

Fillet Chemical Composition of Sharpsnout Seabream (*Diplodus puntazzo*) from Wild and Cage-Cultured Conditions

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Abstract : Polyunsaturated fatty acids (PUFAs) and particularly the levels and ratios of ω -3 and ω -6 fatty acids are important for biological functions in humans and recognized as essential components of human diet. According to the terms of many different points of view, the nutritional composition of fish in culture conditions and caught from wild are wondered by the consumers. Therefore the aim of this study was to investigate the chemical composition of cage-cultured and wild sharpsnout seabream which has been preferred by the consumers as an economical important fish species in Turkey. The fish were caught from wild and obtained from cage-cultured commercial companies. Eight fish were obtained for each group, and their average weights of the samples were 245.8 ± 13.5 g for cultured, 149.4 ± 13.3 g for wild samples. All samples were stored in freezer (-18 °C) and analyses were carried out in triplicates, using homogenized boneless fish fillets. Proximate compositions (protein, ash, moisture and lipid) were determined. The fatty acid composition was analyzed by a GC Clarous 500 with auto sampler (Perkin-Elmer, USA). Proximate compositions of cage-cultured and wild samples of sharpsnout seabream were found statistical differences in terms of proximate composition between the groups. The saturated fatty acid (SFA), monounsaturated fatty acid (MUFA) and PUFA amounts of cultured and wild sharpsnout seabream were significantly different. ω 3/ ω 6 ratio was higher in the cultured group. Especially in protein level and lipid level of cultured samples was significantly higher than wild counterparts. One of the reasons for this, cultured species exposed to continuous feeding. This situation had a direct effect on their body lipid content. The fatty acid composition of fish differs depending on a variety of factors including species, diet, environmental factors and whether they are farmed or wild. The higher levels of MUFA in the cultured fish may be explained with the high content of monoenoic fatty acids in the feed of cultured fish as in some other species. The ω 3/ ω 6 ratio is a good index for comparing the relative nutritional value of fish oils. In our study, the cultured sharpsnout seabream appears to be better nutritious in terms of ω 3/ ω 6. Acknowledgement: This work was supported by the Scientific Research Project Unit of the University of Cukurova, Turkey under grant no FBA-2016-5780.

Keywords : *Diplodus puntazzo*, cage cultured, PUFA, fatty acid

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