

Exploring farmer preferences for contagious bovine pleuropneumonia vaccination: A case study of Narok District of Kenya

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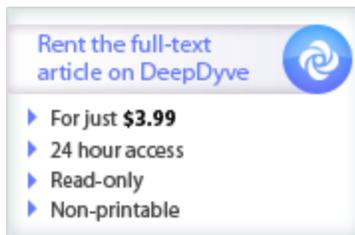
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Abstract

Contagious bovine pleuropneumonia (CBPP) is an economically important disease in most of sub-Saharan Africa. A conjoint analysis and ordered probit regression models were used to measure the preferences of farmers for CBPP vaccine and vaccination attributes. This was with regard to inclusion or not of an indicator in the vaccine, vaccine safety, vaccine stability as well as frequency of vaccination, vaccine administration and the nature of vaccination. The analysis was carried out in 190 households in Narok District of Kenya between October and December 2006 using structured questionnaires, 16 attribute profiles and a five-point Likert scale. The factors affecting attribute valuation were shown through a two-way location interaction model. The study also demonstrated the relative importance (RI) of attributes and the compensation value of attribute levels. The attribute coefficient estimates showed that farmers prefer a vaccine that has an indicator, is 100% safe and is administered by the government ($p < 0.0001$). The preferences for the vaccine attributes were consistent with expectations. Preferences for stability, frequency of vaccination and nature of vaccination differed amongst farmers ($p > 0.05$). While inclusion of an indicator in the vaccine was the most important attribute (RI = 43.6%), price was the least important (RI = 0.5%). Of the 22 household factors considered, 15 affected attribute valuation. The compensation values for a change from non inclusion to inclusion of an indicator, 95–100% safety, 2 h to greater than 2 h stability and from compulsory to elective vaccination were positive while those for a change from annual to biannual vaccination and from government to private administration were negative. The study concluded that the farmers in Narok District had preferences for specific vaccine and vaccination attributes. These preferences were conditioned by various household characteristics and disease risk factors. On average the farmers would need to be compensated or persuaded to accept biannual and private vaccination against CBPP. There is need for consideration of farmer preferences for vaccine attribute levels during vaccine formulations and farmer preferences for vaccination attribute levels when designing delivery of vaccines.

Keywords

- Conjoint analysis;
- Farmer preferences;
- Contagious bovine pleuropneumonia;
- Vaccine;
- Vaccination;
- Narok District;
- Kenya