

The Use of Participatory Methodologies in Veterinary Epidemiology

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Summary

The paper is based on experiences in the use of participatory methodologies in Bolivia between 1998 and 2001. Participatory Appraisal of Livestock Diseases (PALD) workshops were run in different regions of the country, and were successful in generating information about farmers' animal health priorities. However, they lacked methods to confirm the presence or absence of specific diseases and did not lead to the implementation of animal health actions. Later work combined participatory and scientific methods to prioritise animal diseases at field level, and also returned to producers with training materials. It is suggested that to be effective participatory methods need to be combined with scientific and conventional epidemiological methods. In conclusion, participatory epidemiology needs to consider all the actors: producers; veterinary professionals and technical staff; veterinarians; administrators; and politicians.

Introduction

Veterinary epidemiology and participatory methodologies are relatively new specialist subjects, and have only been recognised for the last 20 or 30 years. Despite being relatively new, participatory methods have been used extensively in many fields, but very little has been written on the use of these methodologies in veterinary epidemiology. Water-Bayer and Bayer (1994) wrote an excellent guide on "Planning with Pastoralists", which covers many of the participatory methods useful for study livestock diseases. Catley (1999) has written a report on the role of participatory methods for veterinary epidemiology, but his work is based on specific experiences of the use of the methods in disease investigations and does not address the issue of up-scaling to allow decision making at regional and national level. More recently Mariner (2001) has published a manual on "Participatory Epidemiology", which takes a classic structure of participatory manuals, explaining methods but providing little information of how these methods might be built into a larger structure of epidemiology and surveillance systems.

Objective

The objective of this paper was to examine how participatory methodologies and theories can be used to develop sustainable animal disease surveillance systems. These systems should be able to identify farmer priorities, help address them and in turn generate reliable information on list A diseases.

Materials and methods

The paper draws on experiences of a national epidemiology project that was run in Bolivia between 1997 and 2001 (Rushton et al, 1999). This project used participatory methodologies to improve the surveillance systems (Eulert et al 2000; Rushton et al, 2001a). After this project, the authors were involved in two disease studies in Bolivia, that used a mixture of participatory, and conventional epidemiology methodologies in the regions of the Chapare, Cochabamba (Rushton et al, 2001b) and the Cintis, Chuquisaca (Rushton et al 2001c).

Results

The Bolivian national epidemiology project began with a traditional focus on list A diseases, but focussed particularly on foot and mouth disease (FMD). This focus was reasonably successful in the FMD endemic areas of Bolivia, but proved to be a weakness in the valley and the high Andean region of Bolivia, which have only sporadic FMD outbreaks. Therefore, the project began a process of more active livestock disease surveillance through a methodology of participatory workshops (PALDs). The PALDs had a format of collecting information on: livestock systems, holdings and diseases; livestock diseases priorities; and the treatment and prevention measures currently being employed by the producers. In total, approximately 30 PALDs were carried out in Bolivia. The important diseases perceived at producer level were: ticks and tick borne diseases and trypanosomiasis in the lowland tropical zones where cattle systems are important; internal and external parasites in the sheep, goat and llama systems in the valleys and high Andes; and cysticercosis and classical swine fever in the valleys. Despite this success in generating useful information, the methodology employed was weak in confirming producer perceptions with scientific disease diagnosis and the subsequent implementation of control programmes to solve or alleviate the priorities identified. The Chapare animal disease study combined PALDs with a sero-survey in cattle. The latter provided important information on the absence of FMD and the endemic status for tick-borne diseases. Later in 2001, an animal disease study in the Cintis ran PALDs but also carried out sero-surveys and collected faecal samples from cattle, sheep, goats and pigs. This study had an extension component that developed leaflets for farmers on the priority diseases, a manual on animal health for local animal health workers and a radio soap on animal health. All the material was produced in Spanish and in the local language Quechua. In the latter two studies the types of tests run on the blood samples were directed by the findings from the PALDs and national priorities. For example, in the Chapare abortion problems were investigated with serological tests for brucellosis and IBR, and in the Cintis clinical signs described in the PALDs, that resembled classical swine fever (CSF), were investigated by testing serum samples (NB the area does not practice CSF vaccination). Finally, both studies generated additional information on the movement of animals, livestock production systems and livestock populations.

Discussion

The experiences of the national epidemiology project highlighted a common weakness with livestock disease surveillance systems and veterinary services around the world. Many are focussed on list A disease data collection and the control of those diseases. In some regions of the world this has become extremely focussed on specific diseases, so for Latin America it is FMD and in Africa it is rinderpest. The implication is that in areas where these diseases are not endemic, or have been eradicated, the veterinary services, and hence the surveillance activities, are poorly focussed on the needs of producers. This produces a poor understanding between farmers and veterinarians, in particular those from the state services, and a very weak basis for livestock disease surveillance. The use of participatory methodologies helped to change the focus in Bolivia away from a narrow "Have you got FMD" to a wider more understandable question of what are your principal animal health problems.

Some important issues became clear during the development of the PALDs. It is necessary to focus the participatory methodologies on livestock and animal health and avoid examining the wider range of rural development issues. For the PALDs to be

effective and truly participatory, the facilitators running them need to be veterinarians with a good knowledge of diseases and their control. PALDs on their own are insufficient, in some cases there is a need to identify scientifically the diseases that farmers describe in the workshops, or as in the case for tick-borne diseases, it is important to determine the prevalence/incidence of the diseases before making recommendations for the control of those diseases. Information from PALDs can be useful in developing regional disease maps and hence help prioritise disease investigations and control strategies. PALDs or whatever participatory veterinary methodologies need to be followed with actions in terms of disease control, extension material or a combination of the two. There is a need for monitoring and evaluation of the actions implemented, and as these actions began to have an impact a reprioritisation of animal health problems.

The ideal participatory system requires a long-term commitment to activities where a large amount of animal disease control is at field level. It is recognised that releasing control from the centre and giving it to the field obviously requires a strong political will. The hypothesis is that veterinary services that are focussed on farmer problems develop strong links with farmers, who are the first line of any surveillance system. Data on List A disease in such a system would be generated with more accuracy and help to control the spread of such diseases. Such participation involves all the actors in the chain of a surveillance and epidemiology system. Here the term “participatory epidemiology” could truly be applied and should not be confused with what many people are describing as disease investigation with a friendly face.

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