

The effects of native chicken strains and feed additives on immunity, kidney functions, and blood protein

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Abstract	<p>This study aimed to investigate the interactions between chicken strains and supplementation of feed additives, and the efficacy of the interactions for improving immunity, kidney function, and blood protein of native chicken. Research materials were 480 chickens of different strains including kampung chicken, KUB chicken (Balitbangtan superior native), and Kedu chicken. Basal feed offered to the chickens contained 3,118.95 kcal/kg energy and 19.2% crude protein. The research was conducted in a factorial completely randomized design, utilizing 12 treatments and four replicates. The data were subjected to analysis of variance, followed by the Honestly Significant Difference Test (HSD). The analysis of variance showed that the interactions between chicken strains and 1% supplementation of feed additives were not significantly different ($P > 0.05$) across all parameters, but chicken strain significantly affected ($P < 0.05$) antibody titers against AI and ND, as well as lymphocyte infiltration in the lamina propria ileum. KUB chickens had a higher level of immunity than that Kedu chickens. Supplementation of 1% feed additives tends to improve the level of immunity as reflected by the increased titers against AI and ND after vaccination, as well as the undisturbed kidney functions. Conclusively, the interactions between chicken strains and the supplementation of 1% feed additives into basal feed produced relatively similar results. Meanwhile, KUB chickens showed better immunity than kampung chickens and Kedu chickens. Supplementing feed additives (garlic and kalimunjati) showed relatively effective results in improving antibody titers against AI and ND, so it is necessary to increase the supplementation dosage to enhance significant immunity.</p>
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