

An analysis of productivity growth and factors influencing it in the Iranian rainbow trout aquaculture

ABSTRACT

Rainbow trout culture is an important contributor to the aquaculture industry in Iran. This study number of the factors including the socio-economic factor was considered for analysing the factors affecting TFP growth in trout aquaculture. The Malmquist index is then employed to measure the TFP growth. The panel tobit model was used in order to identify the important factors affecting the TFP growth. A pooled-tobit estimator, which is adopted in the study, is used to examine the determinants of TFP growth. The study was conducted to utilize panel data of 207 trout farms in the country over a five-year period from 2003 to 2007. The results of this study revealed that TFP growth of rainbow trout farming has an increasing trend over the period at an average annual rate of 3.7%. Based on the marginal effects analysis derived from the pooled-tobit regression, the factors affecting TFP growth positively were ranked, and these includes suitable water temperature (13-18oC), extension workshop, and fry supply inside farm. On the other hand, the negatively ranked are number of illiterate labours, number of labours with lower than diploma and the number of fry used per area unit.

Keyword: Rainbow trout; TFP growth; Tobit model; Marginal effect; Iran