

Case Study

Influence of the herbal component of a commercial feed additive on serum parameters, fertility and longevity of dairy cows



Overview

In a randomized placebo-controlled trial, 63 dairy cows of one Swiss organic dairy farm were included to investigate the effects of a specific herbal mixture (main components: stinging nettle herb, fenugreek seed, milk thistle fruit, yarrow herb). The animals were fed either 50 g of the herbal mixture or a grass meal placebo over a period of 60 days. The feeding period started at dry off and lasted until the calving date. To ensure a detailed analysis, cows were differentiated into groups depending on their lactation number: L1 (first lactation), L2-4, and L>4 (cows with more than four lactations).

Blood samples were taken and a rectal palpation of the uterus and ovaries according to Rosenberger was performed once between day 21 and 35 of lactation. Furthermore, all cows were observed until culling or their next calving.

Impact

The fed herbal mixture seemed to have a significant impact on the postpartal metabolic status of dairy cows, which is a main factor influencing fertility. Although the herbs seemed to prolong the postnatal anoestrus, they had a positive effect on long-term health parameters:

- **Longevity and Culling:** Overall, there were significantly fewer cullings ($p < 0.05$) in the group of cows fed with the herbal mixture. The overall culling rate was reduced from 50% in the placebo group to 17% in the herb group.
- **Fertility Reasons:** Specifically, significantly fewer cullings occurred due to fertility reasons. The culling rate for fertility reasons dropped from 23% (placebo) to just 3% (herb group).
- **Serum Parameters:** There were significantly fewer abnormalities in tested blood serum parameters (glucose, bilirubin, AST, GLDH, calcium, phosphate, and magnesium) in the LI - herb group.
- **Physiological Findings:** In older cows ($L > 4$), the herb group showed higher serum phosphate contents compared to the placebo group.
- **Economic Effect:** Analysis showed that the positive effect of the decreased culling rate had a higher economic impact than the slight prolongation of the intercalving period.

Supporting Material

- [Influence of the herbal component of a commercial feed additive on serum parameters, fertility and longevity of dairy cows](#)

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