

عنوان مقاله:

Impact of dietary supplementation of *Chlorella vulgaris* (Beijerinck, 1890) on the growth, antioxidant defense and (immune status of the grey mullet, *Mugil cephalus* (Linnaeus, 1758

محل انتشار:

نشریه بهداشت آبزیان ایران، دوره 5، شماره 1 (سال: 1398)

تعداد صفحات اصل مقاله: 14

نویسندگان:

P Akbary - *Department of Fisheries, Faculty of Marine Sciences, Chabahar Maritime University, Chabahar, Iran*

Z Aminikhoie - *Offshore Research Center, Iranian Fisheries Science Research Institute, Agricultural Research Educations and Extension Organization, Chabahar, Iran*

خلاصه مقاله:

The primary aim of the current study has been to examine the impacts of dietary supplementary of *Chlorella vulgaris* (Beijerinck) powder (CP) different levels on the anti-oxidant enzyme activities, growth, and immune responses of the juvenile *Mugil cephalus* (Linnaeus). Experimental Fish ($15 \pm 0.1\text{g}$) was fed diets enriched with 0 (control), 5, 10, and 15 g CP per kg feed for eight weeks period. After the feeding trial period, the fish were challenged against pathogenic bacteria (*Photobacterium damsela* (subsp. piscicida)) for evaluating the resistance of infected fish to diseases. According to the results, fish growth performance was significantly improved with increasing CP levels at CP10 and CP15. Antioxidant-stimulated activity was observed with dietary CP where total antioxidant capacities (TAC), glutathione (GSH), and super-oxide dismutase (SOD) augmented, while malondialdehyde (MDA) decreased significantly in fish fed CP. Furthermore, serum lysozyme activity of fish fed three levels of CP has been considerably enhanced in comparison with the control group ($p < 0.05$). Moreover, CP supplementation at 10 and 15 g dose induced kidney phagocyte and respiratory burst activity which was maximized at 15 g CP. Meanwhile, feeding 10 and 15 g of CP diets decreased mortality in *M. cephalus* after challenge with *P. damsela*. The present study indicated the role of optimal doses *Chlorella vulgaris* extract (10 and 15 g kg⁻¹ feed) on growth and antioxidant defense and immune status of grey mullet.

کلمات کلیدی:

(*Chlorella vulgaris*. *Mugil cephalus*. Kidney phagocytic, Respiratory burst, Lysozyme, Superoxide dismutase (SOD

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1148787>

