

Integration of a veterinary teaching project in the rural development of a valley in Sri Lanka.

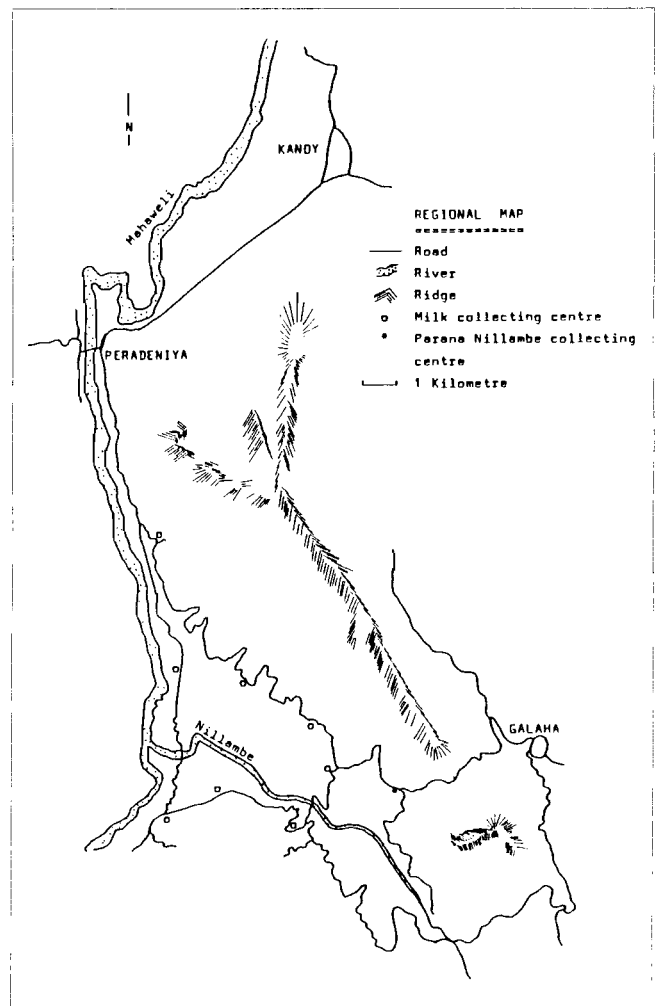
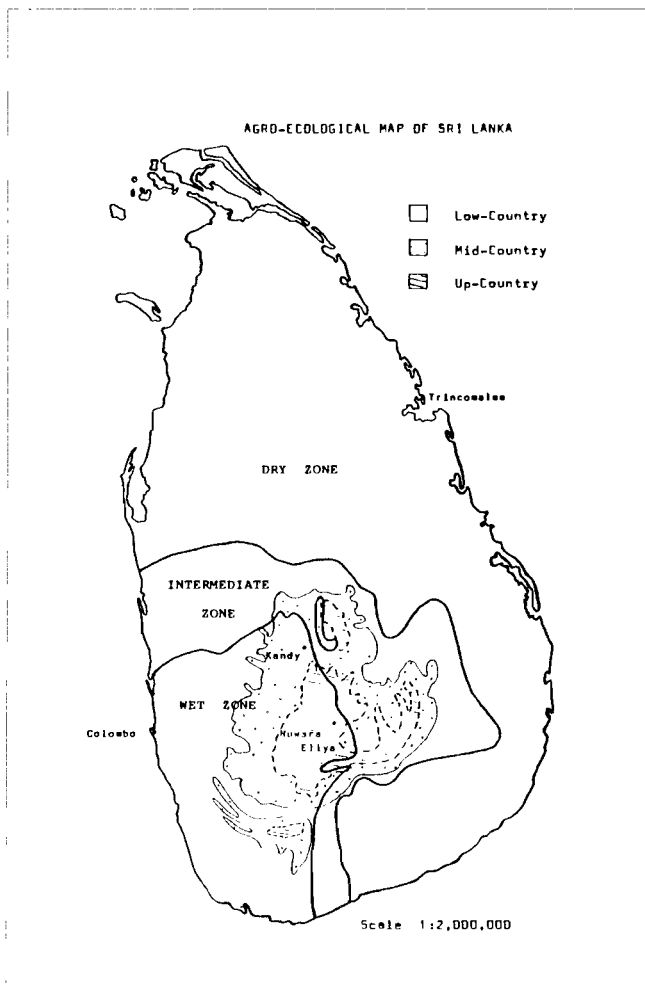
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Summary

An ambulatory clinic for farm animals has been set up at the Faculty of Veterinary Medicine of the University of Peradeniya, Sri Lanka, with the aim of providing clinical training to the final year students. The authors describe the different development programmes on livestock production in a valley near Peradeniya and explain how the clinic has been integrated in the existing structures to ensure maximum opportunities for students to get acquainted with all aspects of veterinary work in Sri Lanka.

Résumé

Une clinique vétérinaire ambulante, destinée à la pratique rurale, a été créée à l'Université de Peradeniya, Sri Lanka, dans le but de fournir une formation pratique aux étudiants de dernière année de la Faculté de Médecine Vétérinaire. Les auteurs décrivent l'organisation générale des projets de développement de l'élevage dans une vallée proche de Peradeniya et expliquent comment la clinique s'est intégrée aux structures existantes. Elle offre ainsi aux étudiants la possibilité de se familiariser avec tous les aspects du travail vétérinaire à Sri Lanka.



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I. Country and people

The Democratic Socialist Republic of Sri Lanka (Ceylon) is a pear-shaped island lying off the southern coast of India between 5,5° and 9,5° of north latitude and 79,4° and 81,5° east longitude. It is 435 km in length and 225 km in width at its broadest point. The island is separated from India by the narrow Palk Strait (29 km) and has a total land area of 65.610 square kilometers. It can be topographically divided into three zones: the Low-Country (0-300 m), the Mid-Country (300-900 m) and the Up-Country (900-2524 m).

Sri Lanka is situated on the border of the equatorial belt and its climate is characterized by low variations in temperature and heavy rainfall. Depending on the elevation, the temperature averages from 16°C in Nuwara Eliya to 27°C in Colombo. The island is subject to the north-east monsoon between November and February (Maha season) and to the south-west monsoon from May to September (Yala season); convection storms occur during intermonsoonal periods. There are three climatological zones. The Up-Country and the southwestern part of the island receive 1500 to 5000 mm of rain per year and are known as the Wet Zone. The major part of the Low-Country to the north and east receives 500 to 1000 mm of rain per year and is referred to as the Dry Zone. These two main regions are separated by a third Intermediate Zone (1000 to 2000 mm). Only the Wet Zone receives rainfall adequate for crop growth throughout the year. In the Dry Zone rains are limited to the Maha season which is followed by a period of drought for the other eight months of the year.

The total population comprising 74 percent Sinhalese, 18 percent Sri Lankan and Indian Tamils, and 7 percent Moors was estimated at 15,4 million in 1983. The average population density was then 235 per square kilometer with a very irregular distribution over the country. About 78 percent of the total population is classified as rural and more than half of it as living in the Wet Zone.

Agriculture is the main economic activity of Sri Lanka. It contributes 25 percent of the Gross National Product and produces more than 70 percent of the country's export earnings. The major crops are tea, rubber, coconut (plantation crops) and rice (food crop). Minor crops include cocoa, potatoes, groundnut, cotton, sugar, manioc, coffee, pulses and a wide variety of spices, condiments, vegetables and fruits.

About 90 percent of all farms are smaller than 5 acres in size (1 acre = 0,405 hectare) and about one third of the farms are under one acre in size. The land pressure is higher and farm size is consequently smaller in the Wet Zone than in the more sparsely populated Dry Zone.

II. General livestock situation

Cultural and religious factors deeply influence the type of animal husbandry in Sri Lanka. The majority of the farmers are Sinhalese Buddhists and animal slaughter runs counter to their precepts. Cattle are therefore reared for milk production or draught only. The Muslim community handles the meat market and the slaughterhouses where, in the case of cattle, only males may legally be butchered. Pork and poultry farms are usually managed by Sinhalese or Tamil Christians and these are the only enterprises which are run for meat production on a large scale.

According to the 1983 census of agriculture, there are 1,699,800 head of cattle; 910,000 buffaloes; 519,300 goats; 77,000 pigs and a poultry population of 6,456,900 birds in Sri Lanka. Ninety percent of the holdings with cattle have 5 or less animals and almost two-thirds of all cattle farms have only one or two cows each. Depending on the climatic conditions, different cattle breeds are reared. In the Dry Zone, the common, small, rustic and low-producing indigenous breeds are undergoing various upgrading programmes through artificial insemination and distribution of studs. In the Mid- and Up-Country, Friesian, Jersey and Ayrshire crossbreds are most commonly seen.

The milk produced in each farm is usually carried to the collecting centres of each village. All these centres are grouped in cooperative societies which sell it to the National Milk Board or to private companies, e.g. Nestlé. The price paid to the farmer varies with the fat content of the milk. In May 1986, one litre of milk containing 4,0 percent fat was paid 4,30 Rs (1 US Dollar = 27,80 Rs). Seven cents are added or withdrawn for each one-tenth percent increase or reduction of the fat content.

There are eight government ministries involved in livestock activities in Sri Lanka. The main one is certainly the Ministry of Rural Industrial Development which has the Department of Animal Production and Health (A.P. & H.), the National Livestock Development Board (N.L.D.B.), the National Milk Board and the Oils and Fats Corporation under its authority. The last-named produces animal concentrate feed while the National Milk Board handles milk collection, processing and marketing. Both the Department of A.P. & H. and the N.L.D.B. are responsible for livestock development and production in general. Their activities include the management of large state farms, the organization of the milk collection and extension services at the farm level, artificial insemination and breeding programmes and cooperation in large livestock development projects sponsored by foreign aid. Of these two institutions, the Board is more particularly specialized in livestock production as a commercial enterprise while the Department looks after animal health, maintains the quality of improved breeding stock, provides education and training and conducts research.

The veterinary service to farms is organized by the government through the Department of A.P. & H. The country is divided into 118 ranges each staffed by a government veterinary officer. In addition to being in charge of all official and administrative work pertaining to livestock production and health in his range, the veterinary surgeon is also responsible for the treatment of sick animals, prophylactic actions, artificial insemination and extension work. His practice is subsidized and the veterinary work is free of service charge during the office hours. Any veterinary surgeon is free to start a private practice anywhere in the country irrespective of the presence of a range office. These practices however are in fact limited to urban areas.

III. The Peradeniya-Galaha Valley

On the banks of the Mahaweli river, about 5 kilometers south-west of Kandy is the campus of the University of Peradeniya. With its three thousand resident students and near two thousand commuting students, it is Sri Lanka's largest institute of higher education and the only one to have a Faculty of Veterinary Medicine. As shown on the regional map, the campus forms the apex of the triangular-shaped area described in this article as the Peradeniya-Galaha valley. The three side limits of this triangle are the valley of the Nillambe river to the south, the ridge of the Hantana mountains to the east and the Mahaweli river to the west. The topography is an irregular and hilly slope which starts down in the paddy fields of the valley bottom (500 m. Alt.) and gradually gains elevation and steepness before it reaches the Hantana ridge (1300 m. Alt.).

Peradeniya is located in the Midcountry Wet Zone and receives an average of 2000 mm of rain from both monsoons annually. The minimum and maximum air temperatures average 20°C and 28°C respectively.

The area is fairly well populated, specially the valley bottom and along roads where people preferably settled. New settlements have now been created on less accessible plots of land quite far from the main road and sometimes high on the hill slopes. People usually work as labourers in the local remaining tea estates and large farms or as employees in one of the neighbouring towns. Depending on their qualifications, they expect daily pay ranging from 33 Rs. for a manual labourer up to 50 or 70 Rs. for a semi-skilled worker. Advised and still helped in that way by various development projects (see below), many of them do back yard dairy farming in an attempt to increase their low incomes.

The cattle farm units have no pasture. The one or sometimes two cows are kept indoors and are fed with grass cut on the wastelands and in neighbouring ravines. This zerograzing management system is also used in the few larger farms where labourers are employed for cutting grass for 15 to 25 animals.

The dairy cows are usually European crossbreds. Some other farms are specialized in pork or poultry production. Buffaloes are very common in the valley bottom where they are used for draught on the paddy fields and for threshing the harvest.

The milk collection is controlled by two well separated organizations. On the one hand, there is the Galaha milk collecting pilot project organized by the N.L.D.B. It is based in Peradeniya and counts about 350 suppliers grouped in eight cooperatives, not all registered. The Parana Nillambe Milk Producers Cooperative Society Ltd on the other hand, groups about 120 suppliers in one collecting centre. It is assisted by a local Christian nongovernmental organization called Gamiseva Sevana. The milk is delivered by both organizations at the Galaha National Milk Board chilling centre. These cooperatives cover their running expenses by selling the milk by weight to the Board while it was bought per litre from the farmers.

Records kept by the collecting societies show that farmers own an average of 2.15 milking cows. The mean daily milk production is 5.3 litres per farm. After subtraction of expenses for purchase of coconut cake (poonac), rice bran or minerals, the monthly income per cow is 210 Rs. This is very marginal, specially when considering the fact that the quantities of concentrates and minerals bought are largely insufficient and that contingencies like the cost of veterinary services are not included in this estimation.

Three organizations are involved in the rural development of the valley: the National Agriculture Diversification and Settlement Authority (NADSA), the NLDB and Gamiseva Sevana.

The 1971 national land reform limiting to 50 acres the maximum land surface to be owned by one single person released some excessive acreage which was taken over by the state. From 1978 onwards, the NADSA started to settle 380 families on the neglected plots of land of this area providing them with 0.1 ha. homestead and 0.7 ha. farmstead. Many farms were not well developed and the income earned from the land was insufficient. Hence, the NADSA asked the NLDB to promote dairy farming in the settlements. This was done in collaboration with the Sri Lanka-Netherlands Livestock Development Programme. The project includes the training of 50 selected farmers, their financial and technical assistance in building a cattle shed and in planting fodder grass, the gift of a pregnant heifer on an interest free loan basis and later follow-up. Construction of bio-gas units and use of urea-treated straw are also encouraged. As already mentioned above, the NLDB is also organizing the milk collection over a large part of the valley. This scheme provides inputs as concentrates and minerals and extension services.

Gamiseva Sevana assists the members of the Parana Nillambe milk cooperative by providing bull services, free transport for the veterinary service, minerals and concentrates and extension services. A thrift and credit society has been created to help people to save and to give them loans for buying a cow.

IV. The veterinary teaching project

In October 1984, a three-year project of cooperation between the University of Peradeniya and the University of Ghent, Belgium, was started with the aim of setting up an ambulatory clinic at the Department of Veterinary CLinical Studies. The purpose of the project is twofold: to provide a practical, field-oriented training for the final year veterinary students and to provide a service to the farmers around Peradeniya.

Till 1984, the clinical training in large animals was very limited. The clinical department has no transport or housing facilities for the animals and the farmers are technically and financially unable to bring their cow to the campus. An ambulatory hospital was therefore considered to be the best alternative to this.

The major problems in organizing this clinic were the lack of communication between the villagers and the faculty and also the often very difficult access to farms. The first contact with farmers was established through the existing Galaha Milk Collecting Pilot project of the NLDB and by directly contacting the managers of somewhat bigger farms. A tour of the eight collecting centres, during which veterinary service was being made available, was worked

out first. The farmers had to report any cases to their secretary who in turn reported to the veterinary team comprising one staff member with a group of students. This weekly tour covers all centres on the same day; a timetable which is adhered to as closely as possible is made known to the farmers through the secretaries. At the beginning, pregnancy diagnosis constituted the major part of the cases presented. The regularity of the visits as well as the results achieved after treatment of an increasing number of cases soon overcame the first reactions of distrust of the farmers towards the clinic.

For the Parana Nillambe Milk Cooperative similar planned visits are being organized.

Another kind of pre-planned work is being done in a programme of farm surveillance; for this purpose eight farms, including some concentrating on pig-ery, are being visited on a regular basis once a month, and their animals are examined individually as well as collectively.

As a third part of its activities the service is also available for individual calls from farmers for ad-hoc work, i.e. emergency cases. People applying for this don't necessarily live in the said valley but are mainly from those who have already been included in the previous groups.

The organization of pre-planned visits requires a continuous contact with the organizations involved in dairy development in the area as well as with the individual farmers. This demanding task also puts the clinic in a strong advisory position towards the said parties and offers the final year veterinary students the ideal opportunity to get acquainted with all aspects of veterinary practice in Sri Lanka.

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