

ABSTRAK

Pakan adalah hal penting dalam budidaya ikan. Substitusi pakan dengan bahan alternatif seperti daun ubi jalar terfermentasi berpotensi menurunkan biaya produksi serta meningkatkan kesehatan ikan. Penelitian ini dilakukan untuk mengetahui pengaruh pakan substitusi tepung daun ubi jalar terfermentasi terhadap diferensiasi leukosit ikan nilem (*Osteochilus sp.*). Penelitian ini dilaksanakan dengan metode eksperimen menggunakan rancangan acak lengkap (RAL) yang meliputi 4 perlakuan dan masing-masing diulang sebanyak 4 kali. Perlakuan yang diberikan yaitu substitusi tepung daun ubi jalar terfermentasi dengan proporsi berbeda: 0% (P1), 25% (P2), 50% (P3), dan 75% (P4). Pemeliharaan ikan nilem dilakukan selama 50 hari. Data yang diamati yaitu diferensiasi leukosit dari preparat apusan darah ikan nilem dan dianalisis dengan ANOVA. Hasil pengamatan persentase limfosit berkisar antara $67 \pm 14\%$ hingga $76 \pm 8\%$; monosit berkisar antara $7 \pm 3\%$ hingga $13 \pm 5\%$ dan polimorfonuklear berkisar antara $16 \pm 7\%$ hingga $22 \pm 5\%$. Hasil analisis menunjukkan bahwa pemberian pakan substitusi tepung daun ubi jalar terfermentasi tidak berpengaruh nyata ($P > 0,05$) terhadap diferensiasi leukosit ikan nilem. Hasil pengukuran kualitas air antara lain pH berkisar antara 6,4-7,6; amonia berkisar 0-0,25 mg/L; nitrit berkisar antara 0-0,25 mg/L; dan nitrat 5-40 mg/L.

Kata kunci: *Diferensiasi leukosit, ikan nilem, pakan substitusi, daun ubi jalar, fermentasi*

ABSTRACT

*Feed is crucial factor in fish farming. Substitution of conventional feed with alternative ingredients such as fermented sweet potato leaf meal has the potential to reduce production costs and enhance fish health. This study aimed to determine effect of substituting fermented sweet potato leaf meal on leukocyte differentiation in Nile fish (*Osteochilus sp.*). Research was conducted using an experimental method with a completely randomized design (CRD) consisting of four treatments and four replications. Treatments involved different substitution levels of fermented sweet potato leaf meal: 0% (P1), 25% (P2), 50% (P3), and 75% (P4). Nile fish were reared for 50 days. The observed parameter was leukocyte differentiation, which was analyzed from blood smear preparations and statistically evaluated using ANOVA. The results showed lymphocyte percentages ranging from $67\pm14\%$ to $76\pm8\%$, monocytes from $7\pm3\%$ to $13\pm5\%$, and polymorphonuclear cells from $16\pm7\%$ to $22\pm5\%$. Statistical analysis indicated that the substitution of fermented sweet potato leaf meal in the feed had no significant effect ($P>0.05$) on leukocyte differentiation in Nile fish. Water quality measurements during the study showed pH ranged from 6.4 to 7.6, ammonia from 0 to 0.25 mg/L, nitrite from 0 to 0.25 mg/L, and nitrate from 5 to 40 mg/L.*

Keywords: *Leukocyte differentiation, Nile fish, substitute feed, sweet potato leaves, fermentation.*

