Abstract:

It is estimated that losses of Mexican Lime fruits (Citrus aurantifolia Swingle) are up to 50% due to its high chilling injury susceptibility. Therefore, the effect of three different natural coatings, two based on mesquite gum mixed with candelilla wax and mineral oil (MCMO) at ratios of 2:1 and 1:1, and a third aqueous emulsion of candelilla wax with Tween60-Span60 were compared with a commercial wax on the post harvest life of Mexican limes. The limes were harvested at the beginning of June and again at the end of August, 2001, and stored at different temperatures (4,7,10 and 20ºC, 90 ±2% R.H.). Chilling injury percentage, peel color, physiological weight loss percentage (%PWL), juice percentage, titratable acidity, and TSS were determined every three days by triplicate. No differences among treatments were found in TSS, juice percentage and titratable acidity. A synergistic effect was found on fruits treated with MCMO 1:1 formulation and stored at 10ºC, showing less chilling injury, less percentage of PWL and a greener color. Significant differences were observed in the response of fruit harvested in both seasons, showing that the overall quality of early season limes were better.