

## Mesa Russet

(Clonal Designation: CO94035-15RU)

**Parentage:** AO80432-1 x Silverton Russet

**Developer(s):** Colorado State University

**Plant Variety Protection:** Yes

### Incentives for Production

- ★ Yield potential
- ★ High percentage of US #1 tubers
- ★ Good tuber size profile
- ★ Attractive tuber type
- ★ Resistance to internal and external grade defects

### General Characteristics

Usage: Dual purpose with fresh and processing potential

Plant: Medium-large, medium erect with white flowers

Maturity: Medium (similar to Canela Russet, Centennial Russet and Rio Grande Russet).

Tubers: Oblong-long with a dark russet skin and white flesh. Tubers are moderately resistant to hollow heart and resistant to second growth, blackspot bruise, and shatter bruise.

Yield Potential: High (avg. 419 cwt/acre) and a high percentage of US No. 1 tubers (avg. 86%, 360 cwt/acre)

Specific Gravity: Medium (avg. 1.082)

### Field Management

Pre-cut seed to a size of 2.5 to 3.0 oz. and allow to suberize before planting.

To obtain maximum marketable size tubers, seed tubers should be planted at in-row spacing of 13 to 14 inches, with row spacing of 34 inches.

Available nitrogen (N) (residual soil N + well water N + applied N) rate required for optimum tuber yield and quality should be between 145 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 85 to 90 lb available N/A (residual soil N + well water N + applied N) pre-plant or at planting

Begin in-season N application after tuber formation. Apply the remaining N rate requirement (60 lb N/A) in three equal split applications at approximately seven days intervals during the growing season. End in-season N application by the end of July in the San Luis Valley. Finishing N application earlier in the season is preferred.

Petiole nitrate N concentration should range from 17,000 ppm at about 57 days after planting (DAP), down to 10,000 ppm at 78 DAP.

Vines should be killed at approximately 115 DAP to allow tubers to mature and to avoid tuber skinning and bruising at harvest.

### Storage Management

Late season nitrogen management is important to subsequent storage. Late season nitrogen applications to Mesa Russet may result in greater total yield but may result in delayed maturity, reduced specific gravity, and increased tuber damage from skinning and bruising resulting in greater risks involved in longer term storage.

Mesa Russet is moderately susceptible to pressure bruise after long term storage. Research indicates that applying additional N later in the season has no affect on pressure bruise.

### **Disease Considerations**

Mesa Russet is very resistant to powdery scab with no tuber symptoms and extremely low levels of root galling. Tubers are moderately resistant to *Fusarium* dry rot and *Pectobacterium carotovora* subsp. and moderately susceptible to *Alternaria solani* dry rot. It is susceptible to bacterial ring rot, PLRV and PVY. Ring rot symptoms express within 90 days of planting with typical symptom expression (early plant dwarfing and rosette, interveinal chlorosis and necrosis, leaf wilt and margin necrosis, and a positive stem squeeze for the presence of bacteria). Tuber symptoms may occur, but generally not in high numbers. While susceptible to PLRV and PVY, Mesa Russet has a low to medium level of in-field spread and disease expression is good. Mesa Russet is also susceptible to black dot caused by *Colletotrichum coccodes* so a good early season fungicide program is important. While susceptible to most other primary potato diseases, it has not shown any significant problems in research or grower trials.

Results from the Western Regional Trials from 2004-2006 indicated that Mesa Russet had no notable weakness and had resistance to *Verticillium wilt* and *Pectobacterium carotovora* subsp.