

## ESTABLISHING AN ATLANTIC BLUEFIN TUNA (*Thunnus thynnus*) BROODSTOCK

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The Spanish Institute of Oceanography owns a facility to reproduce Atlantic bluefin tuna (ABFT). This facility was built in 2015 and in August 2017, some fingerlings born in captivity were moved to this installation, and some wild tunas were added two months later. In November 2019, this batch consists in 69 2+ ABFT weighting 28 kg. Hopefully they can reach 40 kg at the beginning of June and spawn by the first time.

Fertilized ABFT eggs were collected from cages owned by PesciAlba and obtained larvae were cultured in IEO facilities. At the end of July 2017, some fingerlings (Cultured batch –CB–, 2 gr mean weight) were move to ICRA facilities and placed in a 1000 m<sup>3</sup> tank. At the end of September 2017 a total of 68 0+ ABFT fingerlings (Wild batch –WB–, 414 g mean weight), were captured from the Mazarron Bay and placed in another tank in ICRA. 4 months later, 81 tunas coming from both batches were weighted (2.5 kg mean weight), tagged and place together in a 3500 m<sup>3</sup> tank. During all the time, temperature ranged between 17 and 27°C, and food consisted in bait, mainly, *Scomber scombrus* (47% of the total food) and *Clupea harengus* (25%) but also *Sardinella aurita*, *Engraulis encrasicolus* and *Scomber japonicus* (11, 10 and 7% respectively).

From February 2018 to November 2019, mortality has been 16.9% (10.9% in WB and 28.6% in CB) and tunas have grown to reach an average of 28 kg. Biomass in this moment is 1930 kg, which means a density of 0.55 kg/m<sup>3</sup>. Feeding intake was high during the first six months (when tunas were smaller than 2.5 kg), but after this moment it has ranged between 2.5 and 7%, decreasing with the size of tunas and increasing slightly with higher temperatures (circles). Feeding conversion rate was quite stable during the period, averaging 13.8. According to forecast, at the end of next spring, average weight will be about 40 kg, with about 15 tunas greater than 50 kg. This means that they will be able to reproduce next summer if gonadal maturation develops properly.

