

Title Innovative packaging solutions for fresh-cut produce.
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Abstract

During recent years, there has been an explosive growth in the market for freshly prepared fruits and vegetables (i.e. produce). The main driving force for this market growth is the increasing consumer demand for fresh, healthy, convenient and additive-free prepared produce items. However, freshly prepared produce items are highly perishable and prone to major spoilage mechanisms of enzymic discoloration, moisture loss and microbial growth. Good manufacturing and handling practices along with the appropriate use of modified atmosphere packaging (MAP) are relatively effective at inhibiting these spoilage mechanisms, thereby extending shelf life. Shelf life extension also results in the commercial benefits of less wastage in manufacturing and retail display, long distribution channels, improved product image and the ability to sell convenient, added-value, fresh prepared produce items to the consumer with reasonable remaining chilled storage life. The application of high oxygen MAP is one new approach for the retailing of fresh prepared produce items that is capable of overcoming some of the inherent shortcomings of current industry-standard air packaging or low oxygen MAP. The results from an extensive European Commission and industry funded project have shown that high oxygen MAP is particularly effective at inhibiting enzymic discoloration, preventing anaerobic fermentation reactions and moisture losses, and inhibiting aerobic and anaerobic microbial growth. The focus of this presentation will be to highlight how extended shelf life can be achieved by using high-oxygen MAP. In addition, other selected packaging innovations (e.g. edible coatings, active and intelligent packaging) will be briefly mentioned along with some interesting pack/product developments from the fresh-cut produce retail market.