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Factors Influencing the Intensity of Uptake of Alternative Pest Control Methods: Case of Small Scale Tomato Farmers in Kenya

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Abstract

Modern horticultural production in developing countries is characterised by chemical pesticide use. However, inappropriate pesticide use in food production has raised food safety issues and has been linked to undesirable human health and environmental effects. The alternative pest control methods provide a pathway to minimise pesticide use, thereby increasing food safety of products. Despite being alternative pesticide control measure being promoted, what determines the intensity has not been clear. Thus, the objective of this study was to evaluate the determinants of the intensity uptake of alternative pest control methods among small scale tomato farmers in Nakuru County, Kenya. Multistage sampling procedure was used to select a sample of 384 tomato farmers. Data was collected using semi-structured questionnaires administered by well-trained enumerators through face to face interviews. Alternative pest control methods which were identified during the survey were categorised into four groups using principal component analysis technique. Consequently, determinants of the intensity of uptake of alternative pest control methods were estimated using multivariate Tobit model. The findings were that group membership, age, education and training increased the intensity of uptake of alternative pest control methods. Further, participation in off-farm activities and farm size decreased the intensity of uptake of alternative pest control methods. The results have some vital implications on producer awareness that involves comprehensive training programs and enhancing capacity of farmer groups as change agents. Moreover, the research findings could also inform policy makers while formulating and implementing targeted interventions aimed at promoting extensive use of alternative pest control methods to minimise health and environmental effects from indiscriminate usage of pesticides

Keywords: Alternative pesticide control, Food safety, Intensity, Multivariate Tobit model , Pesticides

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