

Original article

# The effect of exogenous proteases on selected hematological and serum biochemical parameters in boars

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## Abstract

The increasing interest in enzymatic growth promoters prompted this investigation of the effect of an enzymatic stimulating complex on selected hematological and serum biochemical parameters in boars. The enzymatic complex [five proteases (proteinases-endopeptidases) and two peptidases (exopeptidases) obtained by fermentation from *Streptomyces fradiae*] was added to diets for three months, at initial doses of 90 (group E1) and 120 (group E2) g/ton feed for the first seven days followed by 40 and 60 g/ton, respectively, in the subsequent weeks. The evaluation was based on selected hematological (RBC, WBC, HCT (Ht), HGB (Hb), MCV, MCH, and MCHC) and biochemical (AST, ALT, AP, Ca, Mg, urea, cholesterol, creatinine, inorganic phosphorus, and oxyglucose) parameters determined before and after the experimental period. The reported values were within physiological norms. Statistical differences were found between experimental groups with respect to WBC, HCT (Ht), MCV, MCH, AP, Ca, Mg, creatinine, and inorganic phosphorus. The study results indicate that the complex of proteolytic enzymes administered to boars caused no negative changes in their metabolic profiles. The statistically different hematological and serum biochemical parameters, while within normal limits, point to an early stage of microcytic anemia and heightened agitation that could be the result of intensified nitrogen metabolism.

**Key words:** boars, proteolytic enzymes, hematological and biochemical serum parameters