



Study of Serum antioxidant activity common carp fed dietary water hyacinth

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Abstract:

A 7-weeks feeding trial was conducted to examine the effects of different levels (0, 0.5, 1 and 1.5%) of dietary water hyacinth (*Eichhornia crassipes*) leaf powder (WLP) as phytotrap on serum antioxidant defence parameters (superoxide dismutase (SOD), catalase (CAT) and glutathione peroxidase (GPX)) in common carp were evaluated. A total of 120 fish weighting 50.07 ± 0.79 g were randomly divided into four groups. The end of the trail fishes per each replicate were randomly sampled after 24h starvation. The blood samples pulled together and instantly transferred into non-heparinized tube and let to clot in room temperature. Isolated serum were finally stored at -20°C until future assay. (SOD) was measured according to Marklund and Marklund, based on the amount of enzyme required to prevent pyrogallol auto-oxidation. (GPX) was calculated following the method of Günzler, based on estimating NADPH oxidation by glutathione reductase through the coupled reaction. (CAT) was measured according to the decline in H_2O_2 according to Goth. Feeding on water hyacinth supplemented diet remarkably increased Serum antioxidant activity ($P < 0.05$). The present investigation clearly showed that oral administration of water hyacinth positive effects on antioxidant capacity *C. carpio* and the use of this herbal biomedicine as an welfare in aquaculture will somewhat overshadow its adverse economic and ecological impacts.

Keywords: common carp, Serum antioxidant, water hyacinth