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## The effect of dietary Earth worm (*Eisenia fetida*) on water quality of Rainbow trout (*Oncorhynchus mykiss*) rearing tanks

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### Abstract

This experiment was designed with the aim of effecting the use of live *Eisenia fetida* as a food supplement on the water quality of rainbow trout rearing tanks. Fish with a weight average of 58 g were placed in a completely randomized design in 4 treatments and each in 3 replicates. The fishes fed with different levels of 0, 25, 50 and 75% (control, T1, T2 and T3) of diets from live worms (including 50% moisture content) for 8 weeks at 18 °C. Comparing means obtained from water quality factors showed a significant difference in pH of control and other treatments and also do and tss among all treatment ( $P<0.05$ ). The amount of TAN in the first sampling was significantly different from the above treatments, but this amount in the last sampling indicated a decrease in TAN and no significant difference was between treatment 2 and 3. The comparison of  $\text{NO}_2^-$  and  $\text{NO}_3^-$  in consecutive sampling was found a significant decrease among all treatment with increasing the amount of worm in the food ( $P<0.05$ ). The use of worm at the level of 50% had the best growth and water quality of tank reserver.

**Keywords:** *Oncorhynchus mykiss*, Food *Eisenia fetida*, Water quality, Ammonia, Nitrate

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