



Chapter 8.

Cheese I

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Objectives



- Trace a brief culinary history of cheese.
 - Explain the cheese-making process overall.
 - Identify classifications of cheese.
 - Discuss the new American cheese movement.
 - Discuss cheese service and storage.
 - Describe the cheese-making process in the kitchen for fresh cheeses.
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Video link



https://www.youtube.com/watch?v=pU_VoyWfLfY&feature=youtu.be

<https://www.youtube.com/watch?v=y9wLhRrj5Ug&feature=youtu.be>

<https://www.youtube.com/watch?v=KPqK5LyGsiE&feature=share>

<https://www.youtube.com/watch?v=1a7f9wzOfWk&feature=youtu.be>

History of Cheese



- Cheeses were enjoyed by the ancient Sumerians as early as 3000 B.C.E.
 - Records of cheese have been in ancient Egyptian tombs as early as 2300 B.C.E.
 - The Romans were the first to mass-produce cheese to be carried on long journeys and used by their armies as a convenient form of concentrated nutrition.
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What is Cheese?



- Cheese is defined as a food product made from the pressed curd of milk.
 - Cheese is thought of as a living food because of the “friendly,” living bacteria that are continually changing it.
 - Cow’s milk is the base for many cheeses, followed by goat’s and then sheep’s milk.
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Artisan Cheeses and Dairies in the United States



- In 1851, the first real cheese factory in America was established in Rome, New York.
 - Around the same period of time, Wisconsin, California, Ohio, and Vermont were also beginning to establish themselves as states with producers of high quality cheeses.
 - By 1900, cheese makers in California were producing soft-ripened, soft, and washed-rind cheeses as well as the American invented Monterey Jack cheese.
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Artisan Cheeses and Dairies in the United States



- In 1990, over eight billion pounds of cheese and cheese-related products were produced in the United States.
 - Since the early 1990s, the number of artisan dairies in the United States has grown from a handful to more than 200.
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The Cheese-Making Process



- The basic stages in modern cheese production:
 1. Milk and its pretreatment, including homogenizing, pasteurizing, or heating
 2. Acidification of milk, to change the pH level
 3. Coagulating (curdling) the milk to create curds
 4. Separating the curds and whey
 5. Salting the curds
 6. Shaping, cutting, or molding the curds into their appropriate shapes
 7. Ripening
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Milk



- The type of milk the cheese maker chooses is critical to the development and final outcome of the cheese.
 - Different milks used in cheese-making:
 - Cow
 - Goat
 - Sheep
 - Camel
 - Yak
 - Mare
 - Llama
 - Buffalo
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Pasteurization of Milk



- Pasteurization is the process by which a liquid is heated to a particular temperature and held there for a specific period of time to destroy the naturally occurring bacteria in the milk.
 - The down side is that the process destroys not only pathogens but also the “friendly” bacteria, which are not only safe but also play an important role in producing cheeses.
 - The majority of cheese in the U.S. is produced from pasteurized milk.
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Acidification of Milk



- The milk is heated to a specific temperature and a starter is added that contains either an acid or an organism that produces lactic acid.
 - If there is too much acid, the curd may take several days to release the whey.
 - If there is too little, a seemingly dry cheese may begin to leak whey several weeks after it has been shaped and pressed.
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Acidification of Milk



- Acid starters for soft fresh cheeses:
 - Lemon juice
 - Vinegar
 - Citric acid
 - Tartaric acid
 - Enzyme starter for most ripened cheeses:
 - A culture composed of a lactic acid-producing organism
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Coagulating (Curdling) the Milk



- Acid starters will change the milk rapidly, souring the milk as well as forming curds—tightening the proteins.
 - **Rennet**: an enzyme starter originally obtained from the fourth stomach of young ruminant animals such as cows, sheep, and goats.
 - Today animal, plant, and genetically engineered forms (chymosin) are available.
 - The rennet that will give the cheese the desired flavor is the one that the cheese maker will use.
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Separating the Curds and Whey



- When the milk coagulates, it generally forms a soft mass curd that must be broken up to allow the noncoagulated portion of the milk, known as the whey, to drain off.



Salting



- Salt may be added at various points in the cheese- making process but it is usually done after draining the whey from the curd.
 - Salt's effects on cheese-making:
 - Adds flavor
 - Controls fermentation
 - Limits spoilage
 - Dries the cheese
 - The drier the cheese, the longer its useful life.
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Shaping



- Some methods for shaping cheese:
 - In cheesecloth bags
 - In baskets
 - In molds
 - Set on racks
 - Hung to drain and dry
 - Shaped in thick slabs and stacked
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Ripening



- Also known as aging or curing.
 - This is where the “magic” of flavor development takes place.
 - Changes during ripening affect:
 - Flavor
 - Texture
 - Body
 - Occasionally color
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Ripening



- Most cheese are ripened in temperature and humidity-controlled environments.
 - Cheese may be ripened in:
 - Leaves
 - Ashes
 - Wax rinds
 - No rind at all
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Cheese Classifications



- Soft fresh
 - Soft ripened
 - Rind-ripened
 - Semi-soft
 - Blue-veined cheeses
 - Pasta filata
 - Hard
 - Very hard
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Soft Fresh Cheeses



- Unripened
 - Fresh, clean, creamy flavor
 - Highly perishable
 - Examples:
 - Cottage cheese
 - Cream cheese
 - Feta
 - Ricotta
 - Mascarpone
 - Chèvre
 - Pot cheese
 - Queso blanco
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Soft Ripened Cheeses



- Sprayed or dusted with a mold and allowed to ripened
 - Varying degrees of richness depending on butterfat
 - Examples:
 - Brie
 - Camembert
 - Explorateur
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Rind-Ripened Cheeses



- Ripen from outside in
 - Periodically washed during ripening period with:
 - Brine
 - Beer
 - Wine
 - Cider
 - Brandy
 - Oils
 - Examples:
 - Limburger
 - Pont l'Évêque
 - Taleggio
 - Epoisses
 - Reblochon
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Semi-Soft Cheeses



- Allowed to ripen in a variety of ways:
 - Dry-rind cheeses form a natural rind while ripening.
 - Wax-rind cheeses are sealed in wax before the aging process.
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Semi-Soft Cheeses



- Examples:
 - Fontina
 - Havarti
 - Monterrey Jack
 - Muenster
 - Caciotta
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Blue-Veined Cheeses



- It is believed that the mold in blue cheeses was first introduced to cheese from moldy bread that had come in contact with the cheese.
 - Today, needles are used to form holes and introduce the mold to the cheese as well as to allow the gases to escape and oxygen to enter to support mold growth within the cheese.
 - The cheese is then salted and brined and allowed to ripen under cave-like conditions.
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Blue-Veined Cheeses



- **Roquefort**: made strictly from raw sheep's milk and has been made since ancient times in the Rouergue area of southern France.
 - Still ripened in the caves of Cambalou for three months to develop their unique character.
 - Roquefort mold is developed naturally from rye bread.
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Blue-Veined Cheeses



- Examples:
 - Danish Blue
 - Gorgonzola
 - Roquefort
 - Stilton
 - Maytag Blue
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Pasta Filata Cheeses



- Pasta filata literally means “spun curds” or “spun paste.
 - During manufacture, the curds are dipped into hot water and then stretched or spun until the proper consistency and texture is achieved.
 - They are then kneaded and molded into the desired shapes.
 - Examples:
 - Mozzarella
 - Provolone
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Hard Cheeses



- Popular hard cheeses include Cheddar, Colby, and Swiss.
 - The yellow color of some Cheddars is achieved through the addition of annatto seed paste and has nothing to do with the flavor.
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Hard Cheeses



- Examples:
 - Cheddar
 - Emmentaler
 - Gouda
 - Jarlsberg
 - Manchego
 - Provolone
 - Gruyère
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Very Hard Cheeses



- In Italy, these cheeses are known as the granas, or grainy cheeses, because of their granular texture.
 - Very hard cheeses are most often grated or shaved.
 - They are also traditionally eaten in chunks broken off with a special knife.
 - True Parmigiano-Reggiano is often referred to as the king of cheeses.
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Very Hard Cheeses



- Examples:
 - Asiago
 - Parmigiano-Reggiano
 - Pecorino Romano
 - Grana Padano
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Cheese Service



- Selecting cheeses for a cheese board should be based on:
 - Color
 - Shape
 - Texture
 - Richness
 - Intensity
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Cheese Service



- Cheeses should be allowed to come to room temperature before they are served
 - Styles of cheese presentation:
 - As a course in and of themselves
 - Cheese cart
 - On a buffet
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Partners and Accompaniments for Cheese



- Three types of food that have a natural affinity for cheese:
 1. Wine, beer, and fortified wines
 2. Varieties of breads and crackers
 3. Fruit
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Caring for Cheeses: Storage and Handling

- Because cheese is a living food with active biological attributes, it is critical to maintain the highest standards in sanitation during handling.
 - Cheese may be a potentially hazardous food, if handled improperly.
 - If cheeses become unnaturally moldy, they may be trimmed by cutting 1 / 2 to 1 inch past the mold.
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