IDALS and Food Safety

Iowa dairy farms and dairy plants are regulated/inspected by Iowa Dept. of Agriculture & Land Stewardship (IDALS) -Dairy Bureau.

- Presenter: Kate Ehlts, SRO, IDALS - Dairy Bureau.
- Please review the previous DBIA Webinar #5 Iowa break-out session for Resource Information and a general list of items to consider when initially designing your dairy plant. (Webinar recording is available here: https://www.cdr.wisc.edu/dbia-webinar-12-01-20) This session focuses on Food Safety and Quality.
- ***The starting point*** **for a processor to make a wholesome, quality dairy product is to begin with good quality raw milk. Quality of milk cannot be improved by processing.**
- All milk must come from a state permitted dairy farm and if sell Grade A prod Interstate, farm also needs to be IMS certified.

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General Items Important to Quality and Food Safety

- 3-A Standards and Accepted Practices
- Recordkeeping and Traceability
- Pest Control
- Pasteurization
- cGMPs – Current Good Manufacturing Practices
- Plant Cleanliness
- Cleaning and Sanitizing of Equipment and Utensils
- Cooling of Milk/Milk Products

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3-A Sanitary Standards & Accepted Practices

- All product contact surfaces of equipment must be 3-A certified or meet 3-A requirements.
  3-A Sanitary Standards Inc*. is a not-for-profit organization that certifies equipment for sanitary design, materials, etc.*
- A fabricator of pasteurizers, tanks, filling equipment, valves, etc. may contact 3-A SSI and VOLUNTARILY request that a specific model of their equipment be reviewed to be 3-A certified. The requirements focus on sanitary design- materials, cleanability, etc
- If you are purchasing new or used equipment, it must be 3-A or meet 3-A stds or will not be approved for use in the dairy plant… AND that 3-A approval must be for a specific use… Ex. Pasteurizer
- As always, **buyer beware** when purchasing equipment from an unknown source/internet/etc. If seller states equip. is 3-A, then verify on 3-A website https://www.3-a.org/

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Recordkeeping and Traceability

- **Daily processing records** should include the lot #/code/etc. of all ingredients and packaging used for each batch. You must also retain Append N records, pasteurizer records, sales records, etc.
  - **Example #1**: If your ingredient supplier contacts you to inform you there is unsafe foreign material or any type of contamination in the ingredient you used, what records do **you** need to determine the batch numbers affected and account for 100% of the product you sold… in case of a recall
  - **Example #2**: The Dairy Inspector will pick up dairy samples from your facility and deliver to the IDALS Dairy Lab for testing monthly. If test results indicate the product is unsafe for consumption, then your records will be utilized to account for and retrieve 100% of that affected product.
- **Pest control management** is extremely important. More than 100 pathogens are associated with the house fly. Pest Control Records must be available for review. Discuss with your inspector what records are required. Be proactive in preventing insect/rodent activity to reduce the likelihood of contamination.

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Pasteurization

Pasteurization is an extremely important public health control.

- Pasteurization is the heating of every particle of milk or milk product, in properly designed and operated equipment to a specific temperature for a specified time. Pasteurization process is at a lower heat than sterilization/canning.
- Pasteurization of milk was adopted as a basic public health measure to kill dangerous bacteria to prevent consumers from getting sick. **Raw** milk may contain Campylobacter, Brucella, Cryptosporidium, E. Coli, Listeria & Salmonella.
- There are 2 types of pasteurizers available for dairy use: **Batch** (Vat) pasteurizer and **HTST** – High Temp. Short Time Verify that the pasteurizer you purchase meets or is 3-A and discuss with the Iowa Plant Specialist before purchasing.

Current Good Manufacturing Practices (cGMPs)

FDA website: "Following Current Good Manufacturing Practices (cGMPs) help to ensure the safety of food. cGMP regulations generally address matters including appropriate personal hygienic practices, design and construction of a food plant and maintenance of plant grounds, plant equipment, sanitary operations, facility sanitation, and production and process controls during the production of food."

Foot-traffic Control is an important cGMP that should be reviewed on initial design of the plant layout (for dairy plants that are located on or off the farm).

- For on-farm processing plants, it is necessary to have a strict policy of not allowing employees, who have been exposed to livestock areas and surroundings, etc. to enter the processing plant without complete change of clothes and footwear. Pathogens (Listeria monocytogenes, Salmonella, Coliforms, etc.) that are commonly found on farms must be kept out of the plant to prevent contamination of your facility and products.
- **For Example**: A facility may have a "buffer room" with a bench dividing the room. When you arrive, you remove street shoes on the "unclean" side then swing feet over to the "clean/plant" side to put on your plant footwear, hairnet/beard net, lab coat, etc.

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Current Good Manufacturing Practices (cGMPs) – cont.

Plant Cleanliness – A CLEAN plant provides a clean environment for processing/handling dairy products and for cleaning and storing utensils/containers/equipment and reduces the RISK of contamination to your dairy products.

- Work with your inspector when designing your dairy plant. Focus is on floors, walls, ceilings, cleanability, unnecessary articles (ex. desks) so only those items that directly pertain to processing may be stored in the processing room; It is designed so is easily cleaned and prevents contamination.

- Areas where ingredients, containers/lids, etc. are stored must be clean and free of insects and rodents. Good housekeeping is also a part of pest mgmt which reduces the likelihood of contamination of your dairy products.

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Current Good Manufacturing Practices (cGMPs) – cont.

Cleaning and Sanitizing Container & Equipment -

- All multi-use containers and utensils are thoroughly cleaned after each use and at least once each day used, (except for tanks storing raw milk >24 hrs). All equipment must be sanitized with an approved sanitizer before use.

- When Inspectors visit your facility, they will use a flashlight to determine if your equipment is cleaning. *There are no levels of cleanliness permitted*… product contact must be 100% clean. Butterfat, mineral and protein are common soils that need to be removed after each use. Work with your chemical supplier or research and follow manufacturer safety instructions on how to clean equip. Cannot effectively sanitize unclean equipment.

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Inhibiting any bacteria growth with cleaning AND COOLING…

Cooling of Milk and/or Milk Products - When raw milk is NOT kept cold during storage, the bacterial counts will increase. The same reasoning applies to cooling the milk/milk products after pasteurization.

- All **raw** milk stored shall be maintained at ≤45 degrees until transferred to pasteurizer.
- P**asteurized** milk/milk products, *except those to be cultured*, shall be cooled immediately to ≤45F after pasteurization and prior to filling or packaging.
- All finished product shall be stored or shipped ≤45 deg. F (*Cultured products may be exempted IF meet pH/temp. requirements*.)

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Questions?

Common Questions:

1. May I make a dairy product out of my kitchen to sell?
   Answer: **No**. ALL dairy products must be processed in an approved permitted dairy plant.

2. I am an organic dairy producer, do I still need to test the milk for antibiotics prior to processing?
   Answer: **Yes.** ALL milk must be tested for antibiotics following Appendix N rules, PRIOR to any processing (pasteurization). If during an inspection, no antibiotic records are available for review, affected product would be recalled and your state dairy plant permit may be suspended.

3. May I legally sell raw milk directly to consumers?
   Answer: **In Iowa, No.**

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  Rules and Regulations can be found on the Iowa website
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IDALS- Dairy Bureau is not a consulting business however, your assigned Dairy Inspector can provide you with regulations and guidelines.