Novel approaches to GAPs training, tools and evaluation
FOOD SAFETY COMMUNICATION PHILOSOPHY

- Anyone who tries to make a distinction between education and entertainment doesn`t know the first thing about either
  - Marshall McLuhan, 1967
FROM THE LITERATURE

- Using stories and narratives better than statistics alone
  - Cole, 1998; Cole, 1997; Howard, 1991; Leventhal, 1970; Morgan et al., 2002; Slater and Rouner, 1996

- Put food safety into context for audience
  - Leventhal et al., 1965; Lordly, 2007

- Generate dialogue
  - Ajzen, 1991; Bohm et al., 1993; Dignum et al., 2001; Schein, 1993

- Surprising messages
  - Shannon, 1948

Used these factors in designing tools for commercial food handlers (Chapman et al., 2011)
Demonstrated behavior change (Chapman et al., 2010)
SERIES (8) OF WORKER TRAINING VIDEOS AND DVDs

- Versatile and easily adaptable training tool that can be used during their informal morning meetings
- Continually educate their workforce with language appropriate materials and visuals pertinent to agricultural work conditions
This video presents information on what a small farm would need to consider when going through the process of GAPs certification.
CRISIS MANAGEMENT – ROLE PLAY

- Outbreak Investigation
  - Regulator
- Food Safety Expert
- Farm Bureau Rep
- Food Safety Expert
- Extension Associates
- Horticulture Expert
- Media
PRESS RELEASE: AUGUST 25, 2009

- NC DHHS There are an increased number of illnesses which are linked together with a genetic fingerprint
- *Salmonella* Poona
- 24 illnesses in 14 NC counties (all around state)
- CDC has been dispatched
Opening Markets
exploring and communicating food safety barriers

Keeping animals out of the fields

June 1, 2011

Fruits and vegetables are grown outside in the environment where there are several routes of potential contamination such as water, wild and domestic animals, and people. The aim of this project is to help small farmers implement risk reduction practices that have been outlined in the Good Agricultural Practices certification document. Over the past week, I visited three farms, Vollmer Farm, Burr (25 acres); Perrywinkle Farm, Chapel Hill (5 acres); and Harland’s Creek Farm, Pittsboro (5 acres).

I’m maybe not the traditional person you might think of working closely with small farmers: I completed my PhD in Food Science in December, 2009, working primarily in a lab setting but the real food safety issues are out in the field and processing plants.

The hope is that the results of this project will identify barriers and solutions that small farmers face while implementing GAPs and attaining certification. As a food scientist I want to help growers, regardless of size, produce under the safest conditions. As this is a learning process for them it is also one for me, I will be onsite on a monthly basis tracking their progress and identifying pitfalls and successful solutions.

Vollmer Farms (certified through Quality Certification Services (QCS) and Harland’s Creek Farms (certified through the International Certification Services (ICSI) produced their product organically for community supported agriculture programs and/or local farmers’ market. Perrywinkle Farm has been certified in the past and sells a majority of their product at farmers’ market and some to local restaurants. Perrywinkle and Harland’s Creek farms have some of their profits coming from fowlers and chickens (eggs and broilers type of chicken raised specifically for meat production). Perrywinkle farm in addition to chickens has pigs on their farm. Perrywinkle farm was told they could no longer sell chicken eggs at the farmers’ market if they did

http://gapsmallfarmsnc.wordpress.com/
http://ncfreshproducesafety.wordpress.com/
Website & Blog

- From the social media tools utilized
- Fresh Produce Safety Website [www.ncfreshproducwsafety.org]
- NC Fresh Produce Safety Blog [http://ncfreshproducesafety.wordpress.com]

- 116,573 visitors to sites to view the educational materials and to get up-to-date information from the resource postings.
EVALUATION

- Disconnect between knowledge and food handler practices
  - Green et al., 2006; Green and Selman, 2005; Pragle et al., 2007; Redmond et al., 2004

- How do we know this is working?
- What are the measures?

- Betsy’s talk yesterday – getting audits is evaluation data.
FOOD SAFETY AT NC FARMERS MARKETS

- Collected data on current requirements, facilities and behaviors at farmers markets
  - Baseline Evaluation
    - 20 secret shoppers for observational data
      - 37 farmers’ markets and 168 vendors
    - Interviewed 23 market managers over the phone
      - Guidelines & requirements of vendors
      - Facilities
      - Responsibilities of manager
# Food Safety at NC Farmers Markets

## North Hills Farmers Market

**Date & Time:**

**Quick Reminders:**
1. Ensure the Farmers Market is unaware that you are collecting data.
2. Choose vendors that have a Farm name.
3. Check Yes/No and orgaize answers further in the comments column.
4. Sheet 1 pertains to the overall Farmers Market facility, the restrooms, etc.
5. Sheets 2-11 are to be used for filling out data on individual vendors.

## Table: Foods Available

<table>
<thead>
<tr>
<th>Product Groups</th>
<th>Vendors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Produce</td>
<td>Meadows</td>
</tr>
<tr>
<td>Fruits</td>
<td>Gorgan</td>
</tr>
<tr>
<td>Meats</td>
<td>Greens</td>
</tr>
<tr>
<td>Dairy</td>
<td>Melons</td>
</tr>
<tr>
<td>Baked Goods</td>
<td>Nuts</td>
</tr>
<tr>
<td>Prepared Foods</td>
<td>Eggs</td>
</tr>
<tr>
<td>Herbs/Spices</td>
<td>Parsley</td>
</tr>
<tr>
<td>Beans</td>
<td>Peppers</td>
</tr>
<tr>
<td>Grains</td>
<td>Roasting</td>
</tr>
<tr>
<td>Beverages</td>
<td>Dried</td>
</tr>
<tr>
<td>Spices</td>
<td>Seafood</td>
</tr>
<tr>
<td>Herbs</td>
<td>Herbs</td>
</tr>
</tbody>
</table>

## Questions

**Overall is the market clean?**

**Are the vendors wearing protective clothing, or do individual vendors have temporary structures (e.g.) set up at the market?**

**Are different products separated into designated areas? (e.g., produce area/seaf,: food area/food area)?**

**Is anyone smoking around the food products?**

**Is there a concession stand at the market? If yes, is it clean?**

**Are there restrooms in the market?**

**Are the restrooms clean?**

**Are the restrooms in good working condition?**

**Are there displays in the restrooms of proper handwashing techniques?**

**Are there handwashing facilities inside the restrooms?**

**Is soap provided?**

**Is there a posted cleaning schedule, if so when and how often is it posted?**

**Are the handwashing facilities inside the restrooms?**

**Are live animals (e.g., dogs) allowed in the market area? Do vendors or persons have animals with them?**

## Questions to Ask Vendors

- Are there any organic or synthetic chemicals/fertilizers/preservatives/seedless used on the products?
- Are all foods grown/processed by the vendor? In NC? What is the percentage?
- Are there signs with the names of crops?
LARGE UNIT
Small Unit
NEXT STEPS

- Small and really small farms
- Training for food handlers from farm-to-fork
- CSAs, gardens, markets
- What does a good food safety culture look like in the produce industry?
- How to engage customers about what happens before it gets to them