

## Effects of harvest time and packing method on fruit quality and Cold-Storage duration of "Gorban Maragheh" apricot cultivar

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### Abstract

Apricot because of its high respiration rate and rapid ripening process has short storage life and so should be marketed immediately after harvest. Harvesting of apricot in suitable time and packing it increase storage period. This study was carried out to determine the optimum harvest time and packing method of apricot fruits to prolong their storage life and decrease their waste. Split-factorial based on complete randomized block design was used for one traditional apricot cultivar as "Gorban maragheh" in three harvesting stages (as the main factor) based on fruit skin color. The first harvest was conducted when skin color had a predominantly green background with yellowish tinges; the second and third harvest times coincided with yellow background with greenish tinges and yellow-orange background color of fruits. Fruits were packed in two methods (as sub-factor), boxes with and without polyethylene covers. Fruits were stored at 0-2 degree centigrade and 85% RH For 0 (control), 7, 14, 21 and 28 days (as sub-factor). Fruit properties including fruit weight, firmness, total soluble solid, pH and electrical conductivity were measured and results were analyzed. Findings showed that the optimum harvest time of this cultivar was when the fruit skin color had a predominantly yellow background with greenish tinges. This was synchronous with 82 days after full bloom equal to 1176 growth degree days or 28224 growth degree hours for "Gorban maragheh" cultivar. Use of polyethylene packaging prolonged storage life. In these conditions, fruits could be cold-stored with suitable quality until 28 days. Apricot fruit's storage life was reduced significantly by delays in their picking time. Accordingly, increase of fruit's cold storage period, fruit firmness reduced but total soluble solid, pH and electrical conductivity of fruit extract rose remarkably.

**Keywords:** *Apricot, Cold-Storage, Harvesting Time, Packing*