CHAPTER 6

IMPACT AND SOCIO-ECONOMICS OF THE STUDY.

To meet consumer demands and the increasingly severe competition between to maximize returns from resources invested, animals of the future must for efficiency. Desirable genetic traits must be increased and this can be done by selecting the most suitable individuals to become the parents of the next generations through breeding. In any efficiently operating artificial insemination unit, the determination of volume of an ejaculate, estimation of the number of spermatozoa/ ml contained and the proportion of cells exhibiting vigorous motility should be routine. The information obtained from such semen evaluation in the rural communities will not establish bases for day-to-day decisions making or provide knowledge necessary for extending the semen and processing it for distribution, but will furnish a continuous record of the semen-producing ability of each male which can then be used to select the most fertile males.

To counteract the influence of season on the reproductive output of animals, well-adapted breeds showing extended period of ovarian activity and semen of high quality must be selected or imported. These breeds may, at many latitudes, yield two crops of offspring per year (Land and McLelland, 1971).

The goat, because of its origin, distribution and unique anatomy and physiology, represents an under-utilized resource of animal protein, and simultaneously a great potential for increasing milk meat, skin and fibre production in the tropics. As the goat originated from tropical and sub-tropical areas, it not only has the ability to survive under harsh tropical conditions but also the ability to produce and reproduce.

Generally goats are more efficient than other domesticated ruminants in digesting low-quality roughage in both tropical and arid environments and are more efficient than sheep in the temperate zones. Sharma and Rajora (1977) reported that goats utilized high-grade

clover hay better than sheep, buffalo and cattle. Goat production is also a less risky enterprise and is more suited to farmers on small holding (1.6 ha), who often lack credit and other inputs needed e.g. cattle production.

The demand for animal protein and energy sources particularly milk and milk products is on the rise in the tropical developing world. Devendra and McLeroy (1982) suggested that the increased demand could be easily met by increasing the ruminant livestock population. Attempts to increase milk production through an increase in cattle numbers as occurred in developing tropical countries will have limited success owing to the high maintenance requirements and low productivity of cattle due to carrying capacity of the land.

Attempts to increase milk production by importing high milk producing temperate cattle have resulted in failure, due to the animals' inability to adapt to tropical environments, poor quality forage, diseases (trypanosomiasis), poor reproductive performance, low levels of management. An increase in the number of females bred increases the flock size, hence increases milk production within the herd. Goat milk production has a comparative advantage to small enterprises since it involves a relatively smaller initial investment and, therefore, carries less overall risk.

It is also suggested that the smaller investment in goats represents a corresponding smaller risk of financial loss through individual death, when compared to cattle or buffaloes. The small body size of goats is an immediate advantage with respect to housing (cheaper, less capital intensive) and, in addition, there is a faster turnover of capital owing to the earlier maturity specie, shorter generation interval and the more efficient use of labour to manage them. Goat meat is a potential by-product of the milk enterprise, which is acceptable to all religions and preferred by some. Goats are often used as a form of capital investment and insurance in many rural societies. The ease with which they are managed allows for the participation by all members of the community in the rearing of these animals and, as a result, is an important source of supplementary income.

In conclusion the, it is suggested that the benefits of goats over other livestock species is apparent. Their use could be encouraged by improved access to superior, adapted genetic materials. For this, artificial insemination programmes would be advantageous. Thus, this study has shown that semen to be used artificial insemination programmes can be collect throughout the year from indigenous goats, but should be limited to the breeding season only, in the exotic imports.