scab caused problems in 2007, perhaps reflecting the exceptionally warm conditions in July.

This trial is supported by the University of Saskatchewan

U of S Potato Cultivar Trials

| | Long-term Average | | 2007 Results | | | | Long-term Average | | | | |
|-----------------|------------------------|---------------|------------------------|-------|------------------|-------|-------------------|-----------|------------|-------------|--------|
| | Marketable Yield (t/a) | Spec. Gravity | Marketable Yield (t/a) | | Specific Gravity | | Uniformity | Eye Depth | Skin Color | Flesh Color | Scab % |
| | | | Early | Final | Early | Final | | | | | |
| RUSSETS | | | | | | | | | | | |
| Pacific Russet | 19.5 | 1.082 | 13.7 | 20.8 | 1.086 | 1.086 | Good | S | R | W | trace |
| Amisk/ Ranger | 177 | 1.091 | 12.0 | 15.0 | 1.092 | 1.100 | Good | S | R | W/Y | 10 |
| Russet Burbank | 16.9 | 1.086 | 13.6 | 16.9 | 1.081 | 1.088 | Medium | M | R | W/Y | 5 |
| Gemstar | 20.0 | 1.091 | 10.7 | 17.8 | 1.086 | 1.089 | Good | S | R | W | trace |
| Goldrush | 18.9 | 1.083 | 16.3 | 17.3 | 1.080 | 1.092 | Good | S | R | W | trace |
| Norkotah | 18.5 | 1.081 | 13.2 | 17.6 | 1.078 | 1.080 | Very Good | M | R | W/Y | 8 |
| Shepody | 17.3 | 1.081 | 11.4 | 16.1 | 1.087 | 1.086 | Good | S | LR | W/Y | 21 |
| Umatilla | 20.4 | 1.090 | 10.2 | 13.4 | 1.080 | 1.084 | Good | S | R | W/Y | trace |
| REDS | | | | | | | | | | | |
| Peregrine Red | 22.9 | 1.083 | 18.5 | 19.7 | 1.078 | 1.084 | Good | S | DRed | W | 25 |
| Cherry Red | 20.0 | 1.088 | 12.6 | 19.9 | 1.090 | 1.095 | Medium | S | DRed | W | 18 |
| Chieftain | 22.2 | 1.079 | 14.5 | 23.1 | 1.076 | 1.081 | Good | M | Red | W | 14 |
| Norland | 20.6 | 1.071 | 18.2 | 19.5 | 1.075 | 1.081 | Medium | M | Red | W | 12 |
| DR Norland | 20.7 | 1.073 | 16.6 | 17.1 | 1.075 | 1.081 | Medium | M | DRed | W/Y | 8 |
| Pontiac | 24.1 | 1.075 | 22.2 | 30.5 | 1.078 | 1.078 | Medium | D | Red | W/Y | 32 |
| Sangre | 21.8 | 1.075 | 17.6 | 23.4 | 1.073 | 1.080 | Good | M | DRed | W | 15 |
| Viking | 21.1 | 1.074 | 10.9 | 15.5 | - | 1.080 | Medium | S | Red | W | 14 |
| CHIPPERS | | | | | | | | | | | |
| Atlantic | 21.0 | 1.095 | 14.4 | 18.9 | 1.095 | 1.097 | Good | S | LR | W/Y | 20 |
| Snowden | 19.3 | 1.095 | 11.5 | 14.2 | 1.087 | 1.096 | Medium | M | LR | W/Y | 14 |
| OTHER | | | | | | | | | | | |
| AC Ptarmigan | 22.4 | 1.073 | 15.7 | 19.8 | 1.074 | 1.076 | Good | S | LR | W/Y | 15 |
| Alpha | 17.6 | 1.097 | 8.6 | 17.9 | 1.081 | 1.094 | Medium | S | LR | Y | 14 |
| Bintje | 20.3 | 1.088 | - | - | - | - | Good | M | W | Y | 12 |
| Yukon Gold | 20.5 | 1.093 | 14.2 | 15.2 | 1.088 | 1.091 | 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