

Mountain Gem Russet A03158-2TE

A long, medium to late maturity,
fresh market or early process russet

- High Yields early and late season
- Excellent Culinary Qualities
- Good Disease Resistance
- A98292-2 X A98104-4

Disease Ratings

Early dying	mod susceptible
Common Scab	resistant
PVY	very susceptible
PLRV	very susceptible
PVX	very susceptible
Net Necrosis	mod susceptible
Soft rot	mod resistant
Dry Rot	susceptible
Late Blight Foliar	susceptible
Late Blight Tuber	resistant

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Mountain Gem Russet is a medium to late maturing variety with both high early and full season yields of oblong-long, medium-russeted tubers having higher protein content than those of standard potato varieties. **Mountain Gem** has greater resistance to tuber late blight, tuber malformations and most internal and external defects than **Russet Burbank (RB)**. **Mountain Gem** maintains acceptable reducing sugar concentrations and fry quality when stored at 48°F and has good potential for early processing. **Mountain Gem**'s high early and late season total and U.S. No. 1 yields, coupled with excellent culinary and nutritional qualities, make it an excellent candidate for fresh market production. A potential replacement for **Russet Norkotah (RN)**, an early harvest fresh variety widely grown in the U.S.

Tuber Yield and Quality:

Mountain Gem produces oblong-long tubers with brown, russet skin with a high number of eyes that are intermediate in depth and are evenly distributed. Tuber set is low, and average tuber size is large

In early harvest trials in Idaho, Oregon and Washington, **Mountain Gem** produced higher average total yields than **RR**, **RB**, and **RN** at all locations, except for **RR** in eastern Idaho. U.S. No. 1 yields were higher for **Mountain Gem** than the other varieties at all locations. Percent US No. 1 tubers ranged from 74-89%, which was higher than the standard varieties at nearly all locations. Yields of tubers greater than 10 oz for **Mountain Gem** were consistently higher than **RB** and **RN** at all early harvest locations, and were equal to or higher than **RR**.

In full season trials in the Tri-States, **Mountain Gem** produced the highest total yields in all locations except Oregon, where its average total yield was slightly lower than **RB**. **Mountain Gem** had the highest average U.S. No. 1 yields and percentage of U.S. No. 1 tubers and also had the highest yields of tubers greater than 10 oz at all locations.

Defects and Disease Reactions:

Mountain Gem shows some susceptibility to growth cracks but reasonably good resistance to second growth with resistance similar to that of **RN**. Its susceptibility to shatter bruise is slightly greater than **RR** and **RN** but slightly less than **RB**. **Mountain Gem** was less susceptible to blackspot bruise than all of the standard varieties evaluated in these trials. Average percent hollow heart incidence is less than Russet Burbank and Russet Norkotah but greater than **RR**. However, significant amounts of hollow heart have occasionally been observed at some locations, thought to be a consequence of **Mountain Gem's** propensity to produce large tubers.

Mountain Gem susceptibility to most diseases is similar to **RB**, except it has greater resistance to tuber late blight. Compared to **RN** it has greater resistance to tuber late blight but greater susceptibility to dry rot. There is also preliminary evidence that it may have greater resistance to selected PVY necrotic strains than **RB** and **RN**, but it is susceptible to PVY^o strain.

Storage Notes:

Dormancy length of **Mountain Gem Russet** tubers is short to moderate. Dormancy length across a range of storage temperatures was 120 days at 42°F, 90 days at 45°F, and 70 days at 48°F. By comparison, dormancy length in **RB** was 190 days at 42°F, 165 days at 45°F, and 140 days at 48°F. **Mountain Gem Russet** and **RB** had similar susceptibility to *Fusarium* dry rot. Percent glucose in **Mountain Gem Russet** tubers was similar to **RB** at 42°F storage. At 45°F and 48°F. At 45°F fry color in **Mountain Gem Russet** ranged from USDA 2 - 3. At 42°F, average fry color in **Mountain Gem Russet** was USDA 4. By comparison, fry color in **RB** tubers was ≥USDA 4 at 42 and 45°F, and a ≥USDA 3 at 48° F. Mottling, was mild to moderate in **Mountain Gem Russet** and similar to that of **RB**. The mean percent weight loss over 9 months of storage at three temperatures was 10% in **Mountain Gem Russet**, which was not significantly different than **RB** at 8%.



Weakness:

- PVY Susceptible
- Hollow heart
- Short dormancy

The information contained within this flyer was supplied by researchers of the Northwest Potato Variety Development Program and their collaborators.