B-33: Characteristics and limitations of cattle farming systems in Sri Lanka

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An island-wide survey, was conducted from 1989 to 1993, to characterize the diverse cattle production systems and to identify constraints which affect productivity and sustainability. The survey data was supplemented with secondary data. Four distinct cattle production systems were identified. The agro-ecology, cropping patterns and pressure on agricultural land, are the major factors that differentiate these systems. The most prevalent system was the Dry Zone traditional village system where the predominant genotype was indigenous zebu (69%), which were managed in large herds (18.5 $\pm$ 15.5). In many instances the herds consist of both neat cattle and buffalo, managed with minimum inputs using communal grazing lands. Yet, the returns from the operations were substantial. Milk provides 52% of the income. Fluctuation of feed supply and scarcity of good dairy breeds affected the sustainability of this system. Close to half the income was obtained by selling animals. Milk was found to be a by-product of lucrative cattle farming for meat. Use of animal draught power was not uniform. In many areas mechanical power had displaced the animals in paddy cultivation. In newly irrigated settlement areas of the Dry Zone where pressure on land was more intense, cattle farming had become intensified. Improved genotypes were maintained in small herds (6.6 $\pm$ 4.2) with tethered grazing and feeding with grass and fodder cuttings. The return on investment was marginal in this system which demands high inputs such as labour and compound feed.

In the Intermediate zone where there was a large area under perennial crops, livestock farming was less important. Small herds (7.4 $\pm$ 4.5) of better genotypes were maintained on natural pasture under perennial crops. Milk was the primary (65%) income source. In the Wet Zone, a unique smallholder mixed crop- livestock production prevailed.

Small herds (4.6 ± 3.2) of *Bos taurus* cattle were maintained on stall-fed conditions with heavy labour and service inputs, particularly for health and artificial breeding. The largest proportion (91%) of the income was from milk. Although the productivity per unit was high, the net return was low compared to other systems. The milk production level was relatively low compared to the expected performance of *Bos taurus* cattle due to poor feeding and lack of selection for productivity.

The major constraints identified in all the production systems were scarcity of animals, inadequate veterinary and breeding services, lack of fair farmgate price for milk and exploitation of producer by the organised milk collecting network. If timely measures are not taken, the future of this rural industry will be threatened.