From Field to Shelf: Increasing Profits Through Season Extension and Diversification by Adding Value to Your Farm Products – Which Food Safety Principles Apply?

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https://www.ciderculture.com/juicing-systems-cider-pressing-equipment-history/

Here is where you can turn on or off your camera and microphone

Click "View Options" and then annotate the next slide, you can use a stamp to show on the map where you are located!

Click this "Chat" button to ask a question during the presentation

welcome to the Introduction to Preventive Controls Webinar!
Please use the “annotate” feature to mark where your facility is located on the map.

Why value-add?

• Helps extend production season
• Reduces waste
  • Surplus
  • Non-wholesale
• Increases revenue
• Introduces new markets
Regulation: Retail vs. Wholesale

**Retail**
- Restricted to sales directly to the consumer, and are inspected and licensed by the local board of health.
- General consuming public (small portion)

**Wholesale**
- Sold to wholesalers, retailers, and industrial or business purchasers (large quantity)
- Wholesale operations may sell their products to retail stores, restaurants, etc., and are inspected and licensed by the Massachusetts Food Protection Program.
- 2 Regulating bodies
  - USDA – 9 CFR
  - FDA – 21 CFR

What Foods May Be Produced in A Residential Kitchen?

- **Retail Residential Kitchen** - only “Cottage Food Products.”
  - Non-Potentially Hazardous –
    - Safely held at room temperature,
    - i.e. baked goods, jams, and jellies. 105 CMR 590.001(C); FC 1-201.10 (B)
  - Check your local boards of health regulations

- **Wholesale Residential Kitchen** - produce foods that can be safely held at room temperature and foods that do not require refrigeration

Retail or Wholesale Residential Kitchens may not prepare finished products that require **hot or cold holding for safety**.
Examples Include: Meat, poultry, fish, juice, canned foods, cut produce, infused vinegars, sauces, prepared meals and more.
Can I make this in a residential kitchen?

No. The preparation of frozen peas requires temperature control to ensure proper safety.

Can I make this in a residential kitchen?

Yes! The natural sugars in the fruit plus added sugar and water bath canning help to make this product shelf stable.

NOTE: Control Brix.
Can I make this in a residential kitchen?

No. The pH and processing conditions must be monitored to ensure food safety.
NOTE: Low acid and canned foods require a scheduled process issued by a process authority.
Food Safety Regulation and Processing

Food Safety

HACCP

Meat & poultry
9 CFR 304

Juice
21 CFR 101/102

Seafood
21 CFR 123

Low Acid
21 CFR 113 AND Preventive Controls

Preventative Controls
*Dairy – also PMO
*Acidified – also comply with 21 CFR 114

Preventive Controls: What are they?

- Preventive Controls are procedures you implement to reduce or remove hazards that are found in your food product at your facility
- There are four categories:
  - Process Preventive Control
  - Allergen Preventive Control
  - Sanitation Preventive Control
  - Supply chain Preventive Control
Contents of a Food Safety Plan

**Required**
- Hazard analysis
- Preventive controls*
  - Process, food allergen, sanitation, supply-chain and other
  - Recall plan*
- Procedures for monitoring, corrective action and verification*

**Useful**
- Facility overview and Food Safety Team
- Product description
- Flow diagram
- Process description

* Required when a hazard requiring a preventive control is identified

Chapter 2, Food Safety Plan
Overview for Preventive Controls for Human Food, slide 19

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Hazard Analysis

The first step of creating a FSP is conducting a hazard analysis:

1. List Ingredient/processing steps
2. Identify potential food safety hazards
3. Determine if hazard requires a PC
4. Justify Decision
5. Identify preventive controls for significant hazard
6. Double check preventive control has been implemented
Potential Preventive Controls Examples

- **Biological Hazards**
  - Process controls that kill pathogens
    - E.g. Cooking
  - Process controls that prevent growth; e.g.
    - Time/temperature controls
    - Checking formulation
  - Supply-chain programs for sensitive ingredients used without a kill step
  - Sanitation Controls that prevent recontamination

- **Chemical Hazards**
  - Supply-chain programs
  - Allergen Labeling
  - Sanitation controls to prevent allergen cross-contact

- **Physical Hazards**
  - Process Controls such as
    - Filtering, metal detection, X-ray devices

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Hazard Analysis Example

<table>
<thead>
<tr>
<th>Ingredient/Processing Step</th>
<th>Identify potential food safety hazards introduced, controlled or enhanced at this step</th>
<th>Do any potential food safety hazards require a preventive control?</th>
<th>Justify your decision for column 3</th>
<th>What preventive control measure(s) can be applied to significantly minimize or prevent the food safety hazard? Process including CCPs, Allergen, Sanitation, Supply-chain, other preventive control</th>
<th>Is the preventive control applied at this step?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Hazards</td>
<td>B</td>
<td>Yes</td>
<td></td>
<td>Process including CCPs, Allergen, Sanitation, Supply-chain, other preventive control</td>
<td>Yes</td>
</tr>
<tr>
<td>Chemical Hazards</td>
<td>C</td>
<td>Yes</td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Physical Hazards</td>
<td>P</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

FSPCA – Hazard Analysis and Preventive Controls Determination for Human Food
<table>
<thead>
<tr>
<th>(1) Ingredient/Processing Step</th>
<th>(2) Identify potential food safety hazards introduced, controlled or enhanced at this step</th>
<th>(3) Do any potential food safety hazards require a preventive control?</th>
<th>(4) Justify your decision for column 3</th>
<th>(5) What preventive control measure(s) can be applied to significantly minimize or prevent the food safety hazard? Process including CCPs, Allergen, Sanitation, Supply-chain, other preventive control</th>
<th>(6) Is the preventive control applied at this step?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving refrigerated ingredients – liquid pasteurized egg</td>
<td>B</td>
<td>X</td>
<td>Yes</td>
<td>Yes</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>X</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>X</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**FSPCA – Hazard Analysis and Preventive Controls Determination for Human Food**

- **Modified Requirements**
  - Read this article to check if you fall under the qualified individual category:
    - Guidance for Industry: Determination of Status as a Qualified Facility
  - Where to find attestation forms online – FDA Website
  - Having a food safety plan is relevant! You want to assure that risks in the facility are being addressed properly.

GMPs

- Current Good Manufacturing Practices 21 CFR Part 117
- Personnel
- Plant and grounds
- Sanitary operations
- Sanitary facilities and control
- Equipment and utensils
- Processes and controls
- Warehousing and distribution
- Holding/distribution of human byproducts for animal use
- Natural or unavoidable defects that present no health hazard


Legal & Financial Implications - Recalls

- Recalls are actions taken to remove an adulterated, misbranded, or violative product from the market.
- If there is a hazard in your facility or with your product, you MUST have a recall plan!
  - Your liability
  - Your customers
  - Your reputation
  - The local food system
Record Keeping

- Records used to document that food safety hazards have been controlled by preventive controls
- Accurate record keeping provides documentation that food safety hazards are being controlled.
- Information required:
  - Standard information required
  - Signature or initials of the person reviewing the record, and date of the review
  - Cost and risk considerations

Food Safety Recommendations: Where Do I Start?

- Implement/Develop/Maintain GMPs
- Set up a documentation system for critical control points in your operating procedures (SOPs)
- Develop written ingredient and packaging material specifications developed for all suppliers, and verification of compliance with those suppliers.
- Sanitation Controls – recommended cleaning products to be used during manufacturing
- Audit – will provide recommendations for improvement*
Key Points for Preventive Controls

- **FSMA** - “Directs the Food and Drug Administration (FDA) as the food regulatory agency of the U.S. Department of Health and Human Services to better protect public health by, among other things, adopting a modern, preventive, and risk-based approach to food safety regulation.”
- Preventive controls fall under FSMA
- Should have plan by January 2020 if you’re a qualified facility
- If your product falls under the modified qualifications, understand and file for attestation

Key Points for Preventive Controls

- Key core components of FSP/Preventive Controls
  - Hazard Analysis
  - Preventive Controls*
  - Monitoring
  - Corrective Actions
  - Verifications and Associated Records
- Developing a food safety plan will help you and your staff understand the risks and significantly reduce food-related incidents.
Personnel

- Consultants and auditors
- Process authorities and subject matter experts
- University specialists
- Government agencies
- Trade associations
- Suppliers, buyers, laboratory analysts

Trusted Internet Sites and FDA Guidance

- FSPCA, FDA Website, Trade Association Websites, USDA Website

- In Development: Food Safety Preventive Controls for Human Food Hazards and Controls Guidance*
- Seafood HACCP Hazards and Controls Guidance
- Juice HACCP Hazards and Controls Guidance
Helpful Reminders

• Don’t be alone in making your food safety plan!
• Say what you do, do what you say
• Hazards are okay!
• Your safety plan is dynamic
• Make a commitment to ensure food safety

Thank you!

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• Successful Value Added Food Product Development: Managing Food Quality and Safety, March 23, 25 & 30th from 9AM-1PM:
• MDAR Food Entrepreneur Guide – coming this spring!
• Resource leads for NPD: https://ag.umass.edu/food-science/resources