



Effect of a complementary feed based on plants macerated on liver function and dairy performance in early lactation cows

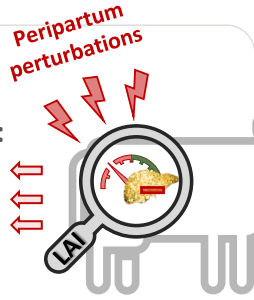
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Context

Reduction of liver activity during peripartum with consequences on:

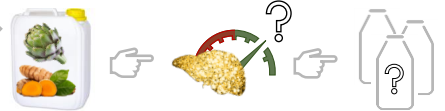
- Health
- Milk production
- Reproduction

→ Functioning and liver activity can be evaluated via LAI and LFI index (Sun *et al.*, 2020; Bertoni *et al.*, 2008)



Objective

Evaluation of a feed supplement on health and cows' performance ?

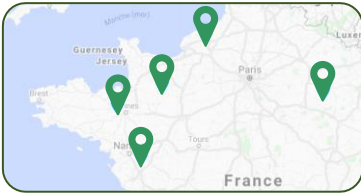


Material & methods

Dispositive

74 cows, Prim'holsteins & Normandy breed, at the beginning of lactation

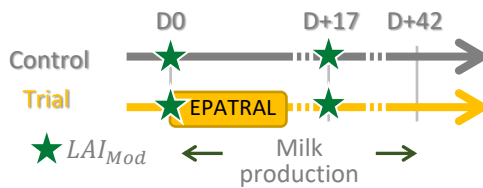
Location of the farms



Method

Distribution of feed supplement EPATRAL, based on curcuma and artichoke macerates in trial group, for 6 days

Experimental design



Analysis

Liver activity index (LAI_{Mod}) & milk production during 6 weeks

Liver activity index formula:

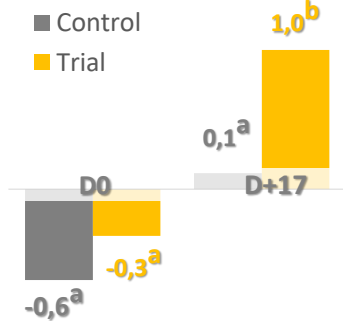
$$\frac{(ALB_i - ALB_\mu)}{ALB_\sigma} + \frac{(CT_i - CT_\mu)}{CT_\sigma}$$

ALB : Albumin rate
CT: Total cholesterol
i: individual | μ : average | σ : standard deviation

Results

Liver activity

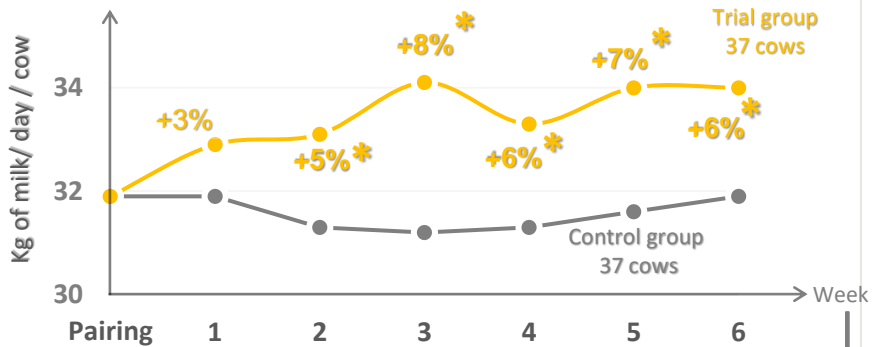
LAI_{mod}



ab : significant difference at 5% level

Milk production

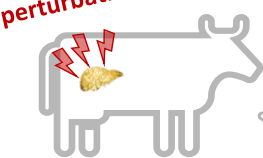
Cows paired according to parity, stage of lactation and milk production at the beginning of lactation



* significant difference at 5% level

Discussion & conclusion

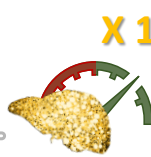
Peripartum perturbations



Cows at the beginning of lactation



Feed supplement EPATRAL



Liver activity



Increase of milk production for 6 weeks



Return on investment from milk increase

Now let's measure effects on health and reproduction ?



Bertoni, G., Trevisi, E., Han, X. and Bionaz, M., 2008. Journal of Dairy Science, 91(9), 3300-3310
SUN, B., CAO, Y., CAI, C., YU, C., LI, S. and YAO, J., 2020. Journal of Integrative Agriculture, 19(3), 820-8