Potato Nitrogen Management in Irrigated Pacific Northwest. (S08-alva171456-Poster)

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Abstract:

Optimal nutrient and irrigation management are critical for maintaining the high yields and quality of tubers. A study was conducted under a center pivot irrigation with Russet Burbank (RB) and Umatilla Russet (UR) cultivars to evaluate the effects of various frequencies of 224 kg/ha in-season (IS) N applications with 112 kg N/ha pre-plant (PP) soil application. The following IS N rates (kg N/ha/appl) were applied as fertigation 8 weeks after planting for a total of 10 weeks as either 11.2 twice/week, 22.4 once/week, 44.8 once every two weeks, or 112 kg N each at week 8 and 12. Tuber yield varied from 58.7 to 62.8 and 57.8 to 60.3 Mg/ha for RB and UR cultivars, respectively. However, the effects of in-season N frequencies were non-significant. Ranger Russet (RR) and UR cultivars were used with either 0, 56, or 112 kg N/ha PP N for a total of 336 kg/ha. Starting 11 WAP, IS N was applied at 2, 3, or 5 applications. The tuber yield varied from 70.2 to 92.9, and 72.1 to 90.6 Mg/ha for RR and UR cultivars, respectively. However, the tuber yield was not significantly influenced by the IS N treatments.

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