



A SURVEY ON THE PESTICIDE APPLICATION PRACTICES AND PRESENCE OF PESTICIDE RESIDUES ON MANGOES IN NEGROS ORIENTAL, PHILIPPINES

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ABSTRACT – “Carabao” mango trees are pervasively applied with pesticides as a principal pest management strategy. This study examined the pesticide application practices of mango-sprayer contractors and determined the presence of pesticide residues on harvested fruits, soils, and water samples from randomly selected mango farms in the province of Negros Oriental, Philippines. One hundred randomly chosen sprayer-contractors were interviewed using a structured questionnaire to determine their pesticide application practices. On the other hand, pesticide residue determination on mango fruits was done by the National Pesticide Analytical Laboratory of the Bureau of Plant Industry, Quezon City, using the Gas Chromatographic method. Results show that insecticides were used in all of the surveyed farms at least six (6) times using chemicals that belong to eight (8) subgroups, the most frequently used of which were organochlorines (87%) and Thiocarbamate (50%). A total of 13 different active ingredients were applied, with Thiodan (Endosulfan), a banned chemical, having the greatest number of users at 87%. Respondents applied a “cocktail” of 4 to 5 pesticides per application. The rate of pesticide application per fruiting season was relatively high, averaging 1138.88 grams of active ingredient/ tree. Results of the Multi Residue Analysis (MRA) show that residues of organophosphates, specifically, Chlorpyrifos, were detected in 11 fruit samples out of 60 tested, but not in soil and water samples. Thus, it is argued that the current pesticide management strategy in some mango farms in the province has resulted in fruit contamination with pesticide residues rendering some of these fruits potentially unsafe for human consumption.

Keywords: pesticide contamination, pesticide residues, pesticide use, residue analysis



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