

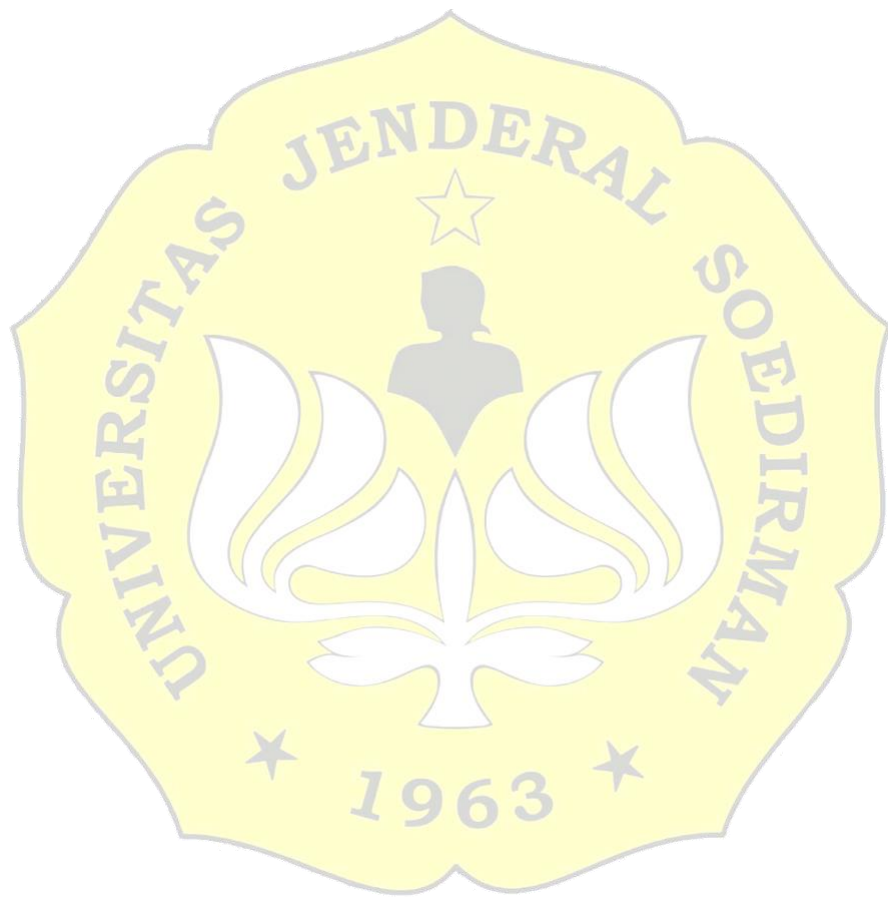
RINGKASAN

Agensia hayati yang digunakan dalam menangani permasalahan kesehatan lingkungan perakaran sekaligus untuk meningkatkan kualitas bibit aren yaitu BIO P60. BIO P60 merupakan formula cair yang mengandung bahan mentah metabolit sekunder dari *Pseudomonas fluorescens* P60. Pengetahuan tentang konsentrasi pemberian agensia hayati yang mengandung *Pseudomonas fluorescens* P60 masih belum diketahui secara pasti beserta dengan pengaruhnya terhadap mikroba dan pertumbuhan bibit aren. Penelitian ini bertujuan untuk: 1) mengetahui pengaruh perlakuan terhadap kondisi mikroba *Pseudomonas fluorescens* BIO P60 pada media tanam dalam fase pembibitan tanaman aren dan pertumbuhan bibit aren, 2) mengetahui konsentrasi BIO P60 terbaik pada media tanam untuk pembibitan tanaman aren.

Penelitian dilaksanakan di *screenhouse* Desa Sunyalangu dan Pasir Kulon, Kecamatan Karanglegwas, Kabupaten Banyumas, serta di Laboratorium Kimia dan Biologi Tanah, Fakultas Pertanian, Universitas Jenderal Soedirman, Purwokerto. Penelitian dilaksanakan dari bulan September 2020 sampai Maret 2021. Penelitian diawali dengan persiapan alat dan bahan, pemberian BIO P60, pemeliharaan, pengamatan, pemanenan, analisis data. Variabel yang diamati adalah total mikroorganisme dan total spesifik *Pseudomonas fluorescens* pada media tanam, N-total jaringan tanaman, jumlah daun, jumlah pelepah, bobot basah akar, bobot kering akar, bobot basah trubus, dan bobot kering trubus.

Hasil penelitian menunjukkan bahwa pengaruh konsentrasi agensia hayati mengandung *Pseudomonas fluorescens* pada media Inseptisols memberikan pengaruh sangat nyata terhadap total mikroorganisme dan total spesifik *Pseudomonas fluorescens* pada media tanam yang dinyatakan dengan jumlah masing-masing tertinggi 4,1 dan 3,6 cfu/ml. Selain itu juga perlakuan menunjukkan pengaruh tidak nyata terhadap N-total jaringan tanaman, jumlah daun, jumlah pelepah, bobot basah akar, bobot kering akar, bobot basah trubus dan bobot kering trubus yang ditunjukkan dengan hasil pertumbuhan bibit aren yang hanya mencapai

50%. Konsentrasi BIO P60 terbaik pada media tanam untuk pembibitan tanaman aren yaitu 90%.



SUMMARY

Biological agency used in handling environmental health problems rooting at the same time to improve the quality of palm seedlings namely BIO P60. BIO P60 is a liquid formula containing raw materials of secondary metabolites of Pseudomonas fluorescens P60. Knowledge of the concentration of biological agency containing Pseudomonas fluorescens P60 is still not known for certain along with its influence on microbes and the growth of palm seedlings. This research aims to: 1) know the effect of treatment on the condition of microbes Pseudomonas fluorescens BIO P60 on planting media in the breeding phase of palm plants and the growth of palm seedlings, 2) know the concentration of BIO P60 best in planting media for seeding palm plants.

The research was conducted in the greenhouse of Sunyalangu and Pasir Kulon Villages, Karanglewas Subdistrict, Banyumas Regency, as well as in the Laboratory of Soil Chemistry and Biology, Faculty of Agriculture, Jenderal Soedirman University, Purwokerto. The research was conducted from September 2020 to March 2021. Research begins with the preparation of tools and materials, the provision of BIO P60, maintenance, observation, harvesting, data analysis. The variables observed were total microorganisms and specific total Pseudomonas fluorescens on the planting medium, N total plant tissue, number of leaves, number of fronds, wet weight of roots, dry weight of roots, wet weight of trubus, and dry weight of trubus.

The results showed that the influence of biological agency concentrations containing Pseudomonas fluorescens on microbes and the growth of palm seedlings on the Inseptisols medium had a very real influence on total microorganisms and the specific total of Pseudomonas fluorescens in the planting medium was expressed with the highest amounts of 4,1 and 3,6 cfu/ml. In addition, it also shows an unreal influence on the total N of plant tissue, the number of leaves, the number of pelepah, wet weight of the roots, the dry weight of the roots, the wet weight of the trubus and the dry weight of the trubus indicated by the growth of palm seedlings that only

reach 50%. The best concentration of BIO P60 in planting media for palm plant breeding is 90%.

