

# Sharing Session Specialized Processes-Reduced Oxygen Packaging

April 25, 2018

All lines will be muted during the entirety of the webinar.

Throughout the presentation and during the discussion and Q&A session, please use the chat box to share your experiences and questions. The facilitator will pose your questions to the presenters.

- Industry Perspective
- Regulator Perspective
- Q&A Session

A link to the recorded webinar will be emailed to all participants. This recording and past food safety sharing sessions can also be found the NACCHO website:

<http://www.naccho.org/programs/environmental-health/hazards/food-safety/>



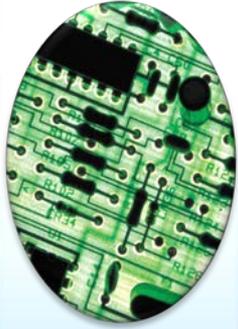
# Special Processing in Retail

**NACCHO Webinar**

**April 25, 2018**

Chef Robert Brener M.A. CHE

Chef Donald W. Brizes, Jr. M.S.Ed.



Identify industry trends



Identify Special Processes being used



Offer training Options Opportunities for REHS



Explore the relationship between Chefs & REHS



Open dialog between Educators, chefs, REHS



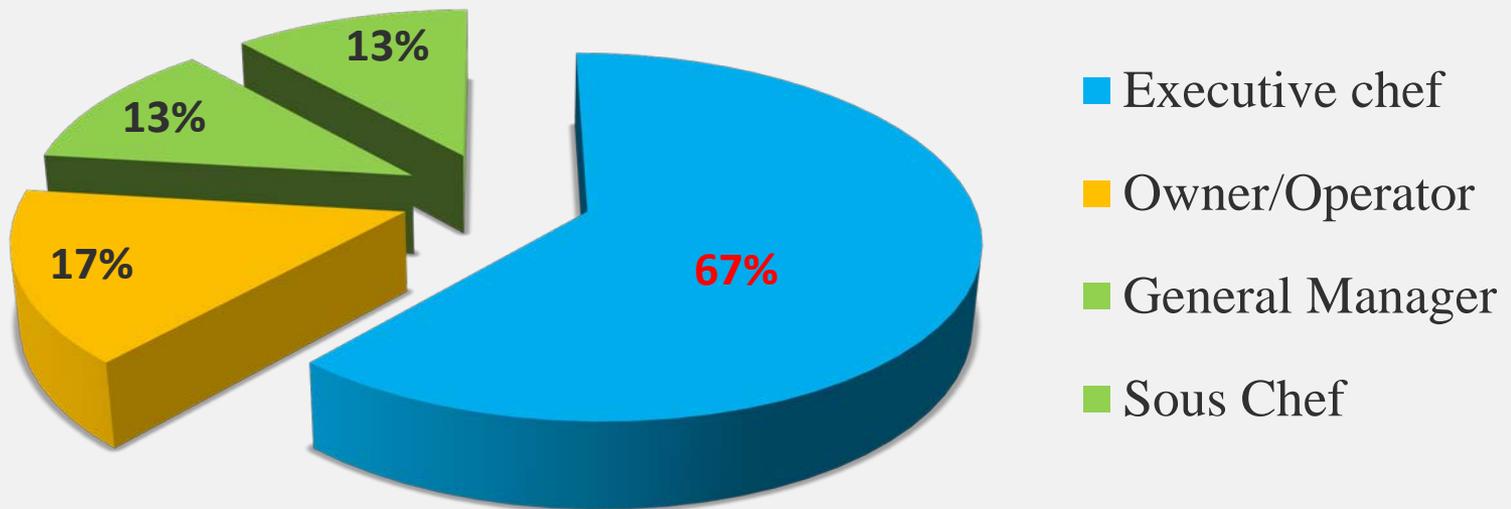
Move toward streamlining Variance application process.



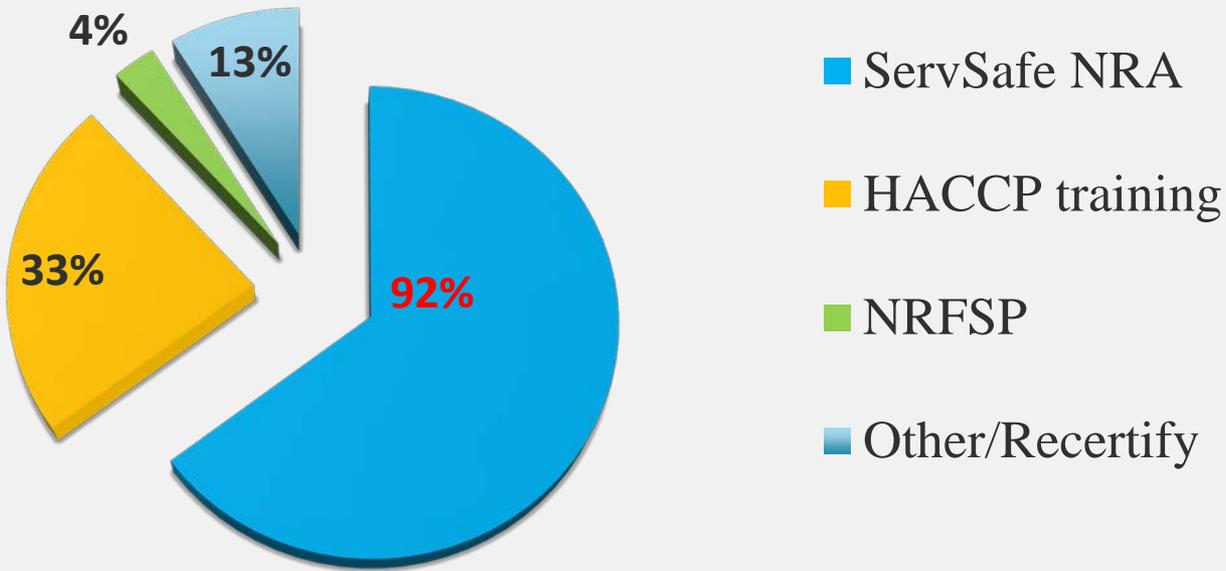
Improve Collaboration efforts



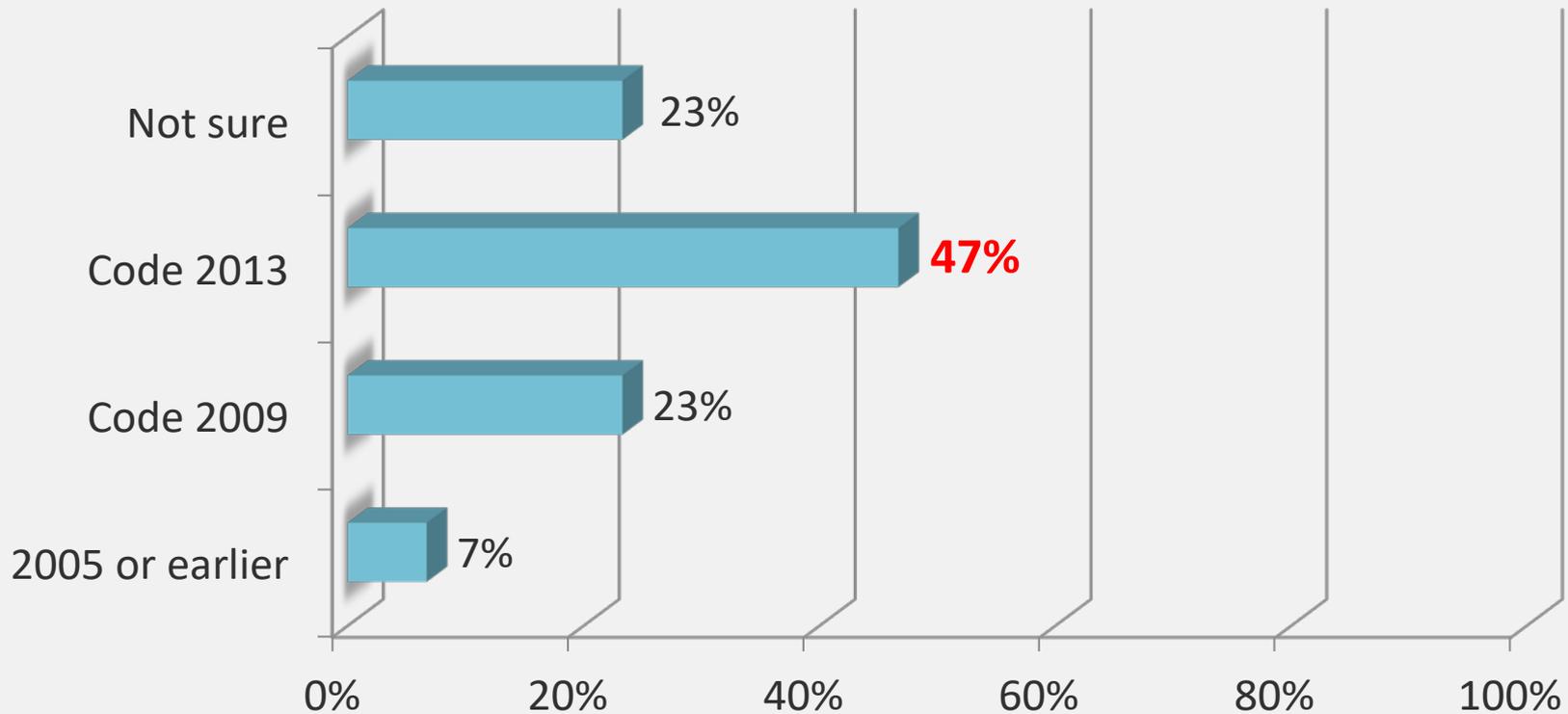
## What is your current position within the organization?



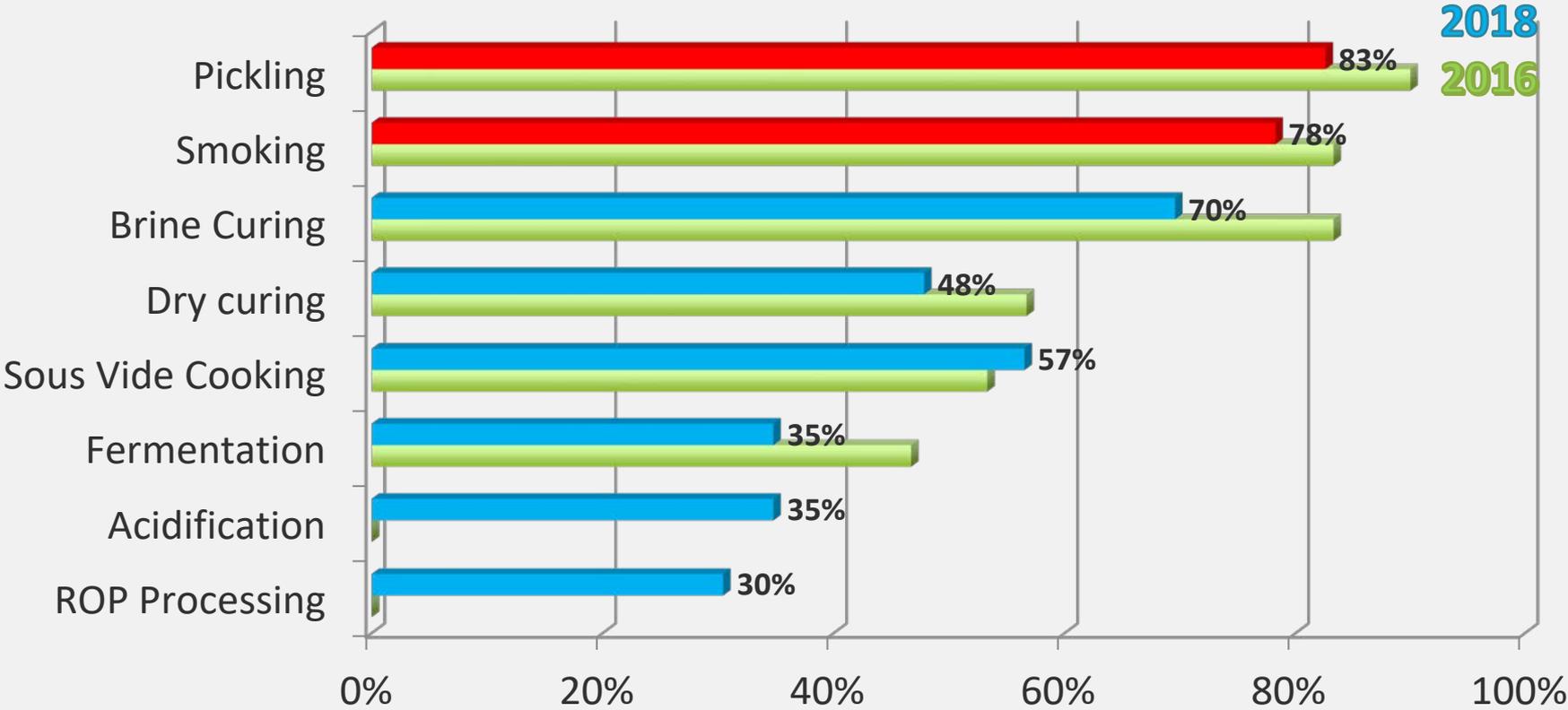
What type of **food safety certification** training do you currently have?



# What **version** of the FDA Food Code does your state environmental health department currently use as their guidance document?

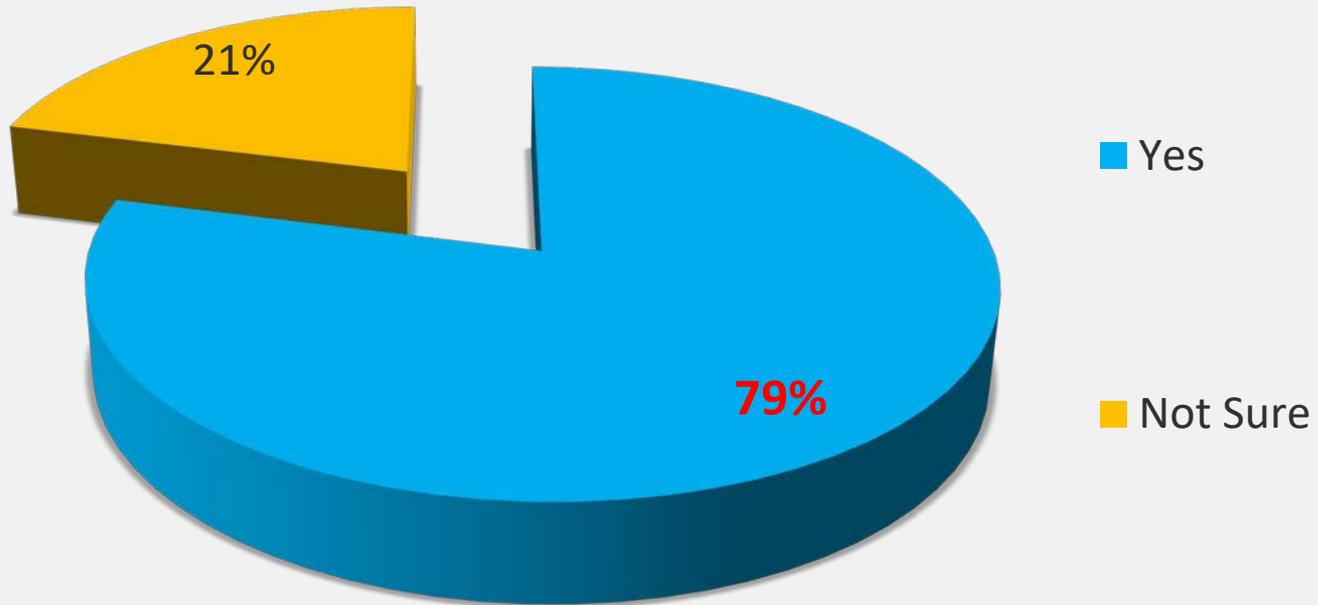


# Do you **currently use** Specialized Processing in your establishment?



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Do you **believe the use** of SP is **trending** in the industry



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Do you **believe the use** of Special Processing is **trending** in the industry

I believe the food industry is ever-changing, as well as the wants and needs of the guests.

This constant change provides an ever present need to motivate oneself to learn more about their industry and push oneself to try new things.

The customers increased knowledge regarding food and food preservation.

The more product produced in house the greater speak it has.

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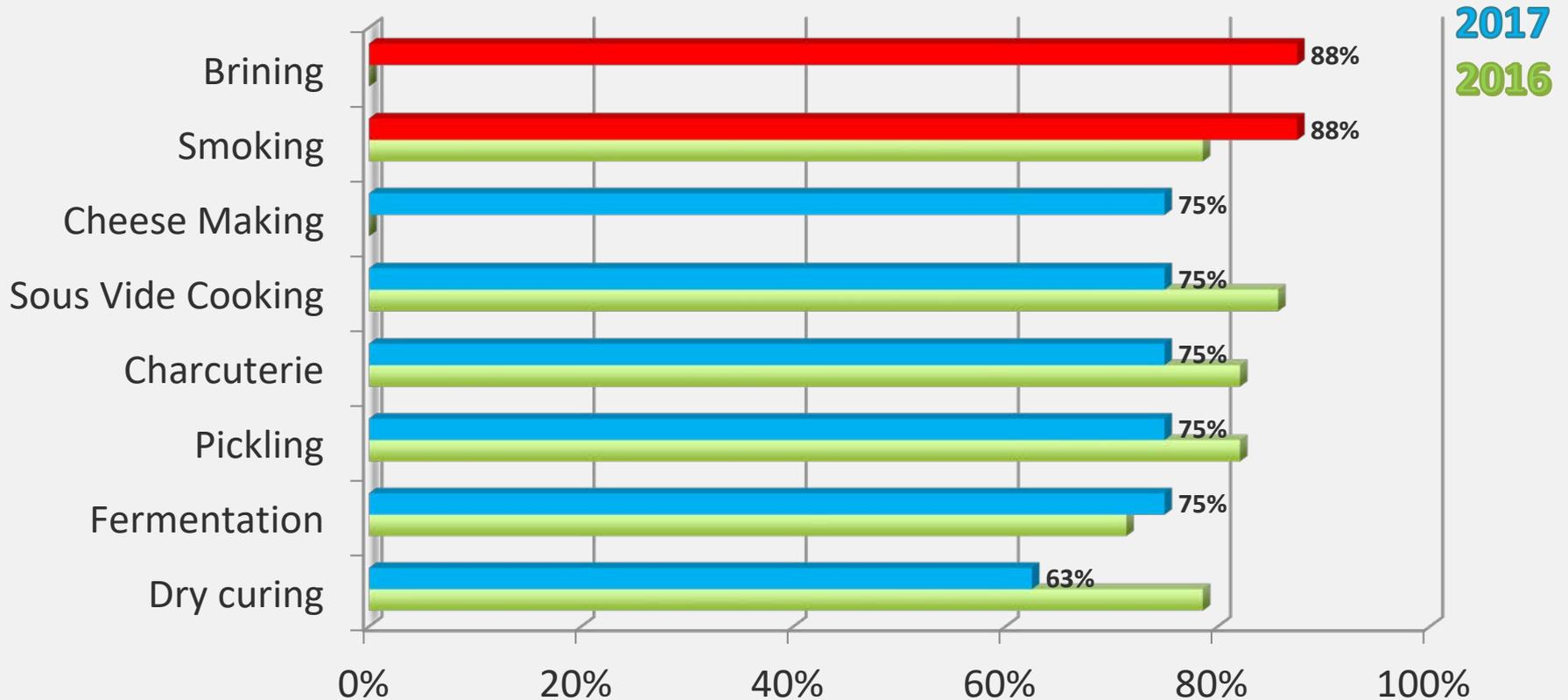
Do you **believe the use** of Special Processing is **trending** in the industry.

Restaurants are moving to more **value based products** -

The chefs are **loosing the chance** to create items in larger batches to serve many people. Instead everything has been shrunk to fit within the food code.

The staff/ labor market do not allow the kinds of remedial processes (old school) that would help production flow and allow restaurants to **operate better financially**.

## Do you **see the use** of the SP trending in the industry?



What **value** do you place on the use of Special Processing in your establish.

Answer Options	No value	Little Value	Moderate Value	High Value.
	0	3	17	10

Creating SOPs that will help maintain proper sanitation is important.

The health department does a **great job monitoring the SOPs** it should be made simpler to proceed within reason.

The benefits of allowing **more creativity** in our food ways is important

**Blocking it** and allowing this huge chain of rift raft doesn't make sense

These processes **offer a value** to customers and allows us to keep food costs low.

If not doing so, how likely are you to utilize SP techniques in your establishment?

Answer Options	Very Unlikely	Somewhat Likely	Likely	Very Likely	N/A	Rating Average
	1	5	9	14	1	3.24
If "Very or Somewhat Unlikely" please explain why?						

Most of these special processing methods just don't apply

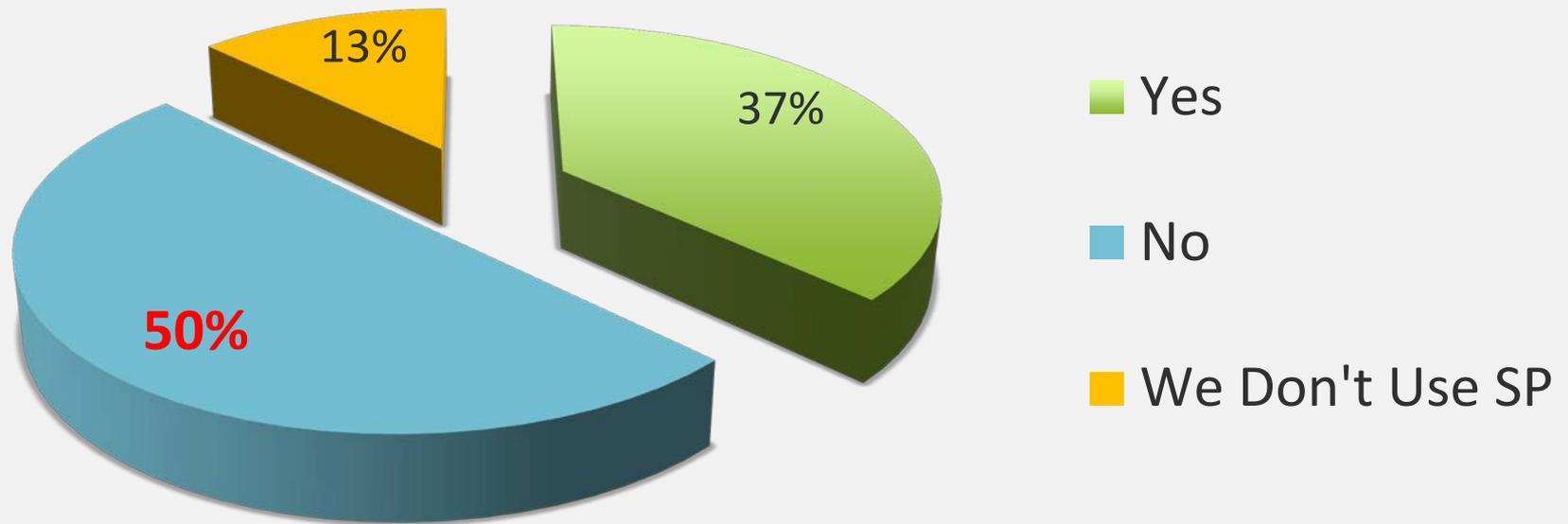
Awaiting feedback regarding my written HACCP plans

**I find it useful and necessary as a chef**

I teach a culinary class and run a cafe. I do not have time to fill out variances for preservation,

**To add value added skill.**

Do You currently have a HACCP variance for one or more of the Specialized Processing Methods identified in the previous question?



## How would you rate your level of understanding of the FDA Food Code section on Special Processing Methods?

Answer Options	Very Weak	Weak	Working	Strong	N/A
	1	7	18	4	0

In some cases my knowledge as a chef is more clear than the inspector

Inspectors know science **but lack understanding of the kitchen** process

I spend a lot of time and energy **learning and working with the process** to be told I don't know what I'm doing.

Need a clearing house for local indigenous products.

How likely are you to take a training program on Special Processing Methods if one were offered by a food safety organization?

Answer Options	Very Unlikely	Somewhat Unlikely	Likely	Very Likely	N/A
	4	2	4	11	3

It would be situational...if these practices could play a role in the production of the food at my establishment, then by all means I would take a training class.

Already done a few - process needs to **more standardized and simpler.**

Never a bad idea to learn more and build on what I already know, possibly even help another professional

HACCP is a very important program that is difficult to do properly, and to teach our team. Any additional knowledge of the subject is good for us and our clients.

# The Relationship Issue?

Based on your current relationship with your REHS, how likely are you to ask **for help** with Special Processing Methods development?

Answer Options	Very Unlikely	Somewhat Likely	Likely	Very Likely	N/A
	5	1	7	9	2

**never thought of them as a resource for HAACP- I would contact state HACCP**

They don't know the science any better than we do **and just say no as a precursor** to anything involving special processes

I don't know that my inspector has a **strong understanding** of the specialized techniques referenced

We want to do the right things - we are **not a restaurant trying to pull the wool over anyone's eyes**. We also want to be progressive and have some neat and trend based menu items.

## How would you rate your relationship with your local EHS?

Answer Options	Very Weak	Weak	Working	Strong	N/A
	2	4	6	10	2

I **value and respect their role**, we do work well together until they move the goal line without coaching or bringing thing to proper attention

Wish the relationship was **based in exchange of knowledge** helping each other understand the processes more in depth

I recognize they are **there to help** so I work with them

Any time I have had an issue my inspector has been **helpful** in getting the issue resolved quickly and properly

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## What would you like your REHS to **know about** SPECIAL PROCESSING??

The better you understand a method of processing, the more creative you can be within your daily operations while still maintaining safe practices that follow the FDA Food Code.

I believe that if you are making charcuterie the use of fermenting or canning the processes should still remain under scrutiny and **proper due diligence** by the operator must be taken.

I would like to see more of a conversation about how to make these processes safe, **and not just a blanket** "no, you can't do that" answer.

---

## What would you like your REHS to know about SPECIAL PROCESSING?

That chefs want to use them, and they are going to use them. It would be best if **we could agree on safe methods** for these processes..

Many of them have been used for hundreds of years; the processes themselves are not dangerous. **What is dangerous** is people who don't have a full understanding of the processes, using them without health department knowledge.

I understand the processes that require HACCP Plans and Variances, however we are able to **work around such constraints** and use them to aid in our creative process.

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What you want local regulators to **know** about the use of SP the industry?

Lots of people are doing them anyway **taking more risks** in doing so should be allowed within reason

They are a trend **that will maintain**. They wouldn't even know where to start here in KCMO.

Please train the health Dept. On special processes, and set up an **easy system** for operators to navigate to secure a variance

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What you want local regulators to **know** about the use of SP the industry?

I feel there should be more of a focus on Special Processing Methods, **especially from the educational** standpoint.

I believe there are plenty of individuals in the industry that would love to indulge in these practices, but they just don't know enough about them to feel comfortable. This is where the **training and education** aspects come into play.

Help health inspectors be **more aware of actual working conditions**. Sous vide applications increase the ease of the submission and acceptance process for variances

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What you want local regulators to **know about** the use of SP the industry?

We need to **reduce the amount of time** that these processes take to get approved.

Making SOP's and processes for these types of **methods simplified** & more approachable.

State/local health departments should act more like **liaisons to the science** and methodology

Promote well educated chefs to continue to push themselves.

It's a chess match pieces won't fall **until we work together** to move forward

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# Specialized Food Processing

The Growing Trend in Today's Foodservice Industry

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## Specialized Food Processing In-house: prior to implementation.

### **Culture of Food Safety**

- Starts with good practices already in place
- Cannot be “*new concept of food safety*”
- Do you have documentation, HACCP logs, Self Inspection Process

### **Value Added**

- Customer base or just want to be part of trend
- Will customer base support the technique
- Does it fit into the menu culture and philosophy

### **Equipment Facility**

- ***Cold storage***, cooling procedures, equipment capacity
- Cost effective implementation, equipment, etc.
- Storage production areas clean and efficient

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## Specialized Food Processing In-house

### Understanding the process, scientific effect on food & the growth of bacteria

- Special process and it's effect on food & food quality
- Process & effect on bacterial growth
- Which bacteria are we trying to control
- At-risk population/demographics

### Cooking:

- Creates safe palatable, digestible, tasty food
- Cooking: The art, technology, **science** & craft of preparing food for consumption with or without the use of fire or heat.

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# Specialized Food Processing In-house

## **Connection on food & food safety**

- Flavor enhancement &/or preservation
- Value in each, can flavor be enhanced in other ways?

## **Research the FDA Code**

- Special Processing Criteria
- Federal, state and local requirements.

## **County Health Officials & Relationship**

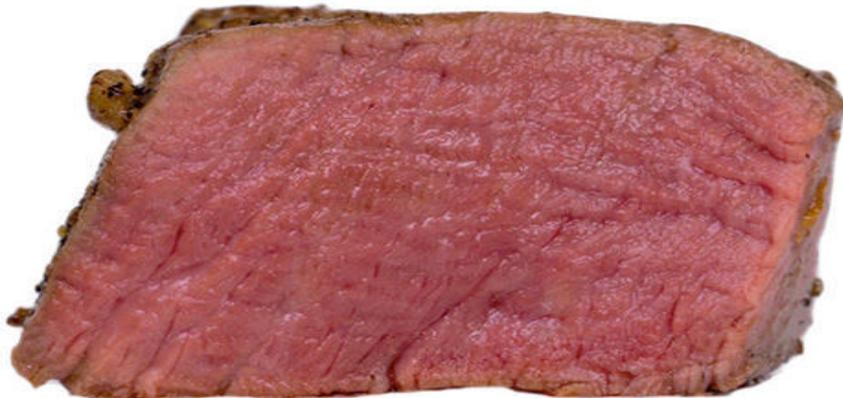
- Relationship with REHS adversarial/amicable
- Pride or Hide

# Sous Vide Cookery

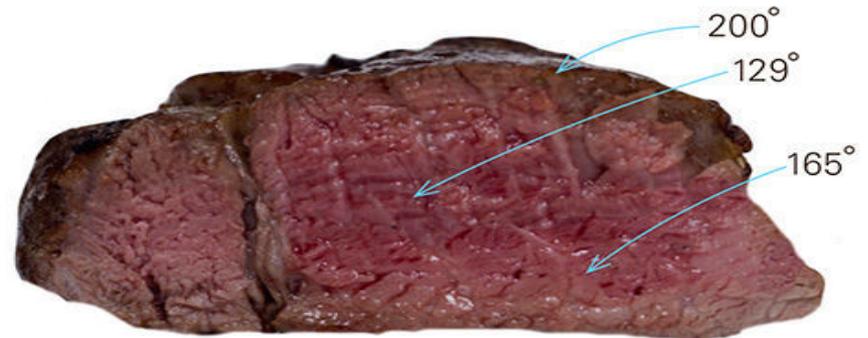
Utilizes precise temperature control to deliver consistent, quality results.

- ▶ Restaurants have been using it for years to cook food to the exact level of doneness consistently, now popular for home cooks

SOUS-VIDE COOKED STEAK  
EDGE-TO-EDGE PINKNESS



GRILLED STEAK  
LOSS OF MOISTURE CAUSES "SHRINKING"



## Easier than conventional cooking techniques:

1. Attach circulator to pot of water, set time & temperature
2. Put food in appropriate bag
3. Finish with dry method to add crisp & complexity



# Sous Vide Cookery





## Sous Vide Cookery



### ► Under Vacuum

Process of vacuum-sealing food, cooking at precise temperature in a water bath. Produces results that are **impossible** to achieve otherwise

# Reduced Oxygen Packaging

- Oxygen reduced by mechanically evacuating
- Oxygen, displaced with another gas or combination of gases
- Controlling oxygen content to level below normal in surrounding atmosphere
- **Includes:**
  - **Modified atmosphere (MAP)**
  - **Controlled atmosphere (CAP)**
  - **Cook-chill**
  - **Vacuum packaging**
  - **Sous vide**

ROP





# COOK-CHILL Process

**1. FOOD PREP**

**2. BAG FILL**

**3. BAG SEAL**

**4. ICE BATH**

**5. STORE**

**6. RETHERM**



# Pickling

The process of creating an environment that is inhospitable to microbes that would normally cause food to decay



## Pickling



### START OFF WITH A BASE

Acidity levels below  $<4.6$  to control bacterial growth

Cold Pickle vs. Hot Pickle

difference in finished product

Heat: 2<sup>nd</sup> barrier of control

Equipment Sterilization

Freshest food, cleaned well

Quick Pickle in ROP

Short time frame for similar result

Acidity level  $<4.6$

# Fermentation

Food exposed to **bacteria & yeasts** via inoculation or natural exposure

**Lactic Acid** Fermentation – cheese, yogurt, quark:

\*Acidic environment controlling bacterial growth

**Alcoholic** Fermentation – wine, beer, kimchi, kombucha

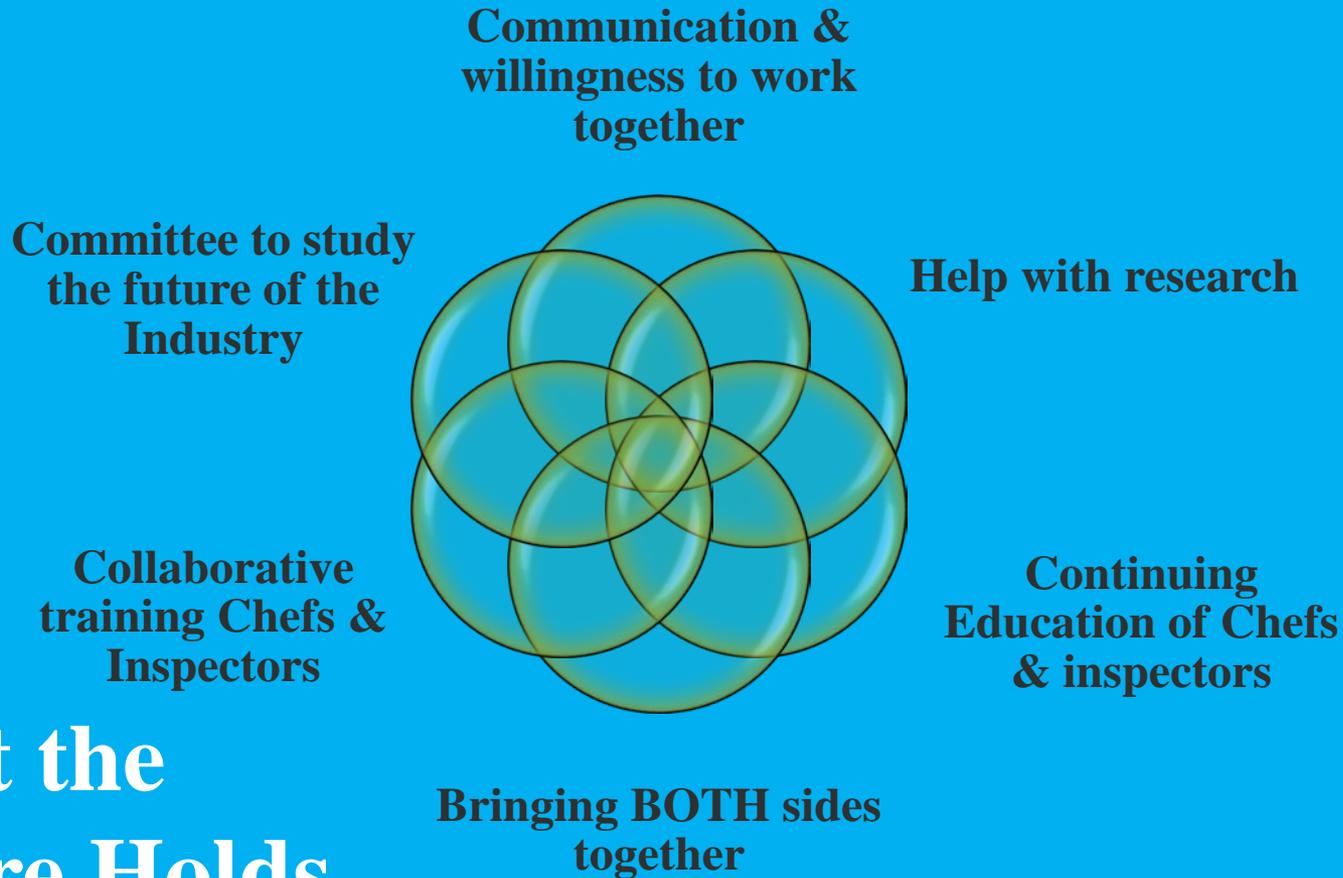
**Beneficial microorganisms destroy the dangerous** & consume carbohydrates in food

Anerobic Environment

Healthy benefits



# What the Future Holds



# Questions or Comments

Thank You for your time and attention.



Maricopa  
County  
Environmental  
Services  
Department

# Reduced Oxygen Packaging Review Process



# Maricopa County Environmental Services Department



Working with our community  
to ensure a safe and healthy environment

## **VISION STATEMENT:**

As the recognized regional environmental leader, we will develop and foster innovative environmental health protection programs for the safety of our residents and their environment.

## **MISSION STATEMENT:**

The mission of the Environmental Services Department is to provide safe food, water, waste disposal and vector borne disease reduction controls to the people of Maricopa County so that they may enjoy living in a healthy and safe community.



## Steps to Conduct Review

1. Pre-submittal Meeting (1<sup>st</sup> time submitter)
2. Application submission/review
3. Onsite inspection
4. Approval letter with stipulations

## Pre-submittal Meeting with Owner or Person Overseeing ROP Process

1. Review menu/packaging process
  - Determine if HACCP Plan review or Variance are required
  - 48 hour rule 3-502.12(F) (Note: exception fresh fish)
2. Review items needed to be submitted for review
3. Explain Department review/approval process

# Commonly Encountered

Of the 5 ROP methods, we commonly encounter the following:

- Cook chill
- Sous vide
- Vacuum packaging

# Application Submission/ Review

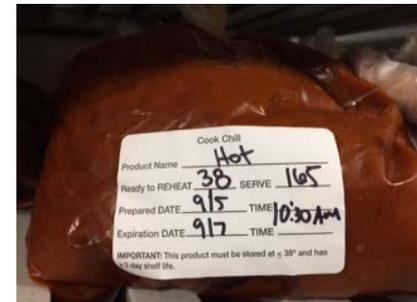
## Review application

- Food Items w/ detailed preparation process
- HACCP Plan
  - Hazard, critical control point, critical limit, monitoring, corrective action, records verification
- Equipment needed for process
- Standard Operating Procedures (handwashing, cooking, employee health, cross contamination, cleaning and sanitizing, cold holding, etc.)
- Training plan for staff involved in process
- Describe how person in charge will oversee process
- Provide sample log sheets
- Provide statement as to whether for retail sales or for in-house use only
- Provide samples of labels used on packaging
- If process is not approved in FDA food code, provide scientific data to support process
- Provide statement that logs will be maintained for 180 days
- If operating in shared kitchen, provide details on how food process will be protected

Onsite  
Inspection  
(cook chill  
example)



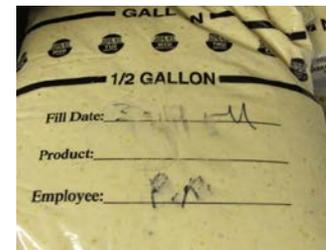
# Onsite Inspection (cook chill example)



# Onsite Inspection

## Common areas of deficiency

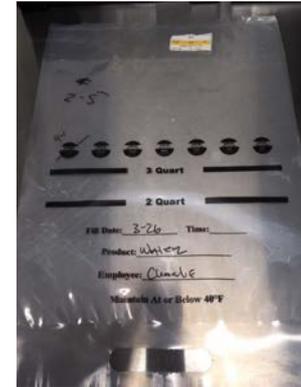
- Improper cooling
- Improper tracking of bags
- Mislabeling the product
- Lack of labels/ information
- Poorly labeled product
  - Marker wipes off over time
- Logging errors



# Onsite Inspection

## Recommendations

- Cook-chill
  - Place into bag at 145°F or greater
- Know where your product is always
  - Discarded/consumed/in cooler/etc.
- Verify bag will work with marker
- Double seal label so label stays in place



# Generate HACCP Plan approval/ Variance Letter

The letter should provide clear guidance for owner and inspector.

Cook-Chill variance letter *example*; stipulated items are as follows:

- The facility performs the specified operations in accordance with the approved plans pursuant to §8-103.12(A).
- The facility provides records upon request to the Maricopa County Environmental Services Department ("Department") or its representatives pursuant to §8-103.12(B).
- Cook-Chill Reduced Oxygen Packaging approval is limited to the packaging of <specify items here>.
- Hot packaged food items shall be fully cooked.
- All packaged foods shall be packaged at 135°F or greater.
- Hot packaged food items shall be rapidly cooled below 70°F within 2 hours and below 41°F within 4 hours. The entire process shall take less than 6 hours.
- All packaged items shall be stored and held below 41°F with a shelf life not to exceed 7 days. Daily manual monitoring of product temperature shall be conducted and logged.
- All packaged items shall be labeled with a discard date.
- Full and accurate monitoring of all critical control points shall be conducted and documented using the approved logs and shall be maintained on premises for at least 180 days.
- Approval for Reduced Oxygen Packaging shall be limited to the menu items and processes described in the HACCP Plan. Modification of the HACCP Plan shall be preapproved prior to implementation and may require resubmittal of the full application and review fees.
- The donation of ROP products is not allowed. Wholesaling or sales directly to the consumer of cook-chill bags is prohibited.

# Interpretations/Clarifications

## Heat sealing without drawing a vacuum (FCRS)

- Package not cooked per Food Code or held/heated to 135°F, just prior to packaging, not treated as ROP
- Heat sealing hot TCS, even without modifying atmosphere or drawing vacuum, treated as ROP

## Fresh Fish – packaged in bag with high OTR (10k bags)

- Regarded and treated as ROP (FCRS)
  - Oregon State Seafood & FDA import alert (16-125) – high OTR allows for adequate oxygen exchange and competing spoilage organisms to control for toxin production

## Cheese

- Section 3-502.12(E) is primarily directed at retail food establishments that intend to ROP cheeses for sale to consumer for off-site consumption. The focus on this provision is cheese that has already been processed and is not expected to be subjected to a subsequent thermal heat process.

# Resources

## Application

- <https://www.maricopa.gov/DocumentCenter/View/5805/HACCPVariance-Application-PDF>

## Resources

- <https://www.maricopa.gov/DocumentCenter/View/30410/Reduced-Oxygen-Packaging-Without-a-Variance-PDF>
- <https://www.maricopa.gov/DocumentCenter/View/30422/Reduced-Oxygen-Packaging-CookChill-PDF>
- <https://www.maricopa.gov/DocumentCenter/View/30426/Reduced-Oxygen-Packaging-Sous-Vide-PDF>

## Food Safety Forms

- <https://www.maricopa.gov/4126/Food-Safety-Forms>

## Active Managerial Control Resources

- <https://www.maricopa.gov/4162/Active-Managerial-Control>

# Resources

## Food Code Reference System

- [Heat Sealing Without a Vacuum](#)
- [Vacuum Packaging and Oxygen Transfer Rate of Packaging Material](#)

## Oregon State

- <http://seafood.oregonstate.edu/.pdf%20Links/Compendium/Chapter-8-Vacuum-Modified-Atmosphere.pdf>

# Resources

## Conference for Food Protection 2018 Biennial Meeting

- Single Hazard Special Process (SHSP) HACCP Template Guidance Document

[http://www.foodprotect.org/issues/packets/2018Packet/issues/III\\_007.html](http://www.foodprotect.org/issues/packets/2018Packet/issues/III_007.html)

- SHSP Reduced Oxygen Packaging: Raw Meat, Cheese, Frozen Fish

[http://www.foodprotect.org/issues/packets/2018Packet/issues/III\\_008.html](http://www.foodprotect.org/issues/packets/2018Packet/issues/III_008.html)

Note: SHSP HACCP Templates were developed for use with single critical control point processes. Does not apply to processes with multiple critical control points (e.g. Sous Vide, cook-chill, etc.)

Questions?



**Vas Hofer, REHS/RS, CPM**

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<http://www.maricopa.gov/3978/Food-Variances>



# Q&A Session



Thank you for your participation in  
today's sharing session!

**For more information about NACCHO's Food Safety Program, contact:**

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- Amy Chang(achang@naccho.org; 202-507-4221)

<http://www.naccho.org/programs/environmental-health/hazards/food-safety>