

Comparison of Rainbow trout (*Oncorhynchus mykiss*) aquaculture in fresh water and brackish water of Caspian Sea

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Abstract:

Aquaculture development in Iran is due to climate change and shortage of freshwater and marine aquatic resources. This research has been carried out with the aim of introducing a special species according to existing conditions and development of aquaculture in the southern part of the Caspian Sea. Rainbow trout (*Oncorhynchus mykiss*) was selected and tested as susceptible species. Fish 34.92 ± 0.2 grams were used for growing tubs of $2 * 2 \text{ m}^2$ with a density of 10 fish / m^2 in water with zero salinity and 13 grams per thousand. They were grown for 120 days. The results showed that rainbow trout has the ability to grow with Caspian Sea salt and in terms of growth indices (final weight, weight gain, daily growth rate, survival rate, Feed conversion ratio and specific growth rate), differences no statistical significance with the fresh water environment. The survival rate of the fish growth rate was 100%, and the average final weight of fish respectively, in fresh water and the Caspian Sea water was 246 and 243 g.

Keywords: Rainbow trout (*Oncorhynchus mykiss*), Caspian Sea, salty water, growth