

Intisari

Eceng gondok merupakan salah satu tanaman air tawar yang dianggap sebagai gulma berbahaya di beberapa belahan dunia karena pertumbuhannya yang sangat cepat dan mampu menyerap nutrisi dan oksigen yang berdampak buruk pada lingkungannya. Kandungan hara pada eceng gondok memiliki potensi sebagai pupuk untuk tanaman jika diolah dengan tepat. Penelitian ini bertujuan untuk mengetahui tanaman eceng gondok dapat digunakan sebagai bahan pembuatan pupuk organik cair (POC) dengan teknologi mikroorganisme lokal (MOL) dan diaplikasikan pada rumput gama umami. Komposisi bahan membuat MOL yaitu 2 kg eceng gondok segar, 2 liter air cucian beras, 2 liter air kelapa tua dan $\frac{1}{2}$ kg gula merah. Rancangan percobaan menggunakan rancangan acak kelompok (RAK) 1 faktor dengan 9 perlakuan dan 3 pengulangan. Perlakuan berupa pengenceran MOL dengan konsentrasi berbeda, Yaitu P0=kontrol, P1=10%, P2=20%, P3=30%, P4=40%, P5=50%, P6=60%, P7=70%, P8=80%. Data yang diperoleh diolah dengan ANOVA untuk rancangan CRD dan uji lanjut Tukey. Hasil penelitian menunjukkan bahwa eceng gondok dapat digunakan sebagai bahan pembuatan pupuk organik cair dengan teknologi MOL. MOL eceng gondok yang dihasilkan memiliki pH 4,05, DHL 1,56 mS/cm, bahan organik 2,66%, nisbah C/N 14,09, N-total 0,11%, P-total 1,27%, dan K-total 1,97%. Pengaruh perlakuan terhadap pH tanah, DHL tanah, bahan organik tanah, berat tajuk, kandungan nitrogen tajuk dan serapan nitrogen jaringan tidak memberikan hasil yang berbeda nyata, namun terdapat tren yang cenderung meningkat dari kontrol hingga perlakuan dengan konsentrasi MOL tertinggi. Perlakuan memberikan pengaruh dengan hasil yang berbeda nyata terhadap nitrogen total tanah, berat akar dan kandungan nitrogen akar.

Kata kunci : Eceng Gondok, Pupuk Organik Cair, Mikro Organisme Lokal (MOL), Gama Umami

Abstract

Water hyacinth is a freshwater plant that is considered a noxious weed in some parts of the world due to its rapid growth and ability to absorb nutrients and oxygen which adversely affects the environment. The nutrient content in water hyacinth has the potential as a fertilizer for plants if processed properly. This study aims to determine that water hyacinth plants can be used as ingredients for making liquid organic fertilizer with Indigenous Microorganism (IMO) technology and applied to gama umami grass. The composition of the ingredients for making IMO is 2 kg of fresh water hyacinth, 2 liters of rice washing water, 2 liters of old coconut water and ½ kg of brown sugar. The experimental design used a randomized group design 1 factor with 9 treatments and 3 repetitions. The treatment was in the form of IMO dilution with different concentrations, namely P0 = control, P1 = 10%, P2 = 20%, P3 = 30%, P4 = 40%, P5 = 50%, P6 = 60%, P7 = 70%, P8 = 80%. The data obtained were processed with ANOVA for CRD design and Tukey's further test. The results showed that water hyacinth can be used as a material for making liquid organic fertilizer with IMO technology. The water hyacinth IMO produced had pH 4.05, DHL 1.56 mS/cm, organic matter 2.66%, C/N ratio 14.09, N-total 0.11%, P-total 1.27%, and K-total 1.97%. The effect of treatment on soil pH, soil DHL, soil organic matter, crown weight, crown nitrogen content and tissue nitrogen uptake did not give significantly different results, but there was a trend that tended to increase from the control to the treatment with the highest IMO concentration. The treatments gave significantly different effects on soil total nitrogen, root weight and root nitrogen content.

Keywords: Water Hyacinth, Liquid Organic Fertilizer, Indigenous Microorganism (IMO), Gama Umami.