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Opuntia Ficus Indica Fruit That Aids the Broiler Chicken Diet to Improve Overall Performance

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In contemporary broiler breeding, antibiotics are frequently used to treat specific infections, as preventative measures after exposure to risk factors, and to enhance growth rates as antimicrobial growth promoter drugs. The livestock sector has been directed toward creating alternatives by this ban. Particularly, certain plant metabolites with antibacterial, anti-inflammatory, and antioxidant action have been investigated as prospective antibiotic replacements. *Opuntia ficus-indica*, sometimes known as the prickly pear cactus, is a widely distributed plant that grows in dry and semi-arid climates and is used extensively in traditional medicine. Its fruit can be used to enhance the performance of animals, notably broilers, and has numerous significant nutritional and functional qualities. The purpose of the current study was to examine the potential of OFI fruit as a phytobiotic growth promoter in the diet of broiler chickens. Only healthy fruits were chosen, carefully rinsed in distilled water, and then peeled by hand. The chickens in this experiment were fed a basic diet of corn, soybean meal, and mineral-vitamin supplements. The temperature and lighting program, along with the housing and diet, were implemented following the standards for the Ross 208 breed. Performance information was assessed during the growth-feeding phase (day 22-48). Individual body weights were measured on days 21, 24, 27, 30, 33, 36, 39, 42, 45, and 48.

Around day 27 of the study period, a variation in the evolution of average body weight to nutrition was discovered. Food consumption increased gradually during the raising period, like growth. However, starting on day 27 of the experiment, there was a difference in the average daily food consumption across the groups, with experimental birds consuming the most food (417.77 g). The antibacterial capabilities of GAPs, which can enhance livestock performance by reducing the accumulation of excess intestinal microbiota and dysbiosis, are the most widely recognized mechanisms of action for GAPs. GAPs also lessen some immune responses that require a lot of energy by restricting the growth of the microbiota. Insignificant gut bacteria have been shown to have a positive impact on growth. The current weight growth findings are consistent with prior studies that found rosemary essential oil or ground garlic to increase weight by about 10%. However, some phytobiotic additions may have deleterious effect on weight. Feed intake, weight gain, and zootechnical performance were all improved when OFI fruit was added to the diet of chicken broilers. To determine the best circumstances for the application and manufacture of a well-balanced OFI fruit diet-based formula, additional research is required.

JOURNAL REFERENCE

A. Belghiti, S. Zougagh, A. Aainouss, T. Rochd, I. Zerdani and J. Mouslim, 2021. Promoting of growth in ross 208 chicken broilers following a diet based on *opuntia ficus-indica* (prickly pear) fruit. Int. J. Poult. Sci., 20: 99-105.

KEYWORDS

Growth promoting antibiotics, *Opuntia ficus-indica*, phytobiotic, chicken broilers, broiler diet