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## **RESEARCH PAPER**

## Root characteristics studies in tropical sugarbeet as influenced by genotypes and fertilizer levels

HARISH H. DESHPANDE\* AND C.S. HUNSHAL Faculty of Agriculture, Water and Land Management Institute, AURANGABAD (M.S.) INDIA (Email : deshpandewalmi@gmail.com)

**Abstract :** The field experiments were conducted at ARS, Mudhol, University of Agricultural Sciences, Dharwad in order to study the response of sugarbeet genotypes and fertilizer N and K levels on root characters of sugarbeet during *Rabi* season of 2011-12 and 2012-13. The experiment was laid out in Split Plot Design. Three genotypes *viz.*, SZ -35, PAC 60008 and Magnolia were assigned to main plot and five N:K<sub>2</sub>O levels to sub plots *viz.*, 100, 120, 140, 160 and 180 kg N:K<sub>2</sub>O ha<sup>-1</sup>. The crop was raised under irrigated condition. The experimental results revealed that, the performance Magnolia genotype was found superior over SZ 35 and PAC 60008 with respect root diameter, fresh weight and volume. The lengthier roots were observed in SZ 35. Among the fertilizer N: K<sub>2</sub>O levels application of 160:160 kg N:K<sub>2</sub>O ha<sup>-1</sup> was found to be significant compared to other levels. The genotype Magnolia applied with of N and K<sub>2</sub>O @ 160:160 kg ha<sup>-1</sup> recorded significantly higher root volume, diameter and root fresh weight compared to other treatment combinations.

Key Words: Root volume, Root diameter, Root length, Tropical sugarbeet, Root fresh weight

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