



## RESEARCH PAPER

# Influence of graded levels of essential heavy metals on the fresh weight changes of tuberose cv. 'Prajwal'

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**Abstract :** An experiment was conducted with graded levels of three different essential heavy metals viz., MnSO<sub>4</sub> (1000, 2000 and 3000 mg kg<sup>-1</sup> soil), CuSO<sub>4</sub> (100, 200 and 300 mg kg<sup>-1</sup> soil) and ZnSO<sub>4</sub> (200, 400 and 600 mg kg<sup>-1</sup> soil) in addition to control *i.e.*, without external application of any essential heavy metals mentioned above. The experiment was carried out continuously for two years in polybag culture method and conducted with a Completely Randomized Design using three replications. The data recorded at every 90 days after planting (DAP) interval on fresh weight changes of tuberose cv. 'Prajwal' during different phases of vegetative growth were analyzed using OPSTAT software and the least significant difference was used to differentiate the treatments. Analysis of results indicated that soil application of ZnSO<sub>4</sub> @ 400 mg kg<sup>-1</sup> soil recorded a significant improvement in the fresh weight changes of different vegetative parameters viz., fresh weight of leaves (591.06, 807.66 and 699.36 g, respectively during 2018-19, 2019-20 and the pooled data analysis), fresh weight of flower stalks (37.33 g during 2018-19), fresh weight of roots (36.26 and 37.29 g, respectively during 2018-19 and the pooled data analysis), fresh weight of bulbs (86.60, 221.76 and 154.18 g, respectively during 2018-19, 2019-20 and the pooled data analysis), the above ground fresh biomass (377.43, 532.30 and 454.86 g, respectively during 2018-19, 2019-20 and the pooled data analysis) and the total fresh biomass (595.30, 996.50 and 795.90 g, respectively during 2018-19, 2019-20 and the pooled data analysis) per plant.

**Key Words :** CuSO<sub>4</sub>, Heavy metals, MnSO<sub>4</sub>, Fresh leaf yield, Total biomass, Tuberose, ZnSO<sub>4</sub>

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