

## EFFECT OF 6-BENZYLAMINOPURINE ON SWEET POTATO'S (*IPOMOEA BATATAS*) RESPONSE TO DROUGHT STRESS

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Sweet potato (*Ipomoea batatas*) is a significant crop owing to its high nutrient content, economic value, and adaptability. Although it is a hardy crop that can withstand unfavorable conditions, the long duration of such conditions tends to significantly affect its growth and development. 6-benzylaminopurine (BAP) is a plant growth regulator whose effect on plant growth and morphogenesis is well established. However, its role in plant development and responses to abiotic stresses, such as drought, has not yet been explored. Therefore, this study sought to determine the effect of 6-benzylaminopurine on the response of sweet potatoes to drought stress. Stem cuttings (15 cm each) of Ásothalmi 12 (a local sweet potato genotype in Hungary) were used for planting. The experiment was conducted in a 2 × 2 factorial design containing four different treatments. Each treatment was replicated thrice. Drought stress was imposed by the complete withdrawal of water for 14 days after the successful establishment of the plants. 5 mg/l BAP was applied using the foliar method to the selected groups. The data collected were analyzed to assess the singular and interactive effects of drought stress and BAP on the morphophysiology of plants, as well as the effect of BAP on the plants' recovery from drought stress. The results revealed significant ( $p < 0.001$ ) effects of the applied treatments on the measured parameters over time. This study contributes to the ongoing scientific exploration of the effects of plant growth regulators on crop improvement.