

ABSTRACT

IRRIGATION MANAGEMENT AND CALCIUM APPLICATION TO CONTROL ERWINIA DISEASES OF POTATO

The effects of irrigation and calcium fertilization on *Erwinia* early dying and postharvest soft rot were examined in two locations. At the University Agriculture Laboratory, irrigation at 75 and 100% of crop evapotranspiration (ET_c) reduced disease severity significantly ($P < 0.10$) as compared to the 150 and 200% ET_c treatments. Also, potato yield was significantly higher under irrigation at 75% ET_c than at 100, 150, and 200% ET_c. At the University of California Kearney Agricultural Center, irrigation treatments had no significant effect on disease incidence, severity, and potato yield. Calcium fertilizer application (224, 336, and 448 kg Ca/ha) did not decrease *Erwinia* early dying incidence and severity or postharvest soft rot at either location; nor did it significantly increase tuber calcium concentrations. In six field trials in Kern County, there were no consistent differences in postharvest rot and tuber calcium concentration between gypsum and CaCl₂ as calcium sources.

Mohammad Yaghmour
August 2003