

The Synergy of Urea and SP 36 Fertilizers on Production of Cowpea (*Vigna Unguiculata*)

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ABSTRACT

Cowpea is one of the local legume commodities that has potential as an material industry. The use of appropriate technology in plant cultivation activities is absolutely necessary to increase production yields. Increased production can be done by fulfillment of the nutrient needs by fertilizing with Urea and SP 36 fertilizers. This study aims to determine the production of cowpea (*Vigna unguiculata*) KT 6 variety with a dose of Urea and SP 36 fertilizers. The implementation begins on October 20, 2020 until February 28, 2021 in Sumberkalong, Wonosari District, Bondowoso Regency, East Java. This study used a factorial randomized design (RAK) with 2 factors 9 treatments and 3 repetitions, factor A 3 levels, that is the dose of Urea fertilizer 20 Kg/ha, 35 Kg/ha and 50 Kg/ha, Factor B 3 levels, that is the dose of Sp fertilizer. 36 100 Kg/ha, 120 Kg/ha and 140 Kg/ha. The data analysis using ANOVA and then for the further tested using DMRT (Duncan's Multiple Range Test) with an error rate of 5%. The results of this study showed that the treatment of Urea fertilizer dosage gave no significant effect on the number of pods, wet pod weight, dry pod weight, dry seed weight and 100 seed weight, however, the dose of Urea fertilizer had a significant effect on the observation of plant heights at 14 HST and 35 HST. Meanwhile the SP 36 fertilizer treatment gave a very significant effect on the parameters of wet pod weight, dry pod weight, and dry seed weight but gave no significant effect on the parameters of plant height, number of pods, and weight of 100 seeds. And there was no interaction between the administration of Urea Fertilizer and SP 36 fertilizer for cowpea plants.

Keywords: *Cowpea, Dosage, Sp36 and urea*