

AGRI-FACTS

Practical Information for Alberta's Agriculture Industry

June 2018

Agdex 268/089-1

Commercial Microgreens: Food Safety and Third-party Certifications

With any plant or product produced for consumption, there is risk associated. To address this risk, the responsibility for food safety falls on each individual involved in producing that product.

Through every stage of production from the seed of a microgreen to the final edible on a plate, food safety awareness, processes and applications must be a central focus.

No matter the scale of operation, a commercial microgreens producer is required to abide by regulations set in place by governments, regulatory bodies and associations. It is also in the producer's interests to go above and beyond these regulations to achieve the highest of standards as a representative of the province and nation as a producer of food.

Food safety regulations

This document is a summary of base requirements, regulations and information with regard to food safety and microgreen production. However, further personal research and confirmation of requirements should be done on an individual, case-by-case basis.

Each level of government regulation (municipal, provincial and federal) has its own requirements in place to create a unified platform for businesses to produce safe products. In this factsheet are the regulation highlights within each level.

Municipal

Each municipality will have its own set of bylaws and permit requirements to be followed. Further research into your local municipal requirements needs to be done in the following areas before starting your business:

- local business license and development permits
- zoning bylaws and regulations
- facility requirements and guidelines

Contact your local planning department for more information on these areas.

Provincial

Alberta Health Services requires the following of all food processing businesses:

- food handling permit (with the exception of microgreen producers unless washing, cutting and packing) and facility inspection
- certified food safety training (unless exempt)
 - Even if Alberta food regulation may not require food safety training for your business, food safety training is strongly recommended for anyone handling food. Ask your Public Health Inspector for guidance on approved in-class and online food safety training courses.
- farmers' market food safety home study course (unless exempt)

Everyone in the microgreens production chain is responsible for food safety

Federal

Some products that are sold internationally and between provinces will fall under federal regulations pertaining to food safety and packaging requirements. Through the Canadian Food Inspection Agency (CFIA), producers and processors may be required to register their businesses. Contact the CFIA to verify if your business requires federal registration and monitoring.

A proper **labeling system** throughout the production cycle should be in place to reduce risks of mis-identification and contamination.

For sales and marketing, all food labels, regardless of where the products are sold, must comply with federal legislation, available from the Canadian Food Inspection Agency (CFIA) – check the website <http://www.inspection.gc.ca/food/labelling/food-labelling-for-industry/fresh-fruits-and-vegetables/eng/1393800946775/1393801047506> for the Canadian Food Inspection Agency and search for “Labelling Requirements for Fresh Fruits and Vegetables.”

Along with regulatory labeling, extra labeling like lot identification (traceability codes) is essential in the event of a product recall and also assists in proper stock rotation. Specific core labelling requirements must be included on a label.

Core label elements:

- common name
- allergens
- net quantity
- nutrition labelling (unless exempt)
- dealer name and address
- durable life date
- list of ingredients
- bilingual labelling (unless exempt)

Above and beyond recommendations

Although not required by law, it is highly recommended that producers follow and meet the requirements of an On-Farm Food Safety Program (OFFS) or “third-party” food certification program.

Regardless of choice, each OFFS program must go through vigorous review and oversight by CFIA, Health Canada and the provinces on a continuous basis to maintain its status. All OFFS programs are auditable and owned wholly by industry.

Not only will having an OFFS program help you proactively mitigate risks in your process, it will also encourage consumers that your product is safe for consumption.

Regardless of which program you choose or which is accepted by your buyer, the importance of having an OFFS program for your operation is key and will often be a requirement by your customers. Many distributors now require their producers and suppliers to be certified by an OFFS or third-party food certification program along with meeting all other regulatory requirements.

Alberta Agriculture and Forestry may be able to help you navigate this process. Food safety specialists can be reached through the Ag-Info Centre by calling 310-FARM (3276) within Alberta.

Many different food safety programmes/schemes assist producers in meeting the highest level of food safety procedures and practices for their business model. Grouped into three different categories, here are the most recognized and known programs. Each scheme is grouped by its main focus.

Farming of Plants:

- Canada GAP
- Good Agriculture and Collection Practices
- Primus GFS
- GlobalGAP
- SQF Institute

Pre-processing handling of plant products:

- Canada GAP
- Good Agriculture and Collection Practices
- Primus GFS
- GlobalGAP
- SQF Institute
- FSSC 2000
- IFS
- BRC Global Standards

Provision of storage and distribution services:

- Good Agriculture and Collection Practices
- FSSC 2000
- IFS
- BRC Global Standards
- Primus GFS

Each of these programs will have differing levels of cost and requirements to achieve certification. In some cases, the schemes have been created to be

relevant to multiple industries or types of agriculture. This structure may create sections that would not be relevant to your production methods and product handling, so be aware of what the programs cover.

Ensure that you have researched and confirmed the correct scheme that will suit your business and meet your distributor requirements before beginning the process of certification under one of these programs.

It is also worth noting that while certification may be necessary for some markets, in others that do not require it, certification may not be the end goal. Often, producers can reap much of the benefit of an OFFS system in terms acquiring risk management skills to develop and implement food safety and quality practices throughout their operation without going through the expense of becoming certified.

An operation with solid food-safe practices in place may find it easier to access new markets and scale up to a certification as market demands make it more necessary. With this base of food safety in the operation, acquiring certification becomes less daunting than starting from the ground and working through the process all at once.

Microgreen production risk assessment

Risk assessments deal with analyzing the potential hazards, communicating them to your staff and managing them. Understanding different types of hazards and their forms of potential contamination is important.

Three basic categories of hazards:

1. Biological
 - pathogenic microorganisms
 - found on plant material (soil, seed, transplants)
 - in water
 - developed on equipment
 - rodents, flies, small animals, birds (feces)
 - allergens
2. Chemical
 - pesticides, fertilizers, cleaning products, etc.
3. Physical
 - debris, nails, metal, glass, wood, etc.

Below are some example risks specific to microgreen production for each category:

1. Biological
 - pathogenic microorganisms
 - Listeria can be a problem with microgreens due to condensation and dust. How is this issue controlled? Examples: Does your growing and processing facility have proper air flow and enough ventilation? Is your cold storage system maintained at a proper temperature along with proper ventilation?
 - Could your planting medium or seeds potentially carry any harmful microorganisms that are conducive to bacterial growth and mould? Do you source your planting materials from a reputable supplier? Do you have a seed sanitation protocol in place?
 - rodents, flies, small animals, birds (feces)
 - What measures are in place to prevent pest issues? Examples: Is your facility cleaned regularly? Are your seeds properly stored in sealed containers? Is there a protocol in place for when you find evidence of pests within your facility or seed stock?
 - allergens
 - Are any of your crops seen as a priority allergen in Canada (for example, mustard)? Are crops properly labeled and inspected throughout the production process to ensure proper plant identification? If you notice a stray seed has landed in a different variety of microgreen, what do you do? Are racks organized in a way so as to not pose a source of contamination for the product underneath? Is harvesting equipment washed between each variety of microgreen or only required for priority allergen crops?
2. Chemical
 - pesticides, fertilizers, cleaning products, etc.
 - Are your chemicals properly stored in a secure enclosed area? Have you ensured that cleaning products used are at appropriate concentrations and applied following all instructions and protocols? Are staff following proper hygiene practices?

3. Physical

- debris, nails, metal, glass, wood, etc.
 - Are the growing racks strong enough to hold the weight of the crops produced? If the facility lighting or crop light is fluorescent, is it covered with a shatterproof material? Is there a mitigation protocol in place if a light bulb shatters within the growing or processing area? Do you dispose of all microgreens in that area to avoid the risk of including broken glass in the final product? Have you ensured that the production facility is free of construction material?

Every aspect of your business should be assessed regularly for potential hazards, followed up by a corrective action plan. This preventative practice will assist in consistently producing a safer product for your customers.

Microgreens operations need to follow all government regulations and the appropriate food safety programs along with adhering to rigorous risk assessment protocols.

Prepared by

Alberta Agriculture and Forestry,
Dustin Morton and Craig Stretch

More information

Alberta Ag-Info Centre
Call toll free 310-FARM (3276)

Website: agriculture.alberta.ca