

## ABSTRACT

### USE OF GIANT GROUPEL RECOMBINANT GROWTH HORMONE (r-*ElGH*) ON BOTH GROWTH PERFORMANCE AND SEX DIFFERENTIATION OF MILK FISH *Chanos chanos* (Forsskal, 1775)

by

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Market demand of milkfish has been increased. But the availability of seeds and also the growth of milkfish is slow, becoming an obstacle in culture process. The aim of this study was to investigate the effect of addition recombinant giant grouper (r-*ElGH*) on both growth performance and sex differentiation of milkfish. Addition of r-*ElGH* hormone technique was used the oral method. There were six treatments used, without egg yolks, *phosphate buffer saline*, and without r-*ElGH* (K (-)), with the addition of egg yolks, *phosphate buffer saline*, and different r-*ElGH* dose (0, 3, 6, 30, 60 mg/kg of feed, (K (+), P1, P2, P3, P4, respectively) with individually replications. The result shows that the addition of r-*ElGH* hormone on feed with dose 6 mg/kg of milkfish can be provided a specific growth rate of 2,01%/day, absolute body growth of 15,1 g, absolute body length of 6,52 cm, and also feed conversion ratio 1,43. Whereas, sex differentiation of larvae milkfish was observed only individual which were presumptive females on age 3,5 months. It indicates that differentiation period of this larvae might be needed times longer than 3,5 months to be able analyze complete gonadal sex differentiation on milkfish juvenile.

**Keywords:** r-*ElGH*, *chanos chanos*, growth, gonadal sex differentiation

## ABSTRAK

### STUDI PENGGUNAAN HORMON PERTUMBUHAN REKOMBINAN KERAPU KERTANG (*r-ElGH*) TERHADAP PERFORMA PERTUMBUHAN DAN DIFERENSIASI KELAMIN IKAN BANDENG, *Chanos chanos* (Forsskal, 1775)

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Permintaan pasar terhadap ikan bandeng terus meningkat. Namun ketersediaan benih serta pertumbuhan benih ikan bandeng yang lambat menjadi kendala dalam budidaya. Tujuan dari penelitian ini yaitu untuk mempelajari pengaruh pemberian hormon pertumbuhan rekombinan (*r-ElGH*) terhadap pertumbuhan dan diferensiasi kelamin ikan bandeng (*Chanos chanos*). Teknik pemberian hormon *r-ElGH* yang digunakan yaitu dengan metode oral. Terdapat enam perlakuan yang digunakan yaitu perlakuan K- (tanpa penambahan *r-ElGH*, kuning telur, dan *phosphate buffer saline*), perlakuan K+ (tanpa penambahan *r-ElGH*, namun ditambahkan kuning telur, dan *phosphate buffer saline*), penambahan *r-ElGH* pada pakan dengan dosis 3 mg/kg pakan (P1), 6 mg/kg pakan (P2), 30 mg/kg (P3), 60 mg/kg (P4) dengan ulangan individu pada setiap perlakuan. Hasil penelitian menunjukkan bahwa pemberian *r-ElGH* dengan dosis 6 mg/kg pakan pada ikan bandeng dapat memberikan laju pertumbuhan spesifik 2,01% hari, bobot mutlak 15,1 g, panjang mutlak 6,52 cm, dan rasio konversi pakan sebesar 1,43. Sementara itu, diferensiasi kelamin bandeng yang berumur 3,5 bulan hanya terdapat individu dengan *presumptive* betina. Diduga bandeng sedang dalam masa diferensiasi, sehingga dibutuhkan waktu yang lebih lama dari 3,5 bulan untuk dapat menganalisa sel kelamin benih ikan bandeng.

**Kata Kunci : *r-ElGH*, *chanos chanos*, pertumbuhan, diferensiasi kelamin gonad**