Mefenoxam sensitivity of strain US-23 of *Phytophthora infestans* in the United States

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Every year, late blight caused by *Phytophthora infestans* is responsible for millions of dollars in damage from yield losses and fungicide use in the United States. The recent recurrence of *P. infestans* starting in 2009 exposed several new strains, of which US23 has been the most predominant clonal lineage. For the past thirty years, populations of *P. infestans* in the United States have been dominated by mefenoxam-resistant strains. Analysis of earlier strains showed that US23 is generally sensitive to mefenoxam. The prevalence of US23 caused us to test recently acquired strains for their sensitivity to mefenoxam. Eighty isolates were grown on pea agar amended with Ridomil Gold EC with three concentrations of the active ingredient: 0, 5, and 100µg/mL. Mycelial plugs (8mm in diameter) were transferred from actively growing cultures and incubated for approximately 7 to 9 days. Resistance was determined by relative radial growth of the mefenoxam-amended plates to the 0µg/mL plates. Mefenoxam sensitivity in US23 was also compared to results from 2010 and 2011. In general, the 2012 isolates of US23 were sensitive to mefenoxam. Clonal lineage US23 showed a decrease in the mean colony growth on mefenoxam-amended plates in comparison with isolates from 2011, indicating a potential increase in sensitivity to mefenoxam. Knowledge regarding the sensitivity of the lineages to mefenoxam is important in terms of selecting the most effective disease treatment.