

17. PERFORMANCE AND CARCASS CHARACTERISTICS OF LOCAL SHEEP AND GOATS OF MLALI AND MKUYUNI DIVISIONS OF MOROGORO DISTRICT

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A survey was conducted in two divisions (Mkuyuni and Mlali) of Morogoro District. A questionnaire was used to collect primary data dealing with farmer occupation and enterprises, management aspects and performance of small ruminants. Measurements of chest depth, chest width, heart girth, rump height, body length and hip width (in cm) and liveweight (in kg) were taken from 18 males and 43 female goats and 18 males and 25 female sheep in Mkuyuni division and 16 males and 43 female goats and 23 male and 24 female sheep in Mlali division. In addition 6 male and 7 female goats and 6 male and 12 female sheep in Mkuyuni division and 6 male and 7 female goats and 6 male and 7 female sheep in Mlali division were purchased for slaughter characteristic studies. Goats are the main animals kept in the two areas with sheep to goat ratio of 1:5 and 1:3 in Mkuyuni and Mlali divisions, respectively. The main source of labour in small ruminant management was children. Twinning rate of 30% in goats was indicated by 67% of the responses while only 10% of the respondents showed twinning rate of 30% in sheep. There was little difference (23.43 versus 23.42 kg) in liveweights between Mkuyuni and Mlali goats while Mlali sheep were heavier (26.83 ± 7.26 versus 23.31 ± 7.07 kg) than Mkuyuni sheep. Generally, sheep were heavier by 1.72 kg than goats and females were heavier than males. Most measurements studied in sheep were affected by location, and being heavier in Mlali. (71 ± 8.8 vs 68 ± 7.4 cm) chest width and higher (71 ± 8.8 vs 68 ± 7.4 cm) heart girth than goats. Body condition score ranged from 2.47 to 2.89. Most of the killing characteristics were not affected by species or location. Dressing percentage (DP) ranged from 40 to 45 % in goats and 39 to 42% in sheep. DP was 42.14 and 45.04 % in male sheep and goats respectively while it was 40.66 and 40.54% in female sheep and goats. Some data on linear measurements and killing out characteristics showed significant

species and sex effects. The percentage of offal yield ranged from 53 to 56% in sheep and 56 to 60% in goats. Carcass composition consisted of 71.8, 7.3 and 19.9% of lean, fat and bone respectively in sheep and 72.9, 4.6 and 22.8% in goats. Male goats had lower (3.4 vs 5.6%) fat and higher (25.6 vs 20.6%) bone content ($P < 0.05$) in the carcass than female goats. These tissues in sheep were not affected by sex. Male goats had heavier (5.8 vs 4.7%) and lighter (12.3 vs 13.9%) proportions of breast and loin joint weights respectively than female goats, while male sheep had higher (13.4 vs 12.8%) and lower (7.6 vs 9.0%) proportions of loin and chump joint weights. Goats were superior in the proportion of muscles in breast (4.2 vs 3.5%) and foreleg (20.7 vs 19.3%) while sheep were superior in muscle in the neck (8.6 vs 7.8%) and hindleg (27.7 vs 25.8%). Sex effects on muscle distribution were evident in neck, ribs and loin muscles in sheep and in breast and loin muscle in goats. Sex had significant effects only on fat proportions in neck, breast and ribs and on bone distributions in foreleg, chump and hindleg in goats. In both sheep and goats heart girth was the best predictor of liveweight ($R^2 = 0.83$ and $R^2 = 0.77$ respectively). Measurement combinations involving chest depth, heart girth and hip width were the best predictors of liveweight. The proportion of tissues in the hindleg joint were promising predictors of carcass composition. The results in the present study showed that farmers do not keep records but their perception on sheep and goat performance is based on memory.