



TETON RUSSET

A dual purpose, early russet with good yield, high protein and Vitamin C



SUMMARY

Teton Russet (A0008-ITE) emerged as a standout in the 2009 Potato Cultivar Evaluations by the WSU Potato Research Group. A cross of Blazer Russet and Classic Russet, it excels in both fresh markets and processing. Performing impressively in early and late trials across the Pacific Northwest, it outperformed other clones, yielding high-quality US Number Ones. Its combined merit score surpassed Ranger, Russet Burbank, and Russet Norkotah. Sporting oblong tubers with moderate russet and shallow eyes, it produces uniformly light-colored fries. Suited for both fresh packing and processing, its specific gravity resembles Russet Burbank's, but slightly lower than Ranger Russet. Resistant to dry rot yet vulnerable to soft rot and shatter bruising, managing hollow heart is essential based on the Idaho trial.

SPECIAL CONSIDERATIONS

Teton Russet typically produces a low tuber set (~ 1 less tuber/plant than R. Burbank and R. Norkotah) and has the potential to produce large tubers. In-row spacing and nitrogen management are crucial to produce a profit maxing tuber size profile. Teton Russet is an early- to mid-harvest variety and is typically finished growing about 130-140 days after planting; this is, however, dependent on the climate and planting date. Yields at 100-110 days after planting are similar or slightly higher than standard Russet Norkotah, but note that the tubers are generally 1-2 oz heavier on average if planted at the same in-row spacing as Russet Norkotah. Teton Russet should be handled as gently as possible to minimize bruising and skinning. Irrigation rates should be gradually reduced during the last couple of weeks prior to vine kill to about 65% ASM to allow tuber hydration to decrease to an intermediate level during skin set. This will also minimize the potential for producing swollen, open lenticels that can provide entry points for disease organisms.

To minimize shatter bruise and skinning:

- Complete N fertilizer applications at least 30 days prior to harvest.
- Tubers should be allowed to dry to a moderate moisture level (medium turgidity –not firm or well hydrated but not flaccid where the surface is easily depressed)
- Warm temperatures and moderate soil moisture facilitate dehydrating tubers
- Allow at least 21 days after vine kill prior to harvest
- If possible, irrigate a few days prior to harvest to reduce bruising from clods, etc.

DISEASE RATINGS

RESISTANT

- Common Scab
- Dry Rot

MODERATELY RESISTANT

- Corky Ringspot
- Net Necrosis

MODERATELY SUSCEPTIBLE

- PVY
- PLRV
- Late Blight Tuber



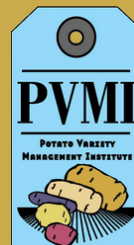
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- It is best to harvest tubers when pulp temperature is warm, but not greater than 60°F to minimize disease development

Seed Size: 1.5 to 3 oz

Row Spacing: 34 inches

Planting Depth: 8 inches – top of seed piece to top of hill.

Alternatively, 4 inches below level soil or 2 inches below furrow.

FRESH MARKET

* These recommendations are based on performance of Teton Russet in the Columbia Basin.

For harvest between early and late-July (~ 90-110 Days After Planting), space Teton Russet at 12 inches in-row. For harvest between early August to early September, plant seed pieces 10 inches apart within the row. For all harvest dates, fertilize as you would for Classic Russet early harvest with 200-250 lbs N/A, including pre-plant soil residual N. Ap- proximately 125-150 lbs N (soil residual + applied) should be available at emergence in the root zone. Apply the remaining N throughout June via overhead irrigation. N should be applied through the irrigation water so that petiole NO₃ is at or above 20,000 ppm and total soil N above 50 lbs/A at 60 DAP (mid June, end of tuber initiation). At approximately 90-100 days after planting (early July, early bulking), petioles should be below 20,000 ppm and soil N should be below 50 lbs/A. Petioles should be allowed to decline at least 30 days prior to harvest with values below 12,000 ppm at late bulking (approx. 125 DAP, end of July). Leaves will curl and start to decline in mid August. Avoid excessive, lush early growth to prevent hollow heart.

PROCESS MARKET

Use fresh market in-row spacing and fertilize recommendations as described above.

WATER MANAGEMENT

Irrigate similar to Russet Burbank. Maintain ASM between 65%-85% from full emer- gence until late bulking (mid-July, August), reduce to 60%-65% as vines start to se- nesce. Avoid excessive soil moisture from mid to late bulking

OTHER NUTRIENT MANAGEMENT

Nutrients should be maintained similar to the Russet Burbank recommendations in:

Lang, N.S., R.G. Stevens, R.E. Thornton, W.L. Pan, and S. Victory. 1999. Nutrient Management Guide: Central Wash- ington Irrigated Potatoes. Washington State University Experiment Station Extension Bulletin EB1882.

ORGANIC PRODUCTION

Specific recommendations have not been established. However, research has suggested that Teton Russet is efficient with Nitrogen and as a result will likely do well under organic production.

STORAGE CHARACTERISTICS

Store at 47 - 48° to avoid sugar development. Teton Russet was tested in the Kimberly Potato Storage Variety Trial for its first year in 2009-10. Results of this first year of testing indicate that dormancy length in Teton Russet is approximately 30-40 days shorter than Russet Burbank, depending upon storage temperature. Teton Russet had a dormancy length in 45°F storage of approximately 105 days as compared to 135 for Russet Burbank. Teton Russet had significantly lower susceptibility to Fusarium dry rot as compared to Russet Burbank. Percent glucose in Teton Russet was generally higher than Russet Burbank at 42 and 45 storage temperatures, but lower than Russet Burbank when stored at 48°F. Fry color values for Teton Russet were dark (≤USDA 2) out of storage at 42 and 45°F. At 48°F, fry color values were USDA 1 – 2 throughout the nine months of storage for Teton Russet and were lighter than those for Russet Burbank. Teton Russet had a lower incidence of sugar end (darker fry color at the stem end of the tuber) than Russet Burbank. Mean percent weight loss in Teton Russet after nine months of storage was equivalent to that of Russet Burbank at 5.1% (average of three storage temperatures).