Pengaruh Jarak Tanam Dan Pemberian Pupuk Kandang Sapi Terhadap Produksi dan Mutu Benih Kacang Hijau(*Vigna radiata L.*.).(*Application Planting Distance and cow manure Fertilizer Dosage on Production and Seed Quality of mung bean (Vigna radiata L.))*

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ABSTRACT

One of the efforts to improve the production and quality of mung bean seeds can be achieved through the application of planting distance and cow manure dosage. This research was conducted to determine the effect of planting distance and cow manure dosage on increasing the production and quality of mung bean seeds (Vigna radiata L.). The study was carried out from July to October 2024 in Antirogo Village, Sumbersari District, Jember Regency, East Java, and in the Seed Production Engineering Laboratory of Jember State Polytechnic. The experimental design used was a factorial Randomized Block Design (RBD) consisting of two factors and repeated three times. The first factor was planting distance (J), consisting of 40 cm x 10 cm (J1), 40 cm x 15 cm (J2), and 40 cm x 20 cm (J3). The second factor was the dosage of cow manure (F), consisting of 20 tons/ha (F1), 30 tons/ha (F2), and 40 tons/ha (F3). The results obtained were analyzed using ANOVA (Analysis of Variance), followed by the Least Significant Difference (LSD) test. The research results showed that the treatment of a planting distance of 40 cm x 20 cm (J3) produced the best and significantly different results in productive branches (4.49), total branches (8.76), number of pods (26.76), and seed weight per plant (19.62 grams). Meanwhile, the treatment of a planting distance of 40 cm x 10 cm (J1) yielded the best results for the parameters of seed weight per plot (647.47 grams), actual production per hectare (1.81 tons/ha), and potential production per hectare (3.37 tons/ha). On the other hand, the treatment of cow manure dosage of 40 tons/ha provided the best and significantly different results for the parameters of the number of pods per plant (26.24), seed weight per plant (18.59 grams), seed weight per plot (621.54 grams), actual production per hectare (1.74 tons/ha), and potential production per hectare (3.24 tons/ha).

Keywords: Mung bean, Planting Distance, Cow Manure Dosage, Seed Production