ABSTRAK

PEMANFAATAN TEPUNG LEMNA (*Lemna* sp.) FERMENTASI SEBAGAI SUMBER PROTEIN NABATI ALTERNATIF DALAM MENUNJANG PERTUMBUHAN IKAN NILA, *Oreochromis niloticus* (Linnaeus, 1758)

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Tepung lemna fermentasi digunakan sebagai sumber protein nabati alternatif untuk menggantikan tepung bungkil kedelai dalam pakan ikan nila. Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan tepung lemna fermentasi pada pakan guna menunjang performa pertumbuhan benih ikan nila. Penelitian ini menggunakan Rancangan Acak Lengkap dengan 5 perlakuan 3 ulangan. Perlakuan pakan A (0% tepung lemna fermentasi + 100% tepung bungkil kedelai), B (25% tepung lemna fermentasi + 75% tepung bungkil kedelai), perlakuan C (50% tepung lemna fermentasi + 50% tepung bungkil kedelai), D (75% tepung lemna fermentasi + 25% tepung bungkil kedelai), dan E (100% tepung lemna fermentasi + 0% tepung bungkil kedelai). Data yang diperoleh dianalisis ragam Anova dan diuji lanjut dengan uji Duncan. Parameter yang diukur berupa pertumbuhan bobot mutlak, *spesific growth rate*, retensi protein, rasio konversi pakan, *protein efficiency ratio*, tingkat kelangsungan hidup, dan kualitas air. Hasil penelitian menunjukkan penggunaan 25% tepung lemna fermentasi sebagai pengganti tepung bungkil kedelai dalam pakan berbeda nyata ($P<0,05$) terhadap pertumbuhan bobot mutlak sebesar 7,11 gr, rasio konversi pakan 2,22 dan protein efisiensi rasio 1,08.

Kata Kunci: *Pakan, tepung lemna fermentasi, performa pertumbuhan.*

ABSTRACT

THE UTILIZATION OF FERMENTED DUCKWEED MEAL (*Lemna* sp.) AS AN ALTERNATIVE VEGETABLE PROTEIN SOURCE IN SUPPORTING THE GROWTH OF TILAPIA, *Oreochromis niloticus* (Linnaeus, 1758)

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Fermented duckweed meal is used as an alternative source of vegetable protein to replace soybean meal in fish feed. This study aimed to determine the effect of using fermented duckweed meal on feed to support the growth performance of tilapia. This study used completely randomized design with five treatment and three replications. Feed treatment A (0% fermented duckweed meal + 100% soybean meal), feed treatment B (25% fermented duckweed meal + 75% soybean meal), feed treatment C (50% fermented duckweed meal + 50% soybean meal), feed treatment D (75% fermented duckweed meal + 25% soybean meal), and feed treatment E (100% fermented duckweed meal + 0% soybean meal). The data obtained were analyzed using analysis of variance (Anova) and Duncan post hoc. The parameters observed were absolute weight growth, *specific growth rate*, feed conversion ration , protein efficiency ratio, protein retention, survival rate, and water quality. The result showed the use of 25% fermented duckweed meal as a substitute for soybean meal in feed had a significant effect ($P<0.005$) on absolute weight growth of 7.11 g, the feed conversion ration was 2.22 and the protein efficiency ratio was 1.08.

Key words : *feed, fermented duckweed meal, growth performance*