



Wildflower Raw Milk LLC Risk Analysis and Management Plan
Avon, Mt

GMP - General Management Plan
SSOP - Standard Sanitary Operating Procedures
CCP - Critical Control Point

Farm Conditions	Reference	Narrative of Conditions	Risk Reduction	GMP	SSOP	CCP
F1	Green Pastures	The land around the house is 160 acres. The cows spend most of their time on 80 acres of hay meadow/pasture. It is flood irrigated in the spring and summer. They are pastured with 25 sheep and 6-10 horses. During calving, there are beef cows that share the pasture. During the winter, they are fed hay out on the pasture during the day and at night have a hay rack, corral and barn. During the summer, they are kept off the hay meadow and have 32 acres for grazing. There is a creek that runs through the property with warm springs.	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	Water is from a spring and will be tested annually for coliform.	Ensure that water is pure and not contaminated. Annual testing.			*
F3	Rotational Grazing	During the summer the cows, horses and sheep are fenced off the hay meadow and kept in the pastures around the house. We rotate the lots as needed.	Move cows/does to new pastures every day to ensure nutrition and cleanliness.	*		
F4	Clean and Dry Conditions	The barn is kept clean daily, removing manure to a compost pile and laying fresh straw as necessary. The corral is well drained and doesn't become muddy.	Well drained paddock, manure cleaned up daily. Ensure that shelter conditions and packs are managed properly year-round.	*		
F5	Poultry	Chickens are not allowed in the milking parlor. The chickens are fenced in a mobile coop and do not free range.	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	We do not have pigs.	Prevent cross-contamination by ensuring that pigs are not in the same pastures and other areas with cows/does.	*		
F7	Pasture Management	We have a variety of grasses that grow and our main weeds are Canada Thistle, spotted knapweed and hounds tongue. Fences are checked frequently to make sure the perimeter is secure.	Check annually to ensure that no harmful pests or weeds invade the herd's environment and that all perimeter fences are secure.	*		

F8	Biosecurity	Visitors park on a gravel bed and are encouraged to wash their hands prior to meeting the animals. Tours will be given starting in the clean room and move towards the milking parlor and animal visits.	Ensure that visitors and farm helpers are educated about risks of cross contamination.	*		
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Animal Nutrition and Conditions	Reference	Narrative of Conditions	Risk Reduction	GMP	SSOP	CCP
A1	Herd Health	Milk cows were purchased from a known quality herd and 2 are registered. Cows are tested initially for Johnes, BVD, BLV, and TB. They are inspected by a vet and tested annually for brucellosis BLV, BVD and Johnes. Their body condition and general health are assessed daily.	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.	*		
A2	Veterinary Program	There are 2 vets that we regularly use. The milk cows are assessed annually by a vet or more frequently if needed.	Ensure that a proper preventative veterinary program is followed.	*		
A3	Mastitis Control	Cows are assessed daily for mastitis. This includes inspecting milk for abnormalities, assessing the udders for lumps and heat. SCC testing weekly via the CMT. Milk from mastitis animals will be discarded.	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.	*		
A4	New Livestock	New livestock are quarantined in a corral separate from other livestock.	Ensure that a proper biosecurity protocol is followed when introducing new livestock, such as quarantine, etc.	*		
A5	Water Feeders	Water is fresh from the creek. In the winter, there is a spring that doesn't freeze they have access to, and we chop holes in the creek for multiple access points.	Ensure water feeders are clean for animal consumption use.	*		
A6	Milk from At-Risk Animals	Any questionable milk will be fed to animals, used to water the garden or otherwise 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.	*		

A7	Milk from Fresh Cows/Does	Milk from fresh cows will not be sold until 5-7 days after freshening and has been tested for SCC, SPC and TC	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.	*		
A8	Calf Management	Calves will be separated from mother at birth and housed in a separate location.	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.	*		
A9	Nutrition	Cows are fed free access to grass/hay. Grain is fed at a rate of 3lbs/gallon produced. We feed a non-gmo 16% Dairy ration from Eden feeds and alfalfa pellets. Body condition is analyzed regularly and rations adjusted as needed.	Ensure that livestock is fed a nutritionally appropriate diet to maintain health and body condition.	*		
A10	Supplements	They have access to loose mineral, bicarbonate and loose salt. High magnesium mineral is offered in the spring. Apple Cider Vinegar is fed daily and herbs, essential oils and homeopathy are used as needed.	Ensure that minerals and salt are continually available and appropriate to the needs of herd in this ecosystem.	*		
A11	Feed Management	Grain is locked in a closet in the milking parlor. Cats are on duty for pest control.	Ensure that feed is dry and protected from moisture or pests.	*		
A12	Animal Cleanliness	Cows have enough pasture space to stay clean and shelter facilities are well maintained.	Ensure that cows/does stay clean year-round, shelter facilities are managed and waste is composted separately from cows/does.	*		

Milking Conditions	Reference	Narrative of Conditions	Risk Reduction	GMP	SSOP	CCP
M1	Milking Parlor Cleanliness	Milking parlor is our attached garage. It has a concrete floor and not frequented by other livestock. It is swept out prior to milking and the floor can be washed if soiled. The cows very rarely soil while in the garage and a 5 gallon bucket is kept on hand to catch any urine or manure. There is an automatic car door and man door accessing the house.	Keep milk parlor conditions clean, dry and organized.	*		
M2	Bathroom	The bathroom is in the house which is easily accessed from the garage.	Ensure that there is a bathroom which can be easily accessed from the milking parlor and bottling room.	*		

M3	Manure Management	Very very rarely, does a cow eliminate in the milking parlor, but there is a 5 gallon bucket to catch if necessary. If necessary, it can be sprayed out in the summer or mopped in the winter	Ensure there is a plan in place for managing manure in the milking parlor.	*		
M4	Water Management	There is not standing water in the milking parlor.	Ensure there is no standing water in the milking parlor. Ideally, the floor should drain to outside or to a sump area.	*		
M5	Training	Proper training has been conducted for back up milkers. On farm testing can be completed to ensure cleanliness during milking.	Ensure that only appropriately trained and experienced milking teams perform the milking duties.	*		
M6	Udder Prep	Udders are cleaned, dried, striped and pre dipped prior to milking and post dip applied post milking per the SSOP	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.		*	
M7	Vacuum Pressure	Vacuum Pressures are checked during milking, to read 11.5 to 12 inches vacuum pressure.	High vacuum pressures are associated with increased mastitis. Ensure that vacuum gauge reads negative 11.5 to 12 inches vacuum pressure during milking.	*		
M8	Milk Quality	All milk is evaluated for quality daily and SCC is tested weekly or as needed	Ensure that all milk is evaluated for quality and SCC test is performed on regular basis.	*		
M9	Inflation Liners	Inflation liners are inspected regularly and replaced yearly or as needed.	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.	*		
M10	Clean Milking Equipment	We milk with the improved Hamby Dairy Bucket milker. It is not set on the floor. Milking equipment is taken apart and cleaned after every milking. It is rinsed with tepid water and then scrubbed with hot soapy water followed by an acid rinse. Weekly it is broken down and soaked in a different detergent for further cleaning. It is dried in a protected room.	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.		*	

M11	Clean-In-Place Equipment (if applicable)	NA	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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Bottling Conditions	Reference	Narrative of Conditions	Risk Reduction	GMP	SSOP	CCP
B1	Clean Bottles/Jars and Lids	NA- We use plastic Smart Bottles	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	Milk is immediately chilled in a Milk Pan bulk tank to less than 40 degrees F in under an hour.	Ensure that chilling is completed in one hour to less than 40 degrees F (4.4 degrees C).	*		
B3	Prevent Jar Contamination	NA	Ensure that no chilled ice water ever rises above the level of the filled milk jar lid line.	*		
B4	Clean Milk Handling	Hand washing is complete prior to handling milk and bottling milk	Ensure cleanliness of personnel prior to handling milk and filling or capping jars.	*		
B5	Bulk Tank Sanitation	Bulk tank is emptied and cleaned 3x/week using the rinse, alkaline scrub, acid rinse method. Disassembly and cleaning of the valves are performed at each cleaning.	Ensure that the bulk tank is emptied and sanitized regularly. This should include complete disassembly and cleaning of valves.	*		
B6	Health of Personnel	If health of personnel is compromised, there are trained back up milkers that can step in.	Ensure the health of all employees that handle milk.	*		

B7	Bottling Room Management	The milk room which stores the bulk tank, refrigerator and equipment is kept clean and the door closed. There is a large window which allows for natural light and there are not flies present. The floor is concrete. The sink is in the bathroom located near the milk room and there is a hose that can reach the bulk tank for ease of cleaning.	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.	*		
B8	No Contamination in Milk Area	The counters are sanitized with a bleach solution and floors kept clean. The door is kept shut to the milk storage room.	Ensure that area where milk is handled is free from contamination.	*		
B9	Clean Milk Area	The counters are sanitized with a bleach solution and floors kept clean	Ensure that the place are where milk is handled is regularly cleaned.	*		

Retail Area and Storage	Reference	Narrative of Conditions	Risk Reduction	GMP	SSOP	CCP
R1	Milk Temperature in Storage	Milk refrigerator is kept at 37 degrees and checked daily. Milk is transported with ice packs and pick up locations monitor temperature to be kept below 38 degrees.	Ensure that product is kept cold.	*		
R2	Jar Labeling	Smart Bottles are labeled with the dates and customer initials. Customers agree to pick up within three days.	Ensure that jars are properly labeled and dated, and picked up within three days	*		
R3	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 product is not for resale and is not licensed, permitted, certified, packaged, labeled, or inspected per any official regulations."	Ensure that required warning is posted at point of pick up.	*		
R4	RAWMI Donations	A RAWMI donation can will be available at the pick up locations and sent to RAWMI every month.	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 at least monthly for coliforms and SPC by our on farm laboratory. Results of tests are sent to RAWMI and displayed on the RAWMI LISTED webpage.	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, the farmer is invited to 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.	*		
T3	Pathogen Testing	NA	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	A file will be kept of any complaints.	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.	*		

