

Title Relationship between external color and physiological changes during loquat maturation. comparison between cv. Algerí and cv. Xirlero

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Abstract

'Algerí' is the most important cultivar of loquat grown in Spain; recently, a spontaneous mutation called 'Xirlero' has caught the interest of the loquat industry since the fruit grow to a larger size than 'Algerí' loquats. To ensure that the fruit reaches to the consumers at the optimum quality, it is necessary to determine the optimum state of harvest. Thus, the present study establishes the relationship between peel color and the physiological changes that take place during the development and maturation of both loquat cultivars. The changes in color during fruit maturation were associated with a decrease in firmness, acidity and astringency as well as increase in soluble solid content and fruit size. Eight stages of maturity (SI to SVIII) have been defined based on the external color of the fruit with the color index (CI=1000a/Lb; L, a, b Hunter parameters) ranging from -14 to +10. To ensure an optimum stage of maturity that meets consumer expectations, our results showed that the 'Algerí' loquat should be harvested after reaching maturity stage SVI (CI= +6) while the 'Xirlero' fruit reach commercial maturity at stage SVIII (CI= +10). The factors limiting an earlier harvest of 'Algerí' and 'Xirlero' loquat were the levels of acidity and astringency, respectively.