

Effect of Growth Regulators on the Shelf-life of Sweet Orange cv.Sathgudi (Citrus sinensis Osbeck.)

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ABSTRACT

An experiment was conducted to study the effect of growth regulators in combination with wax on shelf life of sweet orange. Sathgudi fruits were treated with the 2,4-D (500ppm) + wax (6%), GA₃ (500ppm) + wax (6%), Benzyl Adenine (50ppm) + wax (6%) and wax (6%). The results from the experiment clearly indicated that the BA (50ppm) + wax (6%) was better in maintaining the fruit quality during storage followed by 2,4-D (500ppm) + wax (6%). The efficacy of BA (50ppm) + wax (6%) in prolonging the shelf life of sweet orange fruits was attributed to the reduction of weight loss, spoilage, retention of more juice and peel content and maintenance of fruit firmness. Quality changes in sweet orange were also good in the BA (50ppm) + wax (6%) due to the optimum sugar content. The quality of treated fruits was better maintained as compared to those treated with wax alone. The slow buildup of sugars in growth regulator treated fruits was attributed to their increased shelf life. The ascorbic acid content and overall acceptability was also high for the fruits treated with the BA (50ppm) + wax (6%).

Key words : Benzyl adenine (BA), 2,4-Dichloro phenoxy acetic acid (2,4-D), Gibberellic acid (GA₃), Growth Regulators, Wax, Shelf-life, Sweet orange.