

## Seasonal changes in the food quality, diel feeding rhythm and growth rate of juvenile leaping grey mullet



A population of leaping grey mullet *Liza saliens* was studied in order to test whether growth rates decrease in summer owing to a reduction in food quality. A total of 330 juveniles of the 2-year age group were collected for measuring monthly changes in standard length, total weight, length growth rate and weight growth rate. Another 160 fish of the same age were caught monthly in February, April, August and November to measure food quality and calculate energy intake. Food quality changed as predicted. The organic matter content of the diet on a dry matter basis was 9.7% in April, 7.9% in August and 11.7% in November. The protein content of the diet on a dry matter basis was 9.0% in April, 6.4% in August and 9.3% in November. The carbohydrate content of the diet on a dry matter basis was 0.6% in April, 0.7% in August and 1.8% in November. The lipid content of the diet on a dry matter basis was 0.2% in April, 0.2% in August and 0.6% in November. The energy content of the diet was 2.63 kJ·g<sup>-1</sup> in April, 2.21 kJ·g<sup>-1</sup> in August and 3.13 kJ·g<sup>-1</sup> in November. All the analysed mullet stomachs were empty in February, which suggests that they starve in

winter. Daily rations increased when food quality decreased (4% of body weight in April, 6% in August and 1.4% in November). This allowed mullet to show high growth rates from June to August and to overcome a possible food limitation in the warm season. However, we do not know whether they would have grown even faster if food with a higher quality had been available.

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