

Study on the Effects of Packaging and Storage of Himsagar Mango

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Abstract—The study on effect of packaging and storage condition on the shelf life and chemical composition of mango cv. Himsagar was carried out at Department of Post Harvest Technology of Horticultural Crops, Faculty of Horticulture, BCKV, Nadia. The fruits of cultivar were harvested at fully mature but unripe stage and were packed in different packages (Un-perforated LDPE, Perforated LDPE, Plastic crate, CFB box and Perforated LDPE with CFB box) and placed in cold store ($12\pm 1^{\circ}\text{C}$; 85-90% RH) whereas control was without packaging under ambient condition. The fruits were examined for biochemical parameters viz., TSS, titratable acidity, ascorbic acid, total sugar, reducing sugar and β - carotene content. Data revealed that packaging and storage period had significantly affected the various chemical constituents of fresh Himsagar mango. There was a gradual decrease in acidity and ascorbic acid content of mango, whereas, TSS, total sugar and reducing sugar contents increased during storage. Packing Himsagar mango in LDPE bag of 100 gauge thickness with 1% perforation and 3 ply CFB with 5% perforation at temperature $12\pm 1^{\circ}\text{C}$ proved to be the best treatment for it recorded more gradual increase in TSS and total sugar than other treatments up to 12th day. It also showed maximum shelf life and maximum retention of nutritional quality for the cultivar. But, as per sensory quality the maximum score was attained in CFB box (T_4) for Himsagar.

Keywords: Fresh Himsagar, Cold storage, Packaging, Biochemical parameters.