



# SIMPÓSIO INTERNACIONAL DE NUTRIÇÃO E SAÚDE DE PEIXES AQUANUTRI

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REALIZAÇÃO:



## Tissue analysis of pacu *Piaractus mesopotamicus* juvenile fed sorghum

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The fish nutritional status can be observed through analysis of tissue and hematological characteristics, as the fabric, even more fluids such as blood, are changed depending on the diet. Thus, this study aimed to evaluate the hematologic parameters, somatic indices and chemical composition of pacu juveniles fillet fed diets containing increasing levels of sorghum energy to replace corn. For this, we used 180 pacu juvenile with an average weight of  $10.80 \pm 0.77$  g were randomly distributed in 15 aquariums with useful capacity of 200L coupled to water recirculation system. The fish were fed four times a day with five experimental diets isoproteic and isocaloric, composed of 0, 25, 50, 75 and 100% the energy substitution of corn by sorghum, during the trial period of 67 days. The data were submitted to analysis of variance ( $p < 0.05$ ) and mean when significant were submitted to the Duncan test at 5% significance level. After the experimental period, the fish were anaesthetized with benzocaine and  $100 \text{ mg L}^{-1}$  and the blood collected by puncture of the caudal vessel by syringes and needles wetted internally with EDTA at 3%, for carrying out the hematological analysis (hematocrit (Htc), hemoglobin (Hb) and mean corpuscular hemoglobin concentration (MCHC)) then were slaughtered and collected the liver, visceral fat and the fillet for the calculation of somatic indices (hepatosomatic (HSI) and indece fat viscero somatic (FVSI)) and chemical composition of the fillet (dry matter (DM), crude protein (CP), ether extract (EE) and mineral matter (MM)). There were no differences ( $p > 0.05$ ) between treatments for somatic indices and hematological parameters presented by fish, ranging from 0.95 to 1.16% for (HSI), 1.60 to 1.79% for (FVSI), 30 to 32% (Htc), 5.46 to 5.93  $\text{dl g}^{-1}$  for (Hb) and 17.10 to 19.03% for (MCHC). The chemical composition of the fillet also showed no significant difference between treatments for DM percentage, unlike the percentage of CP, EE and MM. The deposition of CP was higher ( $p < 0.05$ ) in fish fillet submitted to diets with 0 and 25% inclusion of sorghum compared to those who received diet with 75%. These data are in meeting with those found for the deposition of EE, which proved to be lower ( $p < 0.05$ ) in fish fed diets containing only corn, followed by fed with 100 and 25%, while those fed 50 and 75% sorghum in the diets had higher ( $p < 0.05$ ) of total lipid deposition in the fillet. Less ( $p < 0.05$ ) MM retention was observed in fish fillets fed diets with 75% sorghum, which differed only in fish fed with 25% sorghum. Thus, it can be concluded that the total replacement of the energy of corn by sorghum in diets for pacu juveniles, do not change the hepatossomáticos indices, hematological and chemical characteristics of the fillet.

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