

## **Broodstock management and spawning induction of greater amberjack (*Seriola dumerili*) reared in sea cages in Greece**

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### **INTRODUCTION**

The greater amberjack (*Seriola dumerili*) is a species with a great potential for the Mediterranean aquaculture industry, due to its excellent flesh quality and worldwide consumer acceptability. We describe here broodstock management and spawning induction methods for greater amberjack maintained in sea cages in Greece.

### **METHODS**

Wild captive-reared individuals were maintained under different conditions in various locations around Greece. Broodstocks were fed with raw fish and squid and/or a commercial diet (Skretting, Vitalis CAL). Females eligible for spawning induction (vitellogenic oocytes 650 µm in diameter) were treated with GnRHa EVAc implants. Fish from sea cages were transferred to land-based tanks for spawning. Egg fecundity and fertilization success were estimated every day, and hatching and larval survival to yolk absorption was monitored.

### **RESULTS & DISCUSSION**

Broodstocks held in tanks over the year did not undergo gametogenesis reliably, with <20% of the females being in full vitellogenesis, but with also extensive atresia. On the contrary, in sea cages almost all females were in full vitellogenesis and some were even undergoing maturation and ovulation spontaneously. Egg collection in sea cages was not very successful, and a relatively small amount of eggs was collected over the three years of the experiments. On the contrary, maintaining the broodstocks in cages during the year and then transferring them to land-based tanks for spawning after GnRHa therapy was proven very effective. Egg collection in sea cages was not very successful. On the contrary, maintaining the broodstocks in cages during the year and then transferring them to land-based tanks for spawning after GnRHa therapy was proven very effective. Egg collection in sea cages was not very successful, and a relatively small amount of eggs was collected over the three years of the experiments. On the contrary, maintaining the broodstocks in cages during the year and then transferring them to land-based tanks for spawning after GnRHa therapy was proven very effective.

Males during the three years of the study were not releasing sperm with abdominal pressure, but in most of the cases collection of sperm was possible using a catheter. Concerning sperm quality parameters of all captive-reared greater amberjack, sperm motility was 77±3%, motility duration was 3.7±0.2min, sperm density was 30±2 10<sup>9</sup> sperm ml<sup>-1</sup> and sperm survival was 8±1days, values that are considered appropriate for good fertilization success.

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