

# Blood chemistry of medium-growing male and female chickens supplemented black soldier fly live larvae

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## Experimental design

A total of 240 Label Naked Neck birds (21d old) were divided according to gender and treatment in 4 experimental groups (10 chicken/pen, 60 birds/treatment):

## Introduction

Effects of live larvae provision on poultry chemical blood parameters have been poorly investigated. This study aims to evaluate the changes in blood chemistry parameters in medium-growing chickens supplemented black soldier fly (BSF) live larvae.

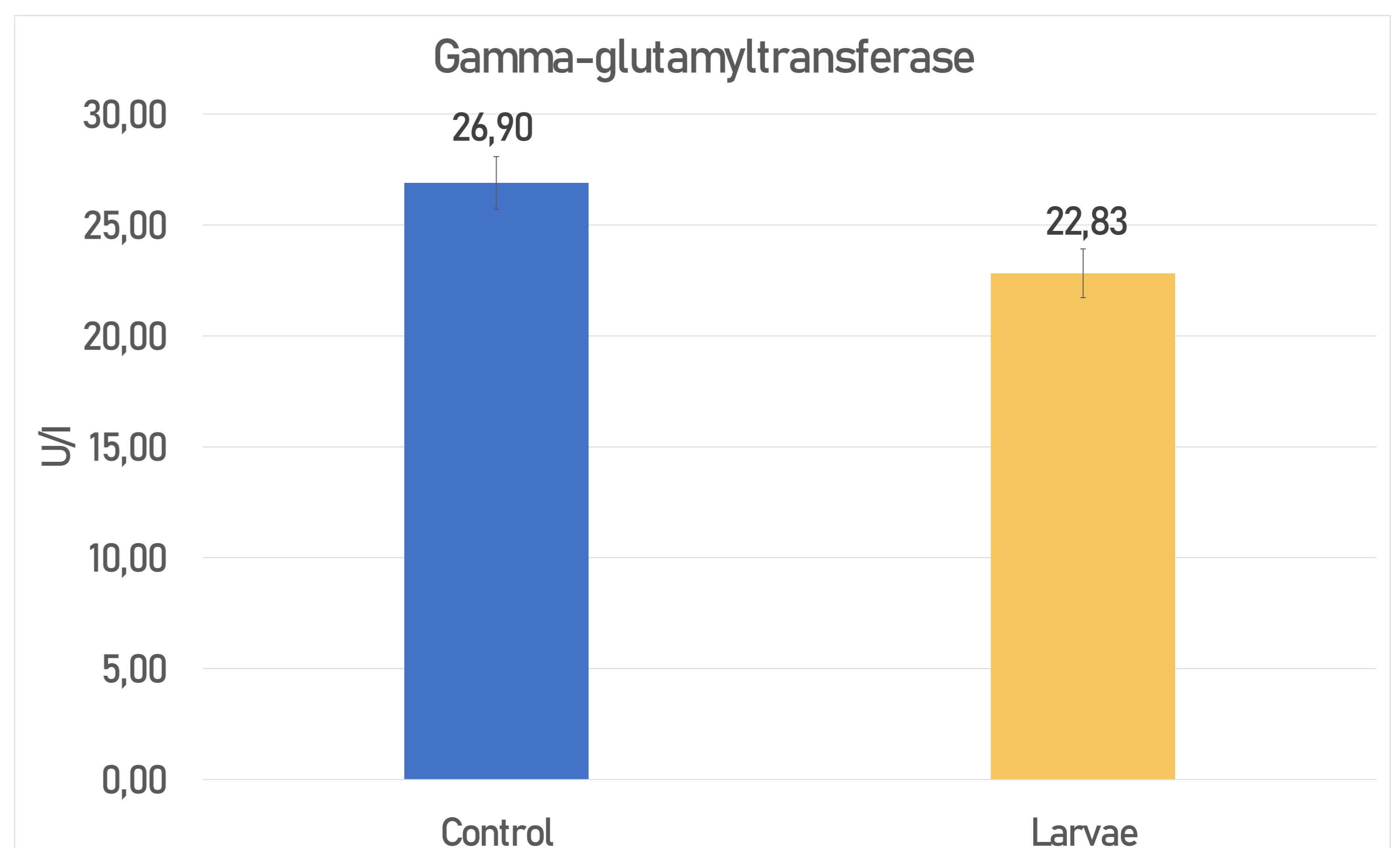
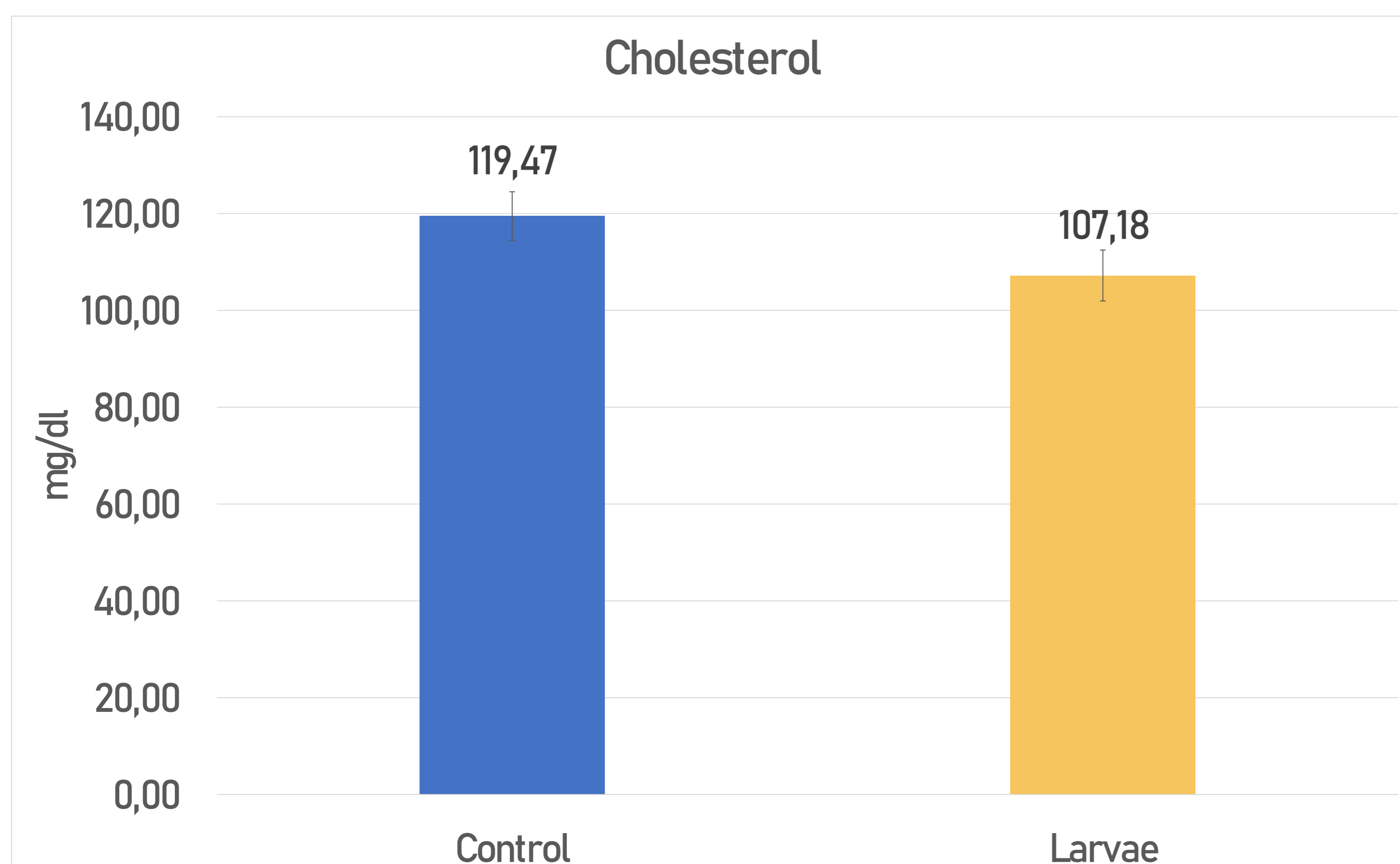


## Sampling methods and statistical analysis

Blood samples were collected at slaughter (82d old) from 2 birds/pen (12 birds/treatment). Serum samples were used for biochemical analysis. A compact liquid chemistry analyzer system (BT 1500 vet-Futurlab) was used to determine the concentrations of alanine aminotransferase (U/l), aspartate aminotransferase (U/l), creatinine total proteins (mg/dl), uric acid (mg/dl), cholesterol (mg/dl), triglycerides (mg/dl), gamma glutamyltransferase (U/l), phosphorus (mg/dl) and magnesium (mg/dl). Data were analyzed by GLM (SPSS software, P<0.05).

## Results

Overall, the blood parameters were not affected by the live larvae supplementation (P>0.05) in both sexes, thus being indicative of a good health status of the birds. The GGT was detected in lower concentrations in the supplemented groups than in the control groups (P<0.05), suggesting a positive effect on the hepatic function. Moreover, the live larvae provision tended to reduce the content of cholesterol (P=0,090), being positive for the cardiovascular system.



## Conclusions

In conclusion, the live BSF larvae provision did not negatively affect the blood parameters of medium-growing chickens and could be beneficial for bird hepatic activity and cardiovascular system.