

**Potency of Black Seed Infusion (*Nigella sativa*) As Immunomodulatory  
Toward Infectious Bursal Disease (IBD) of Broiler Chicken**

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**ABSTRACT**

Infectious Bursal disease (IBD) caused by Birnavirus, infecting young chicken, and destroyed bursal Fabricius so that it generates an immunosuppressive effect. Black seed (*Nigella sativa*) is a plant which can improve immunity of body because of ability to repress T cell of and this indicated the disease. The purpose of this study is to know the effect of black seed infusion to improving and suppressing immunity (immunomodulatory) of the broiler toward IBD by using indirect ELISA method. Experimental design used in this research is Repeated Measure with ten treatments (five vaccinated and five were not vaccinated) with five repetition each treatment and each treatment were given with a different concentration of black seed infusion (10%, 20%, 40%, 80%). Collected data was analyzed by Analysis of Multivariate with Profile analysis, and Equality test. With level of significance 5% (not vaccinated),  $H_0$  is accepted. That means that the immunity is equal for various weeks. The means that difference time of black seed infusion gift (not vaccinated) do not give different effect. With level of significance 5% (vaccinated),  $H_0$  is refused, that mean that the immunity is differed at various week. This means that difference of time of gift of black seed infusion (vaccinated) giving different effect at immunity. The conclusions, first black seed infusion has an immunostimulant activity to IBD at 10% and 20% concentration of black seed infusion and immunosuppressive activity to IBD at 40% and 80% concentration of black seed infusion.

Keywords: Black Seed, *Nigella sativa*, Immunomodulatory, Infectious Bursal Disease, Birnavirus.