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Integrated Pest Management Training and Information Flow among Smallholder Horticulture Farmers in Kenya

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Abstract

Horticulture is a key sector of the Kenyan economy. It improves household welfare through providing income, satisfying domestic food needs and improving human nutrition. Next to market access pests and diseases are the major constraints. With the adoption of Farmer Field Schools (FFS) and Common Interest Groups (CIG) as information sources in horticultural production, it is not yet understood how effective the two approaches enhance environmentally and health friendly production practices such as integrated pest management (IPM). It is expected that IPM information is to a greater extent communicated among farmers belonging to farmer groups because of the enhanced interaction among group members. This paper presents findings of farmer preferences in the choice of information sources and assesses factors that influence IPM information reception and sharing. The analysis applies a bivariate probit regression model for reception and sharing of IPM information to survey data from a random sample of 487 smallholder horticultural producers who are either FFS members, CIG members or non-group based farmers. IPM information and knowledge in this paper is defined as a range of practices including scouting, sanitation, crop rotation, mixed cropping, hand picking, solarisation, planting resistant varieties, applying plant extracts and selective pesticide application. Findings show that government extension staff, NGOs, friends, and neighbours are the three most important information sources for horticulture production and IPM. FFS farmers have more knowledge on IPM practices than CIG and non-group based farmers. Regression results show that membership in farmer groups, gender, education, locality, household size, land per capita, distance to extension service, frequency of listening to radio and literate household members significantly influence information flow. FFS farmers are more likely to receive IPM information than individual farmers whereas CIG farmers are not distinguishable from individual farmers with respect to receiving IPM information. Unlike FFS and non group based framers, CIG farmers are more likely to share IPM information. Implications may be that the intensive training of FFS farmers promotes information reception and knowledge accumulation but promotes close knit interaction in the group which prevents information leaving the group. This is being further tested.

Keywords: Farmer field schools, integrated pest management, Kenya, smallholder horticulture