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Performance of Zero-Grazed Sahelian × Djallonke Ewes with *Lablab purpureus* Supplementation under Tropical Climatic Conditions

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Abstract

In tropical ruminant production, dry seasons are characterised by steady loss of weight of flock due to loss of nutritive value of feed resources. In the light of this challenge which is particularly prominent in peri-urban production systems where the natural grazing land is rapidly declining there is the urgent need to develop farmer friendly feeding strategies to mitigate it. A two fold experiment was conducted at the ruminant section of the Biotechnology and Nuclear Agriculture Research Institute during the dry season from January to February 2013. The growth performance of five Sahelian × Djallonke crossbred ewes over a ten week period in the dry season was evaluated in the context of adaptive agriculture. The age range of selected ewes were between 13 and 16 months. Ewes' basal diet of *Panicum maximum* was supplemented with a drought tolerant tropical leguminous fodder *Lablab purpureus* under zero grazing conditions for the first five week period and followed by a week break then another five weeks during which their diet was not supplemented. Proximate composition of the *Panicum maximum* and the *Lablab purpureus* were evaluated. The ewes on average gained 37.86 g day⁻¹ during the supplementation period compare to a net loss of 15.17 g day⁻¹ when the supplementation was withdrawn. One way analysis of variance showed that the difference was not significantly ($p > 0.05$) different. Given the short duration of the intervention it still demonstrated the potential of the use of simple modifications of existing production systems to mitigate production losses due to drought conditions in the tropical ruminant production.

Keywords: Djallonke, *Lablab purpureus*, non supplemented, *Panicum maximum*, peri urban, supplemented