

News & Comments

The Low Dose of Phyto-plus is an Optimum Supplementation Dose

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According to reports, HSP70 exhibits anti-inflammatory and apoptosis-suppressive properties, providing cytoprotective capabilities against a variety of stressors. One of the tried-and-true methods for reducing the detrimental impacts of stress on chicken productivity and antioxidant factors is dietary modification. Due to various advantages of the natural substances, feed additives of plant origin are becoming more widely accepted in both human health practices and cattle production today. Ingredients from thyme appeared to shield human lymphocytes from DNA damage brought on by peroxide and mutagens. Dietary supplements containing carvacrol have pharmacological effects as well as positive health impacts, including antibacterial, antioxidant, anticancer, antiplatelet, antiviral, anti-inflammatory, antifungal, anti-disease, Alzheimer's anti-obesity activity, and growth-promoting qualities. On the other hand, it was discovered that adding essential oils to broiler diets raised villus height numerically but had no statistically significant impact on villus height in the jejunum.

This study measured corticosterone, Heat shock protein (Hsp70), superoxide dismutase, glutathione peroxidase, catalase (CAT), and malondialdehyde (MDA), in addition to using the histopathological examination of the liver, kidney, and intestine to evaluate the effect of essential oils (Phyto-plus) as antioxidants and anti stressors in broiler chicken.

Before the trial, as well as at the end of the third and sixth weeks of the experiment, individual chicks from each group were weighed. After the third and sixth weeks, each bird's heart was punctured to get blood samples. From dead birds, samples of the liver, kidney, and intestine were taken. Using SPSS 14, the acquired data were processed and examined for significance, standard error, and variance.

After three weeks, there were no appreciable variations in the live body weight of the hens across the three groups (control group, Phyto-plus 100, and Phyto-plus 400). The results showed a significant increase in HSP70 levels in the two treated groups of chickens after three weeks as well as in chickens receiving a low dose of Phyto-plus (GP₂). In contrast, the corticosterone hormone significantly decreased in the two treated groups of chickens (GP₂ and GP₃) when compared to the control group. Results demonstrated that adding 100 g t⁻¹ ration to the diets of broilers in group two after three weeks caused glandular lining epithelial cells to proliferate. It is thought that thymol and carvacrol have a variety of advantageous physiological benefits. Additionally, chicks administered thyme supplements had considerably higher live body weights and body weight gains. The goal of the current investigation



was to pinpoint how Phyto-plus and its antistress effect boosted HSP70. The obtained data demonstrated that groups of birds fed diets supplemented with Phyto-plus at doses of 100 g t⁻¹ of ration for 3 and 6 weeks had significantly higher levels of HSP70 and significantly lower levels of the hormone corticosterone. The outcome also demonstrated that Phyto-low plus's dose (100 g t⁻¹ of ration) is more efficient and secure than its high dose (400 g t⁻¹ of ration).

JOURNAL REFERENCE

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KEYWORDS

Phyto-plus, antistress, antioxidant, growth performance, intestinal histomorphology

