

## ***Appendix A. Glossary of Terms & Acronyms***

### **TERMS**

#### ***Breeds of Milk Cows***

- *Holstein* - A black and white dairy cow (though there are some “Red Holsteins”) that is the most predominant breed of dairy cattle worldwide. The Holstein originated in the province of Friesland, in the Netherlands. They are known for having the highest milk production of all of the breeds of dairy cattle.
- *Jersey* - A breed of dairy cattle that is renowned for the high butterfat content of its milk. Jersey cows are smaller than other breeds (800 to 1,200 pounds) and are known for their big eyes, honey-brown color and docile natures.
- *Brown Swiss* - A breed of dairy cattle that originated on the Swiss Alps. Known for producing the second largest quantity of milk annually of any dairy breed, their milk averages 4 percent butterfat and 3.4 percent protein, which makes it ideal for cheese production. Brown Swiss are gray-brown in color and are known for their immense size, large ears and docile temperament.
- *Ayrshire* - A breed of dairy cattle that originated from the county of Ayr in Scotland. The average mature Ayrshire cow weighs 1,000-1,300 pounds and has red markings that can vary in color from orange to brown.
- *Milking Shorthorn* - A breed of reddish-brown and white dairy cattle that originated in Britain. They are large in size.
- *Guernsey* - A small, cream-and-brown breed of dairy cattle that produces more milk per unit of body weight than any other breed. Guernseys are renowned for the high butterfat content of their milk. The Guernsey was bred on the British Channel island of Guernsey and descended from cattle stock brought from nearby Normandy.

**Bull** - A sexually mature, uncastrated bovine male.

**Calf** - A young male or female bovine. Usually referred to as calves until reaching sexual maturity.

**Cow** - A mature female bovine. Usually referring to any dairy females that have borne a calf. Some may consider females having given birth only once as "first-calf heifers" until they have a second calf.

**Dairy Steer** - A neutered male of any of the dairy cattle breeds. The "dairy steers" are raised for meat production and usually managed like beef cattle.

**Dam** - Mother or female parent in a pedigree.

**Dry Cow** - A cow that is not lactating or secreting milk after it has completed a lactation period following calving.

**Fresh Cow** - A cow that has recently given birth to a calf.

**Heifer** - A female dairy animal that has yet to give birth to a calf.

**Replacement Heifers** - Female dairy animals that are raised with the intent of eventually replacing the cows currently in the milking herd.

**Rumen** - Cows have one stomach that is divided into four compartments, the largest being the rumen. The rumen allows cows to regurgitate forage and re-chew their cud for further digestion.

**Ruminant** - Animals having four stomach compartments - rumen, reticulum, omasum and abomasums - through which food passes in digestion. These animals chew their cud or regurgitate partially digested food for further breakdown in the mouth. Ruminant animals include cattle, sheep, goats, deer and camels.

### ***Equipment and Operation***

**Alley** - A walking area for cattle within a barn such as a loafing alley, feeding alley or cross alley (walkway) from a barn to the milking parlor.

**Bedding** - Material used to absorb moisture and provide cushion. It provides a clean, dry surface and reduces the incidence of mastitis. Possible bedding materials include: straw, sawdust, wood chips, sand, ground limestone, separated manure solids, shredded newspaper, corn stalks, bark, peanut hulls, sunflower hulls and rice hulls.

**Brisket Board** - A raised part of the freestall platform about 6.5 feet in front of

rear of the stall to keep cows positioned properly while lying. Usually made of wood or plastic, but occasionally concrete.

**Bulk Tank** - A refrigerated, stainless steel vessel in which milk is cooled quickly to 2 to 4°C (35 - 39°F) and stored until collected by a bulk tank truck for shipping to the milk plant.

**Bunk** - A feed trough or feeding station for cattle.

**Commodity Barn** - Usually a steel framed shed that provides storage for commodity feeds, such as cottonseed, brewers grains, chopped hay, etc.

**Crate** - An elevated stall for a calf in an indoor facility.

**Flat Barn** - An area for milking cattle where the person milking is on the same level as the cow. May be used with a pipeline or bucket milking system. Generally, the same area is used for cow housing.

**Flush System** - A manure removal system in which an area is cleaned by high volumes of fresh water, or gray water that is recycled from a manure pit or lagoon.

**Footbath** - A long shallow tub or depression in the concrete where cows walk through a mild solution (usually including copper sulfate or formalin) to promote foot health. Usually located along an alley where cows exit the milking parlor.

**Forage** - Feedstuffs composed primarily of the whole plant, including stems and leaves. High in fiber and low in digestible nutrients. Examples include whole plants of corn, small grains (such as oats, barley, or wheat), legumes and grasses.

**Freestall Barn** - A type of facility to house dairy cows that provides the animals with a clean, dry, comfortable resting area and easy access to food and water. The cows are not restrained and are free to enter, lie down, rise and leave the barn whenever they desire.

**Freestalls** - Resting cubicles or "beds" in which dairy cows are free to enter and leave, as opposed to being confined in stanchions or pens.

**Holding Pen** - An area in which cows congregate prior to entering a milking parlor to be milked.

**Homogenization** - A process applied to milk that results in fat globules being reduced in size to allow a smooth consistency.

**Hutch** - An individual housing unit for young calves; often made of wood, white fiberglass, or polyvinyl.

**Lagoon** - A manure storage basin dug into the ground like a pond and earthen lined to prevent absorption into the soil. Solids settle to the bottom and bacteria and microorganisms break down the manure, resulting in a nutrient-rich “wastewater” with less odor that can serve as a natural fertilizer when spread on fields.

**Milk House** - The area near a milking parlor where the bulk milk tank, cleaning units, and equipment are located.

**Milking Machine** - Machinery used by dairy farmers to extract milk from cows. Electronic milking machines use a pulsating vacuum that simulates the effect of a suckling calf. The machines keep the milk safe from external contamination.

***Milking Parlors:***

- Walk-through - Upon completion of milking, cows walk through the front of the stall to exit.
- Herringbone - A milking parlor in which cows stand side-by-side, angled towards the pit. This allows milking from the side of the udder.
- Parallel - A raised milking area or platform where the cow stands perpendicular to the operator and milking units are attached between the rear legs. This may also be referred to as a side-by-side.
- Rotary - A raised, round rotating platform or carousel on which cows ride while being milked.
- Robotic - A completely automated system for milking cows that requires limited human contact.

**Pasteurization** - Pasteurization is a simple, effective method to kill harmful pathogens through heat treatment without affecting the taste or nutritional value of milk. Since its introduction over a century ago, Pasteurization has been recognized around the world as an essential tool for protecting public health.

The process was named after its inventor, French scientist Louis Pasteur.

## **ACRONYMS**

<b>ACDP</b>	Air Contaminant Discharge Permit
<b>AFO</b>	Animal Feeding Operation
<b>ALA</b>	American Lung Association
<b>APCO</b>	Air Pollution Control Officer
<b>AQ</b>	Air Quality Division
<b>ATSDR</b>	Agency for Toxic Substances and Disease Registry
<b>AWMP</b>	Animal Waste Management Plan
<b>BACT</b>	Best Available Control Technology
<b>BART</b>	Best Available Retrofit Technology
<b>BMP</b>	Best Management Practice
<b>CAA</b>	Clean Air Act
<b>CAFO</b>	Confined (or Concentrated) Animal Feeding Operation
<b>CARB</b>	California Air Resources Board
<b>CCC</b>	Commodity Credit Corporation
<b>CERCLA</b>	Comprehensive Environmental Response, Compensation & Liability Act
<b>CNMP</b>	Comprehensive Nutrient Management Plan
<b>CMU</b>	Carnegie Mellon University
<b>CRGNSA</b>	Columbia River Gorge National Scenic Area
<b>CWA</b>	Clean Water Act
<b>DEQ</b>	Department of Environmental Quality
<b>DNR</b>	Iowa Department of Natural Resources
<b>EF</b>	Emissions Factor
<b>EI</b>	Emissions Inventory
<b>EPA</b>	Environmental Protection Agency
<b>EPCRA</b>	Emergency Planning and Community Right-to-Know Act
<b>EQC</b>	Environmental Quality Commission
<b>FIC</b>	Facility in Compliance
<b>FMMO</b>	Federal Milk Marketing Order
<b>GHG</b>	Greenhouse Gas
<b>GHGRAC</b>	Greenhouse Gas Reporting Advisory Committee
<b>HAP</b>	Hazardous Air Pollutants

<b>IDEQ</b>	Idaho Department of Environmental Quality
<b>IPCC</b>	International Panel on Climate Change
<b>LRAPA</b>	Lane Regional Air Protection Agency
<b>MACT</b>	Maximum Achievable Control Technology
<b>MOA</b>	Memorandum of Agreement
<b>MOU</b>	Memorandum of Understanding
<b>NAAQS</b>	National Ambient Air Quality Standards
<b>NAEMS</b>	National Air Emissions Monitoring Study
<b>NAS</b>	National Academy of Science
<b>NESHAP</b>	National Emissions Standards for Hazardous Air Pollutants
<b>NHCP</b>	National Handbook of Conservation Practices
<b>NIOSH</b>	National Institute for Occupational Safety & Health
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>NPS</b>	National Park Service
<b>NRC</b>	National Research Council of the National Academy of Science
<b>NRCS</b>	Natural Resource Conservation Service
<b>NSR</b>	New Source Review
<b>OAR</b>	Oregon Administrative Rules
<b>ODA</b>	Oregon Department of Agriculture
<b>ODOE</b>	Oregon Department of Energy
<b>OLA</b>	Oregon Chapter, American Lung Association
<b>ORS</b>	Oregon Revised Statutes
<b>OSHA</b>	U.S. Occupational Safety & Health Administration
<b>OR-OSHA</b>	Oregon Occupational Safety & Health Administration
<b>PM</b>	Particulate Matter
<b>POC</b>	Plan of Correction
<b>PSD</b>	Prevention of Significant Deterioration
<b>ROG</b>	Reactive Organic Gases
<b>SIP</b>	State Implementation Plan
<b>SJVAPCD</b>	San Joaquin Valley Air Pollution Control District
<b>SWCAA</b>	Southwest Washington Clean Air Agency
<b>USDA</b>	United States Department of Agriculture
<b>USFS</b>	United States Forest Service
<b>VOC</b>	Volatile Organic Compounds
<b>WQA</b>	Water Quality Advisory

**YRCAA**

Yakama Regional Clean Air Authority