

## ABSTRACT

Ridomil® (Metalaxyl 4% + Mancozeb 64%) is one of the most extensively used fungicide to manage late blight globally. The overuse of the chemical has recently raised human health and environmental concerns. The objective of the study was to determine the effect of Ridomil® application regime on yield and Metalaxyl residue in potato tubers. A field experiment was conducted where Ridomil® was applied at 7, 14 and 21 day spray intervals using manufacturer's recommended dosage of 2.5g L<sup>-1</sup>. Fresh tuber samples were also randomly collected from Limuru and Wakulima markets in Kiambu and Nairobi counties respectively. Data on disease severity (RAUDPC), incidence and yield were collected and analyzed using SAS software. Assay of metalaxyl residue was extracted using Soxhlet method and quantified by Gas Chromatography Mass Spectrometer. Higher tuber yield and lower disease score were obtained in plots sprayed at 7 day interval compared to unprotected plots. Samples collected from Limuru market and plots sprayed at 7 and 14 day spray interval had 0.09, 1.69 and 0.08 mgkg<sup>-1</sup> respectively. Metalaxyl residues observed in samples from Wakulima market and plots sprayed at 21 day spray interval were below the limit of detection. The results indicate that potato consumed in most parts of Kenya could be unsafe following the application of Ridomil® at weekly or biweekly spray intervals.