



Zabol University
A Thesis for the master degree
of sciences in fisheries

Subject:

Effects of dietary Glucan-Mannan
oligosaccharide on growth performance,
hematological parameters and body composition
of juvenile Beluga (*Huso huso*)

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Abstract

This study investigated the effects of glucan-mannan oligosaccharide on growth, hematological indices and body composition of Beluga Juvenile for 42 days. Basal diet were supplemented with 0(control), 1.5, 3 and 4.5 g prebiotic glucan-mannan oligosaccharide per kg diet in a total randomized design trial in 4 groups with triplicate per treatments. The experiment carried out in 12 fiberglass tanks. 180 juveniles bluga with initially average weight 48 ± 0.12 gr were stocked with density of 15 per tanks and fed a day. The results have show there were no significant differences in body composition and the protein and lipid contents among the groups ($P > 0.05$). These fish fed diet with 1.5 g prebiotic glucan-mannan oligosaccharide per kg diet had significant different than control diets, and lowest of FCR was recorded in 1.5 g/kg MOS and didn't show significant differences with control groups. And shown significant differences in white and red blood cells, hematocrit and hemoglobin and mean corpuscular hemoglobin in diet with 1.5 g prebiotic with control diets ($P < 0.05$). There aren't significant differences in neutrophill and eosinophill count in whole groups with control groups ($P > 0.05$). Result indicated that 1.5 g/kg glucan-mannan oligosaccharide can improved growth performance, and immunity systems and it is appropriate for supplementation in the diet of bluga juveniles

Key words: *Huso huso*, Glucan-mannan oligosaccharide, Hematological indices, Growth indices.