



# VEGETABLE CULTIVAR AND CULTURAL TRIALS 2005

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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 5-10 site years of tests conducted from 1991 through 2004.

The growing conditions in 2005 were generally favorable for potatoes. Yields were well above average except where damage occurred due to late season flooding. Specific gravities were about average. Scab ratings are trending down - reflecting the change over a less scab infested test site in 2003.

### **Noteworthy new varieties**

- |                   |   |
|-------------------|---|
| Gemstar           | - this new release out of the Pacific Northwest appears to have excellent yield potential at 120 days. A large average tuber size and high specific gravity at maturity makes Gemstar well-suited for processing. |
| AC Pacific Russet | - this new release from the Prairie Potato Breeding Consortium again produced exceptionally good yields at the 90 day harvest. This variety is targeted at the fresh market.                                      |
| AC Peregrine Red  | - another release from the Prairie Potato Breeding Consortium, AC Peregrine 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      |                  | 2005 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 |                   |           |             |              |        |
| <b>RUSSETS</b>    |                        |                  |                        |       |                  |       |                   |           |             |              |        |
| AC Pacific Russet | -                      | -                | 16.1                   | -     | 1.076            | 1.083 | Good              | S         | R           | W            | trace  |
| Amisk             | 17.8                   | 1.091            | 11.3                   | 19.1  | 1.080            | 1.089 | Good              | S         | R           | W/Y          | 16     |
| Burbank           | 16.7                   | 1.085            | 8.5                    | -     | 1.072            | 1.081 | Medium            | M         | R           | W/Y          | 5      |
| Gemstar           | 20.8                   | 1.090            | 14.0                   | 28.1  | 1.082            | 1.085 |                   |           |             |              | trace  |
| Goldrush          | 18.8                   | 1.081            | 14.0                   | 23.2  | 1.079            | 1.080 | Good              | S         | R           | W            | trace  |
| Norkotah          | 18.5                   | 1.080            | 13.4                   | -     | 1.073            | 1.083 | Very Good         | M         | R           | W/Y          | 11     |
| Shepody           | 18.5                   | 1.081            | 12.8                   | -     | 1.071            | 1.074 | Good              | S         | L R         | W/Y          | 28     |
| Umatilla          | 21.6                   | 1.092            | 17.9                   | 27.4  | 1.080            | 1.093 | Good              | S         | R           | W/Y          | trace  |
| <b>REDS</b>       |                        |                  |                        |       |                  |       |                   |           |             |              |        |
| AC Peregrine      | 23.0                   | 1.082            | 17.1                   | 27.3  | 1.078            | 1.083 | Good              | S         | D Red       | W            | 21     |
| Cherry Red        | 20.1                   | 1.087            | 12.9                   | 27.0  | 1.081            | 1.083 | Medium            | S         | D Red       | W            | 16     |
| Chieftain         | 22.0                   | 1.078            | 14.4                   | 24.2  | 1.081            | 1.083 | Good              | M         | Red         | W            | 18     |
| Norland           | 20.7                   | 1.070            | 19.3                   | 27.2  | 1.079            | 1.079 | Medium            | M         | Red         | W            | 10     |
| DR Norland        | 21.0                   | 1.073            | 13.1                   | -     | 1.079            | 1.081 | Medium            | M         | D Red       | W/Y          | 8      |
| Pontiac           | 23.5                   | 1.073            | 11.2                   | 30.7  | 1.068            | 1.075 | Medium            | D         | Red         | W/Y          | 37     |
| Sangre            | 21.8                   | 1.075            | 15.1                   | 27.4  | 1.067            | 1.076 | Good              | M         | D Red       | W            | 19     |
| Viking            | 21.2                   | 1.072            | 13.0                   | 28.3  | 1.072            | 1.078 | Medium            | S         | Red         | W            | 14     |
| <b>CHIPPERS</b>   |                        |                  |                        |       |                  |       |                   |           |             |              |        |
| Atlantic          | 21.0                   | 1.094            | 11.7                   | 22.9  | 1.095            | 1.105 | Good              | S         | L R         | W/Y          | 20     |
| Snowden           | 19.4                   | 1.094            | 16.7                   | -     | 1.089            | 1.090 | Medium            | M         | L R         | W/Y          | 14     |
| <b>OTHER</b>      |                        |                  |                        |       |                  |       |                   |           |             |              |        |
| AC Ptarmigan      | 23.0                   | 1.072            | 14.6                   | 26.3  | 1.072            | 1.077 | Good              | S         | L R         | W/Y          | 19     |
| Alpha             | 17.0                   | 1.097            | 12.4                   | 24.1  | 1.083            | 1.096 | Medium            | S         | L R         | Y            | 14     |
| Bintje            | 19.6                   | 1.088            | 15.4                   | 20.8  | 1.076            | 1.090 | Good              | M         | W           | Y            | 12     |
| Yukon Gold        | 21.1                   | 1.093            | 15.8                   | 25.9  | 1.086            | 1.094 | Good              | M         | W           | Y            | 19     |

**Early and Late** = 90 and 120 days respectively. **Final yields in 2005 lost to flooding.**

**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