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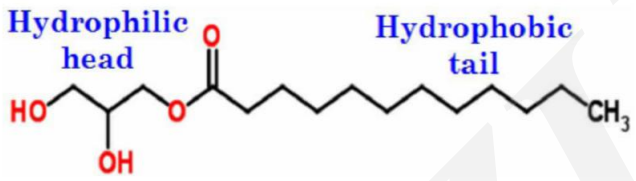
Effects of dietary glycerol monolaurate on productive performance, egg quality, serum biochemical indices, and intestinal morphology of laying hens

Key words: Glycerol monolaurate (GML), Laying hen, Productive performance, Egg quality, Lipid metabolism

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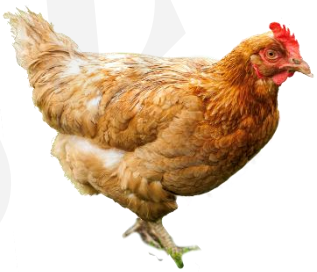
Research Summary

This research mainly focused on the effects of traditional food emulsifier--glycerol monolaurate supplementation on the productive performance, egg quality, serum biochemical indices and intestinal morphology of laying hens.



150, 300, 450 mg/kg







Productive performance

Egg quality

Health status

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Innovation points

- GML supplementation increased yolk proportion and decreased albumen proportion.

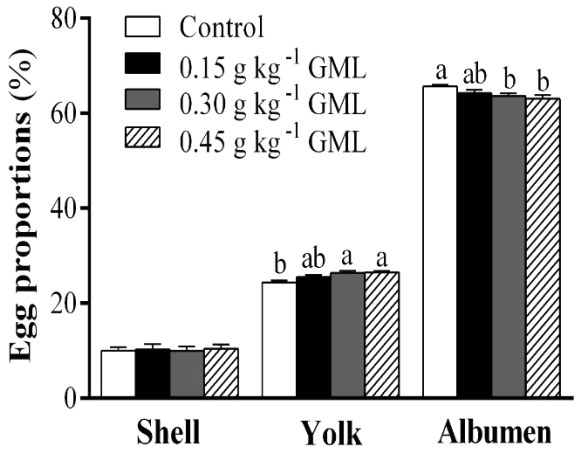


Fig. 1 Egg proportions of laying hens

- GML supplementation significantly increased serum sex hormone levels of laying hens.

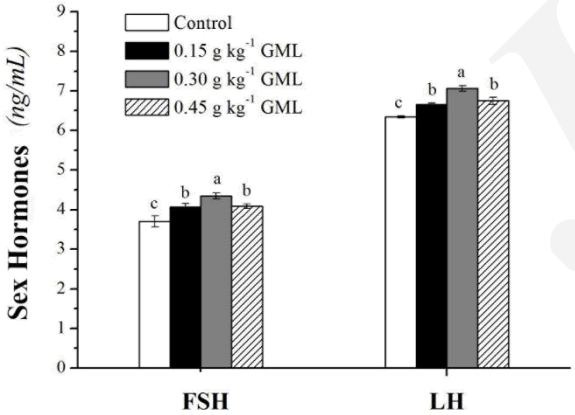


Fig. 2 Serum sex hormone levels of laying hens

- GML supplementation significantly improved jejunum morphology with increased ration of the villus height to crypt depth and improved adipocyte hypertrophy.

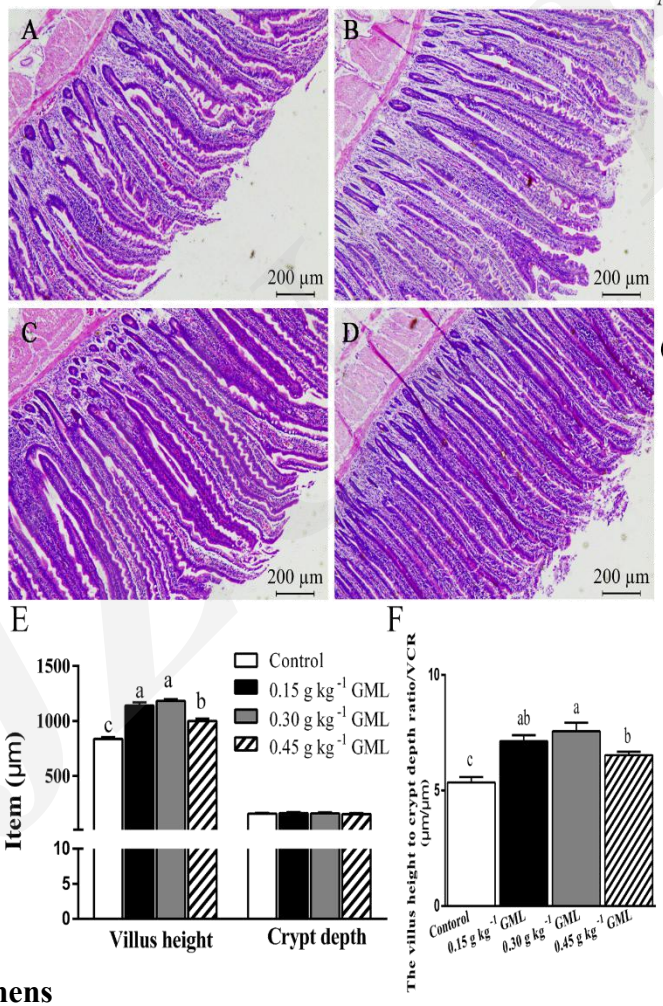


Fig. 3 Jejunum morphology

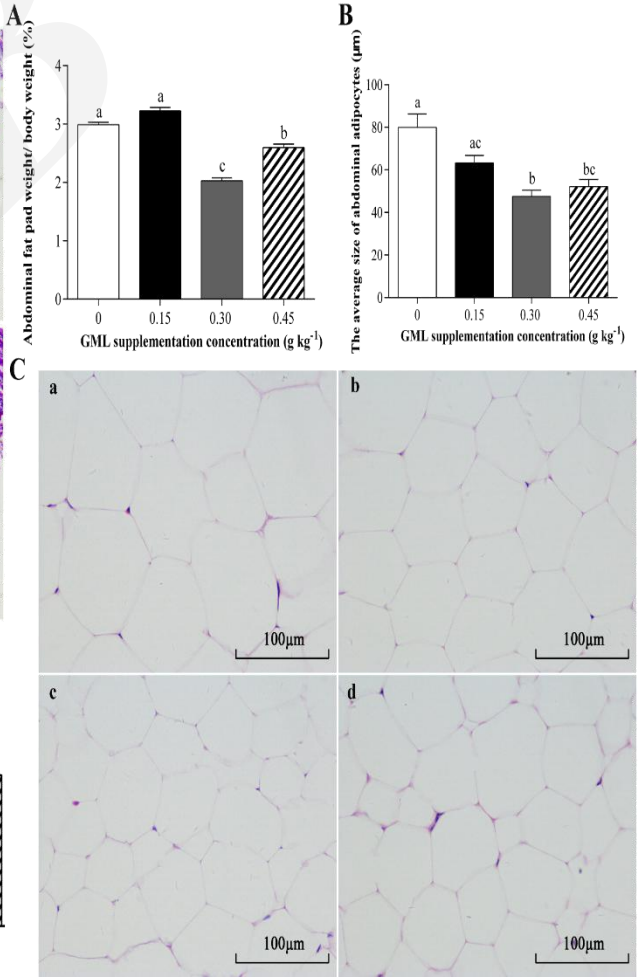


Fig. 4 Abdominal adipose tissue morphology

Innovation points

A series of comprehensive tables were generated to summarize the effects of GML supplementation on laying performance, egg quality, yolk and albumen nutrient composition and serum biochemical indices of laying hense.



Table 1 | Ingredient composition and nutrient levels of basal diets.

Table 2 | Laying performance of hens fed with different levels of GML supplementation.

Table 3 | Egg quality of laying hens fed with different levels of GML supplementation.

Table 4 | Yolk nutrient composition of laying hens fed with different levels of GML supplementation.

Table 5 | Albumen nutrient composition of laying hens fed with different levels of GML supplementation.

Table 6 | The effect of dietary GML concentration on serum biochemical indices of laying hens.