

عنوان مقاله:

Effects of Dietary Supplementation of Arginine-Silicate- Inositol and Phytase Complex on Performance and Blood Biochemical Traits of Laying Hens

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نویسندگان:

B. I Hamed - College of Agriculture, University of Anbar, Baghdad, Iraq

H. H Nafaa - Office of Agricultural Research, Ministry of Agriculture, Iraq

F. M Hussain - College of Agriculture, University of Anbar, Baghdad, Iraq

خلاصه مقاله:

Arginine silicate inositol complex (ASI; Arg = ۴۹.۴۷%, silicone = ۸.۲%, inositol = ۲۵%) is a novel, bioavailable source of Si and Arg and may offer potential benefits for laying hens' performance. The aim of this study was to evaluate the effect of Arginine-Silicate and inositol/phytase on the performance of laying hens. A total of ۹۰ laying hens, ۲۵ weeks old, were randomly assigned to ۶ treatments with ۳ replicates (۵ birds per replicate). The treatments were as follows: ۱st treatment PC: positive Control group (basal diet without additives), ۲nd treatment: basal diet +۱۰۰۰ mg/kg arginine-silicate complex (۴۹.۵±۸.۲ % respectively), ۳rd treatment: basal diet +۱۰۰۰ mg/kg arginine-silicate- inositol (ASI) complex (۴۹.۵, ۸.۲, ۲۵ % respectively), ۴th treatment: T۲ +۵۰۰ FTU/kg, ۵th treatment: T۲ +۱۰۰۰ FTU/kg and ۶th treatment: T۲+۲۰۰۰ FTU/kg. Results indicate a significant increase ($P < 0.05$) in hen house production (H.H. pro.%) of T۵ (۹۵.۰۶ %) compared with T۱ (۹۱.۶۷%) and no significant differences between T۲, T۳, T۴, T۶ (۹۱.۸۴, ۹۳.۲۱, ۹۳.۴۶, ۹۲.۹۸%) and compared with T۱ and T۵. were no significant difference observed in average egg weight and egg mass between the experimental treatments all over the period. Daily feed intake (DFI) significantly decreased ($P < 0.05$) with supplementing diets with deferent levels of phytase with arginine-silicate mixture T۴, T۵, and T۶ (۱۱۳.۵۶, ۱۱۳.۰۶, ۱۱۲.۱۰ g) compared with T۱ (۱۱۴.۳۴ g) which has no significant differences compared with T۲ and T۳ (۱۱۳.۹۶, ۱۱۳.۹۲ g). Phytase supplementation significantly ($P < 0.05$) improved FCR g feed/egg in T۵ (۱۱۹.۰۲) compared with T۱ and T۲ (۱۲۴.۸۹, ۱۲۴.۳۲), while no significant differences between T۳, T۴, T۶ treatments (۱۲۲.۳۹, ۱۲۱.۸۰, ۱۲۰.۶۹) respectively and compared with other treatments. The experimental treatments observed no significant difference in g feed/ g egg

کلمات کلیدی:

Arginine-Silicate, inositol, Phytase Enzyme, blood biochemical traits, Laying hens

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