ABSTRACT

Maisya Sifana Maura, 24020120140113. "Histomorphometry of the Duodenum of Male Peking Ducks (*Anas platyrhynchos*) After Added Spirulina (*Spirulina* sp.) Powder Feed Additive". Under the guidance of Sunarno and Muhammad Anwar Djaelani.

The used of synthetic feed additive in Peking ducks had adverse effects on their growth and productivity. *Spirulina* sp., a blue-green algae, had the potential to be used as a safe feed additive that can enhance the growth and productivity of ducks. This study aims to analyzed the effects of Spirulina (*Spirulina* sp.) powder as a feed additive on the histomorphometry of the duodenum in Peking ducks (*Anas platyrhynchos*), focused on the duodenal lumen diameter, villus height, villus width, mucosal tunic thickness, submucosal tunic thickness, and muscular tunic thickness. This study used a Completely Randomized Design (CRD) with 35 ducks divided into 5 treatments and 5 repetitions. The treatments included a control group and the addition of spirulina powder in feed at concentrations of 2.5%, 5%, 7.5%, and 10%. The research data were analyzed by ANOVA with a 5% significance level, followed by Duncan's test. The data analysis results indicated that spirulina powder significantly affected ($P<0.05$) villus height and tunica mucosa thickness in the duodenum. The conclusion of this study was that spirulina powder had the potential to be used as a feed additive to enhance digestive performance in male Pekin ducks, as evidenced by the increased villus height and tunica mucosa thickness in the small intestine.

***Keywords**: Microalgae, intestinum tenue, antioxidant, flavonoid, cell diferentiation*