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Effect of Organic Fertilizer Humi Potas and Potassium Sulfate on Growth and Reproductive Traits of Stock flower (*Matthiola incana* var. *annua*)

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In order to study the effects of Humi Potas and potassium sulfate on some morphological traits of stock, this research was conducted at research farm of Shahid Chamran University of Ahvaz. This experiment was performed as factorial bassed on RCBD (randomized complete block design) with three replications. Treatments included Humi potas with 3 levels (0, 500 and 1000 mg L^{-1}) and potassium sulfate fertilizer with 3 levels (0, 50 and 100 kg h^{-1}). During growth period, vegetative traits (stem length, stem diameter, leaf number, and leaf area) were evaluated in 6 stages at intervals every 21 days once and reproductive characteristics (flower durability, number of days to flowering, and seed yield per square meter) were measured at the end stage of plant growth. Treatments with Humi Potas were effective on the vegetative and reproductive characteristics. Effect of potassium sulfate was only significant on stem length and diameter. The interaction of Humi Potas fertilizer and potassium sulfate also showed a significant effect on stem diameter, leaf number, leaf area, flower durability, and seed yield. The highest stem diameter, leaf number, leaf area, and flower durability were related to combined treatment (1000 mg L^{-1} Humi Potas and 100 kg h^{-1} potassium sulfate). Overall, it can be concluded that use of Humi Potas in combination with potassium sulfate, it improves the growth characteristics and decreases the use of chemical fertilizers and reduces environmental pollution.

Keywords: Humi potas, Potassium sulfate, Morphological characteristics, vegetative and reproductive indices.

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