



Food Safety at Farmers' Market

Kristen Gibson

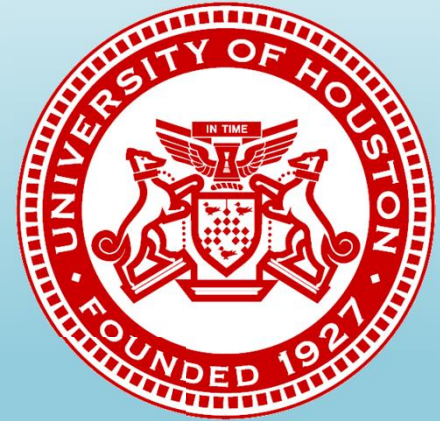
2015 MCAFDO Educational Conference

February 24, 2015

USDA National Farmers' Market Food Safety Project: 10/2013 to 9/2016



Source: <http://www.miromaroutlets.com/>



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DIVISION OF AGRICULTURE
RESEARCH & EXTENSION

University of Arkansas System



What about food safety at farmers' markets?

Food Safety News

Breaking news for everyone's consumption

Shoppers Can Pick Up Food Safety Clues at Farmers Markets

By Cookson Beecher | August 9, 2013

FoodSafety[™] magazine

MEAT SPOTLIGHT | August/September 2014

Food Safety at Farmers Markets: A Reality Check

By Joshua Scheinberg, M.Sc., and Catherine Cutter, Ph.D



Food Safety at the Farmer's Market

Oct 14, 2014

By Howard Seltzer, FDA's Center for Food Safety and Applied Nutrition



[News21 Homepage](#) » [Local](#) » [Farmers Markets Thrive While Concerns Grow](#)

Farmers Markets Thrive While Concerns Grow

■ Small farms and local markets bear the ultimate responsibility for the safety of food they sell and buy.

By **Stephanie Snyder**
News21

Text Size: - +



Against the backdrop of San Francisco's skyline, investment banker Ali Dagli strolled through rows of fresh-picked produce, chatting with farmers as he carefully packed his purchases into a canvas bag slung over his shoulder.

"It's great to see these guys who are passionate about the food that they bring here," said Dagli while shopping at the Ferry Plaza Farmers Market on a recent Saturday morning. "If I go to Safeway, it has no heart. There is heart here at the farmers market."

Produce carrying pathogens can be bought as easily at farmers markets as at supermarkets.

What about food safety at farmers' markets?

Food Quality & Safety

Pathogens Identified in Herbs at Farmers' Markets

Study on the West Coast finds *E. coli*, *Salmonella* in parsley, cilantro, basil

No Longer Niche, Local Foods Becoming Big Business

The Associated Press

Jul 16th 2014 6:00AM

Updated Jul 16th 2014 4:40PM



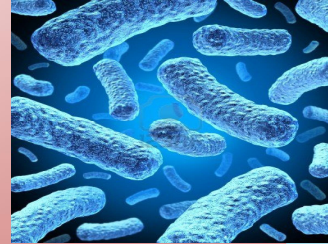
Matt Rourke/AP

By MARY CLARE JALONICK

Primary Concerns

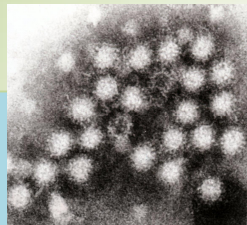
Bacteria:

- ” Too small to see
- ” Can live in many environments
- ” Replicates independently



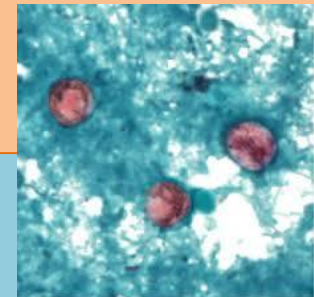
Viruses:

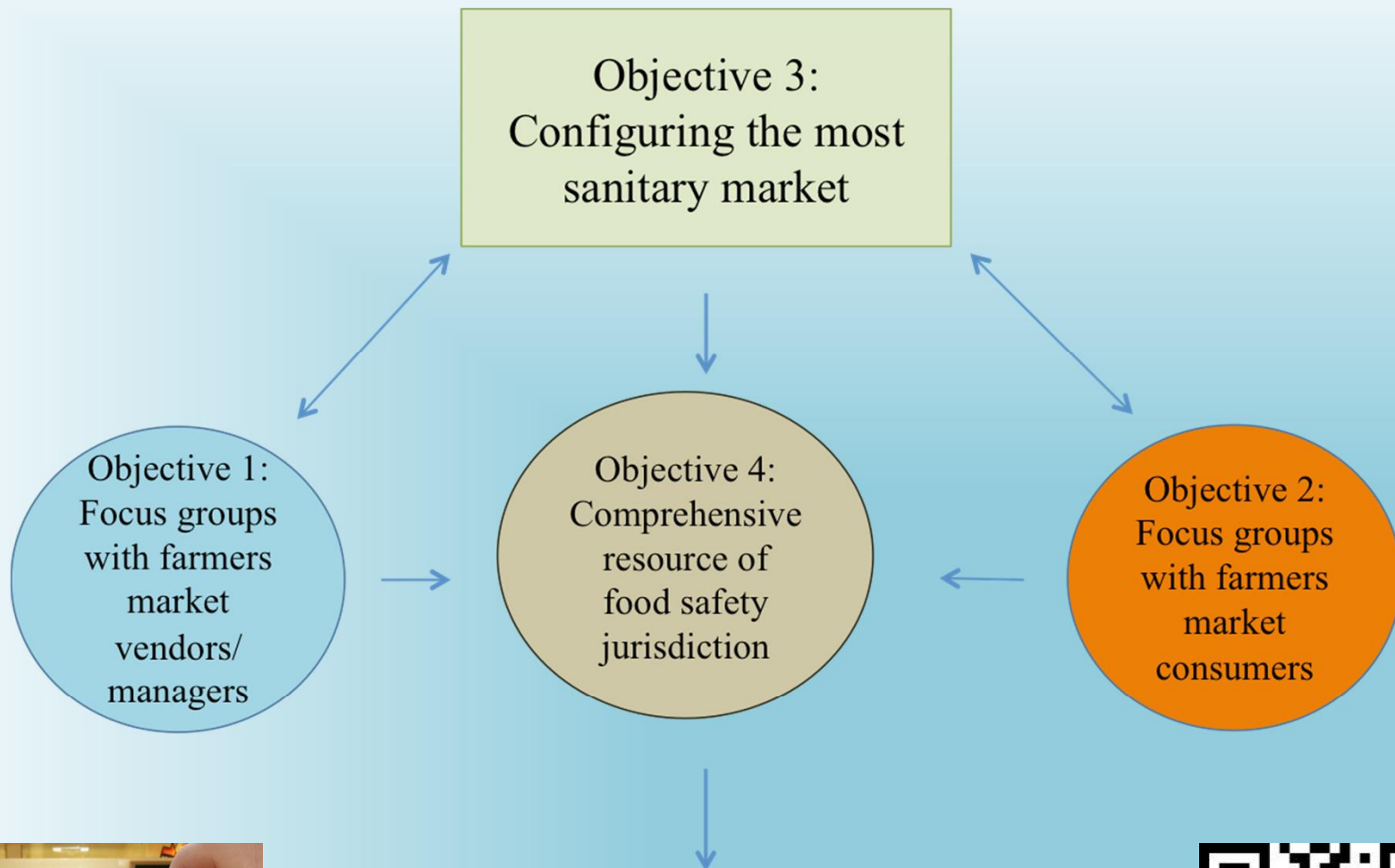
- ” Smaller than bacteria
- ” Require a host to replicate
- ” Norovirus, Hepatitis A



Parasites:

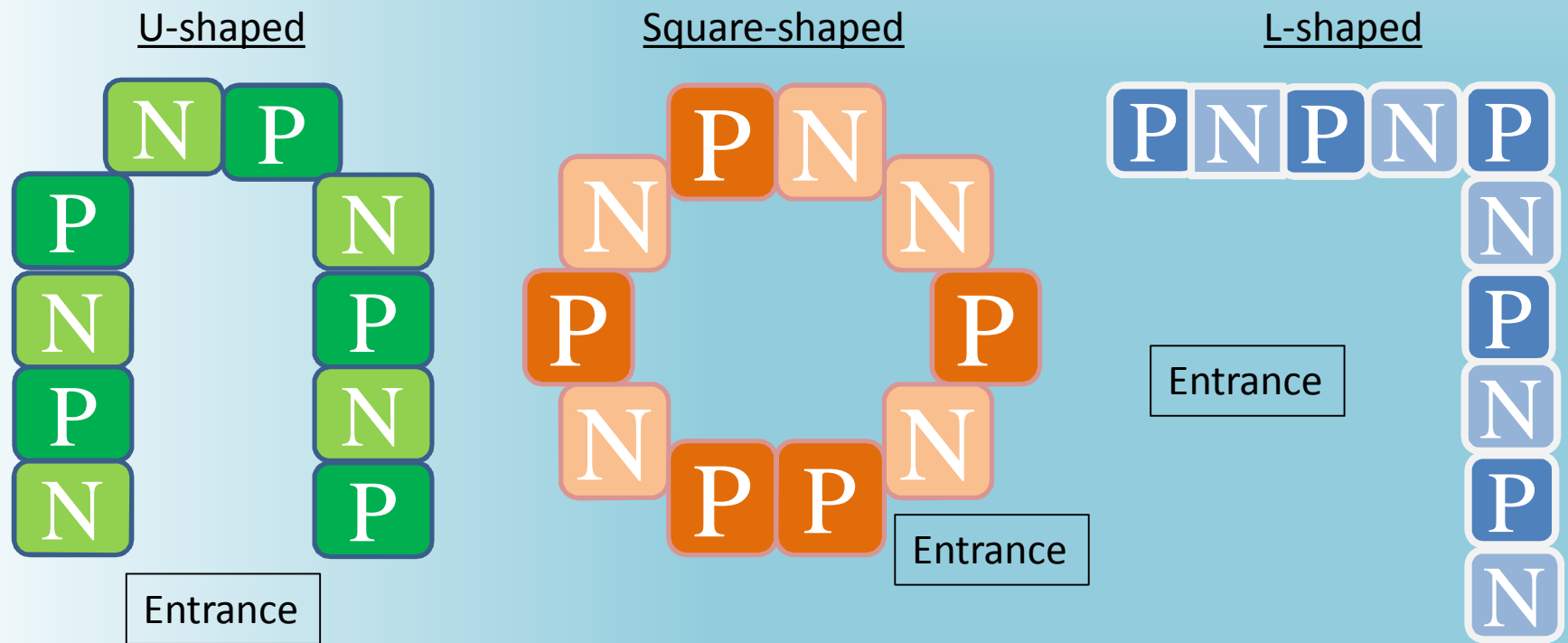
- ” Organisms live in host
- ” Often waterborne
- ” Intestinal worms or protozoan organisms most common

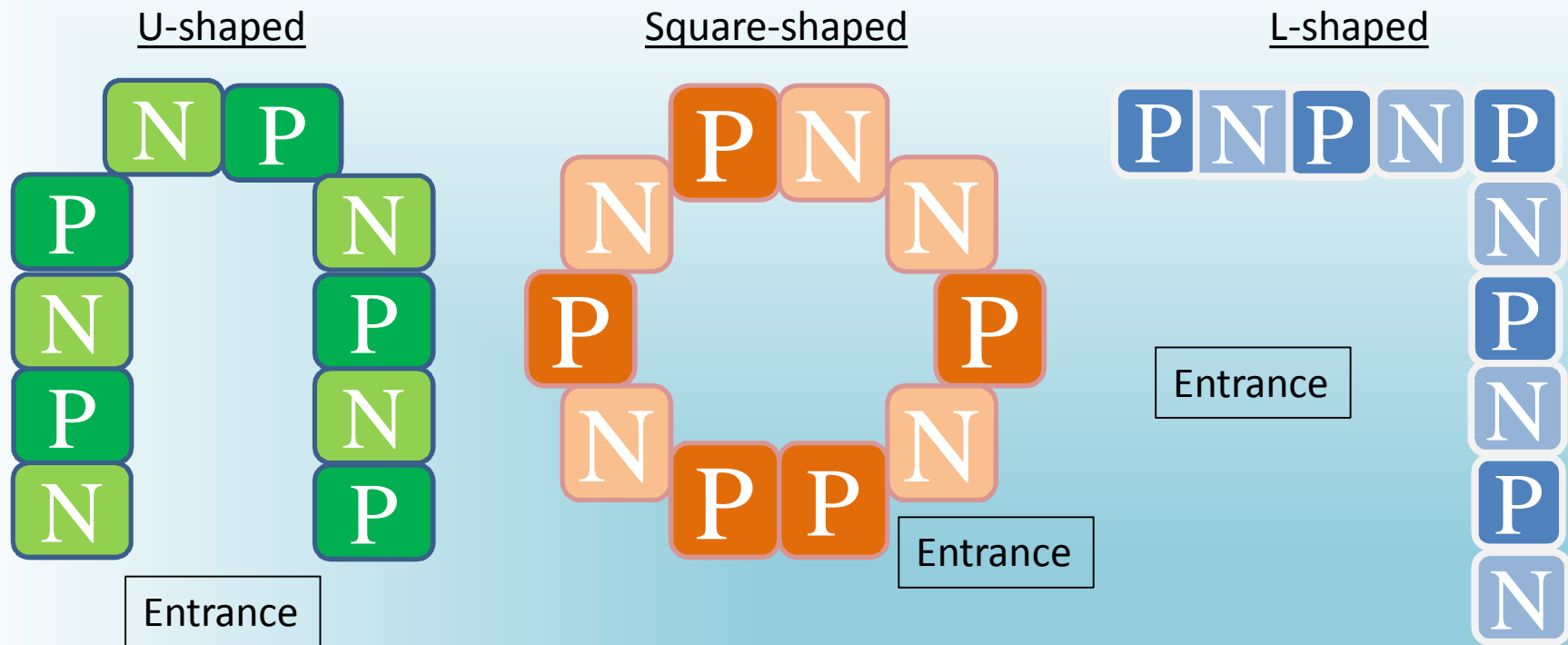




Farmers' Market Vendor Layouts

“ Can vendor booth configurations decrease the risk of cross contamination?





1. Layout selected: U, Square, L
2. Produce: cucumbers, tomatoes, lettuce, green peppers, apples, onions, cantaloupe
3. Non-produce: plastics, paper products, rocks, dog treats, glassware
4. Arrange booths within layout to test patterns
5. Have "consumers" apply 1 ml of fluorescent gel to their dominant hand and go through the market
6. Shine black light on booths and record observations and collect swab samples



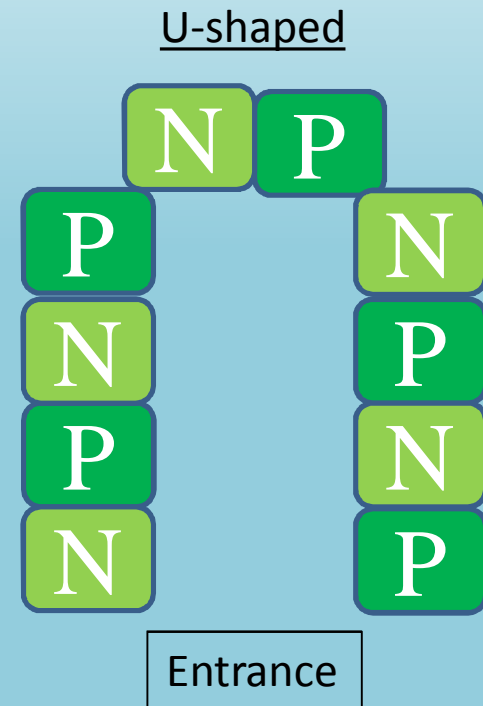
Farmers' Market Layouts

“ Does it matter? **YES, it depends**

“ U-shaped market

- Alternate P and N booths
- Lowest level of contamination based on swab analysis

“ Recommendation: U-shaped market can reduce probability of cross-contamination



Market layout cannot always be changed...

Food Safety at Farmers' Markets

“ Farmers' Markets can...

- . Understand why food safety is important
- . Know what opportunities vendors have for food safety education
- . Develop/maintain a positive working relationship with the local health departments and vendors/producers
- . Encourage vendors /producers to provide food safety education for their customers

Farmers' Markets and LHDs

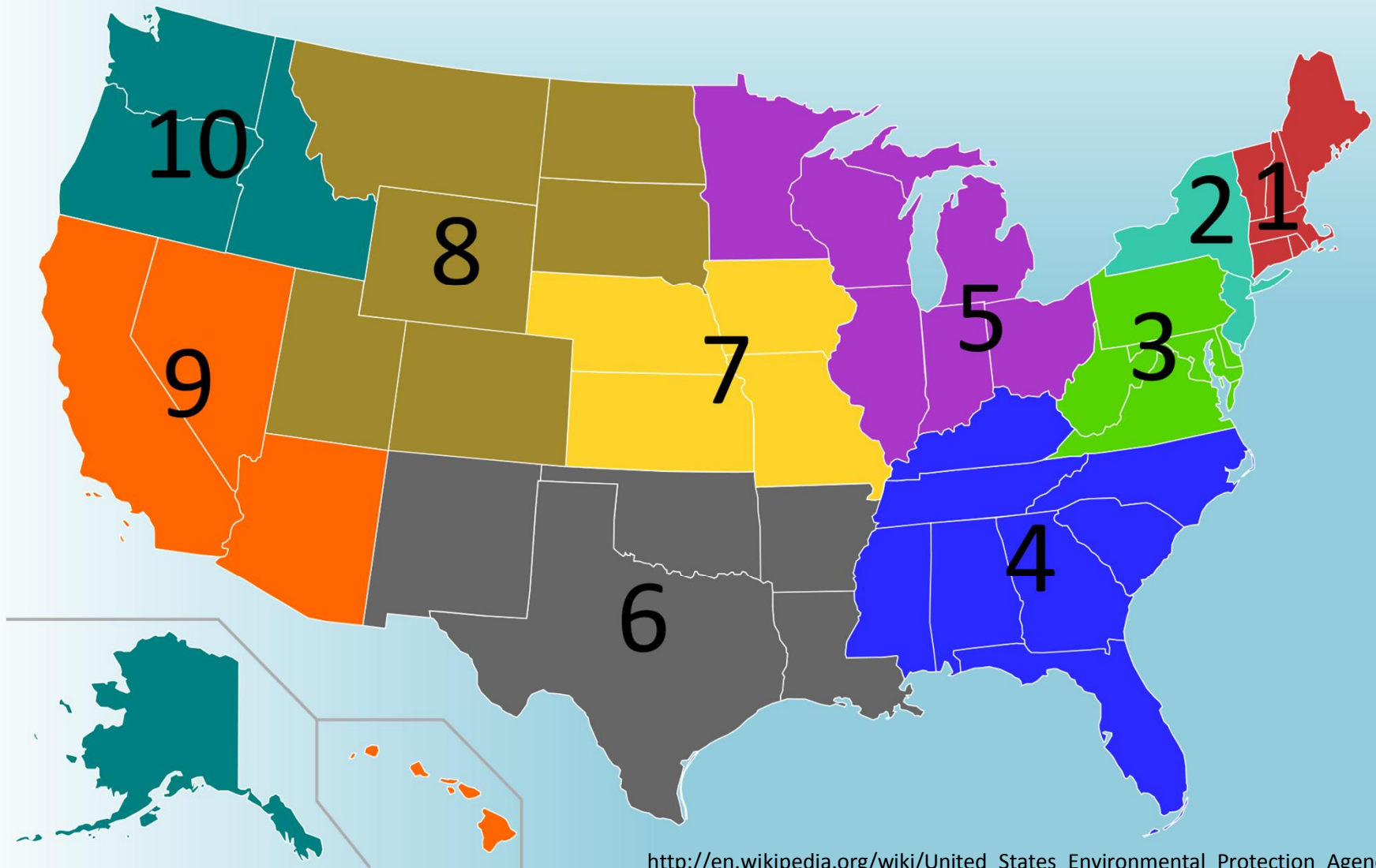
- ” Cottage Foods Rules
 - . labeling
- ” Mobile Retail Food Establishment
- ” “Processed” Foods
 - . Shelled vs. not shelled
 - . Washed and sealed vs. not sealed
 - . Samples



Food Safety for Consumers

- “ Encourage market manager and vendors/producers to educate their consumers
 - . Teach consumers how to transport, store, and prepare their products safely
 - . Include information for each to prepare nutritious recipes to encourage loyal consumers
 - . Post proper hand washing information in restrooms
- “ Support special events that demonstrate safe food handling practices
- “ Encourage vendors/producers to be properly trained
- “ Develop response plan

Regional Farmers' Markets: Web Content Analysis

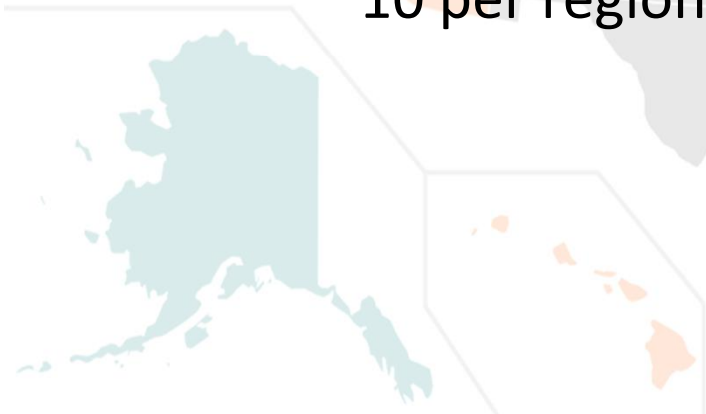


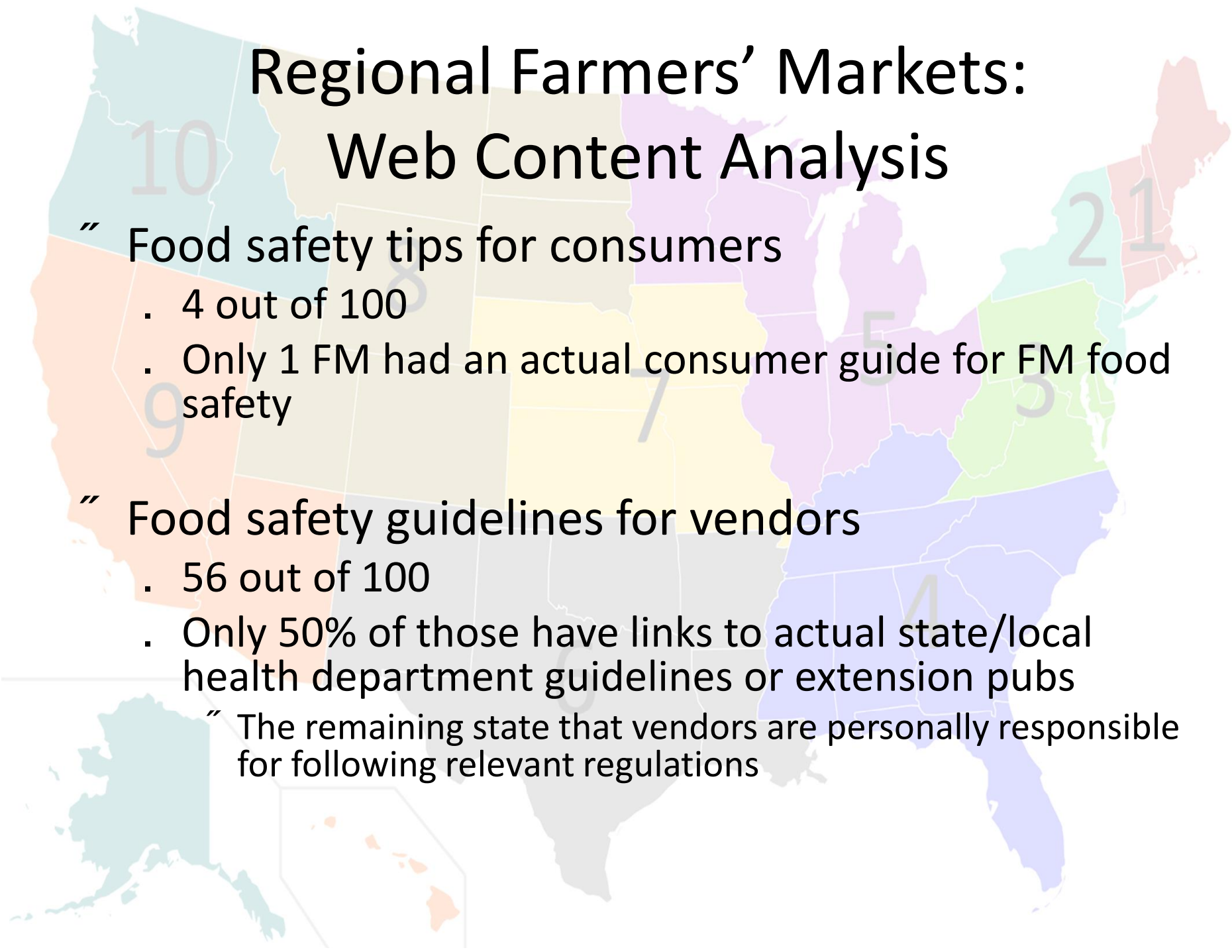
Regional Farmers' Markets: Web Content Analysis

" Sampling Strategy

- . USDA local food directory
- . # of farmers' market per region
- . Inclusion criteria: website, accept SNAP and WIC
- . Random number generator for FM selection by region

" 10 per region = 100 total





Regional Farmers' Markets: Web Content Analysis

" Food safety tips for consumers

- . 4 out of 100
- . Only 1 FM had an actual consumer guide for FM food safety

" Food safety guidelines for vendors

- . 56 out of 100
 - . Only 50% of those have links to actual state/local health department guidelines or extension pubs
- " The remaining state that vendors are personally responsible for following relevant regulations

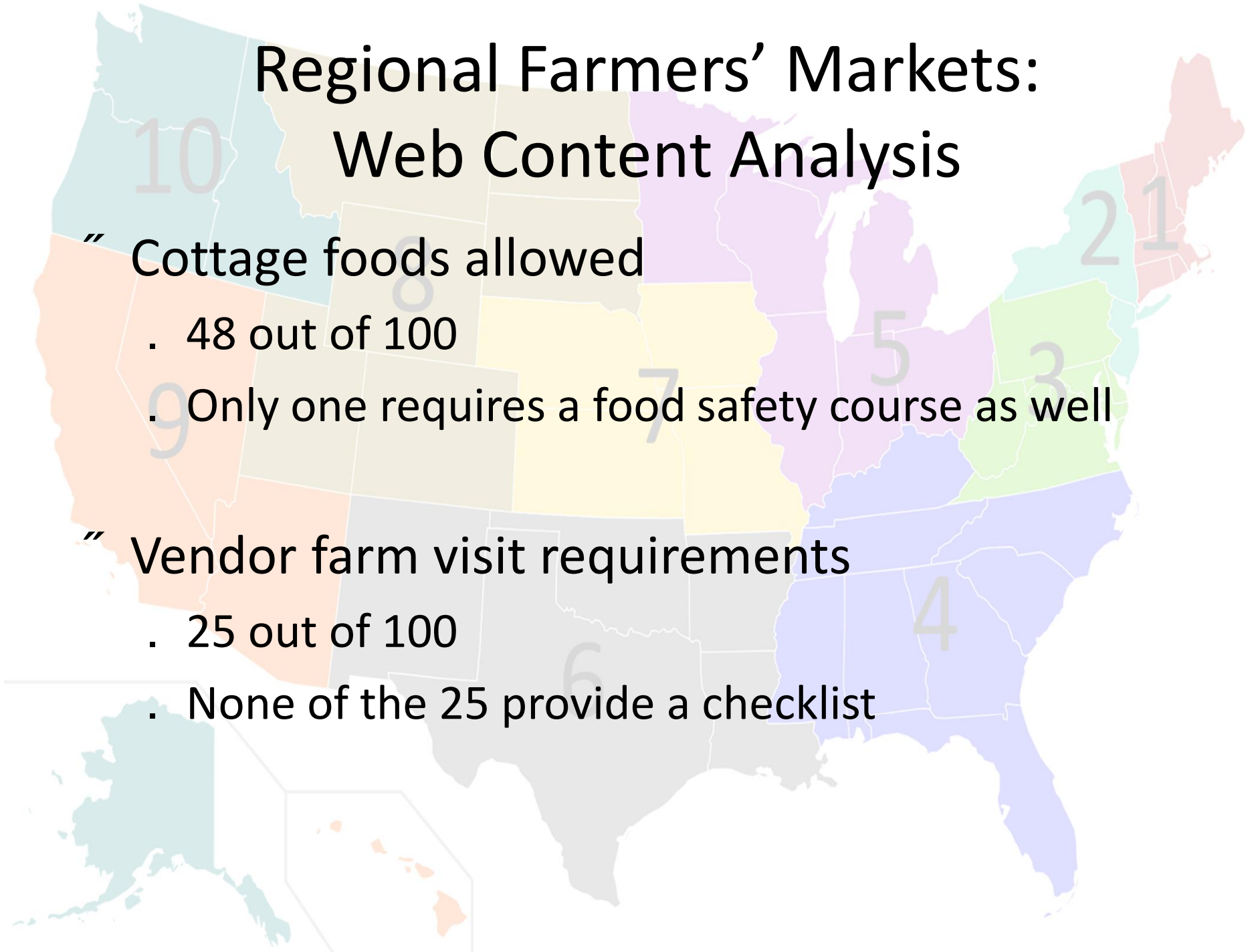
Regional Farmers' Markets: Web Content Analysis

" Cottage foods allowed

- . 48 out of 100
- . Only one requires a food safety course as well

" Vendor farm visit requirements

- . 25 out of 100
- . None of the 25 provide a checklist



Guides for Farmers' Market Consumers



<http://mifma.org/2014/09/food-safety-from-the-farmers-market-to-the-fridgeresource-available-for-consumers/>

MIFMA: *Farmers' Market to your Fridge*

- ” Choosing and buying at the market
- ” Getting your purchase home
 - Hard to resist a fresh berry BUT be sure to wash thoroughly first to remove any soil, bacteria, lingering pests, or traces of pesticides
 - Make the farmers' market your last stop before heading home
- ” Storing your purchases
 - Hold off on washing until ready to use



MIFMA: *Farmers' Market to your Fridge*

- “ Storing your purchases (cont.)
 - . Perforated plastic bags
 - . Store fruits and vegetables in separate crisper drawers in the fridge
 - “ If don't fit in drawers, always store fresh produce on shelves above meat
- “ Using, cooking, and eating your farmers' market items
 - . Basic food safety in the home

Store at Room Temperature:

Melons
Nectarines
Onions
Peaches
Pears
Peppers
Plums
Potatoes
Sweet Potatoes
Tomatoes
Winter Squash

Refrigerate:

(Most other fruits and vegetables)

Beans
Berries
Broccoli
Cucumbers
Lettuces and Greens
Peas
Summer Squash

Other Consumer Education Options

- “ Market managers and CSAs can include food safety tips and information in newsletters
 - . Social media: Facebook, Twitter, Instagram
- “ Newsletters and fact sheets
 - . Inform and remind customers about food safety risks and safe handling practices
- “ Demonstrations and Food Safety Events
 - . Proper procedures can be demonstrated
 - . Equipment can be displayed
 - . Customers can be given opportunity to ask questions and pick up fact sheets or other information on food safety

What are we working on?



**Farmers' Market Consumer
Food Safety Smartphone "App"**



Farmers' Market Consumer "App"



<http://www.realfoodkoshers.com/shopping-the-santa-monica-farmers-market/>

Quick Read Code

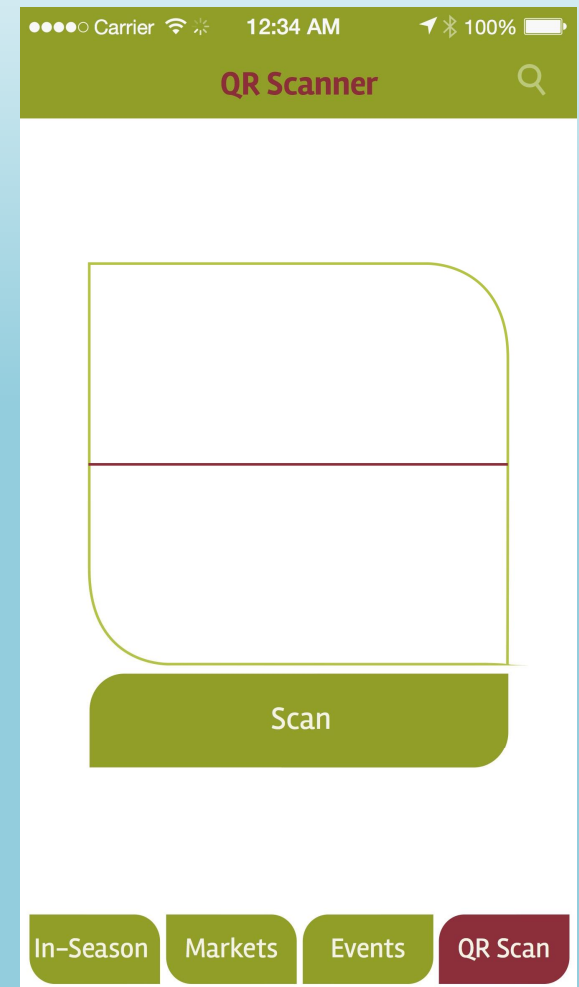
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de.fotolia.com

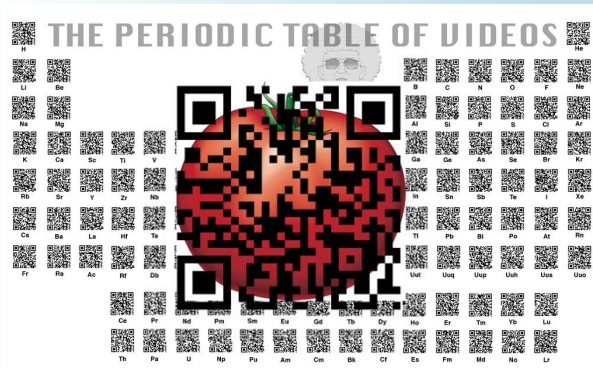
QR Code Scanner

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Creates a "window" to the farm

Farmers' Market Consumer "App"



Quick Read Code

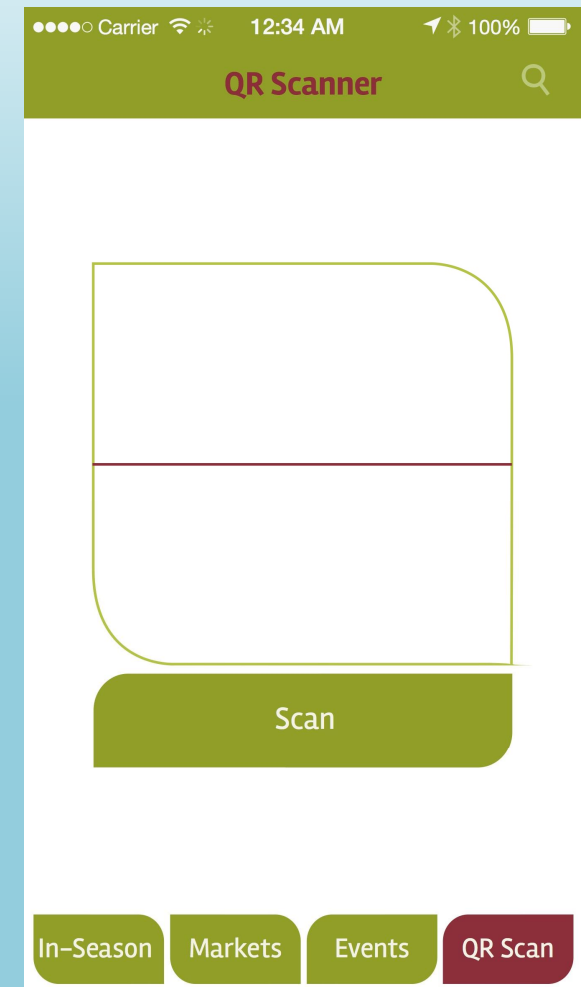
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QR Code Scanner

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- “ Good Handling Practices
- “ Food safety specific to product
- “ Recipes for “exotic” produce



Periodic Table of Farmers' Market Products

**“Food safety involves everyone
in the food chain”**

- US Senator Mike Johanns

Acknowledgements

“ University of Arkansas Team

- . Katie Wright

“ University of Houston Team

- . Jay Neal
- . Sujata Sirsat
- . Kristen Kirkwood, Hillary Norwood, Mary Goodman, Lydia Liou

Questions?

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WASHING YOUR HANDS



IS AWESOME