

*Investigation on replacement of fish oil by vegetable oils (Rice bran and soybean) in diet of rainbow trout (*Oncorhynchus mykiss*)*

Bashirzade hengami, S.^{1,*}; Fekrandish, H.²

¹Graduate student, Institute of Higher Education reason, Persian Gulf University of Bushehr,
Bushehr, Iran

² Department of Fisheries, Institute of Higher Education reason, Persian Gulf University of Bushehr,
Bushehr, Iran

*Email: siros.bashirzade@gmail.com

The aim of the present study was to determine the effect of replacing fish oil by alternative lipid sources in diets for rainbow trout (*Oncorhynchus mykiss*) on growth and fatty acid profiles of muscle. A 2 × 4 factorial design was conducted to study the effects of dietary vegetable oils (Rice bran, soybean) levels on growth performance of rainbow trout (*Oncorhynchus mykiss*) with average weight of 100±63 g with 15 box. The diets were fed to apparent satiation twice a day to triplicate groups of 30 rainbow trout, for 15 weeks in autumn of 2015. In each of the vegetable oils levels, the feed efficiency, body weight increase, Protein efficiency ratio, specific growth rate, final body weight and total feed intake of fish improved insignificantly as dietary energy levels increased ($P \leq 0.05$). The maximum growth and weight were observed in the treatment containing vegetable oils (Rice bran). The results showed that there was no significant differences in some attributes among the stations ($p > 0.05$). The results in this study imply that an appropriate mix of vegetable oils and FO can replace the only use of FO in fish diets.

Keywords: *Cyprinus carpio*, vegetable oils, Rice bran, soybean.