



Program for Value-Added & Alternative Agriculture



At a fresh produce safety workshop, Maria Noriega, NCDA (middle), and Diane Ducharme, Value-Added team (right), uses a blacklight to demonstrate the importance of hand washing.

NC State University • NC Cooperative Extension

September Is Food Safety Month

Update on North Carolina Fresh Produce Safety Initiative

Food safety is at the forefront of consumers' minds. In a 2008 Deloitte survey of 1,100 consumers, 76 percent said they were more concerned with the food they eat than they were five years before. Extensive media coverage on the 2008 outbreak of *Salmonella* (linked initially to tomatoes then to peppers) and the 2006 outbreak of *E.coli* (linked to bagged spinach) raised fears and concerns. These outbreaks have created an environment where fresh fruit and vegetable commodity groups and producers are greatly concerned about minimizing risks.

N.C. Cooperative Extension, through its fresh produce safety initiative, and in cooperation with the N.C. Fresh Produce Safety Task Force, is taking a proactive approach to provide critical training to agents and producers. Extension faculty members have secured more than \$250,000 in grants and equipment for education and research to support training efforts. The N.C. Tobacco Trust Fund Commission, Sustainable Agriculture Research and Education (SARE), USDA Rural Cooperative Development, the Agricultural Advancement Consortium of The Rural Center, Risk Management Agency, N.C. Tomato Growers Association and PPG Inc. funded grants to support these projects:

- A Web site, www.ncfreshproducesafety.org, with resources for growers, educators and consumers. Take a look at what you can do for Food Safety Month and through the year.
- A fresh produce safety curriculum and three train-the-trainer workshops across the state in fall 2008 and spring 2009. The curriculum package is scheduled to go to counties in November.
- Research on water quality issues, human pathogen and plant interactions, and microbiological mitigation.
- Research on current levels and types of traceability systems in North Carolina, including ability and effectiveness to respond to investigations of food-borne illnesses or recall situations, and ways to make improvements.
- A pilot study on the development of traceability templates for three differently sized operations that are typical of N.C. growers, packers and shippers. The study will look at cost-effective ways to comply with current guidance from the Produce Traceability Initiative.
- More than 90 presentations on fresh produce safety education throughout the state and region.

- Food safety plan templates for growers to use and adapt for their operations. The templates are based on the USDA's Good Agricultural Practices (GAPs) and Good Handling Practices (GHPs) audits.
- A plan for delivering rapid information updates during an outbreak in an affected commodity.
- Collaborative efforts throughout the Southeast for a more integrated fresh produce safety response.

Numerous Extension campus and field faculty, from both N.C. State University and N.C. A & T State University, are members of the N.C. Fresh Produce Safety Task Force. The co-chairs of the task force are: Dr. Ben Chapman, Department of 4-H Youth Development and Family and Consumer Sciences; Diane Ducharme, Program for Value-Added & Alternative Agriculture; Dr. Chris Gunter, Department of Horticultural Science; and Dr. Trevor Phister, Department of Food, Bioprocessing and Nutrition Science.

In addition to Ducharme, Value-Added team members involved in task force efforts are Rod Gurganus, co-chair of the education working group, and Leah Chester-Davis, co-chair of the networking and communications working group.

In addition to the above ongoing efforts, the task force has accomplished the following:

- Developed a strategic plan with vision statement and goals for the N.C. fresh produce industry.
- Organized a 30-member policy team of growers and industry and association representatives to provide insight into how federal and state legislation and regulations affect North Carolina. The team provides one-on-one interaction with the N.C. Congressional delegation in Washington, D.C., to discuss pending produce safety regulations and to convey frontline experiences from N.C. farms.
- Maintained active representation on the Governor's Food Safety and Defense Task Force.
- Delivered educational opportunities for commodity leadership.

Updates for both Extension fresh produce safety efforts and the overall N.C. Fresh Produce Safety Task Force are posted at www.ncfreshproducesafety.org.

New Resource

The Strawberry Growers Information Portal brings together many resources pertaining to production, management and marketing of strawberries in North Carolina. The portal was funded by the N.C. Tobacco Trust Fund Commission. Visit www.ncvalueadded.org. Click on "Growers Information Portals."

BOOKMARK IT!

Value-Added & Alternative Agriculture business toolkits, enterprise budgets, marketing handbooks, videos, PowerPoint presentations and more.
www.ncvalueadded.org

Fresh Produce Safety commodity-specific guidance, information on audits, food safety plans and good agricultural practices, and training updates.
www.ncfreshproducesafety.org





Research Focus: Fresh Produce Traceability

Recent outbreaks of illnesses caused by *E.coli* O157 and *Salmonella* on produce have caused economic losses to produce growers nationwide. Losses linked to past outbreaks might have been greatly reduced if the traceability and source identification process were more efficient and precise.

While traceability is important during an outbreak investigation, being able to follow fresh produce throughout the supply chain can have other benefits. Traceability allows for the identification of products (“hey, that’s not our stuff that’s involved”) and can be used in transferring marketing information (“that exact product was grown under these exact conditions”).

Potential barriers to a strong traceability program include equipment costs, data storage, information transfer and resource dedication. Even with direct marketing, such as farmers markets and you-pick farms, traceability is an issue. Cash sales make it even more difficult to know where products went. Earlier this summer, a Texas firm’s recall of fresh cilantro triggered by a *Salmonella*-positive test demonstrated the difficulties of a direct market product. Because many of the producer’s transactions were cash-based, it was almost impossible to track the product’s destination.

This summer we explored the implementation and effectiveness of select grower/packer/shipper traceability programs and evaluated the ability to respond to an outbreak investigation. The research will be used to recommend improvements. Data were collected in two phases: a statewide industry telephone survey and 10 intense, on-site case studies of product tracking systems.

The first phase addressed the self-reported traceability practices of the produce industry. We conducted telephone surveys with 63 grower/packer/shipper firms across the state. Commodities and markets appear to influence the implementation, and different commodities carry different traceability challenges. Packaged items such as bagged potatoes or clam-shelled berries provide different information transfer opportunities than melons sold in bulk bins. The greater the variety of products in an operation, the more challenging traceability becomes.

The second phase involved observing product movement from the field to packed box or bin destined for wholesale or directly to consumers. The goal was to evaluate an individual firm’s ability to conduct an effective recall, whether buyer or grower/packer/shipper driven. Preliminary results indicate a variety of traceability methods being employed throughout North Carolina, from high-tech electronic systems collecting information on rows and harvesters to very little information on inputs and location. The good news is that many of the firms from which we collected data are able to contact customers if an outbreak occurs, some more completely and efficiently than others.

Value-Added & Alternative Agriculture Newsletter

Our multidisciplinary team builds partnerships and educational resources to help North Carolina agriculture be more profitable.

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Extension programs for the produce industry, food services and consumers can be developed using our findings. Support for this project was provided by the N.C. Department of Agriculture & Consumer Services through funding from the N.C. Tobacco Trust Fund Commission.

Guest Contributors: Dr. Ben Chapman and Michelle Rose, Department of 4-H Youth Development and Family and Consumer Sciences

Hand-Washing Facility Prototype

Improper sanitation practices in the field during harvest are potential sources of food contamination. To improve hand-washing practices in the field, the N.C. Rural Economic Development Center provided grant funding to design a portable, scalable and efficient hand-washing facility to facilitate more frequent, thorough hand washing. The project will produce a portable unit for field demonstration as well as downloadable plans that growers can use to construct units suited to their individual operations.

Dr. Gary Roberson, associate professor and Extension specialist with the N.C. State University Department of Biological and Agricultural Engineering, is overseeing the construction phase of the project. A trailer, which will serve as the platform for the unit, has been purchased.

Water tanks for fresh and wastewater are currently being fitted to the platform. Designs for the fiberglass sinks are being evaluated and will soon be built and mounted.

As the project progresses, Roberson will document additional changes in the design that will allow producers even greater flexibility to construct a unit that will accommodate their specific needs. Testing of the design will begin in the fall.

Food Safety Legislation

Food safety legislation has gained major attention this summer with H.R. 2749. The U.S. House of Representatives passed H.R. 2749 in late July, which is known as the Food Safety Enhancement Act of 2009. The bill greatly expands the Food and Drug Administration (FDA) regulatory oversight of the U.S. food system, and for the first time instructs the agency to develop risk-based on-farm production standards for raw commodities. The bill also empowers the FDA to access production records. Many believe that the U.S. Senate will address food safety legislation this fall. Senator Richard Burr (R-NC) is co-sponsor of S510, The FDA Food Safety Modernization Act, introduced by Sen. Dick Durbin (D-IL), and widely believed to be the bill that defines the Senate’s food safety platform. Find the bill at <http://thomas.loc.gov/cgi-bin/bdquery/z?d111:h.r.02749>

Guest Contributor: Debbie Hamrick, N.C. Farm Bureau Federation; N.C. Fresh Produce Safety Task Force

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