

Mercury Russet

(Clonal Designation: CO99100-1RU)

Parentage: AC93047-1 x Silverton Russet

Developer(s): Colorado State University

Plant Variety Protection: Yes

Incentives for Production

- ★ Early Maturity
- ★ High percentage of US #1 tubers
- ★ Good tuber size profile
- ★ Attractive tuber type
- ★ Processing potential

General Characteristics

Usage: Dual purpose with fresh and processing potential

Plant: Small-medium vine size with white flowers

Maturity: Very early (slightly earlier than Russet Norkotah)

Tubers: Oblong with a russet skin and white flesh.

Tubers are resistant to hollow heart, second growth, blackspot bruise, and shatter bruise.

Yield Potential: Med (avg. 358 cwt/acre) and a high percentage of US No. 1 tubers (avg. 85%, 304 cwt/acre)

Specific Gravity: Medium (avg. 1.084)

Tuber Dormancy: 62 days at 45F

Field Management

Mercury Russet is an early Russet variety. Pre-cut seed to a size of 2.5 to 3.0 oz and allow seed to suberize before planting.

To obtain maximum marketable size tubers, seed tubers should be planted at in-row spacing of 12 to 13 inches, with a row spacing of 34 inches.

Available nitrogen (N) (residual soil N + irrigation water N + applied N) rate required for optimum tuber yield and quality should be between 140 to 150 lb N/A. This recommendation does not include nitrate nitrogen mineralization from previous crop stubble and from soil organic matter.



Field Management (continued)

To gain early plant vigor, apply 50-60% of the required seasonal N pre-plant or at planting. Apply the remaining N rate requirement in split applications during the growing season.

Begin in-season N application after tuberization. Finishing N application early in the season is recommended.

Optimum petiole nitrate concentration should range between 5,000 to 6,000 ppm at tuber initiation; 2,000 to 5,000 ppm at tuber bulking; and below 2,000 ppm at tuber maturity.

Do not plan on vine kill. The vines of CO99100-1RU will die naturally when tubers are mature.

A total of 11-12 inches of irrigation water throughout the growing season is sufficient, while maintaining soil water content above 65 to 70%.

Tubers can be harvested between 90 to 100 days after planting.

Storage Considerations

Storage studies indicate that Mercury Russet has potential for long-term storage with minimal pressure bruising when harvested and stored properly.

Disease Considerations

Mercury Russet is susceptible to PLRV and PVY. Based on field observations, it appears to be more susceptible to the PVY^N serotypes such as PVY^{N:0} and PVY^{NTN} rather than the PVY^O strains. Spread of these serotypes in the field may be high under the right circumstances. Mercury Russet is susceptible to bacterial ring rot with typical symptoms easily expressing within a 90 days after planting (55-60 DAP) window and demonstrates all symptoms. Tubers are susceptible to symptoms, but generally not in high numbers.

Mercury Russet is resistant to powdery scab with no tuber symptoms and low levels of root galling. Tubers are susceptible to *Fusarium* dry rot and moderately resistant to *Pectobacterium*.

Nutritional Characteristics

Acrylamide levels in Mercury Russet are at similar levels to most of the other russet cultivars. Asparagine which is responsible for acrylamide formation, is also lower than other russet cultivars.

Reducing sugars are at lower level than most russet checks.