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Effect of dietary supplementation with ginger continuously or intermittently in comparison with prebiotics on broiler performance and physiological and immunological response

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Broiler chickens (n=140), 7 days old, were used in a straight-run complete randomized experimental design. The broilers were distributed among four treatment groups with five replicates per treatment and seven chickens per replicate. During the experiment period (7-42 days old), the chickens were fed iso-caloric and iso-nitrogenous diets with ginger level of 0.5 given either continuously or intermittently (two treatments), and mannanoligosaccharide of 0.05%, and the unsupplemented control. The intermittent treatment was given as two days per week. Feeding 0.5% ginger resulted in higher body weight gain, European production index (EPI) and economic efficiency (EE) than mannanoligosaccharide, however, feed conversion ratio was similar among different experimental groups. Ginger level of 0.5% continuously decreased serum aspartate aminotransferase, increased serum globulin, and 0.5% ginger intermittently increased antibody titer to Newcastle disease. Ginger given continuously or intermittently significantly decreased meat's lipids and plasma glucose with intermittent supplementation showed stronger effect on meat's lipids than continuous supplementation. Hence, it can be concluded that 0.5% ginger continuously gave better results than mannanoligosaccharide and had no negative effects on productive performance, carcass traits, meat quality, blood constituents and immune response as compared with the control and this warrant further investigation for improving food producing animals in respect to health and product quality and safety.

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