

## ABSTRACT

Inappropriate use of chemical pesticide in horticultural production is an emerging problem causing undesirable human health and environmental effects in developing countries including Kenya. Thus, objective of this study is to evaluate the determinants of the intensity of 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 were collected using a semi-structured questionnaire administered by trained enumerators. Alternative pest control methods which were identified during the survey were categorized into four groups using principal component analysis. Determinants of the intensity of uptake of alternative pest control methods were estimated using multivariate tobit model. Group membership, age, education and number of training increased the intensity of uptake of alternative methods. Participation in off-farm activities and farm size decreased the intensity of uptake of alternative methods. These results indicate that farmers' awareness that involves comprehensive training programs and enhancing the capacity of farmer groups as change agents is warranted. Moreover, these research findings could also inform policymakers while formulating and implementing targeted interventions aimed at promoting the use of alternative pest control methods that minimize negative health and environmental effects from overuse of pesticides.

**Key words:** Alternative pest control, pesticides, intensity, food safety, multivariate tobit model.