

CHAPTER ONE

Introduction

The purpose of this study is to determine the suitability of the participatory research approach for determining the educational needs assessment for livestock farmer education programs in Sri Lanka, and to find a suitable system to implement it.

This chapter begins with a brief discussion on the importance of human resource development in rural community development and the importance of the adult learners' involvement in planning their educational programs. The chapter then provides a background to the study, statement of the problem, research question, aims and significance of the study. Finally, an overview of the thesis is presented.

Importance of human resource development in community development

The situations in many developing countries of the world are basically similar in spite of diverse socio-economic, democratic and political backgrounds. These problems are associated with lack of resources, both human and natural, misguided policies, and in some cases, to the unfavourable geographical locations of the countries themselves. Skilled human resources suitable to the country's needs is one of the major areas lacking in developing countries. Compared to other resources, human resource is the most crucial thing for development because of its role in integrating and co-ordinating the contribution of all other resources. Human resource development work should be planned according to the needs of the people and so help to develop the social, economic and cultural development of the country.

The education of rural adults is a very important aspect of any community development project. Community development refers to a process which

aims directly to initiate and effect the improvement of the economic, social, political and cultural conditions of each community and its members. It is a continuing process and its success and effectiveness depends on the participation and willing co-operation of the members of the community (Ife, 1995). Community development programs are influenced by government as well as private organisations.

Agricultural development is one of the higher priorities of community development programs especially in third world countries where the majority of people depend on agriculture. The World Bank and other united nations agencies who are responsible for community development also have shown, that rural agricultural development can be increased not only by making policy suggestions, providing financial and other resources needed by the farmers, but also by human resource development and empowering people to understand their own development. Such agricultural development organisations are not pure adult education organisations but to achieve their main objective, which means to increase the income of farms, those organisations conduct agricultural education programs as one of the major activities of their development programs.

According to Kidd (1974), world conferences on adult education are concerned with educating rural adults in developing countries and emphasise the importance of peoples' participation in their educational activities. The second world conference on adult education sponsored by UNESCO which was held in Montreal, Canada in 1960, considered the aims and functions of adult education in a global context. Adult education was to include any organised attempt to educate adults, no matter what the program, level or purpose. The Montreal Conference has significantly influenced not only the development of adult education, but also participatory research on adult education. It aims to promote more and more education for people to live more healthy lives and achieve economic progress especially in the third world countries. Therefore, adult education is seen as assisting in fighting against the evils of hunger, disease, and poverty. Adult education is an integral part of people's economic development program, in order to prepare people to be actively involved in improving their own conditions (Kidd, 1974). It is assumed that the quickest way to increase productivity in the less developed countries is to train adults who are already in jobs.

The Tokyo Conference on adult education also seriously articulated free and democratic education for adults and it considered extending education for more people regardless of where they lived or what income they earned and increasing the learners' control or participation in the choice of educational needs, goals, methods and content (Kidd, 1974). In a statement explicitly advancing the goal of social justice in education, the Tokyo Conference resolved:

That the content and method of adult education programs be designed to respond to the needs and interests of individual learners and to further the well being of the community as a whole ...that the aims of adult education include ensuring the active participation and commitment of the learner at each stage of programming, implementation and evaluation.....

(Kidd, 1974: 29)

The Nineteenth General Conference of UNESCO Adult Education which was held in Nairobi in 1976, also emphasised democratisation of adult education and the need to make education accessible to more of the underprivileged people. It was recommended that adult education should be based on the learners' needs and develop the learners' critical understanding of major contemporary problems and social change and the ability to play an active part in the progress of society with a view to achieving social justice.

(UNESCO, 1976)

Sirinivasan (1977) has shown that using appropriate procedures of planning educational programs and teaching adults, non formal education could lead to empowerment, liberation and socio-economic development. Her method is based on participatory approaches.

It is clear that for successful community development, adult education needs to be followed with a more co-operative and participatory approach which may help empower people, enabling them to actively come in to their development process. Educational needs assessment is the most important first step of any educational program planning which should also be followed by a participatory approach with learners.

The Sri Lankan Government policy encourages people to take responsibility for their own development by providing them with education and training facilities. Most of the agricultural development programs involve adult education activities as a major part of rural development. The Department of Animal Production and Health in Sri Lanka uses adult education programs as a tool for livestock development, which aims to contribute to overall community development. Livestock education and training programs are helping farmers to develop and provide necessary knowledge and skills on animal husbandry to increase their productivity, which may help them to achieve better and more productive lives within their communities.

Background to the study

Educating rural livestock farmers is one of the major activities of the Department of Animal Production and Health. It uses different approaches to educate farmers. Training programs are a major farmer education activity but print media, electronic media, mass media, and exhibitions are also used to educate the people, especially providing awareness of new animal husbandry technologies. Most of the rural areas of Sri Lanka do not have basic facilities like proper roads, proper bridges for rivers, electricity or telephone facilities, and proper schools etc. Therefore, the majority of the rural people are not in a position to use television, radios, books, booklets, and newspapers for their education. Therefore, the Department of Animal Production and Health realised that conducting training programs is the most significant method to educate rural farmers in Sri Lanka. The DAPH mainly conducts two types of farmer training programs: 1 to 7 day residential training programs conducted in farmer training centres which are situated mostly near farmers' premises.

Short training courses are conducted in farmers' fields or in common places in the villages. Farmers' educational programs are mainly conducted on animal husbandry. The major subject areas are: Dairy cattle management, poultry and duck management, pig management, rabbitry management, goat and sheep management, pasture and fodder management, conservation of animal feeds, integrated farming and processing of animal products. Adult educators from the training centres use a variety of approaches to educate farmers: they use lectures in classrooms, practical training on the

farm, demonstrations, field trips, teaching through video films, providing pamphlets for farmers to read. Any farmers coming to the training centres for the first time receive very basic knowledge of his or her animal husbandry field.

The curriculum for training programs changes over time, learner group to learner group, according to the needs, farming experience of the group and educational level of the learners. Adult educators in the Animal Husbandry Training Centres are mainly responsible for curriculum design and implementation of farmer training programs. Livestock Development Instructors of the veterinary offices or other training organisations usually combine training needs with other relevant information like the educational level of the learner group, farming experience, places where they come from, and inform the training centres. Most of the time, training organisers come to the training centres and discuss the above matters with the trainers in order to help trainers design the training course. All the farmer training programs are self employment oriented. Training organisers send an invitation to farmers at least once a week before they commence training programs. Normally the head of the households are invited to participate in the programs.

Statement of the problem

Provincial Departments of Animal Production and Health provide all kinds of support including financial support to develop livestock farmers of the rural villages. Other community development authorities also provide enough funds to develop the livestock husbandry sector and conduct programs with the assistance of the veterinary offices at the village.

Normally livestock development projects for the farmers are planned by the extension officers of the veterinary offices and the knowledge and skills which are needed for farmers to run the projects are decided by the extension officers who are experts in the animal husbandry field. In 1988 the Department of Animal Production and Health introduced a new method to assess the learners educational needs which is more systematic than the previous system. But still livestock experts are the persons who determined learners' educational needs. Normally livestock experts are livestock

extension officers, veterinary surgeons, livestock officers, trainers, livestock researchers, and top level administrators. Most of them are subject matter specialists but are not accustomed to practical work at the village level. The survey method is suggested as the most appropriate method for needs assessment for developed countries, where infrastructure is highly developed with efficient communication systems and farmers are often powerful and highly educated.

The present adult education programs of the Department of Animal Production and Health are subject centred and theoretical, rather than concerning practical problems which exist in the day-to-day life of the farmers. Farmer training programs conducted by the Department of Animal Production and Health are very much based on a definition of educational need from the department's point of view rather than the farmers' point of view. Learners appear to have accepted this situation without question and do not have the power to make their own voice heard in program planning and for their development. In general farmers do not actively participate in the planning of their educational programs.

In the present situation, farmer education is highly encouraged but problems emerge when very little interest is shown in participation in the programs. The low participation rate may be a result of the "top-down" approach of educational program planning. Although large numbers of livestock education programs have been conducted over the last few years, the experience of the author is that the majority of farmers have not benefited from the educational programs. They are not practising the livestock knowledge and skills taught in the training programs. Lack of farmer participation in assessing their educational needs means the program planning and development process may be neglecting some of the essential needs of the farmers, which are highly important in developing their livestock farms and improving their socio-economic conditions. This situation severely impedes the development of the farms and the resources which are spent on livestock development programs are not utilised properly to develop Sri Lankan rural communities.

Community development, in brief, can be defined as helping communities to articulate their needs and then to act so that they can be met. For this to happen, the people themselves must own and control the process of needs

'assessment' and definitions (Ife, 1995: 19).

Nyerere believed that people are able to develop themselves, and that it is very difficult to create a better society by external forces without the active participation of the people of the society.

People can't be developed; they can only develop themselves. For while it is possible for an outsider to build a man's house, an outsider cannot give the man pride and self confidence in himself as a human being. Those things a man has to create in himself by his own actions. He develops himself by what he does; He develops himself by making his own decisions; by increasing his understanding of what he is doing and why; by increasing his own knowledge and ability and his own full participation as an equal in the life of the community he lives in.

(Hall, Gillette and Tandon, 1982: 13).

The willingness of the people to participate in their own development is a process highly influenced by their empowerment. Empowerment is giving power to disadvantaged individuals or groups, especially poor unemployed people, low income farmers, and other socially unrecognised groups, allowing them to take power in their own hands, redistributing power from the 'haves' to the 'have nots' and so on. Empowerment can be achieved by developing or changing approaches, changing structures to bring about more equitable access to resources or services, and opportunities for people to participate in the life of the community (Ife, 1995). According to Ife, education which is characterised by a "bottom-up" approach will stimulate the empowerment process. The participatory research approach is one example of a "bottom-up" approach.

Needs assessment is an integral part of any educational program planning and development process and it should be conducted prior to the design of the curriculum (Boyle, 1981; Knowles, 1980). If the educational needs assessment follows a participatory research approach, it will provide a "bottom-up" approach for the whole educational activity. This approach is compatible with commonly accepted adult education principles.

When considering the characteristics of the Sri Lankan rural livestock farmers and their under-developed socio-economic situations, it is necessary to follow an approach which can help to support their empowerment process. The participatory research approach does not disturb the peoples' living system, their culture or their values because it believes the people themselves are researchers. The use of the participatory research approach for educational needs assessment may also open paths for rural farmers to come to their own community development process together with community development authorities. Therefore it is important to study the participatory research approach, its suitability for educational needs assessment, and methods to implement it in animal husbandry farmer programs in the Department of Animal Production and Health in Sri Lanka.

Research question

How can the participatory research approach be applied to assess the educational needs of the Sri Lankan livestock farmers?

Aims of the study

- * To analyse the existing educational needs assessment procedures of livestock farmers educational programs in the Department of Animal Production and Health in Sri Lanka and the problems.
- * To identify appropriateness of participatory research approach for educational needs assessment in Sri Lankan livestock farmer education programs.
- * To identify suitable procedures to implement a participatory research approach for educational needs assessment for farmer educational programs and make recommendations to implement this approach.

Significance and importance of the study

- * In Sri Lanka successful rural community development includes a highly developed agriculture sector which can help people to achieve independent lives. Agricultural development is highly dependent on solutions to farmers needs and problems. Effective methods of farmer educational needs assessment methods which are controlled by the farmers could lead to more successful animal husbandry education programs. In general, the findings of this study will help both directly and indirectly to improve the livestock sector in Sri Lanka.
- * This study is very useful to the Department of Animal Production and Health to strengthen its educational needs assessment process for farmer education programs. Farmer education is not a simple process, it needs money, manpower, time, material, and other resources. However the cost of education is very high, so it is the responsibility of the DAPH (Department of Animal Production and Health) to conduct cost effective quality farmer educational programs which are relevant to the farmers. The findings of the study will lead to more cost effective education programs in the DAPH.
- * As critical personnel in rural livestock development activities, livestock extension officers in DAPH can be used in the research study not only to assess farmers educational needs, but also for overall extension activities. This research will provide a better approach for livestock extension activities which may be the most appropriate to develop poor farmer societies in Sri Lanka.
- * The author is mainly involved in the training of livestock extension staff of the DAPH as well as relevant officers of other community development organisations. The author, as trainer and educational program planner in the DAPH, will use the findings to assess educational needs of adult learners in order to conduct more effective educational programs.
- * The study may be useful for decision-makers, planning and policy making officers of the DAPH as well as the Ministry of Rural Industrial Development to plan new livestock development projects with a

participatory research approach.

- * The findings of the research will provide useful information not only for extension officers, adult educators in the Department of Livestock Animal Production and Health and planners, extension officers and adult educators in other parallel fields, to improve their adult education programs to achieve better results.
- * Most third world countries still practice the T & V system for agricultural development activities. Experience with a number of extension services in World Bank assisted projects demonstrates very clearly several short comings of training in the T & V system. The most important common problem of training in the T & V system is that what is taught to farmers may not be relevant to their work. This research will be relevant for other developing countries in similar situations and provide valuable information and suggestions for possible changes.
- * This research will serve as fundamental research for further rural agricultural extension and adult education research in Sri Lanka.

Limitations

Although it is very valuable to find literature on adult educational programs and educational needs assessment procedures of the Department of Animal Production and Health, so far there are no formal research papers published. Within the time-frame and financial limitations of the study, the author will not be able to collect information from the officers who are involved in farmer education activities and from the farmers. Therefore research will be highly dependent on the author's experience as an adult educator for the Department of Animal Production.

The author had the opportunity to observe a rural community development project in Sri Lanka which follows a philosophy more or less similar to the participatory approach. Because of a lack of relevant literature on this community development project, the author's understanding, experiences and observations of that project will be used in this study.

Research methodology

Basically, this research will be conducted to find the most suitable means to implement a participatory research approach for educational needs assessment for farmer education programs in the DAPH. To achieve this, the research study will be based on:

- * Literature on the participatory research approach,
- * Educational needs assessment case studies found in a literature review,
- * Author's experience.

This research will make use of the following qualitative research methods:

The researcher has thirteen years' experience as an adult educator in the Department of Animal Production and Health (DAPH), especially on rural farmer training activities, extension officer training activities and community development activities with special livestock development projects. Therefore the author depends to a large extent, on personal experience to analyse and present the needs assessment procedure, and find out its problems and failures.

A review of the literature on needs assessment will be carried out with a particular emphasis on a participatory approach to educational needs assessment, the theoretical knowledge of the participatory research approach and case studies of educational needs assessment based on the participatory research approach. These and personal experiences will be used to identify problems and failures of the present situations and to find out possible applications of this approach in the DAPH in Sri Lanka.

Overview of the research study

Chapter One

Chapter one of this thesis briefly describes the relationship between adult education and community development and the importance of adult learner participation in educational needs assessment process. Then briefly discusses the background to the research problem, significance and importance of the study, limitations and finally provides an overview of the research.

Chapter Two

Chapter two begins by providing an introduction to Sri Lanka which includes physical, demographic, administrative and economic features. It then briefly provides an introduction to agriculture in Sri Lanka and discusses the Sri Lankan livestock sector emphasising livestock farming systems, production situations and characteristics of Sri Lankan livestock farmers. It then considers the objectives, structure, and roles of the Department of Animal Production and Health (DAPH) and the importance of its extension and farmer education activities in developing rural farming societies in Sri Lanka.

Chapter Three

Chapter three provides a theoretical framework for the study. The main theory used by the study is based on the participatory research approach. The chapter begins by exploring the theory of the participatory research approach and its suitability for adult education which is related to community development and social change. This chapter also provides an introduction to 'needs assessment' according to a literature review. Then it considers a number of other procedural methods of needs assessment found in literature reviews. Finally, this chapter will discuss how the participatory research approach fits in with adult education principles with special regard to needs assessment and program planning.

Chapter Four

Chapter four begins by providing brief information on the training model followed by the DAPH and explains the educational needs assessment procedure of the model. After that, the chapter looks into problems of the above needs assessment method. Finally it discusses the limitations of some livestock development projects which follow the needs assessment procedure for the animal husbandry educational programs.

Chapter Five

Chapter five presents case studies which follow the participatory method of educational needs assessment and discusses the author's personal experiences of some community development projects in Sri Lanka. This chapter ends by presenting common features which are identified from the above mentioned case studies.

Chapter Six

This chapter discusses the appropriateness, possible difficulties and limitations in the application of the participatory research in the Sri Lankan situation. It then considers the application of the participatory research approach in educational needs assessment in the DAPH in Sri Lanka. This chapter suggests possible methods, general recommendations to apply, and finally includes a summary of the study.

CHAPTER TWO

Introduction

This chapter begins by providing background information on the geographical, administrative, economic situation in Sri Lanka, and the context of the study. Then information on the Sri Lankan livestock sector and Department of Animal Production & Health (DAPH) is provided. As the study relates to rural human resource development on animal husbandry, the nature of rural livestock extension and functions of the Division of Human Resource Development of the DAPH are especially discussed here.

Introduction to Sri Lanka

Physical features

The Island of Sri Lanka is a tropical country situated between 5° 55' and 9° 50' of North latitude and between 79° 42' and 81° 52' of East longitude in the Indian ocean. It covers an area of approximately 65,610 square kilometres with North to South 435 km and 225 km West to East. The Sri Lankan population is about 18,112 million (Central Bank of Sri Lanka 1995). Geographically, Sri Lanka is characterised by low lands near the coast and in the northern central part of the country, while a mountain area with peaks of up to 2,524 metres is located in the central region of the country (Ohrling, 1977). 42% (18,498 sq km) of the total land area of Sri Lanka is extremely suitable and available for agricultural practices. The main seasons of the country are the rain and dry seasons and the annual average rain fall is about 1,720 mm (Central Bank of Sri Lanka, 1995). Sri Lanka is divided into three main zones – dry zone, wet zone, and intermediate zone based on annual rainfall.

Demographic features

The population can be roughly divided into three ethnic groups:

- (1) Singhalese who comprise of 74% of the total population.
- (2) Tamil who comprise of 18% of the population.
- (3) Muslims and Burgers who comprise of 8% of the population.

The majority of the people are Buddhists (69.3%) and 78% of the total population in Sri Lanka live in rural areas (Samarasinhe, 1996). Sri Lanka has a young population comprised of 35.2% under 15 years, 60.5% below 55 years and 4.3% above 60 years. The literacy rate of Sri Lanka is 88.6% .

(Central Bank of Sri Lanka, 1995)

Administrative features

The Administrative structure of the government is based on the democratic philosophy and the government is selected every five years by the people in a general election. The President, Prime Minister, cabinet and other parliament members make decisions for the central government and provincial government members make decisions for provincial issues. Sri Lanka was divided into nine provinces in 1988: Western, Southern, North, East, North Central, North West, Uva, Central and Sabaragamuwa. Each province is divided into 2 – 4 districts.

The government has established two Ministries aiming at rural agricultural development and giving a major priority to agricultural development.

The two Ministries are:

- (1) The Ministry of Agriculture which is mainly concerned with crop production.
- (2) The Ministry of Rural Industrial Development which is concerned with livestock development and other rural industrial development.

Economic features

The contribution of agriculture has been a vital factor in Sri Lankan economic development and national income data shows that for the period of 1959-1974 the agricultural sector was responsible for an average of about 37% of the total Gross National Products. In 1981, the agricultural sector contributed 32% of the Gross National Products (GNP) whereas the industrial sector contributed only 13%. In 1996 the agriculture contribution for the GNP was 20% (Central Bank Sri Lanka, 1976-1996). Agriculture is still the largest productive sector in the Sri Lankan economy and the importance of agriculture can be measured in terms of employment provided to the people in the country. In spite of rapid development in the industrial and service sectors, agriculture is still the most important occupation in Sri Lanka, particularly for rural people, since they represent the largest occupational group. The Department of Statistics, Sri Lanka, 1994 shows 65% of the population in Sri Lanka depends on agriculture and allied occupations. 80% of Sri Lankan export earnings still depends on agriculture (Department of Statistics Sri Lanka, 1994) .

The Sri Lankan agricultural sector is divided into two sectors: (a) An export oriented, plantation sector specialising in cash crops (tea, rubber, coconut) and (b) Subsistence oriented peasant sector specialising in food crops, livestock and spice crops. The peasant agricultural sector is not developed enough even to achieve 50% of the country's food demand. The Departments of Agriculture and Health and Export Agriculture are responsible for developing peasant food crops, and spice crop sectors respectively. The Department of Animal Production is responsible for the development of the livestock sector in Sri Lanka.

Livestock sector in Sri Lanka

The livestock sector in Sri Lanka is not significantly developed to contribute to the overseas market, but it generates income for a large number of the farmer population and supplies food for the domestic market. The main objective of the DAPH is to develop the rural livestock sector to create self employment and to promote consumption of animal based foods (eg. milk, meat, eggs) in rural areas where health problems are very high due to

nutritional reasons.

The Sri Lankan livestock sector is always integrated with crop husbandry as each benefits from the other. Although the main objective of livestock farmers is to get good production from animals, they have other objectives such as getting animal power for agricultural land preparation work or to collect manure as fertiliser for crops or to control weeds in their plantations. Sri Lankan livestock farming is always characterised as part-time or a secondary source of income. Most of the people who keep animals are crop husbandry farmers or people who have other small income sources. Generally Sri Lankan farmers are highly dependent on family labour. Involvement of rural women in livestock farming activities is a very prominent characteristic in Sri Lanka as the men of the families are usually involved with the main source of income. From the experience of the author, livestock farming systems in Sri Lanka can be divided into three main systems.

* *Dry zone system*

The dry zone consists of 2/3 of the country and there is no rain for almost half of the year, the temperature of the dry zone is very high when compared with the other zones. 56% of the farmer population of Sri Lanka belongs to the dry zone and they mainly depend on paddy and cultivations. (Chana cultivation is a traditional way of integrated farming which uses forest land for mixed crop cultivation only once and other forest land is used for the next time.) Generally most of the dry zone farmers have large herds of animals (about 30 - 300) mainly consisting of less productive indigenous breeds of cattle, buffalo and goats which are highly resistant to hot temperatures. As land availability is very high compared with other zones, a free grazing system of animal rearing practices can be seen. Dry zone farmers keep their animals as a cash revenue and for agricultural land preparation work as they still depend on animal power.

* *Mid and up country system*

This area consists of higher elevation areas of Sri Lanka in the central part of the country. Genetically high yielding European breeds of animals are

popular in this area as the temperature is very low compared with other areas (16° – 25°C). Most of the people of this area depend on vegetable gardening and keep a smaller number of animals under a controlled system (inside sheds) due to less land availability. Other than receiving income from production, livestock farmers of this area keep animals to collect manure as fertiliser for vegetable cultivation.

* *Wet zone system*

The wet zone is a highly commercialised area and most of the farmers mainly depend on rubber and coconut cultivation. The temperature is moderate in this area and good rain falls almost throughout the year. Livestock farmers of this area keep 5 - 15 cross breed high yielding animals as a second source of income. Farmers also use animals to control weeds in their rubber and coconut cultivations.

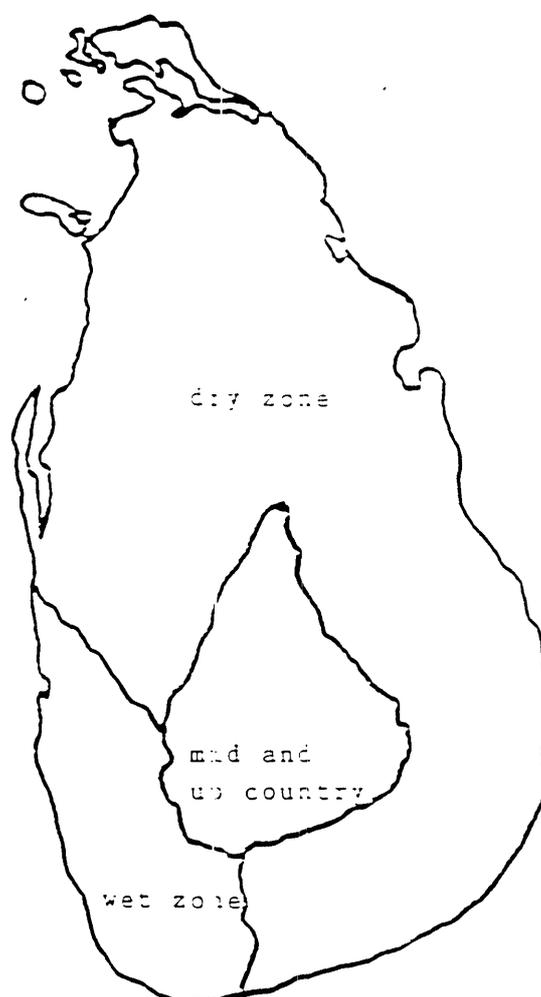


Figure 1.1: Livestock farming systems in Sri Lanka

According to the Livestock Census of the Department of Census and Statistics Sri Lanka (1994), Sri Lanka has a large cattle population. Although the number is more than sufficient to produce the national milk demand, the full potential is not utilised, the average milk production per cow per day is very low (300 ml). Therefore only 20% of the national milk demand is produced by the country and the rest is highly dependent on imported milk products.

	buffalo	cattle	sheep	goats	pigs	poultry
1991	824	1,477	20	460	84	8,000
1993	870	1,600	19	500	90	9,000

Table 1.2: Livestock Population of Sri Lanka (000, head)

* (Source – Department of Census and statistics, 1994)

The census shows less per capita availability of animal-based food in Sri Lanka, even together with the national livestock production and imported production. Although the following figures show some availability of meat, eggs, and milk, people in rural areas may not consume even one gram per day due to the high cost and low availability of these foods, especially in these areas.

Food item	Grams/day/head		
	1990	1991	1992
Beef	3.29	3.69	4.06
Pork	0.25	0.35	0.32
Goat Meat	0.27	0.30	0.35
Poultry	2.27	2.43	3.05
Eggs	9.83	7.12	7.12
Cows Milk	22.72 (ml)	22.10 (ml)	21.58 (ml)
Buffalo Milk	10.24 (ml)	9.92 (ml)	12.99 (ml)
Dried Milk	5.44	7.33	6.14
Condense Milk	0.22	0.70	0.66
Processed Milk Foods	0.22	0.28	0.23

Table 1.3: Per capita availability of animal food products in Sri Lanka

* (Source – Department of Census and Statistics, 1994)

There are three organisations mainly involved in developing the Sri Lankan livestock sector: Department of Animal Production and Health(DAPH) which comes under the Government National Livestock Development Board (NLDB), a semi-government organisation, and Milk Industries of Sri Lanka Company Limited (MILCO), a private organisation. DAPH is involved in developing the subsistence livestock sector while NLDB manages large scale livestock farms and MILCO is involved with collecting and processing milk.

Characteristics of rural farmers in Sri Lanka

A large proportion of the Sri Lankan population live in rural areas consisting mainly of villages where subsistence agriculture predominates.

	1921	1946	1953	1963	1871	1981
Rural	86%	85%	85%	81%	78%	78.5%
Urban	14%	15%	15%	19%	22%	21.5%

Table 1.4: Sectorial distribution of population urban and rural population distribution in percentage)

* (Source – Department of Census and Statistics Sri Lanka, 1921-1981)

Most of the rural people in Sri Lanka are absolutely poor and their living standards are very poor compared with urban people. Rural farmers are concerned only with domestic consumption rather than economic agriculture. When compared with urban people, people in the rural areas do not receive better educational opportunities and end up with only a primary education. The educational level of the average house head in rural areas is not more than grade two level (Kottege, 1988). The majority of rural parents are satisfied with a primary education for their children who can just manage to sign, read and write. Especially the female children help their parents with farming rather than continuing their education. Most of the rural schools are 3 – 4 kilometres away from the homes. People who have not gone to school and drop out early from school, automatically become farmers as they do not have the qualifications for other jobs. When they become farmers their agricultural practices are also traditional.

Although the man of the family is registered as a farmer in the veterinary offices, livestock husbandry practices are normally carried out by the woman of the family while the man is busy with the main income. Generally, rural women are less well educated than men and most of them support their family by rearing animals in backyards or cultivating vegetables in home gardens as well as doing their other housework. A number of other community development organisations are also conducting programs for rural women to promote the nutritional state of their families and especially to motivate them to rear animals and help them to develop livestock farms.

Rural development activities in Sri Lanka consist mainly of agricultural development activities oriented towards achieving improved living conditions for rural people as an important aspect of the overall development strategy. Responsible rural development authorities of Sri Lanka are concerned more with educating people through their extension programs, in order to change attitudes and improve the knowledge and skills of rural people towards economic development.

Department of Animal Production and Health (DAPH)

Government support to the livestock sector is provided by the Department of Animal Production and Health which comes under the Ministry of Rural Industrial Development. After decentralisation of power to the provinces, provincial Departments of Animal Production and Health which are closely linked with the national level, provide the necessary support to the rural livestock sector. Formation of livestock development policies, preparation of long term plans and projects are carried out at a national level and implementation activities by the provincial level. The main objectives of the Department of Animal Production and Health are to increase the productivity of rural livestock farms and to upgrade the income level and living conditions of rural livestock farmers.

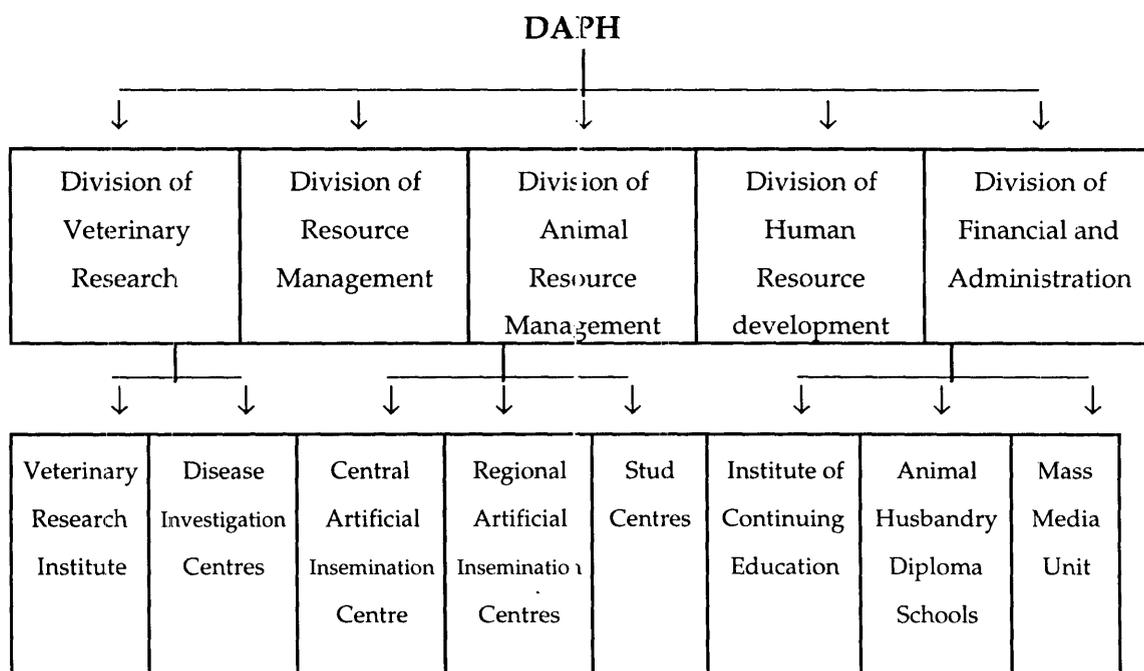


Table 1.5: Structure of the Department of Animal Production & Health

DAPH is managed by the Director of Animal Production and Health and there are five divisions under him. The Division of Animal Resource Management is mainly involved in upgrading of the livestock population in Sri Lanka. The Division of Human Resource Management is involved in inservice training, youth training, mass media, print media, electronic media productions, in order to improve the knowledge of people about livestock management. The Division of Resource Management is mainly involved with planning, monitoring and evaluating activities of all the livestock development programs at both national and provincial levels. The Division of Veterinary Research is involved with research activities on animal production. The Division of Financial and Administration is involved with the overall administration and financial management activities (Appendix 1). In general, the Department of Animal Production and Health carries out the following main functions.

*** *Implementation of national livestock breeding programs***

One of the major functions of the DAPH is to upgrade indigenous animals as they are genetically less productive. Upgrading of animals is done mainly through artificial insemination programs to develop the genetic ability of local animals. Maintenance of semen production and processing centres,

distribution of the semen to the provinces and monitoring of the artificial insemination work are major activities done at the national level and provincial departments are responsible for the implementation.

* *Implementation of animal disease control program*

Every year large numbers of animals are lost due to diseases. DAPH are providing animal health services of both a preventive and curative nature through a network of veterinary officers spread through the provinces. Major activities in the disease control program are maintenance of epidemiological data and identifying animal disease patterns in the country, regulation of importation of live animals to the country, conducting quarantine procedures, maintenance of disease investigating centres.

* *Conducting livestock research programs*

DAPH conducts only animal production research especially on animal breeding, animal nutrition and disease prevention. This research is done in the veterinary research institute of the DAPH.

* *Dissemination of animal husbandry technology*

DAPH also conducts animal husbandry diploma programs for youth to provide qualifications to get jobs in the animal husbandry field and conduct continuing education programs for departmental officers. Livestock extension officers bring the new technical messages and innovations to the farmers, through training programs, field demonstration and field days. Farmers are trained in new technology through regional farmer training centres. Print media, mass media, electronic media are also used to disseminate new livestock technology among the farmers.

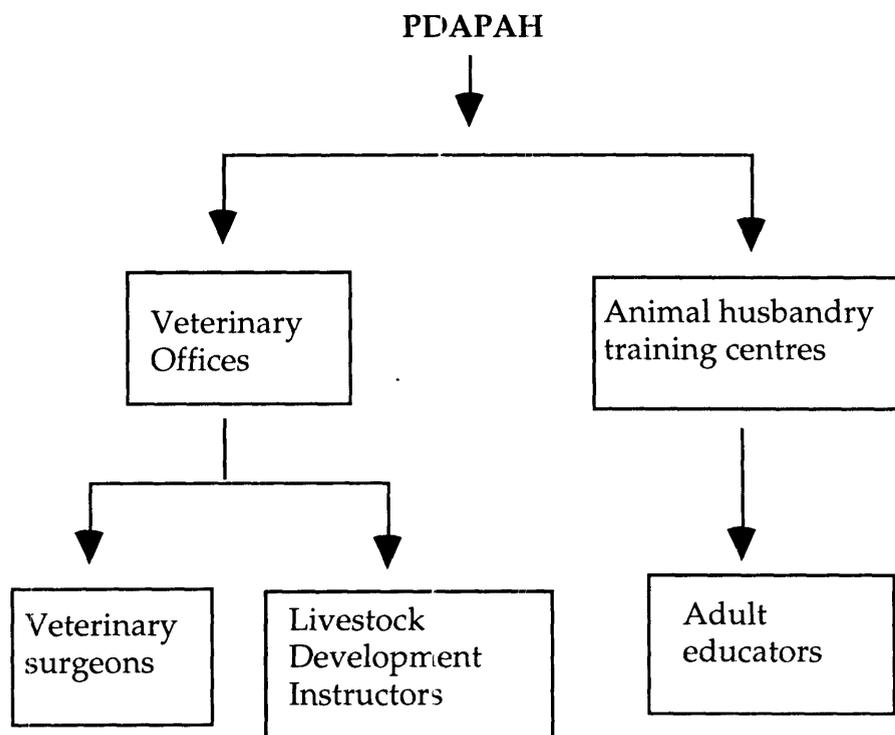


Table 1.6: Provincial Department of Animal Production and Health (PDAPH)

Provincial Departments of Animal Production and Health come under the provincial ministries of livestock development. Provincial Departments of Animal Production and Health are implementing livestock development programs which are formulated at the national level of the Department of Animal Production and Health. Animal husbandry services are provided to the farmers through village veterinary offices.

The Provincial Director of Animal Production and Health is responsible for the overall livestock development in the province, including implementation of village level livestock development projects, administration of staff and co-ordination between national DAPH and other agencies. There are about 12 – 16 village veterinary offices belonging to each province. Administration of the veterinary office is done by a veterinary surgeon and there are an average of 5 livestock extension officers working in one veterinary office. Livestock extension officers are compulsorily qualified with agriculture/animal husbandry diplomas or certificate courses and they are designated as Livestock Development Instructors (LDI). They have to perform different tasks given by their superiors and in general veterinary

officers provide the following services to the rural livestock farmers.

- * Planning of livestock development projects for farmers and implementing, supervising and monitoring same.
- * Implementation of animal health services for rural farms by vaccinating animals against contagious disease and treatment of sick animals.
- * Implementation of artificial insemination work in rural farms and supervising of progress.
- * Issue / co-ordinate / supply of improved varieties of cattle, buffalo, sheep, goats, pigs, poultry, and pasture cuttings to the farmers.
- * Identification of educational needs of livestock farmers and the organisation of training programs, field days or demonstrations.

Human Resource Development Division of the Department of Animal Production and Health

Human resource development is one of the major activities in the Department of Animal Production and Health. For the effective operation of the manpower development activities, DAPH established a separate division called Education Training and Information in 1978. In 1993 the name was changed to Human Resource Development Division.

Role of the Human Resource Development Division

- * To provide training for the departmental officers and other organisational officers who are directly or indirectly involved in livestock development activities.
- * To provide a job oriented two-year practical animal husbandry diploma course for school leavers.
- * Production and distribution of livestock information all over the country through mass media, print media and electronic media.

- * Providing assistance for farmer training and education programs which are conducted by the Provincial Department of APAH

Officer training courses are mainly conducted in the central training centre which is called the Institute of Continuing Education situated in the Kandy district. Provincial level officer training programs are also conducted in provincial training centres. Sri Lankan schools of animal husbandry, which are situated in Seppukulama and Welisara, offer courses for the Diploma in Animal Husbandry. Farmer training programs are mainly conducted in regional training centres situated in Diwulapitiya, Kakanadura and Undugoa. Short term training sessions are also conducted for farmers in the field level. Development of the rural livestock farmers is one of the major objectives of the DAPH. The financial support given from government and non-government organisations to educate the rural livestock farmers is very high when compared with the financial allocation received for other extension activities.

Providing training programs for the farmers on new animal husbandry technology is the first activity of any rural livestock development program. Final objectives of the inservice training for officers also lead to providing better services for the poor livestock farmers, which help to maintain economically viable farms. Department officers received training, free board and lodging instead of sustenance allowance. Both Government organisations and non-government organisations provide expenses for the other organisation training programs. Either government or non-government organisations cover all expenses for farmer training programs and farmer training is almost free to the farmers.

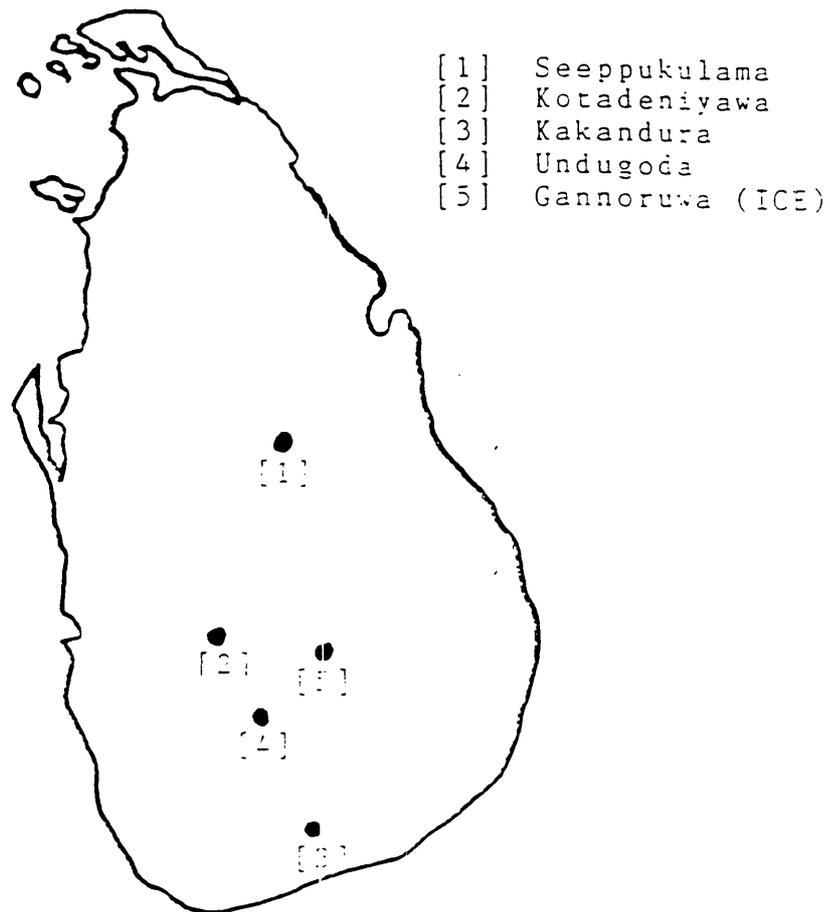


Figure 1.7: Locations of training institutes of DAPH in Sri Lanka

Training staff of the diploma school includes graduate officers in veterinary science or agricultural graduates who specialise in animal science and experienced diploma holders in animal husbandry. Field training for farmers is mainly conducted by the field livestock agents. Field veterinary surgeons and livestock development instructors are called livestock extension agents.

The type of training program offered by the central training centre (Institute of Continuing Education) is mainly concerned with officer training programs to provide current research information to the officers. Training programs provided by the Institute of Continuing Education include subject matter training, training of trainers programs, management and induction training for new recruitment officers, workshops and seminars.

Diploma schools provide job oriented two year animal husbandry practical courses for school leavers which helps them to work in the livestock field. Most of them are absorbed in the DAPH as Livestock Development Instructors (LDI) and some of them join the Education Department as school teachers.

Training centre	Province
AHTC-Seeppukulama	North central
AHTC-Kotadeniyawa	Western
AHTC-Kekanadura	Southern
AHTC-Undugoda	Sabaragamuwa
ICE-Gannoruwa	Central

Table 1.8: Training centres in DAPH.

* (source-Department of Animal Production and Health 1991)

There are two types of farmer training programs conducted by DAPH:

- (1) Residential or one day training program.
- (2) Short term training sessions conducted at the field level.

Educational needs assessment procedure

Assessment of the educational needs of the farmers is done by the livestock development instructors who are livestock extension agents working in the field or other officers who are involved in community development activities. Adult educators in the training centres are responsible for program planning and implementation. Training needs for the officers' training programs are mainly decided by the higher level administrative officers, subject matter specialists or research officers, according to the Department objectives. All the officers who are invited to the training programs are required to attend needs assessment procedures of the livestock farmers'. Educational programs will be discussed in detail in chapter four.

Livestock Extension in Sri Lanka

Sri Lankan farmers have been practising crop and livestock farming for a long time in Sri Lankan farming history. They have shared in an informal way ideas, beliefs, and knowledge and their experience in solving farm problems and production has increased as a result of this sharing. Later the agricultural extension and advisory system for farmers has been developed in Sri Lanka and includes a large element of farmer instruction, and training in better husbandry methods. The Department of Agriculture provided necessary extension services to the livestock farmers until 1978 as part of the activities of the Department of Agriculture following the Training and Visit System (T & V system). The Training and Visit System is linked very closely to researchers, extensionists, and farmers. The basic principle of the T & V system is to provide a professional extension service to the farmers in a very organised manner. Therefore, well trained professional extension officers identify constraints of the farms, assess the needs of the farmers, and plan extension programs to develop the farms. Farmers work according to the extension officer's advice. However the T & V system does not provide the opportunity for farmers to contribute to decision-making. T & V extension services are characterised by a "top-down" approach. In 1978 the Department of Animal Production and Health started to conduct a large number of livestock development programs following a similar extension approach to the T & V system.

Sri Lankan livestock extension services play a very important role in assisting poor, powerless rural livestock farmers to increase the productivity of the rural society but farmers do not have the opportunity to contribute actively their ideas to decision-making as the extension approach is still "top-down".

Although the extension officer is the closest and most important link to the farmer, livestock extension activities cannot cater equally for every farmer as there are insufficient livestock extension officers in Sri Lanka (about one livestock extension officer for 700 - 1000 farmers).

Summary

This chapter gives general information on Sri Lanka by providing information on its physical, demographic, administrative and economic features. To provide information in the livestock sector in Sri Lanka, the author also looks to different livestock farming systems, livestock population census, per capita availability of animal food products, which showed the under-developed condition of the Sri Lankan livestock sector.

The majority of Sri Lankan farmers are very poor, uneducated, powerless, and are neglected by society. The main features of the Sri Lankan livestock sector are:

- * Objective of keeping animal and animal husbandry practices are different in different livestock farming systems.
- * Livestock husbandry work is part-time in nature.
- * Higher level of women involved in livestock husbandry.
- * Less production and irregular income a condition of the rural livestock sector.

The Department of Animal Production and Health is the main organisation which supports the peasant livestock sector in Sri Lanka. The Division of Human Resource Development is responsible for developing skilled manpower by providing necessary education programs for people who are directly or indirectly involved with animal husbandry activities. This helps to develop the livestock sector in Sri Lanka. Village veterinary offices which come under the Provincial Departments of Animal Production and Health have direct links with rural livestock farmers. Although the livestock extension service plays a very important role in assisting rural development of farmers, it still follows a "top-down" approach to extension activities.