

## ABSTARCT

A 21-days experiment was performed to evaluate starvation impact in *Labeo rohita*. The main purpose of the current study was to determine the effect of starvation on muscle morphology, antioxidant, digestive enzymes activities and blood profile of *Labeo rohita*. Fish were divided into different groups. Group A considered as control group and feed during whole experiment. Group B, C and D starved for 7, 14, 21 days respectively. At the end of experiment, sampled were obtained from both control and starvation groups for further analysis. Results findings showed that starvation has a significant effect on muscle diameter of fish and it decreases muscle diameter in starved group as compared to control group. Starvation also has a significant effect on SOD, GPx and CAT as antioxidant enzymes increases in starved group as compared to control group. Starvation has a significant effect on the activity of malondialdehyde. MDA showed a significant decrease as starvation period progressed ( $p < 0.05$ ). Digestive enzymes activities such amylase, protease and lipase reduce significantly in starved group as compared to control group. Starvation also lower in hemoglobin, mean corpuscular hemoglobin, mean corpuscular hemoglobin concentration level significantly while red blood cells, hematocrit and mean corpuscular volume was not affected by starvation. This study increases our knowledge about different feeding strategies and supply proper feed in intensive culture system.