

Title Degreening of 'Murcott' tangor with ethephon treatments

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Abstract

Brazilian citrus are located in the tropical regions, due to this fruit reach full internal maturity, while the peel remains fully or partially green, making them unacceptable for in nature consume. 'Murcott' tangor (*Citrus reticulata* Blanco x *Citrus sinensis* Osbeck) shows problems of green peel regions near to the insertion of the stalk, which affects the fruit quality. The objective was to study the effect of ethephon in degreening of 'Murcott' tangor. Different concentrations of ethephon were used: 0, 500, 1000 and 2000 mg L⁻¹. After treatments fruit were stored at 15°C or 25°C. Fruit were analyzed for color on the equatorial region of the peel and stalk, soluble solids, acidity, juice percentage, 'ratio', ascorbic acid, ethylene production, respiration rate, total chlorophyll content and activity of chlorophyllase. It was observed that at both temperatures 15°C and 25°C, there was a increase in the index of color, getting close to 2.0 that represents yellow color. Treated and untreated fruit with ethephon stored at 25°C had a greater increase in the index values of color than fruit stored at 15°C. It was observed that there was a reduction in the total chlorophyll content due to the increase of color index and activity of chlorophyllase. No differences were verified in the levels of soluble solids, acidity and 'ratio'. It was also observed that the production of ethylene and respiratory rate were proportional to the concentration of applied ethephon, decreasing during storage at 15°C and 25 °C. Treatment with ethephon has great potential for commercial use, requiring further study.

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