

عنوان مقاله:

Research Article: Effect of curcumin on growth performance and antioxidant stress status of Nile tilapia (*Oreochromis niloticus*)

محل انتشار:

مجله علوم شیلات ایران، دوره 20، شماره 5 (سال: 1400)

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خلاصه مقاله:

In the present study, the anti-oxidative effects of dietary curcumin (CUR) were evaluated in Nile tilapia (*Oreochromis niloticus*) challenged with cold temperature condition in floating cages system. Fish with an average weight of 22 ± 0.5 g were divided into four groups and fed daily with free basal diet (control); 1, 2, and 3% CUR for a five-week period. Oxidative status and growth parameters were measured. Results indicated that CUR supplementation markedly enhanced antioxidative status which was noticed by enhanced superoxide dismutase, glutathione peroxidase, catalase and lipid peroxidase activities. In addition, improvement in growth performance including body mass gain, specific growth rate, condition factor and feed conversion ratio were noticed. The expression of related HSP70, IL-1 β and CC δ were markedly up-regulated over the control. Conclusively, dietary CUR markedly enhanced anti-oxidative status all over experimental period, proposing its usage as natural anti-cold stress supplement and thus could increase time spent in outdoor culture systems through improving tolerance to cold water temperature.

کلمات کلیدی:

Curcumin, Growth, Antioxidants, Cold stress, *Oreochromis niloticus*

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