

RESPONSE OF GA₃ AND PGPR ON PLANT GROWTH, FRUITING, QUALITY AND LEAF NUTRIENT STATUS OF STRAWBERRY CV. CHANDLER

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The effectiveness of GA₃ (25, 50 and 75 ppm) alone or in combination with five isolates of plant growth promoting rhizobacteria viz. *Bacillus licheniformis* CKA1, *Bacillus subtilis* CB 8 A, *Bacillus* sp. RG₁, *Bacillus* sp. S₁ and *Bacillus* sp. S₂ was studied to determine its effect on growth, fruiting, quality and leaf nutrient status of strawberry cv. Chandler during 2012-13 and 2013-14 at Model Farm, Dr YSP UHF, Nauni, Solan, Himachal Pradesh, India. The pooled data of both the years revealed significant effects of the treatments and showed that the maximum plant height (30.82 cm) was recorded in T₁₅, plant spread (37.53 cm) in T₁₂ and the number of crowns per plant (4.85) in T₉, while the maximum leaf area (137.71 cm²) and the number of runners per plant (36.04) were recorded in T₁₈. The highest plant biomass on fresh weight basis and dry wt. basis per plant (43.72 g and 13.21 g) were obtained from T₆ and T₁₅ respectively. The flowering duration (86.67 days) and number of fruits (21.42/plant) were high in T₉ while harvesting duration (42.28 days) in T₃ and yield (412.46 g/plant) in T₆. Fruit characteristics viz. maximum fruit weight and diameter (20.89 g and 29.75 mm) were recorded in T₆, fruit length (44.68 mm) and total sugars (7.43%) in T₁₂ and TSS (10.52 0Brix) in T₁₀. Treatments had also significant effects on leaf nutrient contents as maximum leaf nitrogen (2.70%) and potassium (1.67%) were present in T₆, manganese (84.77 ppm) in T₉ and copper (6.92 ppm) in T₁₂, whereas phosphorus (0.287%), calcium (1.43%), magnesium (0.351%), zinc (27.05 ppm) and iron (116.67 ppm) were maximum in T₁₈. Thus, study revealed that these can be used for sustainable fruit production in order to reduce chemical use and increase quality fruit production.

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