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”Young people and multidisciplinary research in applied life sciences”

Effects of Different Dietary Inclusion Levels of Brewer’s Yeast on the Productive Performance of Broiler Chickens Reared in a Backyard Farming System

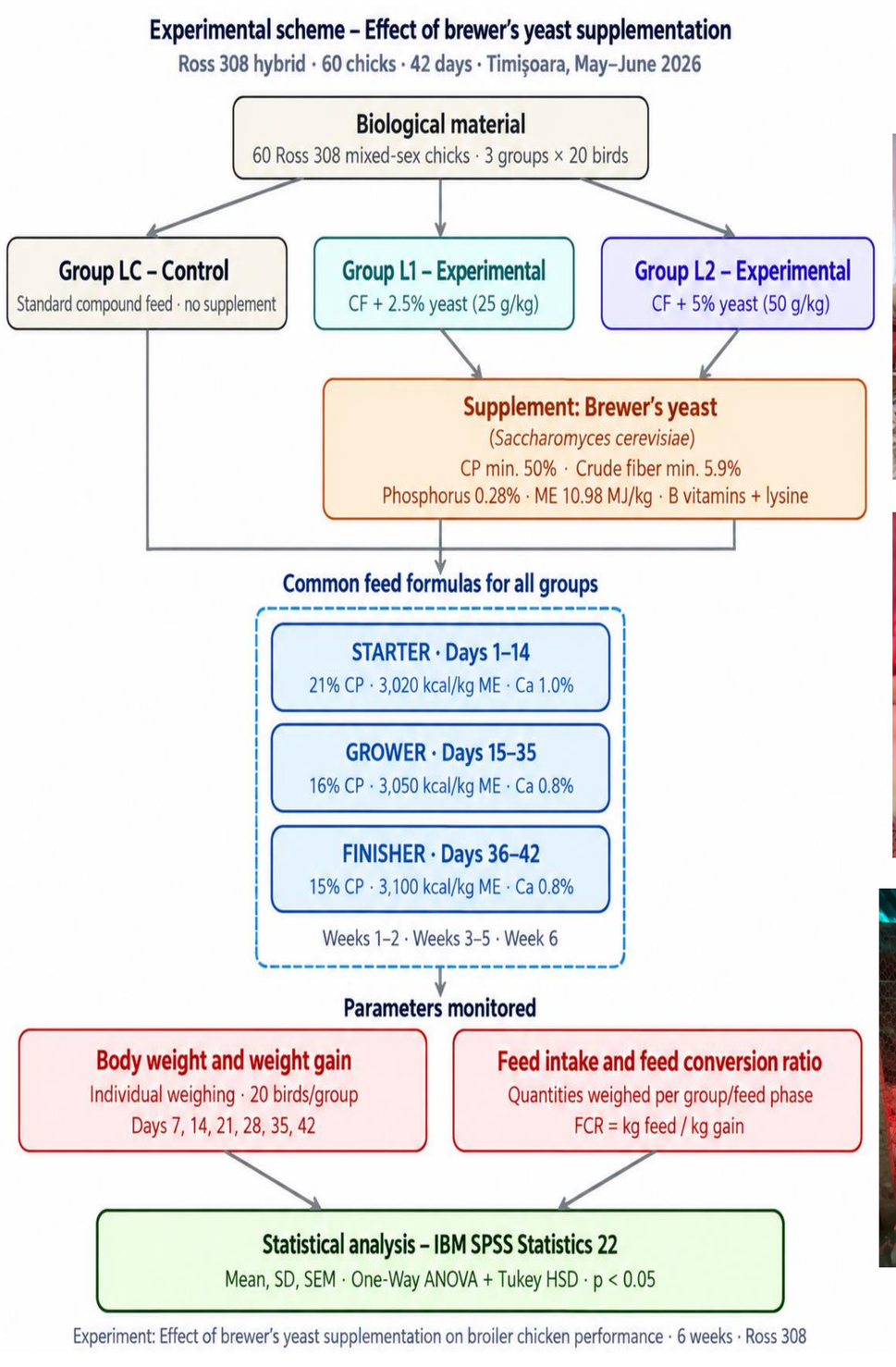
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Abstract: *The present study aimed to evaluate the influence of dietary supplementation with brewer’s yeast (Saccharomyces cerevisiae) on the productive performance of broiler chickens reared under backyard farming conditions. The experiment was conducted over 42 days using 60 broiler chickens divided into three groups: a control group (LC), a group supplemented with 2.5% brewer’s yeast (L1), and a group supplemented with 5% brewer’s yeast (L2). The results showed the most favorable descriptive values for final body weight (2135.33 g), average daily gain (49.86 g/day), and feed conversion ratio (1.78 kg feed/kg gain) in group L2, suggesting that dietary supplementation with 5% brewer’s yeast may improve the productive performance of broiler chickens.*

• Introduction

In the context of modern poultry production, the use of alternative feed ingredients with high nutritional value represents an important strategy for improving the productive performance of broiler chickens. Brewer’s yeast (Saccharomyces cerevisiae), due to its high content of proteins, essential amino acids, B-complex vitamins, and bioactive compounds, has the potential to support body growth and feed utilization efficiency. Evaluating different dietary inclusion levels is of particular interest for optimizing the nutrition of broiler chickens reared under backyard farming conditions.

• Material and method









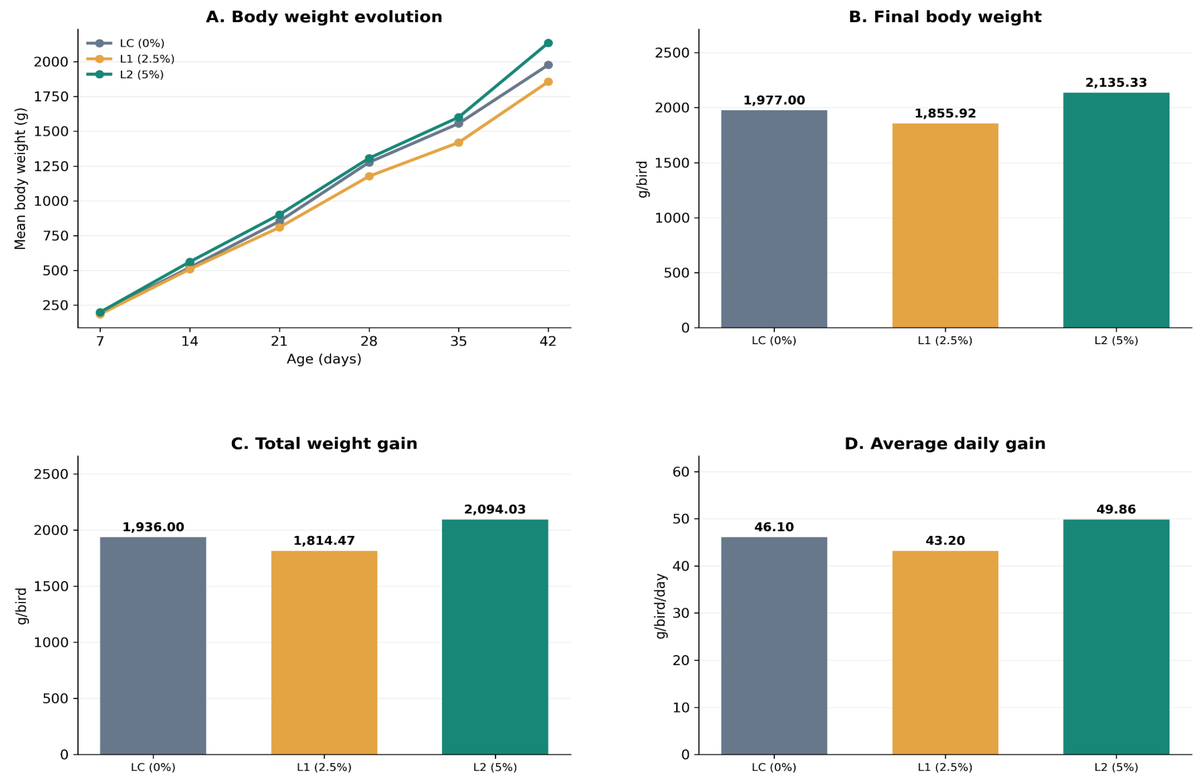
• Results and discussions

Productive performance of Ross 308 broilers (0–42 days)

Parameter	Unit	LC (0%)	L1 (2.5%)	L2 (5%)
Final body weight	g/bird	1,977.00	1,855.92	**2,135.33**
Total weight gain	g/bird	1,936.00	1,814.47	**2,094.03**
Average daily gain (ADG)	g/bird/day	46.10	43.20	**49.86**
Total feed intake	g/bird	3,590.16	3,491.78	**3,734.62**
Feed conversion ratio (FCR)	kg feed/kg gain	1.85	1.92	**1.78**

LC = control; L1 = 2.5% brewer’s yeast; L2 = 5% brewer’s yeast.

Final body weight: p = 0.123 (not significant). Other parameters are descriptive group-level values.



• Conclusions

Dietary supplementation with brewer’s yeast (Saccharomyces cerevisiae) resulted in different productive responses depending on the dietary inclusion level. The findings suggest the potential of brewer’s yeast as an alternative feed ingredient in the nutrition of broiler chickens reared under backyard farming conditions, although further research is needed to confirm the observed effects.

SELECTED REFERENCES:

1. Comi, M., Lanzoni, D., Perricone, V., Jiang, X.-R., Lin, J., & Zhang, H.-J. (2025). Effects of Saccharomyces cerevisiae hydrolysate on growth performance, intestinal morphology, local immune response, and cecal microbiota in broilers. Animals, 15(17), 2531. https://doi.org/10.3390/ani151725312.
2. Selem, E., Hassan, A., & El-Gogary, M. (2025). Comparative effects of Saccharomyces cerevisiae, mannan-oligosaccharides, and their synbiotic on growth performance, gut morphology, immune responses, and economic efficiency in Ross-308 broiler chickens. Frontiers in Veterinary Science, 12, 1523841. https://doi.org/10.3389/fvets.2025.15238413.
3. Lin, J., Comi, M., Perricone, V., Agazzi, A., Qiu, K., Wang, J., Wu, S., Qi, G., & Zhang, H. (2023). Effects of Saccharomyces cerevisiae hydrolysate on growth performance, immunity function, and intestinal health in broilers. Poultry Science, 102(1), 102237. https://doi.org/10.1016/j.psj.2022.102237