

Proposed Regulatory Considerations and Recommendations  
for Fertilizer and Supplement Products in the Proposed  
*Cannabis Act*, Bill C-45

Canadian Fertilizer Products Forum Recommendations  
to  
Health Canada

December, 2017

## Executive Summary

Fertilizers and supplements provide essential nutrients for crop growth and development. For the better part of a century these products have been regulated and used safely within Canada as an integral part of Canadian agriculture. Recent government policy changes towards legalization of cannabis have prompted the fertilizer and supplement sector to assess the use of these products in the cultivation of this crop.

Assessment of the potential risks, if any, to the downstream user of cannabis crops can be most efficiently reviewed concurrently with the modernization of the *Fertilizers Regulations*. The Canadian Food Inspection Agency (CFIA) mandate provides regulatory oversight over fertilizer and supplement products used in all agricultural and horticultural production.

An industry working group was formed under the umbrella of the Canadian Fertilizer Products Forum (CFPF) to provide Health Canada with topics for considerations and recommendations for the use of fertilizers and supplements in the cultivation of cannabis. The principal concern of the Cannabis Working Group is that fertilizers and supplements for cannabis production continue to be regulated by CFIA under the *Fertilizers Act and Regulations*, and that there does not become a dual regulatory system for cannabis fertilizers and supplements.

Recommendations for Canadian cannabis regulators include:

1. **Maintain regulation of all fertilizers and supplements by the CFIA under the *Fertilizers Act and Regulations*.** Cannabis production does not differ from normal crops cultivated within Canada and as such fertilizers and supplements are necessary no matter the application method. Products used on cannabis crops should not be subject to additional regulation.
2. **Exempt fertilizers and supplements from the definition of a “cannabis accessory” to avoid undue regulatory burden on manufacturers and retailers of input materials.** This can be accomplished most easily by amending the definition of cannabis accessories by striking “things used in the production of cannabis” or by explicitly exempting products that are in compliance with the *Fertilizers Act and Regulations*. This will prevent fertilizers and supplements from labeling and representation restrictions including permissible points of sale of the products.
3. **Ensure that the provisions and restrictions in the proposed cannabis regulations are based on modern science and appropriate risk assessment.** Fertilizer and supplement products regulated under the *Fertilizers Act and Regulations* should be exempt from the definition of an “additive” in regulations (e.g. foliar vs. growing media applications).
4. **Provide additional resources to the CFIA to ensure science-based safety assessments are conducted for all modes of application of cannabis fertilizer and supplement products.** Additionally, resources are required to handle the anticipated increases in applications for these products. It is anticipated that the number of registration applications to be received by the CFIA will increase exponentially and the formulations are also likely to become more complex creating pressures on the CFIA to review and approve new products in a timely fashion.

5. **Ensure adequate CFIA standards and marketplace monitoring activities.** There is an anticipated increase in capacity to monitor heavy metal and pathogen testing of fertilizers and supplements to ensure product safety and minimize the potential for contamination of the final cannabis crop. The cannabis crop tends to hyper-accumulate certain metals and as such use of contaminated fertilizers and supplements may present risks to consumers and significant economic losses to the producer. Therefore, additional operational and analytical resources will be required for the CFIA to increase its compliance verification capacity in this area. Accurate trace metal standards for the assessment of hydroponic fertilizers and supplement products are needed to enable compliance verification and enforcement. There is a clear interest to ensure that fertilizer and supplement products are not implicated in contamination of cannabis products in a regulated market.
6. **Do not prohibit foliar application of fertilizer and supplement products to the cannabis crop.** Recognize the need for fertilizer and supplement use in cannabis production within the proposed *Cannabis Regulations* by better defining the term “additive”, and remove the prohibition for foliar application of fertilizers under any growth situation. Conduct a quantitative risk assessment under various application methods: soil, hydroponic nutrient media, and foliar spray etc. to compare risk levels associated with each exposure scenario.
7. **Incorporate cannabis waste disposal procedures that reflect generator source (manufacturer, distributor, consumer) and practicalities.** Provide feedback after industry and CFIA determine feasibility, methods and research needs associated with the rendering of any remaining cannabis residuals unusable.
8. **Ensure recreational growers have access to the necessary information and educational materials to ensure safe and effective use of fertilizer and supplement products.**
9. **Continue to engage the CFPF Cannabis Working Group so that proactive and science based responses may be offered, allowing the fertilizer industry to provide products for the safe production of recreational and medicinal cannabis.** The Cannabis Working Group participation in changes in the regulatory environment of cannabis cultivation will permit the fertilizer industry to proactively respond to market and demand changes.

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## Introduction and Background

Canadian agriculture has been integral to the growth and development of our country. As the country's population grows, so does the importance of farming and the provision of affordable, high-quality food. Following World War II, widespread commercial agriculture returned to Canada, with a trend toward an increased average size of farm holdings. Fertilizers were used to improve crop yields and nutritional quality of the crops yet traditional fertilizing methods were lacking. Fertilizer products claiming to solve every grower's problem began to appear in the market. To certify that products met their label guarantees and ensure farmers didn't purchase inferior products, the Canadian Food Inspection Agency (CFIA) began a program for regulatory oversight of the fertilizer industry.

The *Fertilizers Act* was first enacted in 1885 as the 12<sup>th</sup> Act in Canada. In 1922, the "safety lens" was added to the Fertilizer mandate, while efficacy provisions were eliminated in 2013. Currently the *Fertilizers Act and Regulations* requires that all regulated fertilizer and supplement products must be safe for humans, plants, animals, and the environment. In accordance with the Regulations, fertilizers and supplements must also be properly labelled to ensure safe and appropriate use. The labelling provisions require mandatory inclusion of directions for use which include target crop named either by individual species (e.g. cannabis) or crop types (e.g. hydroponics, vegetable gardens, ornamental flowers etc.).

The mandate of the CFIA's Fertilizer Program covers a wide range of products sold for agricultural, commercial, and home and garden purposes. Regulated products include farm fertilizers, micronutrients, lawn and garden products, and supplements such as water holding polymers, microbial inoculants, plant growth regulators, liming materials, and waste-derived materials such as composts and municipal biosolids. All fertilizers and supplements that are imported or sold in Canada are regulated by the CFIA while the manufacture, proper use and safe disposal of these products are controlled by provincial and municipal rules and regulations. The CFIA works together with provinces and municipalities to ensure that all fertilizers and supplements meet the highest standards for safety.

Some fertilizers and most supplements are subject to registration which includes a comprehensive pre-market assessment prior to their import or sale in Canada. Products that are exempt from registration are still subject to regulation and must meet all the prescribed standards at the time of sale or import.

The CFIA's pre-market assessment consists of a detailed, science-based evaluation of product safety information and labelling. These assessments focus on evaluation of product safety towards humans, plants, animals and the environment. To assess a product, the Agency requires that supporting information, which varies in scope depending on the nature of the product, be submitted. The basic supporting information includes the product label, the manufacturing method, and a complete list of ingredients and source materials. For certain products, additional information may be required, such as a detailed description of the physical and chemical properties of each ingredient, results of analytical tests that show freedom from biological (pathogen) and chemical contaminants (trace metals, dioxins and furans, pesticide residues), or a toxicological data package derived from either laboratory studies or scientific publications.

Registration requirements vary per submission type, class of fertilizer or supplement, and risk profile of the product. Other products, such as customer-formula fertilizers, single ingredient

fertilizers and supplements, mineral farm fertilizers and most specialty fertilizers, are currently exempt from registration. Despite this, all products in the marketplace are regulated and subject to marketplace monitoring and compliance verification including product inspections, sampling and testing for contaminants, and label reviews. Non-compliant products are subject to enforcement actions which may include product detention, and in cases of severe and/or repeated non-compliance, prosecution.

Currently, the *Access to Cannabis for Medicinal Purposes Regulations* (ACMPR) do not recognize the requirement for fertilizers and/or supplements in the production of cannabis, and a Health Canada policy statement lists foliar application of fertilizers and nutrients to cannabis as prohibited.

Fertilizers are important inputs that are vital to successful and efficient plant production of all crop types. As a well-established industry that has served the agricultural and horticultural sectors for decades, the Canadian fertilizer industry has a great interest in opportunities for safe and productive cannabis cultivation. In 2015-2016, the Canadian fertilizer industry produced over 3.1 million metric tonnes of fertilizer products<sup>1</sup> and exported roughly \$7.85 billion worth of NPK fertilizers<sup>2</sup> contributing significantly to the Canadian economy. Use of these products in cannabis production can only improve upon that value.

Members of the fertilizer industry wish to convey the industry's importance within the emerging cannabis production sector. We strongly urge Health Canada to consider the recommendations outlined in this document when developing the regulatory framework in support of the proposed *Cannabis Act*, Bill C-45.

## Objectives and Scope

The CFPF Cannabis Working Group was established with the principal objective of engaging Health Canada and the CFIA in the interests and concerns of the fertilizer and supplement sector with regard to the proposed *Cannabis Act*, Bill C-45. As the modernization of the *Fertilizer Regulations* comes into effect in 2018, it is vital that the sector be aware of and engaged in the regulatory changes and how they may be impacted by the proposed *Cannabis Act*.

Industry members strongly encourage Health Canada to acknowledge these considerations and recommendations during the drafting of the impending cannabis regulations. Fertilizer and supplement products are important crop inputs, and their consideration for use in the production of cannabis for medicinal and recreational purposes is of great interest to the industry and to growers.

It is the industry's intent to supply fertilizers and supplements for cannabis production and other crops for all Canadians. For this to happen, there is a need for the CFIA to mitigate registration backlogs and ensure adequate resources be allocated to assess product safety. Furthermore, information and educational opportunities for Licensed Producers (LPs) regarding the safety and proper use of all crop inputs should be developed.

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<sup>1</sup> CANSIM table 001-0067

<sup>2</sup> Statistics Canada data, as presented in *Export Certification under the Fertilizers Act*, November 1, 2016

This document addresses the following:

1. Considerations of the fertilizer and supplement industry for Health Canada to address;
2. Recommendations for Health Canada to maintain current regulatory framework for all crops under the *Fertilizers Act* and *Regulations*, including cannabis for medicinal and recreational use; and
3. Communication Plan to ensure that the dialog between government and industry is maintained and the industry's objectives and intentions are met.

## Considerations and Recommendations for Health Canada

The legalization of cannabis provides the opportunity for growth within the fertilizer and supplement industry in Canada. With intentions of supplying the demand of this emerging market, new products have been and will continue to be introduced by industry members, including but not limited to the following categories:

- NPK + micronutrient blended fertilizers
- Micronutrients
- Microbials
- Supplements (including Plant Growth Regulators used as growth promoters)
- Biostimulants

It is imperative that Health Canada be aware of the common practices among LPs, and how well these accepted practices align with science-based benchmarks and crop requirements. The fertilizer and supplement industry is committed to provide growers with safe and effective products; however, there is a gap in published science-based literature documenting the specific nutrient requirements of cannabis, which will not differ significantly from that of most edible cultivated crops. Providing the industry with information such as total nutrient needs and maximum residue limits (MRLs) would help to ensure that reliable products with sound recommendations are offered to cannabis producers.

Simultaneously, this information would assist in better defining the use of fertilizers and supplements in cannabis production within the soon to be drafted regulatory framework. Currently, the *Access to Cannabis for Medicinal Purposes Regulations* prohibits the application of an “additive”, or anything other than the approved list of pest control products, to cannabis during production. As such, this Working Group strongly requests that fertilizer and supplement products regulated under the *Fertilizers Act* and *Regulations* be excluded from the definition of an “additive” in future regulations.

Another aspect of production **Health Canada is encouraged to revisit** is the restriction on foliar application of fertilizers. This restriction limits production, since foliar application of micronutrients can effectively correct nutrient deficiencies within the plant. Similar application methods of Nitrogen-Phosphorus-Potassium (NPK) fertilizers that contain micronutrients are

currently made on numerous consumable crops where risk assessments have already been completed and are approved. Any similar restrictions incorporated in the Cannabis Regulations should be explicitly science-based in relation to the cannabis plant.

The differing needs of professional growers versus consumer growers must be recognized and addressed with the impending legalization framework. Our industry has significant expertise in creating, delivering, and educating both professional growers and consumer growers with approaches that are effective but vastly different depending on the intended user. Differences can include formulation, packaging, and labelling. Point of sale, marketing, promotion, instruction and education are much more differentiated with suppliers having much more direct access to professional growers than consumers. Consumer sales of fertilizer and supplement products typically take place via retail outlets which requires a more public approach to labeling, education, and information which must include clear instructions on labels, in-store support material, and publicly available information through advertising and websites. Without this information, the misuse of products is a likely outcome.

Bill C-45 introduces provisions to significantly restrict “cannabis accessories” in terms of sale, marketing, promotion, and advertising of, in such a way, or in places where minors could see or have access to them. It is our understanding based on the definition of a “cannabis accessory” (which is a thing that is represented to be used in the production of cannabis products) that fertilizers and supplements would meet this definition if they are represented through labeling, promotion or advertising to be used to grow cannabis plants.

Inclusion of fertilizer and supplement products as “cannabis accessories” will lead to a major disruption in the current marketplace. Treatment as an accessory will render suppliers unable to label, sell, market, promote, and advertise these products through current retail channels such as Home Depot, Rona, Home Hardware, Walmart etc.; as well as websites, and other means which could be easily seen and accessible to minors. Since a significant number of products are appropriate for multiple crops and are typically marketed that way, products will either not be available on shelves or will not be able to be labeled appropriately for cannabis growing. Either way, this is likely to lead to misuse of products.

It is only through the promotion and education of the proper and responsible use of our products by consumers that the government can ensure safe and legal production of cannabis by the public. This requires suppliers of fertilizers and supplements to be able to educate consumers through labeling, information, and education on how to use our products related to cannabis. With the above mentioned restrictions, products will not be readily available and information will not be able to be provided to consumers for the appropriate use of our products. In other regulatory frameworks where restrictions are placed on products that consumers want to have access to, such as provincial pesticide bans, we have seen civil disobedience such as importing of illegal pesticides, illegal uses of available pesticides, and home-made concoctions, all of which raise the risk of harm. We would like to see a framework where we can responsibly provide the necessary products and information to all consumer growers of any crop. Fertilizer and supplement products which comply with the *Fertilizer Act and Regulations* are safe for use and should not need further restrictions.

Current regulations for fertilizers and supplements have established guidance for contaminants of concern based on a field impact assessment. Should more specific contaminants of concern be identified by Health Canada, they along with their MRLs must be explicitly outlined to ensure that CFIA’s safety assessments are up-to-date. The CFIA currently does not have standards for heavy metals in fertilizers and supplements intended for use in hydroponic systems. There is



interest from CFIA to collaborate with other departments to develop these standards. This information can be used in conjunction with product recommendations to determine risk of accumulation and contamination. Furthermore, industry members are interested in how contaminant MRLs for cannabis compare to those of well-established crop standards for products that are ingested (including through inhalation) or processed for oil, such as tobacco and other medicinal herbs (e.g. ginseng). Risk assessments have previously been completed on these consumables, and should substantiate acceptable fertilizer levels and use on cannabis.

As the modernization of the *Fertilizer Regulations* approaches (Canada Gazette part I publication targeted for Spring, 2018), a number of products currently exempt from registration will become subject to registration while other additional exemptions will be available to fertilizer and supplement manufacturers. This is likely to further confuse producer's current understanding of how fertilizer and supplement products are regulated in Canada. Guidance and communication documents will be of great value and an outlined communication plan can be found in Appendix 3 of this document.

Further to the considerations above, the CFPF Cannabis Working Group would like to make the following recommendations to Health Canada to keep the best interests of industry members, LPs and consumers in mind.

#### **Recommendations:**

- 1. Maintain regulation of all fertilizers and supplements by the CFIA under the *Fertilizers Act and Regulations*.** Cannabis production does not differ from normal crops cultivated within Canada and as such fertilizers and supplements are necessary no matter the application method. Products used on cannabis crops should not be subject to additional regulation.
- 2. Exempt fertilizers and supplements from the definition of a “cannabis accessory” to avoid undue regulatory burden on manufacturers and retailers of input materials.** This can be accomplished most easily by amending the definition of cannabis accessories by striking “things used in the production of cannabis” or by explicitly exempting products that are in compliance with the Fertilizers Act and Regulations. This will prevent fertilizers and supplements from labeling and representation restrictions including permissible points of sale of the products.
- 3. Ensure that the provisions and restrictions in the proposed cannabis regulations are based on modern science and appropriate risk assessment.** Fertilizer and supplement products regulated under the *Fertilizers Act and Regulations* should be exempt from the definition of an “additive” in regulations (e.g. foliar vs. growing media applications).
- 4. Provide additional resources to the CFIA to ensure science-based safety assessments are conducted for all modes of application of cannabis fertilizer and supplement products.** Additionally, resources are required to handle the anticipated increases in applications for these products. It is anticipated that the number of registration applications to be received by the CFIA will increase exponentially and the formulations are also likely to become more complex creating pressures on the CFIA to review and approve new products in a timely fashion.

5. **Ensure adequate CFIA standards and marketplace monitoring activities.** There is an anticipated increase in capacity to monitor heavy metal and pathogen testing of fertilizers and supplements to ensure product safety and minimize the potential for contamination of the final cannabis crop. The cannabis crop tends to hyper-accumulate certain metals and as such use of contaminated fertilizers and supplements may present risks to consumers and significant economic losses to the producer. Therefore, additional operational and analytical resources will be required for the CFIA to increase its compliance verification capacity in this area. Accurate trace metal standards for the assessment of hydroponic fertilizers and supplement products are needed to enable compliance verification and enforcement. There is a clear interest to ensure that fertilizer and supplement products are not implicated in contamination of cannabis products in a regulated market.
6. **Do not prohibit foliar application of fertilizer and supplement products to the cannabis crop.** Recognize the need for fertilizer and supplement use in cannabis production within the proposed *Cannabis Regulations* by better defining the term “additive”, and remove the prohibition for foliar application of fertilizers under any growth condition. Conduct a quantitative risk assessment under various application methods: soil, hydroponic nutrient media, and foliar spray etc. to compare risk levels associated with each exposure scenario.
7. **Incorporate cannabis waste disposal procedures that reflect generator source (manufacturer, distributor, consumer) and practicalities.** Provide feedback after industry and CFIA determine feasibility, methods and research needs associated with the rendering of any remaining cannabis residuals unusable.
8. **Ensure recreational growers have access to the necessary information and educational materials to ensure safe and effective use of fertilizer and supplement products.**
9. **Continue to engage the CFPF Cannabis Working Group so that proactive and science based responses may be offered, allowing the fertilizer industry to provide products for the safe production of recreational and medicinal cannabis.** The Cannabis Working Group participation in changes in the regulatory environment of cannabis cultivation will permit the fertilizer industry to proactively respond to market and demand changes.

## Group Membership

The government-industry Cannabis Working Group submitting these recommendations was formed in 2017, with working group members contributing on a volunteer basis. Members of the working group represent federal government, blenders, manufacturers, importers, agricultural retailers, multi-national companies, and industry consultants. These members are engaged in both the commercial and consumer markets and cover a broad range of products, including supplements, inoculants, organics, biotech products, and other materials regulated under the *Fertilizers Act and Regulations*.

Theresa Wildman (Plant Products Inc.) and Daniel Bechtel (PRTox Consulting Inc.) served as Cannabis Working Group Co-Chairs. The CFIA was represented by Dr. Ewa Madey (National Manager, Fertilizer Safety Section). Health Canada was represented by Guy Levesque and Benoit Séguin (Office of Medical Cannabis), as well as Christine Zaczynski (Cannabis Legalization Secretariat). Nadine Frost (Fertilizer Canada) coordinated group teleconferences and recorded meeting minutes and summaries. A full list of industry working group members can be found in Appendix 2.

## Appendix 1: Glossary of Terms

**Additive** is defined in the *Access to Cannabis for Medicinal Purposes Regulations* as “anything other than marijuana but does not include any residue of a pest control product or its components or derivatives unless the amount of the residue exceeds any maximum residue limit specified for the product, component or derivative under section 9 or 10 of the *Pest Control Products Act*.”

**Cannabis accessory** is defined in Bill C-45 as “a thing, including rolling papers or wraps, holders, pipes, bongs, and vaporizers, that is represented to be used in the consumption of cannabis, or a thing that is represented to be used in the production of cannabis”.

**Compost** as defined under the *Fertilizers Act* and *Regulations*: A solid mature product resulting from composting, which is a managed process of bio-oxidation of a solid heterogeneous organic substrate, including a thermophilic phase. This product may be designated as to kind. Control of cannabinoids are addressed in the *Controlled Drug and Substances Act*<sup>3</sup>.

**Customer-Formula Fertilizers** are defined in the *Fertilizers Regulations* as fertilizers “prepared in accordance with a written formula that sets forth the name, amount and analysis of each ingredient, the fertilizer grade of the total mixture and the signature of the person for whose use for fertilizer purposes it has been prepared.”

**Fertilizer** is defined in the *Fertilizers Act* as “any substance or mixture of substances, containing nitrogen, phosphorus, potassium or other plant food, manufactured, sold or represented for use as a plant nutrient.”

**Mixed Farm Fertilizers** are defined in the *Fertilizers Regulations* as “all fertilizers other than fertilizers consisting of a single material or one chemical compound.”

**Single Ingredient Fertilizers** that are subject to registration exemption are currently listed in Schedule II of the *Fertilizers Regulations*.

**Specialty Fertilizers** are defined in the *Fertilizers Regulations* as fertilizers “(a) recommended for use only on household plants, urban gardens, lawns or golf courses or in nurseries or greenhouses, or (b) that contains no major plant nutrients and contains lesser plant nutrients other than calcium (Ca), magnesium (Mg) and sulphur (S).”

**Supplement** is defined in the *Fertilizers Act* as “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.”

### List of Abbreviations:

<b>AAFC</b>	Agriculture and Agri-Food Canada
<b>ACMPR</b>	Access to Cannabis for Medicinal Purposes Regulations
<b>CFIA</b>	Canadian Food Inspection Agency
<b>CFFP</b>	Canadian Fertilizer Products Forum

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<sup>3</sup> <http://laws-lois.justice.gc.ca/eng/acts/C-38.8/page-13.html>

<b>CRSC</b>	Canadian Roundtable for Sustainable Crops
<b>LP</b>	Licensed Producer
<b>MRL</b>	Maximum Residue Limit
<b>NPK</b>	Nitrogen Phosphorus Potassium
<b>PMRA</b>	Pest Management Regulatory Agency

## Appendix 2: List of CFPF Cannabis Working Group Members

<b>Name</b>	<b>Affiliation</b>
Ewa Madey	CFIA (Fertilizer Section)
Guy Levesque	Health Canada (Office of Medicinal Cannabis)
Benoit Séguin	Health Canada (Office of Medicinal Cannabis)
Christine Zaczynski	Health Canada (Legalization Secretariat)
Theresa Wildman	Plant Products Inc.
Daniel Bechtel	PRTox Consulting Inc.
Laura Barbison	Master Plant-Prod Inc.
Abdel El Hadrami	Omex Agriculture Inc.
George Kanellos	Higrocorp Inc.
Ted Kanellos	Higrocorp Inc.
Krystal Pierce	Hawthorne Hydroponics LLC
Dereje Bezabih	Advanced Nutrients
Cathia Gosselin	Premier Tech Ltd.
Drew Lemche	Nachurs Alpine Solutions
Bill Zimmer	FBSciences
Julie Nykamp	Engage Agro Corporation
Joël Rabesa	Premier Tech Home & Garden
Kyle Landenburger	ENP / Age Old Organics
Andreja Preradov	Loveland Products
Ruth Roberts	Active AgriScience Inc.
Gary Orr	Verdesian Life Sciences LLC
Amy Serafin	Advanced Nutrients
Thea Saammaki	Ecolo Odor Control Tech.
Erin MacLean	Scotts Canada Inc.
Osifo Ofure	Scotts Canada Inc.
Cody Cruise	TerraLink Horticulture Inc. / Biofert Manufacturing Inc.

## **Appendix 3: Communication Plan**

Communication will be key to introducing, updating and reinforcing the guidelines for new and established cannabis growers and the public. Engagement must be tailored to the intended audience.

### **Manufacturers**

Manufacturers of nutritional and crop protection products are already well represented by stakeholder fora. However, as an evolving novel crop, the needs of cannabis growers and consumers must be identified and addressed. It is imperative that new departments formed to address cannabis legalization be approached by the current stakeholder groups so that all parties are aware of the current state of affairs for regulations, cultivation methods, etc.

#### **Action items:**

1. Identify any new stakeholders and connect with Fertilizer Canada and the CFIA Fertilizer Section.
2. Fertilizer Canada to coordinate fertilizer industry-specific information for cannabis growers.
3. Discussion with the CFPF regarding pertinent information to be disseminated to cannabis growers.

### **Growers**

Cannabis cultivation may involve experienced growers, both greenhouse and hydroponic, or attract new growers with varying familiarity with agricultural practices and regulations. There are many web-based resources available for agricultural and horticultural crops through Agriculture and Agri-Food Canada (AAFC) as well as provincial agricultural ministries. Incorporating web-based cannabis cultivation information and advertising these resources will be important as growers enquire and obtain their licenses to cultivate cannabis. Health Canada, AAFC, and provincial ministries could provide experts in forums targeting cannabis growers to provide detailed cultivation and regulatory guidance. As with other industries, a cannabis stakeholder forum, such as CropLife, Fertilizer Canada, the CFPF and the Canadian Roundtable for Sustainable Crops (CRSC), may help growers to connect with peers, industry, and regulators to share information and address concerns within their industry.

#### **Action items:**

1. CFPF to provide Agriculture and Agri-Food Canada (AAFC) and provincial ministries with fertilizer industry-specific information for cannabis growers. Information should be in a ready-to-post format to ensure easy adoption by government agencies.
2. CFPF and Fertilizer Canada, in consultation with other stakeholder groups such as CropLife, to spearhead a cannabis cultivation information forum for growers.

### **Consumers**

As with cultivation, many government agencies provide information for the consumer. For example, the Pesticide Management Regulatory Agency (PMRA) has scientific outreach, compliance, and enforcement programs that provide a forum for the public to communicate with scientists, regulators, and even politicians. Given the change in status of cannabis from an illegal to a legal substance, many consumers may be confused as to what they should expect from all stakeholders. A non-governmental agency such as CropLife may also be beneficial as a third-party source of information for the consumers.

**Action items:**

1. Fertilizer Canada and CFPF to create talking points for consumers regarding the regulation of products applied to cannabis emphasizing safety.
2. Create a space on social media (e.g. Twitter) to allow for informed, science-based discussions and information exchange regarding cannabis cultivation and associated best practises.