

Survival Rate, Growth And Chemical Content of *Dendronereis pinnaticirris* (Polychaeta, Nereidae) In Maintenance With Different Food And Substrate

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Abstract	<p>The worm <i>Dendronereis pinnaticirris</i> is used as feed of shrimp broodstock in a hatchery, mainly because of its availability in the local market, and its nutritional content required for improving gonad maturation and post larvae production. The important economic value of the worm and the increasing demand for feed in shrimp hatcheries have led to an intense exploitation that suppresses its population and the sustainability of the whole estuarine ecosystem. The study, which represents the starting point of large-scale production of the polychaete worm by culture in the artificial system, shall be undertaken. Accordingly, a production study using <i>D. pinnaticirris</i> juvenile was carried out under controlled conditions fed with two different feed (feed contains mainly plant protein and animal protein, respectively), and kept in three different substrates (substrate consists of mud and 8.78%, 37.34%, 39.17% sand, respectively). The treatments were arranged according to randomized completely block design in 8 (eight) replicates. The survival rate, body weight increment and growth, oxygen consumption, proximate body chemical, and fatty acid contents were measured. The results showed that growth and oxygen consumption was significantly influenced by a substrate and feed type ($P < 0.05$). Worms on the mud substrate with 39.17% sand, and feed containing vegetable protein showed the highest oxygen consumption. Survival rate and chemical body content were not significantly influenced by the type of substrate and feed ($P < 0.05$). The protein content of the worm was 32.02-43.81%, while fat content was 2.41-9.89%. Twenty different fatty acids were identified in the worm of all treatment groups.</p>
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