

## CHAPTER 3

# ANIMAL HEALTH SERVICES AS POVERTY ALLEVIATION STRATEGY

### 3.1 INTRODUCTION

While opinions may differ as to what poverty is, and what its causes and effects are, the reality is that it simply will not go away and is getting worse by the day. Various Government departments, parastatal bodies, non-Government organisations and developmental agencies are attempting to address poverty as a social problem. In South Africa, the worst poverty is found in rural areas, whereby rural people have no means to satisfy even the basic needs such as nutrition, safe drinking water, reasonable housing, adequate health care, education and opportunities to have a say on how they would like their situation to be improved (Kgarimetsa, 1992:1).

This poverty culture affects the rural people because they cannot afford various services that are available to them. Rural people depend on various forms of farming to survive. It is necessary for them to look after their farming activities in order to be able to make profit. Hence, given the poverty situation it is difficult for the people to manage their situation. This chapter focuses on rural development, poverty and animal health service as a strategy to alleviate poverty.

### 3.2 THE NATURE OF RURAL POVERTY

Poverty is a multidimensional concept. Its nature can be understood by looking at the views of Derman and Poultney (1984:7-10) who illustrated poverty's two-dimensional view by classifying it as being: absolute or relative, primary or secondary, physiological or social.

### **3.2.1 Absolute, primary and physiological poverty**

This is a concept describing extreme human deprivation where there is a lack of the basic necessities of life such as food, water, shelter and health facilities. This reflects total failure to address and satisfy basic human needs. These factors have a negative effect on human functioning.

### **3.2.2 Relative, secondary and social poverty**

This view explain the inequalities in life such as the uneven distribution of resources, and deprivation where people are denied access to opportunities in order to advance themselves. This might include the fact that most of the poor people do not get a chance to influence the power structures in order to effect change in their lives.

Piven and Cloward (1972:29) present a three-dimensional perspective on poverty. According to these two authors, poverty is looked at from an economic, social and political viewpoint. Politically poverty is perceived in terms of lack of resources such as land, infrastructure and productive resources. This also refers to no or minimal access to such facilities as credits, markets and production assets. A social perspective explains lack of access to such basic provisions as health, education, recreation, sanitation and shelter. Poverty from a political perspective refers to the lack of power of people to make decisions and to take control of their lives.

Lewis (in O'Neil, 1992:5) developed a theory on the culture of poverty, which can be seen as both an adaptation to and a reaction by the poor to their marginal position in a stratified society by identifying various traits of the poor. These traits of the poor include the following:

- Low literacy and education level; non-affiliation to groups; minimal use of public facilities such as schools, hospitals, clinics and welfare agencies.
- Absence of ready cash enforcing a pattern of buying in small quantities; chronic debt and mismanagement of available funds.
- A tendency to live in the present. An inability to plan for the future, a sense of resignation and frustration and little sense of community.
- A deep mistrust of authority, characterised by the hatred of police and cynicism about formal help.

These points by Lewis seem to look at poverty from the individual's point of view. They do not consider other factors such as political, social and economical. It is also important to mention that the poor are not in that situation out of their choice. They are where they are because of various reasons based on political, social and economical factors. Like other social problems, poverty has its distinctive characteristics.

### **3.2.3 Characteristics of rural poverty**

According to Chambers (1980:41) the characteristics of rural poverty can best be described within five major categories from which highlights of causes and effects can be derived. These categories include the following:

#### **- *Unemployment***

Rural areas are populated by a great number of the unemployed and the unemployable. The latter refers to children, the handicapped and the elderly. Most of the youth staying in rural areas are unemployed.

This might be due to the fact that they are not educated, and lack many skills to compete in the market. This makes it difficult for the rural household to meet their basic needs in life.



- ***Lack of sufficient land***

Mostly, the poor people occupy a small part of the available land. Concentration of people within such small parts of land accelerates land degradation and this result in low production yields from which people cannot make a living. This causes problems to livestock farmers because their animals are left without sufficient grazing land due to problems such as erosion (Chambers, 1980: 41).

- ***Population increase***

Although rural people live in small spaces available, they are also affected by the problem of population increase. Rural people do not have knowledge about family planning. This makes life difficult for them because a household has to look after many family members with a small income. This also includes grandchildren. With a decrease and depletion of resources, this factor will aggravate the poverty situation significantly.

- ***Education***

Many people staying in rural areas do not have qualifications like a degree or diploma. The younger generations usually are matriculated people, and could not go to higher institutions due to lack of financial support. Even the older generation did not have school education on secondary level and this has impact on their socio-economic status.

Although the matriculated people can read and write, they lack knowledge about services around them. They do not have an understanding about the importance of the Animal Health Service and this leads towards the resistance to the service.

- **Migration**

A great number of the economically active populations of rural areas migrate to urban areas. This is further aggravated by the fact that even those who have qualifications tend to go to urban areas (Chambers,1980:42). Those who get a chance to go to tertiary institutions often end up staying in the urban areas after graduating. This also applies to the able-bodied who are still young and who go to urban areas and seek employment. There are strong indications that migrant earnings are relied on to keep rural households going.

According to Chambers (1980:42) all these characteristics of rural poverty are caused by the following factors:

- Lack of housing and overcrowding;
- Dependence on migrant earnings, which often are not enough for basic household needs;
- Fragmented families characterised by the elderly and children;
- Low food production resulting in nutritional disorders;
- High rate of illiteracy and unskilled people further reduce the chances of better employment and higher income;
- High mortality and morbidity rate.

These characteristics indicate very clearly that poverty is not a desirable phenomenon in any community. Poverty affects animal owners in rural areas even more negatively.

The animal owners cannot afford to buy medicines for their sick animals and this further affects production. Their animals may die because of sicknesses and this leaves them without anything to survive from. The Animal Health Service in Madinyane may help the farmers because it will help prevent animal diseases.

This will also help in poverty alleviation because the animals serve as insurance and protect the farmers from poverty.

There are various ways of alleviating poverty. As it was discussed in Chapter 2, social development strategies can help alleviate poverty to rural areas. Another strategy that can contribute in alleviating poverty, especially in rural areas, is rural development.

### 3.3 RURAL DEVELOPMENT

There has been a tendency for organisations and experts to define agricultural development as the increase in production of food and fibre, and rural development as the improvement of the quality of life (Bembridge, 1987:665). For the purpose of this chapter, rural development is taken as including both types of activity and is regarded as an approach to increase the participation of the rural population in the development process, consequently improving their level of living.

The focus of rural development is on the overall economic and social development of rural people, which includes giving them access to resources and technology, non-farming activities and choice of strategies, all of which are aimed at increasing the well-being and income of rural households (Bryant & White, 1980:23). Since the causes of poverty are multiple and interdependent, it is necessary for them to be addressed simultaneously in many sectors.

Rural development, however, should be viewed broadly - beyond meaning agricultural development only. It should include the creation and promotion of opportunities for the rural people to contribute meaningfully to the rural economy. It should entail the empowerment of people to participate towards their own advancement.



According to Jeppe (1985:31) rural development should be seen as a dynamic, flexible and innovative process carried out by rural people to improve their living standard. Rural development is a process that initiates social and economic change. It has its primary focus on people. With people at its centre, it is aimed at strengthening the confidence of the people to exploit their own potential, encouraging independent action and self-initiative (Jeppe, 1985:33).

Rural development is furthermore an empowering process that enables people to take control of their lives. This greater emphasis on human resources, calls for appropriate education of the poor, trained locally towards improved life-skills, self-management and self-sufficiency (Kgarimetsa, 1992:12). The World Bank (1990) suggests that rural development, aimed at the eradication of poverty, should involve the following focuses:

- ***Increase access to land***

An increase in access to land includes the reforming of property rights and the improvement of tenancy. According to Bembridge (1987:680) there are limitations to the extent to which traditional small-scale agriculture can be developed without some form of land reform focussed on a system of negotiable rights for grazing. Suitable land tenure arrangements are important in accelerating agricultural production. Small-scale farmers are affected by shortage of land. This compels them to look for grazing at distant areas, which leads to livestock being lost or stolen.

- ***Increase access to credit***

An increase to access to credit entails subsidising credit to the poor and the development of financial institution for the poor. In many rural areas there are no organised credit facilities. Rural families often have to rely on the extended family to obtain credit. This is not considered to be a real credit. Because of the

problems of collateral security' commercial banks play a very minimal role in providing credit for rural development activation. The necessary procedural requirements act as constraints to seeking help. Tests for credit worthiness and credit acquisition requirement leads to the denial of credit to the most needy rural families whom neither pass the test nor understand the procedure.

- ***Increasing access to infrastructure and to appropriate technology***

This entails the adapting of technologies for small farmers. The development and transfer of technology must be an integral part of an overall comprehensive rural development program. This includes basic need technology for ensuring clean water supplies, alternative fuel conservation, food technology, housing and other technology aimed at utilising local resources.

The context and nature of rural poverty help the community developer to understand the situation in which rural people find themselves. It also brings insight into the characteristics and constraints in alleviating poverty. Rural development is necessary for eradicating poverty in rural areas because it is a dynamic, flexible and innovative process carried out by rural people to improve their living standard. Rural development uses various strategies to eradicate poverty. In this study Animal Health Services will be discussed as a strategy to eradicate rural poverty.

### **3.4 ANIMAL HEALTH SERVICES**

Most people may wonder about how animal health can contribute in addressing rural poverty. Small-scale farmers in rural areas are faced with minimal access to veterinary services. Veterinary services are mostly centred in cities and rural areas, where people who can afford the services reside. Small-scale farmers experience difficulties in accessing these services because they are far away and costly. This contributes to poverty because the small-scale farmers do not obtain



necessary resources to manage their livestock. This results in a high level of animal diseases and livestock death, which leaves the farmers with less to survive on.

The provision of animal health service attempts to address poverty by bringing the veterinary services to the poor small-scale farmers in rural areas. Small-scale farmers function as a system. In a system small changes in one part of the system can bring changes to the other parts of the system. For example, livestock is part of the system. Good treatment and management of livestock will improve production, which will further contribute to the well being of the farmers. Animal health services attempts to address poverty by using different strategies. With regard to animal health services, the aims and objectives, status of animal health services in South Africa, participation and agricultural development, the human dimension of livestock disease control in small-scale farming and a conceptual model of human behaviour and animal disease control will be discussed in this section.

### **3.4.1 Aims and objectives**

In order for animal health programs to be effective in rural areas, they need to be guided by aims and objectives.

Animal health goals and objectives are not the same for all community settings. For example, an animal health project in rural areas will have different goals and objectives from the ones in informal community settings in urban and semi-urban areas.

According to the aims and the objectives of the project at Madinyane, the aims and the objectives of the Animal Health Services are as follows:

### **Aims**

- To develop a cost effective, yet affordable extension and veterinary care delivery system based on active participation of both resource poor animal owners and emerging commercial farmers.
- To promote primary animal health programmes in order to have broader access to veterinary services, improve the health status of animals and ensure human health.

### **Objectives**

- To determine how affordable veterinary services can be provided to emerging farmers and resource poor animal owners.
- To develop the communities ability to help themselves and develop the capacity to learn to work together to guide the future development of their communities making full use of their own resources as well as external resources.
- To develop the community's ability to produce an action plan and to implement that plan.
- To improve the farmer's knowledge of animal health and production by providing technical advice and extension to determine the occurrence and relative importance of animal diseases.

Madinyane is one of the South African rural areas, which need assistance in order to develop. Animal Health Services are meant to assist rural areas in dealing with animal diseases. Since this service is rendered to various South African communities and not only refers to the project initiated at Madinyane, it will be important to contextualise the status of animal health services in South Africa.

### 3.4.2 Status of animal health services in South Africa

South Africa is characterised by an agricultural system with a close integration of livestock and humans resulting in a need to consider both components in the delivery of animal health services. Animal health services include the components of field veterinary services, laboratory services, and public health (Umali, Feder, and De Haan, 1994:77). According to the Report from the Onderstepoort Veterinary Services (1998:2) field veterinary services in South Africa are suffering from a lack of veterinarians, particularly in rural areas. Most government veterinarians are overburdened with administrative work and any technical activities are mainly related to prevention and elimination of major infectious diseases, provision of clinical services, handling reproduction and production problems, and regulatory services.

The overall effectiveness of the field veterinary service is limited by inadequate transportation, inadequate funding for running and maintenance costs, poor communication facilities, lack of drugs and vaccines, insufficient trained man power at professional and support level and inadequate funds for monitoring programmes (Stewart, 2001, Veterinary Service Provision and Extension for small-scale farmers).

According to the researcher's point of view, veterinary services are still inadequate in South Africa. Most farmers do not receive the necessary services like education as far as animal management is concerned. It is sometimes very difficult for farmers to have access to other facilities that are mainly found around cities. This is due to the fact that farmers are staying far from towns and cannot afford travelling costs. This makes things difficult for farmers to acquire skills from any training source so that they are able to manage their livestock.

In South Africa, the government should consider changing its policy on delivering of veterinary services. Veterinary services, which are accessible and affordable,



need to be developed with the emphasis on primary health care and economic development. According to the World Bank (1994:49) the improvement of veterinary services can be achieved by encouraging the development of various strategies such as privatisation, use of para-professionals, education, and use of research and local knowledge to render service to poor rural farmers. These strategies suggested by the World Bank (1994:54) will be discussed in more depth.

### **3.4.2.1 Privatisation**

The changes taking place in South Africa have raised expectations in the population with regard to rural development. One of the cornerstones of government policy is reconstruction and development. It is important that the veterinary profession adapts to meet these changes by focussing on community based services. Privatisation of animal health services is one of the strategies that are considered by the government.

According to Leonard (1993:223) in terms of delivering of veterinary services, it is important to distinguish between public good and private good. Public good exist when the service benefits spill over to other members of the community and in many cases is paid for through government taxes, for example foot and mouth disease vaccinations. Private good occur when the individual consumer captures the benefits of the service in full. An example of private good is a clinical visit to a farm to treat an animal for an abscess. The owner captures the full benefit from the treatment given and the consumer should pay for these costs (Leonard, 1993:225).

In rural areas of South Africa, privatisation can contribute to the improvement of farming. Public good services should be provided to animal owners by vaccinating against animal diseases that can affect the whole community, which is paid for from taxes.

Private veterinary services, in most instances, are provided by veterinarians and are controlled by the veterinary council. These experts have knowledge about farming so they can educate farmers through their skills. Through training farmers can gain knowledge about various farming aspects such as animal management, nature of animal diseases and commercial farming. This can be paid for by the government to alleviate poverty. Private good can be provided for the benefits of individual farmers. This may even include giving credit to farmers in order for them to be able to use the service. Through privatisation the farmers can have access to treatment of their animals but would require payment by the farmer or subsidy from the government.

#### **3.4.2.2 Use of para-professionals**

The use of para-professionals for resource-poor and emerging farmers could result in a more affordable service (Stewart, personal communication, 2001, Veterinary Service Provision and Extension to small-scale farmers). These auxiliaries could work under the direct supervision of a veterinarian. McCrindle, Tice, and Mogojane, Stewart and Mosupi (1994:91) proposed two categories. The first is the Animal Health Technician (AHT) for which there would be statutory requirements for registration. This could be a person with a national diploma in animal health. The Animal Health Technician will be responsible for visiting the community and the Community Animal Health Worker (CAHW) on a regular basis to treat animals and to replace used remedies. The Animal Health Technician will contact the responsible veterinarian for any treatment, which are not within the competency of the Animal Health Technician to handle (Stewart, 2001, Veterinary Service Provision and Extension for small-scale farmers). The second would be a Community Animal Health Worker (CAHW) who would be permitted to carry out certain procedures under permit specifically in that case. The CAHW would be resident in the village and would sell remedies to farmers and help them with treatment of their animals. He would make profit from the sale of these remedies .

The proposed para-professionals could be of benefit to expand the client base of the veterinary profession in South Africa. It would be a low cost scheme resulting in local capacity building, with increasing knowledge of animal health by local communities. In achieving this, farmers can be trained to have skills in managing their own livestock in order to improve their quality of life. In situations whereby the farmers are staying far from cities, they can benefit from the para-professionals because they will obtain drugs and remedies from the para-professional staying in their community.

This will help farmers to maintain the health of their animals because when an animal gets ill, the Community Animal Health Worker will be living in the community. This will also reduce the cost of transport because the Community Animal Health Worker lives in the village.

#### **3.4.2.3 Education**

A lack of knowledge and skills is one of the main problems affecting rural communities. The people do not have information about resources and various opportunities available for farmers. According to Flora (1997:4) education maximises local participation and provides community and leadership development by encouraging people to help themselves acquiring skills and knowledge to improve their quality of life and that of the community.

It is important for the veterinarians and the Animal Health Technician to provide regular education courses to the farming community. These courses will lead to community building and community capacity. According to Flora (1997:2) community building implies a broad set of participants and a shared vision by the community members of what the community should be like in the future, looking at the whole and not just at a few parts.



Community capacity means the ability of the associations and institutions within the community to use the skills, knowledge and ability of all the people in the community to take initiatives, responsibility and be adaptable in the face of constant change (Flora: 1997:3). It requires strengthened relationships and communications both inside and outside of the community.

Due to lack of education various communities experience difficulties in initiating their own development. They expect someone from outside, like the government, to come and do things for them. By introducing education, people will learn to take action to improve their situation. In a rural area such as Madinyane, farmers days can be conducted to educate, for example, animal owners of that area about animal diseases and the advantages of commercial farming. Education in that area will build their capacities to do something on their own to change their situations. They will also learn to work as a group in dealing with other problems such as animal theft in the community. The fact that education is a tool for economic development emphasises the need for education at Madinyane. Through education the farmers can be encouraged to manage their livestock in order to generate profit and change their economic situation. The fourth strategy to be discussed is research and local knowledge.

#### **3.4.2.4 Research and local knowledge**

##### **- Research**

Research can play a major role in rural development efforts. The research task in veterinary science should be guided by economic considerations with an attempt to identify private and public good, and to determine how best resource poor and emerging rural animal owners can be provided with veterinary services (Krerek, Cornelius, McCrindle, 1995:117). In order to evaluate veterinary services, it is necessary to document its programs based on sound research principles.

**- Local knowledge**

Norgaard (1984:875) states that “Only very rarely is local knowledge treated as a knowledge per se in the mainstream of agricultural development and environmental management as knowledge that contributes to our understanding of agricultural production and the maintenance and use of environmental systems”. Local knowledge is an important aspect of society's development. Warren and Cashman (1988:1) characterised such knowledge as the sum of experience and knowledge for a given group, which forms the basis for decision-making with regard to familiar and unfamiliar problems and challenges.

Altieri (1990:22) defines such knowledge as “accumulated knowledge, skills and technology of the local people derived from the direct interaction of humans and environment”.

According to the researcher's point of view local knowledge plays a major role in development. It is important for the practitioner concerned to obtain information about the resources of the community before development can proceed. There is not a more reliable source of information about a community like the community members. Community members are able to identify needs and resources of the community. By interacting with community members, knowledge about strengths and weaknesses of the community can be obtained. In addition community leaders need to be consulted since they have important information on the community such as population density of the community, type of resources available and the kinds of problems experienced in the community.

Furthermore, local knowledge can provide practitioners with information such as values and norms of the community which can enhance a better understanding of the community.

It can also help in formulating plans and strategies to approach the community. Looking at Madinyane, there are individuals like the headmen, Chairperson of the Community Committee and committee members, who can provide essential information.

### 3.6 PARTICIPATION AND AGRICULTURAL DEVELOPMENT

Participation of farmers in agricultural development is an important issue. According to Farrington & Martin (1998:27) participation implies the balance in control of decision-making, information and resources between outsiders and the community, which require local people to take ownership of development activities. It is very crucial for the farmers to take responsibility because they know their situation and circumstances the best. If they become involved in development, they will be able to share various ideas that will contribute to changes in their situation. This calls for practitioners to facilitate effective participation in communities (compare Chapter 2).

As already discussed in Chapter 2, it is not easy to create effective participation since there is no simple blueprint. This implies that any intervention should be tailored to the specific environment in which it is to be implemented. However, there is a growing body of knowledge that can provide some indications on how to proceed. According to Cohen and Uphoff (1980:213-222) operational steps for creating effective participation include the following.

- **Implementers of rural development projects should be prepared to follow a process approach**

There is a growing consensus in the developmental literature that the creation of an effective participation is a gradual, evolutionary process in which both project staff and potential beneficiaries are willing to try various alternatives, discard them when they prove unworkable, and try others. According to Chambers



(1974:78) in general terms, management approaches to project implementation range from what can be termed a “blueprint” style to what, at the other end of the spectrum becomes a process “approach”. The process approach assumes considerable uncertainty and is characterised by continual openness to redesign and adaptation to changing circumstances (Sweet & Wessel, 1979:192). This approach requires an admission by both designer and implementers that, given the complexity of the problem to be solved, there is still much to be learned. It implies that both are prepared to try and find solutions by following a “dynamic living theory of knowledge that requires us to set new facts into the world” (Friedman, 1978: 85).

Although there has been less documented experience with the process approach than with the blueprint, according to Sweet and Wessel (1979:198-230), the process approach appears to have the following strengths and potentials:

- It is rooted in dialogue with the rural population and thus is more responsive to local potential and needs than the more technical oriented blue-print;
- It allows variation in bureaucratic structures and thus is more likely to adapt to political, social, economical, and physical changes that occur during implementation;
- It is based on learning and capacity building that is more suited to the promotion of self-sustaining development dynamics;
- It transfer's the ownership of programmes to implementers and thus creates an environment supportive of innovative problem solving rather than routine application of predetermined solutions; and
- It avoids negative side effects by eliminating design components that are deemed inappropriate (Honadle, 1979:13).

- **A project should start with small, relatively simple activities, which respond to local needs and produce results quickly**

If a project is highly complex, it is less likely that beneficiaries will be encouraged to become involved in project implementation (Cohen, 1971:66). Small-scale farmers are more likely to participate effectively in development initiatives if, they by so doing, obtain tangible, relatively immediate benefits as defined from their perspective. Small-scale farmers usually have an excellent idea of what their immediate problems are. In Madinyane it will be relevant if activities like animal disease treatment can be implemented because this is the main concern of the farmers.

- **Potential beneficiaries should make resource commitments to the project to be implemented**

According to Chambers (1974:110) obtaining a resource commitment from potential beneficiaries is desirable for a number of reasons. Firstly, government does not have the resources to support all worthwhile development initiatives. Many activities will function better without the involvement of the government at all. Secondly, the act of making a resource commitment will make contributors more concerned for the success of the development initiative than they otherwise might be. Finally, such a commitment will provide a concrete indication of how interested the community is in a new initiative. Such commitments can be in cash or in kind and can be generated in various ways. For example in Madinyane; the farmers can work together and initiate projects, which will facilitate the availability of animal service in the areas. This implies that the farmers will be committed by contributing their energy in order to better their animal disease and production situation.

- **Possible projects should be organised with existing organisations- formal or informal**

Local organisations of farmers are commonly regarded as the most practical and effective means of achieving participation (Dore, 1971:19). It is important for structures or organisations to be involved in rural development.

In Madinyane, organisations can play a major role including those mentioned by Tendler (1976:51) who states that organisations can play potential positive roles in the process of rural development by acting as vehicles for:

- Two-way flows of technical information, which reinforce individuals who try new approaches and breakdown barriers between groups and individual;
- Minimising risks and providing economies of scale;
- Adapting project activities to local conditions;
- Marshalling local resources;
- Achieving greater political and economic goals for local people by exercising influence over local administrators and asserting claims on government;
- Sustaining projects benefits; and
- Co-ordinating and spreading the benefits of external resources.

- **A two-way information flow (both formal and informal) between project implementers and potential beneficiaries should be established at the time of project start-up**

Information serves not only a functional role in supporting effective management but also has a process role in facilitating local involvement in project decisions and actions. Information is a necessary ingredient in building local involvement.

The participation of local population in data collection, analysis, and decision making is of vital importance. Not only does such involvement increase the



willingness of local people to take risks, but it also supplies the necessary feedback information for adapting development initiatives to local conditions.

Not only should an information system make information available to the local population on what the project has to offer, it should determine what the information needs of the local population are (Korten, 1981:11). For example, individual households will want some basis for evaluating the recommended development initiatives so that they can decide for themselves if the initiatives are worth the risk involved. Korten (1986:13) states two reasons for creating an information system, namely:

- To generate useful information for planning, implementing, monitoring and evaluating project activities;
- To provide a two-way information flow between project personnel and project beneficiaries.

This information system can play a major role in areas like Madinyane. Information from both the farmers and Animal Health Technicians and veterinarians need to be shared by all parties. This can be achieved through communication. The veterinarians need to be aware of the farmer's circumstances in order to come up with an effective approach. They also need to share their ideas about the nature of services rendered and its advantages. It is very difficult to determine strengths and weaknesses of community members without communicating with them. The community developers must ensure the information reaches the larger community in order to attract more participants. By so doing it will be much easier to get adequate information about the community and its functioning.

- **Emphasis should be placed on building organisational capacity**

In many project areas there may be a lack of organisational skills, particularly

those required for organising meetings, reaching consensus, choosing capable leaders, keeping records and handling organisational funds (Korten, 1981:11). Capacity building efforts are an obvious way to address such constraints. Farmers need to be trained in various organisational skills for effective local action.

According to Lele (1975:180) among the skills needed for organised and effective local action, are the following:

- The ability to form committees and conduct meetings;
- The ability to attract and pool resources to embark on a common enterprise;
- The ability to manage common funds and hold leaders accountable;
- The ability to choose capable leaders; and
- The ability to make informed decisions.

According to Lele (1975:187) capacity-building efforts must begin by instilling in project staff a conscious awareness of the strengths and weaknesses, incentives and behaviour in developmental projects. This awareness is an essential precondition for the development of effective projects to upgrade organisational capacity. In rural areas, although they do have committees, the researcher is of the opinion that they should also get information or be trained in organisational skills. In rural areas like Madinyane, they are still lacking initiative skills. The farmers largely depend on outsiders to come and provide help without even trying to initiate something on their own.

- **Decentralisation: local control is the key to any strategy designed to encourage participation**

Decentralisation is at the heart of any attempt to stimulate effective local participation. According to Korten (1986:14) decentralisation refers to more than the transfer by local authorities of certain powers and functions such as control

over policy and resources to the people. When local people feel that they have control, rather than feeling forced to follow the dictates of some central authority, then it is more likely that they will be willing and able to encourage beneficiary participation.

Cohen and Uphoff (1980:235) state that “Generally speaking people are more interested in specific services to alleviate basic problems than in action on long-range solutions to problems of development policy; that is they are not likely to think beyond what can be done within existing policy and environmental constraints”. If their views are taken seriously and are incorporated into policy decisions concerning development priorities and allocation of resources, there will be greater likelihood of creating effective participation and thereby, improving project performance (Cohen, 1971:236).

### **3.7 THE HUMAN DIMENSION OF LIVESTOCK DISEASES CONTROL IN SMALL SCALE FARMING**

According to Curry (1992:17) improved livestock disease control depends on an understanding of the human environment, as well as the physical and biological environment. The relationship between disease and human behaviour is widely recognised by epidemiologists of both human and animal disease.

For example, epidemiologists who study human diseases currently consider a multiplicity of factors in order to understand the underlying causes of patterns of frequency and occurrence (Curry, 1992:17). According to Curry (1992:23) factors in this ‘causal web’ include exogenous factors of the biotic and abiotic environment, endogenous or genetic factors, demographic factors, and behavioural—that is, social, psychological, economical and cultural factors. Veterinary epidemiologists also acknowledge that understanding this human dimension is no less important for successful control of livestock disease, and include human behaviour along with agent, host and environment – among the



determinants of disease in their “web of causality” (Schwabe, 1984:42). However human behaviour enters into this ‘causal web’ primarily through animal husbandry (management) practices on the farm (Schwabe, 1984:42).

The researcher agrees with the fact that human behaviour affects livestock production and disease control. In many farms in South Africa, the farmers do not have the necessary knowledge of how to control the health of their livestock. This might be because of the fact that there is a lack of both formal and informal training for farmers. Farmers may not be aware of factors around their places that cause diseases, so this makes it difficult to avoid animals from being affected. It is necessary for farmers to receive knowledge about social, economical and physical factors, which can cause disease to their livestock. Prevention is the ideal solution to this problem of animal disease and farmers can be educated about the human dimension of livestock diseases, formally or informally.

### **3.8 A CONCEPTUAL MODEL OF HUMAN BEHAVIOUR AND ANIMAL DISEASE CONTROL**

This model originates from farming system research, which provides a number of concepts that are useful for developing a framework to investigate the management aspects of disease control in case of small-scale farmers (Jaetzold & Schmidt, 1983:60). According to Jaetzold and Schmidt (1983:62) the farm system research contains several key concepts useful for rural development purpose. First it views the whole farm as a system and places importance upon understanding the relationship between the various parts of the system. Secondly it focuses attention on the goals, resources and constraints of the family farm as the unit of production, and of consumption. Thirdly, implicit in the farming system research approach, is the notion of variation in farmers’ circumstances and therefore in farming systems.

According to Shaner, Phillip and Schmehl (1982:19) using this perspective of farming system research, a conceptual model of those aspects of the human environment which affect livestock disease control in small-scale farmers can be constructed. This is due to the fact that the model contains the following elements:

- *The family farm*

Much research on subsistent farming has shown that the demographic profile of the family farm is a very important shaper of the farming system (Curry, 1992:19). The family is the unit of production, consumption and adoption of technology. The size and composition by age and sex of households are important for determining the needs of its members, and for setting household goals, which may or may not be met through the farming system. Household goals and behaviour usually change through time as its size and age composition change in a process known as the domestic life-cycle (Schwabe, 1984-47).

In situations whereby the household consists of females only, it is difficult for them to look after their livestock because there is no one who can take responsibility to take animals to grazing and to dipping. Most of the household tends to call their male relatives to help them with this problem.

- *Goals*

Individuals and groups often have stated and unstated goals, which they strive to accomplish. In the case of the family farm, there are a variety of goals, which can be seen as being set to meet individual and collective needs. These needs most certainly include providing for the welfare of household members in terms of food, clothing, and shelter. In addition there might be other goals such as education for children. Livestock may play a role in realising family goals through their economic value as source of subsistence and income, or by their socio-cultural importance as a potential means of access to status and other resources

of the social groups. In many farms in South Africa, for example, livestock serve as indicators of wealth and are used in marriage and other social transactions and events.

- *Knowledge, attitudes and skills*

There are many of these factors, which mutually affect the family farm and its goals. Among them, are those which are important for the livestock and components of the farming system and knowledge and understanding of animal disease. Farmers possess varying degrees of knowledge about the cause and the methods of control of animal diseases.

These are obtained from a variety of sources, both traditional and modern. Also important are the frequency with which farmers have contact with veterinary agents, and the degree to which they rely upon them for animal health care (Anteneh, 1991:11).

In South Africa, many of the farmers, especially black animal owners are restricted to subsistence farming. This might be due to the fact that they have no skills and knowledge about commercial farming. Therefore they think that if they sell some of their livestock, they will eventually be left without livestock. It is important that knowledge and skills about commercial farming be taught to farmers in order to develop a positive attitude towards commercial farming.

- *Management Behaviours*

Both the resource for keeping livestock (i.e., factors affecting the nutritional status of livestock) and the exposure of livestock to disease are mediated through the management behaviours of the family (Anteneh, 1991:12). If the family is unaware of the various factors causing animal disease, the animal will be exposed to various disease situations and will be affected. If the family members are not trained on how to manage their animals, the animals are more likely to be



affected by diseases. It is important for family members to be aware of diseases and prevention methods. The most important part that they need to know is how to prevent animal diseases from occurring.

By looking at Madinyane, the farmers find it difficult to afford treatment of their animals; therefore by practising prevention it might be more cost effective for them. Prevention can be taught to farmers by teaching them the causes of diseases, enabling the farmers to attend to their animals before they get sick.

- *On-farm resources for tending livestock*

The farm household utilises a variety of on-farm resources to effect production. According to Gilbert, Norman and Winch (1980:16) "... perhaps the most important resources for livestock production which affects animal nutritional status and exposure to disease are land, water, labour and income".

- Land

There are several important attributes of the land resources of the farm family, which may affect animal health status. Curry (1992:20-21) lists four factors of land which may affect animal health status, namely - *Farm size*: This often determines the capacity of the family farm to benefit from certain technologies through realisation of economies of scale. This may consequently influence the type of farming the family uses. *Land tenure*: Smallholders utilise a variety of land tenure arrangements to obtain access to land for agricultural production. Farmers may own land outright through customary arrangements. Additional land may be rented or borrowed from neighbours. Under this system of security of tenure, this may affect the farmer's ability and willingness to invest in improved technologies for crops and livestock.

The amount and quality of *pasture land* available to the farm household can affect the livestock production strategies, the quality of supervision of animals,

animal nutritional status, and exposure of livestock to disease from the grassland itself or from other animals. The presence or absence of *fodder crops* on the farm and the degree to which they are used for feed or are sold for cash may have effects on the health status of the animals. This can happen when more crops are sold and none is left for the livestock. It is important to remember that the kind of food that is available to livestock also contributes to animal health status.

- Water

Water is an important factor in animal health not only because it is essential for livestock production, but also as a potential for increased disease risk through contamination and by providing an occasion for contact with other animals. Contamination of water can come from a number of sources.

According to Schwabe (1984:52) the factors affecting water quality and the potential for exposing animals to disease include: water source, whether it comes from a tap, well, or river; water location, whether the source is on-farm or of-farm; the reliability of the source (year-round or seasonal); and distance of the source from where the animals are kept. Mostly, the farmers only know that their animals should get water, but do not know about what effects do water have on their animals. This indicates that it is important for farmers to be taught these factors about the effect of water in order for them to be able to manage water borne diseases in their animals.

- Labour

An adequate supply of labour applied to productive tasks in a timely manner is essential for any successful farming enterprise. Important to the livestock production and the disease control systems are stated by Shaner, Phillip and Schmehl, (1982:24) as the composition of the labour force (age, sex, and home versus hired), the quality of the effort the labour force provides, the timing of the

productive tasks, and the competing demands of other tasks and productive enterprises, both on-farm and off-farm.

In rural areas like Madinyane, co-operation of farmers can help them in improving their livestock. Farmers need to initiate effective strategies to obtain good treatment for their animals. In order to obtain medication, they can negotiate with the department of veterinary services to provide them with a mobile clinic at least once per month, if possible. This will reduce costs for transport for the farmers and their animals will be practically examined by the veterinarians. This can be successful if the government can subsidise such service.

- Income

Income produced by sales of crops and livestock products may be used to make improvements in the farm. These improvements lower disease risk, for example, an improved watering system, or to purchase nutritional supplements and veterinary products which control disease (Curry, 1992:21).

This could be a problem to a place like Madinyane because almost all the farmers own animals and they do not practice commercial farming. So it is difficult for most of them to have enough income, therefore they need to initiate other projects within the community that will provide them with income. This income can help them in doing most of the things themselves other than waiting for an outsider to come and help them.

- Off-farm resources for livestock production and disease treatment

Many farming families in rural areas of South Africa rely on resources acquired off-farm to support various aspects of agricultural production. Income obtained from wages or self-employment can be used to purchase essential resources for production. Family income must be allocated in numerous ways to meet the goals of the farming household and individuals.



The researcher agrees with the idea of using off-farm resources, but this can be difficult in resource poor areas like Madinyane. Those who are employed have a task of looking after their families, and may not be in a position to utilise these resources. It would be better if they can do this as a community but this will be affected by the unemployment problem in the area. There are those individuals who might be able to do so provided that they are informed about the availability of such resources.

- Outcomes of management and resources

According to Schwabe (1984:60) the goals, knowledge, skills and management behaviours of the farm family interact systematically with family resources and income to produce outcomes, which affect herd health. It is important for farmers to understand that the health status of the animals affects growth of the animals thereby contributing to the increase in herd productivity and family income.

By adopting a systems perspective as advocated by farming systems research, can provide a useful framework that enable experts to address the human dimension in livestock disease control.

The human dimension of livestock disease control is important because in designing an effective delivery system for improved livestock disease control measures, one must be aware of such differences in farmers circumstances and of differential capacity of those farm families to adopt and to benefit from these measures.

### 3.9 SUMMARY

This chapter has focussed on a very important aspect of animal health services, which can play a major role in improving livestock of animal owners. Animal

health service delivery not only improves the livestock, it also improves the economic position of the owners.

This chapter has discussed the nature of poverty because animal health is directed at addressing poverty. Animal health is regarded as a strategy of rural development, therefore rural development has been explained briefly. The goals and the objectives of animal health services have been discussed to emphasise the importance of the service. This chapter also focuses on the situation of animal health services in South Africa, which also need to be improved by using various strategies such as privatisation, use of para-professionals, education, research and local knowledge.

The importance of participation has been stressed whereby farmers need to be part of agricultural development. It is important for farmers to take part in planning, implementation and decision making processes. In addition, the operational steps to facilitate participation have been discussed.

This chapter also reflects on the fact that the farmers themselves can contribute to the well being of their animals. Therefore it will be important for them to understand the human dimension of livestock disease control in small-scale farming. This has been discussed by using a conceptual model of human behaviour and animal disease control, which is inspired by the farming system research.