

Abstract:

Cultivars 'Parris Island', a romaine type lettuce (*Lactuca sativa* L.) and 'Atraxion', a leaf type lettuce, were grown in an unheated glasshouse at a density of 25 plants.m⁻² in a sandy loam soil. Harvest took place 97 days after transplanting and quality was evaluated on the day of harvest and after 3, 6, 9, 12 and 15 days of storage at 1 °C. At harvest, the plants of cv. 'Atraxion' had a higher nitrate content on a fresh and dry weight basis than the plants of cv. 'Parris Island'. No significant differences were observed between plants of the two lettuce types regarding dry matter, soluble solids, ascorbic acid content, pH and titratable acidity. A remarkable weight loss during storage was observed in both lettuce types; after the 9th day of storage, the plants of cv. 'Atraxion' exhibited a greater weight loss than plants of cv. 'Parris Island'. A significant increase in pH was observed in both lettuce types during storage, as well as a high degree of ascorbic acid retention. Nitrate content showed no remarkable variation during the storage period in either lettuce type. The leaf colour changes were not reliable indicators of storage potential and senescence of lettuce.