



Tropentag, September 15-17, 2021, hybrid conference

“Towards shifting paradigms in agriculture
for a healthy and sustainable future”

Willow and Panicum Silages Effects on Milk Yield and Components of Black Mountain Goats

SAMI AWABDEH¹, RAWAD SWIDAN²

¹National Agricultural Research Center, Livestock, Jordan

²National Agricultural Research Center, Livestock, Jordan

Abstract

A study was conducted at al Khanasri station to evaluate the potential of willow and panicum silages as a forage source for lactating black mountain does and their nursing kids. Twenty-seven black mountain does and their kids were randomly assigned to one of the three dietary treatments (9 does per treatment); control group (CON.) were does fed wheat straw, a common relatively expensive forage source in Jordan, willow silage group (WS) were does fed willow silage, panicum silage group (PS) were does fed panicum silage as a source of forage of the diets. Concentrate were formulated accordingly to each diet for iso-caloric, iso-nitrogenous rations. Does were fed high concentrate diet ad libitum with 25:75 F:C ratio for 8 weeks of lactation. Intake and refusal were measured daily. Milk yield and milk component were measured biweekly. There were no differences in final body weight of does among groups. No significant different in milk yield between CON. and PS throughout the experiment and there were no significant different in milk yield between CON and WS group in the first 4 weeks of lactation. On the other hand, WS group were significantly different from other groups after 6 week of lactation (825 ml milk per day vs. 633 and 616 ml milk yield for CON. and PS, respectively) and the different continue to the end of the experiment. Total milk yield was significantly higher in WS compared to other groups for the entire experiment. No significant differences among treatment in total solids, fat, protein and lactose content. $Cost/kg$ milk production (US\$) was higher ($p < 0.05$) in PS and CON. groups compared with WS group. As a results, using willow silage in nursing doe's diets will increase milk production, with no changes in its components and reduce cost of milk production, which demonstrate a potential of willow silage to use as a forage source for black mountain goats.

Keywords: Black mountain goat, panicum silage milk production, willow silage