

WA Columbia Basin Cultural Management Recommendations for A95109-1

February 2008 MJ Pavek - WSU

Disclaimer: This may change slightly in near future as research and grower feed back increases.

Important Considerations: A95109-1 typically produces a low tuber set (~ 1 less tuber/plant than R. Burbank) and has the potential for extremely large tubers. In-row spacing and nitrogen management are crucial to produce a profit maxing tuber size profile. In research trials with multiple varieties, A95109-1 appeared to be more susceptible to shatter bruise at harvest than most of the other varieties in the experiments. Until more is known about this variety, handle this variety as gently as possible to minimize potential bruising, especially during harvest and placement into storage.

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.

Early Harvest - Fresh Market:

For harvest between mid July and mid August, (~ 100 to 130 Days After Planting), space A95109-1 at 8-9 inches in-row and fertilize with 200 - 250 lbs N/A, including pre-plant soil residual N. Approximately 125-150 lbs N (soil residual + applied) should be available at emergence in the root zone. Apply the remaining N throughout June and early July 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 around 12,000 ppm and soil N should be below 50 lbs/A. Petioles should be allowed to decline to <8,000 ppm at late bulking (approx. 125 DAP, end of July).

Early Harvest – Process Market:

For harvest between mid July and mid August, (~ 100 to 130 DAP), space A95109-1 between 11 to 14 inches in-row and fertilize similar to the recommendations for the early harvest fresh market (above).

Late Harvest – Fresh Market:

For harvest between mid August - October (> 130 DAP), space A95109-1 between 6 and 8 inches in-row and fertilize similar to the recommendations for the early harvest fresh market (above), with the exception that for harvest later than mid September, growers may wish to maintain their petioles between 14,000 to 16,000 ppm at early bulking (90-100 days after planting, early July) and around 10,000 ppm at late bulking (approx. 125 DAP, end of July).

Late Harvest – Process Market:

For harvest between mid August - October (> 130 DAP), space A95109-1 between 6 and 8 inches in-row and fertilize with 250 - 300 lbs N/A, including pre-plant soil residual N.

Approximately 125-150 lbs N (soil residual + applied) should be available at emergence in the root zone. Apply the remaining N throughout June and early July via overhead irrigation. N should be applied through the irrigation water so that petiole NO₃ is around 23,000 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 around 18,000 ppm and soil N should be below 50 lbs/A. Petioles should be allowed to decline between 12,000 and 15,000 ppm at late bulking (approx. 125 DAP, end of July).

Water management:

Irrigate similar to Russet Burbank. 75% to 85% ASM from full emergence until late bulking, reduce to 60% to 65% as vines start to senesce. Avoid excessive soil moisture from mid to late bulking as A95109-1 will display noticeable lenticel swelling under high soil moisture conditions.

Nutrient Management other than Nitrogen:

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 Washington Irrigated Potatoes. Washington State University Experiment Station Extension Bulletin EB1882.

Organic Production:

Specific recommendations have not been established. However, A95109-1 was evaluated under organic management (using chicken manure) during 2004 and the economic yields were superior to standard cultivars such as Russet Burbank, Russet Norkotah, and Ranger Russet both years.