



# **MPH Integrated Learning Experience Report:**

*Food Safety Compliance for Kansas Food Operations  
and Consumers: Analyzing Trends, Developing  
Education Materials, and Improving Communication*

**Cheryl Barnes**

MPH Candidate/Food Safety and Biosecurity

APE Site: *Kansas Department of Agriculture and  
Kansas State Research and Extension*

# Outline

- Introduction
- Background
- Applied Practice Experience
- Projects and Products
- MPH Competencies
- Emphasis: Food Safety and Biosecurity Competencies
- Conclusion
- Acknowledgements



# Introduction

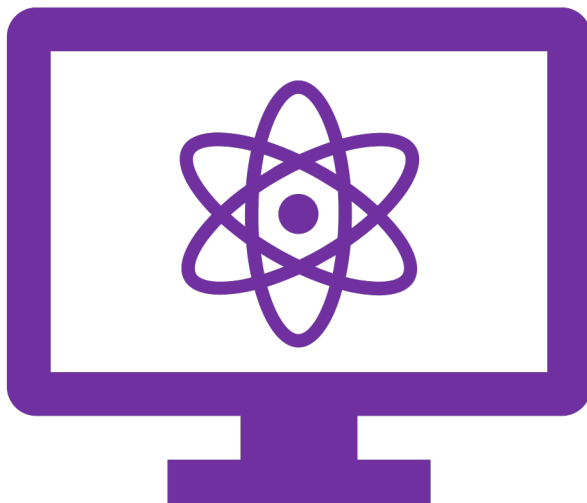
- Undergraduate degree in dietetics
- Completed hours with Kansas Department of Agriculture (KDA) and Kansas State Research and Extension (KSRE)
- Field Experience Spring 2022 – November 2022

# Background

- Every year food that is unsafe causes an estimated **600 million** cases of foodborne illness worldwide and **420,000 deaths**.<sup>1,2</sup>
- One of the Healthy People 2030 goals<sup>3</sup>
  - “Improve food handling practices,” which includes reducing infections and outbreaks caused by pathogens in food, and increase safe food handling practices.
- Common violations at food establishments<sup>4</sup>
  - food contact surfaces being properly cleaned or sanitized
  - having adequate handwashing sinks supplied and accessible
  - physical facilities being installed, maintained, and cleaned
  - properly date marking
  - toxic substances being properly identified, stored, or used



# APPLIED PRACTICE EXPERIENCE



## Kansas Department of Agriculture (KDA) – the nation's first state department of agriculture

**Mission:** “Helping to ensure a safe food supply, protecting natural resources, promoting public health and safety, protecting animal health, and providing consumer protection to the best of our ability.”

## Divisions and Programs

- Agricultural Laboratory
- Agricultural Marketing, Advocacy and Outreach Team
- Dairy and Feed Safety Program
- Division of Animal Health
- Division of Conservation
- **Food Safety and Lodging Program**
- Grain Warehouse Inspection Program
- Meat and Poultry Inspection Program
- Pesticide and Fertilizer Program
- Plant Protection and Weed Control Program
- Division of Water Resources
- Weights and Measures Program

## Food Safety and Lodging Program

- Conducts food safety inspections at food establishments (schools, grocery stores, restaurants, etc.), processors, and lodging establishments
- Public can view health inspection reports
- Provide education to food establishments
- Public can file complaints



Preceptor: Amber Grisamore - Program Manager

## Kansas State Research and Extension (KSRE)

**Mission:** “K-State Research and Extension is dedicated to a safe, sustainable, competitive food and fiber system and to strong, healthy communities, families and youth through integrated research, analysis and education.”

### Provides information and services about:

- Adult Development and Aging
- Community Development
- Crop Production
- Family and Child Development
- Family Resource Management
- Farm Management
- Horticulture
- Livestock Production
- Natural Resources
- **Nutrition, Food Safety, and Health**
- Youth Development



# APE Sites

## Extension Food Safety

Some services include:

- Food safety at farmers' markets
- ServSafe tools
- Food allergy information
- Food preservation
- Food safety for food entrepreneurs

Preceptor: Londa Nwadike, Ph.D.

- State Food Safety Specialist



# Learning Objectives and Project Description

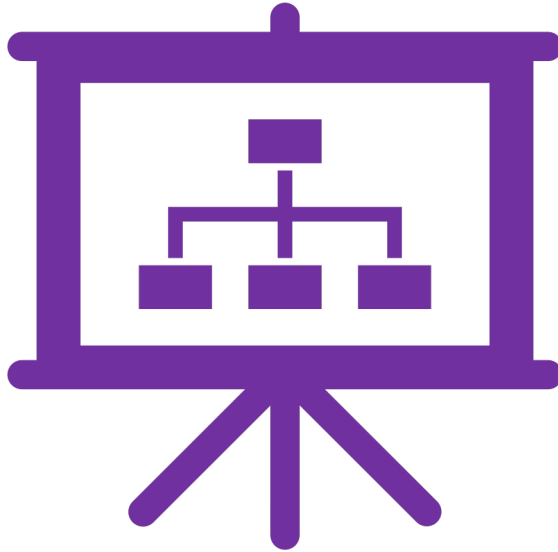
## KDA

- Gain knowledge and understand information in the Kansas Food Code (based on the US Public Health Service 2009 FDA Model Food Code) as it relates to food establishments
- Update and create food safety educational materials for food establishments
- Gain insight and relay information on popular food safety topics to KDA stakeholders via newsletter articles
- Assist with editing the Focus on Food Safety (FOFS) educational video
- Create a review quiz for food establishments to check their knowledge after the FOFS video

## KSRE

- Update food safety educational materials for consumers (KSRE)
- Analyze KSRE bookstore food safety topics for consumers to identify topics that could be added
- Understand GMO concepts and update educational materials on the topic

# PROJECTS AND PRODUCTS



# Examples of Products with KDA

## Employee Illness Policy



### Employee Health – Everyone's Responsibility

#### What foodborne illness symptoms are most concerning?

- Vomiting
- Diarrhea
- Jaundice (yellow skin or eyes)
- Sore throat with fever
- Uncovered infected cuts and burns with pus on hands and wrists

#### What do employees do if they have symptoms of vomiting or diarrhea?

If the symptoms begin while the employee is at work, he or she must:

- Stop work immediately;
- Report to management; and
- Go home and do not return to work until at least 24 hours pass after the vomiting and diarrhea symptoms stop

If the symptoms occur before the employee arrives to work, he or she must:

- Notify the manager by telephone; and
- Not go to work until at least 24 hours pass after the vomiting and diarrhea symptoms stop

#### Big 6 Foodborne Illnesses

- Salmonella Typhi
- Non-typhoidal Salmonella
- Shigella
- Shiga Toxin-Producing E coli
- Hepatitis A
- Norovirus

Employees must report diagnosis with a Big 6 illness to the person in charge

The person in charge must report an employee report diagnosis to the regulatory authority. Employees must be restricted or excluded from working when diagnosed or exposed to the Big 6.

#### Restriction

Restricted employees cannot work with food, utensils, or equipment. They can perform tasks such as bussing tables, taking out the trash, etc

#### Exclusion

Excluded employees are not allowed to be in the facility. Food employees may not return to work after exclusion until at least 24 hours after symptoms stop (or otherwise directed in the Kansas Food Code)

Link to the Kansas Food Code:



## Cleaning Frequency of In-Use Utensils

The growth of pathogenic bacteria to dangerous levels can result when in-use utensils are left out at room temperature for extended times without proper sanitization. In-use utensils can be stored in dipper wells under running water; directly in the food item with handles above the top of the food; in clean water at 135° F or above; or on a clean sanitized surface.



#### In-use utensils must be properly cleaned and sanitized:

- At least once every 4 hours if the utensils are used with potentially hazardous foods (PHFs) and are left out at room temperature
- Before each use with a different type of raw animal protein such as beef, pork, poultry, or fish
- Between uses with raw foods and ready-to-eat foods
- Any time contamination may have occurred

#### Surfaces of in-use utensils contacting PHFs may be cleaned less frequently than 4 hours, if, between uses, the utensils are:

- Stored directly in the food item at a temperature of 41° F or below for cold foods; or 135° F or above for hot foods
- Stored in clean water at a temperature of 135° F or above
- Used to prepare food in a refrigerated room according to the following chart (room temperatures must be documented):

41° F or less	Every 24 hours
> 41° F - 45° F	Every 20 hours
> 45° F - 50° F	Every 16 hours
> 50° F - 55° F	Every 10 hours

Link to the Kansas Food Code:



# Examples of Products with KDA

## The Big 6 Foodborne Illnesses



### E coli

- E. coli 0157 is a dangerous strain
- Commonly found in raw meat, ground beef, undercooked burgers, and raw milk
- Can be fatal for those with a compromised immune system
- Sometime referred to as "travelers diarrhea"



### Hepatitis A

- Viral liver infection
- Comes from infected food handlers
- Commonly found in ready-to-eat foods and contaminated water
- Cooking does not destroy this virus
- Jaundice is a tell-tale sign - yellowing of the eyes or skin



### Norovirus

- Very contagious
- Aggressive diarrhea and vomiting
- Comes from infected food handlers
- Commonly found in contaminated water and ready-to-eat foods



The big 6 help guide - always food safe. (n.d.). Retrieved June 14, 2022, from <https://alwaysfoodsafe.com/learn/files/downloads/other/The-Big-6-Help-Guide.pdf>

## The Big 6 Foodborne Illnesses



### Nontyphoidal Salmonella

- Bacteria that does not need oxygen to live
- Carried in farm animals
- Commonly found in meat, poultry, eggs, dairy products, and sausages
- Can not be killed by freezing but can be killed with heat



### Salmonella Typhi

- A bacteria that is the most severe of all foodborne illnesses
- Comes from contact with feces of infected animals and people
- Commonly found in ready-to-eat foods, water or milk that is contaminated with sewage
- Prefers a warmer climate especially flooded areas
- Can survive at cool temps but is killed by heat
- Thrives at 98.6 F body temperature



### Shigella spp

- A bacteria that is also called "bacillary dysentery"
- Comes from infected food handlers
- Commonly found in contaminated water or foods that are regularly touched by hands (raw produce, potato salad, etc)



The big 6 help guide - always food safe. (n.d.). Retrieved June 14, 2022, from <https://alwaysfoodsafe.com/learn/files/downloads/other/The-Big-6-Help-Guide.pdf>

# Examples of Products with KDA

## Manual Cleaning and Sanitizing

Why is this important?

The U.S. Centers for Disease Control and Prevention has identified contamination of food equipment as one of the five leading causes of foodborne illness. Research shows that serious illnesses can result when people ingest even a few organisms like *E. coli* O157:H7 and *Shigella* spp.

**The Kansas Food Code requires that food contact surfaces and utensils be routinely washed, rinsed, and sanitized.**

General procedures for manual cleaning and sanitizing:

- **Clean sinks before using**
- **Scrape food debris from utensils and equipment**
- **Wash items thoroughly in a hot (110° F or greater) detergent solution, draining, and refilling as often as necessary to keep the water clean**
- **Rise by complete immersion in clean hot water to remove detergent, abrasives, etc.**
- **Sanitize by immersing in an approved sanitizer solution for the required time\*:**
  - 50 - 200 mg/L2 chlorine; mix with cool water\*\*
  - 200 mg/L quaternary ammonium; mix with 70° F water
  - 12.5-25 mg/L iodine
- **Air Dry in a clean, dry, well-drained location before storing**



\*Always follow the sanitizer manufacturer's EPA-registered use directions for exposure time and solution concentration

\*\*mg/L is equivalent to Parts Per Million (PPM)

## Food Safety Fact Sheet: Handwashing



One of the most important things you can do to prevent the spread of foodborne illnesses is to wash your hands. In fact, the Kansas Food Code requires that all food employees keep their hands and exposed portions of their arms clean. By frequently washing your hands, you wash away germs that you have picked up from other people or from contaminated surfaces, and you prevent the spread of disease.

### When should you wash your hands?

- After using the restroom
- After touching bare human body parts (hands, exposed portions of arms)
- After handling support animals or aquatic animals (fish in aquariums, shellfish or crustaceans in display cases)
- After coughing, sneezing, using a handkerchief or tissue, using tobacco, eating or drinking
- After handling soiled equipment or utensils
- During food preparation, as often as necessary to remove soil and contamination and to prevent cross-contamination when changing tasks
- When switching between working with raw food and working with ready-to-eat food
- After engaging in other activities that contaminate the hands, (handling dirty dishes or taking out the trash)

**1) Wet your hands under warm, running water and apply a liquid powder, or bar soap**



**2) Rub your hands vigorously together and scrub all surfaces. Clean under fingernails and between fingers**



**3) Continue scrubbing for 20 seconds or about how long it takes to sing "Happy Birthday to You." The soap combined with the scrubbing action helps dislodge and remove dirt and germs**



**4) Rinse thoroughly under running water and dry your hands using an appropriate method like disposable towels; a continuous towel system that supplies the user with clean towels, or a heated-air device**

**Link to the Kansas Food Code:**





# Examples of Products with KDA







# Examples of Products with KDA





## FOCUS ON FOOD SAFETY

Food Safety and Lodging Program


---



Kansas Department of Agriculture

Revised August 2017



<p><b>Review</b></p> <p>Which food is <b>not</b> TCS foods?</p> <ol style="list-style-type: none"> <li>Apple</li> <li>Chicken breast</li> <li>Cooked ravioli</li> <li>Cut cantaloupe</li> </ol>	<p><b>Review</b></p> <p>What is the minimum temperature poultry should be cooked to for safety?</p> <ol style="list-style-type: none"> <li>180</li> <li>155</li> <li>135</li> <li>165</li> </ol>	<p><b>Review</b></p> <p>What is the temperature danger zone?</p> <ol style="list-style-type: none"> <li>51°F to 140°F</li> <li>31°F to 140°F</li> <li>41°F to 135°F</li> <li>41°F to 140°F</li> </ol>
1	2	3
<p><b>Review</b></p> <p>Which is <b>not</b> part of the Big 6 Foodborne illnesses?</p> <ol style="list-style-type: none"> <li>Salmonella</li> <li>Enterohemorrhagic E. coli</li> <li>Hepatitis C</li> <li>Shigella</li> </ol>	<p><b>Review</b></p> <p>What is the ideal way to thaw product?</p> <ol style="list-style-type: none"> <li>Microwave, Oven</li> <li>Refrigerator</li> <li>Running cold water over the product</li> <li>All of the above</li> </ol>	<p><b>Review</b></p> <p>Which of the following is the correct order for washing kitchen equipment and utensils?</p> <ol style="list-style-type: none"> <li>Scrap, Wash, Sanitize, Rinse, Air Dry</li> <li>Scrap, Sanitize, Wash, Rinse, Air Dry</li> <li>Scrap, Wash, Rinse, Sanitize, Air Dry</li> <li>Scrap, Wash, Air Dry, Sanitize, Rinse</li> </ol>
4	5	6
<p><b>Review</b></p> <p>Where should you store chemicals?</p> <ol style="list-style-type: none"> <li>Next to foods for easy access</li> <li>On the top shelf above the prep area</li> <li>Near where the cutting boards are stored</li> <li>Away from all food and food-contact surfaces</li> </ol>	<p><b>Review</b></p> <p>What is the <b>best</b> way to reheat a product?</p> <ol style="list-style-type: none"> <li>In steam tables</li> <li>Crockpots</li> <li>Microwaves</li> <li>Direct heat (stove top)</li> </ol>	<p><b>Review</b></p> <p>When is it appropriate to wash hands?</p> <ol style="list-style-type: none"> <li>After handling a cell phone</li> <li>After handling money from the cash register</li> <li>When an employee coughs on their gloves</li> <li>After handling raw burger patty</li> <li>All of the above</li> </ol>
7	8	9
<p><b>Review</b></p> <p>You observe another employee cutting slices of cake on the same cutting board that was used to prep raw chicken, what do you do?</p> <ol style="list-style-type: none"> <li>Scrape the cake as normal and wash the cutting board</li> <li>Get out a new cutting board for the cake to be sliced on</li> <li>Immediately discard the cake and remove from consumption and its deep-draw with the employee</li> <li>Don't say anything</li> </ol>	<p><b>Correct!</b></p> <p>• Continue quiz →</p> 	<p><b>Incorrect</b></p> <p>• Continue quiz → • Try again →</p> 
10	11	12



# Examples of Products with KDA



## FOOD PROTECTION TASK FORCE

QUARTERLY NEWSLETTER

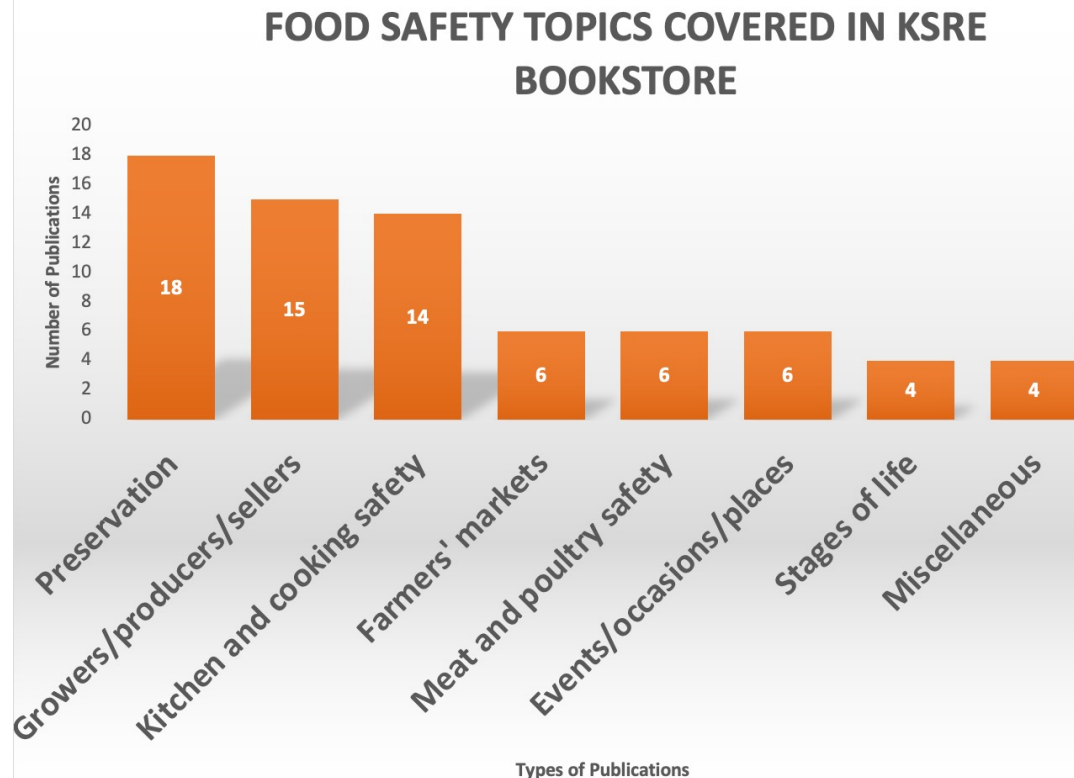
WINTER 2022

### Sent out to KDA stakeholders and is on their website

Wrote on the following topics:

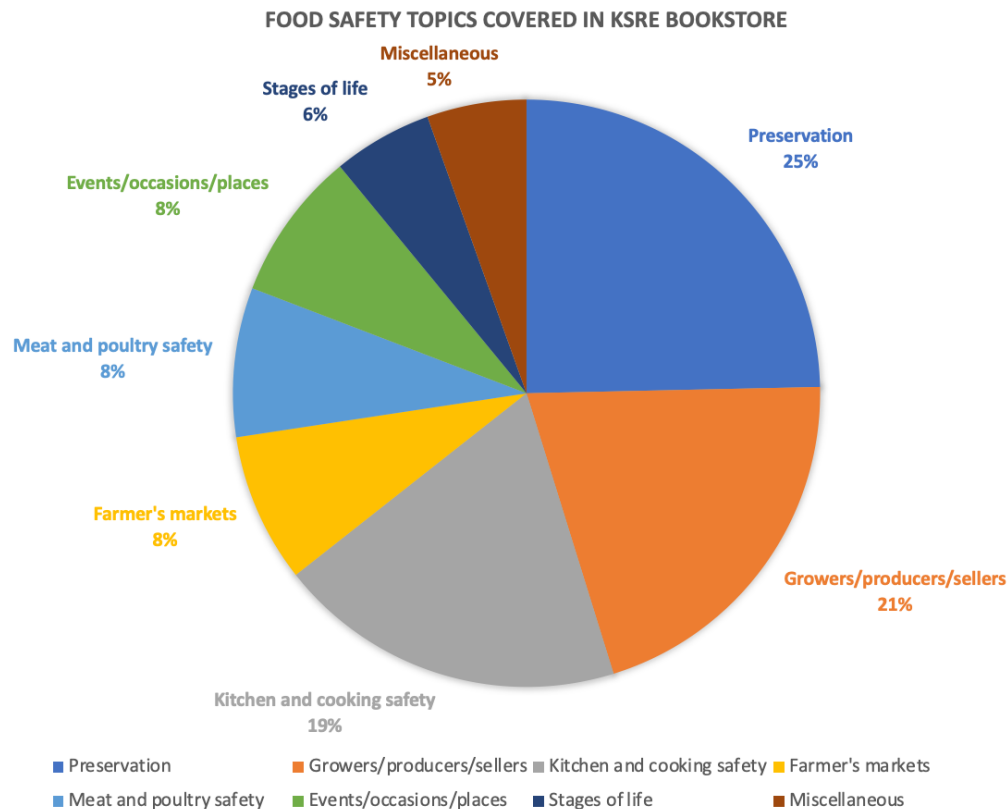
- Hepatitis A
- Bacteria, Enterics, Amoeba, and Mycotics (BEAM) Dashboard for *Salmonella* – interactive tool used by the CDC that shows trends on outbreaks of *Salmonella* by year, month, and state. The goal of this tool is to better understand illnesses from food and animal contact.
- National Outbreak Reporting System (NORS) – this is a system that shows foodborne illnesses, outbreaks, hospitalizations, and deaths. This interactive system lets people filter through by year, state, setting, food, etc.
- United States FDA New Era of Smarter Food Safety – include food safety goals to reduce food contamination and increase traceability.

# Example of Products with KSRE



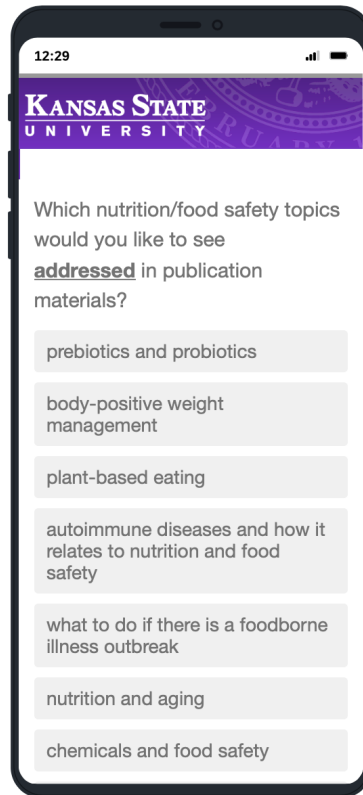
# Example of Products with KSRE

Categorized food safety topics available in the KSRE bookstore



# Example of Products with KSRE

Survey created for KSRE extension agents to be given in the future by the food safety state specialist

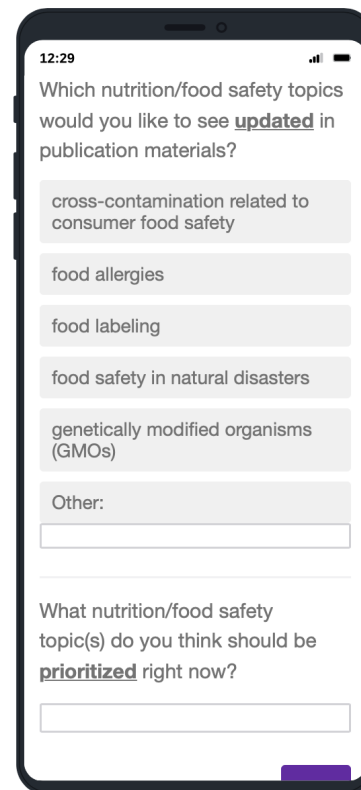


12:29

**KANSAS STATE UNIVERSITY**

Which nutrition/food safety topics would you like to see addressed in publication materials?

- prebiotics and probiotics
- body-positive weight management
- plant-based eating
- autoimmune diseases and how it relates to nutrition and food safety
- what to do if there is a foodborne illness outbreak
- nutrition and aging
- chemicals and food safety



12:29

Which nutrition/food safety topics would you like to see updated in publication materials?

- cross-contamination related to consumer food safety
- food allergies
- food labeling
- food safety in natural disasters
- genetically modified organisms (GMOs)
- Other:

What nutrition/food safety topic(s) do you think should be prioritized right now?

# Examples of Products with KSRE

## Tips for Consumers: Kitchen Cleaning

It's important to keep your kitchen clean, because germs can easily lurk on the surfaces you touch frequently! Maintaining a clean kitchen can help decrease your risk of contracting a foodborne illness. Foodborne illnesses can occur when consuming contaminated foods. Symptoms can include stomach upset, vomiting, nausea, or diarrhea.

All surfaces that have contact with food should be cleaned before and after preparing food. These surfaces should also be cleaned between food types such as preparing raw chicken and then a salad.

1. Remove scraps
2. Wash with hot and soapy water
3. Rinse well and wipe down with disposable towels, if possible. When using re-usable towels, clean frequently with hot water.
4. Sanitize by using a commercial sanitizer spray or wipe. A homemade version of sanitizer can be used by mixing 1 tablespoon of liquid chlorine bleach with 1 gallon of water.

This is done to prevent cross-contamination. Cross-contamination is the transfer of harmful pathogens to food from other foods, surfaces, or utensils. Designating cutting boards can also reduce cross-contamination. For example, use one cutting board for meat and another for vegetables. Keep an eye on cutting boards and if they are getting worn with grooves from your knives, consider buying a new one. Those grooves can harbor bacteria because they are harder to clean.

Clean frequently touched areas such as:

- Cupboard knobs and handles
- Refrigerator, freezer, and stove knobs and handles
- Microwave buttons
- Soap dispensers
- Faucet handles

Tips on cleaning other items in your kitchen:

Microwave or oven	Clean when there are spills so they do not build up.
Refrigerator or freezer	Clean up spills as they occur. Deep clean every 3 months and remember to include the bins and racks within the unit. Defrost ice build-up as needed.
Dish clothes and towels	Change daily and wash with hot water.
Cleaning pads or sponges	Clean daily in the dishwasher or by soaking in a sanitizer solution. Replace these often.

Sources:

1. <https://www.usda.gov/media/blog/2019/08/27/clean-then-sanitize-one-two-punch-stop-foodborne-illness-kitchen>
2. <https://www.fsis.usda.gov/news-events/events-meetings/food-safety-education-month-preventing-cross-contamination>
3. Food Safety for Boomers and Beyond – Kitchen Cleaning KSRE handout

## Tips for Consumers: Meal Delivery Services and Food Safety



It's important to keep food safety in mind when receiving meal deliveries or getting groceries delivered. Foodborne illnesses can occur when food isn't handled properly. Those at increased risk include young children, adults 65 years and older, people with weakened immune systems, and those who are pregnant.

General Delivery Guidelines	Grocery Deliveries	Restaurant Deliveries
Identify a safe place for food to be delivered	When food arrives at your home, if it's a hot food, it should be hot and if it is a cold food, then it should arrive cold.	Meals that are cooked can make you sick if they sit out too long.
Ideally a place that is shaded, cool, and away from pests or animals	They should also be separated from each other	Refrigerate leftover foods that are cooked or cold immediately
Check perishable foods that are shipped with a food thermometer to ensure that it's cold like it would be in a refrigerator, 40° F or below	Avoid leaving perishable foods at room temperature for more than 2 hours.	Avoid leaving perishable foods at room temperature for more than 2 hours.
If it is above 40° F, it can be unsafe and it is recommended to not consume it	If the temperature is 90° F or warmer, do not leave it out for more than 1 hour	If the temperature is 90° F or warmer, do not leave it out for more than 1 hour
	Have a plan to receive the food and store it quickly	Check how many days leftovers are will stay safe for using this website:  <a href="https://www.foodsafety.gov/keep-food-safe/foodkeeper-app">https://www.foodsafety.gov/keep-food-safe/foodkeeper-app</a>
When in doubt, throw it out!		

Source: <https://www.cdc.gov/foodsafety/communication/food-safety-meal-kits.html>

# Examples of Products with KSRE

Tips for Consumers:  
GMOs

**Genetically Modified Organisms (GMOs)** are foods that are created using genetic engineering. The genetic engineering process:<sup>1</sup>



GMOs have been evaluated as safe from the U.S. Food and Drug Administration (FDA), the United States Department of Agriculture (USDA), and the U.S. Environmental Protection Agency (EPA). GMO foods have the same safety standards as other foods.<sup>2</sup>

Non-GMO labels – this means that no GMO technology was used to create this product. This is not the same thing as an organic label.<sup>2</sup>

There are benefits to GMO crops like growing more food on less land and improving nutrition. Common traits for GMO crops: resistance to insect damage, tolerance to herbicides, and resistance to plant viruses.<sup>1</sup>

Very common GMO crops are:<sup>3</sup>

Corn  
Soybean  
Cotton  
Potatoes  
Papayas  
Summer Squash  
Canola  
Alfalfa  
Apples  
Sugar beets  
Pink pineapple

<insert pictures of GMO crops here>

**National Bioengineered Food Disclosure Standard:**<sup>4</sup>

Simply put, this disclosure is a symbol indicating to the consumer that a food is or may be bioengineered. The options for disclosure are text, symbol (see below), digital link, or text message. As of January 1, 2022, this disclosure is required.



Picture source: <https://www.ams.usda.gov/rules-regulations/be/symbols>

Tips for CC  
GMOs

Sources:

- 1) Center for Food Safety and Applied Nutrition. (2022, August 3). *How GMO crops impact our world*. U.S. Food and Drug Administration. Retrieved October 20, 2022, from <https://www.fda.gov/food/agricultural-biotechnology/how-gmo-crops-impact-our-world>
- 2) Sims, T. (2021, December 1). *GMOs and your next shopping trip: An FAQ to help you*. Food Insight. Retrieved October 20, 2022, from <https://foodinsight.org/gmo-faq>
- 3) Center for Food Safety and Applied Nutrition. (2022, August 3). *GMO crops: animal food, and beyond*. U.S. Food and Drug Administration. Retrieved October 20, 2022, from <https://www.fda.gov/food/agricultural-biotechnology/gmo-crops-animal-food-and-beyond>
- 4) USDA/AMS. (2022). *The disclosure*. BE: Disclosure | Agricultural Marketing Service. Retrieved October 20, 2022, from <https://www.ams.usda.gov/rules-regulations/be>

# COMPETENCIES



# MPH Foundational Competencies

## **Planning and Management to Promote Health**

### **11) Select methods to evaluate public health programs**

- Evaluated public health programs by working with KSRE on their materials that are available in the online bookstore
- Identified emerging topics in food safety and assessed availability of these topics through the bookstore





## Communication

### **18) Select communication strategies for different audiences and sectors**

- Assisted in editing the Focus on Food Safety video that would provide food operations with easier access to food safety information
- Created a review/quiz portion for the opportunity to test knowledge at the end of the video
- Communicated with KDA stakeholders via Food Protection Taskforce quarterly newsletter articles
- Worked on food safety educational materials for operations and consumers

# MPH Foundational Competencies

## Communication

**19) Communicate audience-appropriate public health content, both in writing and through oral presentation**

- Writing on public health topics for the Food Protection Taskforce quarterly newsletter articles
- Assisting with editing on the Focus on Food Safety video
- Updating the food safety handouts that are available to the public and food operations online on the KDA website

# MPH Foundational Competencies



## Communication

**20) Describe the importance of cultural competence in communicating public health content**

- Identified audiences we were serving:
  - Food establishments/employees
  - Consumers
- Materials created during this time are currently being translated into Spanish to reach a broader audience



## **Interprofessional Practice**

### **21) Perform effectively on interprofessional teams**

- Attended meetings with the program manager for the Food Safety and Lodging Department for KDA
- Attended meetings and collaborated with the district manager for KDA and her team on the Focus on Food Safety video
- Worked with state food safety specialist with KSRE
  - Through meetings and emails, we collaborated to:
    1. Identify needs for educational materials that should be met within the KSRE bookstore, and
    2. Update existing materials.

# Emphasis Competencies

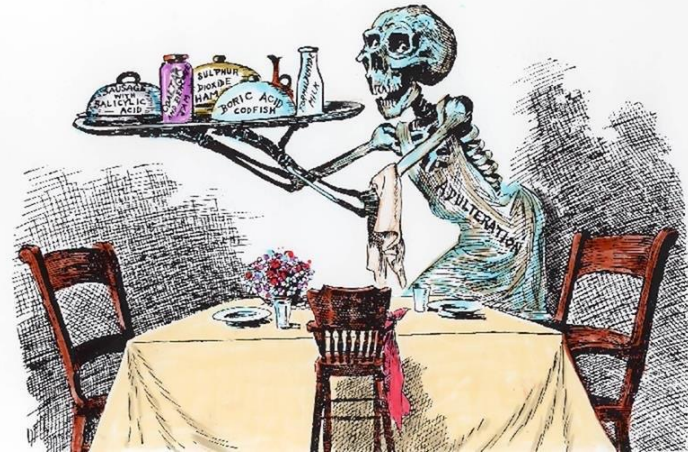
## Food Safety and Biosecurity:

FDSCI 730 Food Safety and Security

FDSCI 731 Food Protection and Defense

**Evaluate solutions appropriate for different food safety, biosecurity, and defense issues in the food production continuum.**

- Educational materials will help educate employees and food service workers to minimize violations
- Empower managers of food establishments to train their staff accordingly
- Reviewed previous violations from different food establishments



# Emphasis Competencies

## Threats to the Food System:

FDSCI 730 Food Safety and Security

FDSCI 731 Food Protection and Defense

**Examine specific threats to the food system and scientifically investigate how each can be prevented, controlled, and/or mitigated in the food production system.**

- Updated the educational materials for food establishments based on common violations to make the concepts clear and concise
- Education on these topics and exposure to the concepts can help mitigate violations



# Emphasis Competencies

## Food Safety Laws and Regulations:

DMP 816 Trade and Ag Health

**Differentiate key U.S. food safety regulatory bodies and their unique legislative authorities, missions, and jurisdictions.**

- The FDA food code and the Kansas food code co-exist and during my time at
- My experience with KDA, I studied these regulations to understand their purpose and how to implement them in educational materials



# Emphasis Competencies

## Food Safety Policy and the Global Food System:

DMP 888 Global and Food Trade

**Analyze and distinguish how food safety and governmental biosecurity policies, globalization, and international trade cooperation influence public health.**

- Foodborne illnesses and outbreaks impact people each year
- It is beneficial for food establishments to protect their business by decreasing food safety risks, this protects them and the public mutually





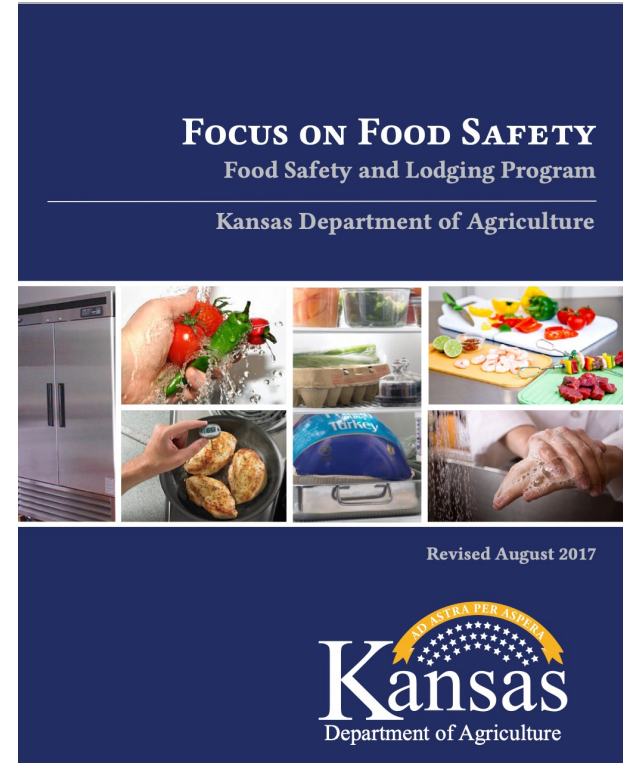
# Emphasis Competencies

## Multidisciplinary Leadership:

DMP 815 Multidisciplinary Thought/Presentation

**Contrast the food safety and biosecurity technical needs of different stakeholders and make judgements as to the appropriate methods of collaboration.**

- Articles for KDA newsletters
- Example: collaboration with KDA on Focus on Food Safety Video
  - Helped update and review the slides for the video
  - Created review/quiz slides to help employees check their knowledge



# Lessons Learned/Conclusions



- Foodborne illnesses are preventable, and communication is the first step to educating food handlers and consumers
- Working together as a team with different organizations and agencies is **critical** to reach the populations we serve everyday
- Keeping the most current information in the hands of food establishments and consumers creates a widely available and trusted source to obtain knowledge on food safety topics
  - Barrier is time

# Thank You



## **Graduate Committee and MPH Program Faculty**

Sara Gragg Ph.D.

Abbey Nutsch Ph.D.

Justin Kastner Ph.D.

Paige Adams DMV, Ph.D. (proxy)

Rebecca Burks

Ellyn Mulcahy Ph.D., MPH

## **Preceptors**

Amber Grisamore

Londa Nwadike, Ph.D.

# References

1. WHO. (2022). *Estimating the burden of foodborne diseases*. World Health Organization. Retrieved October 9, 2022, from <https://www.who.int/activities/estimating-the-burden-of-foodborne-diseases>
2. WHO. (2022, May 19). *Food safety*. World Health Organization. Retrieved October 9, 2022, from <https://www.who.int/news-room/fact-sheets/detail/food-safety>
3. ODPHP. (2022). *Safe food handling*. Safe Food Handling – Healthy People 2030. Retrieved October 9, 2022, from <https://health.gov/healthypeople/objectives-and-data/browse-objectives/safe-food-handling>
4. KRHA. (2017, April 11). *Food Safety – Kansas Restaurant and hospitality association (KRHA)*. Food Safety: What You Should Know. Retrieved October 9, 2022, from <https://www.krha.org/blogpost/1528753/Food-Safety>
5. Commissioner, O. of the. (2019, April 24). *Part I: The 1906 Food and Drugs Act and its enforcement*. U.S. Food and Drug Administration. Retrieved October 20, 2022, from <https://www.fda.gov/about-fda/changes-science-law-and-regulatory-authorities/part-i-1906-food-and-drugs-act-and-its-enforcement>
6. Drexler, M. (2011, September 17). *The 24schuster institute for investigative journalism*. Food Safety: A Historical Look | Food Safety | Schuster Institute for Investigative Journalism | Brandeis University. Retrieved October 20, 2022, from <https://www.brandeis.edu/investigate/food-health/foodborne-illness/history-of-food-safety.html>

# References

7. Center for Food Safety and Applied Nutrition. (2022, March 7). *FDA Food Code*. U.S. Food and Drug Administration. Retrieved October 30, 2022, from <https://www.fda.gov/food/retail-food-protection/fda-food-code>
8. Center for Food Safety and Applied Nutrition. (2020, June 11). *Benefits associated with adopting and implementing the FDA Food Code*. U.S. Food and Drug Administration. Retrieved October 30, 2022, from <https://www.fda.gov/food/fda-food-code/benefits-associated-complete-adoption-and-implementation-fda-food-code>
9. ODPHP2. (2021, August 2). *Safe food handling*. Safe Food Handling - Healthy People 2030. Retrieved October 20, 2022, from <https://health.gov/healthypeople/objectives-and-data/browse-objectives/safe-food-handling>
10. de Freitas, R. S., & Stedefeldt, E. (2020). Covid-19 pandemic underlines the need to build resilience in commercial restaurants' Food Safety. *Food Research International*, 136, 109472. <https://doi.org/10.1016/j.foodres.2020.109472>
11. KDA. (2016). *Kansas Department of Agriculture*. Kansas Department of Agriculture - Agency Information. Retrieved October 20, 2022, from <https://agriculture.ks.gov/about-kda>
12. Kansas State University. (2021, January 22). *K-State Olathe*. Londa Nwadike. Retrieved October 20, 2022, from <https://olathe.k-state.edu/about/people/faculty/nwadike.html>
13. Department of Agriculture. (2016). *Kansas Department of Agriculture*. Kansas Food Safety Task Force. Retrieved October 30, 2022, from <https://agriculture.ks.gov/divisions-programs/food-safety-lodging/food-protection-task-force>