**Production characteristics of the Common Meagre *Argyrosomus regius* (Asso, 1801) (Teleostei: Sciaenidae) off the Moroccan Saharan Atlantic coastal waters: a comparison among fisheries, and aquaculture for restocking and industrial processes**

Znari M.1,2, H. Elmaghazli1,2, H., Aharroy1,3, A.J., Bensbai3, and M. Naimi2,4

1. Laboratory ‘Water, Biodiversity and Climate Change’, Departement of Biology, Faculty of Science-Semlalia, Cadi Ayyad University, PO Box: 2390; 40 000, Marrakech, Morocco
2. The Natural History Museum of Marrakech, Cadi Ayyad University, Marrakech, Morocco
3. Laboratoire Halieutique, Centre de l’Institut National de Recherche Halieutique (INRH) de Dakhla, Morocco
4. Sultan Moulay Sliman University, Béni Mellal, Morocco

**Abstract**

Common Meagre *Argyrosomus regius*, represents one of the largest fish of great economic importance as both natural fishery resource and farmed fish, in eastern Atlantic Ocean and Mediterranean and Black seas. It has excellent biological characteristics with high feed conversion and fertility rates, euryhalinity, and relatively rapid and optimal growth between 16 and 20°C. It is appreciated for its flesh quality and flavor, high selling price for fish weighing over 2 kg. Fished specimens can reach maximal body size and weight over 1.80 m and 50 kg, respectively. The common meagre is considered as a strategic species for the developing marine aquaculture in Morocco, allowing a specific diversification of marine fish farming. To this end, an experimental farm of this species has been operating at the Aquaculture Centre of the National Institute of Fishery Research in Mdi'q, northwest Morocco. We aimed at assessing the growth parameters, mortality and exploitation of this species in southern Morocco, with a comparative analysis among fisheries and farmed populations. 115 specimens were measured for body length at the Dakhla landing port. Individual age was estimated by scalimetry and monthly length frequency data were analyzed using FiSAT II software for evaluating the Von Bertalanffy growth parameters, which include the asymptotic body length (L∞), the growth constant rate (k). Body weight was calculated using a length to Weight relationship. An auximetric analysis at the inter-specific level within the sciaenids, was carried out to correct k values for differences in L∞. Recorded standard body length ranged from 28 to 137 cm with corresponding ages of 1+ to 12+ years. Estimated L∞ was 213 cm and k was 0.075 year-1 and a high growth performance index (Ø) of 5.53 and body weights of 366g and 1835g, respectively at ages of 2 and 4 years. L∞-corrected k was similar to that of other congeneric species, but much lower than those of other sciaenids. Total mortality (Z), estimated by the capture of converted length curve, was 0.56 year-1, natural mortality (M) of 0.16, and fishing mortality (F) of 0.40 year-1. The exploitation level (E) of *A. regius* was then 0.7, which is higher that the optimal exploitation efficiency (E=0.5) indicating that the fishing pressure on *A. regius* is very high. Thus, the status of the stock in the Moroccan southern Atlantic zone seems to be over-exploited. Besides fishing regulatory measures, restocking fisheries and the production of ready-to-cook portions should be developed.

**Keywords:** Common Meagre; Sciaenid; growth; exploitation; aquaculture; south Atlantic zone; Morocco