

Title Effects of growing conditions on the postharvest quality of herbs
Author Nazrul Islam, Sissel Torre, Anne B. Wold and Hans R. Gislerod
Citation Abstracts Book, 6th International Postharvest symposium, 8-12 April 2009, Antalya, Turkey.
256 pages.
Keyword Postharvest; quality; herb

Abstract

Temperature, relative air humidity (RH) and light period are the essential climatic factors for growth and postharvest quality of horticultural crops. Relatively little is known about the effects of pre-harvest climatic condition on the postharvest quality of herbs. Three experiments were conducted in growth chambers and greenhouse compartments *Melissa officinalis* L. (lemon balm) and Increasing RH (65, 80, and 95%) and light period (16, 20, and 24 hr) increased the rate of water loss from detached leaves. highest rate of water loss was recorded from detached leaves that were taken from the plants grown at 95% RH, and at 24 hr period High RH (95%) and 24 hr light period during growth resulted the highest rate of water loss (g/pot/day) during postharvest and the lowest postharvest life, and was negatively correlated ($r = -0.000$) High variation in the day/night ($32^{\circ}/8^{\circ}\text{C}$) temperature (+24 DIF) had pronounced effect on the rate of water loss and postharvest life compare to other treatments (0 DIP, 20 DIP, 12° drop, and 6° drop) , but the effects varies between the species. In basil, the rate of water loss increased and postharvest life was reduced with + 24 DIF while in lemon balm, the rate of water loss reduced and postharvest life was eased. There was little or no effect of temperature drop on the postharvest life and shoot quality. Increased shoot elongation high RH caused bending of shoots and may not be acceptable by the consumers. This suggest that high RH and continuous t needs to be avoided for quality herbs production, even though that gave good dry matter production.