

Impact of Adoption of Improved Varieties on Household Share of Peanut Income in Northern Ghana

I. YAHAYA*, J. NBOYINE, R. OTENG-FRIMPONG, G. MAHAMA, and M. ABUDULAI, CSIR–Savanna Agricultural Research Institute, Tamale. Ghana; A. Dankyi and M.B. MOCHIAH, CSI–Crops Research Institute, Kumasi, Ghana; R. AKROMAH, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana; I. DZOMEKU, University for Development Studies, Tamale, Ghana; and D.L. JORDAN and R.L. BRANDENBURG, North Carolina State University, Raleigh, NC 27695.

Peanut cultivation is one of the farming activities with the potential to reducing rural poverty among small holder farmers. A current survey show majority of farmers still use their local varieties in peanut cultivation resulting in reduced yields and low financial returns. There has been very little information on the adoption of improved varieties and its impact on household income in Ghana. This paper therefore is to measure the adoption of improved varieties of peanut and the impact on household share of peanut income. Using a survey data of 108 farm households in the Upper West, Savanna and Norther regions in 2020, an endogenous treatment effect model (ETEM) was used to model the impact of adoption of improved varieties on household share of peanut income. The model allows for correlation structure between non-observables affecting the household adoption of improved varieties and those affecting the household share of peanut income. The model allows for the correction of sample bias. The study revealed a 23% adoption rate of improved varieties. Among the adopters, a 52% adoption rate for improved varieties was observed among households participating in the peanut innovation lab project. Household average income from peanut production was found to GHS 2,726.00 (\$478.25). The study found that, the average treatment effect of the treated is about GHS 2,175.85 (\$381.60). The implication is that, adopters of improved peanut varieties had significant positive increases on household share of peanut income by GHS 2,175.85(\$381.60) additional income on the average. The use of improved varieties by household had significant impact on household share of peanut income. Hence, extension should be geared towards the need for improved variety use by farm households in the peanut production in Ghana. This can effectively improve the general farm household income and potentially reduce poverty.