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"Global food security and food safety:
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"Green Village Hubs" and Smallholder Marketing Preference: A Discrete Choice Modelling Approach

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Abstract

Sustainable agriculture is emerging as an option to address food security and food safety. There is an increase in acreage under sustainable agriculture and a diversification of products from sustainable agriculture. Moreover, smallholder farmers involved in sustainable agriculture receive premiums and numerous ecological benefits. However, there is a disconnect in the information on sustainable agriculture among smallholders in Kenya. This has lead to the emergence of innovations, such as "green village hubs" (GVH) that attempt to address this disconnect. The GVH has three components, which are related to marketing, extension and production respectively. Therefore, it is on this basis that we attempted to evaluate smallholder farmer preference for the marketing component of GVH innovations in Makueni County in Kenya. Our study used a sample of 130 smallholder farmers, who were obtained through a stratified random sampling. Consequently we conducted a household survey, where we administered pretested questionnaires. We used discrete choice modelling approach to analyse the attributes of GVH innovations that influence smallholder farmer preference in marketing.

First, we developed choice sets from three GVH innovations attributes. These attributes included expertise, interaction, diversity and application. In order to do this, we used some proxy variables including contracts (diversity), practicals (application), type of group (expertise) and feedback frequency (interaction). Furthermore we assigned levels to each of this attributes. Moreover, we used individuals specific characteristics as covariates in our analysis. Second, we performed a multinomial regression using the three GVH innovations (dependent variables) and GVH attributes alongside specific characteristics. Our results suggest that smallholder preference for marketing GVH innovations are significantly affected by contracts (0.66) **, type of groups (0.2)*, feedback frequency (0.18) **, practicals (0.47)*, education (-0.19)* and age (0.13) **.

Therefore, the policy on agriculture innovation hubs should focus on incorporating diversity in training. Moreover, these hubs should use a participatory approach with hands on practice as opposed to theory sessions. Our study can be viewed as a precursor to other studies on smallholder preferences of innovations in Kenya.

Keywords: Diversity, food safety, hubs, innovations, policy, sustainable

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