

Tekleyohannes Berhanu Tesfu 2012: Feeding Strategy on Growth and Reproductive Performance of Woyto-Guji Goat. Doctor of Philosophy (Tropical Agriculture), Major Field: Tropical Agriculture, Faculty of Agriculture. Thesis Advisor: Associate Professor Somkiert Prasanpanich, Ph.D. 153 pages.

Goat management practices and constraints (Experiment 1) were studied in Hamer and Bena-Tsemay districts of south Omo zone (south western Ethiopia) using structured questionnaires administered to 250 respondents. Goats are important means of livelihood for pastoral and agro-pastoral households in the studied districts.

All households owned indigenous goat genotypes and the average goat herd size per household was 66.7 ± 54.2 heads in Hamer and 41.8 ± 31.2 heads in Bena-Tsemay districts. Eighty eight and 70% of households in Hamer and Bena-Tsemay districts, respectively, have a preference for dual purpose goat than either meat or milk type. Prevalence of diseases, shortage of grazing and water are the major constraints in both districts.

In Experiment 2, growth and reproductive performances of forty five Woyto-Guji goats, 14.3 ± 0.49 months old and 15.0 ± 2.9 kg body weights, were evaluated in a Completely Randomized Design under three meal concentrate feeding levels, viz., No concentrate (T_0 , control), 200 g per goat daily (T_1) and 400 g per goat daily (T_2) as fed basis. Supplementation was fed for 90 days before mating and for the last 60 days of gestation. Rhodes grass hay was fed *ad libitum* for all goats. The average daily weight gains were 2.7, 33.5 and 54.7 g/day for T_0 , T_1 and T_2 treatment groups, respectively. Pregnancy and kidding rates of goats were improved by 17% (T_1), 29% (T_2) and by 71% (T_1), 83% (T_2) over the control, respectively. Supplementation of goats end of dry season prior to mating may also offer benefit in promoting early mating and kidding of goats before the following hot dry season of south western Ethiopia.

Student's signature

Thesis Advisor's signature