



SASKATCHEWAN

FOOD PROCESSING FACILITY

BEST MANAGEMENT PRACTICES

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Preamble

Food processing in Saskatchewan is varied and includes those that process: produce (e.g., juices and jams); grains and cereals; bread and related bakery goods; confections; meat; dairy products; fish; egg products; condiments; protein products (e.g., tofu); bottled water; pre-packaged ice; seeds into sprouts; and soups (including dry mixes and bases).

This document has been developed to assist food processors in their efforts to produce a food product in a manner that will minimize or prevent the risk of food borne illness, poisoning or injury to the public. It contains various sections of *The Food Safety Regulations* and corresponding best management practices that assist the processor in meeting the intent of the regulations. Although this best management document includes specific methods of achievement, other methods may be considered with the approval of the public health officer.

Regulatory Responsibilities for Food Safety

In Saskatchewan the responsibility for ensuring food safety rests with the federal and provincial governments and the health regions.

Ministry of Health/Health Regions

Under *The Food Safety Regulations*, *The Milk Pasteurization Regulations* and *The Sanitation Regulations*, health regions inspect public eating establishments, milk pasteurization plants and food processing facilities, including slaughterhouses.

Individuals wishing to process food in their private home for retail sale to the public may have difficulty meeting the regulated requirements because the family setting, physical structure and types of environment do not lend themselves to commercial processing. For example, children and pets may contaminate food, household fridges and ranges can only accommodate small volumes and the necessary plumbing fixtures for hand washing or equipment washing is usually inadequate. As well, family members who are ill or convalescing at home may be a source of contamination of the food being sold.

Health regions may approve the sale of home prepared food if the food processing area, storage areas and washing facilities are contained in an area completely separate from the rest of the residence. *The Food Safety Regulations* will apply to this setting.

Low risk processed foods prepared in private kitchens, may be sold through local farmers' markets. Processors are encouraged to contact their public health officer regarding regulations and guidelines applicable to food sales at farmers' markets.

Canadian Food Inspection Agency (CFIA)

1. CFIA has the following responsibilities in the health region inspected facilities mentioned above:
 - (a) enforce federal requirements related to labelling, additives, contaminants, adulterants and consumer fraud; and
 - (b) ensure all manufactured, prepared, preserved, packaged or stored food results in a safe product.

2. CFIA is also responsible for:
 - (a) the inspection and regulation of food processing, importation and storage facilities under several pieces of federal legislation, (e.g., *Food and Drugs Act* and regulations; *Meat Inspection Act* and regulations and *Consumer Packaging and Labelling Act* and regulations). Types of food processing facilities that are within the mandate of CFIA include: meat processing and slaughter plants, flour mills, bakeries, water bottling and pre-packaged ice operations, vegetable oil processing facilities, soft drink bottling plants, breweries, sprouts growing facilities for human consumption, jam and jelly processing plants, food storage warehouses and a variety of other food processing operations that sell inter-provincially or internationally;
 - (b) overseeing the safety of food products imported into Saskatchewan from outside Canada; and
 - (c) the prevention of adulteration or chemical/toxicant contamination of primary product intended for food or animal feed.

General Information

In addition to the CFIA's role in water bottling facilities, health regions also play a role in these types of operations. The Ministry of Health's Technical Guideline #551 'Bottled Water Guidelines' provides detailed minimum layout and operational standards. Contact your public health officer for more information.

Anyone requiring clarification on any aspect of *The Food Safety Regulations* or the Saskatchewan Food Processing Facility Best Management Practices is advised to contact their public health officer. The link below will provide contact information for public health officers throughout the province:

<http://www.health.gov.sk.ca/public-health-inspections>

The most current versions of *The Food Safety Regulations* and the Saskatchewan Food Processing Facility Best Management Practices are available online at:

<http://www.health.gov.sk.ca/food-safety>

<http://www.health.gov.sk.ca/environmental-health-regulatory-info>

Anyone considering establishing or renovating a food processing facility should be aware that in addition to the requirements of *The Food Safety Regulations* and the Saskatchewan Food Processing Facility Best Management Practices, approvals from other ministries, agencies and/or local municipalities may also be required. These approvals may include, but are not limited to: building, fire, accessibility and plumbing.

Definitions

Approved means approved by the public health officer appointed pursuant to *The Public Health Act, 1994*.

Chronic Wasting Disease (CWD) means a contagious and fatal brain disease that affects deer and elk.

Clean-in-place means a cleaning and sanitizing process for food processing equipment that works by flushing detergent, water and a sanitizing solution through the equipment by contacting all interior food contact surfaces before being completely drained of cleaning and sanitizing solution.

Corrosion-resistant material means material that maintains acceptable cleanable characteristics under prolonged exposure to food, soil, moisture, heat or the normal application of cleaning compounds and sanitizing solutions.

Critical control point means a point, step or procedure at which control can be applied and an unacceptable health risk prevented, eliminated, or reduced to acceptable levels.

Critical limit means a criterion that must be met for each preventative measure associated with a 'critical control point'.

Food means:

- (a) a solid or liquid substance that is used or intended to be used for human consumption; or
- (b) a substance that is intended to enter into, or be used in the preparation or composition of, a substance described in (a) but does not include drugs or water.

Food grade material means a material that is used in the construction of utensils, equipment and food contact surfaces that does not allow the migration of deleterious substances or imparts colours, substances, tastes or odours to the food and is safe, durable, corrosion-resistant, smooth, easily cleanable and resistant to pitting, chipping and scratching.

Game farm meat products means a product that includes antelope, bison, caribou, elk, fallow deer, moose, mule deer, reindeer, white-tailed deer, bighorn sheep, thinhorn sheep, mouflon sheep, musk deer, mountain goats, ostrich, emu, rhea, pheasant, meat rabbit, llama, alpaca, wild boar or any other animal held in captivity for the purpose of producing game meat products.

Hazard Analysis Critical Control Point (HACCP) means a prevention based food safety plan designed to identify and monitor food safety hazards (biological, chemical or physical properties) within the food processing facility that, if uncontrolled, can affect the safety of the food product.

Impervious means a surface that is constructed of a material that prevents the passage or entry of moisture.

Local authority means a regional health authority appointed under *The Public Health Act, 1994*.

Operator means a person who is temporarily or permanently managing, supervising or in control of the operation of a food processing facility.

Potable water means water that is suitable and safe for human consumption.

Potentially hazardous food means food with a pH level or a water activity level, or a combination of a pH level and water activity level that will support the growth of pathogenic micro-organisms or the production of toxins.

Public health officer means a person employed by or on contract with a local authority and who has been delegated board powers to administer *The Public Health Act, 1994* and related regulations. Public health officers may also be referred to as public health inspectors or environmental health officers.

Sanitizing means a process that provides enough accumulative heat or concentration of chemicals for a sufficient length of time to reduce the number of micro-organizations on food contact surfaces to a level that does not compromise food safety.

Specified Risk Material (SRMs) means the skull, brain, trigeminal ganglia (nerves attached to the brain), eyes, tonsils, spinal cord and dorsal root ganglia (nerves attached to the spinal cord) of cattle aged 30 months or older and the distal ileum (part of the small intestine) of cattle of all ages.

Utensil and equipment means any implement, stationary or mobile, manual or mechanical, used in the storage, preparation, or transportation of food.

SECTION 1 – SUBMISSION OF INFORMATION TO PUBLIC HEALTH OFFICER

Food Safety Regulation Related to Plan Development and Review:

Section 33 states:

A local authority may require the operator of a processing facility to provide the following information to the local authority within a period set by the local authority:

- (a) the name and telephone number of the operator or owner of the processing facility;*
- (b) the address of the processing facility;*
- (c) the date on which the operation of the processing facility commenced;*
- (d) the sources and types of food being processed in the processing facility;*
- (e) the methods of processing being used in the processing facility;*
- (f) the methods of transporting food from the processing facility;*
- (g) the food safety training taken by the employees and operator of the processing facility;*
- (h) the programs carried out in the processing facility for:*
 - (i) maintaining general sanitation;*
 - (ii) controlling pests; and*
 - (iii) carrying out food or water recalls;*
- (i) any other information related to the safety of food or water that the local authority may specify.*

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

1.1 Structural and Processing Plan Development and Review

Food processing facility operators are encouraged to discuss their structural plans with their public health officer prior to construction, extension, renovation, or alteration of a food processing facility.

When considering the construction, extension, renovation, or alteration of a food processing facility, food processing facility operators are encouraged to seek the assistance of consulting companies specializing in establishment design.

Operators may also be required to submit to the public health officer, processing facility information, which may include but is not limited to: written cleaning schedules, pest control programs, food and water recall programs and possibly food handling and processing procedures, (e.g., Hazard Analysis Critical Control Point) plans for the storage, handling and production of food products, as well as any other information related to the safe production of food and water that the public health officer may require.

*Refer to Appendix III for details.

Construction or renovation of a food processing facility should in accordance with the plans submitted to and reviewed by the public health officer. Any plan changes should be discussed with the public health officer.

SECTION 2 – PHYSICAL ENVIRONMENT AND EQUIPMENT

Food Safety Regulations Related to Construction Requirements:

Section 13 states:

An operator of a food facility must ensure that any building used as premises for a food facility:

- (a) is designed:*
 - (i) to facilitate cleaning; and*
 - (ii) to prevent the entry and harbourage of pests; and*
- (b) unless otherwise exempted in writing by the local authority:*
 - (i) is supplied with hot and cold water that is safe for human consumption and is available in sufficient quantities and under sufficient pressure to meet the needs of the food facility;*
 - (ii) is connected to a lawful and properly operating sewage containment or disposal system;*
 - (iii) is equipped with lighting that is adequate in intensity to enable the sanitary operation and maintenance of the food areas; and*
 - (iv) is equipped with a properly operating means of providing ventilation to food areas that are subject to the generation or accumulation of odours, fumes, steam, vapours, smoke or excessive heat.*

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

2.1 Separation

When food processing takes place on the same premises with any retail or wholesale business, trade or private home, the food processing area is to be separated from other operations by a floor to ceiling wall in a manner acceptable to the public health officer. Barriers are not required where the food processing area of the facility forms part of a public eating establishment, food retail or food wholesale operation provided the layout does not create any potential source of contamination to food.

2.2 Utility Service Lines

Exposed service lines for gas, water, plumbing and electrical utilities that are located within a food processing facility should be installed in a manner that allows for easy access for cleaning purposes. Permanently mounted equipment should be completely sealed to the floor, wall or ceiling. Floor mounted equipment, unless easily moveable, should be sealed or elevated 15 cm (six inches) and installed in a manner that will facilitate cleaning in and around the equipment.

2.3 Ventilation

Adequate ventilation is to be provided to prevent an accumulation of heat, condensation, smoke, dust, grease/oils, odours or other contaminants within the facility. The ventilation system, which includes hoods, canopies, filters and similar devices, should be designed, installed and maintained so as to prevent contaminants from collecting on walls and ceilings and from dripping onto food or food contact surfaces.

2.4 Finishing Materials

1. In areas where food is processed, packaged, stored or received and where utensils and equipment are kept or cleaned, the floors, walls and ceilings are to be constructed of materials that are:
 - (a) easily cleaned;
 - (b) durable;
 - (c) impervious;
 - (d) light in colour (to reflect light and facilitate cleaning);
 - (e) smooth;
 - (f) non-toxic; and
 - (g) non-corrosive.
2. The joints between the floors and the walls in areas identified above are to be covered and properly sealed to facilitate cleaning.

2.5 Lighting

1. Adequate and appropriate lighting is to be provided throughout the premises to facilitate cleaning. The intensity in the various areas should be no less than:
 - (a) 110 lux (at a distance of 91 cm [3 ft.] above the floor) in walk-in coolers, walk-in freezers, dry food storage areas and in all other areas and rooms during periods of cleaning;
 - (b) 220 lux (at a distance of 91 cm [3 ft.] above the floor) in areas used for: food processing or packaging; hand washing; utensil and equipment washing; and equipment and utensil storage; and
 - (c) 540 lux at the surface where a food handler is working with food or food utensils and equipment such as knives, slicers, grinders or saws where food handler safety is a factor.

2. Lighting fixtures should be located and be of a safety type or protected to prevent contamination of food and packaging material in the event of breakage.

Food Safety Regulations Related to Cleaning and Sanitizing of Utensils and Equipment:

Section 16 states:

An operator of a food facility must ensure that all utensils and equipment used in the food facility, and all surfaces in the food facility that come into contact with food, are entirely made from materials that are suitable for their intended purpose, durable, easily cleanable and free from any undesirable substance.

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

2.6 Equipment Requirements for Effective Cleaning and Sanitizing

1. Utensils and equipment are to be effectively washed, rinsed and sanitized either manually or mechanically. Washing removes the soil, rinsing removes detergent residue, oils and food particles and sanitizing destroys the microorganisms that can cause food borne illness. Sanitization may be accomplished by chemical or heat treatments.

Recommendation

Utensil and equipment washing, rinsing and sanitizing procedures should be posted for easy reference.

2. The operator should provide manual or mechanical dishwashing equipment to wash, rinse and sanitize utensils and food processing equipment. The dishwashing equipment should include:
 - (a) a non-corrosive three-compartment sink of sufficient size to accommodate pots and large food processing equipment*; **or**
 - (b) mechanical dishwashing equipment that conforms to National Sanitation Foundation International Standards (NSF/ANSI Standard 3 – Commercial Warewashing Equipment) or equivalent for the washing, rinsing and sanitizing of all utensils and (non-stationary) equipment.
3. Where a dishwasher is in place, a minimum of a two-compartment sink should be provided for the purpose of cleaning or thawing food, for the disposal of liquid wastes and to facilitate manual dishwashing in the event that the dishwasher malfunctions.

* Some equipment, because of size or design, cannot be cleaned in sinks or dishwashers - refer to the **Cleaning and Sanitizing of Large Equipment and Clean-in-Place Equipment** subsection on page 6 for details.

4. Where utensils and equipment are washed, rinsed and sanitized manually, drainage racks of corrosion-resistant material and of adequate size should be provided. Drainage racks should be stored in a sanitary manner when not in use.

Recommendation

A counter within the dishwashing area should be dedicated for soiled utensils and equipment.

SECTION 3 – FOOD PROCESSING OPERATIONS

Section 16 of *The Food Safety Regulations* also applies to utensil and equipment washing procedures - refer to page 4 for the specific regulation.

3.1 Manual Dishwashing Process

1. Utensils and equipment are to be washed, rinsed and sanitized in the following manner:
 - (a) **washed** in the first compartment with an effective detergent at a wash temperature not less than 44°C (111°F);
 - (b) **rinsed** in the second compartment in clean water at a temperature not less than 44°C (111°F);
 - (c) **sanitized** in the third compartment using one of the following treatments:
 - (i) immersion for at least one minute in clean hot water at a temperature of at least 82°C (180°F);
 - (ii) immersion for at least two minutes in a warm 24°C – 44°C (75°F – 111°F) chlorine solution of not less than 100 parts per million (ppm) concentration;
 - (iii) immersion for at least two minutes in a warm 24°C – 44°C (75°F – 111°F) quaternary ammonium solution having a concentration of 200 ppm; or
 - (iv) immersion for at least two minutes in a warm 24°C – 44°C (75°F – 111°F) iodine solution of between 12.5 and 25 ppm concentration.

Recommendation

Manufacturers' recommendations for detergents and sanitizers should be followed.

2. Where chemicals are used for sanitizing, testing equipment should be available to monitor the concentrations of the sanitizers used.
3. If sanitizer concentrations exceed the concentrations noted above, an additional warm water rinse is required to remove the sanitizer residual.
4. Utensils and equipment should be:
 - (a) air dried after being sanitized; and
 - (b) handled and stored in a sanitary manner.

3.2 Mechanical Dishwashing Process

1. If chemicals are used to sanitize utensils and equipment in dishwashers, the concentrations should be as noted in the **Manual Dishwashing Process** subsection on page 5.
2. If hot water is used to sanitize utensils and equipment, maximum registering thermometers (thermo-labels or temperature stickers) should be used to determine if the required temperatures are being met as per the **Manual Dishwashing Process** subsection on page 5.
3. Dishwashers should be thoroughly cleaned at the end of each day's operation or more frequently to maintain them in a satisfactory condition.

3.3 Cleaning and Sanitizing of Large Equipment and Clean-in-Place Equipment

1. Some equipment, because of size or design, cannot be cleaned in sinks or dishwashers.
2. Equipment too large to be cleaned in sinks or dishwashers, (e.g., dough mixers or meat slicers), should be cleaned where the equipment is situated. The following process should be followed:
 - (a) clean food contact surfaces either by using a cloth immersed in a detergent solution or a pressure washer with detergent;
 - (b) rinse food contact surfaces either by using a spray bottle with clear water or a pressure washer; and
 - (c) sanitize food contact surfaces with a spray bottle containing a sanitizer or a pressure washer containing a sanitizer. Sanitizer concentrations should be as noted in the **Manual Dishwashing Process** subsection on page 5. Follow the manufacturer's recommendation regarding sanitizer use.
3. Clean-in-place equipment should be cleaned as per manufacturer's instructions.

Instructions should be posted respecting:

- a) the procedures used for cleaning and sanitizing the equipment;
- b) the chemicals used for cleaning and sanitizing;
- c) the strength of the chemical solutions used;
- d) the length of time the equipment is to be exposed to the sanitizer; and
- e) the disassembly and assembly of equipment for the purposes of cleaning and inspection.

3.4 Additional Cleaning Related Information

1. Wiping cloths for cleaning work surfaces should be immersed in a sanitizing solution before each use. The sanitizing solution should be changed frequently to ensure it remains effective.

2. Spray bottles containing sanitizing solutions may also be used to sanitize work surfaces provided the wiping cloth is changed or washed frequently so it does not re-contaminate surfaces between uses.
3. Sanitizing solutions may include chlorine based products, iodophors or quaternary ammonium compounds; concentrations should be as noted in the **Manual Dishwashing Process** subsection on page 5.
4. Wiping clothes are not to be used for any other purpose.
5. Equipment that is used continuously at room temperature for handling or processing of potentially hazardous food, such as meat slicers, mixers and tenderizers should be disassembled, washed, rinsed and sanitized every four hours.

Food Safety Regulation Related to Refrigeration/Freezer Equipment Requirements:

Section 17 states:

An operator of a food facility in which potentially hazardous foods are stored, prepared, processed, packaged, dispensed, sold or served must provide refrigeration units and hot food holding units in sufficient numbers and of sufficient capacity to ensure that the potentially hazardous foods are kept at the temperatures required by section 23.

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

3.5 Refrigeration/Walk-in Coolers/Freezers

1. Food processing facilities are to be equipped with refrigerators or walk-in coolers and freezers of sufficient size and/or number to accommodate the food supplies that are to be refrigerated or frozen.
2. Refrigerators, walk-in coolers and freezers are to be designed and maintained to operate at the required temperatures.

Recommendation

Unless food volume is minimal, commercial refrigerators (or walk-in coolers) should be used.

3. Walk-in coolers should be equipped with adequate shelving to accommodate food supplies that are to be refrigerated. Shelving should be designed to permit proper air circulation/flow and to facilitate cleaning.

Food Safety Regulation Related to Sanitation and Written Cleaning Schedules:

Section 18 states:

An operator of a food facility must:

- (a) establish a written cleaning schedule for the food facility;*
- (b) ensure that the food facility is cleaned in accordance with the cleaning schedule; and*
- (c) make the cleaning schedule available to the local authority on request.*

Method(s) of Achievement – the intent of the above regulatory requirements can be achieved by applying the best management practices below:

3.6 Sanitation and Maintenance

1. Every food processing facility is to have a detailed written cleaning schedule to ensure the safe and sanitary operation of the facility. The cleaning schedule should specify:
 - (a) areas, equipment and utensils to be cleaned, (e.g., food storage and processing areas, refrigerators/coolers/freezers, washrooms, utensils and clean-in-place equipment);
 - (b) methods of cleaning (including how to disassemble, clean, sanitize and reassemble the equipment);
 - (c) frequency of cleaning;
 - (d) cleaning and sanitizing agents, their concentration and frequency of application;
 - (e) equipment required to do the cleaning; and
 - (f) personnel responsible for cleaning.

The written cleaning schedule should be monitored, verified and adjusted as necessary to ensure its effectiveness.

2. Operators are to ensure the food processing facility is kept clean and in good repair.

3.7 Janitorial Facilities

1. To provide for the cleaning requirements of the food processing facility, every facility should be equipped with cleaning material and equipment stored so as to prevent contamination of food or food contact surfaces.

Recommendation

A service sink, janitor's sink, curbed cleaning facility (equipped with a floor drain) should be provided for the cleaning of mops and the disposal of mop water and similar liquid waste.

2. Mops and similar floor cleaning tools should be kept in a clean and sanitary manner. This equipment should be cleaned in such a manner so as not to contaminate food or food contact surfaces. Mop water and other liquid wastes should be disposed of in manner that prevents the contamination of food or food contact surfaces.

SECTION 4 – HANDLING, PREPARATION, STORAGE AND SALE OF FOOD

Food Safety Regulation Related to the General Duty of All:

Subsection 19(1) states:

Every person who prepares, stores, cooks, processes, dispenses, transports, serves or sells food or drink that is intended for consumption by the public must ensure that the food or drink is prepared, stored, cooked, processed, dispensed, transported, served or sold:

- (a) in a manner that will prevent or minimize the risk of illness, poisoning or injury to the public; and*
- (b) in a sanitary manner or under sanitary conditions.*

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

4.1 Hand Washing Stations

1. An adequate number of conveniently located sinks for the sole purpose of hand washing are to be located in areas where food is handled or processed.
2. Each hand washing station should be equipped with the following:
 - (a) hot and cold water under pressure;
 - (b) liquid soap in a dispenser;
 - (c) single use paper towels in a dispenser; and
 - (d) an uncovered* plastic lined waste container.

*Covered waste containers may be permitted provided the lid is controlled by a foot pedal.

4.2 Food Safety

1. All food that is processed or sold in a food processing facility is to be clean, free from contamination and spoilage and prepared so as to be safe for human consumption.
2. Where food items are to be washed before being processed, the sink(s) should be washed, rinsed and sanitized between uses.
3. Raw fruit and vegetables should be thoroughly washed to remove soil and other contaminants before being cut, combined with other ingredients or processed.

4. When thawing raw meat, poultry or fish in a refrigerated unit, operators should ensure that:
 - (a) the products are placed in a container that will collect any liquid that may be produced as the product thaws; and
 - (b) containers with thawing food are placed on the lowest shelf of the refrigerator or walk-in cooler to prevent the raw liquid from contaminating other food.
5. Food should be cooked in one continuous process. Food is not to be partially cooked, cooled and then reheated to complete the cooking process.
6. Internal cooking temperatures, regardless of cooking methods, should be consistent. To achieve consistent temperatures of foods cooked in a microwave:
 - (a) rotate or stir midway or during the cooking process to compensate for uneven distribution of heat;
 - (b) cover to retain surface moisture; and
 - (c) allow to stand covered for two minutes after cooking to obtain temperature equilibrium.
7. The temperature of cooked food that will not be immediately further processed or packaged, should be reduced:
 - (a) to 20°C (68°F) or less within 2 hours; and
 - (b) from 20°C (68°F) to 4°C (40°F) or less within the next 4 hours.
8. Cooling time should be reduced quickly by:
 - (a) using stainless steel containers rather than plastic or other material;
 - (b) using ice baths, ice wands and/or shallow pans;
 - (c) cutting large items into smaller portions;
 - (d) portioning large quantities of food into smaller containers;
 - (e) stirring the food frequently; or
 - (f) placing the food items in a blast chiller.
9. Ice should be made from potable water and stored and handled in a sanitary manner. Appropriate scoops with handles should be used when handling ice. Ice scoops should be stored outside ice making equipment in a clean and sanitary manner. After being used to cool food, ice should not be used as food.

4.3 Food Storage

1. Food processing facilities should have adequate storage space, separate from food processing areas, for all items including food, ingredients and non-food items such as utensils, equipment, packaging, cleaning supplies and other chemical agents.

2. Foods not requiring refrigeration, such as dried goods, should be stored in containers constructed of food grade material which can be easily cleaned and which have tight fitting covers.
3. Foods should be stored on impervious shelves which are of sufficient height to allow for easy cleaning of the floor and inspection for pests.

4.4 Washrooms

Note: Washroom facilities may be required by municipalities through *The Uniform Building and Accessibility Standards Regulations* and/or by the Ministry of Labour Relations and Workplace Safety (LRWS) through *The Occupational Health and Safety Regulations*. Contact your local municipality and LRWS for details.

1. Washrooms should be equipped with:
 - (a) liquid soap in dispensers;
 - (b) paper towels in dispensers, hot air dryers, roller-type linen towels or roller-type cotton towels; and
 - (c) an adequate number of easily cleanable waste containers.

Note: When using roller-type towels, ongoing monitoring should be in place to ensure fresh towels are available at all times.

2. Washrooms should be cleaned at least on a daily basis. More frequent cleaning may be required.

4.5 Dressing Rooms

Recommendation

Dressing rooms should be provided if employees are required to change their clothes prior to commencement of their shifts.

1. Where provided, dressing rooms should be:
 - (a) easily cleanable;
 - (b) well ventilated;
 - (c) well lit;
 - (d) provided with lockers or other suitable facilities for the storage of employee possessions;
 - (e) maintained in a sanitary manner and in good repair; and
 - (f) completely enclosed and provided with a lockable door unless separate facilities are provided for each gender.
2. Where dressing rooms are not provided, lockers or cabinets, located separate from food storage, preparation, processing or packaging areas, should be provided for storage of employee apparel and other personal items.

Food Safety Regulation Related to Protection of Food Against Contamination:

Section 20 states:

(1) An operator of a food facility must ensure that food and water is at all times protected against:

(a) cross-contamination; and

(b) potential contamination:

(i) by pests;

(ii) resulting from contact with unclean equipment or utensils;

(iii) resulting from unnecessary handling;

(iv) resulting from flooding, drainage problems, overhead leakage or condensation; and

(v) by any other agent of public health significance.

(2) Without limiting the generality of subsection (1), an operator of a food facility must ensure that detergents, disinfectants, pesticides and other poisonous materials are stored, labelled and used in a manner that does not contribute to contamination of food or water by those materials.

(3) Without limiting the generality of subsection (1), where, in a food facility, a customer has access to food or water that is not specifically intended for him or her, the operator must ensure that the food or water is presented or made available in a manner that effectively minimizes manual contact by customers and contamination by any other means.

(4) An operator of a food facility must ensure that a written record of all pest control measures used in the food facility is maintained.

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

4.6 Protecting Food from Contamination

1. Operators of food processing facilities are to ensure that food handlers are adequately trained to handle food safely.
2. Surfaces such as cutting blocks and boards that are subject to scratching and scoring should be resurfaced if they can no longer be effectively cleaned and sanitized or replaced if they can not be effectively resurfaced.
3. Food processors should be aware of potential food allergens. Cleaning equipment to control allergen transfer between products is critical. When undeclared food allergens contaminate other food products, the food processor is to recall the suspect food and eliminate the health hazard. Refer to subsection 4.14 on page 18 for information on food and water recalls.

4. Carcasses in walk-in coolers should not touch other carcasses, walls, floors or other sources of potential contamination and should not be a source of potential contamination for any food items being stored in the same cooler.
5. Food processors should consult with the public health officer prior to processing wild game. The operator should ensure that no unsanitary conditions are created and that wild game is handled in a manner that will not lead to the contamination of other food products.
6. Operators providing custom cutting services should be aware of several recommended precautions related to Chronic Wasting Disease (CWD) in wild and domestic game farm elk and deer and Specified Risk Materials (SRMs) in cattle.
 - (a) Operators who process deer and elk should take certain precautions when handling these carcasses. Refer to Appendix I for details.
 - (b) SRMs are to be removed from cattle pursuant to federal regulations administered by the CFIA. The CFIA should be contacted for more information. Refer to Appendix II for contact information.
7. Only authorized personnel should be allowed in areas of the food processing facility where food is stored, processed or packaged or where utensils and equipment are cleaned and stored.
8. Cleaning compounds, toxic and poisonous substances should be:
 - (a) kept in a compartment separate from food;
 - (b) prominently and distinctly labelled for easy identification of contents; and
 - (c) used so that the substances do not contaminate food, or endanger the health of any person.
10. Stairways should be:
 - (a) located so as to prevent direct or indirect contamination of food; and
 - (b) constructed of materials that are impervious and easily cleanable.
11. Catwalks and mezzanines should:
 - (a) not be located over food storage, processing or packaging areas, or where splashing or dripping could pose a contamination risk; and
 - (b) be constructed of suitable materials.

4.7 Packaging

1. Packaging material should be sufficient for the purpose of protecting the product from contamination in the conditions under which it will be handled, transported and/or stored.
2. Packaging material should be non-toxic and should not leave harmful deposits of any kind on the product, or otherwise contaminate the food product.

3. Packaging material for food products should be stored in a clean and sanitary manner.
4. Packaging should be done under conditions that prevent the contamination of the product(s).

Note: Food processors should be aware of federal labelling legislation applicable to the product(s) they produce. For information on labelling requirements, contact CFIA. Refer to Appendix II for contact information.

4.8 Controlling Pests

1. All food processing facilities are to be free of pests.
2. Areas surrounding the food processing facility should be maintained, adequately drained, kept free of rubbish, old equipment and any other potential pest harbourage.
3. All openings to the outside air should be effectively screened. Doors should be self-closing and equipped with tight fitting gaskets to prevent pests from gaining access to the facility.
4. An integrated pest management plan is to be developed. The plan should describe how to:
 - (a) identify potential pests;
 - (b) monitor pest populations, pest damage and potential pest habitats;
 - (c) eliminate pest populations using strategies that may include a combination of biological, physical, mechanical, behavioral and/or chemical methods; and
 - (d) monitor and evaluate the effectiveness of pest elimination strategies.
5. The operator should ensure that a written record of all pest control measures used in the food processing facility is maintained.
6. If pests gain access to the food processing facility, the infestation is to be eradicated in a manner that does not contaminate food or food contact surfaces. In the case where there is a serious infestation, a qualified person should be used to eradicate the infestation.

Food Safety Regulation Related to Waste and Recycling Material:

Section 21 states:

An operator of a food facility must ensure that any filth, grease, spilled material, garbage or other waste:

- (a) is not allowed to accumulate; and*
- (b) is disposed of in a manner approved by the local authority.*

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

4.9 Waste Disposal

1. Waste should be handled, stored and disposed of in a sanitary manner and in accordance with local bylaws.
2. Waste containers should be:
 - (a) made of material that is impervious, durable, smooth and easily cleaned;
 - (b) of sufficient number to contain all the waste generated by the facility;
 - (c) equipped with tight fitting lids and covered where practical;
 - (d) plastic lined;
 - (e) kept in a clean state and in good repair; and
 - (f) removed daily or more frequently if necessary from any area where food is stored, processed or packaged or where utensils and equipment are washed or stored.

4.10 Recycling

Where recycling is practiced in the food processing facility, containers should be:

- (a) identifiable or labelled and used exclusively for that purpose;
- (b) made of material that is impervious, durable, smooth and easily cleaned;
- (c) equipped with tight fitting lids;
- (d) emptied at a frequency that does not permit the development of objectionable odours and other conditions that may attract pests;
- (e) kept in a clean state and in good repair; and
- (f) stored away from areas where food is stored, processed or packaged or where utensils and equipment are washed or stored.

Food Safety Regulation Related to Approved Food Sources:

Section 22 states:

(1) Unless exempted in writing by the local authority, an operator of a food facility must ensure that foods that are intended to be sold to the public, and ingredients that will be used in the preparation or processing of foods that are intended to be sold to the public, are:

(a) liable under law to inspection by:

- (i) the Government of Saskatchewan or an agency of that Government;*
- (ii) the Government of Canada or an agency of that Government;*
- (iii) the governments of other provinces or territories of Canada or an agency of any of those governments; or*

(b) obtained from sources that are subject to inspection by:

- (i) the Government of Saskatchewan or an agency of that Government;*
- (ii) the Government of Canada or an agency of that Government;*
- (iii) the governments of other provinces or territories of Canada or an agency of any of those governments; or*
- (iv) a local authority.*

(2) An operator of a food facility must maintain an up-to-date record of the names and addresses of all sources of foods and ingredients to which subsection (1) applies, and make the record available to the local authority on request.

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

4.11 Food Sources

Unless exempted in writing by the public health officer, all food and ingredients that will be used in the preparation of food and sold to the public is to be from approved sources, (i.e., sources that are subject to inspection by a government agency or the health region).

Food Safety Regulation Related to Safe Food Storage Temperatures:

Section 23 states:

(1) An operator of a food facility must ensure that:

(a) potentially hazardous food that is stored or displayed in the operator's food facility before it is sold for human consumption is kept at a temperature of 4°C or less or 60°C or greater; and

(b) an accurate thermometer is available in the operator's food facility to monitor the temperature of potentially hazardous food.

(2) Unless exempted in writing by the local authority, a person who transports potentially hazardous food intended for sale must ensure that the food is kept at a temperature of 4°C or less or 60°C or greater.

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

4.12 Food Temperatures

1. Operators should provide an accurate (to 1°C or 2°F) thermometer to monitor food temperatures. Thermometers, used to determine internal food temperatures, should be sanitized between uses.

Recommendation

Thermometers should be calibrated against a known standard prior to initial use and maintained as necessary to ensure accuracy.

2. Operators should monitor the temperatures of potentially hazardous foods to ensure that food is kept at:
 - (a) 4°C (40°F) or lower for cold holding; and
 - (b) 60°C (140°F) or higher for hot holding.

Recommendation

Frozen foods should be stored at -18°C (0°F) or lower.

Recommendation

Refrigerator and walk-in cooler temperatures should be checked at least daily and a written record of the temperatures should be maintained.

Recommendation

A thermometer should be placed in each refrigerator, walk-in cooler and freezer within the premises to ensure that the equipment is maintaining correct temperatures.

4.13 Thawing Foods Safely

Frozen potentially hazardous food is not to be thawed at room temperature. Food should be thawed safely using one of the following methods:

- (a) in refrigerated units at a temperature of 4°C (40°F) or lower;
- (b) completely submerged in potable cold running water;
- (c) in a microwave oven only when the food will be immediately subjected to a cooking process; or
- (d) as part of a cooking process.

Food Safety Regulation Related to Food Recalls:

Section 24 states:

(1) If an operator of a processing facility has reason to believe that a lot of food or water processed in the facility may be unsafe for human consumption, the operator must, as soon as possible after becoming aware of the problem:

- (a) recall the lot of food or water if it has been distributed to the public, to a food processor or to a retail or wholesale establishment; and*
- (b) notify the local authority and the Canadian Food Inspection Agency of the recall.*

(2) An operator of a processing facility must maintain a written record of the details relating to the recall, and make the record available to the local authority or the Canadian Food Inspection Agency on request.

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

4.14 Food and Water Recalls

1. The operator of a food processing facility is responsible to recall all food or water processed in their facility if they have reason to believe it is unsafe for human consumption.
2. Recalled products should be separated from other products and access controlled until appropriate disposition of the product has been determined. This can be achieved by using hold tape, tags, or a designated storage area.
3. Developed, implemented and maintained written procedures will assist in the recall of the food or water of questionable quality.

Recommendation

Operators should also have written procedures in place to record any complaints received with regard to food or water processed within the facility.

Details of complaints should be recorded and the record should be kept for at least one year.

SECTION 5 – PERSONNEL

Food Safety Regulations Related to Employee Training:

Section 25 states:

An operator of a food facility must ensure that employees are adequately trained to handle food safely within the food facility.

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

5.1 Employee Training

Depending on the training needs of the facility, some safe food handling courses are offered through the health region while others are available on-line. Contact your public health officer for details.

Food Safety Regulation Related to Personal Cleanliness and Hygiene:

Section 27 states:

An operator of a food facility must ensure that all persons working in the food facility:
(a) observe high standards of personal cleanliness and proper hygiene; and
(b) engage in safe food-handling practices that will prevent the contamination of food and surfaces that come in contact with food.

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

5.2 Cleanliness and Hygiene

1. Operators are to ensure that all persons working in the food processing facility observe high standards of personal cleanliness and proper hygiene by:
 - (a) being clean;
 - (b) wearing clean outer garments*;
 - (c) confining hair, including beards, by using a hair net or other suitable hair restraint; and
 - (d) removing or suitably covering jewellery.

*Note: Aprons may be used as a type of outer garment. If food processing causes the clothing to become soiled, the clothing should be changed as necessary.

Exercise caution to ensure food handlers do not move from a raw food preparation area to a packaging area without changing soiled clothing or aprons.

2. The wearing of jewellery should be limited to plain rings and/or where necessary, medic alert bracelets or necklaces.
3. Unless wearing intact gloves, food handlers should not wear finger nail polish or artificial nails when handling food.
4. Operators should ensure that any food handler behaviour, which could result in contamination of food, is prohibited in areas where food is processed, stored, or packaged or where utensils or equipment are cleaned or stored.

5.3 Hand Washing

1. Every person engaged in handling food or food processing utensils and equipment is to wash his/her hands frequently and thoroughly with soap and warm water and dry with single use paper towels. Hand sanitizers are not an acceptable alternative for frequent and thorough hand washing.
2. Hands are to be washed before commencing work, after using washroom facilities, after smoking, eating or at any other time hands may be soiled or contaminated.

Recommendation

Notices should be posted at hand washing stations directing employees to wash hands.

5.4 Gloves, Aprons and Other Protective Apparel

1. Disposable gloves are not considered a substitute for frequent and thorough hand washing, however, when gloves are used when handling food, the following protocol should to be followed:
 - (a) hands should be thoroughly washed before putting on gloves and when changing into a fresh pair;
 - (b) gloves should be changed frequently during continual use, (e.g., when they become soiled or torn), and prior to commencing a different task; and
 - (c) gloves should be stored and handled in a manner that minimizes contamination.
2. Protective apparel such as helmets, aprons, reusable gloves, etc. should be of materials that can be easily cleaned and should be cleaned and sanitized at frequencies that will minimize the risk of food contamination.

Food Safety Regulation Related to Persons with Communicable Diseases:

Section 28 states:

Unless exempted in writing by the local authority, an operator of a food facility must ensure that persons in the following categories do not work in the food facility in any capacity in which the persons might contaminate food or surfaces that come in contact with food or might transmit disease to other persons:

- (a) persons who are infected with a communicable disease that can be transmitted by food;*
- (b) persons who are carriers of a communicable disease that can be transmitted by food;*
- (c) persons with an infection on the skin, an acute respiratory infection or gastrointestinal illness.*

Method(s) of Achievement – The intent of the above regulatory requirements can be achieved by applying the best management practices below:

5.5 Ill Persons

1. Food handlers with acute respiratory illness, influenza symptoms (fever, headache, aches and pains, fatigue, weakness, sore throat, cough and chest discomfort) or experiencing any of the following symptoms are not to be involved in the handling of utensils and equipment, or in the preparation, handling or processing of food:
 - (a) diarrhea;
 - (b) jaundice;
 - (c) vomiting;
 - (d) fever;
 - (e) unusual discharges from ear, eye or nose;
 - (f) severe abdominal pain; or
 - (g) an infected wound or lesion that is open or draining on or about the hands, wrist or exposed portion of arms.
2. Food handlers with illness or experiencing the symptoms mentioned above should report the symptoms immediately to the operator or supervisor. The affected food handler may be assigned other tasks in the food facility that does not involve food handling or dishwashing. Contact your public health officer for details.

APPENDIX I

Chronic Wasting Disease (CWD) is prevalent in Saskatchewan. Eradication of CWD from deer and elk is no longer an option and efforts are being redirected to monitoring the disease distribution and infection rate in the province.

Food processors handling deer and elk are to take the following precautionary measures when handling these carcasses:

- Wear rubber or latex gloves.
- Before accepting a carcass, processors should inspect the carcasses to ensure they are free of signs of illness and visible decomposition or contamination.
- Processing of deer and elk is to occur after all commercial food handling has ceased for the day. Ensure deer and elk do not cross contaminate the other food.
- Minimize the handling of brain or spinal tissues. If removing antlers, use a saw designated for this purpose only, and dispose of the blade.
- Do not cut through the spinal column except to remove the head. Use a knife designated for this purpose.
- Bone out the meat from the carcass and remove all fat and connective tissue (i.e., the web-like membranes attached to the meat). This will also remove lymph nodes. **Note:** nerve tissue such as brain, spinal chord, eyes, spleen, tonsils, and lymph nodes are tissue most at risk of being infected with CWD.
- Immediately after deer and elk processing, thoroughly clean and sanitize equipment and work areas by washing with soapy water, rinsing, then sanitizing with an approved sanitizer.
- Avoid batching of all meat for making sausage, unless you receive written permission from the owners or hunters involved. Alternatively, you may want assurances from the hunters that the carcass has tested negative for CWD. Regardless, brain, eyes, spinal cord, spleen, tonsils and lymph nodes should not be eaten or included in products to be eaten.

More information on CWD in Saskatchewan can be found by visiting the Ministry of Environment's website:

<http://www.environment.gov.sk.ca/>

Questions may also be directed to the public health officer.

APPENDIX II

Contact Information

1. The link below will provide contact information for **public health officers** throughout the province:

<http://www.health.gov.sk.ca/public-health-inspections>

2. **Canadian Food Inspection Agency** may be reached at:

Canadian Food Inspection Agency
Food Safety Officer
Broad Street Crossing
1800 11th Avenue
P. O. Box 8060
Regina, SK
S4P 4E3

Phone: (306) 780 - 5180
Fax: (306) 780 - 5177

Canadian Food Inspection Agency
Food Safety Officer
301-421 Downey Road
Saskatoon, SK
S7N 4L8

Phone: (306) 975 - 4240
Fax: (306) 975 - 4339

3. **The Saskatchewan Food Industry Development Centre Inc. (Food Centre)** provides full service assistance to food processors wanting to add value to their products for domestic and/or international markets. The Food Centre provides assistance to food processors with the development and implementation of HACCP systems, Good Manufacturing Practices and other food safety programs in their operations.

Food Centre
117-105 North Road
SASKATOON SK S7N 4L5
CANADA
Tel: (306) 933-7555
Fax: (306) 933-7208

Email: info@foodcentre.sk.ca

APPENDIX III

Written Food Handling Procedures for Potentially Hazardous Foods

Prevention based food safety plans, (e.g., HACCP plans), are designed to identify and monitor food safety hazards (i.e., biological, chemical or physical properties) within the food processing facility. Emphasis should be placed on the control of critical factors known to be implicated in food borne illnesses. These factors are often referred to as critical control points. Monitoring of these areas helps prevent food safety situations from occurring.

Operators should follow the twelve steps below when establishing written procedures:

Step #1

- Assemble a working team (Identify the responsible person(s) to establish written procedures). *(Does not apply to single person operations as the owner will be responsible for establishing written procedures).*

Step #2

- Describe the product (i.e., characteristics, packaging, shelf-life at certain temperature, consumers, labelling instructions and use).

Step #3

- Construct a process flow diagram(s) for the product (i.e., from receipt of raw materials through processing and distribution of finished product).

Step #4

- Construct a plant schematic that shows all production areas, equipment, product and personnel movement, hand wash stations, footbaths and washrooms. This plan should aid in the identification of any potential cross contamination within the establishment.

Step #5

- Verify flow diagram(s) and plant schematic on site.

Step #6

- Identify and list hazards associated with each step of the food production for each product.

Step #7

- Determine the critical control points.

Step #8

- Establish critical limits for each point to ensure the critical control point is under control.

Step #9

- Establish a system to monitor control of critical control points by scheduling testing or observations.

Step #10

- Establish corrective action to be taken when monitoring indicates a critical control point is not under control.

Step #11

- Establish procedures for verification.

Step #12

- Establish documentation procedures.

For assistance with the development of written food handling and processing procedures for potentially hazardous foods, refer to the references on page 26.

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