

Comparative evaluation of strawberry (*Fragaria x ananassa* Duch.) cultivars under Allahabad conditions

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ABSTRACT

The present study was conducted under Allahabad agro-climatic conditions on the experimental farm of department of horticulture, A.A.I.D.U, Allahabad during 2003-04 on five cultivars of strawberry viz. Katrain sweet, Gorella, Belrubi, Blakemore and Fern, planted in the first week of November 2003 with a spacing of 45x30cm. All the vegetative characters viz. plant height (40.14cm), number of leaves/plant (18.90), plant spread (24.33cm), petiole length (10.46cm) and leaf area index (0.68) were found highest in Katrain sweet. All the floral characteristics viz., days taken to first flower emergence (69.72 DAT), first fruit bud development (74.56 DAT), number of flowers/plant (24.30) and fruit set per cent (88.88 per cent) were observed highest in cv. Gorella. Similarly, physico-chemical characteristics viz., fruit yield (6.08 tonnes/hac), fruit weight (12.18g), TSS (9.10 °B) and juice content (74.87%) were also observed highest in cv. GORELLA WHILE, total sugar content was found highest in Katrain sweet (8.12%). The vitamin 'C' content of the fruits was found highest in Blakemore (55.51 mg/100g of pulp). Based on the experimental findings it was concluded that Gorella be recommended as best cultivar under Allahabad regions.

Key words : Strawberry, *Fragaria x ananassa* Duch., Evaluation, Growth and yield

Strawberry (*Fragaria x ananassa* Duch.) is one of the delicious and nutritious among soft fruits. The modern Octaploid strawberry is the result of hybridization of two American species, *F. chiloensis* and *F. virginiana* (Sharma and Yamdagni, 2000). The name strawberry does not incidentally seems to have anything to do with the practice of putting straw around the plants and long predates their cultivation. It probably comes from "stray berry" for the runners cause young plants to stray from the parent (Buczacki, 1994). Strawberry is esteemed as dessert and consumed not so much for their food value as their flavour (Anonymous, 1956). Strawberry offer quicker returns on capital investments than any other fruit crop since under special methods of cultivation. Initially, strawberry was being grown in temperate zone and was considered a seasonal fruit, but now its cultivation is being adapted even in the non-traditional regions of the country. In the agro-climatic conditions of Allahabad, it has been observed that some cultivars of strawberry are showing good results at high temperature and humidity. Thus, it is essential to find out the cultivars suitable for commercial cultivation. There are certain varieties that have been released but their adaptability and acclimatization to different agro climatic conditions is yet to be confirmed for better performance and exploitation towards quantitative and qualitative yield. This will not only help the farmers to grow suitable varieties but it also helps them to understand their superiority over presently grown varieties. So the present study was made to select the

best cultivar for commercial cultivation in the sub-tropical conditions of Allahabad regions.

MATERIALS AND METHODS

The present study was conducted under Allahabad agro-climatic conditions on the experimental farm of department of horticulture, A.A.I.D.U, Allahabad during 2003-04 on five cultivars of strawberry viz., Katrain sweet, Gorella, Belrubi, Blakemore and Fern, planted in the first week of November 2003 with a spacing of 45x30cm. The experiment was laid out in randomized block design and replicated four times. For recording data, three plants of each cultivar were selected randomly from each plot to assess the vegetative and fruit development characters. Plant height and petiole length was recorded with a scale at different intervals from DAT; their average was calculated and subjected to statistical analysis. Leaf number were counted from fully opened leaves, averaged and analyzed at each successive stage of growth till harvesting. Plant spread was measured in east west and north south directions. Leaf area index was calculated with the graph method i.e. LAI = leaf area/ground area. Days taken to first flower emergence and days taken to fruit bud development were recorded from the date of transplanting of the three representative plants and the means were worked out. Fruit set (%) was calculated as per method given by Westwood (1978) i.e. number of flowers/number of fruits x 100. Fruit length was measured with vernier caliper and expressed in cm. Specific gravity