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“Bridging the gap between increasing knowledge and decreasing resources”

Small Ruminant Performance in Different Agro-Ecological Zones of Egypt

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Abstract

The suitability of an area for either animal or crop production, and the type of animal or crop to be produced depends on the agro-ecological conditions of the area. The extent of cropping and the type of crop, in turn, determine the quantity, quality and distribution of animal feed resources throughout the year. This paper intended to assess small ruminant performance under different feeding strategies. Questionnaire was conducted with 162 households in three agro-ecological zones located in the North coastal zone of Egypt: (i) the rain fed area in the West, (ii) the dry area in the middle, and (iii) the irrigated area in the East. Barki sheep and Barki goats are the prevailing breeds raised in these zones. Herd owners in the East use large proportion or all their land to cultivate fodder crops for their small ruminants. Herd differed in size and composition among different agro-ecological zones. Analysis of data showed that the drought in the middle region lead to reduce small ruminant productivity by 16% to 28%, compared to both other regions. Improvement of the feeding level conventionally achieved through the use of concentrate could not be cost-effective at the Bedouins level. Alternative feeding strategies are therefore needed in these arid environments. This paper reports on some nutrition technologies which should be implemented in this area in order to improve small ruminant performance. Urea and ammonia treatments of straw, the use of fodder shrubs and agricultural by-products might be considered within feeding strategies to improve reproductive efficiency when animals graze poor pastures. Adoption of these technologies is constrained by many household and farm characteristics.

Keywords: Agro-pastoral system, crop-livestock system, drought, pastoral system, small ruminants, technological interventions