INTISARI

Nanang Dwi Wardana (1510311035) **"Efektivitas Dosis Biofertilizer Berbasis Azolla (*Azolla microphylla)* dan Konsentrasi MOL Kulit pisang Pada Pertumbuhan dan Produksi Tanaman Padi Sawah (*Oryza sativa L*)".** Dosen Pembimbing Utama Ir. Hudaini Hasbi, Msc. Agr. Dosen Pembimbing Anggota Ir. Wiwit Widiarti, MP.

Tujuan dari penelitian ini adalah untuk mengetahui efektivitas pemberian dosis biofertilizer berbasis *Azolla* (*Azolla microphylla)* terhadap pertumbuhan dan produksi tanaman padi sawah (*Oryza sativa L*), untuk mengetahui efektivitas pemberian konsentrasi MOL kulit pisang terhadap pertumbuhan dan produksi tanaman padi sawah (*Oryza sativa*), untuk mengetahui interaksi antara pemberian dosis biofertilizer berbasis *Azolla* (*Azolla microphylla)* dan pemberian konsentrasi MOL kulit pisang terhadap pertumbuhan dan produksi tanaman padi sawah (*Oryza sativa L*). Penelitian ini dilaksanakan di Desa Sulek, Kecamatan Tlogosari, Kabupaten Bondowoso. Dimulai pada 3 Maret 2019 sampai 18 Juni 2019 dengan ketinggian tempat ± 510 meter di atas permukaan laut (dpl).

Penelitian dilakukan secara faktorial (4 x 4) dengan pola dasar Rancangan Acak Kelompok (RAK) yang terdiri dari dua faktor yaitu faktor pertama Pemberian Dosis Biofertilizer Azolla (A), yaitu A0 : 0 gram/plot (kontrol), A1 : 400 gram/plot, A2 : 500 gram/plot, A3 : 600 gram/plot. Faktor kedua pemberian Konsentrasi MOL Kulit Pisang (R), R0 : 0 ml/liter (kontrol), R1 : 10 ml/liter, R2 : 20 ml/liter, R3 : 30 ml/liter. Masing-masing perlakuan diulang 3 kali.

Hasil penelitian menunjukkan bahwa Perlakuan pemberian dosis *biofertilizer* berbasis azolla berpengaruh sangat nyata terhadap tinggi tanaman umur 30 dan 45hst, jumlah anakan produktif (tanaman), berat gabah per plot, dan berpengaruh nyata terhadap jumlah anakan total (tanaman), berat gabah per rumpun, berat brangkasan basah tanaman, berat brangkasan kering tanaman. (500 g/plot) sebagai perlakuan paling efektif terhadap pertumbuhan dan produksi tanaman padi sawah. Perlakuan pemberian konsentrasi mol kulit pisang berpengaruh sangat nyata terhadap berat brangkasan basah tanaman, berat brangkasan kering tanaman, dan berpengaruh nyata pada berat gabah per rumpun. R2= 20 ml/liter air sebagai perlakuan paling efektif terhadap pertumbuhan dan produksi tanaman padi sawah. Interaksi antara perlakuan dosis *biofertilizer* berbasis azolla dan konsentrasi mol kulit pisang berpengaruh sangat nyata terhadap tinggi tanaman umur 30 dan 45 hst, berat gabah per rumpun, berat brangkasan basah tanaman, berat brangkasan kering tanaman, dan berpengaruh nyata terhadap tinggi tanaman 60 hst, berat gabah per plot. A2R2 (dosis biofertilizer azolla 500 g/plot, konsentrasi mol kulit pisang 20 ml/liter air) sebagai perlakuan paling efektif terhadap pertumbuhan dan produksi tanaman padi sawah.

Kata Kunci : Biofertilizer, Dosis, Konsentrasi, MOL kulit pisang, *Azolla*, Padi, Anakan, Gabah, Pertumbuhan, Produksi

ABSTRACT

Nanang Dwi Wardana (1510311035) **"Effectivity of Azolla (*Azolla microphylla)* Biofertilizers Dosage and Local Microorganism (MOL) of Banana Peel Concentration on Growth and Production of Rice Plant (*Oryza sativa L*)".** The main supervisor Ir. Hudaini Hasbi, Msc. Agr. Member supervisor Ir. Wiwit Widiarti, MP.

The purpose of this research was to determine the effectivity of Azolla (*Azolla microphylla)* biofertilizers dosage on the growth and production of rice plants (*Oryza sativa L*), to determine the effectivity of local microorganism (MOL) of banana peel concentrations on the growth and production of rice plant (*Oryza sativa L*), to determine the interaction between Azolla (*Azolla microphylla)* biofertilizers dosage and local microorganism (MOL) of banana peel concentrations on the growth and production of rice plant (*Oryza sativa*). This research was conducted in Sulek village, Tlogosari sub-district, Bondowoso district, from March 3, 2019 until June 21, 2019 on ± 510 meter above sea level.

The research was conducted in factorial (4 x 4) with Randomized Completely Block Design (RCBD), consists of two factors, the first factor is Azolla biofertilizers dosage (A), A0 : 0 gram/plot (Control), A1 : 400 gram/plot, A2 : 500 gram/plot, A3 : 600 gram/plot. The second factor is local microorganism (MOL) of banana peel concentrations (R), R0 : 0 ml/liter (Control), R1 : 10 ml/liter, R2 : 20 ml/liter, R3 : 30 ml/liter, with 3 replication.

The results showed that the treatment of Azolla biofertilizer dosage was most significantly influenced on plant height 30 and 45 days after planting, productive tiller, and grain weight per plot. it was significantly influenced on total tillers, grain weight per sample, fresh weight of plants, and dry weight of plants. Dosage of 500 gram Azolla biofertilizer/plot (A3) is the best treatment for increasing rice plant productian and growth. The treatment of local microorganism (MOL) of banana peel concentrations was most significantly influenced on grain fresh weight of plants, and dry weight of plants. It was significantly influenced on grain weight per sample. Treatment of 20 ml/liter local microorganism (MOL) of banana peel concentrations (R3) is the best treatment for increasing rice plant productian and growth. The interaction between Azolla biofertilizer dosage and local microorganism (MOL) of banana peel concentrations was most significantly influenced on plain height 30 and 45 days after planting, grain weight per sample, fresh weight of plants, and dry weight of plants. It was a significantly influenced on plant height 60 days after planting,and grain weight/plot. Interaction treatment of 500 grams Azolla biofertilizer/plot and 20 ml/liter of local microorganism (MOL) of banana peel concentrations (A2R2) is the best treatment for increasing rice plant productian and growth.

Keywords : Biofertilizer, Dosage, Concentration, Local microorganism (MOL) of banana peel, Azolla, Rice plant, Tiller, Grain, Effectivity, Growth, Production