

**Rearing of Rabbitfish Fry *Siganus rivulatus* in Different Culture Tank Shape and Its Impact on Growth Performance**

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**ABSTRACT**

This trial was conducted to the effect of culture tank shape on growth performance, feed utilization and body chemical composition of rabbitfish fry *Siganus rivulatus*. The average initial weight was 0.18 g and three of culture fiberglass tank shapes (rectangular, circular and square) were tested. The fish fed at 7% of body weight on artificial diet and the fish were stocked at 40 fries per m<sup>3</sup>. The trial continued for 100 days. The results shown that, the growth parameters were significantly affected by the tank shape and the rectangular tank was the best in growth rate, survival rate and feed conversion rate of rabbitfish fry. The circular tank was better in final weight and weight gain than square tank while, feed conversion ratio did not differ between the circular tank and square tank, so it can be suggested that, the rectangular tank are more suitability for growth of rabbitfish fry than the other shapes.

**Keywords: Rabbitfish, tank shape, growth performance, feed utilization**

**INTRODUCTION**

Rabbitfish *Siganus rivulatus* is a potential candidate for warm water marine aquaculture diversification (Lam, 1974 and saoud *et al.*, 2008). It belongs to the genus *Siganus* of the family siganidae (Woodland, 1990). Siganids are herbivorous marine and brackishwater fishes that are found throughout the indo west pacific (Woodland, 1983), and the more common species are the objects of traditional subsistence and commercial fisheries throughout this region. There has been interest in the culture of these fish

species in ponds or cages in several areas (Duray, 1990).

Rabbitfish high tolerances to environmental factors, rough handling and crowding so can be stocked at very high density (Saoud *et al.*, 2007a). Rabbitfish are economically considered to be excellent food fish in many parts of the world especially in the eastern Mediterranean and indo-pacific regions (Lam, 1974) and are important and relatively easy to rear and thus considered suitable for aquaculture (Hara *et al.*, 1986). Additionally, rabbitfish have a high market value in Eastern Mediterranean countries

## رعاية زريعة أسماك السيجان فى تانكات مختلفة الشكل وتأثير ذلك على مظاهر النمو

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اجريت التجربة لتحديد شكل الحوض المناسب لنمو زريعة اسماك السيجان، حيث تم اختبار ثلاثة اشكال لتتكات فيبرجلاس (المستطيل، الدائرى ، المربع ) حجم الماء ١,٥ متر مكعب. الوزن الابتدائى لزريعة السيجان ٠,١٨ جرام، التغذية على عليقة ٣٦,٤٤% بروتين بمعدل ٧% من الكتلة الحية والتغذية مرتان يوميا. تم وضع ٤٠ سمكة فى المتر مكعب واستمرت التجربة لمدة ١٠٠ يوم. اظهرت النتائج ان الشكل المستطيلى لتانك التربية هو الافضل فى مظاهر النمو والتحويل الغذائى يلية الشكل الدائرى ثم المربع.