



Zabol University

A Thesis for the master degree
of sciences in fisheries

Subject:

**Effect of dietary onion (*Allium cepa* L.)
powder on growth performance, survival
and blood indices of gold fish (*Carassius
auratus*).**

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Abstract

This study investigated the Onion Powder (OP) supplementation in the diet of the gold fish (*Carassius auratus*) on the growth, survival and some blood parameters. Fish averaging 1.16 ± 0.09 g were randomly stocked into aquarium. Four experimental diets were prepared to contain onion powder at the concentrations of 0, 0.5, 1 and 1.5% for diets for eight weeks. In order to adapted to experimental condition, fish samples fed with commercial diet during two week before starting experiment. At the end of trial, growth, survival and blood indices (WBC, RBC, Hb, HCT and Cholesterol) were determined. The optimal growth performance and feed efficiency was observed in fish fed the 0.5% onion powder diet. Fish fed 0.5% onion powder diet showed a significantly increased final production compared with the control ($P < 0.05$). The highest survival rate in fish fed the 0.5% onion powder diet compared with the control ($P < 0.05$). The blood cholesterol level were relatively lower in treated onion groups. Haematocrit was significantly ($p < 0.05$) higher in the group fed onion powder 0.5% and 1% compared to the control. In conclusion, it can be suggested that dietary inclusion of 0.5% onion powder was effective at improving growth, feed efficiency and hematological parameters of goldfish.

Keywords: Onion powder, Immune stimulant, Goldfish.