

Serum biochemical properties and liver morphology of broiler chicken as affected by feeding Misai kucing (*Orthosiphon stamineus*) as supplement diet

ABSTRACT

To evaluate the effects of ground leaf of Misai kucing (*Orthosiphon stamineus*) as a dietary supplement on serum biochemical parameters and liver morphology. One hundred and sixty one-day old male broiler chickens (n=160) were distributed into four treatment groups, with five replicates of eight birds in each group: the control group (diet without additives); the group dietary treatments, Diet OS2 (Basal diet + 2g/kg *O. stamineus*); Diet OS4 (Basal diet + 4g/kg *O. stamineus*) and Diet OS8 (Basal diet + 8g/kg *O. stamineus*). After 42 days, 40 birds were randomly selected for serum biochemical profile analysis involving pancreatic, renal, and hepatic functions (urea, sodium, potassium, chlorine, aspartate transaminase (AST), alkaline transaminase (ALT), alkaline phosphatase (ALP), glucose, cholesterol, triglycerides, total protein, albumin, and globulins). Present study found that serum levels of cholesterol, triglycerides, urea, AST, ALT and ALP were significantly lower suggesting that the *O. stamineus* ground leaf possibly do not cause kidney and liver impairment, mainly, at the higher dosage (8g/kg). Present study concluded that the broiler chicken fed *O. stamineus* ground leaf at a rate 8 g/kg was the most promising dietary supplement to enhance health without deleterious effects on serum biochemical properties and morphological components of liver. In addition, it reduces abdominal fats and serum cholesterol. This study has provide evident that medicinal plant, *O. stamineus* can potentially substituted the use of additive synthetic.

Keyword: Broiler; Liver; Medicinal plant; *Orthosiphon stamineus*; Serum