Food Safety in North Carolina

A Collaborative Model

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Problem

• Food-borne illnesses affect an estimated 76 million consumers annually.

• These illnesses result in approximately 325,000 hospitalizations.
Problem

- Disturbingly, 5,200 consumers die each year as a result of food-borne pathogens.
- The estimated economic impact is somewhere between $10 and $83 billion.
Good Agricultural Practices

• Good Agricultural Practices (GAP) are the basic environmental and operational conditions and the growing and harvesting practices that are necessary for the production of safe, wholesome fruits and vegetables.
Good Handling Practices

• Good Handling Practices (GHP) are the general practices that are intended to reduce microbial food safety hazards (that may include GAP) that include sorting, packing, storage and transportation operations.
Pathogens of Concern

- Water can be a source of and vehicle for biological hazards such as *Escherichia coli* (in particular *E. coli O157:H7*), *Salmonella*, *Vibrio cholerae*, *Shigella*, *Cryptosporidium parvum*, *Giardia lamblia*, *Cyclospora cayetanensis*, *Toxoplasma gondii*, the Norwalk virus and hepatitis A.
Water can easily become contaminated with human and/or animal feces.

To protect water sources:

• Provide field workers with properly constructed and maintained restrooms or sanitary mobile units.

• Remind workers to wash hands frequently!
Broiler Houses
Farm Layout/Topography
Wash Water Quality

Wash water must be properly chlorinated to keep it safe and tested to ensure the proper chlorination levels are consistently maintained (~150 ppm).
Chlorination Unit
Partners in the Work-NC A&T State University

• Cooperative Extension Program
• Department of Natural Resources and Environmental Design
• Department of Family and Consumer Sciences
• County Extension Agents
Partners in the Work-NC State University

- Cooperative Extension Service
- Department of Food, Bioprocessing and Nutritional Sciences
- Department of Horticultural Science
- Department of Ag and Resource Economics
- Department of Ag and Biological Engineering
- Department of Family and Consumer Sciences
- CALS Communications Services
Partners in the Work-NC
Department of Agriculture and Consumer Services

- NC Food and Drug Division
- NC Marketing Division
- Cost share assistance for audits and certification (USDA Specialty Crops grant)
Partners in the Work

- United States Food and Drug Administration (FDA)
- Commodity Groups
- Fresh Produce Brokers and Distributors
- Individual Growers
Funding

- Socially Disadvantaged Farmers and Ranchers Program
- Risk Management Agency
- Tobacco Trust Fund
- Southern SARE PDP
Partners in the Work

• Eastern Advisory Group
  – Large growers selling wholesale

• Western Advisory Group
  – Direct marketers
Eastern Advisory Group Recommendations

• “Buyers Rule”, “Customers Dictate Standards.”

• Got2BNC should stand for food safety and security.

• Surface water is key to NC agriculture and research on irrigation water quality and safety is paramount.
Eastern Advisory Group Recommendations

• Training programs are needed for employees.

• Guidance documents are needed for employee “situations.”
Western Advisory Group Recommendations

• GAP standards should be “translated” for direct market situations.
• Growers need resource information for purchasing GAP infrastructure components.
• Water and irrigation issues need to be addressed.
• Regulations should be scale-neutral and not be onerous for producers.
Western Advisory Group Recommendations

- Growers should find it easy to participate.
- Commodity specific risk factors should apply.
- Information should remain “attached” to the product through the distribution train.
- Growers want training on food safety and achievable steps for success.
- A consumer education component should be included.
Strategic Plan Objectives

• The fresh produce industry understands and implements GAP through effective (dynamic) educational programs.

• Research-based crop production and management guidelines are used to maximize produce safety.
Strategic Plan Objectives

• Industry and public policy decisions regarding fresh produce safety are informed by science-based information.

• A network of government, university and industry collaborators work together in an effective and timely manner to communicate and address food safety incidences and concerns.
Strategic Plan Objectives

- The North Carolina Fresh Produce Safety Taskforce is effectively managed and supported and is integrated with other organization initiatives through the North Carolina Food Safety and Defense Taskforce.
Working Groups

- Education
- Research
- Industry and Policy
- Networking
- Management and Support
Plan of Action-Education

- Develop agent training modules
- Train fresh produce growers in GAP
- Develop “model” food safety plan for growers
- Assist and encourage growers to implement food safety plans
- Assist growers in achieving GAP & GHP certifications
- Implement an assessment tool.
Plan of Action-Research

• Develop and conduct research projects in order to minimize human health hazards

• Explore potential to research microbial transport in fresh produce in both pre- and post-harvest

• Explore metrics and buffer area recommendations

• Build a network of regulatory agencies working on animal waste issues.
Plan of Action-Industry and Policy

• Host a food safety think tank forum to enlist support of state leaders
• Target interactions with selected legislators and regulatory agencies
• Put public policy resources on the NCFPSTF website
• Develop research-based white papers for industry, regulatory and legislative audiences
• Track state, federal and private produce safety initiatives.
Plan of Action-Networking

- Encourage participation in ICS training for task force members and industry leaders
- Participate in risk communication training with task force members and key leaders
- Establish an interagency fresh produce emergency response team trained in traceback/recall situations
- Develop communication methods to provide accurate information to stakeholders
- Develop, maintain and promote fresh produce Web presence.
Plan of Action-Management Support

- Establish criteria for selection and responsibilities of task force members
- Establish logical working groups and give respective assignments
- Assess the need for an executive committee to facilitate purposes and outputs
- Initiative regular meetings of working groups, executive committee and task force
- Secure funding to support outputs.
Educational Modules

• Introduction to Fresh Produce Safety and Food Safety Hazards
• Personal Health and Hygiene
• Handling Organic Fertilizers
• Field Packing and Facility Sanitation
Educational Modules

• Water Quality
• Sanitation During Transportation and Traceback Protocols
• Supervisory Management-Identification of Worker Illness and Associated Protocols
• Risk Management
Next Steps

• Beta test curriculum in July with Mountain Region Extension agents
• Mock certification audits this summer for growers at produce farm field days
• Statewide Extension agent training in winter of 2009 with revised curriculum
• Grower training in 2009