ABSTRAK

PENGARUH TAKARAN *NIGHT SOIL* YANG DIINOKULASI BAKTERI PELARUT FOSFAT DAN BAKTERI PENAMBAT NITROGEN TERHADAP PERTUMBUHAN DAN HASIL BUNCIS TEGAK (*Phaseolus vulgaris* L.)

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Tanaman buncis tegak (*Phaseolus vulgaris* L.) termasuk tanaman semusim. Hasil buncis masih belum stabil, sedangkan kebutuhan konsumsi buncis terus mengalami peningkatan. Salah satu upaya untuk meningkatkan hasil buncis dapat dilakukan dengan pemupukan yaitu dengan menggunakan *night soil* sebagai pupuk organik dan bakteri pelarut fosfat dan bakteri penambat nitrogen sebagai pupuk hayati. Penelitian ini bertujuan untuk mengetahui pengaruh takaran *night soil* yang diinokulasi bakteri pelarut fosfat dan bakteri penambat nitrogen terhadap pertumbuhan dan hasil buncis tegak. Penelitian dilaksanakan di Laboratorium Mikrobiologi dan di lahan percobaan Fakultas Pertanian Universitas Siliwangi Tasikmalaya kampus Mugarsari pada bulan Februari sampai dengan bulan Mei 2023. Penelitian ini menggunakan Rancangan Acak Kelompok dengan 6 perlakuan dan diulang sebanyak 4 kali. yaitu : A (*night soil* 5 t/ha + BPF), B (*night soil* 10 t/ha + BPF), C (*night soil* 15 t/ha + BPF), D (*night soil* 5 t/ha + BPN), E (*night soil* 10 t/ha + BPN) dan F (*night soil* 15 t/ha + BPN). Data dianalisis dengan sidik ragam dan dilanjutkan dengan Uji Jarak Berganda Duncan pada taraf nyata 5%. Hasil penelitian menunjukkan bahwa takaran *night soil* dengan bakteri pelarut fosfat dan bakteri penambat nitrogen tidak berpengaruh terhadap tinggi tanaman, luas daun, jumlah biji per polong dan bintil akar, namun, berpengaruh terhadap panjang polong, jumlah polong per tanaman, bobot polong per tanaman dan bobot polong per petak.

Kata kunci : Buncis tegak, bakteri pelarut fosfat, bakteri penambat nitrogen, *night soil.*

ABSTRACT

EFFECT OF NIGHT SOIL INOCULATION WITH PHOSPHATE SOLUILIZING BACTERIA AND NITROGEN FIXING BACTERIA ON THE GROWTH AND YIELD OF KIDNEY BEAN (*Phaseolus vulgaris* L.)

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The kidney bean (*Phaseolus vulgaris* L.) is an annual plant. Yield of beans is still not stable, while the need for consumption of beans continues to increase. One effort to increase kidney bean yields can be done by fertilizing, namely by using night soil as organic fertilizer and phosphate solubilizing bacteria and nitrogen fixing bacteria as biological fertilizers. This study aims to determine the effect of dosage night soil with doses of phosphate solubilizing bacteria and nitrogen fixing bacteria on the growth and yield of kidney beans. The study was conducted at the Microbiology Laboratory and in the experimental field of the Faculty of Agriculture, Siliwangi University, Tasikmalaya, Mugarsari campus from February to May 2023. The study used a Randomized Block Design with 6 treatments and repeated 4 times. namely: A (night soil 5 tons/ha + BPF), B (night soil 10 tons/ha + BPF), C (night soil 15 tons/ha + BPF), D (night soil 5 tons /ha + BPN), E (night soil 10 tons/ha + BPN) and F (night soil 15 tons/ha + BPN). Data were analyzed with variance and continued with Duncan's Multiple Range Test at 5% significance level. The results showed that the dosage of night soil with doses of phosphate solubilizing bacteria and nitrogen fixing bacteria had no effect on plant height, leaf area, number of seeds per pod and root nodules, however, had an effect on pod length, number of pods per plant, pod weight per plant and pod weight per plot.

Keywords: Kidney beans, phosphate solubilizing bacteria, nitrogen fixing bacteria, night soil.