

Food Storage Technology Improves Consumer Satisfaction

North Carolina State University



To provide consumers with the freshest, highest-quality fruits and vegetables, researchers have long been interested in managing the production of ethylene, which is a naturally occurring hormone in fruit that causes ripening, and eventually, softening and rot. Effective quality control methods would mean benefits to consumers such as improved overall tartness and taste.

North Carolina State researchers from the College of Agriculture and Life Sciences, Edward C. Sisler, Ph.D., and Sylvia M. Blankenship, Ph.D., have discovered the secret to keeping fruits and vegetables juicy, crisp and harvest-quality-fresh through storage and the trip to the marketplace. They uncovered 1-MCP (1-methylcyclopropene), a patented technology that provides a method of inhibiting the ethylene response of fruits and vegetables, thereby regulating the ripening process and lengthening the shelf life of produce.

“*Researchers have discovered the secret to keeping fruits and vegetables juicy, crisp and harvest-quality-fresh through storage and the trip to the marketplace.*”

Rohm and Hass Company recognized the commercial potential of the university's discovery and worked with the Office of Technology Transfer to license the ethylene-inhibiting technology. Rohm and Hass formed AgroFresh to develop its product platform. Based on this successful union, AgroFresh developed a product called SmartFresh® a synthetic produce enhancer. Ethylene-sensitive crops such as apples, avocados, bananas, broccoli, cucumbers, leafy vegetables, mangoes, melons, pears, plums and tomatoes are now candidates for longer life spans and fresher taste. SmartFresh® helps drive growth in the produce industry by ensuring that fresh food crops get to market, which means consumers can expect fresher fruits and vegetables year-round.

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