

Influence of Responsible Rearing Techniques on Flesh Quality and Welfare Status of Seabass (*Dicentrarchus labrax*) in Italy

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Abstract

In order to evaluate the reliability of a productive protocol of seabass reared in floating cages following prescriptions reported in terms of specification, qualitative and quantitative assessments were carried out in a farm located in the south of Italy over a five year period. From 2002-2006, throughout different fattening cycles, biometric parameters and indices, significant blood metabolites, and the activity of enzymes were chosen as indicators of the general conditions of reared seabass. Meat quality, from the total lipid and polyunsaturated fatty acids point of view, was also considered.

The increase of the fattening period and the reduction of daily ration and lipid content of feed do not have significant effects on the final mean body weight and, at the same time, had positive effects on the total lipid content and fatty acid profile of the filet. Regarding blood metabolites, all the parameters resulted within the maximum and minimum levels and always stayed within natural physiological ranges.

Proteins levels ranged from 20.9% in the fresh sample of 2005 to 21.7% in 2005. Lipid content results were lower (2.39%) in 2006 compared to 2002 (3.82%). Total cholesterol went from 60 mg/100 g in the first years of monitoring to 53.6 mg/100 g in the seabass produced in 2006. Regarding the fatty acid profile, the polyunsaturated fraction was predominant (42.19-44.98%) in all the five years of sampling, followed by monounsaturated (27.4-30.63%) and saturated (24.13-26.07%). Results obtained have to be interpreted as an example of good application of seabass rearing management.

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² Ibid.

³ Ibid.

⁴ Ibid.

⁵ Ibid.

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