

**PENGARUH PENAMBAHAN PROBIOTIK EM4 PADA PAKAN IKAN
TERHADAP PERTUMBUHAN IKAN NILA MERAH
(*Oreochromis niloticus*)**

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ABSTRAK

Ikan nila merah merupakan ikan yang banyak dibudidayakan karena mudah dipelihara, serta laju pertumbuhan dan perkembangbiakannya cepat. Kualitas pakan yang dikonsumsi mempengaruhi pertumbuhan ikan. Probiotik dapat mengoptimalkan pertumbuhan ikan. Salah satu contoh probiotik adalah EM4. Tujuan penelitian ini adalah untuk mengetahui pengaruh pemberian EM4 pada pakan ikan terhadap pertumbuhan ikan nila (*Oreochromis niloticus*).

Penelitian ini dilakukan di Kebun Percobaan Pendidikan Biologi Universitas Sanata Dharma. Metode percobaan menggunakan Rancangan Acak Lengkap (RAL) dengan 3 perlakuan yaitu konsentrasi EM4 15 ml/kg pakan (P1), 20 ml/kg pakan (P2), 25 ml/kg pakan (P3) dan kontrol atau tanpa penambahan EM4 (P0). Pertumbuhan ikan yang diukur adalah rata-rata berat dan panjang total ikan setiap 7 hari. Untuk mengetahui pengaruh pemberian EM4 pada pakan ikan terhadap pertumbuhan ikan nila (*Oreochromis niloticus*) digunakan analisis *Anova one factor between design* dan Uji Duncan.

Berdasarkan pengamatan dan hasil analisis data dapat disimpulkan bahwa terdapat pengaruh pemberian EM4 pada pakan ikan terhadap berat dan panjang total ikan nila. Konsentrasi EM4 yang optimal untuk pertumbuhan ikan nila adalah 25 ml/kg pakan. Uji *Anova one factor between design* memberikan hasil signifikan. Berdasarkan uji Duncan, perlakuan yang paling baik adalah P3.

Kata kunci : Ikan Nila, Probiotik, EM4, Pertumbuhan.

**THE INFLUENCE OF EM4 PROBIOTIC IN FISH FEED TO THE
GROWTH OF RED NILA (*Oreochromis niloticus*)**

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ABSTRACT

*Nila is a fish that mostly cultivated because it is raised easily and it has fast growth and proliferation. The feed quality can influence the growth of nila. Probiotic can optimize the growth of fish. One kind of probiotic is EM4. The purpose of this research is to know the influence of EM4 probiotic in fish feed to the growth of nila (*Oreochromis niloticus*).*

*This research was done in Biology Education Experimental Garden of Sanata Dharma University. It used Completely Randomized Design experiment method with three treatments that was EM4 concentration of 15 ml/kg of feed (P1), 20 ml/kg of feed (P2), 25 ml/kg of feed (P3) and control or without addition of EM4 (P0). Growth that were measured were the average of weight and total length of fish every seven days. The analyses used Anova one factor between design to know the influence of EM4 probiotic addition fertilizer in feed fish to growth of nila (*Oreochromis niloticus*).*

The result of this research found that there were influence of EM4 probiotic fertilizer addition to the weight and the total length of nila fish. The optimized concentration of EM4 for nila's growth was 25 ml/kg of feed. The result of Anova test was significant so it was continued with Duncan test. The result of Duncan test show that P3 treatment was the best treatment.

Keywords: Nila fish, probiotic, EM4, Growth