

## Pengaruh *stunting* terhadap kondisi fisiologis benih ikan sidat, *Anguilla bicolor bicolor* McClelland, 1844

[The effect of stunting to physiological condition of freshwater eel seed, *Anguilla bicolor bicolor* McClelland, 1844]

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### Abstrak

Sidat adalah ikan ekonomis penting yang memiliki permintaan pasar yang terus meningkat dari tahun ke tahun. Namun, ketersediaan stok ikan sidat tidak berkelanjutan karena budi daya ikan ini masih bergantung kepada benih hasil tangkapan dari alam. Penelitian ini bertujuan untuk mengkaji pengaruh *stunting* (penahanan pertumbuhan) terhadap kondisi fisiologis benih ikan sidat ukuran 1-2 g dengan panjang tubuh 8-12 cm. Penelitian dilakukan dari bulan September 2013 hingga Februari 2014 di Laboratorium Fisiologi Hewan Air, FPIK IPB. Penelitian menggunakan rancangan acak lengkap dengan tiga perlakuan lama *stunting* (30, 60 dan 90 hari) dan masing-masing dengan tiga ulangan. Ikan dipelihara dalam akuarium ukuran 60 x 40 x 30 cm<sup>3</sup> dengan padat tebar 30 ekor per akuarium dan diberi pakan komersial berupa pellet ukuran 1,5 mm dengan kadar protein 46%. Jumlah pakan yang diberi setiap hari sebanyak 3,3 % dari total biomassa ikan. Ikan diberi pakan dua kali sehari secara kontinu selama 30, 60 dan 90 hari pemeliharaan. Hasil penelitian menunjukkan bahwa *stunting* selama satu bulan merupakan perlakuan yang terbaik yang ditunjukkan dengan dengan laju pertumbuhan spesifik benih ikan mendekati nol (0,1%), nilai koefisien keragaman bobot <20% (19,90%) dan kondisi fisiologis mendekati normal (tidak berbeda jauh dengan kontrol), serta kelangsungan hidup 96%. Perlakuan lama *stunting* dua dan tiga bulan menunjukkan bahwa laju pertumbuhan spesifik sebesar 0,2%, nilai koefisien keragaman bobot >25% (27,96% dan 30,37%) dan kondisi fisiologisnya jauh di atas batas normal benih ikan sidat, serta kelangsungan hidup sebesar 89%.

Kata penting: benih ikan sidat, kebutuhan pakan, pertumbuhan, *stunting*

### Abstract

Eel is an economically important fish species and the demand for this species is increasing every year. However, stock availability not sustainable because the eel culture totally depends on the wild catches of glass eel (elver). The aim of this study was to examine the effect of stunting to the physiological condition of eel seeds with 1-2 g body weight and 8-12 mm body length. The research was conducted from September 2013 to February 2014 at the Aquatic Animal Physiology Laboratory, Faculty of Fisheries and Marine Science, Bogor Agricultural University. The experiment was arranged in a completely randomized design with three treatments of stunting (i.e. 30, 60, and 90 days) and three replications. Eel seeds were reared in aquarium 60 x 40 x 30 cm<sup>3</sup> with a density of 30 fish in each aquarium and fed with commercial pellets of 1.5 mm in size with 46 % protein content. The diets were fed to the fish at a daily rate of 3.3% of the total biomass. Fish were fed twice a day continuously for 30, 60 and 90 days of rearing process. The weight, proximate test and blood analysis of each specimen were checked at the beginning of the experiment and in every 30 days. The results showed that the stunting for one month was the best treatment. In this treatment, the lowest specific growth rate was approaching 0 % (0.1%), coefficient of variation in body weight was < 20 % (19.90%), physiological conditions was normal (not different with control) and survival rate was above 96 %. The treatment of stunting for two and three months showed that the specific growth rate was 0.2 %, coefficient of variation in body weight was > 25% (27.96 % and 30.37 %), physiological conditions was over than the limit for normal conditions, and survival rate was 89% for both treatments.

Keywords: eel seed, feed requirement, growth, stunting

### Pendahuluan

*Stunting* adalah proses penahanan pertumbuhan bobot atau panjang ikan. *Stunting* pertama

kali dikembangkan di Filipina oleh Bombeo-Tuburan (1988) yang melakukan *stunting* pada ikan bandeng untuk dapat menyediakan pasokan

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