# Starvation and Refeeding on Fatty Acid Composition of Farmed Dentex (Dentex Dentex) Muscle

Rincón-Cervera, M.A. (1); Salmerón (2), L.; Suárez, M.D.(2); Guil, J.L. (1); Abellán, E.(3), Arizcun, M.(3) ; Pérez-Jiménez(4), A. y Cardenete, G.(4)

1 Food Technology Department. University of Almería. Almería (Spain). 2 Applied Biology Department. University of Almería. Almería (Spain). 3 Spanish Oceanography Institute. Puerto de Mazarrón. Murcia (SPAIN). 4 Ecology and Animal Biology Department. University of Granada. Granada (Spain).

Sexually immature common dentex (*Dentex dentex*) were distributed into three groups. One of them was fed three times a day with a commercial diet (Controls) while the others were maintained without food (starved). At the end of a 5 week experimental period 9 fishes from each lot were killed and dissected in order to study their muscle composition. Subsequently the fishes subjected to starvation were fed for 3 weeks in the same way and with the same diet as those of the control group (Re-fed). Animals sampled in each group (control, starved and re-fed) were anaesthetized and dissected.

Analytical data of muscle composition show considerable muscle lipid depletion during the starvation period and a partial recovery with re-feeding which shows the capacity of the lipids to cope with periods of food restriction compared to other muscle components. There also were several changes in other muscle parameters in starved dentex.

Changes in fatty acid (FA) profile associated to feeding status were not significant although in the starved dentex the proportion of Highly Unsaturated Fatty Acids (HUFAs) and individual *n*-3 fatty acids, in particular DHA, slightly increased as a decrease of total *n*-6 was observed; so, the *n*-3/*n*-6 ratio increased significantly with starvation. Anyway, changes reported after refeeding almost fully reverted. The significant increase in the *n*-3/*n*-6 ratio in muscle of starved dentex and the subsequently decrease in re-fed fish may be due to the preservation of *n*-3 FAs for structural purposes and the shortage of dietary *n*-6 FAs.