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Agricultural production support and the adoption of sustainable agricultural practices – the case of Ghana

SYLVESTER AMOAKO AGYEMANG, MIROSLAVA BAVOROVÁ, TOMÁŠ RATINGER

Czech University of Life Sciences Prague, Fac. of Tropical AgriScience - Dept. of Economics and Development, Czech Republic

Abstract

To achieve food security – the first Sustainable Development Goal (SDG) – amid the growing population, food production in Sub-Saharan Africa has to be increased through intensification programmes. But the intensive “monocultural” cropping, characterised by the use of synthetic fertilisers to replace missing nutrients, may affect negatively the agroecosystem. Sustainable agricultural practices (SAPs) are increasingly used worldwide to reduce the adverse effects of agricultural intensification and to maintain soil fertility. The challenge is how to successfully promote agricultural intensification and productivity growth under SAPs in order to increase food production. Moreover, very few studies have investigated the effect of external governmental interventions such as production support on farmers’ SAP adoption behaviour. This article contributes to answering the question of whether it is possible to simultaneously increase smallholders’ agricultural productivity and protect the environment by adopting sustainable agricultural practices. The main objective of this research was to evaluate the effect of Ghana’s production support programme, integrated with technical advisory services and training, and other factors on farmers’ SAP adoption intensity, i.e., number of SAPs adopted. A quantitative questionnaire survey was conducted in Northern Ghana with 540 respondents from December 2018 to April 2019. The findings of our Poisson regression analysis show that farmers’ access to production support, SAP training and extension through the support programme and farmers awareness of environmental and production risks, i.e., erosion and flood, are statistically significant drivers of farmers’ SAP adoption intensity. Result from the generalised propensity score matching shows that higher amount of the production support, decoupled from SAP adoption, can increase farmers’ SAP adoption intensity and vice versa. Agricultural production support programmes integrated with extension and technical advisory services can enhance sustainable agriculture.

Keywords: Generalized propensity score matching, northern Ghana, production support, soil erosion, sustainable agricultural practices