

Pengaruh padat penebaran terhadap pertumbuhan dan kelangsungan hidup juvenil abalon *Haliotis asinina* pada sistem resirkulasi menggunakan biofilter sekam padi = Effect of stocking density on the growth and survival rate of juvenile abalone *Haliotis asinina* on the use of rice husk biofilter in recirculating system

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Abstrak

Penelitian dilakukan untuk mengetahui pengaruh padat penebaran terhadap pertumbuhan, food conversion ratio, dan kelangsungan hidup juvenil abalon *Haliotis asinina* yang dipelihara dalam sistem resirkulasi dengan menggunakan biofilter sekam padi dan tanpa biofilter. Penelitian menggunakan juvenil abalon berukuran SL $34,52 \pm 2,66$ mm. Juvenil abalon diberi pakan *Gracilaria* dan dipelihara selama 90 hari dalam keranjang yang diapungkan dalam tangki. Padat penebaran yang digunakan, yaitu 200 ind/m² (D1), 300 ind/m² (D2), dan 400 ind/m² (D3).

Hasil penelitian ini menunjukkan bahwa penggunaan biofilter sekam padi memiliki pertumbuhan relatif cangkang (relative growth shell length/RGSL), laju pertumbuhan cangkang (growth rate shell length/GRSL), feeding rate (FR), food conversion ratio (FCR), dan survival rate (SR) yang lebih tinggi dibandingkan dengan tanpa penggunaan biofilter. Hasil penelitian ini juga menunjukkan bahwa terdapat hubungan padat penebaran terhadap kebutuhan ruang untuk memperoleh pakan pada sistem yang menggunakan biofilter sekam padi.

.....The effects of different stocking densities on the growth, food conversion ratio and survival rate of three density groups (200 abalones/m² for D1, 300 abalones/m² for D2 and 400 abalones/m² for D3) of the tropical juvenile abalone *Haliotis asinina* were determined. Three culture trials were conducted in net cages floated in two ton size tank respectively, using $34,52 \pm 2,66$ mm abalone juveniles, treated for 90 days. Two different types of recirculating aquaculture system (with rice husk media biofilter and without biofilter) were constructed. The animals were fed by sufficient amounts of the red algae, *Gracilaria*, throughout the experiment.

The results revealed that juveniles reared in system with rice husk media biofilter show higher relative growth shell length (RGSL), growth rate shell length (GRSL), feeding rate (FR), food conversion ratio (FCR), and survival rate (SR) compared to the juveniles reared in system without biofilter. There was density-dependance for space and food for juveniles reared in system with biofilter.