

ABSTRACT

GROW OUT PERFORMANCE OF SPINY LOBSTER (*Panulirus homarus*) WITH VARIETY OF CAGE DIMENSIONS AND DENSITIES

By

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Spiny lobster (*Panulirus homarus*) has a high selling price at puerulus, pre adult lobster and adult lobster stages. Pre-adult and adult spiny lobster able to produce with cultured puerulus by using immersion cages. The performance of puerulus cultured has not been optimized with different cage sizes and varying stocking densities. The purpose of the study was to evaluate the performance of puerulus of spiny lobster cultured at different immersion cage sizes and stocking densities. The study was conducted with two experimental units of a completely randomized design using two sizes of tubular immersion cages and three different stocking densities. The immersion cages used were 77 cm in diameter, 65 cm in height, 8 kg in weight (S immersion cage) and 96 cm in diameter, 89 cm in height, 18 kg in weight (M immersion cage). The stocking densities of puerulus used were: 200 ind/immersion cage unit; 300 ind/unit and 400 ind/unit. The parameters observed include: absolute weight growth, daily growth rate, survival rate, feed conversion ratio and physicochemical parameters of water quality. Analysis of variance followed by Duncan's test was used to obtain the best immersion cage size and stocking density. Quality parameters were compared with references to indicate the feasibility of spiny lobster rearing. The results showed that the performance of rearing spiny lobster puerulus was optimum in S and M size cages at a stocking density of 200 ind/unit with the highest survival rate. Even though the absolute weight growth and daily growth rate were the lowest but significantly different ($P < 0.05$) from other stocking densities. Water quality parameters during rearing are included in normal conditions for spiny lobster.

Keywords: cage, immersion, rearing, scalloped spiny lobster, stocking density

ABSTRAK

PERFORMA PEMBESARAN LOBSTER PASIR (*Panulirus homarus*) PADA VARIASI UKURAN KURUNGAN BENAM DAN PADAT TEBAR

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Lobster pasir (*Panulirus homarus*) memiliki harga jual tinggi pada tahap benih bening lobster, lobster pra dewasa dan lobster dewasa. Untuk memperoleh produk lobster pasir pra dewasa dan dewasa, pembesaran benih bening lobster dapat dilakukan dengan wadah kurungan benam. Performa pembesaran benih bening lobster pasir belum dioptimasi dengan kurungan benam yang berbeda ukuran dan padat tebar yang bervariasi. Tujuan penelitian dilakukan untuk mengevaluasi performa pembesaran benih bening lobster pasir pada ukuran kurungan benam dan padat tebar yang berbeda. Studi dilakukan dengan dua unit percobaan rancangan acak lengkap menggunakan dua ukuran kurungan benam berbentuk tabung dan tiga padat tebar berbeda. Kurungan benam yang digunakan berdiameter 77 cm, tinggi 65 cm, berat 8 kg (kurungan benam S) dan berdiameter 96 cm, tinggi 89 cm, berat 18 kg (kurungan benam M). Padat tebar benih bening lobster yang digunakan yaitu: 200 ekor/unit kurungan benam; 300 ekor/unit dan 400 ekor/unit. Parameter yang diamati antara lain: pertumbuhan berat mutlak, laju pertumbuhan harian, tingkat kelangsungan hidup, rasio konversi pakan dan parameter fisika-kimia kualitas air. Analisis sidik ragam dilanjutkan uji Duncan digunakan untuk memperoleh kurungan benam dan padat tebar terbaik. Parameter kualitas dibandingkan dengan referensi untuk menunjukkan kelayakan pembesaran benih bening lobster pasir. Hasil penelitian menunjukkan performa pembesaran benih bening lobster pasir optimum pada kurungan benam S dan M dengan padat tebar 200 ekor/unit dengan tingkat kelangsungan hidup tertinggi. Meskipun dengan pertumbuhan berat mutlak dan laju pertumbuhan harian paling rendah tetapi berbeda nyata ($P < 0,05$) dengan padat tebar lainnya. Parameter kualitas air selama pembesaran termasuk dalam kondisi normal untuk pemeliharaan lobster pasir.

Kata kunci: kurungan benam, lobster pasir, padat tebar, pembesaran