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Milk Production From Cross-Bred Sannen Goats under Local conditions

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Abstract

Majority of goats in Sri Lanka are indigenous and non descriptive types. They are reared for meat production. Goat milk is mainly consume by the people in town areas and the potential of goat milk production have never been investigated. This study reveals the basic information on goat milk production with cross-bred sannen goats under local conditions. Lactation records of forty six Sannen does managed under intensive system were studied. Animals were fed with jack leaves *Artocarpus heterophyllus,* spplemented with 200-300 grams of concentrates. They were milked once a day in the morning. Total milk production per lactation varies from 381-2831 and length of the lactaions were 2-9 months. The average daily production of the does were 1.781 during the peak of lactation. Persistency of milk production was considerably high. The possibility of using goats for milk production under prevailing situation is discussed.

Introduction

The goat population in Sri Lanka is about 534000, of which the majority are indigenous and non descriptive types, reared under extensive system in dry and intermediate zones (Rajaguru and Senanayake 1988). They are mainly reared for meat production. A very small fraction of animals are used for milk production particularly in urban areas. Milk is sold as fresh milk or in the form of frozen milk. The milk production of local goats is very low and hardly satisfy the requirement of their kids. Therefore milch goats are mostly crosses of Sannen and Jamnapari with local goats.

There is a high demand for cow milk and dairy products in the country that cannot be met by local production and more than 80% of the present milk consumption is supplied by imported milk products (Livestock statistics 1991/1992). Use of goat milk in affluent societies is increasing because of consumer preference, which is frequently due to its special health and nutritive values.

The potential for goat milk production is almost totally unrealized. There are very few goat milk dairies and some of these do not milk on a regular basis, and milking is only done when there is a local demand for the milk. However, the nutritive intake of many people could be significantly improved if the goats being raised were utilized for milk production instead of only being slaughtered for meat.

The goat is a more efficient ruminant for milk production than the cow or buffalo, particularly under village conditions where the land resouces are limited (Devendra 1980). They can be fed with a large number of different feed available and can be easily managed in small flocks. Further to that the intial cost involved in establishing a new herd is comparatively low. However no investigations have been done to study the potential for goat milk production under local conditions.

The objective of this study is to investigate the potential of milk production using Sannen cross-bred goats under average conditions in Matara district and to collect some basic informations on goat milk production.

Materials and Methods

This study was carried-out at a private farm in Matara District. Forty six crossbred Sannen does ranging from two to four parities were investigated. Animals were managed under intensive system, housed in slattered floor house. They were mainly fed with jack leaves (*Artocarpus heterophyllus*) adlibitum. About 200-300 grams of concentrates (50% Coconut poonack and 50% rice bran) supplemented with mineral mixture were given per doe per day. Fresh water was provided for the animals through out the day.

Animals were milked once a day in early mornings and kids were allowed to be with the mothers during the day time till 3.00pm. Milk production was recorded every day with the helpofa measuring jar.

Persistency of milk production was studied according to the method applied for measuring the same in cattle by Horac and Pindak (1969). Lactation curves based on average daily yield were studied from the animals, those have completed 180 days in milk.

Results

Lactation length of the animals were varies form 2-9 months. About 72% of the animals were in milk for more than 150 days. Figure 1 shows the distribution of the animals according to the lactation length.

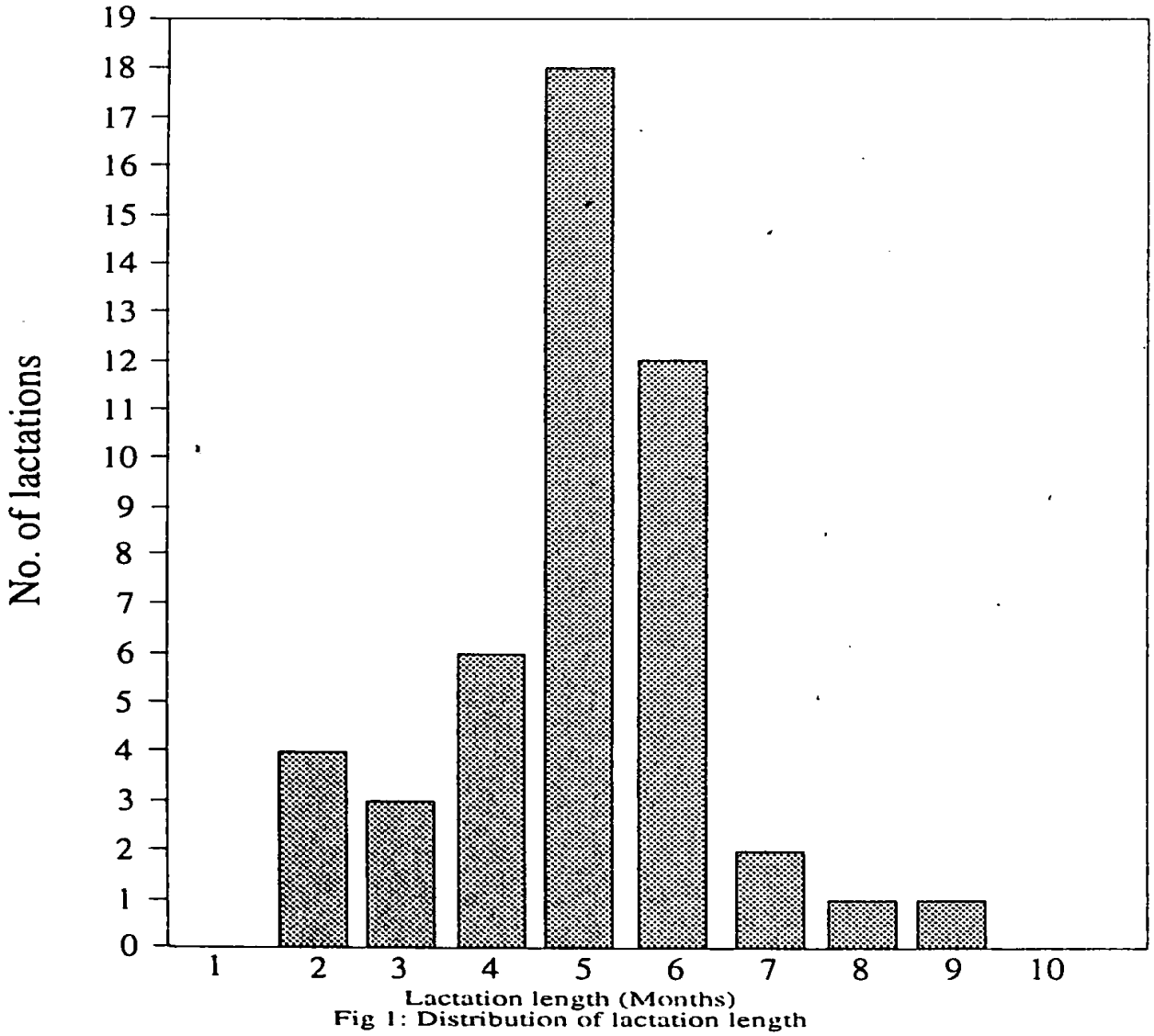

Fig 1: Distribution of lactation length

Total milk production per lactation varies from 2831-771 and 1281-381 for the animals with 180 days and 150 days of lactation respectively. The average daily production of the animals was 1. 781 during the peak of lactation. Persistency of the production was 78% for the animals with high production and 82% for the low yielding animals. A lactation curve based on average daily yield is shown in Fig. 2. Yield figures have not been corrected for any effects of years or seasons.

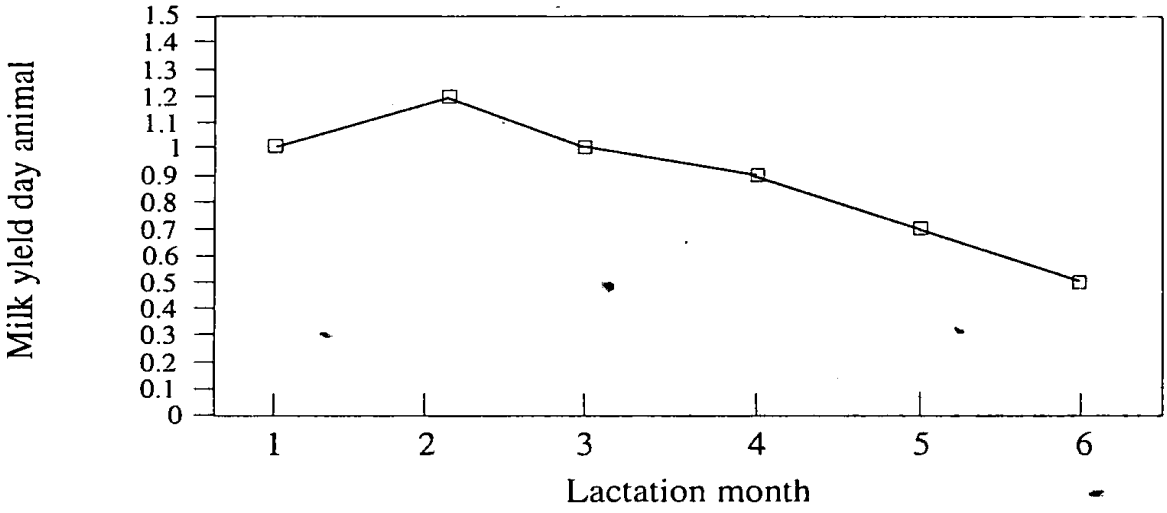

Fig 2. Lactation curve (180 days)

Discussion

Milk production of the local goats is very low, and under most situations their production hardly enough to satisfy their kids requirements (Rajaguru and Senanayake 1989). It was observed during the study cross-bred Sannen does are capable of producing about 0.51-1.751 of milk per day in addition to their kids requirements. However the total and average milk production/day of the animals according to this study is comparatively low. Under improved management systems in India, a good cross-bred doe produces about 6001/lactation averaging 2.3 1/day/doe (Gupta and Tiwan, 1993). In temperate countries average production was 6701/doe/lactation (Devendra 1980). The total production of the animals in this study range from 280-381 demonstrating high variability among the animals in this population. The lactation length of the animals were 3-9 months and 78% of them were in

lactation for more than 3-6 months and 72% of them were in milk for more than 150 days. Further to that they do not show any seasonality in breeding under local condition. Therefore with a planned breeding programme and under good management practices it will be possible to produce milk continiousely from them through-out the year.

As a source of protein, milk production represents a more efficient use of land than produce of meat (Devendra 1975). In Sri Lanka, neat cattle given priority in every livestock development programme.

However, their average daily milk yield is very low and average lactation lasting approximately 6-8 months (Mahadeven 1976). As discussed above, under average management conditions, a cross-bred goat produces a equal amount of milk for a considerable length of lactation. Further to that goats need less feed, care and capital investment. Therefore a cross-bred milk goat could easily replace an indigenous cow with less feed and care needed by a cow. This type of animal may be more important under present farming system where the agricultural holding size declining with the time. The persistency of milk production of the animals with higher yield are 78% which is some what lower than the low yielding animals. However, according to (Gipson *et al* 1987), the persistency of milk production of pure sannea goats under better management systems are higher particularly in the first tactation.

As demonstrated by the lactation curve (fig. 2), there is no drastic fluctuation in daily production showing no special attention is needed during lactation as in high yielding cattle. This will help the farmers to adjust their feeding practices more easily.

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