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Farmers’ and academia’s views”

What factors influence farmers’ willingness to pay for East Coast fever vaccination in Tanzania?

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Abstract

East Coast fever (ECF) is caused by *Theileria parva*, a parasite transmitted by ticks (*Rhipicephalus appendiculatus*). This parasite causes severe losses in cattle stocks and thus economic losses in Eastern Africa. A vaccine is available to mitigate ECF-related cattle losses. The immunisation procedure relies on ITM, the Infection-and-Treatment Method of vaccination. This study aimed to gain a better understanding of the vaccine adoption by analysing decisive attributes of farmers and their animal healthcare providers in Tanzania. Data was recorded by ILRI, the International Livestock Research Institute, through two questionnaires specifically tailored for farmers and healthcare providers, respectively. The farmer sample comprised 994 records; out of these, 543 farmers were using the ITM vaccine. Farmers adopting and paying for the vaccine (adopters) were compared to farmers not using it (non-adopters), in terms of area (ha) of cultivated land, crop sales revenues per hectare cultivated, cattle herd size (in tropical livestock units, TLU), share of milk sold, livestock product sales revenues per TLU, and education level of the farmer. Additionally, three variables pertaining to the individual farmer’s healthcare provider were assessed, namely possibility to pay for ITM at a later point in time (yes or no), means of transport used for farm visits (motorbike or car), and travel distance (km) covered by the healthcare provider. Results show that among illiterate farmers (n=83), 43 % were having their cattle vaccinated with ITM. The picture reversed for farmers with an education level up to primary school (n=695), of whom 52 % had adopted the vaccination; lastly, among farmers with secondary and post-secondary education (n=216), the share of adopters was 68 %. Adoption of the ITM vaccination was associated with higher annual revenues from livestock product sales: vaccine-adopting farmers (n=543) generated 1766 thousand Tanzanian shilling per TLU and non-adopters (n=451) achieved 1307 thousand Tanzanian shilling per TLU. These results suggest that ITM usage depends on education as well as on the direct economic benefits related to its use, and possibly also on the financial means available to pay for it. Yet, disentangling education from generated revenues and availability of additional financial means warrants further analysis which is currently ongoing.

Keywords: Adoption, East Coast fever, education, infection and treatment method, Muguga cocktail, revenues

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