

## THE RELATION BETWEEN TANK COLOR AND EUROPEAN SEABASS (*DICENTRARCHUS LABRAX*) JUVENILES GROWTH PERFORMANCE

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### ODNOS IZMEĐU BOJE BAZENA I PRIRASTA MLAĐI EVROPSKOG BRANCINA (*DICENTRARCHUS LABRAX*)

#### *Apstrakt*

Dizajn sistema za gajenje riba je veoma bitan za održivu i visoko profitabilnu proizvodnju u akvakulturi. Različitim vrstama riba potrebani su drugačije dizajnirani sistemi i veštačke sredine. Sistemi u zatvorenom prostoru su korisni za mrestilišta a tankovi su veštačka staništa za vrste gajene u tim sistemima. Prethodna istraživanja pokazuju da boja zida bazena utiče na nivo stresa kod riba (Rotlant et al., 2003) i parametre koji utiču na rast, a dobrobit riba može da bude ugrožena u stresnim uslovima (De Silva and Anderson 1994). Cilj ovog istraživanja je da ispita efekte koje različite boje zidova tankova imaju na prirast mlađi Evropskog brancina (*Dicentrarchus labrax*).

480 jedinki mlađi nasumice su raspoređene u 12 identičnih plastičnih tankova (40 jedinki po tanku). Zapremina svakog bazena iznosila je 40 litara. U triplikatu su korišćene četiri različite boje bazena (crvena, zelena, plava i svetlo žuta). Riba je hranjena komercijalnom hranom za brancina 2 puta dnevno u period od 60 dana.

Najveći prirast dostigla je riba gajena u crvenim bazenima, dok je riba gajena u žutim bazenima imala najmanji prirast.

Prethodna istraživanja su pokazala da boja zida bazena utiče na prirast ribe u uslovima gajenja i da je različitim vrstama riba potrebna drugačija boja bazena da bi postigle najbolji

prirast (Duray et al., 1996; Rotland et al., 2003; Imanpoor and Abdollahi, 2011). Rezultati pokazuju da boja bazena utiče na prirast riba u uslovima gajenja.

## INTRODUCTION

System design is very important for sustainable and high profit aquaculture production. Different species need various system design and artificial area. Indoor aquaculture systems are useful for hatcheries and tanks are artificial habitats for culture species in these systems. Previous studies reported that, tanks wall color can affected stress level of fishes (Rotlant et al., 2003) and growth-related parameters and welfare of the fish may be negatively affected under stressful conditions (De Silva and Anderson 1994). In this study it was intended to research the effects of different tank colors on growth performance of Seabass (*Dicentrarchus labrax*) juveniles.

## MATERIAL AND METHODS

A total of 480 juveniles were randomly distributed in 12 identical plastic tanks (40 fish per tank) with a water volume of 40 L. Four different tank colors (red, green, blue and light yellow) with triplicate treatments were used. Fish were fed on commercial seabass diet 2 times a day for 60 days.

## RESULTS

The best growth performance was obtained in red color, while the lowest growth of fish was recorded in the yellow colored tanks.

## DISCUSSION

Previous studies showed that fish growth performance under culture conditions were affected by tank wall color and different species need different tank color for best growth performance (Duray et al., 1996; Rotland et al., 2003; Imanpoor and Abdollahi, 2011). According to results, tank color affects growth performance in fish under culture conditions.

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