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Effects of dietary administration of olive milling on growth rate, cellular immune activity and antioxidant potential of gilthead seabream (*Sparus aurata* L.)

M A Esteban, F A Guardiola, A Cuesta and **J Meseguer**
University of Murcia, Spain

Olive tree (*Olea europaea* L.) is one of the most important fruit trees in Mediterranean countries. This tree has been widely studied for its alimentary use because the fruits and the oil are important components in the daily diet of a large part of the world's population, whereas the leaves are important for their secondary metabolites. The aim of the present work was to evaluate the effect of dietary administration of olive milling on gilthead seabream (*Sparus aurata* L.) growth rate, main cellular innate immune parameters (respiratory burst, peroxidase and phagocytic activities of head-kidney leucocytes) and the serum antioxidant potential.Fish were fed with control diet (non-supplement) orolive milling supplement diets (50, 100 and 200 mg olive milling kg feed^{-1}) during 4 weeks. Interestingly, the highest supplemented diet produced statistically significantincrements in the seabream growth rates. Regarding the immune parameters, highlight thatan increase of the phagocytic capacity of leucocytes from fish fed the 100 mg supplemented diets were observed, respect to the values found from leucocytes from control fish.In addition, biological antioxidant potentialalso increased in fish fed the supplemented diets. These results suggest that the administration of diets supplemented with olive milling to gilthead seabream hasbeneficial effects on fish growth and immune status, as well as, on theserum antioxidant potential. Further studies are needed to understand these effects of a natural product obtained from olive that could have important applications as a feed additive in fish aquaculture.

Biography

M A Esteban is a full time professor at the University of Murcia. Her research interest focuses on the study of the fish immune system, fish immunomodulation and fish defence. She has published more than 150 papers in reputed international journals and more than 100 presentations at national and international conferences. She has participated in more than 25 research projects and in 15 contracts with enterprises and she has 2 patents.

aesteban@um.es

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