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Integrated Pest Management (IPM) and Information Flow: Case Study Tomato Stakeholders' Practices in Kenya

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Abstract

Small holder horticultural farmers in Kenya, producing both for local and export markets, are faced with challenges arising from changes in consumer demands and environmental awareness concerns. This stems directly from over reliance on chemical pesticides for pests and diseases control. Currently, various pests and diseases control methods are being tested, all aimed at being used in an integrated pest management (IPM) approach. The approach is site specific and knowledge-intensive, hence effective information flow and management are fundamental tenets towards its success. The study is based on interviews with tomato-growing farmers in Kenya. The study assessed existing tomato IPM practices; IPM information management practices; IPM social networks among stakeholders and IPM communication media. Descriptive statistics and social network analyses were undertaken. Preliminary results show that tomato diseases (wilts and blights), thrips (insect pest), red spine mites, and nematodes were the most important production constraints reported by the farmers. Majority (over 80 %) of the farmers interviewed were not aware of the IPM approach, though a significant number practices various IPM components. Majority of the tomato farmers (over 50 %) reported spraying pesticides frequently mainly for common pests and diseases. Other practices mainly indigenous technical knowledge (ITKs) are used in cases of newly emerging tomato pests and diseases. Biological control agents and legislation regulations were not reported to be practised from the study. The most important medium of communication used is verbal. A significant numbers of farmers interviewed keep pest management information in memory. Social network analysis was undertaken using UCINET program. Results show that the density of social relations influence IPM stakeholders interaction behaviours inducing various structural patterns of connections. Implications towards IPM implementation and effective information flow in Kenya are discussed. The study is anticipated to contribute towards improvement of integration and communication of pest management information leading to effective crop protection in Kenya

Keywords: Asymmetrical information, integration, IPM, Kenya, relations, social networks analysis