

Title Biochemical basis of the effects of modified and controlled atmospheres
Author Chien Y. Wang
Citation Stewart Postharvest Review, Volume 2, Number 5, October 2006, pp. 1-4(4)
Keyword Biochemical basis; physiological effects; metabolic activities; storage

Abstract

Purpose of the review: This review provides updated information on the biochemical and physiological effects of modified and controlled atmospheres (MA and CA) on fruits and vegetables.

Main findings: In addition to conventional MA and CA storage, which use low O₂ and high CO₂, there has recently been some interest in using superatmospheric O₂ and other non-conventional gas mixtures such as argon and nitrous oxide. The biochemical basis for these treatments is also included in this review.

Directions for future research: Specific biochemical and physiological reactions to MA and CA in each commodity require further investigation. The great diversity in shape, size, physical structure and chemical composition of various fruits and vegetables create variations in the response to MA and CA. Understanding more about these specific responses will be helpful in refining storage technology for each individual commodity.