

Abstract:

Research was conducted during 1995~1996 to determine harvesting time, maturity indices and the effect of storage period on the poststorage ripening of 'Sebri' pear of Esfahan. 'Sebri' pear is part Japanese sand pear and was developed from *Pyrus serotina* var. *culta* Rehd. One of the most important problems in postharvest physiology of 'Sebri' pear is determining the precise harvesting time or maturity indices, so as to increase quality and quantity of pear fruit during storage and marketing. Fruits were harvested at weekly intervals over approximately a 4 week period from a commercial orchard. Fruits were dipped in a mixture of the fungicides thiabendazole, 2 g/l and ethoxyquine, 2 g/l for 3 minutes. Samples of 10 fruits were placed in plastic bags and stored at $10\text{C} \pm 1$, at 85 to 90% RH for 6 months. At each harvesting time, 120 fruits were selected and divided into four storage periods (0, 2, 4, and 6 months). Fruits were subjected to measurements of flesh firmness, skin colour, soluble solids content, weight loss, and physiological disorders. The results of the study showed that skin colour proved to be the best index for determination of maturity of 'Sebri' pear but this index with other maturity indices gave better results in determination of harvesting time. The best harvesting time was determined when skin colour changed from green to greenish-yellow and fruit firmness was 9.65 kg and 5.65 kg, using pressure probes with tips of 11 and 8 mm, respectively. The results of this investigation also showed that 'Sebri' pear did not need a period of cold treatment before ripening, but holding fruits at 20oC , and 80% RH for 8 days, uniformly induced ripening. Fruits harvested at optimum maturity had optimum quality after 6 months storage at 10C with minimum physiological disorders.