

ENSURING THE SAFETY & QUALITY OF FRESH-CUT PRODUCE

Food safety and quality control are critical aspects of food security and human health. Fresh-cut produce like packaged salad, carrot sticks, and sliced melons spoil easily and has been responsible for recent foodborne illness outbreaks, which cost billions of dollars due to recalled products, healthcare expenses, and lost wages and worker productivity.

Conventional food safety methods are not always effective and often damage the flavor, texture, nutritional value of fresh-cut produce. Researchers from 14 land-grant universities are collaborating with the U.S. Department of Agriculture and international institutions to find innovative solutions to these issues.

This research has played a big part in giving consumers steady access to safe, high quality fresh-cut products and boosting customer satisfaction and confidence. Over the past five years, scientists have:

- Determined the optimal ripeness for cutting and processing fresh produce so that it lasts longer.
- Designed biodegradable packaging made from renewable resources and packaging that controls humidity and releases antimicrobials.
- Improved tools for detecting pathogens in food processing areas and on food surfaces.
- Tested cleansing techniques, sanitizers, protective coatings, and other tools that can remove or kill dangerous bacteria and the biofilms they form.
- Measured the risk of *Salmonella* transfer when using single-use or reusable gloves to handle fresh-cut produce.
- Characterized the compounds in fresh produce that promote health. This helps make sure food safety techniques preserve nutritional value.
- Produced educational materials and training courses that have helped federal agencies, industry members, growers, processors, and customers accept and adopt new practices.



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