

Due Diligence, Food Safety and Locally Grown Produce

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Definitions

Organic – product was grown/produced in a manner consistent with sustainable agriculture as described by grower

“Certified” organic as above EXCEPT agronomic practices were validated by third party audit

Sustainable agriculture – concept that inputs to land will not damage but will build health of soil and environment

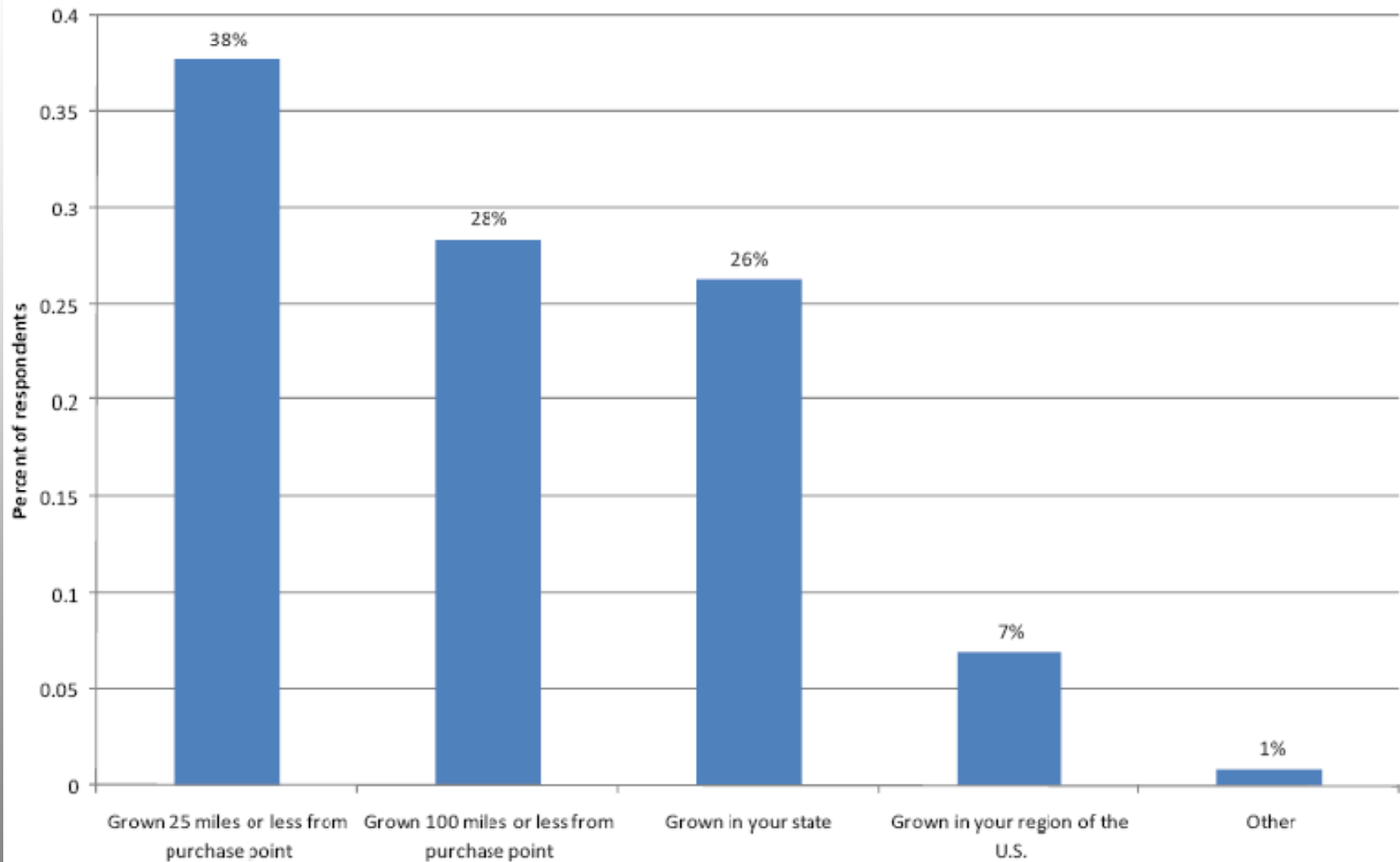


Locally grown – a concept that products are grown or produced within a given area or region;

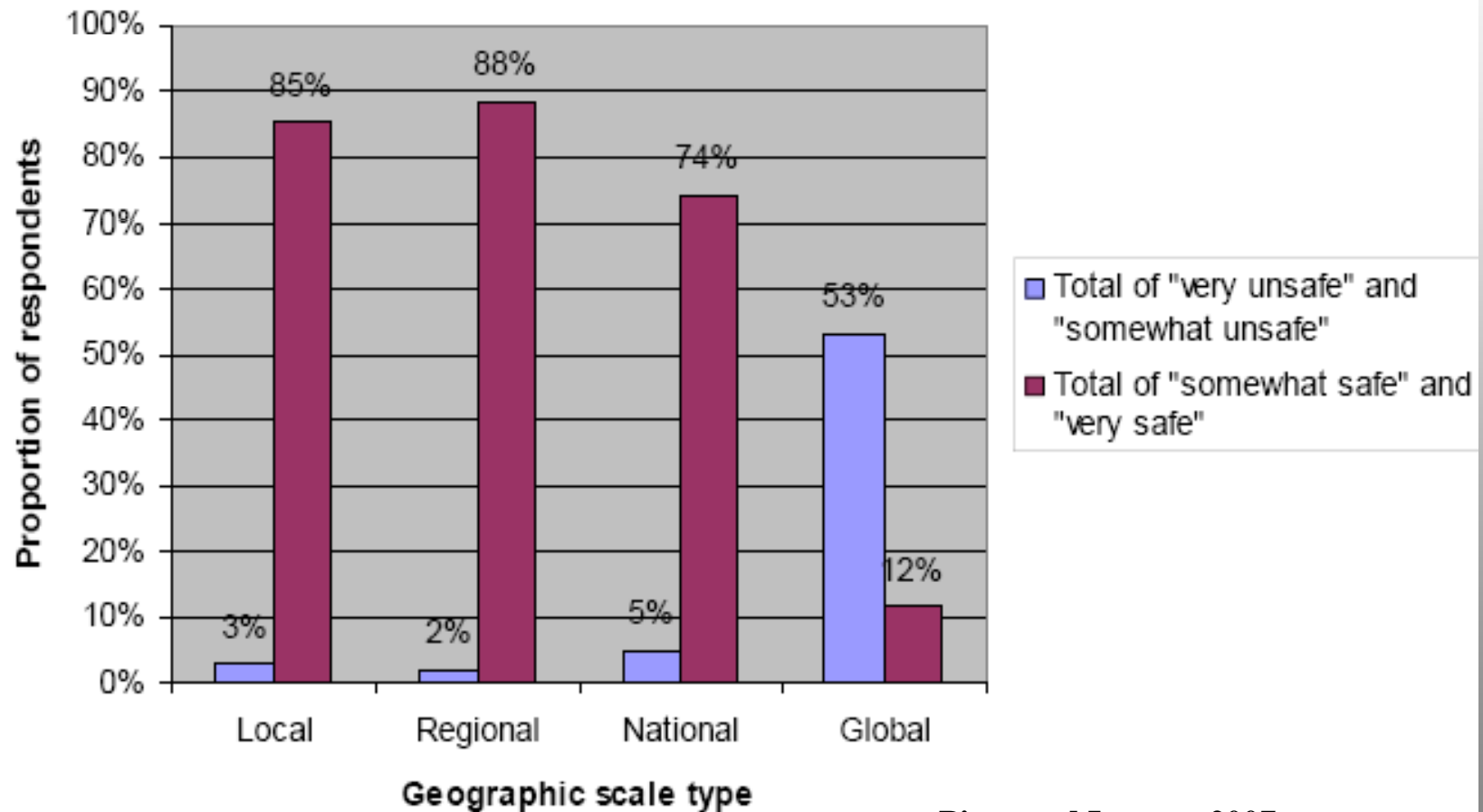
- Less than a day drive;
- Regional may be more;
- May be small or large farm;
- May not be safer or healthier;
- Organic has nothing to do with it;
- Sustainable has nothing to do with it.



What consumers think "local" means.

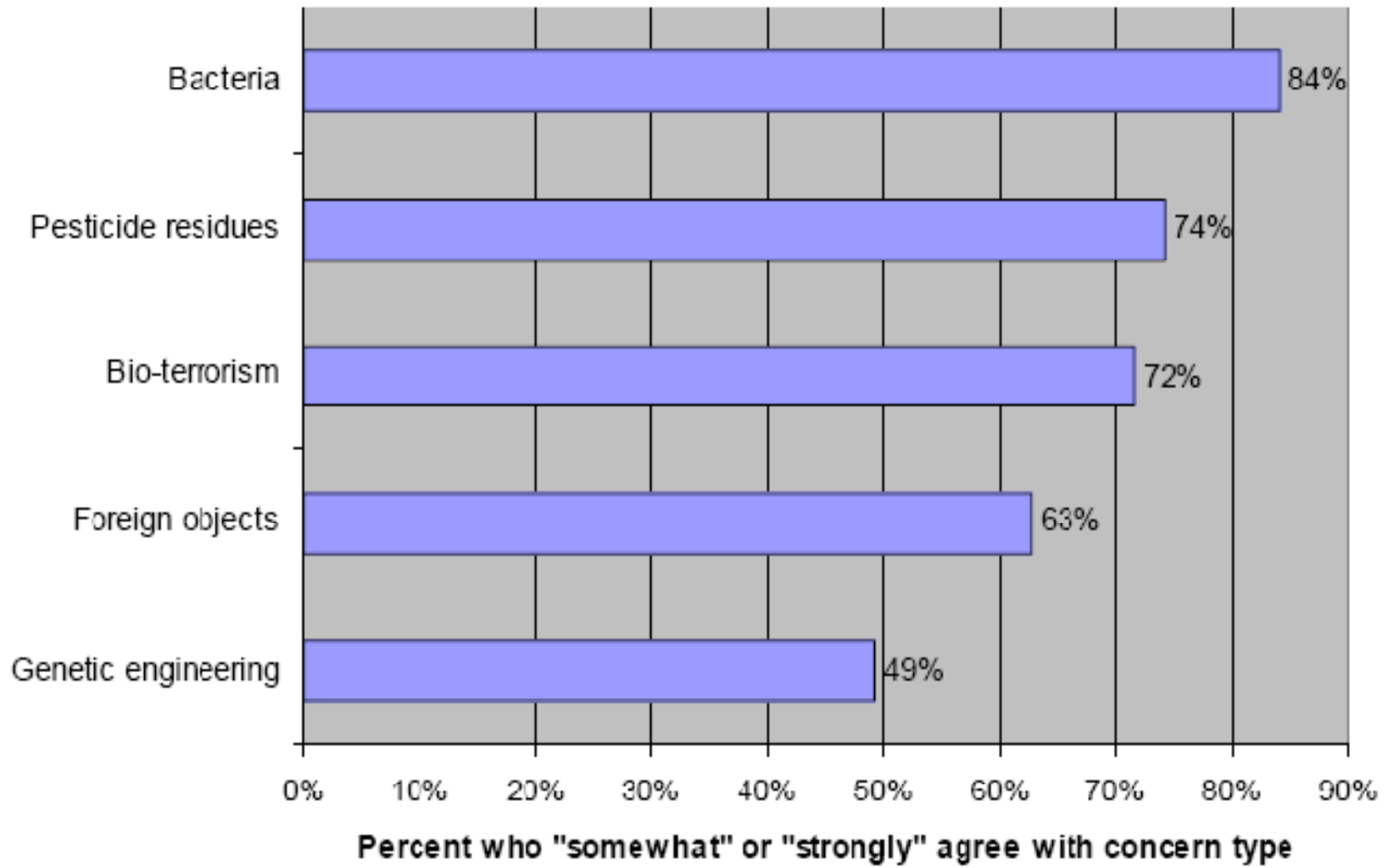


Consumers perceive that locally grown may be safer

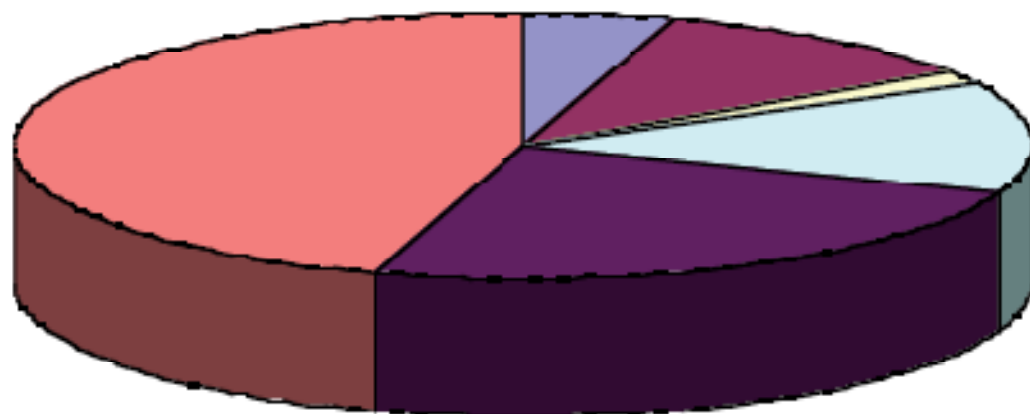


Pirot and Larson, 2007

What consumers are concerned about in produce




Establishment's preferred source for locally produced foods



- From a Farmer's Market
- Direct from a farmer
- Direct from a farmer's co-op
- From a local manufacturer or processor
- From a foodservice distributor
- N/A

Amit, 2007



“Our commitment to using ingredients from more sustainable sources is the best of both worlds,” said Ells. “From a sustainability perspective, we are supporting local agriculture and family owned farms.”

Steve Ells, founder, chairman and co-CEO Chipotle
Restaurants

Food Safety is high on food services requirements for acceptability of locally grown

competitive prices,
consistent quality,
adequate supplies,
standard packaging,
ease of ordering,
delivery frequency,
dependability,
transportation and
distribution, and
food safety concerns.

Schools

product costs,
labor time to prepare the
food,
safety of food served to
patrons,
working with multiple
vendors,
payment procedures,
obtaining an adequate supply
of food.

Restaurants

Legally speaking – food borne illnesses is big business.

Several large law firms make their living chasing toilets rather than ambulances.

Mr. Marler is an advocate of locally grown but does not know the facts

**University of Michigan Student Files
E. coli Lawsuit Against Aunt Mid's
Produce**

2008

...it was filed today

**Sprouts Responsible for Salmonella
Illnesses in Washington and Oregon**

September 5 2008

**Attorney speaks out about recall of
Salmonella-contaminated spinach**

August 30 2007

MELBOURNE, AUSTRALIA —Food
safety attorney Bill Marler spoke out
from across the globe today after
hearing that bagged spinach has once

Produce does cause some illness

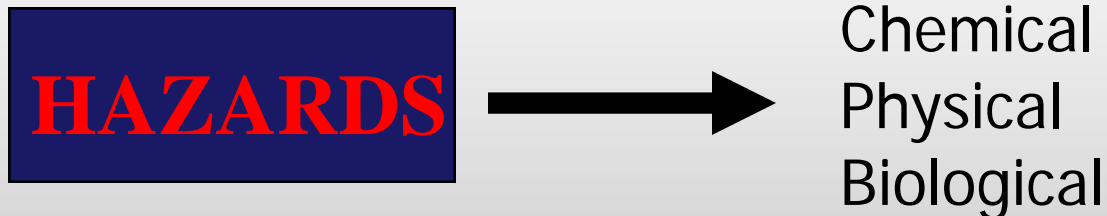
1990 – 2007 over 36,000 cases of foodborne illness attributed to produce related foods:

<u>Food product</u>	<u>% of contribution</u>
Salad greens/lettuce	36%
Fruits/berries/melons	17%
Vegetables sprouts	29%
Home canned	3%
Processed retail	15%

Is this a lot of cases? Consider that CDC estimates 76 million cases of FBI EACH YEAR 36,000 over 17 years...

Food Safety

What causes produce to be unsafe?



Microbiological hazards are considered the biggest risk to the food industry.

Microorganisms are important because:
loss of shelf life and product quality
major cause of food borne illness

Fruits and vegetables

Agricultural products can be exposed to microbial contamination through a variety of sources

Once contaminated fresh produce often not heated to destroy pathogens



How does produce become contaminated?

Environmental sources of contamination

Handling and human sources of contamination

These sources may have a variety of pathogenic microbes associated with them.

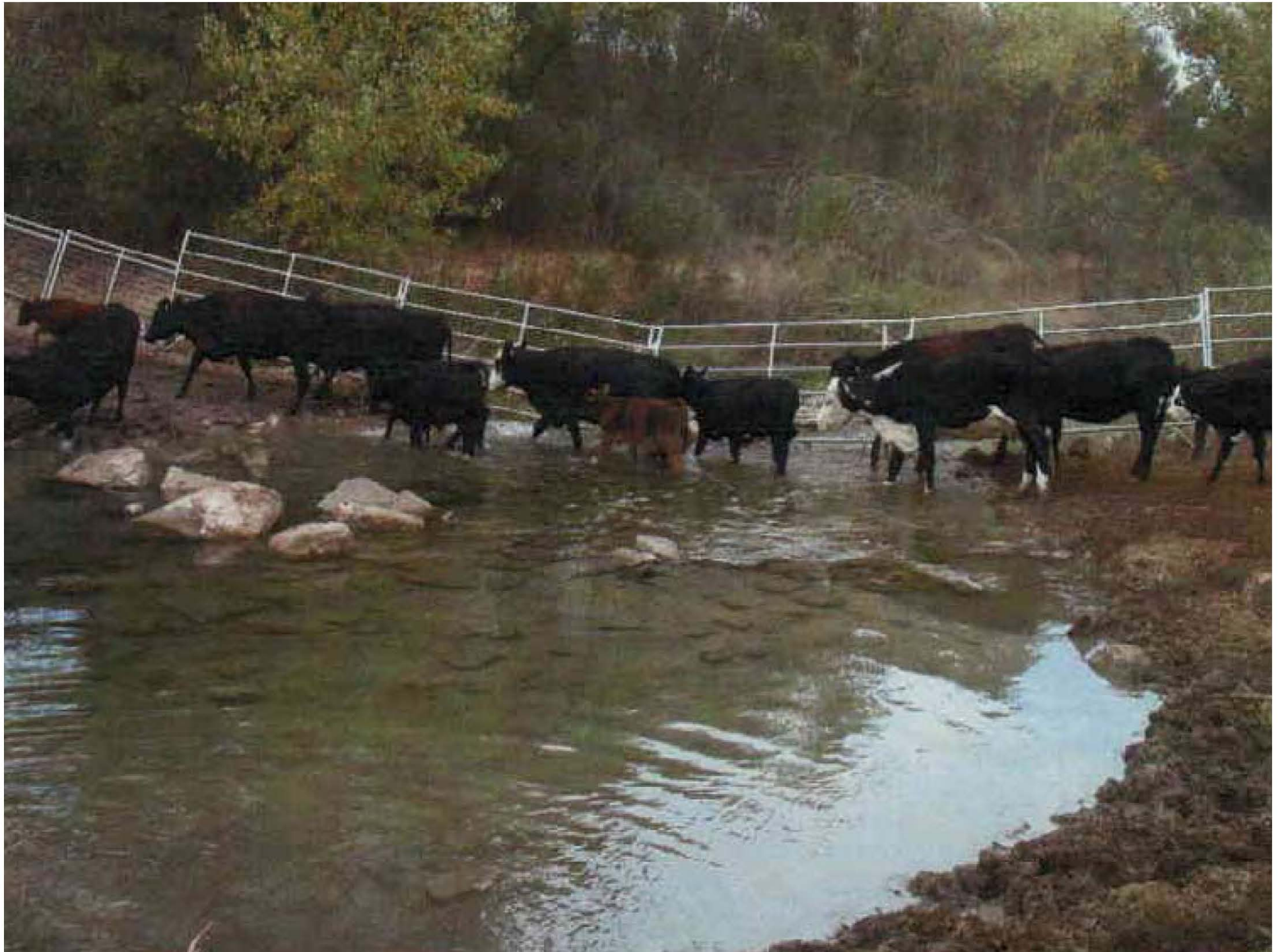
These microbes include:

Parasitic protozoans

Fungi

Viruses

Bacteria





Noah probably had gastroenteritis



HOW do we prevent hazards from reaching the consumer?

HAZARDS



Chemical
Physical
Biological



Due Diligence?

Due Diligence is a concept that a food producer, processor or food management employer has carried out every reasonable step to protect the food they work with.

If they can prove due diligence in a court of law which is questioning them about their food safety practices and they can prove due diligence, it is more likely that no charges can be brought against them for negligence in case of food poisoning etc to others.

Works in UK may not work in US civil courts...

Legally Speaking

A due diligence defence can be established if you can show that:

You have taken all reasonable steps to ensure that the food you sell complies with the law or;

The offense was the fault of another person or company.

Demonstration of Due Diligence

An assessment of the foreseeable risks to the consumer throughout the flow of the food – pre-planting to fork;

An appropriate system for managing those risks (in context of ability) – GAPs/HACCP;

Evidence of a continuous compliance (that the system is being adhered to) aka – recordkeeping, third party audits;

A process to actively seek out and incorporate new knowledge;

Appropriate planning for correction

Due Diligence for Locally Grown

Adherence to Good Agricultural Practices (GAPs) and Good Hygienic Practices (GHPs).

Establishment of a record keeping system that allows documentation of soil inputs, harvesting and other equipment cleanliness, employee health, etc...

Establishment of a trace or recall system

Establishment of a training system for employees

Maintenance of water quality and source

Maintenance of environmental around farm

Others...

Basic principles of produce microbial safety

Principle 1. Prevention of microbial contamination of fresh produce is favored over reliance on corrective actions once contamination has occurred.

Principle 2. Fresh produce can become microbiologically contaminated at any point along the farm-to-table food chain. The major source of microbial contamination with fresh produce is associated with human or animal feces.

Principle 3. Practices using animal manure or municipal biosolid wastes should be managed closely to minimize the potential for microbial contamination of fresh produce.



Principle 4. To minimize microbial food safety hazards in fresh produce, growers, packers, or shippers should use good agricultural and management practices in those areas over which they have control.

Principle 5. Whenever water comes in contact with produce, its source and quality dictates the potential for contamination. Minimize the potential of microbial contamination from water used with fresh fruits and vegetables.

Principle 6. Worker hygiene and sanitation practices during production, harvesting, sorting, packing, and transport play a critical role in minimizing the potential for microbial contamination of fresh produce.



Principle 7. Follow all applicable local, state, and Federal laws and regulations, or corresponding or similar laws, regulations, or standards for operators outside the U.S., for agricultural practices.

Principle 8. Accountability at all levels of the agricultural environment (farm, packing facility, distribution center, and transport operation) is important to a successful food safety program.



Implementation of Good Agricultural Practices

<http://postharvest.ucdavis.edu>



Postharvest Technology Research and Information Center Home Page - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://postharvest.ucdavis.edu/>



POSTHARVEST TECHNOLOGY
Research and Information Center

Goals:

- Improving the quality and value of horticultural crops available to the consumer
- Reducing postharvest losses and improving marketing efficiency
- Solving particular problems in handling fruits, vegetables, and ornamentals to maintain their quality and safety

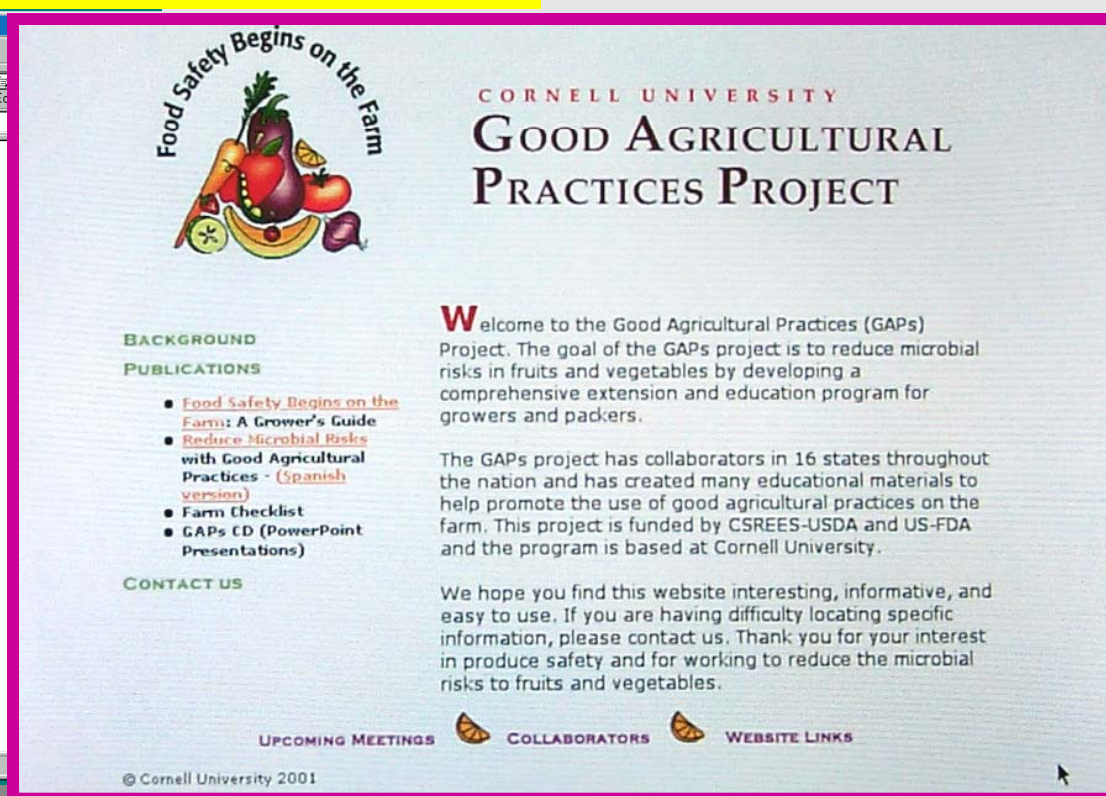
Postharvest Technology Research and Information Center

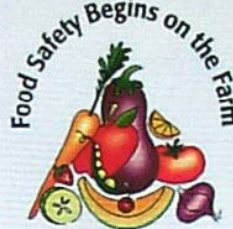
- [About the Center](#)
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- [Center Publications](#) - list and order form

Online UC Postharvest Information

- [Produce Facts](#)
- [Physiological Disorder Fact Sheets](#)
- [Properties and Recommended Conditions for Storage of Fresh Fruits and Vegetables](#)
- [Additional Information](#)

Done Internet zone





CORNELL UNIVERSITY
GOOD AGRICULTURAL PRACTICES PROJECT

BACKGROUND PUBLICATIONS



- [Food Safety Begins on the Farm: A Grower's Guide](#)
- [Reduce Microbial Risks with Good Agricultural Practices - \(Spanish version\)](#)
- [Farm Checklist](#)
- [GAPs CD \(PowerPoint Presentations\)](#)

CONTACT US

Welcome to the Good Agricultural Practices (GAPs) Project. The goal of the GAPs project is to reduce microbial risks in fruits and vegetables by developing a comprehensive extension and education program for growers and packers.

The GAPs project has collaborators in 16 states throughout the nation and has created many educational materials to help promote the use of good agricultural practices on the farm. This project is funded by CSREES-USDA and US-FDA and the program is based at Cornell University.

We hope you find this website interesting, informative, and easy to use. If you are having difficulty locating specific information, please contact us. Thank you for your interest in produce safety and for working to reduce the microbial risks to fruits and vegetables.

[UPCOMING MEETINGS](#)  [COLLABORATORS](#)  [WEBSITE LINKS](#)

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IOWA STATE UNIVERSITY
University Extension

<http://www.gaps.cornell.edu>

Farms can do a lot

Learn about the risks.

Develop a plan – focus each step

Provide tools for staff

Document your actions.

Strive to reduce risks.



Producing Safe Food

- Establish system to document use of GAPs on farm and during transit along the food chain
- Ensure clean and appropriate food contact surfaces and packages are used
- Be able to provide certification and/or evidence of liability protection

Good Agricultural Practices (GAPs)
Monthly Inspection Record Sheet*

Agricultural Water		Animal Feces		Worker Health and Hygiene		Field Sanitation		Trace Back	
Good	Needs Work	Good	Needs Work	Good	Needs Work	Good	Needs Work	Good	Needs Work
1.		6.		9.		15.			
2.		7.		10.		16.			
3.		8.		11.		17.			
4.				12.		18.			
5.				13.		19.			

On-Farm Food Safety

- Production – GAPs
 - Safe water
 - Manure management
- Harvest
- Post-Harvest
 - Processing
 - Packing
 - Transportation



On-Farm Food Safety Focus

Workers:

- Health
- Practices
- Training

Training Focus:

- Handwashing
- Cleaning and Sanitizing
Contamination
- Cross-Contamination

Documentation: Put Actions in Writing

- Develop written policies
 - Of production and handling practices
 - For hired workers (templates available at “www.iowahaccp.iastate.edu”)
Visitor access especially if U Picks
- Keep records - Certified Organic Producers already keep records
- Document
 - Insurance – liability if selling to markets
 - Water tests
 - Temperature log
 - Employee health and training
 - Cleaning schedules

Proper Facilities, Education, and Training Training Training



Zero-Risk/Pathogen Free is Mission Impossible

- BUT Action Steps (some are easy and inexpensive fixes) can **REDUCE** the Risk
- People want and need fruits and vegetables for many reasons – taste and health
- Producers need to show best practices are used

So What?

- Customers have awareness of potential risks
- Producers must practice precautions to demonstrate *reasonable care*
- Producers should keep documentation
- Checklists for Buyers and Sellers at www.iastatelocalfoods.org
- Foodservices will often request this information, especially if serving elderly or children
- Insurance carrier negotiation?
- Market quality and safety aspects of your products (Some preliminary survey research indicates people will pay premium for assurances)

Good Agricultural Practices Can Reduce Food Safety Risks

- Good Agricultural Practices (GAPs) for food safety include Best Management Practices (BMPs) to protect the environment.
- These same practices that reduce losses of soil and nutrients can reduce risk of microbial contamination of produce.
- Keeping records of production practices allows regular updates of plans.



Resources

Iowa State Food Safety Project

www.iowafoodsafety.org

HACCP website

www.iastatehaccp.org

Local foods website


www.iastateocalfoods.org

What do your customers want?



What they don't want!





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