Preventive Veterinary Medicine 112 (2013) 174–182

Contents lists available at ScienceDirect

Preventive Veterinary Medicine

journal homepage: www.elsevier.com/locate/prevetmed

Factors influencing the demand of the service of community based animal health care in Zimbabwe

J. Mutambara*, I. Dube, E. Matangi, F. Majeke

University of Zimbabwe, Faculty of Agriculture, Department of Agriculture Economics and Extension, Zimbabwe

ARTICLE INFO

Article history:
Received 23 October 2012
Received in revised form 10 July 2013
Accepted 12 July 2013

Keywords:
Choice
Communication
Education
Smallholder
Resources
Questionnaire

ABSTRACT

This study was done to find out about animal health service providers and factors that determined demand for community based veterinary service delivery in smallholder sector of Zimbabwe. Focus group discussions and a questionnaire was used to collect data on veterinary services providers and socio-economic factors related to animal health from a sample ($N = 333$) smallholder livestock farmers from Gutu district of Masvingo province in Zimbabwe. Analytical techniques used were descriptive statistics, K-mean cluster analysis and Tobit regression model. Results showed that the majority of farmers (45%) obtained services from both Community Based Animal Health Workers (CBAHWs) and Department of Veterinary Service (DVS), 25% DVS only, 20% used CBAHWs while 10% did not seek any services. Further analysis showed that distance to CBAHW, distance to AHMC and employment status were significantly related to demand for CBAHWs with coefficients of −1.5, 0.7 and −10.3, respectively. The study thus concluded that CBAHW is an alternative animal health service delivery approach already practiced in smallholder farming sectors of Zimbabwe. Socio-economic factors significantly influenced the demand for CBAHW services. Given limited resources by state sponsored veterinary services, it is recommended that the CBAHWs approach should be encouraged as supplementary service provider especially in areas further DVS. These community organizations can be empowered by the state to deliver more improved services based on hygiene and modern science at a relatively low cost to farmers.

1. Introduction

The issue of severe financial crisis in Zimbabwe and other developing countries has posed a problem in the sustainability of animal health services provision by the state (Mariam, 2000, pp. 42–64). National Veterinary Services were established to control major epidemic animal diseases such as rinderpest, haemorrhagic septicaemia, anthrax and other major fatal diseases. In fighting these diseases, remarkable progress has been made all over the world, however, these activities involve considerable resources in terms of finance, facilities and trained manpower (Leonard, 2000, pp. 1–39). Due to scarce resources, traditional veterinary and animal production services cannot be provided cost-effectively to livestock farmers in villages in many areas of the developing world. In Zimbabwe, the public owned institution has a low geographic coverage, heavily limited by scarce resources and in contrast confronted with increased animal health needs such that optimal health care will not be achieved with reliance on public sector (Mills and Lee, 1993). Animal health service provision by the Department of Veterinary Services (DVS) under such limitations have implications on effectiveness and efficiency of animal health system, livelihoods of farmers and the nation at large may be adversely affected. The failure of public owned veterinary services

* Corresponding author at: University of Zimbabwe, Department of Agricultural Economics and Extension, P.O. Box MP 167, Harare, Zimbabwe. Tel.: +263 772482561.
E-mail address: jmutambara@agric.uz.ac.zw (J. Mutambara).

0167-5877/$ – see front matter © 2013 Elsevier B.V. All rights reserved.
http://dx.doi.org/10.1016/j.prevetmed.2013.07.007

to effectively deliver animal health services to farmers is a cause of concern in Zimbabwe. Animal health care is more important now than ever given the expected increase in animal health related challenges following continuous deterioration of natural grazing pastures under this era of climate change with changes in temperatures, humidity, wind and other climate related variables that affect diseases and pests incidences and growth in pastures. According to FAO (1997), the animals of the poor farming sectors are particularly vulnerable to diseases because of the expense, absence and unsuitability of animal health and production inputs. It is estimated that the decline in productivity due to diseases in developed sectors is around 15%, while in the underdeveloped sector the figure is twice as high.

As an alternative to improve veterinary service delivery, efforts have been made to restructure the delivery system in a sustainable, practicable and cost effective means. The new paradigm shift encourages involvement of other private players outside state sponsored DVS. The late 1990s saw the government and other players embarking on a core functions analysis in an effort to delineate private, public and intermediary goods for possible privatization, commercialization and cost recovery price mechanisms by various players. Holden et al. (1996) encouraged the use of community-based approaches as possible alternatives. Community Based Animal Health Workers (CBAHWs) are considered cost effective, easy to establish, easily accessible and a move towards community empowerment in animal health (Catley et al., 2002). Growing interest in Community Based Animal Health Worker (CBAHW) systems is mainly related to the high impact on animal health and human livelihoods resulting from improved basic veterinary care in rural communities (Leyland and Akabwai, 1998). However, despite evidence of the impact of CBAHWs, relatively few countries have officially recognized this level of worker or support community-based animal health delivery systems through appropriate policies and legislation.

The current policy shift in the delivery of veterinary services that encourages other players outside government institutions especially CBAHWs requires a better understanding of the usage and need for such services by targeted farmers. Whether the involvement of other players will improve overall effectiveness and efficiency in the delivery of veterinary services will depend greatly on the demand response of livestock producers who must make decisions about the health of livestock. Thus this study was designed to investigate the potentials for community based approaches in animal health service delivery for smallholder farmers. It is expected that the outcomes from this study will provide policy guidelines on the practicability of the concept in smallholder farming sector where the bulk of livestock are kept.

2. Materials and methods

2.1. Area description

The study was carried out in Gutu district of Masvingo Province in the southern parts of Zimbabwe. The area falls under natural regions III and IV. Zimbabwe is divided into five agro-ecological regions, known as natural regions, on the basis of the rainfall regime, soil quality and vegetation among other factors. The quality of the land resource declines from natural region (NR) I through to NR V (Moyo, 2000; Vincent and Thomas, 1961). NR III is located mainly in the mid-altitude areas of the country. It is characterized by annual rainfall of 500–750 mm, mid-season dry spells and high temperatures. Production systems are based on drought-tolerant crops and semi-intensive livestock farming based on fodder crops. The predominant farming system is smallholder agriculture. Large-scale farming accounts for 15% of the arable land production, most of the land being used for extensive beef ranching. Smallholder agriculture in the communal farming areas is under relatively intensive cropping systems. The main crops are maize (the staple food) and cotton (a major cash crop). NR III is suitable for the production of groundnuts and sunflowers as cash crops. NR IV is located in the low-lying areas in the north and south of the country. The characteristics of the region are: annual rainfall of 450–650 mm, severe dry spells during the rainy season, and frequent seasonal droughts. Although NR IV is considered unsuitable for dryland cropping, smallholder farmers grow drought-tolerant varieties of maize, sorghum, pearl millet (*mhunga*) and finger millet (*rapoko*). NR IV is ideally suitable for cattle production under extensive production systems and for wildlife production (FAO, 2006).

2.2. Population and sample size selection

It is estimated that in Gutu district there are over 20,000 livestock keepers although exact figures could not be obtained due to collapse in data collection systems over the years. There are nine Animal Health Management Centres in Gutu District serving all the farmers. A representative five out of nine AHMCs were randomly selected using a multi-stage sampling strategy. Farmers were then selected randomly from the AHMCs. A total of 333 farmers were thus selected. The sample size used in a study was determined based on administrative limitations, the expense of data collection and the need to have sufficient statistical power. Despite the administrative limitations, a larger sample size (333) was aimed at as a way to boost the statistical power of tests in the analysis.

2.3. Data collection methods

Focus group discussions were held with farmers in Gutu district to establish the general views of farmers about animal health challenges, service providers and demand for services providers. This information was instrumental in the development of a questionnaire that was used to collect data from individual farmers. Animal health challenges were identified by the groups of farmers and each identified challenge was assigned a weighting score on a scale of 0–100% in order of increasing importance. The groups of farmers were also asked to identify service providers in their areas and factors that affect demand for services from different service providers. These factors were also assigned scores of importance on a scale of 0–100% in order of increasing importance.