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COMMUNITY BASED PARTICIPATORY EPIZOOTIOLOGY OF LIVESTOCK KEPT BY AWOTAN WOMEN, IDO LGA, OYO STATE, NIGERIA

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ABSTRACT

Participatory Epizootiology (PE) is the use of participatory approaches and methods, involving the community based livestock keepers, to improve the understanding of their animal diseases and production problems, and to design appropriate veterinary intervention and other action plans for these problems Women are generally responsible for small stocks of livestock species kept in local communities This study was to investigate by the use of semi structured interviews, livestock diseases and health problems of traditional animal health projects in the study area, Awotan in Ido Local Government Area of Oyo State; with

livestock keeping women as the primary respondents. The major species of animals kept were sheep and goats (51%), domestic fowl (27%), duck (18%), and dog (4%). They were kept under a semi intensive system of management in which farmers have no adequate control over the animals. Common livestock diseases and health problems in encountered by female livestock keepers at Awotan were ranked by respondents as follows:- Diarrhea (26%), Newcastle Disease (22.7%), Mange (18%), Fowl pox (8.4%), Pestes des petite ruminants PPR (7.8%), Lice infestation 5.8%, Foot and nose bots 5.2%, Tick infestation 3.9% and Contagious Caprine Pleuro-pneumonia CCPP (1.95%). The farmers regard traditional intervention on the diseases of their animals as very effective as a palliative treatment, and modern veterinary services as curative but less accessible and very expensive. Veterinary staff associated with the community complained about non conducive working environment and lack of mobility/ ambulatory vehicle, problems of 'quacks' that have motorcycles and go around disguising as Veterinary doctors. Recommendations are made for the training of some educated community members as community animal health workers, the control of quackery in the Awotan, the provision of adequate mobility and conducive working environment for Veterinary staff, as well as provision of veterinary services to farmers at affordable prices.

KEY WORDS: Community based, Participatory Epizootiology, Livestock, Women, Oyo State

INTRODUCTION

Remote and marginalized livestock populations are under-represented in veterinary service delivery and information systems. As a result, these populations suffer from the direct lack of services and pose epizootiological risks to the national livestock population as a whole. The absence of current surveillance information on the animal health status of remote populations adversely affects export trade.

For livestock health project intervention to be successful it must be based upon intimate knowledge of local conditions obtained by first hand, village level assessments (Johnston and Clark, 1982). Farmer participation in problem identification allows easier implementation and has a substantial cost-effectiveness (Farringnton and Martin, 1988). Although community participation has various meanings, the term usually convey some form of interaction between local people and outsiders in which the former play a role in identifying, implementing or even controlling development activities.

Participatory Epizootiology (PE) is the use of community-based participatory approaches and methods, not just to collect detailed information, but to improve the understanding of animal diseases and veterinary services, and to design solutions to disease problems with livestock keepers. Overtime, participatory methods have attracted increasing interest from veterinarians and are now used by a wide range of organization (Catley and Jeffrey, 2001).

With regards to livestock farming activities, women are generally responsible for livestock species kept closer to the home e.g., dairy cows and goats or for smaller species such as chickens, ducks and small ruminants (Anon, 2000a). Women have intimate knowledge of their animals, their productivity, the management techniques used, and the diseases which afflict them. To fully understand these things, women must be included in the data gathering process and their knowledge properly respected.

This research focused on Livestock keeping Women of Awotan in Ido Local Government Area of Oyo State, Nigeria and was conducted between August and September 2006; using fifteen community-based livestock-keeping women as the primary respondents. Information about animal health problems obtained from farmers by the use of semi- structured interviews. Study objectives were to

1 To identify and rank the major animal diseases and health problems of epizootiological importance in the study area from the livestock-keepers' perspective.
2 To determine the effectiveness of Veterinary services available in the study area.
3 To identify the major constraint to animal health management and disease control in the study area.

A multidisciplinary team comprised of 2 Veterinarians, 1 Epizootiologist (Veterinary Epidemiologist) and 1 Sociologist; all members of the team have some training in participatory research, carried out the study.

MATERIALS AND METHODS

Data Collection

Information was gathered through

a) Interviews with key informants
b). Group and individual interviews: A total of 6 individual and 1 group interviews were held. 15 women participated in the interview.

c) Direct observation

Participatory tools

Participatory tools used were

a) Semi-structured interviews
b) Ranking and scoring
c) Seasonal calendar
d) Venn diagram
e) Transects
f) Clinical examination
g) Triangulation

RESULTS

Common Livestock diseases and health problems

Common Livestock diseases and health problems in encountered by female livestock keepers at Awotan were ranked by respondents as follows Diarrhea (26%), Newcastle Disease (22.7%), Mange (18%), Fowl pox (8.4%), Pestes des petite ruminants PPR (7.8%), Lice infestation 5.8%, Foot and nose bots 5.2%, Tick infestation 3.9% and Contagious Caprine Pleuro-pneumonia CCPP (1.95%). The diseases most commonly seen in wet season according to the farmers include diarrhea, PPR, New Castle disease, CCPP. Others such as mange, foot and nose bots, lice and tick infestation and fowl pox occur all year round. Also livestock mortality is highest during raining season when vector population is also highest.

Farmers' evaluation of Veterinary services

1. Traditional intervention considered very effective but palliative
2. Modern Veterinary treatment curative.
3. Veterinary services less accessible, very expensive and non functional 4. Services more on sheep and goats, followed by chicken and then dogs

Constraints to livestock health

As perceived by local Veterinarians in the area

1. Non payment for services.
2. Non conducive working conditions
3. Lack of mobility and bad roads
4. Problems of quacks who have motor cycles with which they move around even into the interiors of the community.
5. Understaffing.

As perceived by farmers

1. System of management (semi intensive)
2. Inadequate housing which exposes the animals to cold and other health problems
3. Inaccessibility of veterinary services
4. Financial constraints and
5. Bad roads.

CONCLUSION AND RECOMMENDATIONS

1 Awareness campaign for livestock owners concerning national issues in the control of the major livestock diseases.
2 Training of community members (NCE holders or others with some level of education) as Community Animal Health Workers (CAHW).
3 Control of quackery in the Awotan.
4 Provision of mobility and conducive working environment for Veterinary staff
5 Provision of services to farmers at affordable prices.

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SPATIO-TEMPORAL ANALYSES SUGGEST CENTRIPETAL SPREAD OF THE HIGHLY PATHOGENIC AVIAN INFLUENZA H5N1 IN SELECTED STATES OF NIGERIA

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ABSTRACT

Asian strain of highly pathogenic avian influenza (HPAI) H5N1 viruses was reported in the Nigerian poultry industry in February, 2006. It has since caused the death or destruction of about 1,000,000 birds of different species in Nigeria. While previous reports have indicated that there were multiple sources of HPAI viral infection in Nigeria, this present work analysed the dispersal of the virus within some of the states that reported persistent infection in the country during the HPAI crises window period in 2006. Our evaluation using spatial and temporal analyses indicated that following the virus infection of locations within states, the infections tended to spread out centripetally thereby creating newly infected premises. We found out that the infections and outward spread were positively correlated in space and time; and a large majority of the infected premises were within three infectious circles (75km). We advised that there should be enforcement of effective inter-state border control, and future infected premises must be properly quarantined and monitored effectively. It will similarly be necessary to plan for and prevent future occurrences of such rapidly fatal animal diseases using the available tools of spatial and temporal epidemiology. This work was carried out in NVRI, Vom, Nigeria (data collection and evaluation) and Cornell University, Ithaca, NY, USA (data analyses).

KEY WORDS: HPAI H5N1, HPAIV, GIS, poultry, spatial-temporal epidemiology

INTRODUCTION

Outbreak of Asian strain of the HPAI H5N1 virus was confirmed for the first time in the African continent specifically Northern Nigeria in February, 2006 (Joannis *et al.*, 2006). Though several control measures including culling, movement control, compensation and improved biosecurity were implemented by the authorities to limit the spread, the country continued to report outbreaks and new premises were infected (OIE, 2007). Since the time of the first report, the outbreaks had since been confirmed in over twenty two of the thirty-six states with death of avian species in excess of 945,862 birds at an enormous cost (www.worldpoultry.net/news/id2205 12011/bird_flu_resurfaces_in_kano_nigeria.html).

Kilpatrick and co workers (2006) concluded that the spread are more likely to have been caused by unreported/illegal trade in poultry and poultry products, and migratory birds. Further arguments have been proposed for and against the roles of poultry and wild/migratory birds as being primarily responsible for the introduction and widespread infection with the virus (van Borm *et al.*, 2005, Sims *et al.*, 2005, Birdlife International, 2006, ProMed mail, 2006-2007, Gauthier-Clerc *et al.*, 2007, Ducatez *et al.*, 2007, Feare, 2007, Salzberg *et al.*, 2007).