

# The Effect of Feeding Silage on Assaf Sheep Milk Quality and Quantity



Iyad Badran<sup>a</sup>, Mahmood Fatafta <sup>b</sup>, Muayad Salman <sup>b</sup>, Rami Al Qaisi<sup>a</sup>

- <sup>a</sup> National Agricutural Research Center, Ministry of Agriculture, State of Palestine.
- <sup>b</sup> Department of Ruminant, Ministry of Agriculture, State of Palestine

### INTRODUCTION

In Palestine feed contributes more than 75% of the total cost of the animal production, where most of ingredient are imported from foreign sources at high cost. Utilizing by product as components of animal feed may decrease the total cost of feeding which could increase the profitability of livestock producers.

#### METHODS

Twenty one ewes were divided according daily ration to three groups

Group 1 (G1): control (concentrate and wheat hay).

- Group 2 (G2): received concentrate, 50% wheat hay and 50% silage.
- Group 3 (G3): received concentrate, and 100% silage.

Several milking tests were made during milking season which normally last to 150 days for the Assaf breed, ewes were hand-milked twice daily (in the morning and the evening) and the total daily milk was recorded.





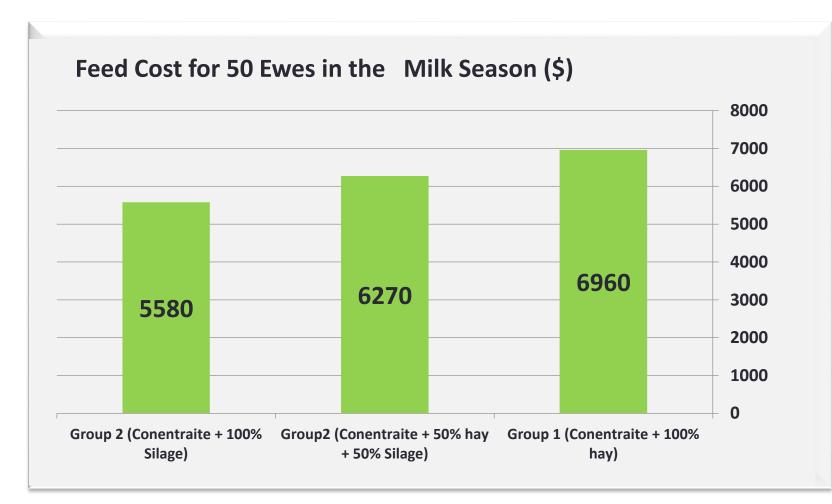
## CONCLUSIONS

- It was concluded that substitution wheat hay by 50% of silage on lactating Assaf ewes rations increased milk production by 14.2% and reduced feed cost by 10.6 %
- Also it was concluded that replace wheat hay by 100% of silage on lactating Assaf ewes rations did not increase milk production, but it decreased feed cost by 21.3% %.

## OBJECTIVES

- to study the effect of different levels of silage as alternative of roughages on Assaf sheep milk quality and quantity.
- to evaluate the economic effect of feeding silage to sheep as alternative to wheat hay.

## RESULTS



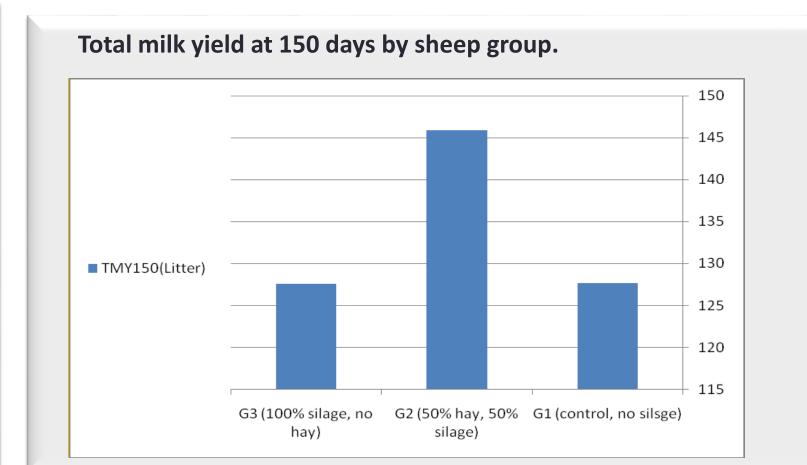
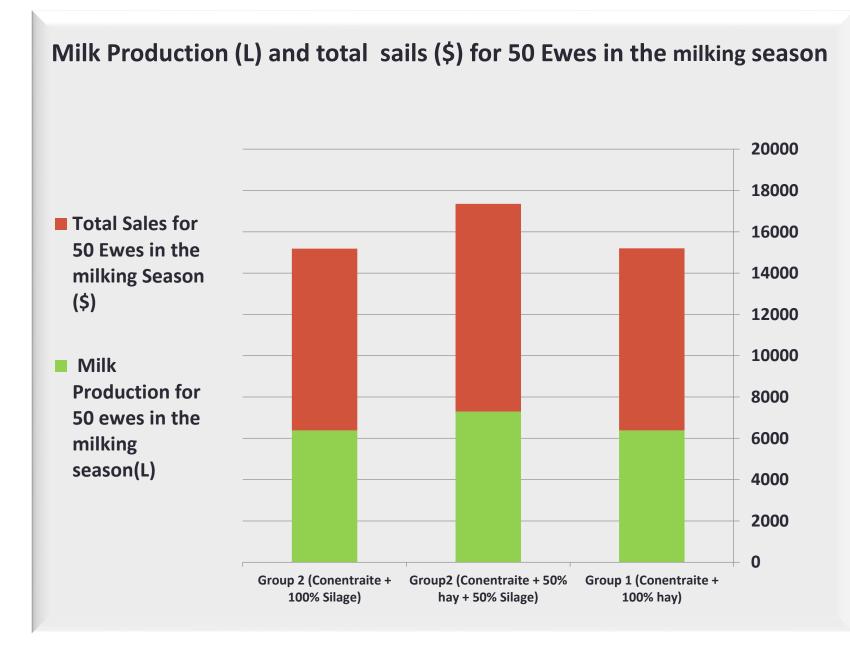
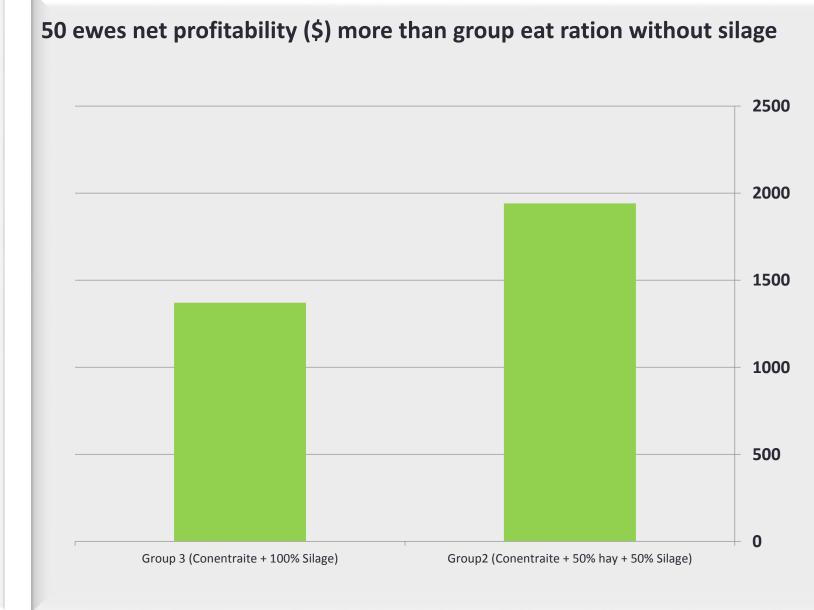


Table (1) Least squares means of milk composition traits (%) by feeding group.

Group 1	Milk Composition Trait				
	Fat%	Protein%	Non Solid Fat%	Lactose%	Mineral%
1	5.61 <sup>a</sup> <sup>1</sup> .	3.50 <sup>a</sup>	9.79 <sup>a</sup>	5.53 <sup>a</sup>	1.78 <sup>a</sup>
2	7.32 <sup>b</sup>	3.49 <sup>a</sup>	10.02 <sup>a</sup>	5.74 <sup>b</sup>	4.35 <sup>a</sup>
3	6.66 <sup>ab</sup>	3.50 <sup>a</sup>	9.96 <sup>a</sup>	5.68 <sup>ab</sup>	1.09 <sup>a</sup>

<sup>&</sup>lt;sup>1.</sup> Means in the same column with similar letters are not significantly different (P > 0.05)





#### RECOMMENDATIONS

- We recommend replacing silage by 50% of roughage in the rations of lactating Assaf ewes.
- To improve milk quality it's recommended applying silage as a part of sheep ration.