

*Octopus vulgaris* as new species for the diversification in the Mediterranean aquaculture

Editorial

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Abstract

*Octopus vulgaris* (common octopus) is considered a new species for the diversification in Mediterranean aquaculture. *Octopus vulgaris* like other cephalopods is carnivorous (Lee, 1994). One of the most important problems related to the production of new species is the diet, The study of digestive enzymes it is important to know the nutritional habits of the new species to breed in order to create appropriated diets protocols.

**Keywords:** Aquaculture, Diversification, *Octopus Vulgaris*.

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Introduction

*Octopus vulgaris* (common octopus) is considered a new species for the diversification in Mediterranean aquaculture.

In the Mediterranean countries the introduction of *Octopus vulgaris* as potential aquaculture candidate is under consideration thanks to: the adaptation to captivity, fast growth (between 3 and 15% body weight/day), high food conversion rates, incorporating 40-60% of ingested food into tissue, high fecundity, producing from 100- 500 thousand eggs per female with well developed hatchlings compared to other molluscs and the size and price of its market in the Mediterranean and high commercial value and fast growth [1,7,8,4]. The commercial culture of common octopus in NW Spanish waters is limited to on-growing sub-adult individuals captured from the wild [2], in fact also if the reproduction is easy with an elevated number of hatched eggs, the long and complicated paralarval phase is a limiting step in its culture, both with respect to time and feeding concerns [6,5].

*Octopus vulgaris* like other cephalopods is carnivorous [3]. One of

the most important problems related to the production of new species is the diet, in fact it is important to know the nutritional habits of the new species to breed in order to create appropriated diets protocols.

Mancuso et al. in 2014 studied the digestive physiology of common octopus. The attention given to the intensive rearing of common octopus has stimulated the research of suitable nutritional protocols, which depends, in turn, on the knowledge of enzymatic patterns. The results provided that common octopus is well equipped with a wide range of digestive enzymes; therefore under normal conditions they could be able to efficiently digest important dietary substrates, confirming previous findings reported by Vaz-Pires et al, (2004) [9], who showed that *O. vulgaris* has a very rapid digestive rate (12 hours at 18-19°C) compared with other octopuses. All these studies confirm that *Octopus vulgaris* is a good candidate for the aquaculture, in fact the results of digestive enzymes will help to better understand which food components are responsible for the growth in common octopus and thus contribute to the formulation of new diets more suitable to the species; also the studies carried out on the high digestive rate and the consequent high rate of growth will help to better understand what protocols choose in order to achieve optimum production of this species.

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