Improving Food Safety—It’s Everyone’s Responsibility

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What comes to mind when you first hear the words food safety? Today, in September, 2010, it might be “egg recall”, “contaminated beef”, “melamine”, “Salmonella”, or a list of other words.

At a recent food safety summit hosted by Harrisburg University in partnership with the Central Pennsylvania Business Journal and the Pennsylvania Department of Agriculture, attendees discussed ways to improve food safety. These 150 participants represented over 70 companies and public agencies from 6 different states. Some were from small businesses; others were from large international corporations. All had one thing in common: the goal of maintaining and improving food safety and quality.
Food Safety and Quality is a broad field within food science that focuses on food safety parameters and food quality aspects. The World Health Organization (WHO) defines food safety as hazards and conditions that increase the risk of food contamination with chemicals or microorganisms that may cause foodborne illness in consumers. Food safety has defined minimum standards that reduce the risk of these exposures and illnesses when met (FAO/WHO 2003).

Although the terms food safety and food quality are often cited together, food quality is uniquely different in that it includes the characteristics of food that affect the overall safety, taste, feel, smell, appearance, and general acceptability, whether positive or negative.

Food quality assurance focuses on the systematic monitoring and evaluation of the production, processing, manufacturing, and shipping of food products to ensure the highest standards are being met. Food quality assurance that focuses only on food producers or food companies does not address all risks to food safety as foodborne outbreaks of illness over the last century have demonstrated.

Instead, these foodborne illnesses are a reminder of the importance of assuring food quality across the entire farm-to-table or food safety continuum which includes responsibility for all stakeholders involved: food producers, processors, transporters, vendors, and consumers.
Many food products begin their journey to the consumer on the farm. Farms, representing the majority of food producers in the U.S., are the source of fresh fruits, vegetables, grain crops, meat, poultry, and eggs. Food safety at this earliest stage is often provided through voluntary Good Agricultural Practice (GAP) programs in addition to required food inspection monitoring within certain industries such as meat, poultry, and eggs. Agricultural operations may process their own food products or sell them to food processing companies such as those that process apples for juice or applesauce.

Separate food processors are the second step in the food safety continuum. These food processors prepare raw food ingredients for use in prepared foods or sell direct to consumers through farmer’s markets, grocery stores, and business stands.

Food manufacturers are the next link in the chain from farm to table. Food manufacturing companies are required to have personnel trained in hazard analysis and critical control point (HACCP) assessment and have complete HACCP plans in place that recognize and address potential contamination points in the manufacturing process.

In order for food to get to the consumer in the best possible condition, food shippers and transporters are required to monitor food safety, storage, and transport conditions to ensure that a safe product is delivered to consumers. Food retailers receive the food products for sale to consumers who are the final link in the food safety continuum.

Each of these stakeholders from farm to table are responsible for maintaining the safety and quality of the food, including the consumer.
Guidelines for Keeping Food Safe

Safe steps in food handling, cooking, and storage are essential to prevent foodborne illness. This is important along each step of the farm-to-table journey of food products.

You can't see, smell, or taste harmful bacteria that may cause illness. In every step of food preparation, follow the four Fight BAC!™ guidelines to keep food safe:

- **Clean** — Wash hands and surfaces often.
- **Separate** — Don't cross-contaminate.
- **Cook** — Cook to proper temperatures.
- **Chill** — Refrigerate promptly.
Guidelines for Keeping Food Safe

Shopping
- Purchase refrigerated or frozen items after selecting your non-perishables.
- Never choose meat or poultry in packaging that is torn or leaking.
- Do not buy food past "Sell-By," "Use-By," or other expiration dates.

Storage
- Always refrigerate perishable food within 2 hours (1 hour when the temperature is above 90 °F).
- Check the temperature of your refrigerator and freezer with an appliance thermometer. The refrigerator should be at 40 °F or below and the freezer at 0 °F or below.
- Cook or freeze fresh poultry, fish, ground meats, and variety meats within 2 days; other beef, veal, lamb, or pork, within 3 to 5 days.
- Perishable food such as meat and poultry should be wrapped securely to maintain quality and to prevent meat juices from getting onto other food.
- To maintain quality when freezing meat and poultry in its original package, wrap the package again with foil or plastic wrap that is recommended for the freezer.
- In general, high-acid canned food such as tomatoes, grapefruit, and pineapple can be stored on the shelf for 12 to 18 months. Low-acid canned food such as meat, poultry, fish, and most vegetables will keep 2 to 5 years — if the can remains in good condition and has been stored in a cool, clean, and dry place. Discard cans that are dented, leaking, bulging, or rusted.
**Guidelines for Keeping Food Safe**

**Preparation**
- Always wash hands with warm water and soap for 20 seconds before and after handling food.
- Don’t cross-contaminate. Keep raw meat, poultry, fish, and their juices away from other food. After cutting raw meats, wash cutting board, utensils, and countertops with hot, soapy water.
- Cutting boards, utensils, and countertops can be sanitized by using a solution of 1 tablespoon of unscented, liquid chlorine bleach in 1 gallon of water.
- Marinate meat and poultry in a covered dish in the refrigerator.

**Thawing**
- **Refrigerator:** The refrigerator allows slow, safe thawing. Make sure thawing meat and poultry juices do not drip onto other food.
- **Cold Water:** For faster thawing, place food in a leak-proof plastic bag. Submerge in cold tap water. Change the water every 30 minutes. Cook immediately after thawing.
- **Microwave:** Cook meat and poultry immediately after microwave thawing.

**Cooking**
- Beef, veal, and lamb steaks, roasts, and chops may be cooked to 145 °F.
- All cuts of pork, 160 °F.
- Ground beef, veal and lamb to 160 °F.
- All poultry should reach a safe minimum internal temperature of 165 °F.
Serving
• Hot food should be held at 140 °F or warmer.
• Cold food should be held at 40 °F or colder.
• When serving food at a buffet, keep food hot with chafing dishes, slow cookers, and warming trays. Keep food cold by nesting dishes in bowls of ice or use small serving trays and replace them often.
• Perishable food should not be left out more than 2 hours at room temperature (1 hour when the temperature is above 90 °F).

Leftovers
• Discard any food left out at room temperature for more than 2 hours (1 hour if the temperature was above 90 °F).
• Place food into shallow containers and immediately put in the refrigerator or freezer for rapid cooling.
• Use cooked leftovers within 4 days.


For more information on food safety, training courses, and the Harrisburg University Food Safety and Quality Initiative, please contact:

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