

**Title** Influence of harvest time on cold storage of local early cultivars of Iran

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### **Abstract**

Early native cultivars are assumed by many local fruit growers affected by complete lack of storage capacity, in Iran. Preliminary researches reject at least partially this common belief. Different factors like pomological characters of the cultivar like higher juice content, low flesh firmness, improper handlings during harvest and post harvest, and in particular incorrect harvest time cause high losses and decrease the limited genetic storage capacity. In order to determine the influence of harvest time, the samples were harvested in two different stages, physiological maturation and precocious phase, in 2007. This experiment was carried out on 10 native early and mid early cultivars with 15 years old trees planted in national apple cultivar collection of Karaj (Iran). The research experiment was a Factorial within completely randomized design. The harvest time was determined by using maturation indexes particularly the accumulative temperature degree day, from full bloom till harvest time and potassium Iodide tests. The samples weight variations were measured together with quality properties such as firmness, pH, TA, TSS. Sensorial analyzes was organized by a fixed panel test composed of 10 individuals. All the tests and measurements were computed based on the differentiated sequential intervals on the basis of earliness class of the cultivar. So, the tests intervals differed from weekly: 'Ghandak-e Kashan', bi weekly: 'Golab-e Kohanz', Monthly 'Asali' and 'Ghermez-e Rezayeh'. The results showed that not only the first harvest showed better storage keeping good quality in many cultivars than the second harvest, but it was demonstrated that early cultivars can be easily stored for 6,8,9, 10 and 15 weeks relatively for 'Mashad-e Nouri' and 'Mashad'; 'Golab-e Kohanz' and 'Koli-e Mahallaf'; 'Golab-e Isfahan'; 'Ghermez-e Rezayeh' and 'Payze Zarde Mashad'.