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Reducing protein and energy rates in diet while maintaining broiler zootechnical performances: Case study of Nor-Spice AB® supplemented diet

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Broiler productivity has been enhanced by the considerable genetic improvement achieved in the last decades. However, the expression of broiler genetic potential is conditioned to an optimal nutrition and usage of antibiotics as growth promoter; Providing a well-balanced diet in term of Digestible Amino Acid (DAA) and energy while reducing the feed cost and maintaining zootechnical performances is a real challenge. Furthermore broiler producer in order to meet sustainable agriculture standards have to go through optimizing the use of resources in feed formulation and reducing the antibiotic use. Nor-Spice AB® (NSAB) is a citrus concentrate containing a set of well characterized phytochemical compounds with a documented prebiotic like effect and control of pathogenic bacteria. Monogastrics fed with NSAB supplemented feed displayed better growth performances. This trial was conducted in the Bangkok Animal Research Center aimed to investigate the effect of NSAB supplementation in a “low-cost” diet (-5% DAA, -7% energy) and to answer the question whereas it's possible to reduce DAA and energy and still achieve zootechnical performances by supplementing diet with NSAB. 288 male broilers were allocated to 4 diets: Optimal diet and low cost diet with or without 250 ppm NSAB Supplementation. Zootechnical parameters were measured daily. Animals fed with NSAB supplemented feed showed 1.1% higher feed intake, an improved FCR (-0.019) and livability (+5%). Effect of NSAB supplementation was more evident in the case of “low-cost” diet. Indeed, Animals fed “low-cost” diet supplemented with 250 ppm NSAB reached similar final body weight as animal fed optimal diet without supplementation. These results suggest that plant based feed additive can be a solution for a more sustainable broiler production by optimizing the use of resources in broiler feed formulation without losing zootechnical performances.

Biography

Mohammed El Amine Benarbia is a Doctor of Veterinary Medicine. He has completed his PhD in 2012 from Angers's University and Postdoctoral studies from Inserm, a well-known organisation in the biotechnology and medical research. He is a R&D Manager at NOR-FEED SUD, a premier French society developing vegetal based feed additives.

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