

**Title** Calcium chloride dip and postharvest behavior of butterhead lettuce minimally processed

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**Keyword** calcium chloride; butterhead lettuce; minimally

#### **Abstract**

Pre and post harvest calcium applications have been used to delay aging or ripening, to reduce postharvest decay, and to control the development of many physiological disorders in fruits and vegetables. This experiment was performed to determine whether calcium chloride dip extends post harvest shelf life of butterhead lettuce minimally processed. Plants were grown during whole production period in soilless culture with a complete nutrient solution. After transplant, plants were grown for 45 days. At harvest wrapper leaves were trimmed off and the others were used. About  $90 \pm 5$  g of intact and shredded leaves were dipped in calcium chloride or water, packed in bags, sealed and stored in chambers at  $1 \pm 0.5^\circ\text{C}$  and  $8 \pm 2^\circ\text{C}$  for 8 days. Every three days, samples were taken to measure overall quality, gas concentration (oxygen and carbon dioxide) inside the bags, weight loss and total chlorophyll. At the end of the storage period, electrolyte leakage and browning intensity were measured. Calcium chloride dips and shredded the leaves affected all postharvest variables, specially when the storage temperature was  $8 \pm 2^\circ\text{C}$