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Effects of dietary propolis and vitamin E on growth performance and antioxidant status in juvenile rainbow trout (*Oncorhynchus mykiss*) under different flow rate

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The present study investigated the effects of propolis and vitamin E supplementation in diets of juvenile rainbow trout subjected to two different flow rates (0.9 and 2.1 L min⁻¹) on growth performance, and vitamin A, C and E concentrations in tissues as well as malondialdehyde (MDA) levels. Juvenile rainbow trout were fed with diets containing 10 and 30 g propolis kg⁻¹, 60 mg kg⁻¹ vitamin E (Rovimix E-50 adsorbate; min. % 50 dl- α -tokopherlyacetate) and with out supplemented basal diet for 12 weeks. Weight gain (WG) in the C group was significantly lower ($P<0.05$) than P10, P30 and E60 groups at both flow rate treatments. At 2.1 L min⁻¹, specific growth rate (SGR) in the C group was significantly lower ($P<0.05$) than other groups, but at 0.9 L min⁻¹, SGR of fish did not differ among the diets groups ($P>0.05$). Survival rate (SUR) was higher in propolis and vitamin E supplemented diet groups ($P<0.05$) than control diet group at 0.9 L min⁻¹. Fish fed on diet E60 had higher ($P<0.05$) tissue vitamin E concentration than fishes fed on other diets groups. Vitamin C concentration in rainbow trout tissues was significantly affected by the 30 g propolis supplemented diet group ($P<0.05$), followed by the 10 g propolis supplemented diet group ($P<0.05$). MDA level of E60 group was found significantly decreased instead of different than other groups ($P<0.05$). The results of student's t-test revealed that WG, SGR, SUR values, vitamin (A, C, E) concentrations and MDA levels of tissues were negatively affected by 0.9 L min⁻¹ flow rate treatment in juvenile rainbow trout.

Biography

Guluzar Tuna Kelestemur has completed her PhD from Firat University, Faculty of Fisheries, Elazig/Turkey. Her expertise areas are fish feeding and stress in fish. She had published more than 20 papers in reputed journals. She is serving as a reviewer in different journals and Editorial Board Member of repute.

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