

ABSTRACT

Fungicide application strategies (timing, frequency, rates and mixtures) are important for control and resistance management of potato late blight, caused by *Phytophthora infestans*. The efficacy of fungicide mixtures consisting of fenamidone + mancozeb, and propamocarb-HCL + mancozeb mixtures at various rates and in spray regimes containing metalaxyl and mancozeb was evaluated for late blight control (US-1) at four locations in Kenya. Propamocarb-HCL + mancozeb significantly ($P<0.05$) reduced foliar blight compared to mancozeb and the check under moderate to severe disease pressure. Application rate of 4L/ha of propamocarb-HCL + mancozeb had significantly lower disease severity than rates of 2L and 3L/ha in 1999/2000, but not significantly lower disease severity than rate of 3L/ha in 2000/2001. There was no significant difference in mean final late blight score among the three rates of 0.9, 1.0 and 1.1 kg/ha of fenamidone + mancozeb. All fungicide mixtures and application sequences significantly reduced AUDPC and final late blight scores as compared to the unprotected control. Total and marketable tuber yield significantly ($P<0.05$) increased in all fungicide treated plots.

Key words: Fungicide mixtures, combinations, late blight; US-1 genotype, *Phytophthora infestans*, *Solanum tuberosum*