

## ABSTRAK

**SRI WARDANI. 105941100524.** Pengaruh Pemberian Pakan Dengan Penambahan Dedak Padi Terfermentasi Terhadap Pertumbuhan Dan Sintasan Udang Windu (*Penaeus monodon*). Dibimbing oleh Hamsah dan Syawaluddin Soadiq.

Udang windu (*Penaeus monodon*) merupakan komoditas budidaya perikanan unggulan Indonesia yang membutuhkan pakan berkualitas tinggi. Harga pakan komersial yang tinggi telah mendorong pencarian alternatif pakan ekonomis berbasis bahan lokal. Dedak padi, limbah pertanian yang melimpah dengan kandungan protein 12-15%, berpotensi digunakan sebagai bahan pakan alternatif melalui teknologi fermentasi untuk meningkatkan daya cerna dan nilai gizi.

Penelitian ini bertujuan untuk mengetahui pengaruh dedak padi fermentasi terhadap pertumbuhan dan kelangsungan hidup udang windu.

Penelitian ini dilakukan di Badan Pengembangan Perikanan dan Budidaya Perikanan Takalar (BPPBAP) menggunakan Rancangan Acak Lengkap (RAL) dengan empat perlakuan dan tiga ulangan: A (5% dedak padi tidak difermentasi), B (10% dedak padi difermentasi), C (20% dedak padi difermentasi), dan D (30% dedak padi difermentasi). Dedak padi difermentasi menggunakan EM4 dan molase selama 2-3 hari. Udang windu PL 20 dipelihara selama 28 hari dengan kepadatan tebar 35 ekor per kontainer, diberi pakan dengan laju 5% dari berat badan per hari. Parameter yang diamati meliputi pertumbuhan mutlak, laju pertumbuhan harian (SGR), rasio konversi pakan (FCR), sintasan. Hasil penelitian menunjukkan bahwa perlakuan C (20% dedak padi fermentasi) memberikan hasil terbaik dengan tingkat pertumbuhan mutlak  $0,47 \pm 0,05$  g, SGR  $1,72 \pm 0,11\%$ /hari, FCR  $0,99 \pm 0,06$ , dan SR  $70,00 \pm 0,02\%$ . Analisis statistik menunjukkan pengaruh signifikan pada semua parameter ( $P < 0,05$ ). Fermentasi meningkatkan daya cerna protein, mengurangi serat kasar, dan memberikan efek probiotik yang meningkatkan kesehatan udang. Dapat disimpulkan bahwa penambahan 20% dedak padi terfermentasi menunjukkan hasil terbaik terhadap pertumbuhan dan sintasan udang windu pada kondisi penelitian ini.

Kata kunci: Udang windu, dedak padi fermentasi, EM4, pertumbuhan, sintasan.

## ABSTRACT

**SRI WARDANI. 105941100524.** The Effect of Feed Supplementation with Fermented Rice Bran on the Growth and Survival of Black Tiger Shrimp (*Penaeus monodon*). Supervised by Hamsah and Syawaluddin Soadiq.

Black tiger shrimp (*Penaeus monodon*) is one of Indonesia's leading aquaculture commodities that requires high-quality feed to support optimal growth and survival. The high cost of commercial feed has encouraged the exploration of economical feed alternatives based on locally available ingredients. Rice bran, an abundant agricultural by-product with a protein content of 12–15%, has potential as an alternative feed ingredient through fermentation technology to improve digestibility and nutritional value.

This study aimed to determine the effect of fermented rice bran on the growth and survival of black tiger shrimp.

The research was conducted at the Takalar Fisheries and Aquaculture Development Center (BPPBAP) using a Completely Randomized Design (RAL) with four treatments and three replications: A (5% unfermented rice bran), B (10% fermented rice bran), C (20% fermented rice bran), and D (30% fermented rice bran). Rice bran was fermented using EM4 and molasses for 2–3 days. PL-20 black tiger shrimp were reared for 28 days at a stocking density of 35 individuals per container and fed at a rate of 5% of body weight per day. Parameters observed included absolute growth, specific growth rate (SGR), feed conversion ratio (FCR), and survival rate. The results showed that treatment C (20% fermented rice bran) produced the best performance, with an absolute growth of  $0.47 \pm 0.05$  g, SGR of  $1.72 \pm 0.11\%$ /day, FCR of  $0.99 \pm 0.06$ , and a survival rate of  $70.00 \pm 0.02\%$ . Statistical analysis indicated a significant effect of fermented rice bran supplementation on all observed parameters ( $P < 0.05$ ). Fermentation improved protein digestibility, reduced crude fiber content, and provided probiotic effects that enhanced shrimp health. It can be concluded that the addition of 20% fermented rice bran yielded the best results for the growth and survival of black tiger shrimp under the conditions of this study.

Keywords: black tiger shrimp, fermented rice bran, EM4, growth, survival.