Canadian Food Inspection Agency | Agence canadienne d'inspection des aliments

Regulation of biosolids in Canada
Federal perspective

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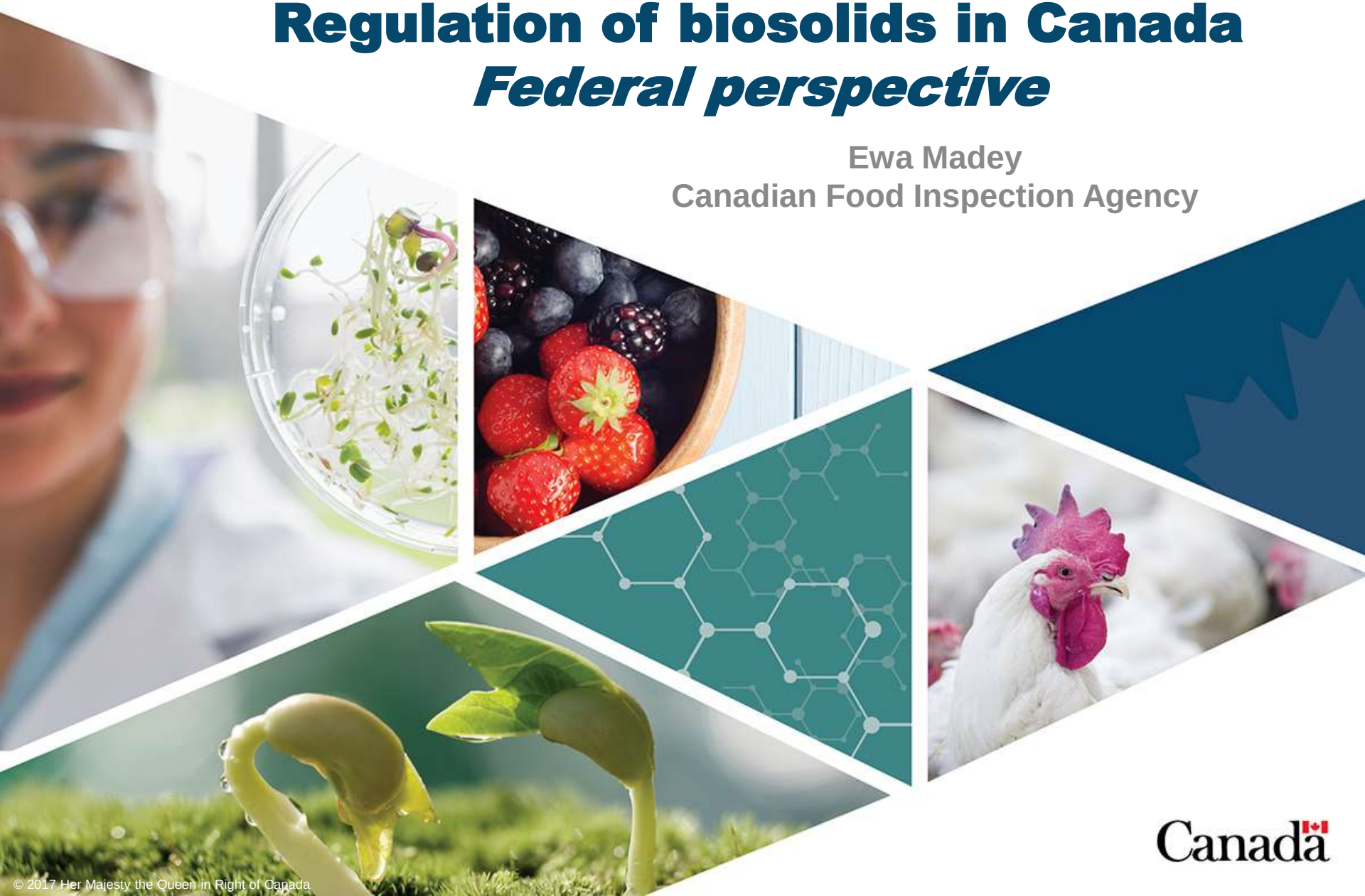

Canada

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Regulated Products and Sectors

Fertilizers and Supplements sold or imported into Canada are regulated under the authority of the federal *Fertilizers Act* administered by the Canadian Food Inspection Agency (CFIA).

> **Fertilizer:** *any substance or mixture of substances containing nitrogen, phosphorus, potassium or other essential plant food, manufactured, sold or represented for use as a plant nutrient.*
>
> **Supplement:** *any substance or mixture of substances, other than a fertilizer, that is manufactured, sold or represented for use in the improvement of the physical condition of soils or to aid plant growth or crop yields.*

All regulated fertilizers and supplements must be safe for: humans, plants, animals, the environment

Farm gate to dinner plate risk management model

N, P, K fertilizers

Micronutrients

Fertilizer-Pesticides

Chemical supplements

Microbial supplements

Composts, digestates

Municipal biosolids

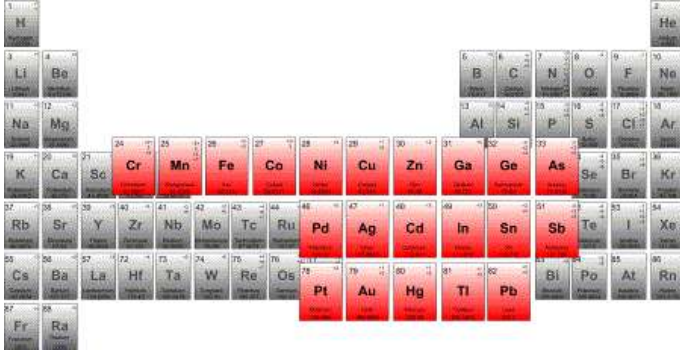
Risk Pathways

Direct - Worker, handler, applicator, bystander

Indirect - Feed, grazing land

- Food crop production (adsorption and absorption, plant uptake)
- Environment (soil, ground water, waterways)

Safety standards



METALS

- Arsenic (As), Cadmium (Cd), Chromium (Cr), Cobalt (Co), Copper (Cu), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Lead (Pb), Selenium (Se), Zinc (Zn)
- CFIA Metals Standards and Maximum Acceptable Fertilizer/Supplement Metal Concentrations are based on a 45 year cumulative application to soil (product concentration and rate of application)

DIOXINS and FURANS

- Polychlorinated dibenzo-p-dioxins (dioxins; PCDD) and polychlorinated dibenzofurans (furans; PCDF) is 5.355 mg TEQ/ha over 45 years (where TEQ = Toxic Equivalency Quotient).

INDICATOR ORGANISMS

Indicator organism	Level	Minimum Detection Limit
Salmonella	Not detectable	Less than 1 CFU (Colony Forming Unit)/25 g
Feacal Coliform	1000 MPN	Less than 2 CFU/gram

Amended *Fertilizers Regulations*

- The modernized *Fertilizers Regulations* came into force on October 26, 2020 – the consolidated version of the Regulations is available:

https://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._666/index.html
https://laws-lois.justice.gc.ca/eng/regulations/C.R.C.%2C_c._666/20150227/P1TT3xt3.html

- The amendments to the Regulations introduced a number of substantive changes to:
  - product definitions and compositional criteria,
  - general exemptions,
  - the registration exemption scheme
  - labelling requirements
  - administrative processes

- The Regulations also contain transitional provisions that allow regulated parties to comply with either the "old" or the "new" Regulations for a period of 3 years

IMPORTANT NOTE:
Solid understanding of both sets of Regulations will facilitate your choice and ultimately promote compliance in the marketplace

Important definitions associated with Exemptions

Repealed

- **House-cleaning items :** Brand, Director, environment, fertilizer, mixed fertilizer, shipping bill, supplement
- **Compendium of Fertilizer-Use Pesticide**
- **Farm Fertilizer and Specialty fertilizer**

Amended/ Replaced

- **Lesser Plant Nutrient = Secondary Nutrient,**
- **Minor tweaks for clarity: Grade, Organic matter, Registrant, fertilizer-pesticide and customer formula fertilizers**

Added

- ***List of Materials*** means the document entitled *Primary Fertilizer and Supplement Materials* prepared by the Agency and published on its website, as amended from time to time
- **Lot number** means a combination of letters or numbers or both that allows a lot of a fertilizer or a supplement to be traced in manufacture and distribution
- **Micronutrient** means boron, chlorine, copper, iron, manganese, molybdenum or zinc
- **Micronutrient fertilizer** means a fertilizer that is represented to contain a micronutrient

Exemptions from registration – Fertilizers

- Fertilizers appearing on the **List of Primary Fertilizer and Supplement Materials**
- Customer-formula fertilizers
- Mixed fertilizers that do not contain substances that are produced by (or derived from) living organisms
- Fertilizers that consist solely of a mixture of fertilizers that are exempt from registration or that are registered for that use

List of Materials = old Schedule II

- **Incorporated by reference**
- A primary material on the *List of materials* must meet the term and compositional criteria outlined in the list
- Products represented to be or to contain a material on the List must in fact contain this material

Not exempt:

- Fertilizers produced or derived from a living organism (unless on the *List of Materials)*
- Fertilizers containing a **pesticide**, an **unregistered supplement**, **unregistered micronutrient** or a registered supplement or micronutrient if the directions for use are **NOT consistent** with the registered product's approved use pattern; (this includes application rate, frequency, method of application and target crop.)

Regulation of biosolids – general

- Manufacture, use and disposal of biosolids is regulated by Provincial and municipal jurisdictions.
- Municipal biosolids represented as sources or recycled plant nutrients meet the definition of a *fertilizer* and when **imported or sold** in Canada are regulated under the *Fertilizers Act.*
- All municipal biosolids must meet the CFIA safety standards (trace metals, pathogen indicators, dioxins and furans and pesticide residues (if applicable). **THE SAFETY STANDARDS HAVE NOT CHANGED**
- The CFIA no longer (2012) regulates product efficacy: performance claims and testing for minimum nutrient content.
- However, municipal biosolids (even if exempt from registration) are subject to marketplace monitoring and compliance verification with safety stnadards.
- Non-compliant products are subject to enforcement actions (such as detention or seizure, order of unlawful imports out of the country or, in cases of severe or repeated violations – prosecution).

General Exemptions

Exemption from all provisions of the *Fertilizers Act* and *Regulations* for*:*

- Manures sold in their natural condition that conform to prescribed safety standards
- Fertilizers and supplements that are imported or manufactured in Canada that are used for manufacturing purposes only and that require further treatment.

NOTE: Mixing, blending, repackaging or application to seed do not constitute manufacturing or further treatment

- Fertilizers and supplements that are manufactured domestically, or imported for export only and not for sale or use in Canada and labelled accordingly are eligible for export certification, but are otherwise EXEMPT from all provisions of the *Act and Regulations* except section 5.5.

Export certification is not a requirement to export fertilizers and supplements from Canada.

Repeal the exemption for fertilizers imported for personal use

However, importation of an unregistered **fertilizer for research purposes** is permitted if:

- Does not contain a pesticide or a supplement
- Is safe for humans, plants, animals and the environment
- The residual product and the crops grown with the fertilizer are disposed of at the end of the and do not enter the commercial food or feed chains

Exemptions from registration

List of Primary Fertilizer and Supplement Materials

- **Exempt from registration and pre-market assessment**

- **Mixtures** of fertilizers and supplements or both are also exempt if:

1. The individual components are exempt
2. The individual components are registered and the direction for use on the approved product label are consistent with the intended use pattern of the mixture (such as materials to be mixed with, target crop, application rate and frequency
3. Combination of the above

Municipal biosolids (Specify grade) - *Solid, semi-solid or liquid material comprised of septage or municipal sewage sludge, or both, freed from grit and coarse solids, which have been subjected to physical, chemical or biological treatment, or a combination of these treatments, sufficient to mitigate against the presence and effect of generally detrimental or serious injurious substances that may be associated with untreated forms of this material*

The exemption for mixtures was not possible under the former *Fertilizers Regulations* – it offers greater flexibility for regulated parties and expedites time to market

Labelling

Package includes a sack, bag, barrel, case or any other container in which fertilizers or supplements are placed or packed;

- Every person who packages or causes to be packaged a fertilizer or supplement or who imports a packaged product MUST ensure that the package is labelled in accordance with the Regulations.
- Must not have printed on it any incorrect or misleading information or symbol (that misleads the purchaser as to identity of the product, its composition, safety and directions for use).
- All the information required by the Regulations are to appear on the label conspicuously, legibly and indelibly **in English and in French**.
- The definition of municipal biosolids as it appears on the List requires a grade. The nutrients (major and secondary) need to be guaranteed on minimum basis
- **Upper major nutrient tolerances** – environmental sustainability and sound nutrient management

Grade means the amount of total nitrogen, available phosphoric acid and soluble potash in a fertilizer, expressed in per cent

- If the products is a **single ingredient** material the term *municipal biosolids* must appear on the label
- For **Mixtures = Term** + Other **active** ingredients OR keep records that demonstrate that the product meets the exemption including registration numbers if applicable

Labelling - safety

Any precautionary statement that is necessary to mitigate a risk of harm to human, animal or plant health or the environment

If any person requests a document in English or in French that lists the ingredients that are contained in a fertilizer or supplement that present a risk of harm to the health of ANY human or animal that do not appear on the label the document shall be provided by:

a) the person who packaged it or caused to be packaged, or
b) the person who caused it to be imported

What does that mean?

This provision is intended to protect consumers that are immunocompromised, hypersensitive or allergic from exposure risks that would result in adverse health reactions

Precautionary Statements

Precautionary statement requirements based on active ingredients in the fertilizer or supplement product

- Viable microorganisms
- Supplemental metal (such as cobalt, nickel, silicon)
- Boron, copper, iron, manganese, molybdenum or zinc
- Boron content greater than or equal to 0.3% of the final product

Precautionary statement requirement for specific materials which may be included in/as fertilizer or supplements

- Priority allergens: peanuts, tree nuts, sesame seeds, milk, eggs, fish, crustaceans and molluscs, soy, wheat and triticale, sulphites and mustard.
- Prohibited material as defined in subsection 162(1) of the *Health of Animals Regulations*

Precautionary statement is one of the preventative risk mitigation measure, along with safe handling, disposal measures, use pattern restrictions (e.g. do not use on food crops or grazing lands).

More Information:

Fertilizer website
https://www.inspection.gc.ca/plant-health/fertilizers/eng/1299165827648/1299165914316

Fertilizer Program Regulatory modernization
https://www.inspection.gc.ca/plant-health/fertilizers/regulatory-modernization/eng/1490851506920/1490851535765

Updated Trade Memoranda
https://www.inspection.gc.ca/plant-health/fertilizers/trade-memoranda/eng/1299873703612/1299873786929

Email: cfia.paso-bpdpm.acia@canada.ca
Copies of presentations
Videos
Inquiry process

Canada