

Abstract:

The literature on controlled atmospheres (CA) for arthropod control on fresh horticultural perishables is summarized. Four basic approaches to control of arthropod pests are discussed, including regular CA storage, low temperature insecticidal CA, room temperature insecticidal CA, and high temperature insecticidal CA. Insecticidal CA (ICA) generally involves O₂ concentrations below 2 kPa and/or CO₂ concentrations of 20 kPa or greater. In recent years, researchers have focused more on high temperature ICA with reduced activity in the other three areas. In addition, there has been less research on the tolerance of fresh commodities to ICA in recent years. To date, CA has not been approved as an official quarantine method, although it is used during storage of dried fruits and nuts for insect control.