

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

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## Introduction

Forage availability is one of the major obstacles facing the livestock sector in Jordan. Low milk production per unit increases the effect of high feed cost and reduce profitability. Finding new cheaper forage source is important to reduce feed costs and increase animal production.



Willow silage is been used recently in small ruminant diets as a source of forage. Its newly introduced as non-conventional fresh forages with high protein contents (9.5% as DM basis). Panicum is perennial plant that thrives in saline water, it consider a good forage source with 6.5% crude protein (DM basis). Using panicum silages for goat feeding is still under study in Jordan.



## The Objective

to study the effect of different silages on milk yield and components of Black Mountain goats.

## Materials and Methods

- 27 Black mountain does and their kids were randomly assigned to one of the three dietary treatments (9 does / treatment); differ in their source of forage.
- Control group (CON) were does fed wheat straw
- Willow silage group (WS) were does fed willow silage
- Panicum Silage (PS) were does fed panicum silage

⇒ Lactating does were fed high concentrate diet with 25: 75 F: C ratio *ad libitum* for first 8 weeks of lactation.

⇒ Intake and Refusal were measured daily

⇒ Milk yield and milk component were measured biweekly.

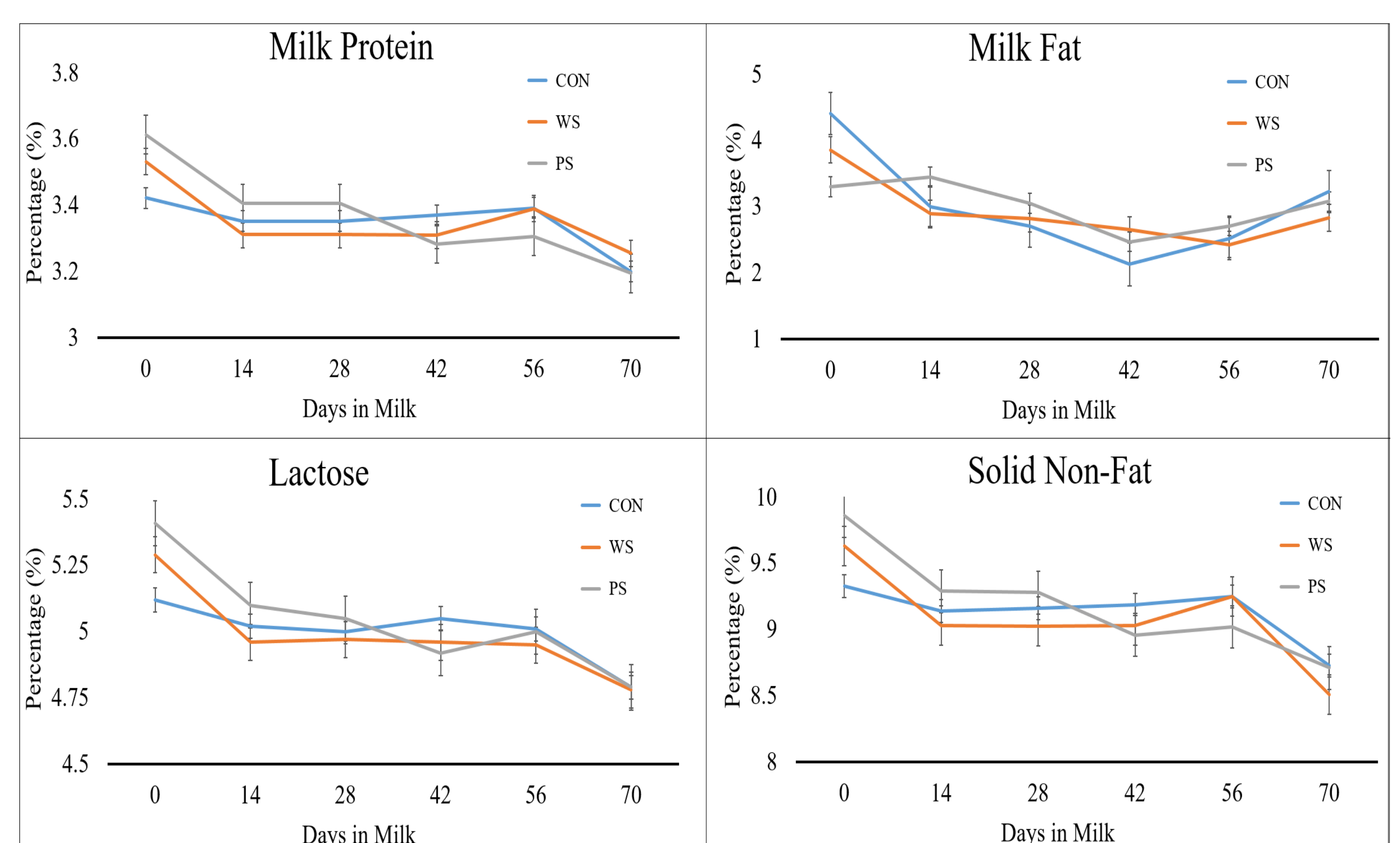
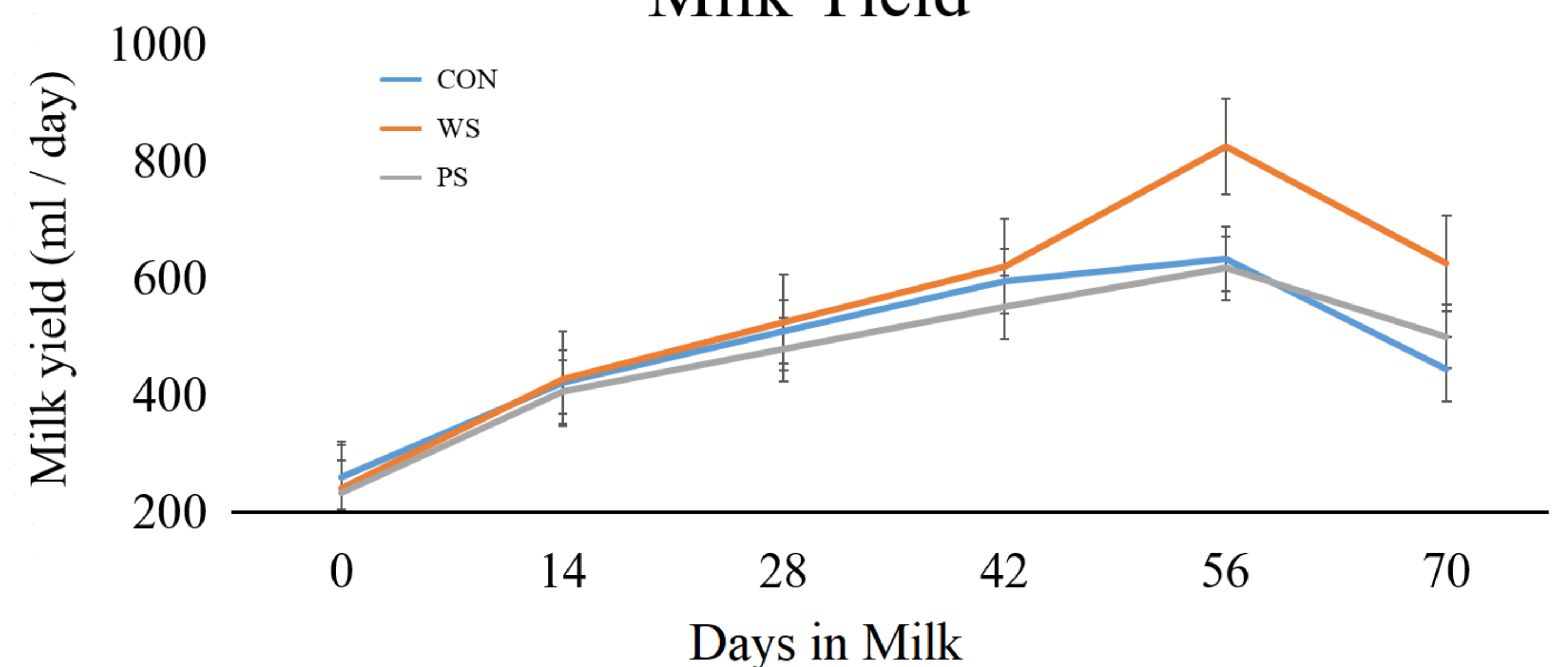
⇒ Final body weight for does were measure at the end of experiment.



## Results

- No significant differences in milk yield between CON and PS groups
- No significant differences in milk yield between CON and WS groups in the first 4 week of lactation. On the other hand, milk yield was significantly higher in WS group (825 ml/day) compared to CON and PS (633 and 616 ml/day, respectively) after week 6 of the lactation till the end of the experiment.
- No differences among treatment groups in total solids, fat, protein and lactose content.
- Cost/kg milk production (US\$) was higher ( $P < 0.05$ ) in CON and PS groups compared with WS group.

## Milk Yield



## Conclusions

In conclusion, 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 to use as a forage source for Black Mountain goats.