LIVESTOCK DEVELOPMENT NOTE NO. 3

PERFORMANCE OF SHEEP AND GOATS IN SMALL-HOLDER FARMS IN EASTERN HIGHLANDS PROVINCE OF PAPUA NEW GUINEA

P.N. MANUA, Labu Animal Husbandry Research Centre, Agriculture Research Division, P.O. Box 1086, Lae.

ABSTRACT

This paper reports a study conducted over a period of two years to evaluate the relative performance of sheep and goats under village condition in the Eastern Highlands Province of Papua New Guinea. Goats showed relatively higher fertility rate (80 vs 32 %) than the sheep. Preweaning mortality was high, particularly in sheep resulting in very low weaning rates. Prolificacy was variable and found to be highly influenced by the feeding regime. The study indicates that under village conditions in Eastern Highlands Province performance of goats is much supperior to that of sheep.

INTRODUCTION

Small flocks of sheep or goats are considered suitable for village meat production. In recent years the number of sheep and possibly goat projects have increased considerably. Small farmers find them easy to manage. A study was undertaken recently to evaluate the performance of sheep and goats on small holder farms in Eastern Highlands Province (E.H.P.). The results of the preliminary findings are discussed.

MANAGEMENT PRACTICES

In E.H.P. sheep and goat farmers keep all their animals together and allow them to graze or browse free range from early in the morning till late in the evening. When the animals return home in the evenings some farmers feed their animals with kaukau and or cassava leaves and tubers. Some farmers in addition give mineral mixture as well. Because of the level of management skills and husbandry practiced, lambs and kids were weaned naturally. Shearing was practiced by few farmers while none drenched their animals. Use of sheep and goat manure as a fertiliser in gardens was common among farmers.

PREWEANING GROWTH OF LAMBS AND KIDS

The preweaning growth rate of lambs and kids was found to be highly variable. Lambs and kids of the animals receiving supplementary feeding (kaukau tubers, leaves etc.) grew faster than those receiving none at all. Lambs and kids of animals which were receiving both supplementary feed and mineral mixture however, grew more faster, as shown in Table 1

Table 1. **Effect of feeding on preweaning growth rate (g / day) of lambs and kids.**

Management systems	lambs	kids
Grazing only	59 (8)	38 (7)
Grazing and supplements	94 (3)	78 (14)
Grazing, supplements and minerals	109 (29)	98 (30)

(*) - Parentheses represent numbers of lambs and kids

These results clearly show (grazing and supplementary feeding) is good for lactating ewes, doe and subsequently their offspring. Farmers should therefore be encouraged to feed their animals with supplements, preferably supplements and minerals blocks particularly during the dry season. Interestingly, sheep farmers paid more attention to their animals than the goat farmers, which basically is an indication of the temperament of the two animal species.

REPRODUCTIVE PERFORMANCE

Breeding was aseasonal as breeding males and females were kept together. The reproductive performance of sheep and goats is shown in Table 2. The fertility and weaning rates in sheep were extremely low. The major contributing factors to the poor fertility of ewes appear to be old age and non shearing or crutching as this would interfere with mating. Where as the higher fertility, litter size and low mortality resulted in high weaning rate in goats.

HEALTH

Although animals were not drenched they were found to be healthy and losses from worms were small. Only few animals showed high egg counts. The overall post weaning mortality in sheep and goats was 10% and 6% respectively.

CONCLUSION

This preliminary study shows that goats are generally performing better than sheep in small holder farms in E.H.P. Majority of the farmers do not have the experience/knowledge and motivation to manage their animals for maximum production. In addition, extension support is weak in E.H.P. It appears that where farmers do not have the expertise and motivation, and the extension support is weak, goats may be a better choice.

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Table 2. **Reproductive performance of sheep and goats.**

Groups	Total number of breeders	Number of animals produced lambs/kids	Number of lambs/kids	Fertility %	Prolificacy %	Weaning %
Sheeps	60	19	24	32	126	238
Goats	41	33	49	80	148	78