Analysis of Pesticide Residues in Fruits and Vegetables Exported to the European Union

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ABSTRACT

Presence of pesticide residues in agricultural commodities can cause acute and chronic toxicities in human and thus, exceeding their Maximum Residue Levels (MRL) in fresh fruits and vegetables can negatively affect the export market. The purpose of this study was to develop a monitoring programme to evaluate and regulate the pesticide usage of farmers to produce safe products for human consumption while protecting the export market. Two surveys were conducted to identify the practices of the farmers and exporters who cultivate and process the commodities respectivly for exportation to the European Union market. A total of 340 samples of fresh fruits and vegetables were analyzed for the presence of pesticide residues. According to the results, 26% of tested samples showed the presence of pesticide residues. Among them 65% samples exceeded thee Maximum Residue limit of the European Union (EUMRL). Number of pesticide residue forms identifiied in samples were 24 out of which 50% them are unauthorized in the European Union. Contamination of leafy vegetables was relatively higher than that of the other food categories analyzed in this study. The most detected pesticide residues are Profenophos and Tebuconazole.

Key words: Contamination, Leafy vegetables and fruits, Maximum Residue Limit, Pesticide

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