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ABSTRACT

This study aims to determine the effect of MKP fertilizer concentration (N) and compound NPK fertilizer dosage (D) on the yield and quality of bitter melon seeds (*Momordica charantia* L.). The study was conducted in rice fields in Kertosari Village, Pakusari District, Jember Regency (145 meters above sea level) with an average temperature of 25°C - 26°C. The experiment used a 3×3 factorial Randomized Block Design (RAK) with 3 replications, consisting of the N factor, namely the concentration of MKP fertilizer (N1 = 6 g / L; N2 = 9 g / L; N3 = 12 g / L) and the D factor, the compound NPK fertilizer dosage (D) (D1 = 250 kg / ha; D2 = 300 kg / ha; D3 = 350 kg / ha). The parameters observed were the number of seeds, the number of seeds, the diameter of the fruit, the number of fruits, the weight of 1000 grains, germination power, and the vigor index. Data were analyzed using ANOVA at 5% level and continued with DMRT 5%. The results showed that the N×D interaction had no significant effect on all observed parameters. The compound NPK dose factor (D) significantly affected the number of seeds, the number of seeds, and the diameter of the fruit, while the MKP concentration factor (N) significantly affected the number of fruits. The organic NPK treatment of 350 kg/Ha produced the highest average number of seeds (413.14) and the highest number of seeds (408.36). In terms of fruit diameter, treatments D2 and D3 were higher than D1 (D1 = 7.72 cm; D2 = 8.48 cm; D3 = 8.96 cm). In terms of the number of fruits, treatment N1 gave the highest average (14.61) and was significantly different from N2 (13.67). The parameters of 1000 grain weight, germination power, and vigor index were not significantly different in N or D factors. The best treatment to increase the yield components related to bitter melon seed production was the compound NPK dose D3 (350 kg/ha), while for the number of fruits the best treatment was the MKP N1 concentration (6 g/L).