



TROPENTAG 2026

Topic: Promoting poultry bird performance using photogenic as a healthy modulator of gut morphometry in broiler



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INTRODUCTION

Poultry meat is a good source of animal protein (Bogole and Engida, 2022). But the industry is faced with the indiscriminate use of antibiotics which has led to antibiotics resistance posing a serious threat to public health (Mirzaei et al., 2022). A search for a safe, natural alternative source that wouldn't compromise consumers health (El-Saadany et al., 2022).



PROBLEM STATEMENT

A need for a natural alternative that can support bird's health and productivity



OBJECTIVES

To assess the impact of Piper guineense and Carica papaya on gut morphometry in broiler chicken.



METHODOLOGY



Fresh Carica papaya and Piper guineense seed were sun-dried and grounded to powder form and incorporated into the feed.



Antibiotics (oxytetracycline 5.5 HCl powder).



240 arbor acre broiler birds. Each treatment had 4 replicate each, 10 birds per replicate.



On day 42, two birds per replicates were slaughtered. A piece of the ileum was used for gut morphometry analysis.



Seeds



Powder



Feed

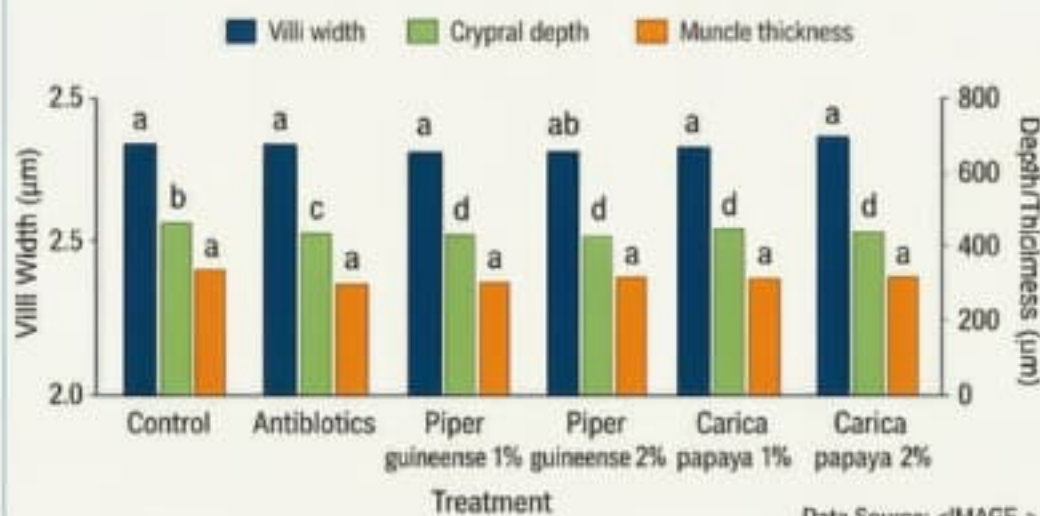


Healthy Gut

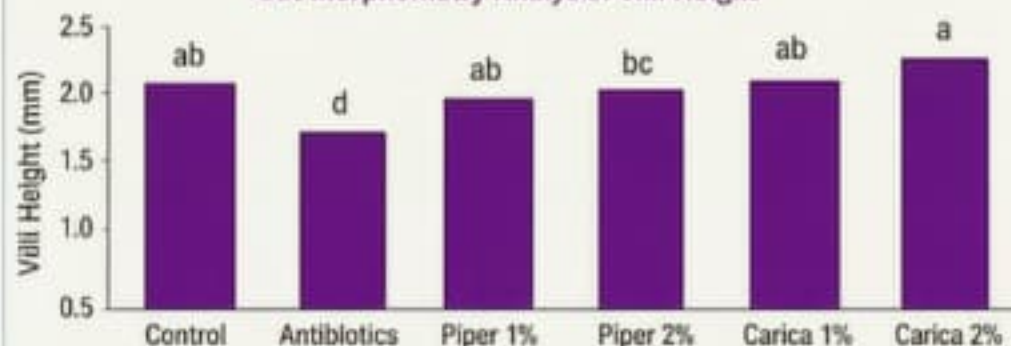


RESULTS

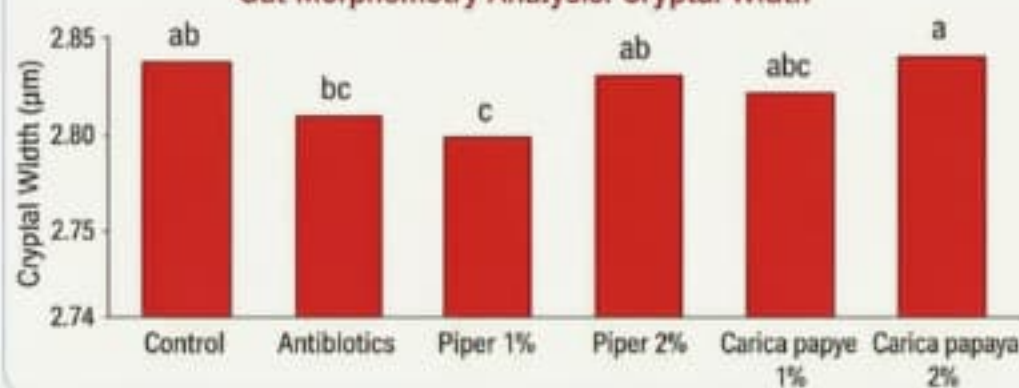
Gut Morphometry Analysis: Villi Width, Cryptal Depth, and Muscle Thickness



Gut Morphometry Analysis: Villi Height



Gut Morphometry Analysis: Cryptal Width



CONCLUSION

Based on the findings, Carica papaya seed meal supplementation particularly at 2% improved gut morphometry parameters and can serve as a good alternative to antibiotics.



REFERENCES

- Bogale BM and Engida T (2022). Effect of replacing essential amino acids and soybean seed with mest and bune meal on feed intake, body weight change and quality of eggs in exotic chickens. Liveetook Research for Rural Development, 34(7): 59.
- El-Saadany AS, El-Barbary AM, Shreif EY, Elloomy A, Khalifah AM, and El-Sabrou K (2022). Pumpkin and garden cress seed oils as feed additives to improve the physiological and productive traits of laying hens. Italian Journal of Animal Science, 21(1): 1047-1057.
- Mirzaei A, Razavi SA, Babazadeh D, Laven R, and Seeed M (2022). Roles of probiotics in farm animals: A review. Farm Animal Health and Nutrition, 1 (1): 17-25.

