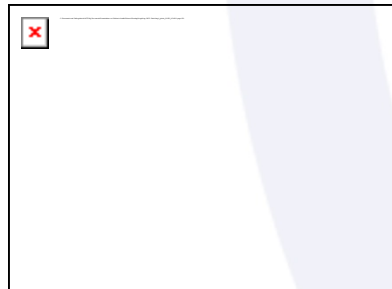


# What Makes a Safe Food System?

FoodMed 2009 ♦ Detroit, Mich.

Food Safety and Public Health Panel

Marie Kulick, MSEL



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# The Regulatory Landscape

- Federal Government
  - USDA/FDA
- State Government
  - Passes a food law (usually adopting the federal food code)
  - May do their own meat inspection (intrastate)
- Local Government
  - Enforces the food law
  - Inspects facilities

Slide courtesy of Ruth Blackburn,  
Ecology Center



# Defining Safe Food

## Conventional Considerations

- Keep “hazardous” substances out of food
  - Microbial
  - Chemical
  - Physical
- Prevent/slow bacterial growth
- Post farm gate regulations
- Traceability



# Hazard Analysis and Critical Control Points (HACCP)

- Process developed initially for space program
- Based on the identification of potential food-safety hazards that can occur during commercial-scale processing, transport, and preparation of food, so that key preventative actions can be taken at Critical Control Points (CCP's) to reduce or eliminate risk.
- Mandatory for juice, seafood, meat, and poultry processing facilities, but voluntary elsewhere.



# On Farm

- “Good Agricultural Practices”
  - Federal
  - State
  - Private corporations
  - Others
- “Voluntary”
  - Buyer required
- Good Handling Practices



# Issues for Smaller, Diversified Farms

- One-size fits all
- Documentation requirements
- Audit costs



# Defining Safe Food Holistic View

- Minimize use of synthetic pesticides, added hormones, antibiotics, arsenic compounds
- Prevent air, water and soil degradation
- Rebuild soils
- Avoid genetic manipulation
- Avoid use of preservatives
- Minimize packaging made with problematic additives



# Benefits of On-Farm Conservation Methods

- Grass and wetlands can filter 99 percent of the *E. coli* present in surface water.
- Conservation practices like hedgerows and filter strips can also intercept airborne dust and chemical drift and detain water-borne pathogens.
- Well-managed soil, which has a higher diversity and biomass of soil microbial and faunal communities, has been found to suppress and reduce the longevity of *E. coli* O157:H7 and other pathogens in the fields.



# Issues of Concern to Health Care

- Serve vulnerable population
- Health-focused mission
- Subject to regulations
- Hazard Analysis and Critical Control Points (HACCP)



# HACCP & Food Service

- Receiving
  - Recommended control measures
    - Receiving the food at proper temperatures and getting perishable food into cold storage quickly
    - Obtaining food, ingredients, and packaging materials from approved sources (suppliers who are regulated and inspected by appropriate regulatory authorities)





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# Factors that Increase Risk of Microbial Contamination

- Comingling of produce
- Whether the product is eaten raw or cooked
- Whether there is substantial time between harvest and consumption
- Whether the product passes through multiple hands before it is eaten
- Processing and packaging



# Role of Processing

- The majority of foodborne illnesses are traced back to processors, where poorly maintained equipment or facilities, poor worker sanitation, or improper treatment of food can put consumers at risk.
- An analysis of outbreaks in the leafy greens industry since 1990 found that nearly 99 percent of outbreaks were linked to processed, bagged "ready to eat" salad mixes rather than the bunched, unprocessed greens typical of smaller farms.

Community Alliance with Family Farmers. "California E. coli O157:H7 Leafy Greens Outbreaks." Available online at

<http://caff.org/foodsafety/documents/E.coliChartNC.pdf>. 2008.



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# Role of Traceability

- A March report by the Office of the Inspector General for the U.S. Department of Health and Human Services was able to trace the ingredients of only five out of forty food products back to the source, largely because of the complexity and recordkeeping associated with long supply chains that mix products from many farms.

Levinson, D. “Traceability in the Food Supply Chain.” Department of Health and Human Services, Office of Inspector General, OEI-02-06-00210, March 2009.



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# Potential Benefits of Local Produce Sourcing

- Shorter distribution chain/direct-less time between harvest and consumption
- Less co-mingling
- Easier trace back to farm
- Reduced need for preservatives, waxes
- More opportunities to see operations first hand



# Potential Benefits of Eco-Label Products

- Address some of the conventional food safety concerns
  - e.g. organic manure management standards
- Address most, or all, of the non-traditional food safety issues
  - Pesticide use
  - Hormone use
  - Antibiotic use
  - Genetic manipulation



# What can we do?

- Know and care about where your food comes from and how it is produced
- Purchase food directly from farmers whenever possible
  - Visit farms to observe practices first hand
  - Accept GAP self-audit checklists
  - Ask if grower has 3<sup>rd</sup> party GAP certification or certification to a similar protocol, but avoid requiring
- Purchase sustainably produced foods e.g. Organic
- Avoid/limit processed foods especially those processed with chemical additives
- Follow accepted practices for controlling pathogens in food service operations

