

Effect of growth regulators on post-harvest life of banana cv. Grand Naine and Bio-chemical changes during storage

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SUMMARY : Post-harvest treatment of GA₃ 100 mg l⁻¹ with fruit from 1st to 4th basal hands of the bunch (H₁) and stored at ambient temperature was found excellent in bio-chemical parameters viz., total soluble solids (TSS %), reducing sugar (%), total sugar (%) and ascorbic acid (mg/100 g of fresh pulp). While, it increased the titrable acidity (%) during the storage period by without affecting the quality of banana fruits cv. Grand Naine.

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Banana is one of the most important fruit crops of the world. Its origin is the tropical region of South-East Asia. Banana crop has nutritional, medicinal, industrial as well as aesthetic value in Hindu religion. India is the largest banana consumer and producer in the world. A few main challenges faced by fruit industry are the enormous post-harvest losses, lack of scientific information on handling, packaging system and post-harvest treatments. Out of large number of varieties grown in India, Basari was the most popular variety among growers and consumers. But with the introduction of high yielding variety 'Grand Naine', the area of Basari is shriveled to greater extent. Grand Naine is the most popular in Gujarat and Maharashtra for domestic market and export. Besides the increasing production of banana, post harvest losses are the major problem. Since, banana is a climacteric and perishable fruit, application of post harvest treatments becomes

necessary to extend shelf life with reduction in post-harvest losses. The present investigation was carried out to find out the possibility to improve the shelf life of 'Grand Naine' bananas by post harvest application of certain growth regulators.

EXPERIMENTAL METHODS

Fully mature bunches of the Grand Naine variety were used for the study. The experiment was conducted in Completely Randomized Design with Factorial concept (FCRD). There were three repetitions and nine treatments with one control. Hands of banana were treated with growth regulating substances. All the fingers from the first basal four hands (H₁) and the succeeding four hands (H₂) were mixed together separately to find out whether any quality difference existed between hands of same banana bunch. The fingers in each treatment were dipped in the solutions for about 10 minutes and then taken out and kept separately for ripening at ambient temperature. Control fruit were dipped in distilled water. The quality was assessed with respect to different bio-chemical parameters.

EXPERIMENTAL FINDINGS AND ANALYSIS

The results obtained from the present investigation are presented below:

Total soluble solids (%) :

Banana fruits of first four hands significantly

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