

# Making the Jump- Moving From Retailer To Processor

## Regulatory and Technology



**PennState Extension**

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# Penn State Food Safety Programs

Providing science-based information to support a safe and quality-focused food supply through training and technical support

- Programs cover various aspects for the food supply chain
- Best-practice polices and procedures
- Compliance to regulatory requirements
- Problem-solving

# Typical Scenario

- After selling product direct to consumers at a Farmers' Market, a budding entrepreneur wants to distribute their product to a broader audience
  - May have been previously selling a small amount of product at a farmers' market (or through a retail store)
  - They realize the need to increase production
  - Unaware of regulatory requirements
  - Has little scientific understanding of the product or process, including those parameters important for safety

# What is Needed?

- Gain an understanding of the process and product parameters
- Address regulatory considerations
- Research opportunities and challenges to scaling up production
- Continual redefining of product and process as information is gained
- Business evaluation

# Understanding Product and Process

What are the product and processing parameters?

- Product characterization – for example - shelf-stable vs refrigerated, packaged in plastic, glass, or other,
- Processing parameters – pasteurization or cooking temperature, cooling, freezing
- Product parameters – pH, water activity ( $A_w$ ), atmospheric conditions (anaerobic), preservatives, estimated shelf-life, etc
- Product goals – what goals do you want for the product – increased shelf-life, new package, etc

# Understanding Product and Process

## Improve understanding

- Self-study of science-based literature
- Discussing product with as many experts as possible
- Contacting a commercial laboratory to conduct basic analysis if not already known
- Contacting a process authority if needed
- Courses
- Websites – science-based  
Extension - <https://extension.psu.edu/food-entrepreneurs>
- Scouting trips – retail and specialty stores, online

# Understanding Product and Process

## Validation support

- Regulatory guidance
    - US Food Code
    - Acidified foods regulation
    - USDA Appendix A and B
  - Scientific support
    - Extension publications – *So Easy to Preserve*
    - Scientific literature
  - Internal testing
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- Information must be science-based

# Understanding Product and Process

## Shelf-life determination

- First, determine if product will be safe
- Internal testing
  - Sensory evaluation
  - Basic analytical testing
- Third party laboratory
  - Use sensory evaluation as the base
  - Use appropriate methodology that focuses on spoilage
  - Match analytical results to sensory analysis
- Are there specific issues that may be a concern



# Understanding Product and Process

## Modifying product for commercial sales

### Impact of added ingredients

- Lowering pH and/or  $A_w$
- Addition of preservatives

### Impact of Packaging

- Plastic vs Glass
- Reduced Oxygen packaging / modified atmospheric packaging / vacuum packaging

# Addressing Regulatory Considerations

- Do product specific regulations apply?
  - Acid vs Acidified
  - USDA for meat and poultry products
  - ROP – reduced oxygen packaging
- HACCP / Preventive Controls
  - What are the hazards and how are they controlled?
- Inspected facility (GMPs)
- Labeling with specific attention to allergens

# Food Labels

- There are specific regulations relating to labeling  
Guidance for Industry: Food Labeling Guide
- Nutritional label information
  - Database vs analysis
- Allergen Declarations

# Scaling up production

## Internal production

- Facility size
- Regulatory inspection / third-party audit requirements
- Equipment capability / Sourcing new equipment
- Ingredient sourcing
- Inventory and shipment of product
- Allergen considerations

# Scaling up production

## Co-pack facility

- Inspected facility
- Process capabilities (mixing, heating, filling, etc)
- Product handling (labeling, casing, etc)
- Allergen considerations
- Testing capabilities for product (pH, other QC checks)
- Ingredient sourcing
- Run size minimums
- Inventory of product
- Trial runs

# Gathering Information and Refining Concept

- The product development process is ongoing
- Importance of truthful discussions and internal evaluation
  - Customer feedback
  - Formalized feedback – sensory evaluations
  - Regulatory compliance
  - Business analysis
- Product analysis and evaluation

# Making the Jump to Food Processor

- The entrepreneur must take ownership of the science and technology of the product
- There are many factors that must be addressed and many of these factors interconnect
- The first step is gaining science-based information on the product and the process
- Penn State Food Entrepreneur website

**<https://extension.psu.edu/food-entrepreneurs>**

# Thank you!

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