

EARLY WEANING OF CUTTLEFISH (*Sepia officinalis*) WITH DEAD GRASS SHRIMP (*Palaemonetes varians*) FROM THE FIRST DAY AFTER HATCHING

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Introduction

Cuttlefish (*Sepia officinalis*) research during the last years has focused on its introduction as a new species for aquaculture. The inability to grow cephalopods on an inexpensive and storable prepared diet has been pointed as a bottleneck (Sykes et al., 2006).

Cuttlefish weaning (transition from live to dead food) is temperature dependant and usually carried out between the 25th and the 30th DAH (Sykes et al., 2006). Nonetheless, good results were obtained with frozen mysids from the 1st to the 10th DAH (Koueta and Boucaud-Camou, 1999) and frozen shrimp from 10th onwards (Koueta et al., 2000).

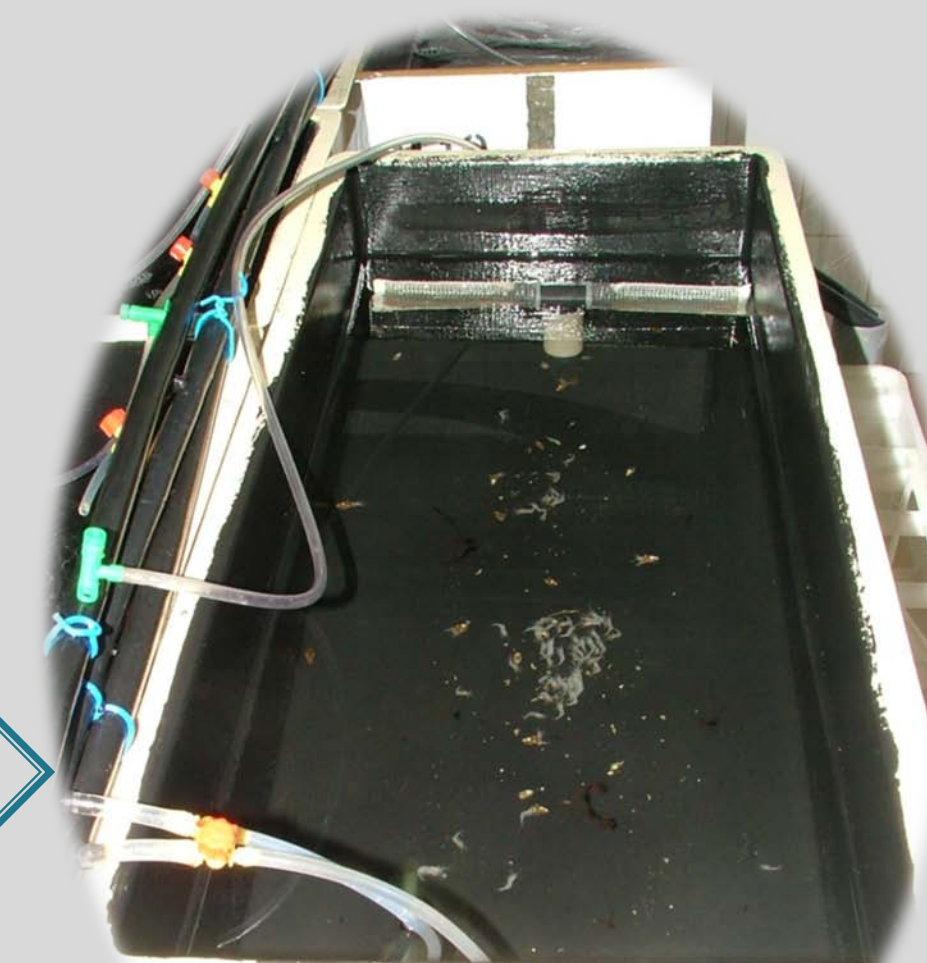
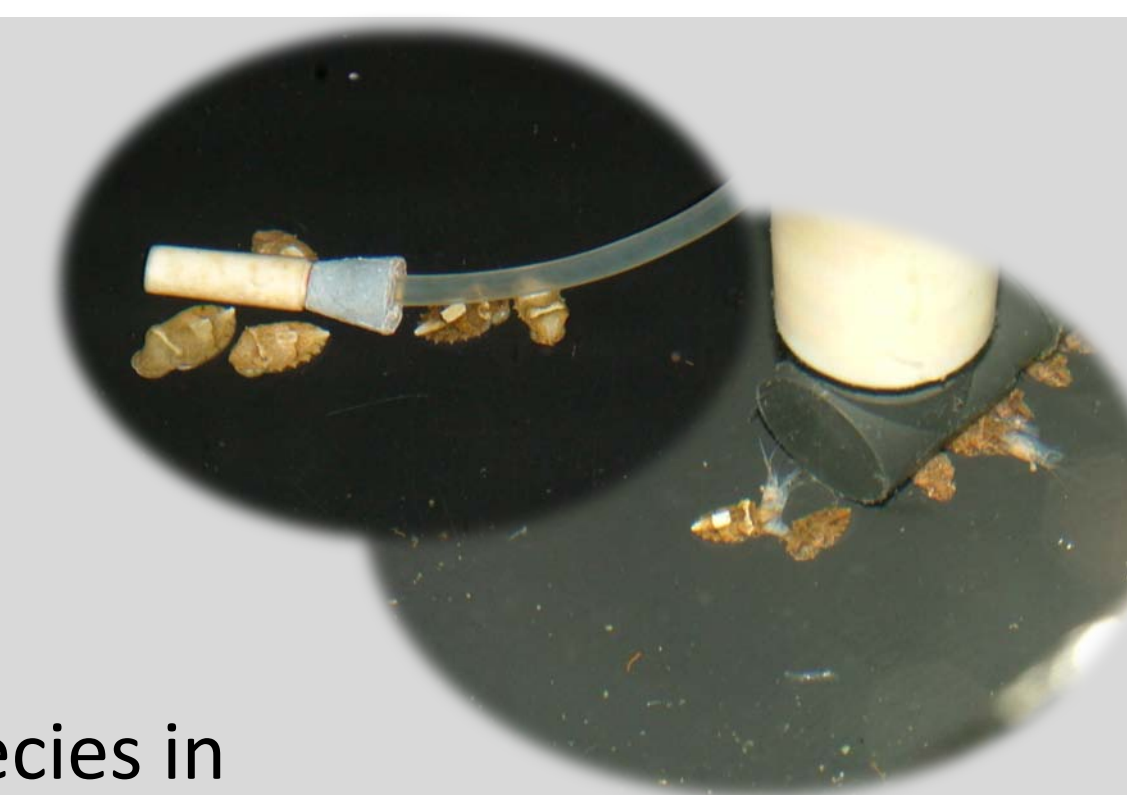
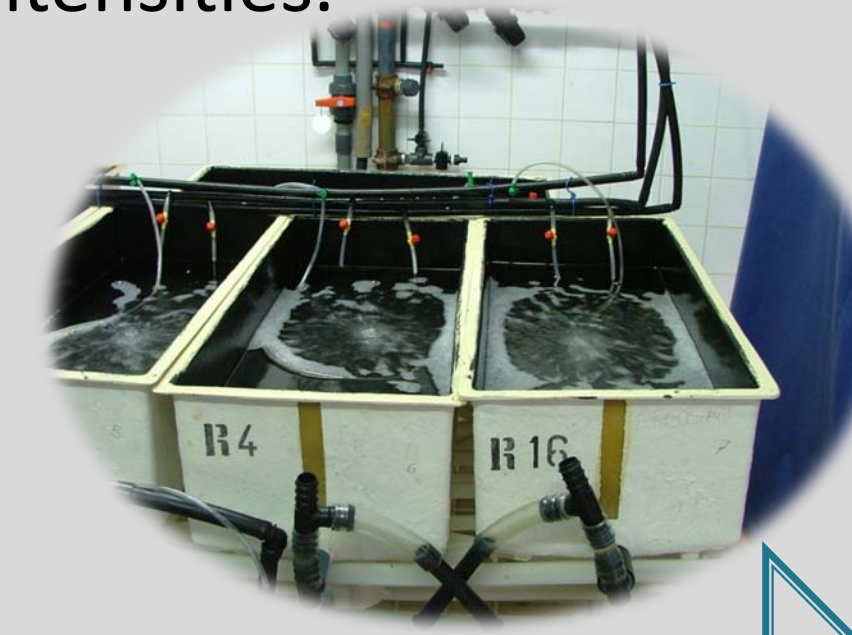
The ability of *S. officinalis* to be early weaned from the 1st DAH and for a long term has never been tested, as the possibility of using live food for a short period (first 5 DAH) preceding an early weaning to frozen food; and the subsequent effects on the culture performance of the species in its hatchling stage.

Material and methods

- 315 cuttlefish hatchlings with 0.072 ± 0.009 g
- 35 cuttlefish per tank

Experimental design

- Culture setup based in the latest findings for the species in terms of tank colour and light intensities.



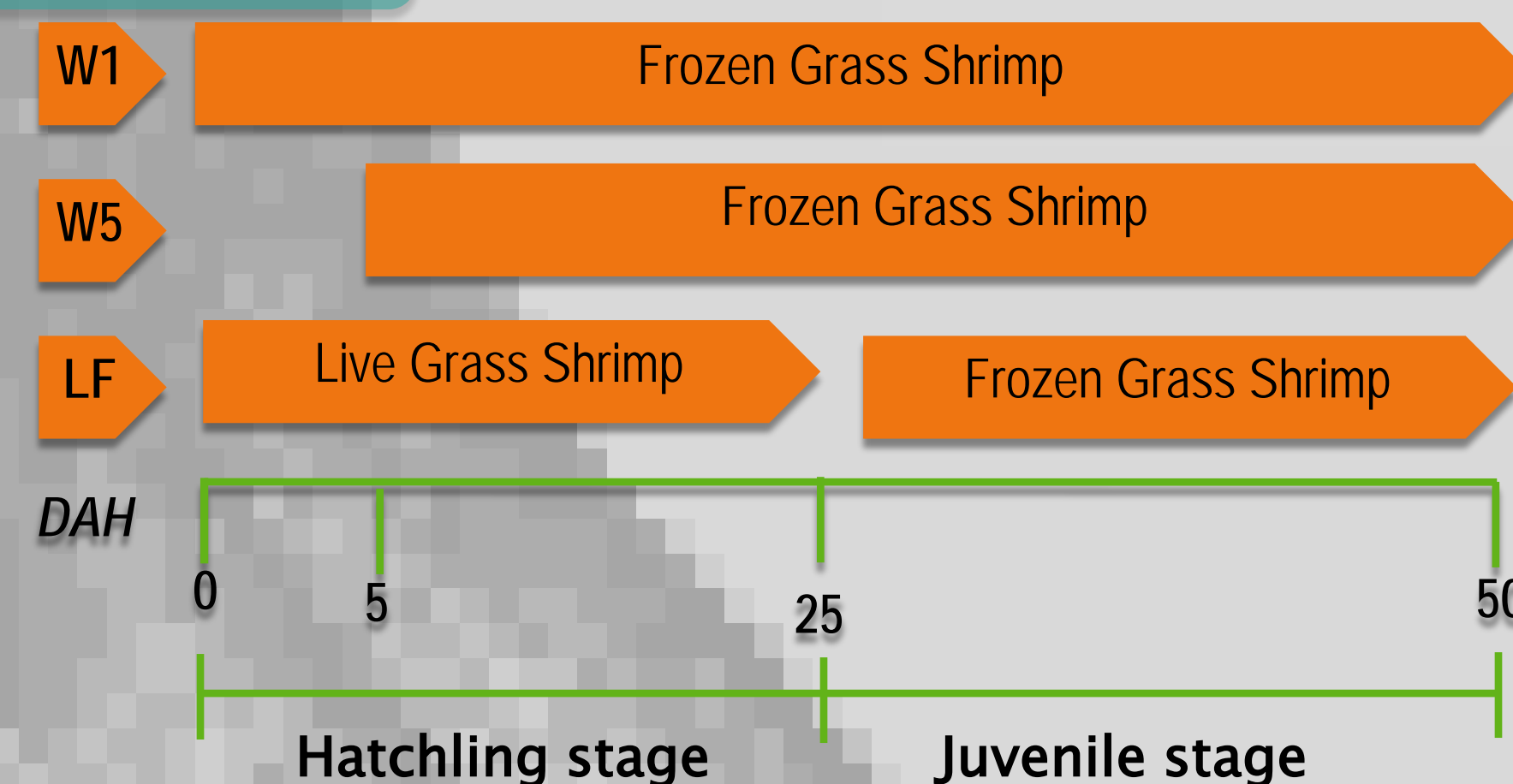
Flow-through system composed of 9 similar black raceway

Three different food setups were established

LF - Live Food

W1- Frozen Food from 1st day

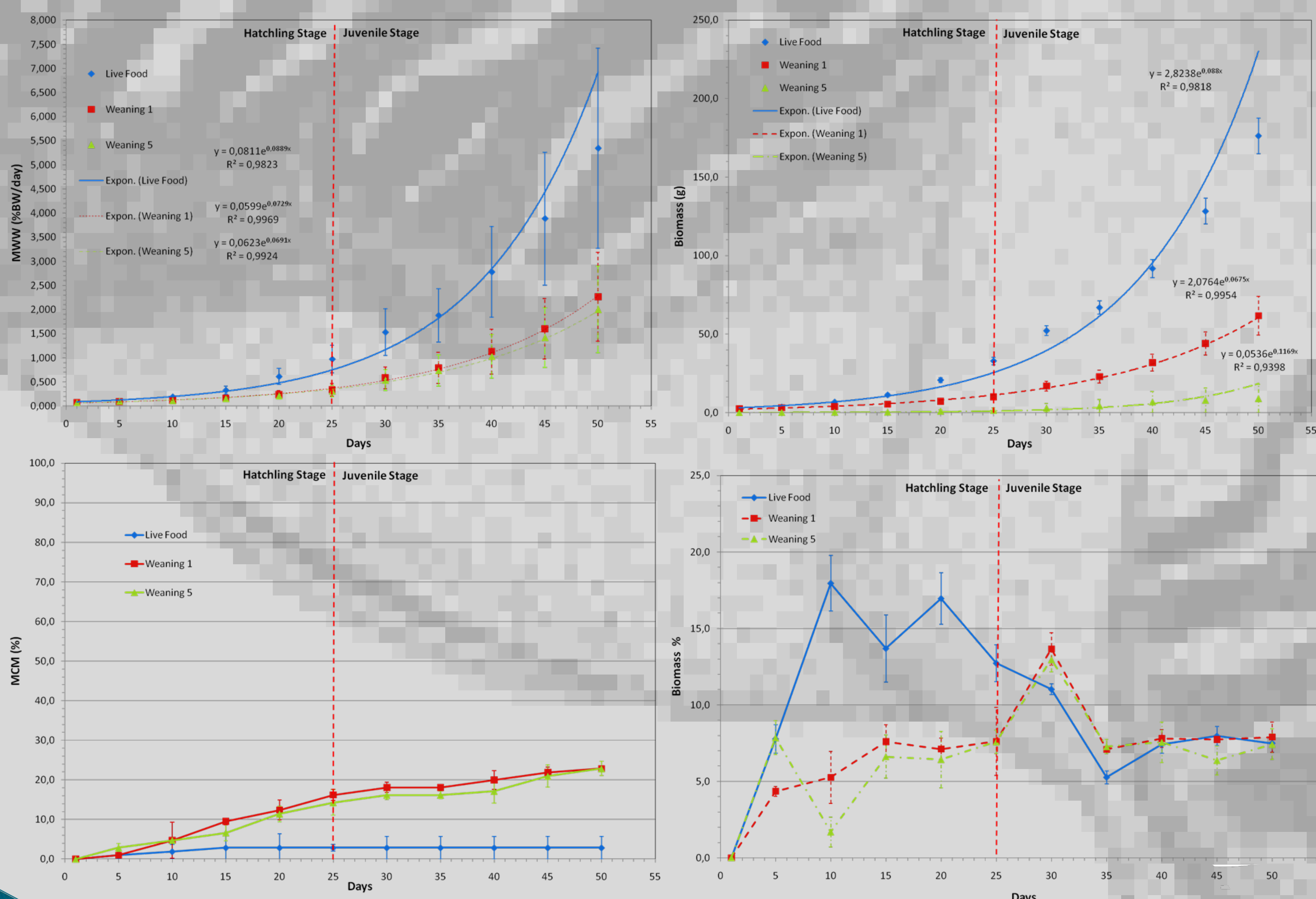
W5 - Frozen Food from 5th day



Objective

Determine the suitability of cuttlefish early weaning using frozen grass shrimp; and its effects on growth and mortality

Results & Discussion



- Cuttlefish hatchlings readily accepted frozen grass shrimp from the first DAH which may point to the possible acceptance of a prepared diet from hatching;
- This is the first report on the species accepting frozen food from the first DAH. Until now, only acceptance from the 10th day was reported.
- Cuttlefish fed live food had a significantly higher WW and B ($p < 0.01$) than those fed frozen food and LF grew almost 3 times more than W1 and W5;
- Despite acceptance, growth and mortality of W1 and W5 were lower and higher, respectively, than LF which points to the need of further studies regarding the whole lifecycle and both nutritional and enzymatic aspects.

-- Conclusion --

Cuttlefish hatchlings accept frozen grass shrimp from the first DAH, without major consequences in growth and survival

References: Koueta, N., Boucaud-Camou, E., 1999. J Exp Mar Biol Ecol. 240, 93-109.
Koueta, N., et al. 2000. Ices J Mar Sci. 57, 1-7.
Sykes, A.V., et al. 2006. Vie Et Milieu-Life and Environment. 56, 129-137.



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