



RESEARCH PAPER

Effect of preharvest application of chemicals and plant growth regulators on physical parameters and shelf-life of custard apple (*Annona squamosa* L.)

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Abstract : The three varieties of custard apple were subjected to various preharvest chemicals and plant growth regulators treatments, viz., CaCl_2 @ 2 %, KNO_3 @ 2 %, GA_3 @ 50 mg/l, NAA @ 50 mg/l and no spray. Then mature, uniformed sizes fruit were harvested and observation were recorded under ambient storage condition. Balanagar recorded maximum fruit weight (180.32 g), volume (109.42 cc) and pulp weight per fruit (90.52 g) while minimum peel weight per fruit (53.87 g) and seed weight per fruit (10.43 g) recorded in Local variety at harvest. GA_3 @ 50 mg/l were found to best since they have maximum fruit weight (159.60 g), volume (96.85 cc) and pulp weight per fruit (79.54 g) at harvest. In case of fruit diameter (7.39 cm, 7.09 cm) in both factors were recorded maximum at 3rd day of storage. CaCl_2 @ 2 % recorded minimum PLW (23.54 % at 6th day) and spoilage percentage (32.22 %) and maximum fruit firmness (0.25 kg/cm² at 6th day), shelf-life of fruits (7.25 days) and marketable fruit percentage (67.78 %) during storage. Thus, it can be inferred from the study that Balanagar variety and GA_3 @ 50 mg/l rated as most acceptable and superior, over all the other treatments in term of physical parameters and in term of quality and shelf-life CaCl_2 @ 2 % treatment observed during ambient storage.

Key Words : Calcium chloride, Potassium nitrate, NAA, GA_3 , Physical parameters, shelf-life

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