Effects of Dietary Lecithin, Nucleoside, and Krill Supplementation to a Fishmeal Based Diet on Growth and Feed Utilization of Sharpsnout Sea Bream (Diplodus Puntazzo)

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Abstract

The aim of this 96 day feeding trial was to investigate the effects of the addition of different combinations of dietary lecithin, nucleosides, and krill to a fishmeal-based diet on the growth, feed utilization, feed consumption, and body composition of sharpsnout sea bream (Diplodus puntazzo). Six hundred (600) fish (average weight 21.21 ± 0.06SD g) were divided into 8 groups (triplicate treatments) and fed eight isoenergetic fishmeal-based diets, (C-control, L-lecithin, N-nucleosides, K-krill, L+N-lecithin+nucleosides, N+K-nucleosides+krill, L+K-lecithin+krill, L+N+K-lecithin+nucleosides+krill). The effects of the dietary regimes were evaluated in terms of specific growth rate (SGR), feed conversion ratio (FCR), daily feed intake (DFI), and whole body chemical composition (moisture, crude ash, crude protein and crude lipid). At the end the trial the fish had tripled their initial weight. SGR, FCR and DFI were 1.17-1.24 %, 0.95-1.01, and 1.03-1.14% respectively. Although differences were observed between some groups, none of the tested feed additives improved SGR, FCR, and DFI, compared to the control diet. Analysis of whole body proximate composition showed that moisture, crude ash, crude protein, and crude lipid ranged 61.45-64.00%, 3.96-4.26%, 15.44-17.26% and 14.87-18.82% respectively. Crude lipid concentration was higher in whole body of fish fed the nucleoside supplemented diet compared to control, lecithin, and krill groups. No other effects of the dietary regime on the whole body composition of sharpsnout sea bream were observed.

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