WA Columbia Basin Cultural Management Recommendations Umatilla R.

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Disclaimer: This may change slightly in future as more research and grower feed back is received.

Important Considerations: After planting, Umatilla Russet's emergence is often slow and non-uniform, largely due its genetics. Umatilla typically requires more heat units to emerge from the same planting depth than Russet Burbank or Ranger Russet. However, in a 3-year Columbia Basin planting depth study, the delayed emergence did not affect final yield or market value. It is believed that in the Columbia Basin, plants have ample time to "catch-up" after delayed emergence because the growing season provides enough long days to maximize Umatilla's marketable yield. However, it is important to plant healthy seed pieces of the right size into moist soil at the right depth and in-row spacing.

Because Umatilla is susceptible to dry-rot, seed cutting operations will benefit by employing extra people to pick out rotting seed pieces prior to planting. Seed pieces should be treated with one of the commonly used fungicides prior to/during planting. Seed pieces with small, peeping sprouts are ideal for quick emergence. Good soil moisture is essential for quick emergence and excessively dry fields should be pre-irrigated prior to planting.

Because Umatilla tubers continue to bulk late into the growing season, early senescence of Umatilla should be avoided through adequate nutrient, irrigation, and disease management. To reduce incidence of white mold, growers should consider applying Omega Fungicide or similar products when the majority of plants are flowering, in accordance with the label. Omega fungicide is also active against late blight. Insects should be controlled similar to the recommendations for R. Burbank.

Seed Size: 1.5 to 3 oz

Suggested Planting Date: Mid to late April

Row Spacing: 34 inches

In-Row Spacing: 10 inches is ideal for most seasons and locations across the basin. With previous Umatilla growing experience, adjust in-row spacing plant to produce the most valuable size profile, which might be 6 to 12 oz potatoes, depending on your contract. In-row spacing should be reduced if growers have experienced a high yield of over-sized tubers (>14 oz), and visa versa.

Planting Depth: 8 inches – top of seed piece to top of hill.
Alternatively, 4 inches below level soil or 2 inches below furrow. Due to Umatilla's delayed emergence, do not plant deeper than 8 inches.

Nitrogen Management – Process Market:
For full-season production of Umatilla (harvest > 150 Days After Planting), N should be applied through the irrigation water so that petiole NO_3 is between 26,000- and 30,000-ppm and available 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/above 25,000 ppm. Petioles should be between 18,000- and 22,000-ppm at mid bulking (approx. 125 DAP, end of July). Fertilizing with 360 lbs N/A, including pre-plant soil residual N has worked well in the Othello area, when petioles were kept near the levels mentioned above. 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.

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.

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.