OMISSION OF TWO WEEKEND MILKINGS IN MANCHEGA AND LACAUNE DAIRY EWES

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❑ INTRODUCTION

Mediterranean sheep milk is mainly produced in family flocks, where ewes are milked twice a day (morning and evening).

This practice doesn't permit farmers to spend much time to other farming practices and/or to other activities off the farm.

For this reason, any possible reduction of daily milking frequency in dairy sheep might be a suitable strategy to improve the farmer's quality of life.

However, for milking omission to become a practical strategy, it should have no deleterious effects on milk yield, milk quality or udder health.

This study was conducted to evaluate the long- and short-term effects of **omitting 2 milkings weekly** during **early-** and **mid-lactation**, in 2 dairy ewe breeds characterized by differences in milk yield and udder cistern size.

❑ MATERIAL AND METHODS

▪ Animals:

★ **60 dairy ewes** (**Manchega, MN**, n = 42; and **Lacaune, LC**, n = 18).

▪ Milking treatments:

★ No milking omission (**C**): **2 milkings/day** (8:00 and 18:00 h).

★ Weekend milking omission (**WO**): only **1 milking/day during the weekend** (16:00 and 14:00 h on Saturday and Sunday, respectively).

Table 1. Experimental groups of dairy ewes.

			Treatment	
Group	Breed	Ewes, n	Early-lactation (wk 8-14)	Mid-lactation (wk 15-22)
1	MN	12	C	WO
	LC	6		
2	MN	11	WO	C
	LC	6		
3	MN	17	C	C
	LC	6		

❑ RESULTS

▪ Long-term effects:

★ **Omitting 2 milkings weekly tended to decrease milk yield in MN ewes** (-15%, *P* = 0.07) in early-lactation, whereas **no effects** were observed **in LC ewes**.

★ **Milking omissions in mid-lactation did not affect milk yield** in either breed.

★ **Milk composition and SCC were unaffected** by milking omissions in both breeds and stages of lactation

▪ Short-term effects:

★ Milking omissions **decreased milk yield and milk fat** content **on the first omission day** in both breeds, losses being more noticeable in early- than in mid-lactation (Fig. 1).

★ Milk protein content and SCC did not vary.

★ **After resuming the twice-daily milking routine** on Monday:

- **Milk yield showed a compensatory increase** and allowed milk yield to return to Friday values **in LC ewes**. However, MN ewes did not reach Friday values in wk 12 (Fig. 1).
- **Milk fat content increased** during Sunday and Monday, **re-establishing Friday values** in both breeds (Fig.1).

Figure 1. Effect of weekend milking omissions on daily milk yield and fat content during wk 12 and 20 of lactation in MN (■,▫) and LC (●,○) dairy ewes.

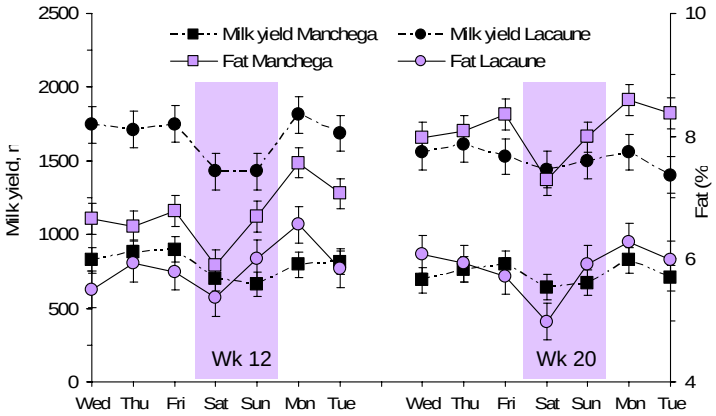
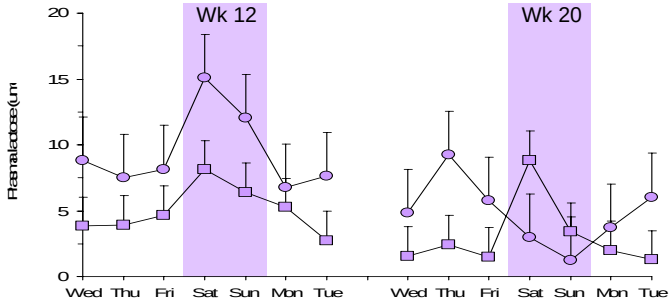


Figure 2. Effect of weekend milking omissions on daily concentration of plasma lactose during wk 12 and 20 of lactation in MN (▫) and LC (○)dairy ewes.



★ Weekend milking omissions **in early-lactation caused tight junction leakiness** in both breeds, but **mammary epithelium adapted** to extended milking intervals when applied successively. **In mid-lactation**, **mammary tight junction** showed **leakiness only in MN** ewes (Fig. 2).

❑ CONCLUSIONS

- **Omitting 2 milkings weekly** could be an **interesting** management approach **to reduce farm labor with no negative effects** on milk yield and milk SCC values in dairy sheep.
- **Losses** in milk yield would be **reduced if milking omissions were done during late lactation in small-cisterned ewes.**

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