No Hassle HACCP

A Simplified Approach to a Complicated Process

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Risk Reduction Plans

- May soon be mandatory
- Do not have to follow the exact terminology of a certified HACCP plan
- Must meet the goals of recognized standards
- A simplified, foundation approach will make the process more user friendly
- Ongoing training is a must
- The role of ACS, Universities, Cheese Guilds

A Simple Seven Part Approach

1. Adopt Good Manufacturing Practices, GMP's
2. Write Step by Step Cleaning, Sanitizing, and Operating Instructions (aka SSOP's and SOP's)
3. Describe each cheese and create Process Flow Charts
4. Create Eight or more Main Policies
5. Develop monitoring records
6. Perform the HACCP part of plan
7. Create a recall plan

1. Adopt GMP's- access online, from DPC guidebook, or other source

- **Personnel Hygiene**

– Everything to do with people including policies on health, handwashing, attire, jewelry, eating and chewing gum, and cleanliness

- **Building and Facilities**

– Everything to do with the building and space including polcies on handwashing facilities, lighting and ventilation, storage of ingredients, separation of finished product from unfinished, pest control, and construction and maintenance standards

- **Equipment and Utensils**

– Policies regarding the quality of equipment and utensils – such as ladles, milking equipment, milk cans, etc.

- **Production and Process Controls**

– This section covers policies on such things as records for ingredients, production batch and inventory records, and temperature control records.

2. Write Step by Step Cleaning, Sanitizing, and Operating Instructions

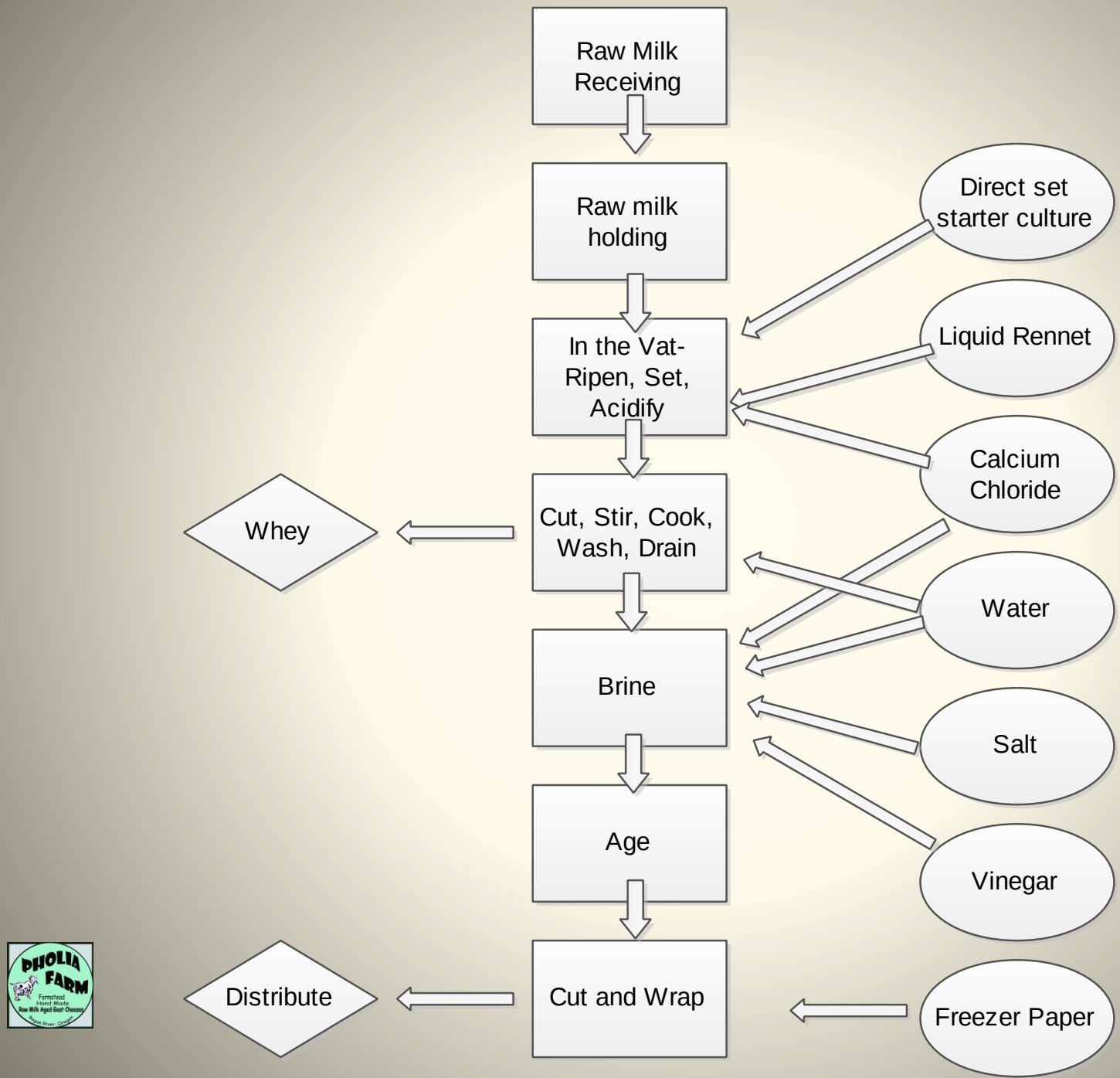
- Make a list of everything in your facility that you clean and sanitize
  - Milking equipment
  - Processing equipment
  - Refrigerators
  - Utensils
- Make another list of everything you do
  - Calibrate pH meter
  - Calibrate thermometers
  - Wash rinds
  - Pack cheese for sale

- Take each item in your list and write a detailed set of instructions that include the following:
  - Frequency of task
  - Supplies needed
  - Hazards involved
  - Step by step instructions
  - List of monitoring records associated with task
  - Who will verify that it is done

- You can assign a number code to each SSOP/SOP
- Keep all SSOP's and SOP's in main binder and accessible near where task is performed

3. Describe and Create Flow Charts

- Make a list of each cheese you make
- Group cheeses by similar category
- Describe each cheese, or main category, include:
  - Style: finish pH, moisture content, aged or fresh
  - Ingredients
  - Packaging
  - Sample of label and/or label information
  - Shelf life once in market
  - Method of distribution and sales type
  - Area of distribution
- Create a flow chart for each cheese
- Create a make sheet for each cheese (a cheese SOP)


Raw Milk Receiving
Raw milk holding
In the Vat- Ripen, Set, Acidify
Cut, Stir, Cook, Wash, Drain
Brine
Age
Cut and Wrap
Whey
Distribute
Direct set starter culture
Liquid Rennet
Calcium Chloride
Water
Salt
Vinegar
Freezer Paper

4. Create Main Policies

- Main policies cover the eight required by the NCIMS plus more that are recommended for all cheesemakers.
- These were formerly labeled as SSOP's
- Sometimes called P&P's for prerequisite programs or policy and procedures
- Doesn't matter what you call them!

- Policies include:
  - Safety of Water
  - Condition and cleanliness of food surfaces
  - Prevention of cross contamination and adulteration
  - Maintenance of handwashing, hand-santizing, and toilet facilities
  - Protection of product, packaging, and product contact surfaces
  - Proper labeling, storage, and usage of chemicals
  - Control of employee health conditions
  - Exclusion of pests
  - Receiving and storage of all ingredients
  - Temperature controls
  - Creamery environment condition and cleanliness
  - Inventory control
  - Worker training

Creating the Policies

1. Write the policy goal
2. Write the procedure that will accomplish the goal
3. Define how the goal is monitored
4. Define how problems (deviations) will be corrected.
5. Date and identify the facility

Policy # 2	***Title:*** Condition and Cleanliness of Product Contact Surfaces

Facility Name:

Date:

Policy Goal: Clean and sanitized processing equipment and utensils are essential to the manufacture of safe food products. Processing equipment is cleaned after each day's run and sanitized immediately prior to the next use. Items must be cleaned and sanitized after each use by hand.

Procedures:

1. SSOP's for each piece of equipment used (kept in bottling room in SSOP and SOP binder)
    a. Milking Machine and Equipment Cleaning and Maintenance Instructions
    b. Milk Bottling Equipment Cleaning and Maintenance Instruction
    c. Instructions for Manually Cleaning of Pots, Utensils, Cutting Boards, etc.
2. Preventative maintenance is performed to keep all equipment in good working condition so that it can be properly cleaned and sanitized. Equipment product contact surfaces that are worn and unable to be cleaned effectively shall be replaced.
3. Gloves and outer garments that may come into contact with food are kept in sanitary condition.
4. All equipment used in milk processing and cheesemaking meets recommended state and federal standards for food contact surfaces.

Monitoring Records

Log # 2-Make Room Check List – current log kept in make room, archived logs kept for 3 years in binder in tasting room

Log # 5- New Equipment Invoices and log – Invoices kept in office, log kept in archive binder in tasting room.

Log # 1 - Scheduled Correction Log – Main repairs and replacement log that lists and monitors corrections that cannot be done immediately.

Corrective Actions

Corrections will be taken as needed at each step and will be noted on Make Room Check List. *Any correction that cannot be accomplished immediately will be assessed as to whether the deviation has a potential impact on the ability to produce a safe product. If immediate measures are needed to minimize the effect of the deviation they will be taken and noted. Corrections that cannot be addressed immediately will be given a timeline for correction on the monitoring form* Scheduled Correction Log.

5. Develop Monitoring Records

- Create a record, a log or checklist, that documents that each policy is being followed.
  - These can be consolidated checklists!
  - Don't go overboard – it is easy to create so much paperwork that it cannot be followed
- Create a master log that oversees all policies
  - Master log documents maintenance, repairs, and replacement that must be done at a future date
  - Master log documents corrections fixed (described at end of each policy)

Monitoring Records

- Master corrections log
- Make Sheets
- Make Room log
  - Equipment condition and cleaning log
  - Cross contamination monitoring
  - Chemical storage and dilutions
  - Handwashing facilites monitoring
  - Pest monitoring
  - Refrigeration temperature
- Aging room log
  - Temperature log
  - Brine concentration log
  - Aging room cleaning and maintenance
  - Inventory control
- Packaging room log
  - Equipment cleaning and maintenance
  - Packing materials stored properly
  - Pest monitoring
- Training log
- Water sample and testing file
- New Equipment invoices file
- Distribution log
  - Inventory records
  - Customer complaint log
  - Farmer's market log
- Environmental testing log
- Recall log
- Supplier contracts log
- Worker health log
- Visitor log
- Milk receiving log
- Pasteurizer charts
- Inspections file/log
- More!!!

Sample Make Room Checklist

Monitors Policies # 2, 3, 4, 5, 6, 8

Task	Frequency	M	T	W	Th	F	S	Su	C : Corrective Action Notes
Prepare for Cheesemaking - Calibrate meter, sanitize contact surfaces in room, inspect and sanitize vat, sanitize cart, santize outside of milk cans	Each Make Day								
Petri film coliform and/or APC	Each Make Day								
Check Footbath Sanitizer	Each Make day								
Turn Babies	Each Make Day								
Turn Older Cheeses	1x Week								
Change pH Buffers	1x Week								
Clean and Sanitize Cooler	1x Week								
Clean and Sanitize insde Refrigerator	1x Week								
Clean and sanitize Aging room curtain, wipe walls, door	1x week								
Chemicals properly stored and labeled	Each make day								
Handwashing sink – towels, soap, hot water	Each make day								
Whey pump and tub cleaned	Each make day								
Trash emptied, fly strip checked	Each Make day								

6. Create the HACCP part of Plan

- Create a table based on each step in your process (use flow chart)
- Include everything that enters the process
- Identify any hazards – chemical, biological, physical
- Determine if they are critical or not
- If critical, state why
- List what can be done to prevent them
- Decide if the control is a CCP and if so list the CC that will be used
- If not a CCP, list how hazard is addressed in process
- Create a 2nd chart that details each critical control

Process step	Potential Hazards	What Potential Hazard is Significant?	Justification for Decision	What Control Steps can be used to prevent significant hazards?	Is this a CCP?	If not a CCP where is CP controlled?
Milk in Vat	Biological / Chemical	Pathogens, Antibiotic residues	Pathogenic bacteria and their toxins can cause illness and antibiotic residue can cause allergic reactions	Maintain healthy herd and sanitary milk collection SOP's. Rapidly chill milk and hold at <45F	Yes CCP 1 and 2	
Culturing and set Added culture, coagulant, calcium chloride	Biological	Pathogen growth and possible toxin formation	Pathogenic bacteria and their toxins can cause illness	Correct growth of lactic acid bacteria to inhibit growth of pathogens, document lot numbers of added ingredients	No	Processing GMP
Cutting	Physical	Metal pieces from knives can cause injury to consumer	Metal shards are hazardous	Visual examination of knives after cutting curd is done. Reject product if metal pieces are missing from tools	Yes CCP 3	
Cooking	Biological	Contamination	Pathogens can cause foodborne illness	Ensure the plant and equipment are clean and sanitary and workers follow GMP's	No	GMP's and SSOP's
Draining	Biological	Contamination	Pathogens can cause foodborne illness	Ensure the plant and equipment are clean and sanitary and workers follow GMP's	No	GMP's and SSOP's
Pressing	Biological	Contamination	Pathogens can cause foodborne illness	Ensure the plant and equipment are clean and sanitary and workers follow GMP's	No	GMP's and SSOP's
Salting Brine salting, salt, vinegar, calcium chloride, water	Biological	Contamination	Pathogens can cause foodborne illness	Ensure the plant and equipment are clean and sanitary and workers follow GMP's. Salt at correct pH, maintain brine, document lot numbers ingredients	No	GMP's and SSOP's
ing	Biological	Pathogen survival and contamination	Pathogens can cause foodborne illness	Age at correct temperature (>35F) and for over 60 days. Ensure room sanitation and worker GMP's to prevent contamination.	Yes CCP 4	GMP's and SSOP's

CCP	Hazard	Critical Limits	What	How	Frequency	Who	Corrective Actions	Records	Verification
1 Raw Milk Temperature	Pathogenic bacterial growth and possible toxin formation due to warm temp-eratures	<45F milk	Temp-erature of milk in cooler	Measure temp-erature of milk before processing	Before each batch	Cheese-maker	Reject if milk is > 45F	Make Sheet	Cheese-maker
2 Antibiotic residues in milk	Antibiotic residues	None present	Presence of antibiotics	Follow milk withhold-ing times as directed	Whenever antibiot-ics are used	Milker	Reject if with-holding times not followed	Farm calendar	Cheese-maker
3 Cutting of cheese	Metal	No metal	Each tool used to cut curd or cheese	Visual inspection to see if any pieces of are missing	After every use	Cheese-maker	Discard cheese	Make Sheet	Cheese-maker
4 Aging of cheeses	Pathogen survival	Minimu m 60 days at >35 F and proper moisture content	Aging temp-erature	Measure room temp-erature and note aging time	Each batch of cheese	Cheese-maker	Do not sell under age limit	Make sheet/ inven-tory sheet	Cheese-maker

PIJOLIA FARM
Farmstead Hand Made Raw Milk Aged Goat Cheeses

7. Create a Recall Plan

- For another class!

Resources

- ACS- Cheesemaker Best Practices Coming soon
- ACS – HACCP templates
- Peter Dixon – HACCP Based Program Handbook
- Dairy Practices Council Booklets # 8, 9, 57, 90, 91, 92, 93, 94, 100
- Farmstead Creamery Advisor and Mastering Artisan Cheesemaking, Gianaclis Caldwell
- www.gianacliscaldwell.wordpress.org
- www.pholiafarm.com