Marketing food safety at your market
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USDA statistics from 2011

Who benefits from a farmer’s market?
- Small/Medium sized Farms
- Local Farmers
- Consumers
- Communities

Farmer’s markets in NC
- Shopper-based survey
  10 markets, 988 responses
  - 89% willing to support local for extra $
  - 62% in favor of organic
  - Likert scale (1-10) rating safety, 92% rate their market as at least an 8
- Name the 3 main reasons you shop at a farmers’ or roadside market
  - Safety not one of them
  - Fresh, local, community support
**What is food safety?**

- Handling
- Preparation
- Storage

**Avoid foodborne illness**

**Symptoms of foodborne illness**
- Fever
- Loss of appetite
- Fatigue
- Nausea
- Dark urine
- Jaundice
- Diarrhea (may be bloody)
- Vomiting
- Muscle aches
- Headaches
- Chills
- Abdominal cramps
- Death

**Foodborne illness in the US**
- 48 million cases of foodborne illness
- 55,961 hospitalizations
- 1,351 deaths

**High risk populations (YOPIs)**
- Very young (underdeveloped)
- Very old (decreased immune function)
- Pregnant (immunocompromised naturally)
- Immunocompromised (AIDS, chemotherapy, transplants, external stress)
Factors contributing to foodborne illness
- Improper cooking procedures
- Temperature abuse during storage
- Lack of hygiene and sanitation by food handlers
- Cross-contamination between raw and ready-to-eat foods
- Foods from unsafe sources

Major pathogens
- Norovirus
- Campylobacter spp.
- Salmonella spp.
- Clostridium perfringens
- Staphylococcus
- E. coli O157
- Shigella spp.
- Listeria monocytogenes
- Hepatitis A
- Giardia lamblia

Seriousness of foodborne illness
“I never thought you could die from E.coli. Never, I had heard of E.coli and I just thought it was food poisoning” she said. “I never ever thought Mason would die from it.”

— Family’s call for E. coli lesson
01 nov 05 BBC News

Mason Jones
Dec. 24, 1999 - Oct. 6, 2005

Farmer’s market outbreak
- In 2000, Escherichia coli O157:H7 linked to produce samples offered at a farmer’s market in Fort Collins, CO.
- 14 people were ill and two elementary school-aged children required dialysis.
In 2010, Salmonella linked to guacamole, salsa and uncooked tamales at a farmer’s market in east-central Iowa. 44 people sick and five hospitalized.

In 2011, Escherichia coli O157:H7 linked to strawberries sold at multiple farm stands and farmer’s markets in Oregon. 12 females and four males became ill. 4 individuals were hospitalized and 2 people suffered kidney failure.

Food safety culture

It tells a story....
Creating a food safety culture

- Manager has to be a leader
- Provide the tools/resources/expectations
- Help the vendors explore risks and how to address them
- There are a set of shared values that everyone works towards
- It’s all about protecting the market and businesses associated with it

Good Farmer’s Market Practices (GFMPs)

- Three Sessions:
  - Food Safety Principles
  - Personnel Health & Hygiene
  - Food Sampling

Food Safety Principles

- Overview
- Factors contributing to foodborne illness
- Food commodities
- What bacteria need to grow
- Viruses
- Food safety culture

Food safety hazard categories

- Physical
- Chemical
- Biological
What bacteria need to grow

- Temperature
- pH
- Organic acids
- Oxygen
- Water activity
- Other factors:
  - Inhibitors
  - Nutrients
  - Competition

It is important to understand that ALL of these factors are important and ALL play into the safety of a food product.

Temperature

- Time and temperature control for bacterial growth
  - Temperature Danger Zone
    - Hold hot food above 135°F
    - Hold cold food below 41°
  - Temperature Abuse
    - Foods not heated to a safe temperature or kept at a safe temperature

What foods cause illness?

ANY FOOD can cause foodborne illness

- Potentially hazardous foods
  - Greater possibility of supporting the growth of harmful bacteria and causing illness
  - Low acid foods
  - pH greater than 4.6
  - Water activity greater than 0.85
  - Ready-to-eat foods
    - Do not need any further processing or cooking for safety

Personnel Health & Hygiene

- Training program
- Communication
- Supervision
- Proper handwashing techniques
- Sanitizers & One-use gloves
- Open wounds
- Restroom use
- Clothing and cleanliness

Session Two
Handwashing Stations

- Six-component method
- 5 gal cooler with free-flow spigot (clean & sanitary)
- Constant flow
- Two-handed washing
- Soap
- Clean water
- Paper towels
- Catch basin for wastewater
- Trash receptacle

One-use gloves

- Gloves are capable of spreading germs
- Not a substitute for handwashing
- Helpful for avoiding bare-hand contact with food
- Must be used for single task & discarded
  - Damaged
  - Soiled
  - Interrupted task
  - Non-latex gloves
  - Allergies

Food Sampling

- Preparation
- Storage
- Clean & sanitary
- Chemicals
- Transportation

Cutting board

- Place on sanitized food-contact surface
- Reservoir for contamination
- Do not use
  - Same cutting board for raw foods & ready-to-eat foods
  - Wood cutting boards
  - Table surfaces
  - Use
  - Polypropylene materials
Cross-Contamination
- Keep raw and prepared food separate
- Clean & sanitize thoroughly after handling uncooked foods
- Hands
- Cutting boards
- Counters
- Knives
- Other utensils
- Hands should be washed before handling any food and between handling different food items

Things to concentrate on
- Asking questions from vendors about their practices and having a system to know what the right answers are
- Provide tools/resources
- Share what the market’s food safety values are with all vendors
- And when you get good at it (or if you already are), market it

Importance of Protection
The question at hand
- If I am a small, niche marketer/producer of a food product, who will help me identify, manage and reduce risks?
Questions
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