

# Monitoring the Flesh Softening and the Ripening of Peach during the Last Phase of Growth On-tree

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## Resumen

The aims of this study were to characterize the softening rate of the flesh and some physiological parameters of three peach cultivars during the last phase of on-tree development. During two consecutive seasons, labeled fruits were nondestructively monitored on-tree, from the stone-hardening phase up to harvest. The absorbance index of the skin (I-AD) follows a segmented, nonlinear regression. Beyond the intersection point of the two segments of the regression, the I-AD decreased linearly at a higher rate 10 to 15 day before harvest. The most dramatic change of the I-AD coincided with the "color break" of the skin. The I-AD and the flesh softening were similar in 'Andes Du-1' and 'Loadel', while there was no difference in the growth rate of 'Bowen' and 'Loadel'. 'Andes Du-1' and 'Bowen' showed the same growth rate in the upper and the lower sections of the canopy. The fruit at the upper section showed a mass of 30 to 50 g greater than the fruit at the lower section. In addition, no significant changes in the evolution of the soluble solids content (SSC) were observed, with the exception of 'Loadel' located in the upper section of the canopy.

Differences in the length of the fruit development period are strongly influenced by the accumulated temperature after bloom. The difference in the fruit mass, SSC, I-AD, and background color depend on the position of the fruit on the canopy. The use of mixed models, based on repeated sampling over time allows to accurately describing the evolution of peach ripening.

## Palabras clave

**Palabras clave de autor:** [peach maturation](#); [fruit quality](#); [flesh softening](#); [ripening](#)

**KeyWords Plus:** [FRUIT-QUALITY](#); [CROP LOAD](#); [ELEGANT](#)

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