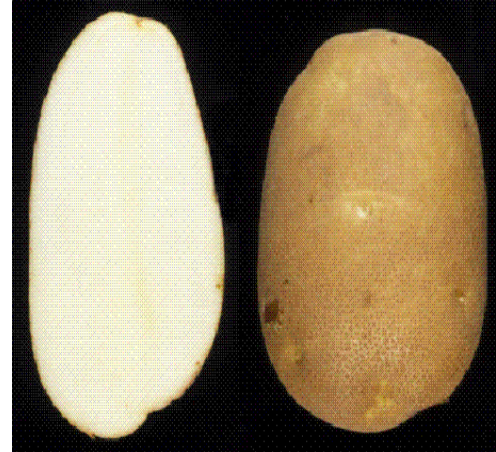


Pacific Russet (VO168-3)

Pedigree and Description

Pacific Russet (VO168-3) was derived from a cross made in 1987 at the Lethbridge Research Center between NDA 8694-3 and Century Russet. This line was evaluated in Western Canada Region Trials, the U.S. North Central Potato Trials and in trials conducted in central Canada from 1988 through 2002. The variety was licenced to the Saskatchewan Seed Potato Growers' Association Inc. (SSPGA) and the Alberta Seed Potato Inc. The variety was protected under Plant Breeders Rights in 2002 and was registered in Canada in 2003. The variety has been evaluated in commercial production and storage trials since 2005.



PACIFIC RUSSET

Description

Tubers

Tubers of Pacific Russet are oblong, with a brown russet skin and uniformly spaced shallow eyes. The flesh is white/cream. Tuber appearance and size distribution are uniform and tuber deformities are rare. Tuber number per plant is comparable to Russet Norkotah. Specific gravities for Pacific Russet averaged over > 20 site years of testing are 1.076, as compared to 1.086 for Russet Burbank and 1.080 for Russet Norkotah. Pacific Russet sizes up quickly, resulting in a large average tuber size profile.

Plants

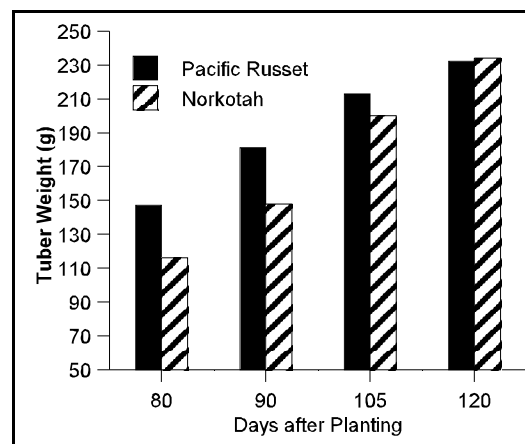
Pacific Russet emerges quickly to produce semi-erect, medium height, early maturing plants. Natural die-off of the tops is common after 120 days in the field. Skin set is excellent within two weeks of vine maturity or top kill.

Yields

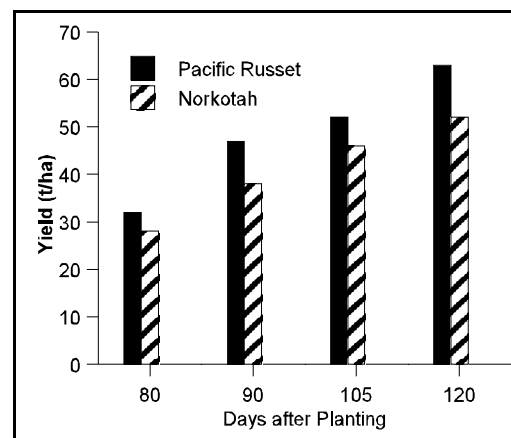
During > 30 site years of evaluation in trials conducted across Canada and the northern U.S., marketable yields of Pacific Russet were consistently much superior to Russet Burbank and equal to or superior to Russet Norkotah at all harvest dates.

Uses

Pacific Russet represents an early maturing, high yielding alternative to Russet Norkotah in the table stock market. Pacific Russet is comparable to Russet Norkotah in terms of appearance and freedom from defects and is superior in



Average tuber size of Pacific Russet (2004-2008).



Yield profile of Pacific Russet (2005-2010).

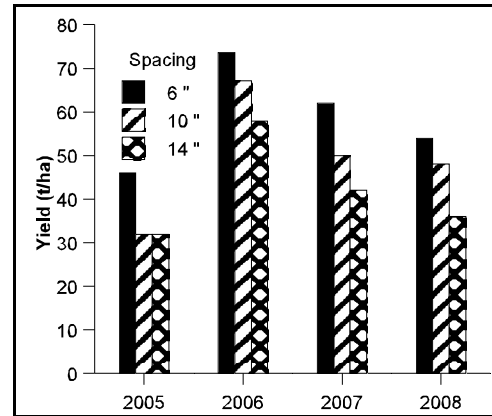
flavor and other cooking characteristics.

Reactions to Diseases and Disorders

Pacific Russet is resistant to common scab but susceptible to fusarium dry rot. It is susceptible to both foliar and tuber infection by late blight. Pacific Russet has few tuber deformities (cracks, knobs and hollow heart), resulting in excellent pack out.

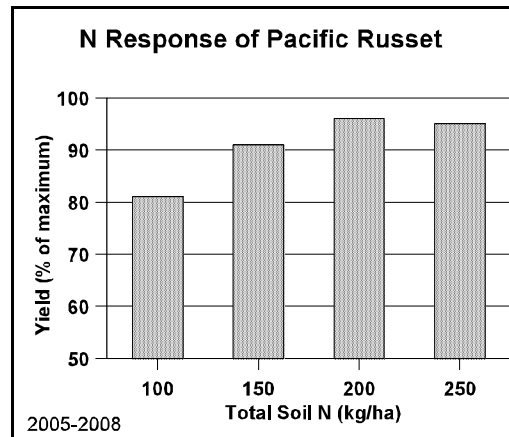
Production Recommendations

Production practices used for Russet Norkotah should work well for Pacific Russet. As Pacific Russet is earlier maturing with a larger tuber profile than Russet Norkotah, growers should consider management practices that increase yields while controlling tuber size. Spacing trials showed a definite yield and tuber size advantage from closer spacing (10" or less) under irrigation.



In-row spacing response of Pacific Russet

Trials conducted in Alberta indicate very limited N fertilizer responses for Pacific Russet, with maximum yields achieved at 100 kg N/ha. Trials in Saskatchewan suggest some yield benefit of applying higher rates of pre-plant N.



Registration trials for Pacific Russet suggested that it was more drought tolerant than Russet Norkotah, particularly if the water stress occurs later in the growing season. However, yield comparisons for dryland versus irrigated production conducted in Saskatchewan from 2001-2010 suggest that Pacific Russet may be more sensitive to drought stress than Norkotah. However, it should be emphasized that dryland yields of Pacific Russet are still equal or superior to Russet Norkotah.

Percent yield reduction due to drought stress for Pacific Russet compared to Russet Norkotah

| | 2001 | 2004 | 2005 | 2006 | 2007 | 2008 | 2010 | Avg |
|-----------------------|------|------|------|------|------|------|------|-----|
| Pacific Russet | 90 | 42 | 25 | 52 | 43 | 64 | 9 | 46 |

| | 2001 | 2004 | 2005 | 2006 | 2007 | 2008 | 2010 | Avg |
|------------------------|------|------|------|------|------|------|------|-----|
| Russet Norkotah | 95 | 44 | 29 | 38 | 21 | 58 | 3 | 41 |

* Yield reduction = 1-(dryland yields/irrigated yields)*100.

For more information on Pacific Russet see:

D. R. Lynch, L. M. Kawchuk, Q. Chen, J. Wahab, M. Korschuh, D. Waterer, J. Holley, D. K. Fujimoto, D. Driedger and H. Wolfe, et al. (2004). **Pacific Russet: An early maturing, attractive russet cultivar with excellent culinary quality.** Amer. J. Potato Res. 81:235-241.

<http://www.springerlink.com/content/183p0m2228qr1140/>

CFIA Varietal Description for **Pacific Russet** -

<http://www.inspection.gc.ca/english/plaveg/potpom/var/pacificrusset/pacificse.shtml>