

Farm Conditions	Reference	Narrative of Conditions	Risk Reduction	GMP	SSOP	CCP
F1	Green Pastures	We are currently working on improving our pastures. We have had them tested for nutrient content and soil quality and are reseeding and fertilizing accordingly. In the meantime, our animals are receiving quality hay in addition to the pasture.	Ensure that pastures are kept green (with irrigation if necessary) and that livestock have adequate space. Ideally, soil fertility testing for macro- and micro-elements should be performed every 3 years to detect deficiencies or overaccumulation of nutrients in the soil that could have an impact on pasture quality and/or herd health.	X		
F2	Clean, Tested Water	We currently use city water	Ensure that water is pure and not contaminated. Annual testing.			X
F3	Rotational Grazing	We currently have five different pastures which we partition into smaller paddocks for grazing with portable fencing. These fences are moved as needed to adequately graze and manage the fields	Move cows/does to new pastures every day to ensure nutrition and cleanliness.	X		
F4	Clean and Dry Conditions	We are located on a hill so our pastures are relatively well drained. The holding area where the cows wait to be milked is packed with crush and run. The fields have tree lines that provide shade and shelter. The animals also have access to run in sheds that are cleaned out or rebuilt as needed.	Well drained paddock, manure cleaned up daily. Ensure that shelter conditions and packs are managed properly year-round.	X		
F5	Poultry	Our chickens and turkeys are housed in movable coops so that chickens are not in the milking area or fields where milking animals are kept.	Prevent cross-contamination by ensuring that chickens or other birds do not enter and roost in the milking room areas. Consider implementing time separation between cows/does entering pasture after chickens have been removed from area.	X		
F6	Pigs and Other Livestock	We do not have pigs currently.	Prevent cross-contamination by ensuring that pigs are not in the same pastures and other areas with cows/does.	X		
F7	Pasture Management	Our perimeter fences are regularly checked and maintained.	Check annually to ensure that no harmful pests or weeds invade the herd's environment and that all perimeter fences are secure.	X		

<b>F8</b>	Biosecurity	Visitors are not allowed in the pasture with the milk cows or goats. Boots from other farms are asked to be sprayed with chlorahexadine. Owner has a separate pair of boots for wearing off property.	Ensure that visitors and farm helpers are educated about risks of cross contamination.	<b>X</b>		
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<b>Animal Nutrition and Conditions</b>	<b>Reference</b>	<b>Narrative of Conditions</b>	<b>Risk Reduction</b>	<b>GMP</b>	<b>SSOP</b>	<b>CCP</b>
<b>A1</b>	Herd Health	Goats: yearly tested for Johnnes and CAE; do need to purchase a buck every few years but only do so from clean tested herds. Goats are checked for parasites every three months or as needed. Adult stock is vaccinated yearly with CD&T. Cows: yearly tested for Johnnes, BVD, and BLV. We are in a TB and brucellosis free state. The Dexters are negative for all however the jerseys do test positive for BLV. Precautions are being taken to prevent spread of BLV. Cows are wormed as needed. We vaccinate with Triangle 10 yearly.	If possible, maintain a closed herd. Ensure that only cows/does with good body condition, from a known high quality herd, negative TB tests, negative bangs test, and no infections or other health issues are purchased and used for human consumption raw milk.	<b>X</b>		
<b>A2</b>	Veterinary Program	Rock and Country Veterinary Services or TennSouth Veterinary Services	Ensure that a proper preventative veterinary program is followed.	<b>X</b>		
<b>A3</b>	Mastitis Control	Milk is visually inspected upon stripping. Filter rate is also monitored. CMT is used if either is suspect. Milk is cultured if positive CMT test and then treated. Positive cows are milked last by hand and milk is dumped until infection is cleared and medicine withdrawal is complete.	Ensure that animals are being closely monitored for signs of mastitis. This may include visual inspection of the udders and milk as well as SCC testing. Milk from mastitic animals must not enter the milk bottling room, and can be either fed to animals or discarded.		<b>X</b>	
<b>A4</b>	New Livestock	New animals are quarantined until negative test results are achieved	Ensure that a proper biosecurity protocol is followed when introducing new livestock, such as quarantine, etc.	<b>X</b>		
<b>A5</b>	Water Feeders	Water feeders are cleaned weekly	Ensure water feeders are clean for animal consumption use.	<b>X</b>		
<b>A6</b>	Milk from At-Risk Animals	Milk from at risk animals is discarded	Ensure that all milk from animals that are separated for health risks will not enter the Milk Bottling room and will be fed to animals or discarded.	<b>X</b>		

<b>A7</b>	Milk from Fresh Cows/Does	Milk from fresh animals is reserved for bottle babies for the first week. It is then tested to ensure that it meets the common standards before being added to the milk pool.	Milk from fresh cows/does poses greater pathogen risks. Ensure that this milk is separated and does not enter the Milk Bottling room until a specific time period has elapsed or testing has been accomplished.	X		
<b>A8</b>	Calf Management	Calves/kids are separated from milking moms at birth and bottle fed	Allowing calves/kids to be with their mothers poses greater pathogen risks. Ensure there is a program in place for either separating calves/kids from mothers or otherwise managing the increased risks.	X		
<b>A9</b>	Nutrition	Animals have access to pasture at all times, Milking animals also have access to alfalfa hay. Animals are offered a dairy ration of grain made by CPC Commodities on the milk stand.	Ensure that livestock is fed a nutritionally appropriate diet to maintain health and body condition.	X		
<b>A10</b>	Supplements	All animals have access to loose minerals at all times. Mineral Min or cooper is also given periodically as recommended by the vet	Ensure that minerals and salt are continually available and appropriate to the needs of herd in this ecosystem.	X		
<b>A11</b>	Feed Management	Feed is stored in shed	Ensure that feed is dry and protected from moisture or pests.	X		
<b>A12</b>	Animal Cleanliness	Animals are cleaned as needed. Sheds are cleaned or moved as needed	Ensure that cows/does stay clean year-round, shelter facilities are managed and waste is composted separately from cows/does.	X		

<b>Milking Conditions</b>	<b>Reference</b>	<b>Narrative of Conditions</b>	<b>Risk Reduction</b>	<b>GMP</b>	<b>SSOP</b>	<b>CCP</b>
<b>M1</b>	Milking Parlor Cleanliness	Milk parlor is power washed or hosed down at the beginning and end of every milking.	Keep milk parlor conditions clean, dry and organized.		X	
<b>M2</b>	Bathroom	There is a bathroom located in the house that is close	Ensure that there is a bathroom which can be easily accessed from the milking parlor and bottling room.	X		

<b>M3</b>	Manure Management	Manure in the milking parlor is removed as soon as possible with a shovel. Once that cow is removed, the floor is hosed down before the next cow is brought into the parlor	Ensure there is a plan in place for managing manure in the milking parlor.		X	
<b>M4</b>	Water Management	The floor of the parlor is slanted such that the water is drained down the hill.	Ensure there is no standing water in the milking parlor. Ideally, the floor should drain to outside or to a sump area.		X	
<b>M5</b>	Training	All our milkers will go through a training period where they are taught our protocols for milking.	Ensure that only appropriately trained and experienced milking teams perform the milking duties.		X	
<b>M6</b>	Udder Prep	Before milking udders are brushed of dirt, if needed. Teats are cleaned with a damp rag, then dipped in iodine based dip. We wait at least 30 seconds then wipe with a clean paper towel. The udder is stripped and ready for milking. Teats are dipped again in iodine dip when milking is complete	Ensure that udders are cleaned, dried, sanitized for at least 30 seconds, and stripped prior to milk collection. Ensure that post-dip is applied after milking. Iodine based pre- and post-dips are preferred.		X	
<b>M7</b>	Vacuum Pressure	Vacuum pressures are monitored during milking and adjusted as needed	High vacuum pressures are associated with increased mastitis. Ensure that vacuum gauge reads negative 11.5 to 12 inches vacuum pressure during milking.		X	
<b>M8</b>	Milk Quality	Milk is viewed when stripping to make sure there are no signs of mastitis. It is reevaluated during filtering to ensure that it filters quickly without residue. If questioned, milk is tested with CMT and cultured as needed. AC and EC plates are made and counted at least monthly, if not more frequently.	Ensure that all milk is evaluated for quality and SCC test is performed on regular basis.		X	
<b>M9</b>	Inflation Liners	Inflators are replaced every 6 months. All tubing is replaced yearly.	Cracks in inflation liners can harbor bacteria and biofilms. Ensure that milk claw inflations liners are replaced regularly, depending on the manufacturer's suggested cycle life and number of accumulated cycles.		X	
<b>M10</b>	Clean Milking Equipment	Milking equipment is rinsed with water. Equipment is brought into the milk room and washed in hot water with alkaline cleaner (pfnazite) using a scrub brush. It is then rinsed with an acid rinse followed by a hot water rinse. It is then sprayed with sanitizer and set to dry on rack. The outside of the milk lines and claws are washed in same manner. They are then hooked up to a portable vaccum pump. A 5 gallon bucket of hot water with added alkaline cleaner is run through the system. It is rinsed with another 5 gallons of acid rinse water. The tubing and claws are then hung to dry.	Ensure that milking equipment is clean and well maintained. Cleaning should begin with cool/tepid water rinse, to prevent formation of milk stone. Cleaning protocols should include both alkaline and acid cleaners. Typically, cleaning should start with cool water rinse, followed by hot alkaline cleaner, followed by hot acid sanitizer.		X	

<b>M11</b>	Clean-In-Place Equipment (if applicable)	N/A	Temperature at exit of Clean-In-Place system should be at least 140 degrees F (60 C). Clean-in-Place protocols should include regularly (1-2x/month) using alternate acid and alkali cleaners to prevent cleaner-resistant bacteria colonies.			
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<b>Bottling Conditions</b>	<b>Reference</b>	<b>Narrative of Conditions</b>	<b>Risk Reduction</b>	<b>GMP</b>	<b>SSOP</b>	<b>CCP</b>
<b>B1</b>	Clean Bottles/Jars and Lids	Glass bottles should be returned clean. They are stored right side up in crates until washed (usually within 24 hours of receipt) They are rinsed and inspected visually before being washed in the dishwasher. If needed, they are scrubbed with vinegar and allowed to soak. Once clean and dry, the bottles are stored upside down in a crate until ready to use. New plastic caps are used on bottles which are sold. New bottles are stored in the garage. They are washed in the dishwasher before use.	Ensure that glass bottles and lids are clean and sanitary prior to filling with milk. Non-metal lids are preferred since rust from metal lids can encourage pathogen growth. Ensure that plastic bottles and lids are kept clean and uncontaminated.		X	
<b>B2</b>	Chilling	Cow milk is filtered into a Milk Plan bulk tank immediately after milking. The bulk tank is emptied and cleaned every other day. Goat milk is filtered into bottles which are then placed in a ice water bath until temperature is below 40 degrees F.	Ensure that chilling is completed in one hour to less than 40 degrees F (4.4 degrees C).		X	
<b>B3</b>	Prevent Jar Contamination	(Goat Milk only) The ice water bath is only filled to the shoulder of the milk bottles.	Ensure that no chilled ice water ever rises above the level of the filled milk jar lid line.		X	
<b>B3.5</b>	Prevent Jar Contamination from Eggs	Eggs are gathered after milking is complete for the day. They are stored on the far wall of the milk room on a separate table. They are not to be placed on the bottling table or near any milking equipment.		X		
<b>B4</b>	Clean Milk Handling	Hands are washed prior to handling bottles.	Ensure cleanliness of personnel prior to handling milk and filling or capping jars.		X	
<b>B5</b>	Bulk Tank Sanitation	Bulk tank is emptied and cleaned every other day. This includes disassembly of valves. Cleaning is accomplished with hot water with added alkaline cleaner followed by an acid rinse and hot water rinse. The inside of the tank is scrubbed with a brush dedicated for this purpose.	Ensure that the bulk tank is emptied and sanitized regularly. This should include complete disassembly and cleaning of valves.		X	

<b>B6</b>	Health of Personnel	Anyone who is ill is not allowed to handle the milk.	Ensure the health of all employees that handle milk.	X		
<b>B7</b>	Bottling Room Management	The milk room has an epoxy floor and a double barrel sink. The floor is slanted to drain out of the garage.	Ideally, the floor in the bottling area should have a slope and drain, the air should be filtered and under slight positive pressure to keep out flies, there should be plenty of natural light, the walls should be smooth and washable, and there should be a sink/washing area.	X		
<b>B8</b>	No Contamination in Milk Area	No dirty boots are allowed in the milk room. Boots can be changed at the door. Hands are washed upon entering.	Ensure that area where milk is handled is free from contamination.	X		
<b>B9</b>	Clean Milk Area	<b>The floor of the milk room is sprayed after every milking. It is cleaned once a week.</b>	Ensure that the place are where milk is handled is regularly cleaned.	X		

<b>Retail Area and Storage</b>	<b>Reference</b>	<b>Narrative of Conditions</b>	<b>Risk Reduction</b>	<b>GMP</b>	<b>SSOP</b>	<b>CCP</b>
<b>R1</b>	Milk Temperature in Storage	Our milk refrigerator is kept at 33 degrees.	Ensure that product is kept cold.	X		
<b>R2</b>	Jar Labeling	Bottles of milk are marked with the date upon which the milk was bottled. If the milk is not sold within 72 hours of the first milk added to the bulk tank, it is made into cheese or dumped.	Ensure that jars are properly labeled and dated, and picked up within three days	X		
<b>R3</b>	Warning Statement	A warning statement is located at the point of pick up. Statement says: "Raw (unpasteurized) milk and raw milk dairy products may contain disease-causing micro-organisms. Persons at highest risk of disease from these organisms include newborns and infants; the elderly; pregnant women; those taking corticosteroids, antibiotics or antacids; and those having chronic illnesses or other conditions that weaken their immunity." This warning statement is also included in our herdshare agreement which is signed by each customer.	Ensure that required warning is posted at point of pick up.	X		

<b>R4</b>	RAWMI Donations	We will set up a donation box where customers can donate to RAWMI	Ensure that these tax deductible donations are collected and sent to RAWMI every month.	X		
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<b>Testing Protocol and Results</b>	<b>Reference</b>	<b>Narrative of Conditions</b>	<b>Risk Reduction</b>	<b>GMP</b>	<b>SSOP</b>	<b>CCP</b>
<b>T1</b>	SPC and Coliform Testing	Coliform and SPC testing is completed on site as needed, or at least monthly. A notebook is kept which customers may view upon request. Results are reported to RAWMI	Ensure that coliform and SPC testing is completed at least monthly. Ensure that this data is available and compliant with RAWMI Common Standards and for review.	X		
<b>T2</b>	Compliance with Standards	If bacteria results rise above the RAWMI Common Standards, the farmer will contact RAWMI or another RAWMI LISTED member to consult and determine the likely cause and retest until a conforming test result is achieved.	Ensure compliance with Common Standards.			X
<b>T3</b>	Pathogen Testing	Milk is tested at the Kord Animal Diagnostic Lab for pathogens only as needed. Instead, SPC and coliform testing is used as general indicators.	Test regularly for 4 pathogens: campylobacter, salmonella, listeria mono, E coli 0151H7	X		

<b>Customer Complaint and Compliments</b>	<b>Reference</b>	<b>Narrative of Conditions</b>	<b>Risk Reduction</b>	<b>GMP</b>	<b>SSOP</b>	<b>CCP</b>
<b>C1</b>	Customer Communications	Whispering Willows customers are asked to report any irregularity in milk as soon as possible.	The RAWMI LISTED farmer must keep a file and record of all complaints. This information is used by the farmer to track any potential emerging illness outbreaks or issues.	X		

