

EVALUATION OF BEET ROOT (*BETA VULGARIS* L.) VARIETIES TO DIFFERENT SPACINGS

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ABSTRACT : A field experiment was conducted at the Vegetable Research Farm of the Department of Horticulture, Allahabad Agricultural Institute-Deemed University, Allahabad, during the Rabi season of 2007-08 to study the effect of different spacing and varieties on growth and yield of Beet root. The experiment was laid in Randomized Block Design (3 x 4 factorial) comprising of 3 spacing (30cm x 10cm, 30cm x 20cm and 30cm x 30cm) and 4 varieties (Dark Red, Peto, Valivar and Ruby Queen), making 12 treatment combinations each replicated three times. Spacing of 30cm x 20cm, Dark Red variety and their combination recorded maximum germination (89.33%); plant height (34.44 cm); number of leaves (11.66), leaf length (33.55 cm) and width of leaf (12.89 cm); leaf spread (55.25 cm); root weight per plant (138.28 g); root length (16.97 cm); polar and radial diameter (6.71 and 5.90 cm) of root;) yield (20.74 t/ha); total soluble solid (8.89°Brix); gross return (Rs. 1,45,180/ha), net return (Rs. 97,997/ha) and cost: benefit ratio (1:3.07). Combination of 30 cm x 20cm spacing + Dark Red variety emerged as superior over all other combinations in relation to growth, yield attributing components, yield, quality and economic returns for cultivation of Beet root under the agro-climatic conditions of Allahabad.

Key Words : *Beta vulgaris* L., spacing, variety, growth parameters, yield.