Effect of the source of magnesium fed during pregnancy and lactation on performance of sheep

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Magnesium (Mg) plays an essential role in a wide variety of fundamental cellular reactions. Concentrates of farm animals are supplemented with minerals but their absorption depends on their source. A deficiency in Mg may lead to tetany or chronic dysfunctions

Objective:
does the source of magnesium affect the performance of ewes and their lambs?

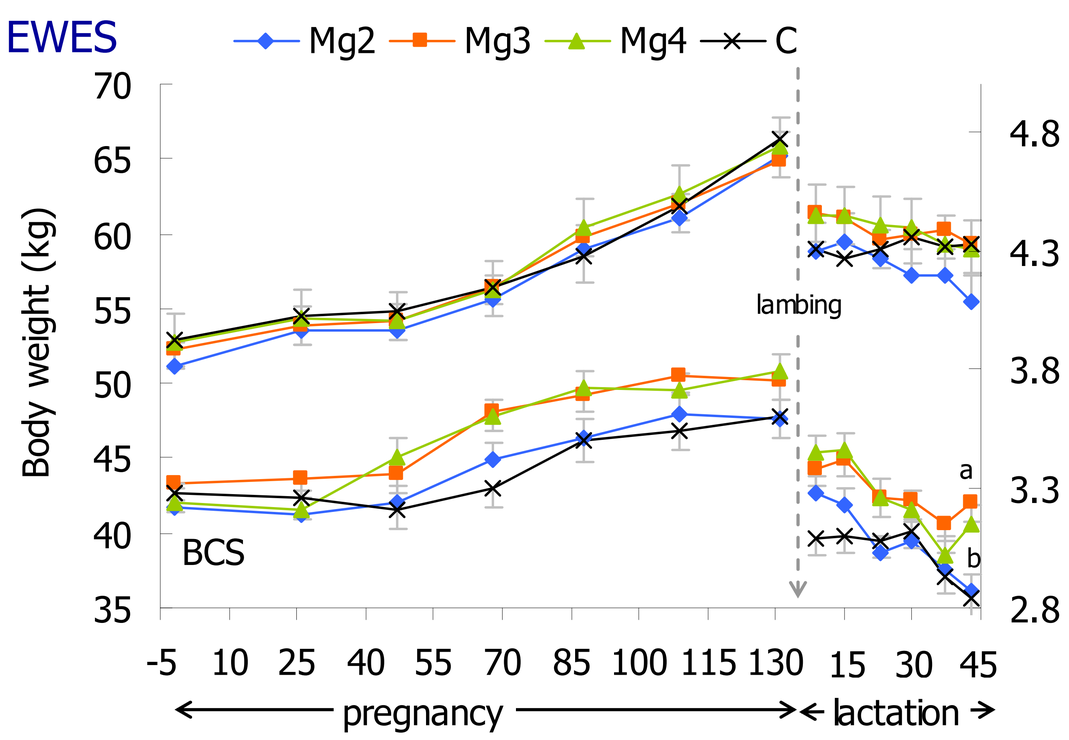
Material and Methods

116 Rasa Aragonesa ewes
Feeding during **pregnancy**: straw + 950 g of concentrates (18.0% CP, 30.7% NDF)
during **lactation**: straw + 950 g of concentrates (19.5% CP, 32.5% NDF)

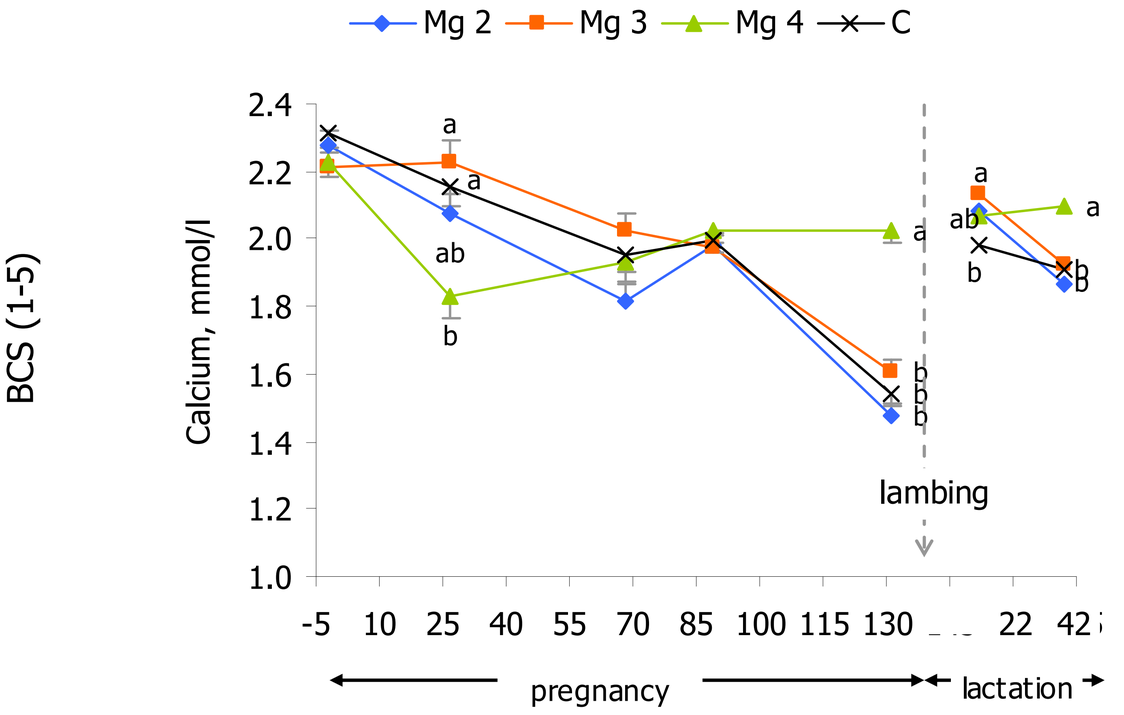
Treatments	Source of magnesium of the concentrates
C	100% caustic MgO
Mg2	caustic semicalcined MgO and $MgCO_3$
Mg3	caustic semicalcined MgO and calcined dolomite
Mg4	caustic semicalcined MgO and $Mg(OH)_2$

Measurements:
- Body weight: ewes & lambs
- Body condition score (BCS)
- Serum mineral concentrations
- Num lambs/birth

Results



Body weight and BCS evolutions
* Pregnancy: similar
* Lactation: depend on the source of Mg

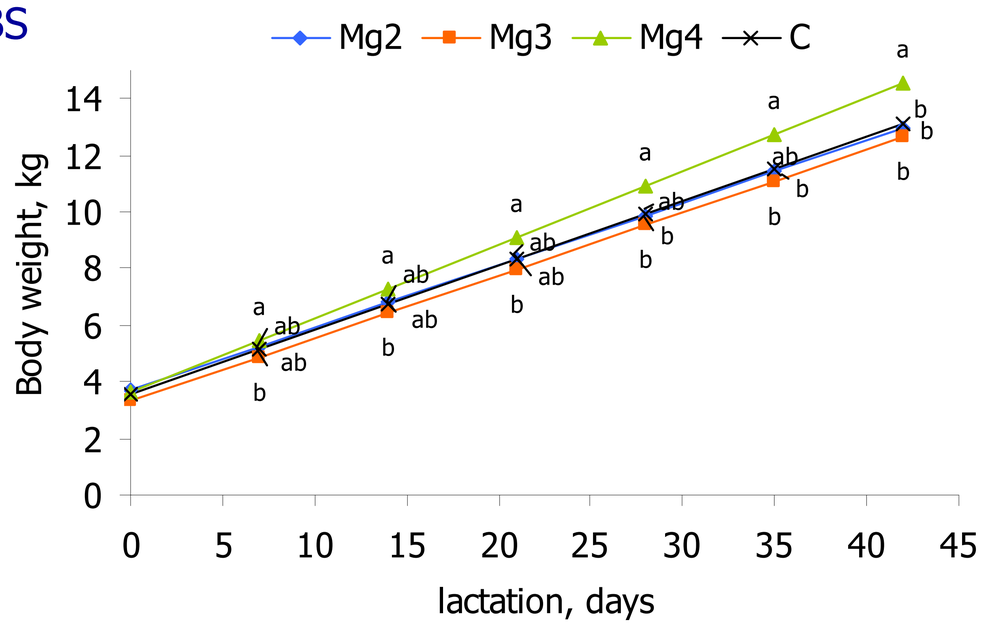


Mineral concentration in plasma affected by the source of Mg. No clear effect but:
Calcium was greater in Mg4 since the 90d of pregnancy

LAMBINGS

Similar birth rate, prolificity, lamb birth weight or mortality

LAMBS



Mg4 lambs had greater weight gains

Conclusions

The source of magnesium has influence on mineral concentrations in plasma. Lambs of Mg4 treatment (caustic semicalcined MgO and Mg(OH)2) presented a greater average daily

65th Annual Meeting of the European Association of Animal Production
Copenhagen, 25th to 28th August 2014 mjoy@aragon.es