

Maturation Behavior of Maxi Gala Grafted on two Rootstocks by no Destructive Method

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Keywords: *DA-Meter, fruit quality, M.9, Marubakaido*

The evaluation of the maturation in apple orchards is checked using destructive methods, sampling fruits and analyzing them in the laboratory, making the process slow and expensive. The use of not destructive method to determine fruit maturation in the orchard could accelerate delivery of results and help in determining harvest time, because non-destructive data would allow to verify the maturation on different blocks in the orchard. The aim of this work was to chart fruit maturation in 'Maxi Gala' grafted on two different rootstocks, using destructive and not destructive methods. The non-destructive method used was the portable DA-Meter. The trial was realized at Vacaria, southern Brazil located 28,44 S and 50,85 W. The samples were harvested on two orchards during the seasons 2014/15 and 2015/16, during six weeks before harvest from January until the second week of February. The sampling was realized in five different points of the orchard, on rootstocks M.9 or Marubakaido with M.9 interstem. Ten-apple samples were collected weekly in each point in the orchard and then evaluated by destructive method (flesh firmness, starch degradation, total soluble solids and acidity) and the not destructive method (DA-Meter). For both seasons, the evolution of the fruit maturation of Maxi Gala showed a similar progression for both rootstocks. The non-destructive method correlated well with the traditional destructive methods, making it a tool for more practical and easy determination of the harvest date.

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