



GROWTH, FEED UTILIZATION AND FISH QUALITY OF GILTHEAD SEABREAM (*Sparus aurata*) FED INCREASED LIPID LEVELS COMBINED WITH DIFFERENT FISH MEAL QUALITIES UP TO COMMERCIAL SIZE

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The actual trend on fish feed production is to increase lipid proportion in diets to spare proteins, mainly to improve feed conversion reducing nitrogen environmental impact derived from the use of the diets. Most of the works concern to this field have been done on salmonid species, whereas less information exist focusing warm water marine species.

The present work shows the effects of feeding nine diets for six month (70 to 400 g) gilthead seabream with different protein to lipid ratios (44/14, 44/20 and 44/27), combined with two different fish meal qualities. Besides, feed procesing effects (extruded versus pelletized) were also compared for the diet 44/20.

Results showed a clear effect of fish meal quality on specific growth rate, being significantly higher for the high quality meal. Values for feed conversion ratios (FCR) obtained for the high quality meal were significantly lower than those observed for the low quality meal for the same dietary lipid contents. According to fish meal qualities, values for FCR obtained for the high quality meal were significantly lower than those observed for the low quality meal at same dietary lipid contents. Significant differences in growth rates were observed in diets containing different lipid levels at any of the fish meal qualities assayed, being highest and lowest in fish fed diets 44/20 and 44/14, respectively. Accordingly, FCR followed the oposite trend and thus lowest values were obtained with diet 44/20. Results are discussed in relation with nutrient retention index and fish quality.