

Farm Conditions	Reference	Narrative of Conditions	Risk Reduction	GMP	SSOP	CCP
F1	Green Pastures	The cow herd (currently 1 lactating cow, one 18 month old heifer and 1 8 month old steer) at XXXXXXXXXXXX is intensively rotationally grazed for as long as possible over 5 acres of pasture and silvopasture. Soil regeneration and pasture improvement is a work in progress and this will be our 3rd year with cows on the land. We estimate the grazing season will be from mid April to Mid October. After this time the land is too wet for the cows to be on without damaging soil structure. If possible, grass will be stockpiled for a graze through during drier parts of the wet season. Pastures are irrigated during the dry season. Soil testing was performed 2 years ago and deficiencies are being addressed. Soil testing will be repeated next year (2022) to see what deficiencies if any remain and to guide corrections. Amendments are organic.	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.	✓		
F2	Clean, Tested Water	All water is from the municipal water system.	Ensure that water is pure and not contaminated. Annual testing.			✓
F3	Rotational Grazing	Silvopastures are formed with permanent electric fencing around tree lanes. Pastures are further subdivided with moveable electric fencing to give access to 1 day's worth of pasture each day.	Move cows/does to new pastures every day to ensure nutrition and cleanliness.	✓		
F4	Clean and Dry Conditions	Cows are only allowed on pastures that are capable of supporting them without soil structure damage. They have year round access to sacrificial pasture (alleys) which remain fairly dry even throughout the wet season, as well as high ground sacrificial marginal pasture under tree shelter which stays dry year round. Areas around the barn tend to be muddy during the wet season but are scraped out with a tractor down to gravel as needed to keep them as drained as possible. Cows have year round access to a deeply sawdust-bedded barn which is scooped of manure and urine at least twice daily.	Well drained paddock, manure cleaned up daily. Ensure that shelter conditions and packs are managed properly year-round.	✓		
F5	Poultry	Poultry are not allowed in the barn (which currently is also the milking area). Wild birds are discouraged from nesting/being in the barn. On pastures, chickens follow cows in a follow-the-leader manner so cows will be at least a month behind where poultry have previously been	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.	✓		
F6	Pigs and Other Livestock	There are no pigs on the farm. We may co-graze sheep (feeder lambs) some seasons.	Prevent cross-contamination by ensuring that pigs are not in the same pastures and other areas with cows/does.	✓		

<b>F7</b>	Pasture Management	Perimeters are walked at last once weekly and more often daily (patrol with LGD) and pastures observed for soil/grass health. There are no noxious weeds at this time,	Check annually to ensure that no harmful pests or weeds invade the herd's environment and that all perimeter fences are secure.	✓		
<b>F8</b>	Biosecurity	Currently there are no outside farm helpers. Visitors that enter areas where livestock are must wear clothing/footwear that has not been on another farm, or must wear footwear provided by us, or walk through a footbath (bleach and water). Veterinarian wears boots which are dipped/stored in sanitizer between farms. We ourselves have dedicated footwear for off farm wear only.	Ensure that visitors and farm helpers are educated about risks of cross contamination.		✓	

<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	The herd is closed as much as possible. However, we will bring in a bull if necessary if AI is not working. Our first cow (dam to the others) was brought in from the United States so would have been tested negative for all reportable diseases. Canada is currently Brucellosis free.	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>A2</b>	Veterinary Program	I am a veterinarian but for small animals. I feel I can recognize illness but am not comfortable treating illness. I have an excellent relationship with a large animal veterinarian. Cows are vaccinated as recommended but the veterinarian for BVD, IBR, leptospirosis, PI3 BRSV, Clostridia and Tetanus. Cows receive foot trims as needed; currently every 6 weeks for one and every 12 weeks for the other.	Ensure that a proper preventative veterinary program is followed.	✓		
<b>A3</b>	Mastitis Control	Udders are checked at milking which is at least once daily. Udders are visually inspected for any signs of inflammation. Foremilk from each quarter is milked into a strip cup and the milk inspected for any abnormalities. We check for inflammation once weekly with a cowside kit, Udder-check.	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>A4</b>	New Livestock	We intend to keep the herd as closed as possible. We intend that any new cows will come from a known herd which has an excellent health record, vaccinates and/or has tested for communicable diseases present in Canada. If not tested, they will be tested before coming on to the farm. With our present set up it will be difficult to maintain quarantine for any length of time. New cows will have a veterinary exam within a week of arrival if possible. Ideally new cows would be non lactating cow so milking equipment doesn't have to be shared. If necessary to share equipment, the new cow will be milked last and her milk discarded or fed to animals until a clean culture before being introduced into the herdshare milk pool. If infrastructure permits in the future, new arrivals will be quarantined for 21-30 days. No direct or indirect contact with the rest of the herd will occur.	Ensure that a proper biosecurity protocol is followed when introducing new livestock, such as quarantine, etc.		✓	
<b>A5</b>	Water Feeders	water stock tanks are continuously fed from the municipal water system. They are checked daily and water is changed/tanks are cleaned as needed	Ensure water feeders are clean for animal consumption use.	✓		
<b>A6</b>	Milk from At-Risk Animals	Cows that are of health concern will be milked last and their milk kept separate from that of healthy cow(s). It will not enter the milk room but will be poured into buckets for feeding to animals or discarded on tree lanes (where cows do not have access).	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>A7</b>	Milk from Fresh Cows/Does	Milk from fresh cows will not be added to the herdshare pool until either 7 days have elapsed or a culture has been performed and is negative for pathogens, whichever is longer. Fresh cows will be milked last and their milk discarded before it reaches the bottling room (currently the house).	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.		✓	
<b>A8</b>	Calf Management	We have been calf sharing these past 2 lactations however are strongly considering not doing this moving forward. However, our cultures show that our sanitary procedures are sufficient for managing the increased risks of calf sharing.	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.	✓		
<b>A9</b>	Nutrition	Cows are assessed daily for general appearance and body condition and are fed to maintain condition as appropriate to their stage of lactation. They are fed either locally sourced grass hay or pasture (which is being monitored to encourage cow appropriate forage by grazing management and over-seeding with a forage mix), along with dairy concentrate ration (either organic or non-GMO) proportional to milk production and as needed to maintain body condition, and alfalfa pellets daily at milking, dairy minerals appropriate to stage of lactation, organic kelp at recommended amounts, Vitamin E 800iu daily while they are on hay, and both a salt and a mineral block lick are available at all times.	Ensure that livestock is fed a nutritionally appropriate diet to maintain health and body condition.	✓		
<b>A10</b>	Supplements	see above	Ensure that minerals and salt are continually available and appropriate to the needs of herd in this ecosystem.	✓		

<b>A11</b>	Feed Management	Hay is barn stored over winter. Rodents are managed as best as possible with barn cats and traps. Supplements are stored in metal bins with lids.	Ensure that feed is dry and protected from moisture or pests.	✓		
<b>A12</b>	Animal Cleanliness	Cows have access to clean and dry pasture all year as well as a bedded barn made available in inclement weather. Bedding is scooped of manure and urine clumps daily in the morning prior to milking and again as needed throughout the day. Bedding is added as needed to keep the concrete floor well cushioned. Absorbant clay (Stall Dry) is sprinkled on any areas where urine/moisture has reached the concrete pad. Waste is composted on a part of the field that is not accessible to cows when grazing.	Ensure that cows/does stay clean year-round, shelter facilities are managed and waste is composted separately from cows/does.	✓		

<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	We currently milk in the barn. Bedding is thoroughly scooped of manure and urine prior to milking. Equipment aside from the vacuum pump is currently kept in the house and is brought to and from the barn with each milking. It is well organized in our house. There is a covered toolbox with compartments for teat dip cups and extra washcloths as well as a few seldom used sundries. Extra teat dips are kept on a shelf near the toolbox. The vacuum pump has a parked spot near the other dairy supplies.	Keep milk parlor conditions clean, dry and organized.	✓		
<b>M2</b>	Bathroom	The bathroom is in our house which is approximately 30m from the barn (milking area). Bottling is done in our house.	Ensure that there is a bathroom which can be easily accessed from the milking parlor and bottling room.	✓		
<b>M3</b>	Manure Management	Manure and urine are scooped from the barn prior to each milking.	Ensure there is a plan in place for managing manure in the milking parlor.		✓	
<b>M4</b>	Water Management	There is never standing water in the barn/milking area. The barn floor does not slope well but does have a drain connected to underground piping which empties about 6m from the barn into a drainage ditch. If the floor needs to be hosed out, this is done early on a warm sunny day and the water is broomed out as best as possible, the floor allowed to dry and bedding replaced before cows enter.	Ensure there is no standing water in the milking parlor. Ideally, the floor should drain to outside or to a sump area.	✓		

<b>M5</b>	Training	Currently is only my husband and myself who milk. In the future we may have 1-2 well trained workers who will be closely supervised until we are sure they are milking to our standards.	Ensure that only appropriately trained and experienced milking teams perform the milking duties.	✓		
<b>M6</b>	Udder Prep	Udders are washed with warm soapy water. The final wash of each teat/quarter floor is performed with white cloths, one per quarter. If any dirt comes off then the quarter is re-washed until clean. Teats and udder floors are dried with white cloths for a final dirt check. The first 3-5 streams of milk are hand milked into a strip cup to observe the foremilk. Teats are dipped with an approved iodine-based pre-dip (De Laval Della PreTech Plus) and 30 seconds are counted off. After at least 30 seconds have elapsed iodine is wiped off with a new cloth using a different corner of the cloth for each teat. When not calf sharing, post milking, teats are dipped with an iodine-based, barrier type, approved post-dip (De Laval Della One)	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.		✓	
<b>M7</b>	Vacuum Pressure	vacuum pressure is set to 11-12 inches. Prior to putting on the claw, the guage is checked to ensure the pressure is 11-12 inches.	High vacuum pressures are associated with increased mastitis. Ensure that vacuum gauge reads negative 11.5 to 12 inches vacuum pressure during milking.		✓	
<b>M8</b>	Milk Quality	Pooled milk from either the am or pm milking is checked once weekly for inflammation using the cowside kit, Udder-Check. This kit identifies the prescence of lactate dehydrogenase (LDH) which is released from inflammatory cells. The greater the degree of inflammation, the more LDH is produced. Udder-check is a linear test such that the colour change intensity increases proportionally to the concentration of LDH present. If the test reveals inflammation then further testing will be performed to determine which cow(s) it is coming from (if more than one cow is milking) and then from which quarter(s). Once this is determined, milk from this cow will be discarded until she is healthy again.	Ensure that all milk is evaluated for quality and SCC test is performed on regular basis.		✓	
<b>M9</b>	Inflation Liners	Inflations are checked every 2 weeks when the claw is disassembled and cleaned. If liners pass inspection then they are routinely changed every 2500 milkings or every 6 months whichever is sooner (Jan 1 and June 1)	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.		✓	

<p><b>M10</b></p>	<p>Clean Milking Equipment</p>	<p>The cleaning procedure for the milk machine is: pre-milking 10L of tepid to cold water with 1 capful of bleach added is drawn through the claw into the bucket. This rinse is discarded and then the cow is milked. immediately after the milk has been poured into the transport container, 10L of plain, lukewarm water is drawn through the claw into the bucket. This is discarded, then 10L of water as hot as it can get from the tap (57/135F) with an appropriate amount of an alkali detergent cleaner is drawn through then discarded. The final rinse is with 10L of hot water with an appropriate acid sanitizer. The acid rinse is allowed to sit about 5 minutes then is poured out. Once in the cleaning room the claw and lid assembly are removed from the bucket and hung up. The gasket is removed and washed in hot water with chlorine based detergent added. The inside of the bucket is washed with a clean cloth and the hot detergent water solution. The inside of the lid is washed with a clean cloth and this same detergent water. The gasket is replaced. The outside of the claw (shells, hoses, lid) is wiped with a cloth and the same water. The outside of the bucket is wiped progressively lower to the underside of the bucket and then the bucket is inverted and hung on a hook above the floor to dry. The lids and buckets that are used for udder prep are then washed and placed upside down to dry. The buckets that the rinses were in are checked for cleanliness then placed to dry with lids ajar. They are washed as needed. Other equipment used for bottling (funnel, bucket, transport containers) is placed in the dishwasher and cleaned with a high heat, long scrub cycle. Once a week (Mondays) this equipment is cleaned with the acid rinse. Every 2 weeks (1st of the month and 15th of the month) the claw is disassembled and all surfaces inside and out are cleaned with brushes and hot soapy water.</p>	<p>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.</p>		<p>✓</p>	
<p><b>M11</b></p>	<p>Clean-In-Place Equipment (if applicable)</p>	<p>N/A</p>	<p>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.</p>			

Bottling Conditions	Reference	Narrative of Conditions	Risk Reduction	GMP	SSOP	CCP
B1	Clean Bottles/Jars and Lids	Bottles are 1.9L glass jars and lids are Ball brand leakproof plastic lids. All bottles and lids are run through a high temperature scrub cycle in the dishwasher whether they come back looking clean or not. They are dried in the dishwasher and then placed upside down for storage on a shelving rack about 4 feet above the floor. The shelf rack is lined with plastic backed absorbent pads which are changed weekly. Lids are stored in a basket reserved solely for this purpose and are on the rack above the jars. There is another shelf directly above the lid basket which prevents debris from falling into the basket.	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.		✓	
B2	Chilling	Lids are tightened securely and then jars are placed in a cooler in an ice bath made of cold water and frozen 500ml water bottles. Bleach is also added to the water. Water comes up to just over the shoulder of the jars to about 2.5cm below the lid. A fish pump circulates water from one end of the cooler to the other. Every 20-30 minutes jars are gently inverted several times to mix the milk inside the jars. At 30 mins jars are at 10.8C. At 60 minutes they are at 5.4C and at 75 minutes they are at 3.9-4.4C. Water/bleach is changed every few days.	Ensure that chilling is completed in one hour to less than 40 degrees F (4.4 degrees C).		✓	
B3	Prevent Jar Contamination	Water level in the cooler is observed with each jar placement to ensure that the water line is 2.5 cm below the lid line.	Ensure that no chilled ice water ever rises above the level of the filled milk jar lid line.		✓	
B4	Clean Milk Handling	milk is bottled in our kitchen/dining room. Outside clothes have been removed, hair is tied back and hands have been thoroughly washed prior to handling milk.	Ensure cleanliness of personnel prior to handling milk and filling or capping jars.		✓	
B5	Bulk Tank Sanitation	N/A	Ensure that the bulk tank is emptied and sanitized regularly. This should include complete disassembly and cleaning of valves.			
B6	Health of Personnel	If one of us is sick and the other person is well, then the well person will milk and process milk. If we are both sick then masks and gloves will be worn in addition to regular sanitation procedures	Ensure the health of all employees that handle milk.	✓	✓	
B7	Bottling Room Management	Bottling is done in our dining room. There is a sliding glass door to the deck at one end of this small room, allowing for a large amount of natural light in addition to the regular overhead light.	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.	✓		

<b>B8</b>	No Contamination in Milk Area	The laundry room where milk is chilled and equipment is cleaned is kept very clean. Towels collect any drips and these are washed after each milking. The whole room is inspected daily and walls or surfaces that need to be washed are done so. The floor is swept and then washed after each milking process is finished with a chlorine based detergent solution designed for this use (De Laval's Della-Clean Extra)	Ensure that area where milk is handled is free from contamination.		✓	
<b>B9</b>	Clean Milk Area	as above	Ensure that the place are where milk is handled is regularly cleaned.		✓	

<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	We have a dedicated, freezer-less fridge for milk storage. A max-min thermometer continually monitors the middle shelf temperature of the fridge. It has an alarm that is programmed to go off is temperature rises above 4.0C or below 0C. Current temperature, max and min are observed and recorded once daily. The fridge averages 1.5C.	Ensure that product is kept cold.	✓		
<b>R2</b>	Jar Labeling	Jars are labelled with the date and time of milking (am or pm) with masking tape on the lids. Any milk that has not been picked up within 3 days is removed from the member stream.	Ensure that jars are properly labeled and dated, and picked up within three days		✓	
<b>R3</b>	Warning Statement	A warning statement is located at the point of pick up - on the fridge door. 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."	Ensure that required warning is posted at point of pick up.	✓		
<b>R4</b>	RAWMI Donations	This will be done if donations are given.	Ensure that these tax deductible donations are collected and sent to RAWMI every month.	✓		



Testing Protocol and Results	Reference	Narrative of Conditions	Risk Reduction	GMP	SSOP	CCP
T1	SPC and Coliform Testing	Milk is tested every month for coliforms and SPC by a local laboratory. Results of tests will be sent to RAWMI and displayed on the RAWMI LISTED webpage, and made available at on-farm store location for review by customers. Results are available in hard copy in a binder on the fridge door and also posted on a Google Drive folder that is shared with herdshare members.	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.	✓		
T2	Compliance with Standards	If bacteria results rise above the RAWMI Common Standards, we will investigate possible causes, check each cow for udder health, do a thorough cleaning and inspection of equipment, and monitor milking procedures for possible means of contamination. We will ask a RAWMI trained person to observe our milking and cleaning procedures. Retesting will be performed as soon as possible after remedial actions have been taken. If a pathogen is detected, milk will be discarded until a retest shows the problem has been resolved. Customers who may still be in possession of milk will be contacted and asked to stop drinking and discard it. If bacterial levels rise significantly above our norms, even if they are still within RAWMI accepted standards, we will do a thorough cleaning and inspection of equipment, and monitor milking procedures for possible means of contamination and monitor for trends We may retest milk sooner than in 4 weeks.	Ensure compliance with Common Standards.			✓
T3	Pathogen Testing	MB Labs performs pathogen testing as recommended. If a pathogen is detected, any milk produced from that point on will be discarded as well as that which is in the fridge for storage. Customers who still might have milk at home will be contacted and told to discard the milk and asked if they have any symptoms of illness. Possible causes will be investigated and actions taken as above and milk will not be sold until a retest (performed as soon as possible) shows no pathogens present.	Test regularly for 4 pathogens: campylobacter, salmonella, listeria mono, E coli 0151H7			✓

Customer Complaint and Compliments	Reference	Narrative of Conditions	Risk Reduction	GMP	SSOP	CCP
C1	Customer Communications	customers are encouraged to give all and any feedback. Any complaints will be recorded and maintained and used to investigate any issues.	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.	✓		