







Special Issue Reprint

# Challenges in Poultry Production Systems and Nutritional Interventions

www.mdpi.com/books/reprint/10789

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ISBN 978-3-7258-3668-0 (Hardback) ISBN 978-3-7258-3667-3 (PDF)



Chicken is the most consumed meat worldwide, providing affordable and nutritious protein, vitamins, iron, and omega-3s. Poultry production has improved efficiency and yields, yet challenges such as feed costs, infections, heat stress, mycotoxins, and stocking density persist.

Eimeria and Clostridium perfringen infections reduce productivity, with studies showing that tannic acid, sodium butyrate, and sea-buckthorn flavonoids improve gut health and immune response. Phytase supplementation enhances phosphorus utilization, reducing feed costs without compromising growth.

Environmental factors like heat stress impair performance, though probiotics and ascorbic acid have shown benefits. Toxin binders effectively mitigate mycotoxin impacts, while cold stress alters metabolism. High stocking density reduces performance, yet gum Arabic and prebiotics improve gut health. Enrichment huts have enhanced welfare in modern broilers.

This Special Issue highlights nutritional and systemic strategies to address these challenges, emphasizing the need for continued research to advance poultry production.



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