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# **Using Some Green Forage Grasses Cultivated in Reclaimed Sandy Soils for Feeding Ruminants**

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### ABSTRACT

Two experiments were performed to evaluate Panicum maximum (PM) as a new green forage compared with Sudan grass (SG) as a traditional forage in reclaimed sandy soil in Egypt and study the effect of PM or SG with concentrate feed mixture (CFM) on nutritive evaluation and performance of lambs. In the first experiment, 6 rams (3 in each forage cut) were used to measure digestion coefficients, rumen parameters, feed intake and nitrogen balance. In the second experiment, 20 growing lambs with an average 24.3 Kg LBW were used in 4 rations P1 and S1 rations (fed 1.5% of LBW CFM with PM or SG *ad lib*) also, P2 and S2 rations (fed 2% of LBW CFM and PM or SG *ad lib*). Digestibility, rumen and blood parameters, feed intake and nitrogen retention were measured. Daily body gain (DBG), feed conversion and economic efficiency were determined. Forage yield was calculated.

Results showed that crude protein (CP) content, CP digestibility, rumen ammonia-N, digestible crude protein (DCP) and dry matter (DM) yield was significantly higher in PM than SG in two cuts in 1<sup>st</sup> experiment. In 2<sup>nd</sup> experiment: The DM, organic matter and nitrogen free extract digestibility, DCP, N-retained of ration group P2 were significantly higher than ration group P1. DCP and N-retained of ration group S2 were significantly higher than ration group S1. Body gain of ration group P2 was significantly higher than other groups.

In conclusion, Panicum maximum is one of the promising green forage grasses in reclaimed sandy soils of Egypt during summer season and the rations containing CFM with Panicum maximum were better than that containing CFM with Sudan grass. Moreover, the best ration of rations containing CFM which fed with 2 levels and Panicum maximum which fed *ad lib* was ration P2 (containing 2% of LBW CFM) than ration P1 (containing 1.5% of LBW CFM).

**Keywords:** Panicum maximum, Sudan grass, rams, lambs, digestibility, rumen, gain, yield.

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## LIST OF ABBREVIATIONS

<b>Abbreviations</b>	<b>Description</b>
ABW	Average body weight
ADF	Acid detergent fiber
ADL	Acid detergent lignin
AL	Albumin
ALT	Alanine aminotransferase
AST	Aspartate aminotransferase
CF	Crude fiber
CFM	Concentrate feed mixture
CP	Crude protein
CPI	Crude protein intake
DBG	Daily body gain
DCP	Digestible Crude Protein
DM	Dry matter
DMI	Dry matter intake
EE	Ether extract
GL	Globulin
LBW	Live body weight
MP	Microbial protein
NDF	Neutral detergent fiber
NFE	Nitrogen free extract
NH <sub>3</sub> -N	Ammonia - Nitrogen
OM	Organic matter
PM	Panicum maximum
SG	Sudan grass
TDN	Total digestible nutrients
TP	Total protein
TVFA's	Total volatile fatty acids