

Effects of fruit maturity and packing method on storage life of “Ghermez Shahroud” apricot cultivar

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Received: 19 June, 2010

Accepted: 16 May, 2012

Abstract

Apricot has short storage life and is marketed immediately after harvest. Rapid ripening process and high respiration rate of apricot cause its short cold-storage duration. Harvesting of apricot fruits in suitable time and packing them increase their storage period. This study was carried out to determine the optimum harvest maturity and packing method of apricot fruits to prolong their storage life and decrease its wastes. Split-factorial based on complete randomized block design was used for "Germez shahroud" apricot fruits in three harvesting stages (as 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 coincided with yellow background with greenish tinges and yellow-orange background color of fruits. Fruits were packed in two methods (as sub-factor) including boxes with polyethylene covers and without it. Fruits stored at 0-2 degree centigrade and 85% RH For 0 (control), 7, 14, 21 and 28 days (as sub-factor). After each storage period, fruits were tested for their properties including fruit weight, firmness, total soluble solid, pH and electrical conductivity. Results showed that the optimum harvest time of this cultivar was when the fruit skin color had a predominantly yellow background with greenish tinges. This is synchronous with 75 days after full bloom equal to 1041 growth degree days or 24987 growth degree hours for "Germez shahroud" cultivar. Use of polyethylene packaging prolonged fruit's storage life. Under these conditions, the fruits of "Germez Shahroud" could be cold-stored with suitable quality until 21 days. Delay in their packing time reduced apricots storage life significantly. Accordingly, with the increase of fruit's cold storage period, fruit firmness reduced but total soluble solid, pH and electrical conductivity of fruit extract increased significantly.

Keywords: *Apricot, Cold-Storage, Maturity, Packing.*