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Studies on the effect of growth regulator and vermicompost on growth and yield of different cultivars of strawberry (*Fragaria x ananassa* Duch)

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ABSTRACT : The present investigation was carried out at the Horticulture Research Center, of the Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut during 2013-2014. The maximum number of fruits (20.85) were recorded in the variety Chandler which was significantly superior to the rest of the varieties and followed by Gorella, Selva and Confictura. The maximum fruit yield per plant (385.57g) was recorded in the variety Chandler which was superior to the rest of the varieties and was followed by Selva, Confictura and Douglas. The minimum fruit yield per plant (177.79g) was noted in Gorella variety. The maximum fruit weight (18.41g) was recorded in the variety Chandler which was significantly superior to the rest and followed by Confictura, Selva and Douglas. Application of gibberellic acid (GA₃) 100 ppm + vermicompost @ 100q/ha was found to be the best treatment in response to fruit weight among different varieties of strawberry and recorded 16.48g. The maximum fruit yield (171.36q/ha) was recorded in the variety Chandler which was significantly superior to the rest and was followed by Selva, Confictura and Douglas; however, Selva and Confictura were statistically at par to each other. Variety Chandler responded maximum effect on fruit yield per hectare *i.e.* 205.357q/ha with the spray of gibberellic acid (GA₃) 100 ppm and application of vermicompost @ 100q/ha. The maximum total soluble solids (10.68°Brix) was recorded in the variety Douglas which was superior to the rest and was followed by Confictura, Selva and Gorella. The minimum TSS value (9.41°Brix) was noted in Chandler variety. Douglas responded maximum effect on TSS value *i.e.* 11.50°Brix with the spray of gibberellic acid (GA₃) 100 ppm and application of vermicompost @ 100q/ha as basal dose which was statistically significant to other treatments and followed by Confictura, Selva and Gorella. Viewing the above observations, Chandler, Confictura and selva were found promising for commercial cultivation, however, Gorella was found to be earliest among all.

KEY WORDS : Growth regulator, Vermicompost, Growth, Yield, Cultivars

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