SESSION: S.05 POSTER Nº 4255
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Terpene content in ewe´s milk: part-time grazing

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Framework: feeding management of Latxa sheep in spring = part-time grazing (PTG) + indoor supplementation (forage and concentrate)

Objective: to assess the effect of alfalfa hay supplementation (AR) on terpene content of ewe´s milk fat

MATERIAL AND METHODS

Experiment monitored over 4 weeks

48 Latxa dairy ewes

Blocked on the basis of:

- √ Lactation day and milk yield
- √ Milk protein and fat
- √ Body weight

♦Treatments

1 conditioning week + 4 experimental weeks

Group	AR (g/ewe/d)	Grazing time* (min/ewe/d)	Grass hay (g/ewe/d)
Control	600	0	1000
A	300	228±8	0
B	600	224±6	0
C	900	209±14	0

Concentrate: 500 g/ewe/d. *Grazing time visually measured.

♦Measurements

√ Terpene concentration by means of HS-SPME-GC-MS (internal standard 1,3,5-triisopropylbenzene)

♦Statistics

√ Mixed model of repeated-measures ANOVA:

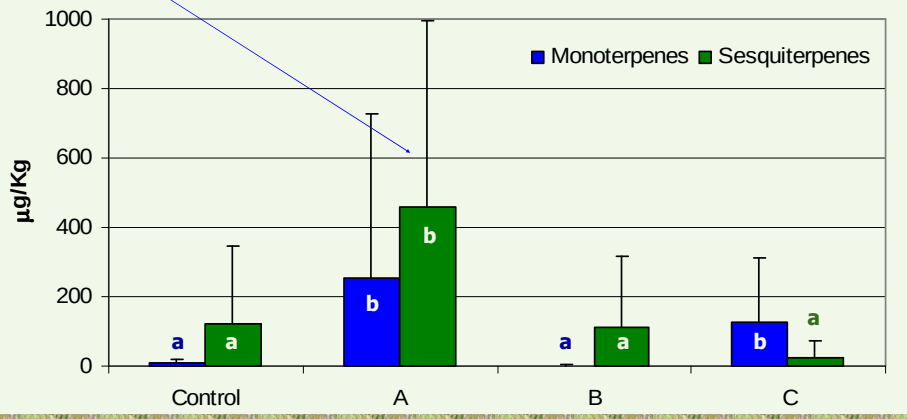
- Fixed factor: AR
- Repeated-measures factor: experimental week

RESULTS

The milk of low AR ewes had the highest concentration of sesquiterpenes. Despite similar grazing time, the contribution of fresh pasture to the diet was, proportionally, the highest for this group.

The effect of the experimental week was significant: the terpene content changed with time

Terpene content of the plants depends on enviromental factors



CONCLUSIONS

✓A minimum amount of fresh pasture in the diet is needed to observe significant increases of sesquiterpenes in the milk fat

✓Large variations in the terpene concentrations in milk samples were observed during the experiment. Perhaps it is due to variable content of these terpenes in the pasture which, in turn, depends on environmental conditions (Mariaca et al., 1997. *J Agric Food Chem, 45*, 4423-4434).

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