Supplementation of Yeast Fractions (Safmannan®) in Broiler Diets: Effects on Growth Performance and Nutrient Digestibility Under High Stocking Density

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Many intensive broiler productions rely on high stocking densities to maximize output, yet overcrowding elevates stress, compromises gut health, and reduces productivity. Yeast-derived postbiotics have shown promising effects in improving broiler performance as sustainable alternatives to antibiotic growth promoters. This study aimed to evaluate the effects of Yeast Fractions containing mannan-oligosaccharides and β-glucans **(**Safmannan®) supplementation on growth performance and ileal nutrient digestibility in broiler chickens reared under standard and high stocking densities. A two-factor factorial design was employed using 112 one-day-old Cobb 500 broilers randomly assigned to four treatments (n = 4 replicates per treatment): T1, control diet at standard stocking density (SSD; 11.11 birds/m²); T2, control diet at high stocking density (HSD; 15.32 birds/m²); T3, 0.05% yeast fractions supplemented diet at SSD; and T4, 0.05% yeast fractions supplemented diet at HSD. Birds were fed with experimental diets for 35 days. Growth performance parameters, carcass traits, relative organ weights, ileal nutrient digestibility were assessed. Final body weight and body weight gain were significantly increased with the yeast fractions supplementation under standard stocking density ($P < 0.001$). Carcass yield and breast muscle yield were significantly reduced in birds fed yeast-derived postbiotics under both stocking densities ($P < 0.001$). Relative weights of the heart, liver, caecum, duodenum, and jejunum were also significantly reduced in birds fed yeast-derived postbiotics under both stocking densities ($P < 0.001$). Overall, dietary supplementation with yeast fractions containing mannan-oligosaccharides and β-glucans improved growth performance in broilers reared under standard stocking density. Therefore, yeast fractions containing mannan-oligosaccharides and β-glucans show potential as a promising functional feed additive for improving broiler production.

Keywords: broiler chicken, stocking density, yeast postbiotics, growth performance, nutrient digestibility