

Institution: Oregon State University

Participant: Jinhe Bai, Telephone 541-386-2030; Email: Jinhe.bai@oregonstate.edu

Activities

Objective 2: To develop new strategies to maintain fresh-cut product quality

- Effect of harvest maturity on quality of pear salad: traditional harvest maturity of pears is not suitable to process salad because the taste is flat and the texture is coarse at an unripe stage. In this research, 'Anjou' pears were harvested at commercial maturity and one month after the commercial harvest (delayed harvest). After two and five months of cold storage, fruit were sliced and stored at 1°C for up to 3 weeks. Fruit were larger in size, less sour, sweeter (higher SS/TA ratio), richer in aroma, had less browning potential, and had a juicier and crispier texture by delaying harvest. A significant improvement of salad quality was achieved by delaying harvest when the raw fruit were stored for two months. However, both commercial and delayed harvested pears had poor quality with little difference between treatments when stored for five months.
- Effect of ethanol release pad on cored cherries: Ethanol-release powder (Antimold Mild®, Freund Industrial, Japan) allows ethanol vapor to diffuse gradually. It is made from ethanol absorbed onto silica gel that is packed in a special film, laminated with ethylene-vinylacetate and Japanese paper, which regulates ethanol diffusion. The ethanol pads reduced deterioration of wound surface and increased shelf-life of cored cherries at 1, 10 and 20°C.

Publications

Plotto, A., J. Bai, J.A. Narciso, J.K. Brecht, and E.A. Baldwin. 2006. Ethanol vapor prior to processing extends fresh-cut mango shelf-life by decreasing spoilage, but does not always delay ripening. *Postharvest Biol. Technol.* 39: 134-145.