

RESPONSE OF TOMATO PLANTS TO POTASSIUM FERTILIZER AND SOIL MOISTURE DEFICIT

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Executive Summary

Drought is one of the most important limiting factors for agricultural crops and vegetable production all around the world. Potassium (K) is one of the vital elements required for plant growth and physiology. So, the experiment was conducted at Sher-e-Bangla Agricultural University, Sher-e-Bangla Nagar, Dhaka to determine the effect of different doses of potassium in drought condition on growth and yield contributing characters of tomato. The two factors experiment was laid out in Randomized Complete Block Design (RCBD) with 3 replications. Factor A was 3 doses of K with drought conditions such as T1 = Control (Without K), T2 = (0.4g K/pot + 200ml water/kg soil) and T3 = (0.9g K/pot + 50 ml water/kg soil) and factor B was Tomato varieties V1 = BARI Tomato 2, V2 = BARI Tomato 15 and V3 = BARI Tomato 16. The treatments were applied at vegetative (40 days), flowering (64 days) and fruiting stage (78 days) days after transplanting (DAT). BARI tomato 15 exhibited the best results in case of morphological as well as yield, with T2 (0.4 g K/Pot+200ml water/kg soil) treatment combination followed by BARI Tomato 2 and BARI tomato 16. The lowest yield was showed when the T3 (0.9 g K/Pot+50ml water/kg soil) treatment was applied.

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