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Adoption of Improved Livestock Disease Management Practices and Food Security: Evidence from Small Scale Cattle Farmers in Rural Togo

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Abstract

Keeping livestock especially cattle continue to play significant roles in the livelihood strategies of the resource poor and landless rural households. Notwithstanding, livestock disease especially the African animal trypanosomosis (AAT) remains one of the most important impediments to increased livestock production and productivity in sub-Saharan Africa. AAT is characterised by chronic illness, loss of weight and in extreme cases death. It also reduces the productivity of bulls that may constrain staple crop production. The methods these farmers adapt to manage AAT is expected to have a trickledown effect on their long run food security status. Using a representative data of 448 randomly selected small scale cattle farmer households in northern Togo, this study investigated the adoption of best bet AAT management practices in particular integrated rational drug use (RDU) strategy. Using propensity score matching techniques, we analyse the impact of adoption of rational drug use as a best bet AAT management practices on food security and poverty. We find that adoption of best bet AAT management practices has a positive and significant impact on being food secure. On the other hand, we find that adoption has a negative significant impact on the probability of households falling below the food poverty line by between 17–27 percentage points.

Another interesting finding in this paper is the fact that the impact is found to be heterogeneous across households. We find larger impacts of adoption for the households within the lower quantile of per capita income with the impact decreasing up the per capita income quantiles. This finding also supports the hypothesis that technology adoption improves the livelihoods of poorer households more.

Keywords: Adoption, consumption, food security, impact, trypanosomosis