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## Food Security and Production Shocks: Panel Data Analysis among Indigenous Vegetable Producers in Kenya

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### Abstract

Acquisition of food and provision of adequate nutrition are among the basic human endeavours. Smallholder farmers in developing countries respond to conditions of food scarcity using various ‘consumption-coping’ strategies. For instance by changing consumption habits when they anticipate food scarcity problem. They could use short-term, easily reversible strategies such as eating less preferred food, or reducing portion size or long-term, less reversible strategies such as selling productive assets to buy food. Even though the long-term livelihood coping strategies are important, research has shown that short-term consumption coping strategies are vital and accurate indicators of acute food security. At the same time households in developing countries face various unexpected negative events i.e. shocks simultaneously such as drought, crop failure and unexpected heavy rains. The occurrence of these unexpected events aggravates the existing problem of food insecurity. However, limited research is conducted to analyse the link between occurrence of shocks and households’ use of short-term ‘consumption-coping’ strategies. Therefore, this research seeks to analyse the effect of shocks on households’ use of ‘consumption-coping’ strategies using panel data from indigenous vegetable producers in Kenya. We calculate coping strategy index (CSI) following Maxwell (2008) and use households reporting of shock occurrences in the 12 months prior to survey. The preliminary result from panel data analysis shows a clear and significant link between occurrence of shocks and use of consumption based coping strategies. This provides empirical evidence that shocks indeed influence acute food security situation of households and calls for informed policy actions to prevent the occurrence of these shocks to minimise their effect on food security.

**Keywords:** Food security, indigenous vegetables, Kenya, panel data, shocks