

## PRIMARY ANIMAL HEALTH CARE SYSTEMS: A SUSTAINABLE APPROACH FOR PROVIDING ANIMAL HEALTH CARE SERVICES IN AFRICA AND ASIA

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*Les services vétérinaires sont incapables de répondre de façon adéquate aux besoins des propriétaires d'animaux dans la plupart des PVD du fait d'un manque de moyens humains. Différentes approches ont été utilisées pour dépasser ces manques et une approche réussie a consisté à former des villageois dans un programme réalisant un «service de santé animale de base» susceptible de procurer des formes simples et standardisées de contrôle des troubles sanitaires majeurs. Le principal problème d'une telle approche a été de la maintenir dans des régions à faibles revenus, et deux modèles ont été décrits pour la Thaïlande et la Malawi où ces difficultés ont été surpassées.*

*Les points critiques sont la définition précise des problèmes prioritaires sur le terrain, la formation effective et les programmes de vulgarisation pour conforter les «hommes-clés» dans leur rôle, ainsi que le développement d'un mécanisme durable d'approvisionnement et de distribution de médicaments pour éviter le manque de produits. Ceci a été obtenu grâce à un fond de roulement qui s'est avéré efficace grâce à la coopération de tous les éleveurs. Ces 2 modèles montrent que les éleveurs même disposant de faibles revenus, sont parfaitement volontaires pour payer des médicaments efficaces dans le cadre de services d'appui, et qu'un modèle d'entreprise privée pour l'apport de services vétérinaires est viable dans cette situation dès lors que ces services ont des objectifs appropriés et structurés.*

### INTRODUCTION

In many parts of the world the number of veterinarians per livestock unit available to provide primary animal health care is so low that the traditional model of service derived from developed economies is quite unrealistic to adopt. Varied alternative approaches have been used to provide more effective coverage of animal health care, but there remains considerable controversy about the merits of the different approaches. This paper describes the experience gained in north-east Thailand with provision of veterinary services to village farmers who are primarily rice and cassava growers, and subsequently in Malawi with maize-growing farmers. Both populations keep livestock as a complementary activity to cropping, as a financial reserve and in Thailand as draught power for crop production. In north-east Thailand swamp buffalo, cattle and chickens are the principal species kept (and most families have all three), whereas in Malawi cattle, sheep, goats, pigs and chickens are all kept, but whereas 90% of families have poultry, only 20% have cattle, 25% have sheep or goats, and 10% have pigs. Both regions have quite difficult environmental conditions and low family cash incomes.

In both countries the number of graduate veterinarians and paraveterinary staff provided to the area by the Government veterinary service is too small to allow direct service to be provided to meet the needs of farmers, and incomes are too low to encourage private veterinary services to develop. The focus of the Government veterinary service is also on diseases considered most important from a national viewpoint, whereas the priorities of the local farmers are often quite different.

### NATURE OF THE BASIC ANIMAL HEALTH SERVICE (BAHS) IN NORTH-EAST THAILAND

In north-east Thailand the focus of government veterinary effort was principally on infectious diseases such as foot and mouth disease and haemorrhagic septicaemia. However a longitudinal field study of buffalo health and productivity demonstrated that the principal problems affecting buffalo productivity were high mortality in calves (about 30% in buffalo and 20% in cattle) due mainly to nematode infestation, fascioliasis in all age groups, and poor calving rates associated with nutritional stress. A subsequent study of poultry showed that Newcastle disease, parasitism and high chick mortality for a number of reasons were the main problems.

The evidence from intervention studies on buffalo and cattle showed that simple therapeutic interventions for nematode and liver fluke infestation would be very effective in improving productivity. Calf mortality could be reduced to under 10% by two low-cost treatments, while a single treatment for fluke-infested adults substantially increased their market value. Therefore a program was developed whereby village farmers, termed keymen, were trained to carry out the treatment procedures and local extension efforts to promote the use of the two treatment programs. Training took place over two days, and was reinforced by periodic refresher sessions. Over 4,000 such keymen were trained from 7 provinces in north-east Thailand, during the early part of the development of the program. Each keyman was provided with a kit comprising drugs and equipment they needed, and the kit was progressively expanded to cover other simple treatments for conditions easily

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recognized by individual owners. Keymen were allocated 6 to 8 villages, and expected to visit all of these villages to promote the program and supply drugs.

Critical features of the program were the development of an effective extension effort, and the payment of a commission on drug sales to each of the keymen, so that there was a private enterprise incentive for them to carry out their responsibilities. There was also involvement of all levels of the field veterinary service in distribution of drugs, with incentive payments related to the amount of drug distributed. Extension programs were designed to take account of local cultural factors, and to combine regional promotion (through television and other media available in the village) with personal extension efforts by each of the keymen.

Two economic evaluations of the BAHS were carried out at different stages of development of the program, and both showed a very high economic return from the service. The first study (Morris and Meemark, 1989) examined factors influencing the extent of adoption of the service, since there was wide variation between keymen in their success in convincing farmers to use the treatments. The explanation turned out to be very simple - keymen who devoted time to the program and visited each of their villages regularly to promote parasite control achieved high adoption levels - on average 64% of farmers studied had treated some or all of their animals. Keymen who made little effort (typically restricted to their own village) had very low adoption levels - averaging 16%. Financial returns to farmers who used the program were very high for a very small cash investment and farmers were very positive about the BAHS (Morris and Meemark, 1989), but returns to keymen from time spent on selling drugs were very low, because of the nature of the incentive system.

The program was changed to reduce the number of keymen and make involvement more attractive to those who remained, at that time about 2,000. The program has subsequently been expanded to cover a larger region, and continues to be effective. The main problem with the system as operated in Thailand concerned the funding of the purchase and distribution of drugs. This was managed through a «revolving fund» which commenced with a donor contribution from the German government, and was based on recycling of income from drug sales through the fund to maintain financial balance in the fund in the long term. This was a new concept which took some time to establish as a workable arrangement, but did in fact become satisfactorily established. Nevertheless, it appeared that a move towards a more firmly private enterprise model would have significant advantages in the operation of future programs of this nature.

#### **BASIC ANIMAL HEALTH SERVICE IN NORTHERN MALAWI**

The same basic model as used in north-east Thailand has subsequently been used in other countries, and the model has been followed in a project in Malawi. Here the problems centred around East Coast Fever in combination with inadequate management of animals, resulting in mortality among young animals of over 30%. Feed shortages and inadequate supplies of drugs and acaricides were limiting factors on improved productivity.

A similar phased programs of problem definition and pilot trials was pursued, and produced very positive results in the control of health and management problems of young cattle. In this case a broadly similar BAHS was then set up, but the revolving fund and the management of the program were operated by a farmer-owned Foundation for Animal Health, which manages the program and drug supplies.

This is seen as a model well suited to future programs, since it provides a better structure and incentive system for the long-term maintenance of the BAHS. Thus accumulated experience has shown the merits of simple interventions by village farmers under general veterinary supervision to provide improved animal health care and therefore improved productivity, which provides substantial economic benefits to farmers within a sustainable financial management framework.

#### **REFERENCE**

Morris, R S and Meemark, N (1989) Factors influencing adoption of the Basic Animal Health Service. Proceedings International Seminar on Animal Health and Production Services for Village Livestock, Khon Kaen Thailand.