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Effects of dietary administration of Formic acid on mucosal immune, innate immune parameters of common carp fingerling (*Cyprinus carpio*)

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Abstract

The present study was performed to investigate the effect of different levels of formic acid on mucus and serum immunity parameters in *Cyprinus carpio*. For this purpose, 360 fish with average weight of 21±5 g were fed on diets supplemented with 0%, 0.5%, 1% and 2% Formic Acid (FA) for 8 weeks. At the end of feeding trial, sampling was done from mucus and blood. Mucus protease and mucus and serum immunoglobulin didn't show significant differences ($P \geq 0.05$) in FA treatments compared to control. Mucus and serum lysozyme showed significant increase ($P \geq 0.05$) in 2% FA treatment compared to other groups. These results revealed beneficial effects of lysozyme and protease as immune parameters is using 2% dietary FA in carp.

Keywords: Blood, Common carp, Formic Acid, Immune, Mucus