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Comparative Performance of Sheep and Goats Raised in Water-Limited Areas

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Abstract

This study was conducted in the northwestern coastal region of Egypt. The study area was intentionally chosen to include dry climatic conditions in order to assess the effect of water availability on the performance of both sheep and goats. The study area was subdivided into two agro ecological zones: Dabaa (DA) and Sidi Barani (SB). The annual rainfall in the study area averaged 108 mm for DA and 259 mm for SB during the period from 2005 to 2015. Data were collected from a total of 100 small ruminants keepers using a survey based on structured questionnaires. The results showed different contributions of the types of small ruminants to the livelihood of the family according to its capital assets. The share of small ruminants in the household economy ranged from 47.22 % in the SB to 73.9 % in the DA. In DA district, sheep productivity was 30.3 % lower and total annual variable costs/ewe were 19 % higher in the DA district than in SB district. The corresponding figures in goats were 22.3 % and 14 %, respectively. The degree of dependence on rangelands is the main reason for the variability of feed costs in the two rain fall districts. The returns on capital invested in sheep production were 22.3 and 14.4 % for SB and DA, respectively. The corresponding figures for goat production were 20.4 and 16.7 %, respectively. Our findings support that goats raised under a less favourable environment perform better than sheep. In areas with limited water, household livelihoods can be improved by developing appropriate strategies to reduce the cost of animal feed.

Keywords: Water scarcity, goats, production, profitability, sheep, survey