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Double-buffered sodium butyrate improves feed efficiency in layers fed a low energy-protein diet

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OBJECTIVE : Evaluate the effect of double-buffered sodium butyrate (Butylin®54) on the performance of laying hens fed a diet reduced in energy and protein.

MATERIAL AND METHODS:

Animals: 360 ISA Brown layers randomly allocated in 3 groups: 8 replicates of 15 hens per treatment

Duration: From 68 to 73 weeks of age

Treatments:

- **Control** (CTRL): basal diet (corn, soybean meal, wheat) 2700kcal/kg; 16%CP; 0.7%Lys SID
- **Low Energy Protein** (LEP): basal diet -3% in energy, protein, lysine, methionine, threonine ; -10% SBM
- **LEP + Butylin®54** (LEP-DBSB): LEP +600g/T of BUTYL*in*®54

Parameters:

- Feed intake
- Number of eggs
- Egg weight
- Egg mass
- Feed conversion ratio (FCR)

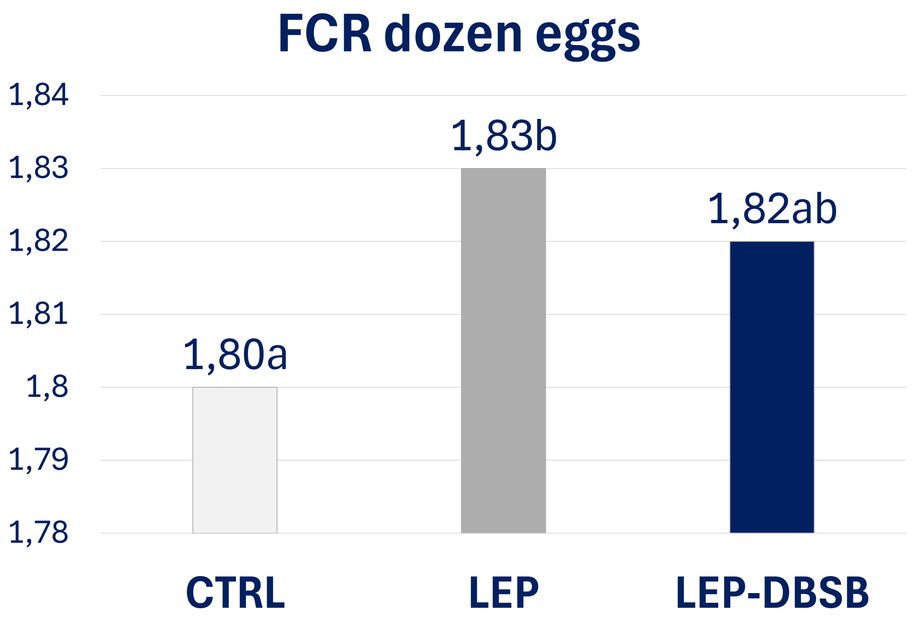
Statistical analysis:
Software XLStat
ANOVA or Kruskal-Wallis test

RESULTS:

Table 1: Performance of layers according to treatment

	CTRL	LEP	LEP-DBSB	P-value
Feed intake (g/d)	132.7^{ab}	133.7^{a}	131.7^{b}	<0.05
Number of eggs[1]	37.1	36.8	36.6	NS
Egg weight (g)	65.7	65.0	65.0	NS
Egg mass[1] (g)	2439	2393	2382	NS
FCR[2] kg eggs	2.29	2.34	2.33	NS

[1]From 68 to 73 weeks ; [2]FCR : Feed Conversion Ratio
NS: Not significant ; a and b for significant difference (P < 0.05)



- Feed intake was higher for LEP (133.7g/d) and lower for LEP-DBSB (131.7g/d ; P<0.05), with intermediary consumption for CTRL (132.7g/d).
- There was no significant difference for egg weight, number of eggs, egg mass, and FCR per kg (P>0.05).
- LEP (1.83) than CTRL (1.80 ; P<0.05), with intermediate results for LEP-DBSB (1.82).

CONCLUSION: The addition of **600ppm of DBSB** (Butylin®54) can **improve feed efficiency** in layers fed a low energy-protein diet maintaining egg production which means **cost reduction of feed formulating** thanks to DBSB. DBSB is also a good strategy to **reduce the carbon impact of the European poultry sector** by limiting the import of soybean meal from overseas and replacing it with more local raw materials.

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