NOVA SCOTIA

Fact Sheet on Sprouted Seeds

This factsheet provides food safety information for growers and vendors of sprouted seeds.

Sprouts and microgreens are agricultural crops that are sprouted, grown and harvested at the immature stage for human consumption. They are sometimes grown in soil, but more commonly are germinated in a soilless medium including drums, trays, bins or racks.

Microbiological pathogens found on sprouts (such as mung bean or alfalfa sprouts) and microgreens (such as broccoli, pea shoots, sunflower, wheatgrass or arugula) have caused numerous product recalls and outbreaks in Canada. Most often, the contamination originated from pathogens such as Salmonella or E. coli on the seeds. The warm conditions that sprouted seeds are grown in are ideal for the growth of any pathogens that may be present.

To prevent bacterial contamination of sprouted seeds and microgreens, growers and vendors should follow the CFIA Preventive controls for the hygienic production of sprouted seeds https://inspection.canada.ca/preventive-controls/fresh-fruits-or-vegetables/sprouted-seeds/eng/1524179755850/1524179758065

Good practices include:

- a certificate from the seed supplier confirming analysis for microbial pathogens for each lot of sourced seeds
- handling and storing seeds in a way that prevents damage and contamination
- rinsing and agitating seeds in potable water both prior to and after applying an antimicrobial seed treatment
- applying an antimicrobial treatment to seeds that can achieve a three-log reduction of pathogens of concern (2,000 ppm of calcium hypochlorite or sodium hypochlorite for 15-20 minutes or 6-10% hydrogen peroxide for 10 minutes.)
- avoiding re-use of any water or antimicrobial treatments on seeds
- soaking seeds in potable water to improve germination
- using sanitized containers for all steps in the process
- keeping the environment and equipment clean and sanitized
- cooling germinated sprouts with cold, potable water or cooling microgreens to further reduce microbial growth
- if applicable, sending spent irrigation water samples to an accredited laboratory to test for indicator microorganisms (such as coliforms and E. coli), and pathogens that may have contacted the produce

Sources:

1. Preventive controls for the hygienic production of sprouted seeds, Canadian Food Inspection Agency
2. Overview of food safety for sprouts and microgreens, Ontario Ministry of Agriculture, Food and Rural Affairs