

## IMPROVING TOLERANCE OF *STEVIA REBAUDIANA* TO WATER DEFICIT STRESS THROUGH FOLIAR SPRAY OF POTASSIUM NITRATE

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### ABSTRACT

An experiment was performed to study the role of potassium nitrate in improving the tolerance capacity of *Stevia rebaudiana* plants grown under water stress. The *Stevia* plants were subjected to different water regimes viz., 100 ml, 200 ml and 300 ml water and the control plants were watered with 400 ml water daily. The different sets of *Stevia* plants were also foliar sprayed with 300ppm KNO<sub>3</sub> solution on weekly basis. The periodic collection of plant samples were made and analysed for various growth parameters viz. number of leaves, growth rate index, biomass, chlorophyll content, proline content and reducing sugar content. The results of the experiment reveal that potassium nitrate acts as a bioregulator and is effective in promoting the growth and physiological performance of potted *Stevia* plants under water stress.

**KEYWORDS:** *Stevia*, Growth Rate Index, Proline, Water Stress, Potassium