APLIKASI BAKTERI PELARUT FOSFAT *Enterobacter* sp. TERHADAP PERKECAMBAHAN TANAMAN CABAI (*Capsicum annuum* L.)

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ABSTRAK

Enterobacter sp. merupakan mikroba pelarut fosfat yang menghasilkan asam-asam organik dan enzim fosfatase yang akan bereaksi dengan kation-kation pengikat fosfat dan membebaskan fosfat dari pengikatnya. Penggunaan bakteri pelarut fosfat (BPF) sebagai agen hayati tanah, menjadi salah satu cara untuk mengatasi masalah ketersediaan fosfat bagi tanaman. Penelitian ini bertujuan untuk mengidentifikasi kurva pertumbuhan bakteri, mengidentifikasi aktivitas fosfatase dengan metode skrining (pembentukan zona bening) dan mengidentifikasi pengaruh aplikasi bakteri pelarut fosfat *Enterobacter* sp. terhadap perkecambahan tanaman cabai merah (*Capsicum annuum* L.). Data hasil penelitian ini dianalisis secara statistik dengan metode analisis variansi satu arah (*One way Anova*) pada taraf signifikansi 5% dan dilanjut dengan uji Duncan. Parameter yang diamati meliputi tinggi tanaman, lebar daun, panjang daun, panjang akar dan jumlah daun. Aplikasi bakteri pelarut fosfat ini menurut uji statistik tidak berpengaruh secara nyata terhadap pertumbuhan tinggi tanaman, lebar daun, panjang daun, panjang akar dan jumlah daun tanaman cabai merah (*Capsicum annuum* L.).

Kata Kunci: Bakteri Pelarut Fosfat, Cabai Merah, Enzim Fosfatase, Pikovskaya.

APPLICATION OF PHOSPATE SOLUBILIZING BACTERIAL *Enterobacter* sp. FOR RED CHILI (*Capsicum annuum* L.) GERMINATION

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ABSTRACT

Bacterial *Enterobacter* sp is a phosphate solubilizing bacteria that produces organic acids which has capability of dissolving phosphate bound in the soil. The use of phosphate solubilizing bacteria (PSB) as a soil biocontrol agent, is one of the way to address the problem of the availability of phosphate for plants. The purpose of the study was to measure bacterial growth curve; to determinethe ability of bacteria in solubilizing phosphate; and the effect on red chili germination applied by bacterial *Enterobacter* sp. Results were analyzed using analysis of variance (ANOVA) one way and continued by Duncan test with significance of level 5%. The parameters were include plant height, leaf width, leaf length, root width and leaf amount. The applicationof phosphate solubilizing bacteria was giving a very significant effect on the growth of plant height, width, and leaf amount; but was not significantly affect the growth of root length andleaf width. The growth of red chili (*Capsicum annuum*L) was influenced by several factors such as temperature, pH, water, light intensity, humidity, and the availability of nutrient.

Keywords: phosphatase enzyme, Pikovskaya, Phosphate Solubilizing Bacteria, Red Chili