

CANADIAN HEMP PROMOTION AND RESEARCH AGENCY



Mike Pickard, Chairman
Farm Products Council of Canada
Central Experimental Farm
960 Carling Avenue, Building 59
Ottawa, Ontario K1A 0C6

Re: Application for the creation of a Hemp Promotion and Research Agency

October 2017

Dear Mr. Pickard,

Canadian hemp producers, with support from the Canadian Hemp Trade Alliance (CHTA), are pleased to submit this application for the creation of the Canadian Hemp Promotion and Research Agency (PRA).

The creation of a hemp Promotion and Research Agency is an important step forward in the development of the Canadian industrial hemp industry. We look forward to a favorable review of this application by the Farm Products Council resulting in Council's recommendation that a Hemp Promotion and Research Agency be established.

We understand that part of the application review process includes public hearings. Our preference is to have the hearings in the late March or early April 2018 timeframe. This timeframe should result in active participation from Canadian hemp growers and other stakeholders.

This application is the result of 18 months of work and consultation, made possible by funding from the Manitoba Government via Growing Forward 2.

Sincerely,

Don Dewar – Dewar Seed Farm, Dauphin, Manitoba

Chair of Producer Industrial Hemp PRA committee



*Application for the creation of a Canadian Industrial Hemp Promotion
and Research Agency*

Submitted to the Farm Products Council of Canada

By

Canadian Hemp Producers

October 2017

For more information on the application please contact any of the following members of the Hemp Promotion and Research Agency committee:

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Introduction

Hemp producers across Canada are proposing that a Hemp Promotion and Research Agency (PRA) be established to facilitate the growth of the hemp industry.

A Brief History

The Canadian government introduced the “Act to Prohibit the Improper Use of Opium and Other Drugs” in 1923, making it illegal to produce or possess marijuana. Enforcement of that act escalated in the late 1930’s in consort with the United States “Marihuana Tax Act” (1937). In 1961 Canada signed the United Nations agreement, the Single Convention on Narcotic Drugs of 1961 which included cannabis along with numerous other restricted drugs¹. In May of 1998 the Canadian government repealed the law against planting industrial hemp and issued the first licenses to grow hemp for commercial purposes under the Industrial Hemp Regulations.

The industrial hemp plant, *Cannabis sativa* L., is the same species as marijuana, although hemp and marijuana have important differences in genetic make-up. In Canada, *Cannabis sativa* L. plants that contain more than 0.3% delta-9-tetrahydrocannabinol (THC), the psychoactive compound in the leaves and flowering heads of the growing plant, are deemed to be marijuana and those containing 0.3% or less THC are classified as hemp. The Canadian Industrial Hemp Regulations (IHR) and the Controlled Drugs and Substances Act (CDSA) define Industrial Hemp as cannabis containing no more than 0.3% delta-9-tetrahydrocannabinol (THC).

Currently, Health Canada regulates Industrial Hemp production. Hemp grown in Canada is produced under permits issued by Health Canada. A license is required to possess, produce (cultivate), sell/provide, import, and/or export Industrial Hemp.

Additionally, the Industrial Hemp Regulations state:

1. “No person shall import, export, sell or provide whole industrial hemp plants, including sprouts, leaves, flowers, or bracts of those plants”.
2. “No person shall import, export, sell/provide or produce a derivative from whole industrial hemp plants, including sprouts, leaves, flowers, or bracts of those plants”.

¹ Article 28 of that document expressly excludes “industrial purposes” usage of hemp but all signatories to this convention have opted to include hemp and marijuana under the same level of restriction.

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With respect to the cultivation, all industrial hemp seed planted must be of a pedigreed status. Currently there are 33 certified cultivars of industrial hemp approved by Health Canada as they contain 0.3% or less THC.

The legislative changes, allowing planting of industrial hemp, have resulted in the Canadian hemp industry innovating and growing over the past 20 years. Today there is a domestic hemp breeding industry, highly advanced processing and fractionation technology, branded products, and branded ingredients, and valued added markets for hemp. Additionally, research into the potential benefits of numerous cannabinoids present in hemp could lead to unprecedented health benefits based on preliminary anecdotal information.

While the industry has been successful, the view is there is room for growth and advancement of the seed and fibre components of the industry, given the relatively low market penetrations in food, personal care, and industrial product categories.

At the November, 2012, annual general meeting of the Canadian Hemp Trade Alliance (CHTA), a motion by hemp producers, subsequently passed by the CHTA membership, was put forward to investigate the possibility of implementing a national levy on hemp production with the express intention of generating funds for hemp research and promotion.

The CHTA at the time was, and continues to be, the only formal Canadian hemp industry association. The CHTA was established in 2003 to promote the development of hemp. CHTA membership consists of producers, processors, related industry service providers, academics, government, retailers, and end use customers.

Following the passing of the motion at the AGM, the CHTA established a producer committee to evaluate mechanisms for a national check-off. After industry consultations, the decision was made to propose a Promotion and Research Agency (PRA) under legal framework of the Farm Products Agency Act. An important consideration in the decision is broad geographic distribution of hemp production in Canada and the relatively few number of hemp growers in some provinces. This made traditional provincial commission or association models unrealistic for hemp.²

In the fall of 2015, hemp producers across Canada were informed that the PRA committee would be conducting meetings with their farm colleagues to consult them and judge their support for a hemp

² An overview of the evaluation of an umbrella model for hemp levy collection is provided in part 7 of Section “C” – The Hemp Agency Plan.

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PRA. Subsequently, in the spring of 2016 meetings were held in various parts of Canada where the PRA concept was explained and producers were polled on their support for a PRA. Approximately 20% of Canada's hemp producers attended the meetings and were introduced to the legal framework of a PRA and the proposed levy on hemp production.³ Producers in attendance, along with others that submitted their view via phone or online surveys, were 95% in support of the establishment of a Hemp Promotion and Research Agency.

This strong endorsement from hemp producers led the producer PRA committee, with support from the CHTA, to move forward with the development of this application to the Farm Products Council for the creation of a Hemp Promotion and Research Agency.

³ The proposed levy on hemp production is presented in detail on Part C, section 4 of this application.

Part A: Background on the Canadian Hemp Industry

1. Canadian Hemp Seed Industry

The hemp seed industry is currently the most important segment of the Canadian industrial hemp industry. The commercial hemp seed industry is made up of three structural segments:

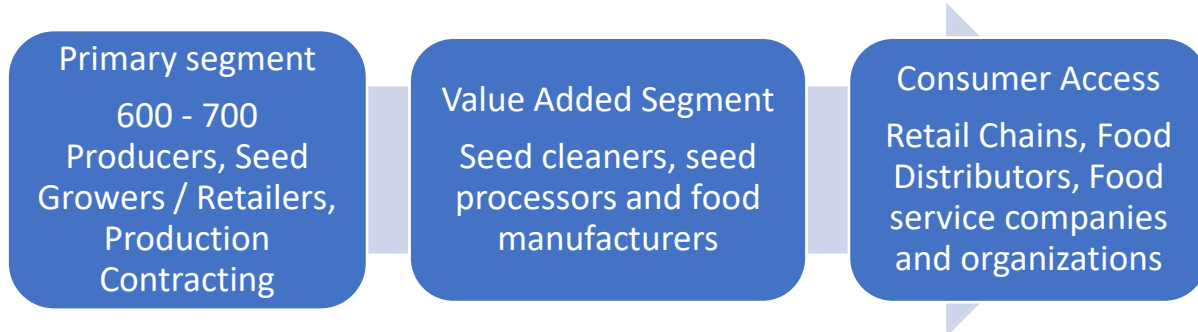
1. Primary segment - hemp producers, seed growers / seed retailers, production contracting companies and seed breeders;
2. Value added segment - seed cleaners, seed processors and food manufacturers;
3. Consumer access - via national and international and regional food retail chains, and product distributors to food service organizations, for example; hospitals and restaurants.

At the producer level, the number of hemp cultivation licenses has ranged from 472 to 768 over the past five years (2013 – 2017 inclusive). Almost all cultivation licenses are issued to producers growing hemp for seed. A few cultivation licenses are for breeding and research trials. Over the 2013-2017 five- year period, 84 % of the cultivation licenses were in the provinces of Manitoba, Saskatchewan, and Alberta. British Columbia, Ontario, Quebec, and the Maritime provinces were 1%, 5 %, 9% and 1% respectively. Production strategies vary somewhat by area, but in the prairie provinces most of the hemp production is contracted by processors. Contracting production reduces supply risks for the processors and affirms seed specs to be used in the processing. Pedigreed seed of hemp cultivars, once approved by Health Canada, may be acquired from the traditional seed industry. In some cases, processors who contract production require the use of their own licensed varieties, whereas in other cases companies will contract production, do initial processing, and then take title and sell the production to processors.

The value-added segment of seed cleaners, processors, and food manufacturers are critically important in the hemp seed supply chain and the future development of the industry. In most cases hemp seed is shipped by truck to seed cleaners where it is cleaned to processor specifications. The clean seed is then further processed into branded ingredients or finished products that flow to marketing channels, including domestic and international food manufacturers, food service organizations or retail chains. A significant portion of the oil is used in the cosmetics industry. Canadian processors export their products throughout North America and internationally to about 30 destinations. Important international markets include the USA, South Korea, the United Kingdom, France, Italy, and the Netherlands. Shoppers Drug Mart, Sobeys and Costco are examples of national retail chains that carry branded hemp products processed in Canada. Many national and regional health food stores also offer numerous hemp

based products. An overview of the Canadian hemp seed processors and / or food manufacturers is available in appendix 2.

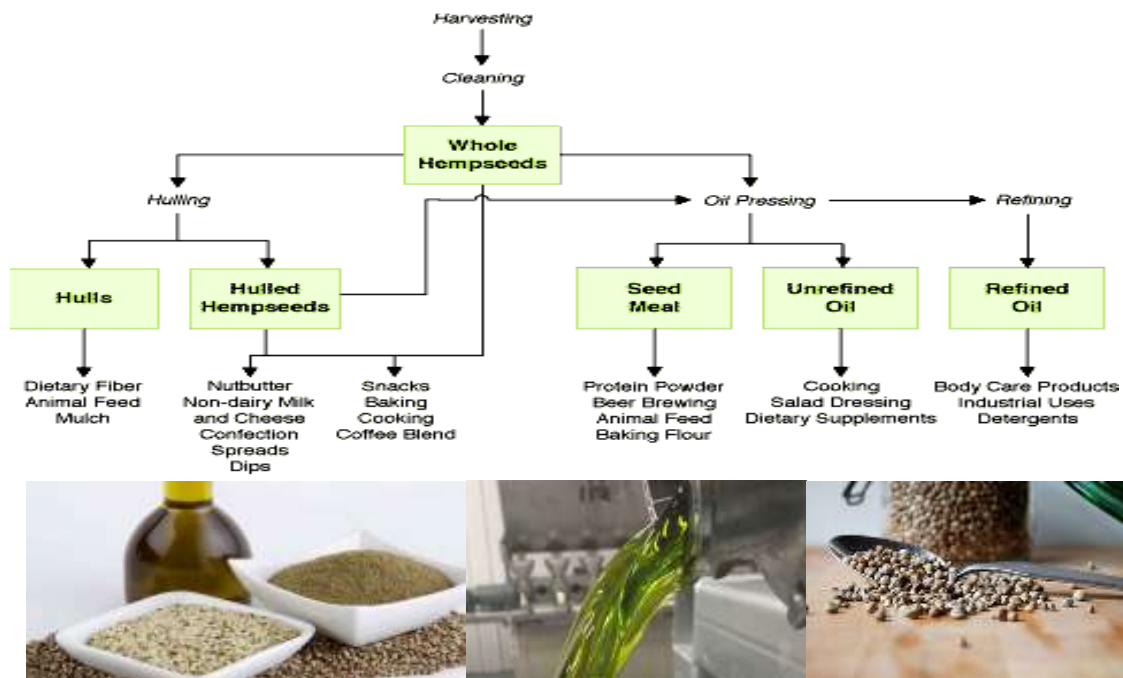
Figure 1: Structure of the Canadian Hemp Seed Industry



Source: Hemp Industry consultations

Figure 2 provides an overview of the wide range of food and consumer care products that can be derived just from the hemp seed.

Figure 2: Products Derived from Hemp Seed



Following are some seed based products available from Fresh Hemp Foods, of Winnipeg, Manitoba.



The following are some additional, diversified seed based products available from Naturally Splendid Enterprises Ltd., of Pitt Meadows, BC the first publicly traded hemp food company in the world TSX.V: NSP⁴

NATERA™



CHII
NATURALLY PURE HEMP
ESTABLISHED 1988



pawstive Fx™



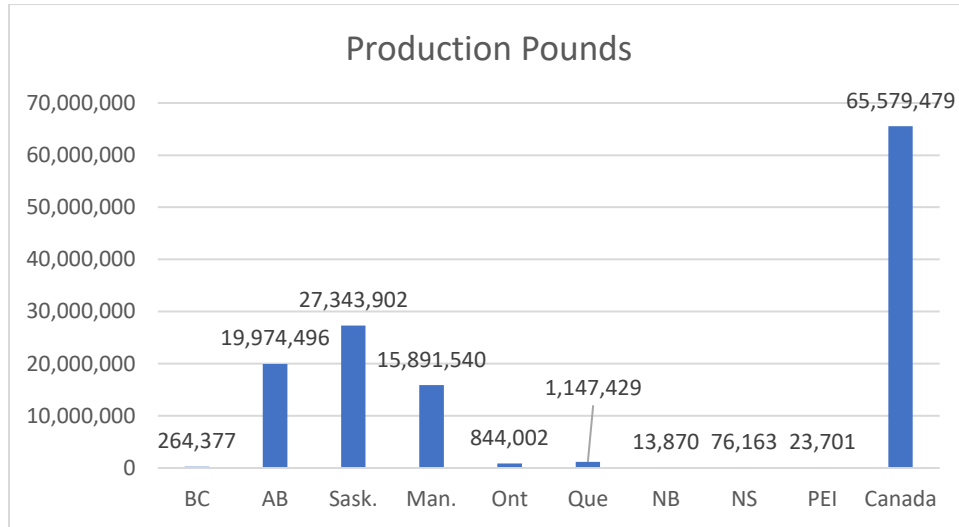
2. Seed Production Statistics

The production of hemp seed in Canada over the three-year period of 2014 – 2016 is estimated to have averaged between 65 and 66 million pounds. Of that total, almost 63 million pounds, or 96 %, is estimated to have been produced in the three prairies provinces of Manitoba, Saskatchewan, and

⁴ The hemp product pictures are used with the permission of Hemp Production Services of Saskatoon, Saskatchewan, Fresh Hemp Foods of Winnipeg, Manitoba, and Naturally Splendid Enterprises Ltd. of Pitt Meadows, B.C.

Alberta. Figure 3 provides an overview of production by province. Of the total production, approximately 25 % is certified organic⁵ and 75 % is grown using conventional production practices.

Figure 3: 2014 – 2016 Average Hemp Seed Production by Province



Source: Calculation based on Cultivation Acres by Province

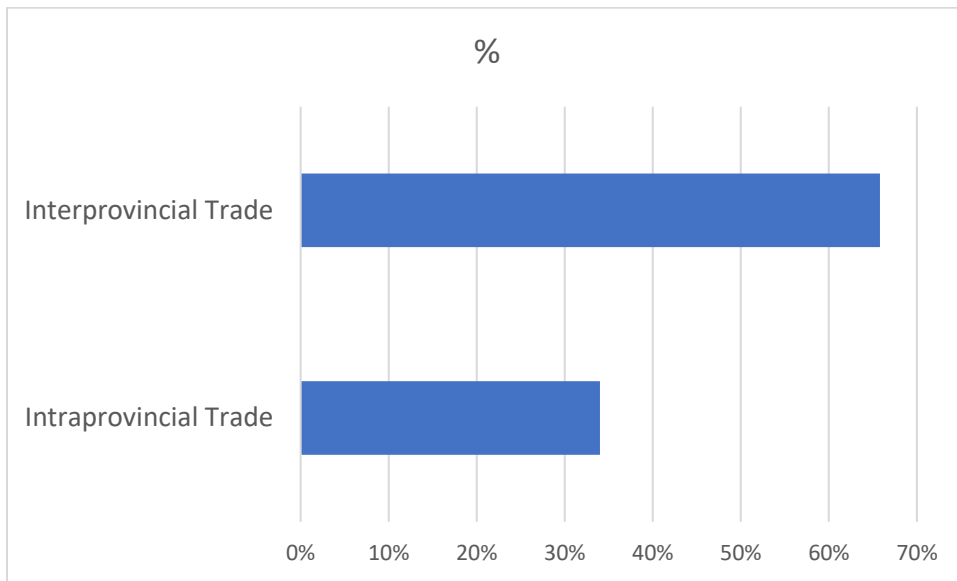
3. Canadian Hemp Seed Trade

Canadian hemp seed trade is a combination of interprovincial, intraprovincial, imports and exports. Import and export trade are discussed in sections 6 and 7 of this part of the application. The level and stability of interprovincial trade is an important consideration for the start-up of the hemp PRA as initial levies are assumed only to be on interprovincial trade.⁶ In western Canada, almost 100 % of the production of hemp seed occurs in Manitoba, Saskatchewan, and Alberta, with a large percent of the hemp seed first point of sale being in Manitoba, where the major hemp seed processing companies are centered. Some of the prairie produced seed also flows to British Columbia as that province has several smaller and mid-sized processors. In Ontario, hemp seed processors source seed locally, whereas in Quebec, seed is sourced locally and from western Canada.

To determine the amount of seed that was traded interprovincially, a survey of processors was conducted and the overall volume aggregated to protect proprietary information of individual companies. The results of these surveys showed that processors currently purchase 65% of their production needs interprovincially.

⁵ Certified by a Certification Agency.

⁶ The levy collection strategy is discussed on page 27 of this application.

Figure 4: Interprovincial Trade of Hemp Seed

Source: Industry Consultations

4. The Canadian Hemp Fibre Industry

The hemp PRA can play a significant role in helping the Canadian hemp fibre sector develop through strategic initiatives that benefit the whole sector. Areas that could be addressed include coordination of research that has industry wide benefits, working with the fibre manufacturing sector to demonstrate the business case for commercial decortication facilities, collaborating on market development initiatives in certain product categories, and creating interest with producers in growing hemp for fibre. For example, Calgary has a world class “Apparel Innovation Centre” that the PRA could introduce to Canadian companies looking to use hemp fibre in clothing or other textiles.

Like the hemp seed industry, other jurisdictions and companies globally are evaluating the opportunities presented by hemp fibre to create diversification opportunities in agriculture, replace non-renewables in manufacturing processes, and address environmental issues. As technologies and products emerge globally, Canadian companies will have the opportunity to collaborate or integrate public technology into local manufacturing while taking advantage of Canada’s local production capacity.

While not that well known, hemp fiber has been used extensively throughout history. Items ranging from rope, to fabrics, to industrial materials, were made from hemp fiber. Hemp was often used to make sail canvas. The word *canvas* derives from *cannabis*.

Today, a modest hemp fibre industry exists in Canada. While early in its commercial development there are features of hemp fibre that make it attractive in many consumer and industrial product applications.

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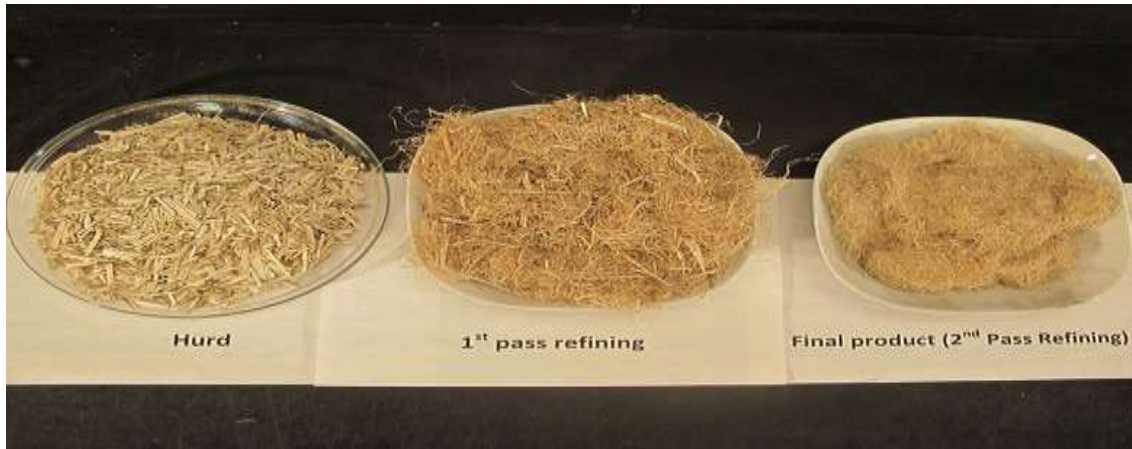
Hemp fibre is strong, light weight, fire retardant and does not have the sheer characteristics of fiberglass making it adaptable to a wide range of product applications. In textiles, where consumers get most of their exposure to hemp fibre, pure hemp fibre has a texture like linen.

A leader in the development of the hemp fibre industry in Canada is the Alberta Provincial Government. In 2010, the Province began operation of a pilot scale decortication plant at Vegreville, AB. Canadian based decortication research facilities were a barrier to the development of the Canadian hemp fibre industry and this investment has been a catalyst for hemp fibre product development in Alberta and with companies in other provinces. A key aspect of the research facility is that it offers flexible configurations of the cleaning and refining steps and therefore is particularly convenient for companies developing and testing new applications for various types of hemp fibre.

There are several steps to develop products that have hemp fibre as an important component, including basic research for process optimization and market demonstration, applied research that focuses on specific customer requirements and prototype trials and market testing. Importantly, the Alberta government's decortication facility allowed companies to decorticate sufficient supplies of hemp fibre that meet their specifications for product development and testing. The government's technical and financial assistance is an important component of the hemp fibre industry development in Canada.

The following pictures show field collection of hemp fibre, the decortication facility and equipment at Vegreville, Alberta, and the types of fibre after decortication.





Public domain pictures

Three promising product applications for the Canadian hemp fibre sector include:

1. Incorporation of hemp textile grade fibre into industrial clothing applications. For instance, Logistik Unicorp of Saint-Jean-sur-Richelieu, Quebec, is investigating the feasibility of incorporating hemp fibre into their existing industrial uniform applications.
2. Composite panels and other products for the auto industry. The BioComposites Group of Drayton Valley, Alberta, is utilizing hemp fibre in combination with other natural fibre to develop fibre mats for the auto industry under their Terrafibre brand.
3. Construction products and materials. Just BioFibre of Calgary, Alberta, are utilizing hemp fibre in their modular block wall system.

Today these and other companies are continuing their product development and applied research in addition to initiatives addressing issues or requirements of sectors for market access. In each product category, hemp fibre based products must have technical advantages over existing products, be cost competitive, meet individual manufacturing sector certification standards, and have supply assurances, before major industrial customers will commit to using hemp based products in manufacturing.



Public domain pictures

An overview of the Canadian hemp fibre processors and product manufacturers is in appendix 3. In terms of hemp fibre trade, almost 100 % of trade, although very small, is intraprovincial. The hemp fibre industry does its contracting close to decortication facilities to reduce transportation costs and therefore the cost of processed fibre. Currently most decortication of hemp for hemp fibre occurs at Vegreville, Alberta, in the Provincial decortication facility.

5. The Future Potential of Cannabinoids

In addition to the products derived from hemp seed and fibre, cannabinoids⁷ found in the hemp plant are believed to be potentially useful in the treatment of inflammation, nausea, seizures, anxiety, and other neurological disorders. To validate the potential for health and wellness benefits of specific cannabinoids, further scientific research is critical.⁸ If certain compounds are shown to be safe and useful in the treatment of neurological disorders and are approved by Health Canada, there could be significant benefits to Canadians who suffer from these disorders, in addition to incremental farm gate and downstream value created as these compounds could be delivered to consumers in natural health products and foods.

6. Exports of Hemp Products

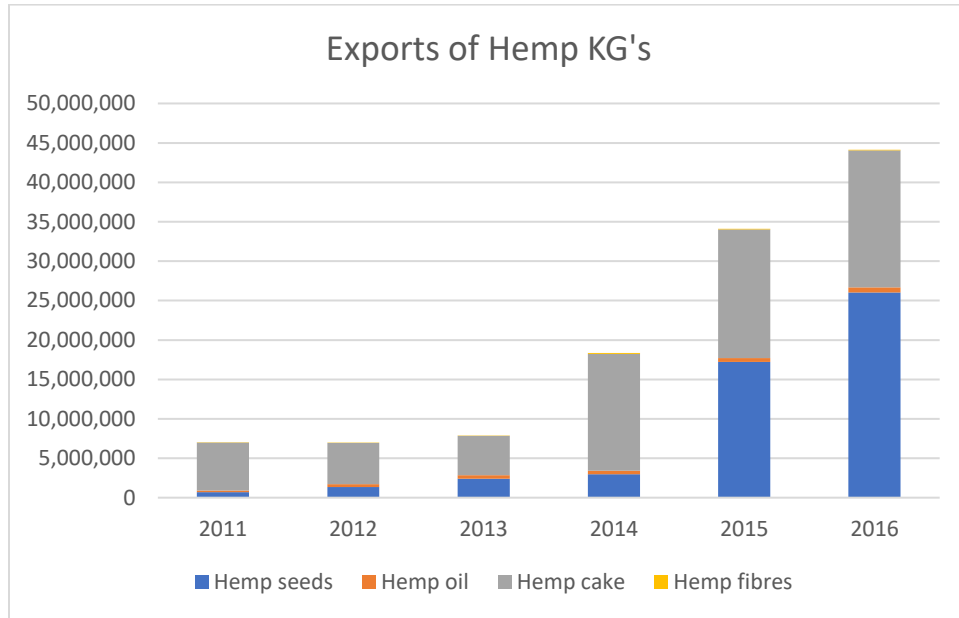
Health Canada regulates exports of hemp. A license (permit) is required to possess, produce (cultivate), sell/provide, import, and/or export Industrial Hemp. As illustrated in figure 5, currently the two main Canadian exports of hemp defined by Statistics Canada include whole or shelled hemp seed and hemp oil-cake. Hemp oil-cake results from the domestic crush of hemp seed for hemp oil, with the by-product being oil-cake. It is important to note that Statistics Canada does not distinguish between raw hemp seed exports and the exports of shelled hemp seed. Based on Statistic Canada's data on destinations for raw seed, 95 % plus of reported exports go to the US, South Korea, United Kingdom, France, Italy, and the Netherlands, which are destinations for processed versus raw hemp seed. Currently there are no duties charged on exports of Canadian seed or fibre, or products derived from seed or fibre by the US or other countries. Based on the statistics Canada information and input from the seed and seed processing industries it's estimated that 2 to 2.2 million pounds of seed, or between 2 and 3 thousand

⁷ Cannabinoids are active compounds found in components, primarily the leaves and stems, of the hemp plant.

⁸ Currently the Canadian Consortium for the investigation of Cannabinoids (www.ccic.net) and Dr. Steve Laviolette from Western University in London, Ontario, are conducting ground breaking research into the potential benefits of cannabinoids and the human endocannabinoid system. However, considerably more research is required to understand and capture the full potential of cannabinoids.

acres of production, were exported annually over the past three years. Health Canada will provide interested parties with a partial list of exporters. The partial list is because Health Canada can only provide information for those individuals or organizations who have given consent to Health Canada for the publication of their contact information.

Figure 5: Historical Canadian Exports of Hemp Products



Source: Adapted from Statistics Canada CatsNet data

7. Imports of Hemp Products

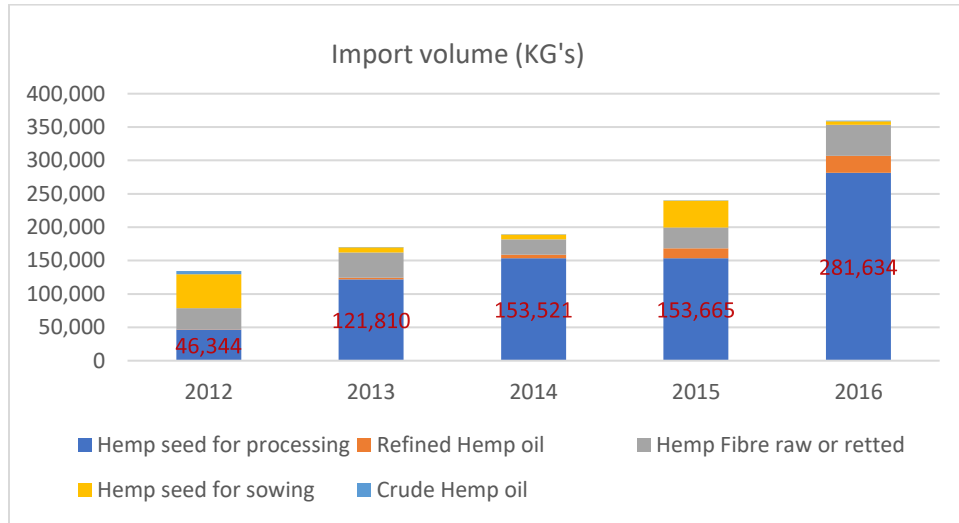
Like exports, Health Canada regulates imports of hemp. A license (permit) is required to possess, produce (cultivate), sell/provide, import, and/or export Industrial Hemp. According to Statistics Canada data, imports volumes of hemp seed or fibre into Canada are very small. As illustrated in figure 6, currently most hemp imports into Canada are whole seed, which is destined for further processing into a wide range of food, food ingredient and consumer care products.

The growth in whole hemp seed imports has been driven by processors due to their inability to source adequate supplies of domestically produced organic hemp seed as the demand for certified organic hemp food products and ingredients has grown. The domestic supply of certified organic hemp seed is being addressed with attractive organic seed price contracts currently being offered to producers by processors. To put seed imports destined for processing into context they would represent less than 1,000 acres of domestic production in 2016, or 1.3 % of total domestic hemp acreage.

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Like exports, Health Canada will provide interested parties with a partial list of importers. The partial list is because Health Canada can only provide information for those individuals or organizations who have given consent to Health Canada for the publication of their contact information. The partial list of importers for 2016 and 2017 is outlined in appendix 4.

Figure 6: Historical Canadian Imports of Hemp Products



Source: Adapted from Statistics Canada CatsNet data

Part B: Rationale for a Hemp Promotion and Research Agency (PRA)

1. Introduction

A Hemp Promotion and Research agency is critical to develop a strong, efficient, and competitive hemp industry in Canada which would work with the hemp value chain in conducting hemp research and in the promotion of hemp products.

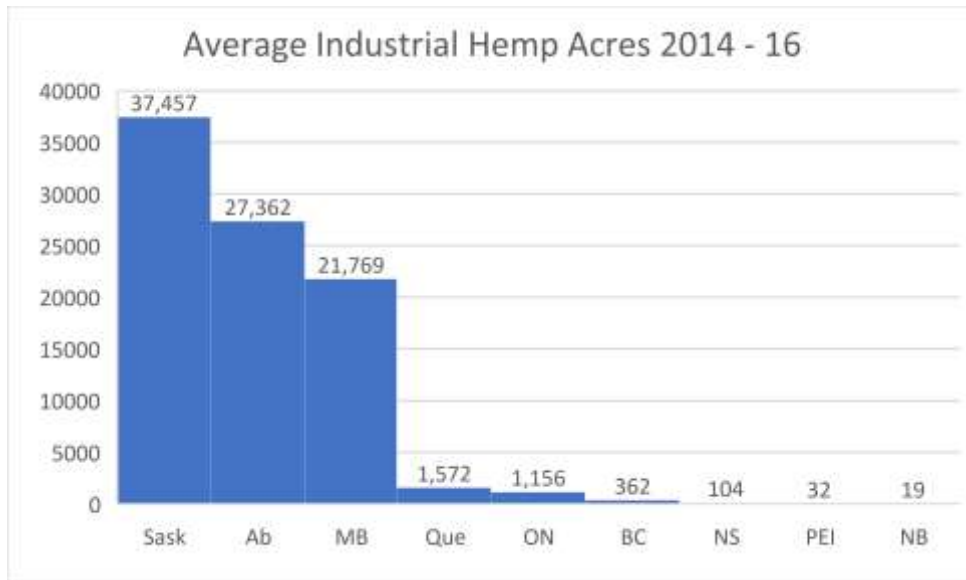
Once established, the hemp PRA would be a focal point to lead research and promotional activities on behalf of producers and the broader hemp value chain, bringing leadership and innovation to the industry. The hemp PRA would leverage the strengths of the whole industry in the development and execution of its research and promotional plans by actively collaborating with the Canadian Hemp Trade Alliance (CHTA) and the CHTA membership. A collaboration model has been successfully executed in other crop platforms, like canola with “The Canola Council of Canada”, in cereals with “Cereals Canada” and pulses with “Pulse Canada” and forms an important aspect of the agency’s business strategy.

2. A Hemp PRA provides “needed” Geographic Scope

Canadian Hemp producers feel that a Promotion and Research Agency is the only feasible model for the hemp industry to institute a national check-off program. Today, hemp is a geographically diverse crop with production in most Canadian provinces. As illustrated in figure 7, currently 90% plus of production is in the three prairie provinces of Alberta, Saskatchewan, and Manitoba, but as production continues to expand, it is anticipated all provinces are likely to have a hemp acreage base equivalent in percentage terms to their overall cultivated acres.⁹

⁹ 2017 acreage will not be available from Health Canada until the late fall of 2017.

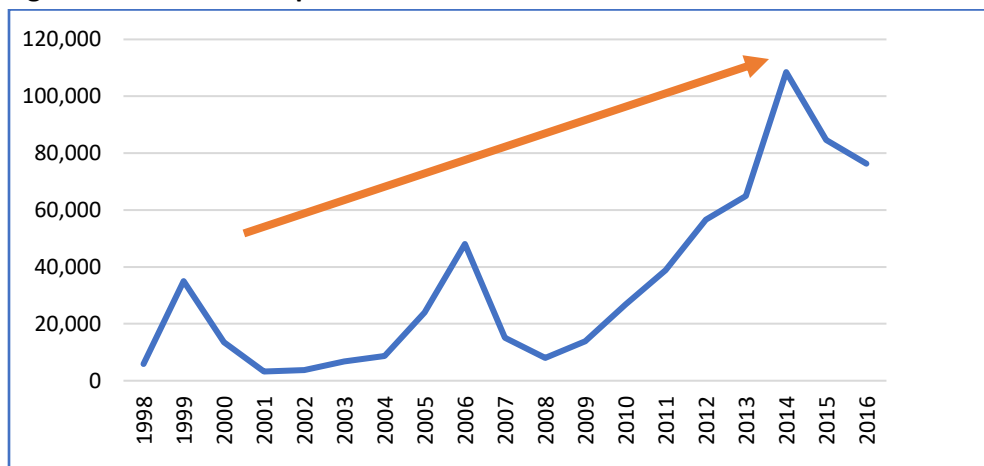
Figure 7: Canadian Hemp Cultivation Acres by Province



Source: Adapted from Health Canada Data

As illustrated in figure 8, years of spikes in production are often followed by lower production years as demand catches up to supply. Like many new crops, supply-demand balance is difficult to maintain within predictable ranges until the industry reaches its full potential. Importantly though figure 8 illustrates how industrial hemp acres are trending up over time.

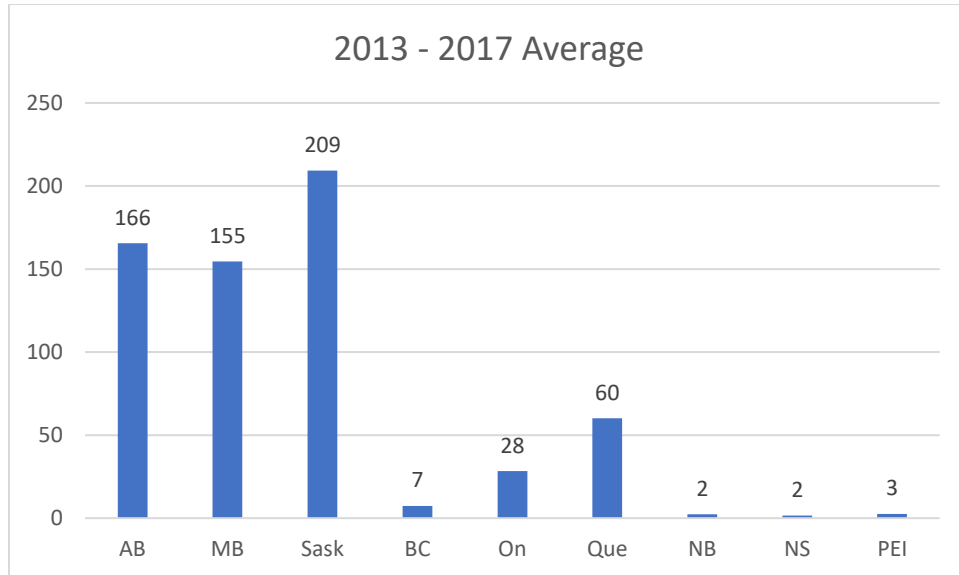
Figure 8: Canadian Hemp Cultivation Acre Trend



Source: Adapted from Health Canada data

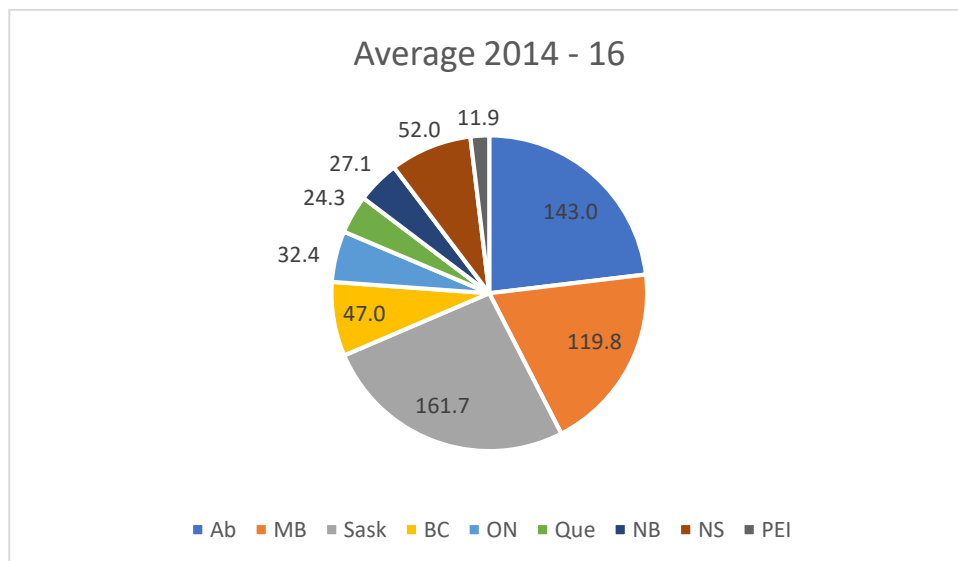
Figures 9 and 10 illustrate how total hemp cultivation licenses and average acres per license vary significantly across Canada. A good deal of the wide variability in average acres relates to farm size and extensive versus intensive production strategies across geographic areas of Canada.

Figure 9: Hemp Cultivation Licenses by Province



Source: Adapted from Health Canada data

Figure 10. Average Acres per Cultivation License by Province¹⁰



Source: Calculated from Health Canada data

The anticipated broad-based growth in acres across all areas of Canada makes a national approach, as provided with a PRA, the best platform for a hemp production levy in Canada. A Promotion and Research Agency achieves three important pillars to the success of a hemp production levy:

¹⁰ 2017 data on cultivation acreage is not available until the fall of 2017 so the three-year average 2014 – 2016 is used to demonstrate acreage trends by province

1. The legal framework for a national levy,
2. The national scope needed without draining resources to establish provincial commissions or agencies for provincial levy collection, and
3. A governance structure, entrenched in the Farm Products Agency Act, that ensures accountability to producers, regardless of where they live in Canada or their contributions to the agency.

3. The Possibility of Hemp being the “next” Cinderella Princess

Canadian agriculture is a significant contributor to the Canadian economy. It has a rich history of developing new crops and creating new opportunities for farmers and industry through crop breeding which can modify existing or create new crop platforms with desirable agronomic and end-use traits. Canola is likely Canada’s best example. Much like Canola evolved from rapeseed, the history and fundamentals of the hemp plant make it an ideal crop to grow and diversify the primary agriculture sector and the agricultural value-added processing industry in Canada. Unique features of the hemp plant include:

1. The breeding elasticity of the hemp species *Cannabis Sativa* L., the hemp species which is the foundation of the industrial hemp industry, due to its genetic diversity. This results in quicker breeding progress for desirable traits than some other crops.
2. Agronomically, hemp grows well in every agricultural area of Canada, providing diversified production options for all Canadian producers.
3. The potential whole crop utilization aspect of hemp creates an unprecedented wide variety of value added opportunities with products that can expand traditional agricultural markets, while also creating opportunities in potential new market categories.

In addition to the unique aspects of the hemp plant, there is production, breeding, processing, and marketing expertise, which collectively provides significant value-added contributions to the Canadian economy. This expertise is also a competitive advantage for the Canadian hemp industry.

4. Canadian Hemp Industry Investment Attractiveness

The growth of Canadian and international markets for hemp seed products has resulted in significant investments over the past few years in all aspects of the industry. For example; there has been growing investment to develop improved seed and fibre varieties, investment in seed cleaning and seed processing facilities, as well as investment in product development and product marketing. While much of the investment is not that visible to the Canadian public, Canada’s investment attractiveness is

illustrated by Compass Diversified Holdings' (CDH) acquisition of majority interest in Manitoba Harvest (Fresh Hemp Foods Ltd) of Winnipeg, Manitoba in 2015. The acquisition allowed Compass to acquire a company that is a pioneer and global leader in branded, hemp-based foods. The subsequent acquisition of Hemp Oil Canada of St Agathe added an experienced private-label packager and processor of hemp foods and ingredients to the company. Another significant investment was Aurora Cannabis (AC) acquisition of a 20% stake in HempCo Food and Fiber Inc. of Nisku, Alberta, in June of 2017, with an option to acquire 50.1% of the company.

The investments by CDH and AC are examples of the interest and strategic opportunities associated with hemp production and processing in Canada. Going forward core investments in research and promotion must be maintained to attract further investment in Canada as other countries also try to capitalize on the growth potential of hemp in a range of consumer markets.

5. Growing Global Interest in Hemp Production and Products

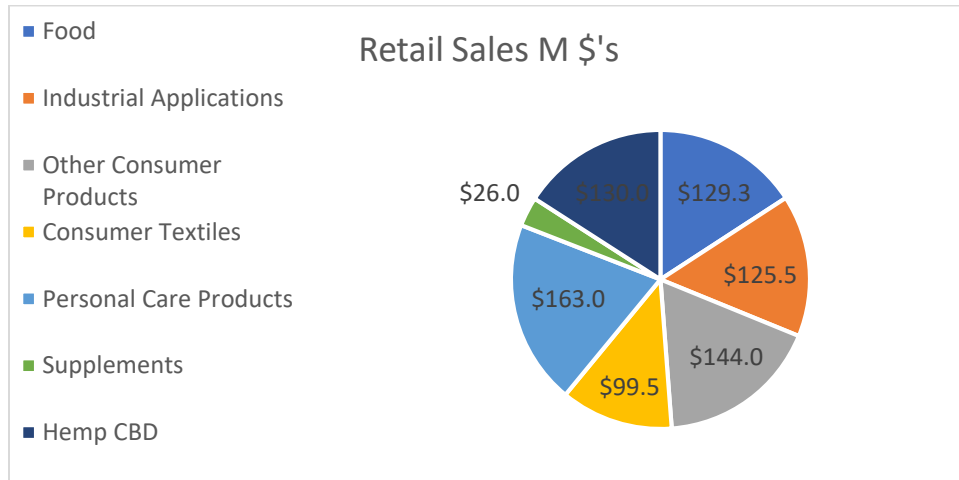
Canada's leadership in hemp variety development, seed production, processing, and branded ingredient and product development, as well as investments by major companies has not gone un-noticed by other jurisdictions globally, particularly the US and China. In the US, hemp growers have advocated for the removal of industrial hemp from the US Controlled Substances Act and have developed strong allies for this policy change in the US Senate and House of Representatives. Beginning with the 2014 US Farm Bill, Federal and State research institutions, State Universities, producers, and commercial entities have been allowed to grow limited amounts of industrial hemp under permits for research purposes. More than 30 states have enacted legislation to set the stage for commercial production of industrial hemp once industrial hemp is removed from the Federal Controlled Substances Act. In addition, in January of 2015, the Industrial Hemp Farming Act was introduced in both the US House of Representatives and US Senate. If passed, the legislation would remove all federal restrictions on the cultivation of industrial hemp in the US and remove its classification as a Schedule 1 controlled substance.

As illustrated in figure 11, current retail sales of hemp products in the US were estimated at \$688 M in 2016 a 25% growth from 2015¹¹. This included products across seven market categories, including food, consumer textiles, personal care products, health supplements, hemp CBD products, industrial applications, and other consumer products. Cumulatively, the overall value of these markets at full

¹¹ Hemp Business Journal and Vote Hemp estimates presented in June 2017 during hemp history week.

penetration of hemp based products dwarfs even the aggressive growth forecast by the Canadian Hemp Trade alliance.

Figure 11: 2016 Estimate of US Retail Sales of Hemp Products



Source: Adapted from Hemp Business Journal and Vote Hemp Estimates

Other jurisdictions that have shown significant recent growth of hemp based food products include south Korea and China. Growth in demand for hemp products in the US and other jurisdictions will be good for the Canadian industry, provided Canadian producers and the value-added industries can stay ahead of the emerging competitive curve. Other crop platforms developed or significantly improved in Canada have shown they can compete successfully. The key is producer and industry leadership on market and trade issues, continual development of better varieties, innovations in production and processing, and other issues that may emerge and cut across the value chain.

6. Why a Hemp PRA is in the National and Public Interest

The vision of the Canadian hemp value chain is of an industry that is significantly larger today in terms of acreage, farm gate revenues per acre, processor revenues and consumer product sales. If these outcomes are achieved there will be significant benefits to hemp producers, the consumers of hemp products, the broader hemp industry and the overall Canadian economy.

Producers will benefit from:

- Increased sales and greater economic returns from growing hemp as the result of expanding domestic and export markets.
- A relatively “high return per acre” crop with relatively low crop input costs.

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- More rapid advancements in research related to production and handling of hemp whether for seed or fibre applications.
- The opportunities created to diversify farm production.

Consumers will or could benefit from:

- Increased access to hemp food products, hemp ingredients, consumer care and fibre products without experiencing any material price increases in products due to the levy on production.¹²
- A credible, trusted, and accessible source of science based facts, information and opinion on all matters related to the hemp industry.
- Increased awareness of the nutritional value of hemp based food products and ingredients and the unique applications and benefits of hemp fibre products.
- Creating emphasis on food safety and raw food processing systems.
- The potential health benefits cannabinoids could bring in treating neurological disorders.

Broader hemp industry will benefit from:

- A credible, trusted, and effective voice with the capacity to understand and address domestic and international trade or product issues which could impact hemp products demand.
- A strong focal point for the assimilation of information and development of industry standards to further grow and develop the industry.
- A credible partner for research and promotional initiatives.

The Canadian Economy will benefit from:

- Increased contributions to the Canadian GDP as value added jobs are added to the agriculture sector.
- Generation of higher revenues from exports of high value-added hemp products.
- Strengthening of Canada's knowledge base and expertise in hemp related research, hemp product development and product marketing.

¹² Appendix 8 illustrates the impact of the levy on consumer products.

Part C: The Hemp Agency Plans

1. Research Plan

There are four markets for hemp based products. These markets are the focus of the research plan. They include food, animal feed, fibre and natural health products, the latter which includes natural health remedies, cosmetics, personal care products, herbal remedies, extracts, supplements, and creams.

The research priorities mirror the market opportunities for hemp and fall into the following areas:

1. Food and Health research on dehulled hemp seed, hempseed oil and hempseed protein and supporting natural health product pre-review research.
2. Agronomic research related to production and harvesting.
3. Fibre research related to yield and fibre quality, the performance of dual seed and fibre varieties and fibre processing.
4. Research on the utilization of hemp as an animal feed.

A more detailed overview of the research priorities by market area is outlined in appendix 7.

2. Promotion Plan

The priorities include:

- a) Spearheading clinical trials and other research needed to demonstrate plant efficacy, which is essential to improved product knowledge needed to gain GRAS¹³ status as well as consumer confidence in hemp products.
- b) Working closely with the CHTA, commercial partners, and the research community targeting domestic and international consumers to grow existing product penetrations.
- c) Developing strategies to support secondary and tertiary processors who could incorporate hemp into their existing products and ingredients.
- d) Advocating for the relaxation of the current hemp regulatory regime. The current regime is a barrier to research, development, and investment in the hemp industry. Removal of these regulatory and licensing requirements on what has been proven to be a "safe" crop over the last 18 years will spur interest and investment in hemp. Permanent improvements the industry wants to see include:
 - Elimination of criminal records checks to issue licenses.

¹³ "Generally Recognized as Safe" according to US Food and Drug regulators, a critical level of acceptance for the food ingredient markets.

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- Less onerous in-field inspections, sampling and sample testing and audits.
- Removal of license restrictions that prohibit or make research and business development difficult. Areas include handling and storage, transport, and the movement of hemp grain as well as other hemp plant parts.
- Removal of restrictions on whole plant use including leaves, flowers, and bracts.

3. Start-up and Ongoing Operational Plan

Once the Minister recommends the Hemp PRA, members of the PRA committee will begin the process of preparing the PRA for start-up, under the assumption that the Governor in Council (GIC), the treasury board and cabinet/PMO will be supportive of the Ministers recommendation.

Priorities for the PRA development committee for the first three months following the proclamation will be to:

1. Establish a transitional board of five producers and 2 non-producers to manage the start-up of the agency.
2. Set up a financial accountability framework and a financial management system.
3. Establish a budget for the first year of agency operations.
4. Formalize contract of services agreements with the Canadian Hemp Trade Alliance on the specific contract services as defined in the legal section of this application.
5. Work with the Federal Department of Justice in the development of the agency levy order.
6. Initiate collection of levies consistent with the agency levy order.

Within the first six months the transitional board will:

- Set out in detail procedural, legal and ethical matters such as conflict of interest parameters, quorum requirements, minimum participation rates, buyer remittance policies, and refund administration policies consistent with the requirements for the Farm Products Agencies Act and the needs of the Agency, to be presented and voted on at the “formation” meeting of the members of the PRA.

Within the first year the transitional board will:

- Facilitate the election of the first board of directors at the “formation” meeting of the new PRA.

Within the first 15 months the elected board will:

- Prepare and submit an annual report to FPCC and the Minister within three months of the end of the fiscal year.

4. Levy Plan

Mandatory Levy

The Agency will be funded by a mandatory levy from hemp growers based on .5 percent of the value of seed and fibre sold into commercial channels in Canada. The levy will be applied to industrial hemp as “*cannabis containing no more than 0.3% delta-9-tetrahydrocannabinol (THC)*”, consistent with the Industrial Hemp Regulations (IHR) and the Controlled Drugs and Substances Act (CDSA) definitions for Industrial Hemp. The levy will be collected at the first point of sale of hemp seed and fibre by the growers.

A levy based on a fixed percent of value of seed and fibre was chosen as the best approach for the hemp industry. A value based levy works better in situations where a levy is collected on different production components of a crop, which is the case for hemp. It is also important that levy amounts and mechanisms, to the extent possible, do not discriminate or create wide variations in contributions per acre based on production strategies, for example organic versus conventional production. Wide variances are likely to lead to issues for the agency with its members. Table 1 illustrates the degree of variability on per acre payments with a .5 % and a 1.0% levy, and why a .5 % levy was considered by the committee as the best option while still meeting the start-up financial needs of the agency.

Table 1: Impact of Levy Rates on Per Acre Contributions

Levy Options	Conventional Production (800 pounds per acre x \$.80 cents per pound)	Organic Production (520 pounds per acre x \$1.60 per pound)	Levy variability per acre
% of value Levy .5 %	\$3.20 per acre	\$4.16 per acre	\$0.96
% of value Levy 1.0 %	\$6.40 per acre	\$8.32 per acre	\$1.92

Notes to table 1: Conventional hemp seed yields under non-irrigated production generally range from 700 to 900 pounds per acre. Organic seed production generally ranges 60 to 70 % of conventional yields depending on an individual producer’s production expertise. Lower seed yields under organic production are offset by higher prices, with organic hemp seeds values often averaging double conventional seed prices.

Crop producers across Canada are aware actual levy amounts per acre will have variances when crops have widely dispersed geographic production areas and diverse production techniques – dryland versus irrigation production, as well as conventional versus organic are common examples of hemp production diversity. It is not unusual for yields of crops to vary as much as 100 % across the prairies, as yields are generally much higher in parkland areas versus the dryer southern regions of Saskatchewan and Alberta. In every crop and model per acre levy variances will exist so it is important to focus on fairness when positioning and communicating the levy. Table 2 illustrates how the value levy strategy versus a production levy strategy, although identical in actual levies that would be paid per acre, could be perceived very differently by producers.

Table 2: Illustration of Potential Levy Variability Perceptions

Levy Options	Conventional Production (800 pounds per acre x \$.80 cents per pound)	Organic Production (520 pounds per acre x \$1.60 per pound)	Levy variability
% of value Levy .5 %	\$3.20 per acre	\$4.16 per acre	30%
Production levy equivalent	.004 cents per pound	.008 cents per pound	100 %

Other considerations in the decision to utilize a percent of value levy included:

- This approach is currently used on many major and minor crops across jurisdictions already¹⁴ and the approach is well accepted by producers.
- The value approach is also easy to administer for the buyers of hemp seed and fibre, the collectors of the levy.

Levy collection strategy

The Hemp Promotion and Research Agency will collect levies on whole seed and fibre on interprovincial trade immediately after the agency proclamation, and on intraprovincial trade as soon as delegation of authority agreements exist. There will be no production thresholds that would trigger participation for those growing hemp seed or fibre for commercial purposes. Once operational, the decision on whether to expand the levy to imports and exports will be reviewed on a regular basis, taking into consideration

¹⁴ See appendix 9 for examples of jurisdictions and crops where a percent of value levy is utilized.

the volume trends of imports and exports and their implications to potential PRA revenues and net benefits to the agency. Currently a levy on imports and exports would be immaterial to the operation of the agency. Imports of raw seed did grow in 2016 but this was due to processors being unable to secure sufficient supplies of certified organic hemp domestically. While approximately 620,000 pounds of raw seed was imported in 2016, based on the weighted average acreage mix and yields of organic and conventional hemp, the total acres represented if the hemp was grown in Canada would be less than 1,000 acres. This amount of acreage is likely to be contracted in Canada by processors in the future.

Refundable Levy

The Hemp Promotion and Research Agency policy will be to allow all producers who pay the mandatory levy, whether on interprovincial or intraprovincial trade, to request a partial or full refund of the levy from the agency provided the producer requesting the refund:

1. Provides evidence to the satisfaction of the agency they paid the mandatory levy.
2. Provides a refund request that is consistent with the agencies levy records.
3. Shows that the province where the producer resides allows for such refunds.

Refundable levies are common in western Canada and provincial governments indicate they have little appetite for regulatory frameworks or policies that don't allow levy refunds. Governments and particularly producers in western Canada see refundable levies as an important aspect of commission and association governance, in that the opportunity for a refund provides a formal mechanism for organizations to be accountable to producers.

Refundable levies are not as common in eastern Canada, and tend to be livestock versus crop orientated. When the Hemp PRA committee put forward the options of a refundable or non-refundable levy at producer meetings there was majority support for a refundable levy in both eastern and western Canada.

Levy refund policies can be viewed as imposing unnecessary financial risk to organizations and raise concerns about free-rider-ship by producers who regularly request a refund. The facts however do not justify these concerns. Most commissions in western Canada have the option for a levy refund in their regulations, yet refunds are not a significant issue for the commissions operations. Industry data shows that refunds are relatively consistent year to year on a percentage of revenue basis. Typically refunds

range from 3 to 7 percent of revenues.¹⁵ Based on this analysis, refunds are budgeted at 5 % of revenues in the Hemp PRA revenue model.

Table 3: Levy Strategy for Hemp Seed and Fibre

Levy strategy		
	Seed	Fibre
Products	Whole Seed	Plant residue following harvesting of seed (not including sprouts, leaves, flowers, or bracts of those plants)
Levy formula	.5 % of Net* value paid to the seller	.5 % of Net* value paid to the seller
Mandatory	Yes	Yes
Refundable	Yes	Yes
Imports	Not Initially	Not Initially
Exports	Not Initially	Not Initially

*Assumes net proceeds from cleaned seed and removal of non-hemp waste from the whole plant in the case of fibre.

In terms of processed product exports, the levy would have been collected on the sale of hemp seed or fibre to the processors and / or production contractors prior to the seed or fibre being processed. Raw seed or fibre exports exported directly by a producer could avoid the levy unless there is a mechanism to collect at the first point of sale in the importing country, however most of the raw hemp seed export trade is conducted through Canadian companies or brokers who take title to the product prior to it being exported.

Legal authority

The legal authority for levy collection on interprovincial hemp trade would be achieved through a levies order granted to the PRA once the PRA is proclaimed. On intraprovincial hemp trade the legal authority for levy collection will be achieved, wherever possible, via agreements between the Federal Government and Provinces on functions related to intraprovincial trade, including levy collection. Should “*Delegation of Authority*” agreements not be achieved between the Federal Government and some Provinces, the agency will only collect levies on interprovincial hemp trade from those provinces, unless other options that provide legal authority for intraprovincial levy collection are financially viable for the Hemp PRA can be put in place.

¹⁵ See appendix 10 for the levels of levy refunds for various crop commissions.

Levy Collection and management

The administration of all aspects of levy collection initially will be managed by the CHTA under a formal contract agreement with the agency. The Board of Directors have the governance responsibility to ensure that the levy administration is consistent with the Federal PRA levies order approved by the Governor in Council and any provincial legislation.

5. Projected Agency Revenues and Budget Allocations

Projected Agency Revenues

The projected annual revenues from seed levies in the first years of Agency operation range from \$190,000 to \$210,000, based on levy collections on interprovincial trade only. These projections are based on historical seed production and price levels of conventional and organic hemp and conventional and organic production share of total hemp acres harvested for seed. Revenues from fibre are expected to be modest in the first years of the PRA operations as this sector of the industry is just emerging and most trade in hemp fibre is on an interprovincial basis. It is estimated that about 1000 acres are harvested for fibre in Canada annually with yields averaging 3 tonnes per acre. The farm gate value of the fibre is averaging \$150.00 per tonne. Based on these production and price levels, revenues from fibre if intraprovincial and interprovincial trade were included, would be in the range of \$2,500 annually. Realistically though, intraprovincial revenues in fibre are expected to be less than \$1,000 annually.

Budget Allocations

The Agency will have three (3) budget categories: General Administration, Research, and Business Development and Promotions. Directionally it is the intent of the agency to allocate non-reserve revenues on the following percentage basis.

Table 4: Budget Categories and Allocations

Budget Category	Funding allocation %
Contract services related to the management and administration of the PRA	36 % = ~ \$70 k*
Research Activities	32 % = ~ \$60 k*
Business Development and Promotions	32 % = ~ \$60 k*

* based on forecast first year revenues of \$200 k less refunds of \$10,000 (5 % of revenues)

The agency forecast of operating expenses at 36 % of revenues in the first year of operation will reduce in percentage terms as agency revenues grow with acreage expansion. For example; a 50 % growth in acreage at current seed prices would result in an incremental \$150,000 in revenue with no anticipated

changes in administration costs. A key objective of the board will be to minimize administration costs so maximum revenues can be directed to Research and Business Development and Promotions. See appendix 8 for the agency revenue projection model. It should be noted that the revenue model does not include revenues for hemp fibre which currently would be very modest but as the fibre segment of the industry grows it will also contribute to the revenues of the agency.

The agency's "Research" and "Promotions" budgets could benefit by leveraging agency funds to secure federal and provincial government research grant or program funds and by partnering with industry and the research community. In some cases, combined federal and other government (provincial, territorial, municipal, other) program contributions can cover up to 85% of research and business development projects. This results in a substantially increased research and business development investment capacity. An annual assessment by the agency board will be carried out to determine available programs, and guide agency investment decisions in research and promotions.

As production and thus levy revenues increase the percentage of funds flowing to "Research" and "Promotion" will increase.

Building a Reserve Fund

It is the intent of the Hemp PRA to have a policy that allows the PRA to build reserve funds in the event of volatility in production as the organization develops. The goal of the reserve strategy will be to have funds in place to manage existing research and promotional commitments for a pre-determined period. A responsibility of the first elected board will be to develop and recommend a reserve fund plan strategy for membership consideration.

6. Ensuring the Successful Operation of the Hemp PRA

There are no specific issues that need to be resolved for the hemp PRA to operate. The hemp PRA can operate successfully with levies on the 65 % of trade that is interprovincial which will initially generate revenues in the range of \$200 thousand annually. Once proclaimed the agency will work with provinces and the federal government to establish delegation of authority agreements or other mechanisms so the agency can also collect levies of intraprovincial trade.

As background, there currently are no provincial producer organizations¹⁶ specific to hemp which could transition to regulated organizational platforms for intraprovincial levy collection. Rather than establish regulated hemp producer organizations in provinces, Canadian hemp producers who are active in the industry, have preferred to be members of the Canadian Hemp Trade Alliance. The broad membership in the CHTA provides industry scope which can assist the agency as it develops its research and development plans.

The option of establishing an umbrella agency with formal links to regulated provincial hemp organizations was evaluated as a mechanism to enable the collection of levies on intraprovincial trade. There is one umbrella model currently in existence that could be relevant to hemp. It is the Prairie Oat Growers Association or POGA. In the POGA model, three provincial oat grower commissions were established, one in each of the three prairie provinces. The provincial commissions serve as the legal framework to collect intraprovincial levies. The three provincial commissions then provide defined financial support via formal agreements to the umbrella organization, the Prairie Oat Growers Association. The funds provided to POGA are invested in research and market development initiatives and used to cover POGA's annual operating costs. While this appears to work well for the prairie oat industry, the challenge for the hemp industry is the set-up costs to establish and the ongoing annual operating costs directly related to meeting regulatory requirements of individual provincial commissions. In the POGA model the three provincial commissions have fixed regulatory costs that collectively are in the range of \$75 k annually, regardless of the commissions' annual revenues. An evaluation of hemp intraprovincial trade volumes in the three prairie provinces, at the levy amount being proposed, would generate approximately \$65 k in revenues for the hemp PRA. Therefore, establishing the provincial commissions would be financially negative to the PRA in the first years of operations and a drain on finances even as production volumes grow.

Processors who buy hemp from producers also indicate they would not be supportive of dual levy mechanisms as that would increase the administrative burden and costs for their organizations.

Given the situation outlined above, the hemp PRA committee has focused on working with the prairie provincial regulatory agencies for Commissions and Boards and Provincial Agricultural Ministries,

¹⁶ Parkland Industrial Hemp Growers Co-op (PIHG) operate out of Dauphin, Manitoba with a focus on selling hemp products produced by their members, Under Manitoba provincial regulations a "Hemp commission" could not operate as a co-op.

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briefing them on the hemp PRA application and asking for their consideration of “delegation of authority” agreements on intraprovincial trade once the hemp PRA is proclaimed.

All three Agricultural Ministries in the three prairie provinces have expressed support for a hemp PRA. In addition, the Saskatchewan and Manitoba Governments have indicated they will consider a federal-provincial agreement that allows for the collection of levies on intraprovincial trade. In the case of Manitoba, the committee has a verbal indication of support from the Minister of Agriculture and the Minister has indicated a letter indicating that support will be provided. Delegation of authority agreements with Saskatchewan and Manitoba would result in an incremental 28 % of total available levies, or 93 % of all levies, coming into the hemp PRA revenues. This is due to the relatively large amount of hemp grown and processed in Manitoba.

In Alberta, the Minister, and the Provincial regulatory agency with oversight for commissions and boards have the view that the hemp industry should establish a provincial commission or have hemp as part of an already existing provincial commission. In either of these cases, an Alberta plan regulation for hemp would be required to provide legal authority for levy collection on Alberta intraprovincial trade. This would result in significant incremental costs, as outlined above, for the hemp PRA, with no clear benefits to Alberta or Canadian hemp growers.

As the PRA application moves through the review process the committee will continue to work with Alberta to address concerns that may be impacting their willingness to enter into a delegation of authority agreement. The agency will approach other provinces with respect to delegation of authority once the agency is proclaimed. See appendix 5, letters on the hemp PRA application from the Saskatchewan and Alberta Ministers of Agriculture.

Part D: Evidence of Support for a Hemp PRA

Hemp producers in conjunction with the CHTA have and are taking the following steps to determine producer support for a Hemp PRA.

1. Determination of Support to Initiate Development of a PRA Application

The first step was producer consultation meetings in the Spring of 2016 where hemp producers across Canada were introduced to the concept of a PRA. Those meetings demonstrated there was overwhelming support for moving forward with a Hemp PRA application with a mandatory and refundable levy of .5 % of the value of production on hemp seed and fibre. The following table provides a summary of hemp producers' views on whether they supported a national levy and if they did their preferred levy approach – mandatory and refundable or mandatory and non-refundable. For producers who supported a levy on hemp the two choices were mutually exclusive.

Table 5: Results of Producer Meetings in March of 2016

Province	Support Mandatory .5 % Refundable Levy	Support Mandatory .5% Non-refundable Levy	Do not support Levy
Ontario	12	5	2
New Brunswick	1	0	0
Quebec	7	1	1
Manitoba	16	9	1
Saskatchewan	14	4	0
Alberta	37	7	1
T o t a l:	87	26	5

In total 118 producers participated in the meeting of which 113 (87 + 26), or 95 %, supported moving forward with a Hemp PRA application with and levy of .5 % on hemp seed and fibre. The 118 producers in attendance at the meetings represent approximately 20 % of current hemp producers in Canada.

2. Determination of Majority Support for a Hemp PRA

The second step was the initiation of a survey of hemp producers across Canada to determine if there is majority support amongst producers for the establishment of a Hemp PRA. The fact that there is the requirement to be licensed to cultivate industrial hemp provides a highly reliable count of the number of hemp producers by province in Canada. This allows majority support for a Hemp PRA by hemp producers to be defined in precise terms.

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Health Canada indicates there are 534 main licenses in 2017. The main licence covers the licence holder for all cultivation activities, therefore main licenses will also include researchers who are not producers. In Canada, there are 10-15 organizations who have cultivation licenses for breeding or other research on an annual basis. Therefore, actual hemp producers in 2017 are in the range of 520 to 525.

A survey of hemp producers is currently in progress. The English and French versions of the survey are provided in appendix 6. The survey was electronically mailed to hemp producers utilizing contact information provided from Health Canada and the CHTA producer membership list. In addition, surveys were electronically mailed to hemp producers who are members of cooperatives or companies that contract and / or process hemp. The survey asked producers whether they supported a Hemp PRA under the terms being proposed in this application.

It is anticipated that many hemp producers will return the survey without further follow-up. In addition, producers who have not personally replied to the survey by October 15th will be contacted and given assistance to complete the survey. The full survey results and determination of majority producers support for the Hemp PRA will be completed by year end 2017.

Part E: Legal Establishment Plan

1. Hemp Promotion and Research Agency Governance

Currently the Canadian hemp industry has a relatively small number of stakeholders, but through the efforts of the CHTA there is active participation in developing the industry from across the hemp value chain. The producer proponents of the agency want to maintain this inclusive culture and leverage the leadership and management strengths of the CHTA to support industry development while meeting the governance requirements outlined in the Farm Products Agency Act.

In compliance with the afore-mentioned objective, and consistent with the Agencies Act, the Hemp PRA once proclaimed will be a body corporate operating on a “not for profit” basis arms length from the CHTA. Operating as a “not for profit” Canadian Corporation is consistent with the purpose, ownership, and producer and public good mandate of the agency and the legal framework under which it is established. The agency, while not owned by hemp producers, is directly accountable to them by ensuring levies are funneled into activities that represent their interests and are consistent with a PRA mandate to promote a strong, efficient, and competitive industry. Crop commissions, associations or agencies generally operate as not for profit corporations in Canada and operate in accordance with Canadian accounting standards for not-for-profit organizations (ASNFPPO). It is the intent of the Hemp PRA to operate within these standards.

The Agency structure will consist of a seven-member Board of Directors (BOD) made up of 5 producers, one from each of the five largest hemp producing provinces and 2 non-producer directors, one who represents Canadian hemp processors and one who represents Canadian hemp researchers. The directors will be elected by the membership at the annual agency AGM. The Officers of the Agency will include a chair who would be the chief officer of the agency, a vice-chair, and secretary-treasurer. The chair will preside over all meetings of the board of directors. The vice-chair would preside over meetings of the board of directors in the absence of the chair. The secretary treasurer will be responsible to the board for reporting, in a timely matter, on matters relevant to the financial management of the agency.

The chair, vice-chair and secretary/treasurer would be appointed by a resolution of the board. The agencies board of directors will be responsible for:

1. Due diligence ensuring the agency meets the requirements of all relevant federal and provincial statutes, regulations, standards, and procedures.

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2. Approval of the annual “Research” and “Promotional” plans.
3. Approval of the annual budget.
4. Usage and disbursements of all funds received via levies or other sources.
5. Approval of all agency contracts.
6. Approval of the annual audit and addressing any observations or concerns.
7. Preparation and approval of the agencies annual report.

There will be two standing committees, a “Promotions Committee” and a “Research Committee”.

Standing committees and their Roles and Responsibilities

- **Promotions committee**
 - Recommend and implement the board approved “Promotion” plans and projects for the agency.
- **Research Committee**
 - Recommend and implement the board approved “Research” plans and projects for the agency.

2. Agency Operations

Headquarters

The Agency office will be headquartered in Winnipeg, Manitoba.

Contracting services

The agency will contract administrative services from the CHTA to minimize duplication and reduce overhead costs while also improving general efficiency and cooperation between the organizations.

An overview of the administrative services that will or could be contracted to the CHTA are outlined in table 6.

Table 6: Administrative Services to be Contracted to the CHTA

Administration Services
General administration of PRA – Coordination of meetings and events, record keeping, compliance with requirement of the Farm Products Agency ACT and other administration as required by the PRA board.
Levy collection and administration – accounting, data entry, banking, refund administration, communications with levy collectors, monitoring collections, regular reporting to board on collection status and issues.
Research Plan - execution and administration
Business Development and Promotions Plan - execution and administration

Financial Operations – general accounting, arranging for the PRA audit and supplying auditor with all requests for information, preparing financial and project status reports for the board, FPCC reports.
Member and external communications – execute the approved communication plans

3. Member Engagement

The agency will remain accountable to producers and other stakeholders via communication tools and activities such as, electronic newsletters, open meetings, an annual general meeting, and other events as determined by the Board.

4. Assessment

The Agency will undergo a strategic review of its operations after the first year of operation and every three years thereafter. The Board will develop an action plan that will be implemented to address any corrective measures deemed necessary. Any changes the Board is recommending to governance can only be approved by a quorum of members (producers) at the annual general meeting and must be consistent with the requirements of the Agencies Act.

Appendices

Appendix 1 – List of Figures and Tables

- a) List of Figures:
 - 1. Structure of the Canadian Hemp Seed Industry
 - 2. Products Derived from Hemp Seed
 - 3. 2014 – 2016 Average Hemp Seed Production by Province
 - 4. Interprovincial Trade of Hemp Seed
 - 5. Historical Canadian Exports of Hemp Products
 - 6. Historical Canadian Imports of Hemp Products
 - 7. Canadian Hemp Cultivation Acres by Province
 - 8. Canadian Hemp Cultivation Acre Trend
 - 9. Hemp Cultivation licenses by Province
 - 10. Average Acres per Cultivation License by Province
 - 11. 2016 Estimate of US Retail Sales of Hemp Products
- b) List of Tables:
 - 1. Impact of Levy Rates on Per Acre Contributions
 - 2. Illustration of Potential Levy Variability Perceptions
 - 3. Levy Strategy for Hemp Seed and Fibre
 - 4. Budget Categories and Allocations
 - 5. Results of Producer Meetings in March of 2016
 - 6. Administrative Services to be Contracted to the CHTA

Appendix 2 - Hemp Seed Processors and Food Manufacturers in Canada

- British Columbia
 - I. HempCo Canada – Unit 112, 5589 Burne Road, Burnaby, BC V5J 3J1 604-431-8787
 - II. North American Hemp Grain – 9 – 45905 Yale Road, Suite 459, Chilliwack, British Columbia 1-888-265-0811
 - III. ACI Foods – # 306 – 31127 Wheel Avenue, Abbotsford, BC 604-870-9806
 - IV. Naturally Splendid Ent. Ltd, 108 – 19100 Airport Way, Pitt Meadows, BC 877-251-7333
- Alberta
 - I. Rocky Mountain Grain Products – Box 550, Lethbridge, Alberta T1J 3Z4 403-329-1380
 - II. Gold Top Organics - 1419 Township Rd 512, Stony Plain, AB T7Z 1X1
- Saskatchewan
 - I. Bioriginal – 102 Melville Street, Saskatoon, Sask. S7J 0R1 306-975-1166
 - II. Farmer Direct Cooperative – 1024 Winnipeg Street, Regina, Sask., S4R 8P8 306-352-2444

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- III. Hemp Production Services – 706 – 6th Avenue, Saskatoon, Sask. S7K 2S9
- IV. Agronart Corporation – 5329 Whereatt Road, Regina, Saskatchewan S4W 0K3
- V. Terramax Seeds – 64 North Pacific Avenue, Qu'Appelle, Saskatchewan. S0G 4H0
- Manitoba
 - I. Fresh Hemp Foods – Winnipeg (formed when the parent company of Winnipeg Harvest, Compass Diversified Holdings, acquired Hemp Oil Canada of St Agathe, MB. They are located at 2166 Notre Dame Ave, Winnipeg, MB R3H 0K2
 - II. Northern Oilseed Mills – 131 Main Street, Rossendale, Manitoba
 - III. Hemp Sense – Box 9, Gilbert Plains, Manitoba R0L 0X0
 - IV. Interlake Agri – Box 443, Fisher Branch, Manitoba R0C 0Z0
 - V. Better Hemp Company – 900 Fisher Ave East, Portage La Prairie, MB R1N 3L5
 - VI. Midlake Specialty Food Products, 460 River Road, Arborg, Manitoba R0C 0A0
- Ontario
 - I. Mettrum Originals – 2133 Forbes Road, Barrie, Ontario L4M 4Y8
- Quebec
 - I. Aliments Trigone – 93 Ch de L'Aqueduc, St Francois de la Riviere du Sud, Quebec.
- New Brunswick
 - I. Arcadia EcoEnergies, 1757 Route 640, Suite 6, Fredericton, NB. E3C 2B9

Appendix 3 – Hemp Fibre Processors and Product Manufacturers in Canada

- Alberta
 - I. Canadian Greenfield Technologies Corporation – # 159, 3953 – 112th Ave. SE, Calgary, Alberta T2C 0J4
 - II. Just BioFiber – 2916 5th Avenue NE, #12 Calgary, Alberta T2A 6K4
 - III. TTS Sustainable Biocomposite Technologies – 9527, 49th Ave. NW, Edmonton, Alberta T6E 5Z5
 - IV. BioComposites Group Inc, 3250 – 50th Street, Drayton Valley, Alberta T7A 0C6
- Manitoba
 - I. Hemp Sense – Box 9, Gilbert Plains, Manitoba R0L 0X0 204-548-2782
 - II. Plains Industrial Hemp Processing – Box 487, 114 Veterans Drive, Gilbert Plains, Manitoba R0L 0X0
- Quebec
 - I. Logistik Unicorp – 820 Chemin du Grand Bernier N, Saint-Jean-sur-Richelieu, QC J2W 0A6

Appendix 4 – Canadian Importers of Industrial Hemp

This is not a comprehensive list. The individuals/companies listed below have given consent to Health Canada for the publication of contact information when they applied for an import license.

- **2016 Import Licenses**
 - I. Absorbent Concepts Inc. Abbotsford, BC 604-224-6404
 - II. Northern Oilseed Mills. Rossendale, Manitoba. 204-252-3900
 - III. S.G Ceresco Inc. St. Urbain-Premier, Quebec. 450-427-3837
 - IV. Bioriginal Food and Science Corp. Saskatoon, Saskatchewan. 306-975-9294
- **2017 Import Licenses**

CANADIAN HEMP PROMOTION AND RESEARCH AGENCY

- I. Absorbent Concepts Inc. Abbotsford, BC 604-224-6404
- II. Northern Oilseed Mills. Rossendale, Manitoba. 204-252-3900
- III. S.G Ceresco Inc. St. Urbain-Premier, Quebec. 450-427-3837
- IV. Bioriginal Food and Science Corp. Saskatoon, Saskatchewan. 306-975-9294
- V. Jeffrey Kostuik. Russell, Manitoba. 204-821-0522
- VI. Hugh Campbell. Qu'Appelle, Saskatchewan. 306-699-7368
- VII. Ernest Holinaty. Porcupine Plain, Saskatchewan. 306-278-3118

Appendix 5 – Support letters from Provincial Governments

Saskatchewan Ministry Letter



June 22, 2017

Mr. Russ Crawford, President
Canadian Hemp Trade Alliance
PO Box 1484
STEINBACH MB R5G 1N2

Dear Mr. Crawford:

Thank you for your June 2, 2017 letter regarding the establishment of a Promotion and Research Agency (PRA) for hemp in Canada. Based on the background information you have provided to Ministry staff, there appears to be significant opportunity and potential for growth in the hemp industry.

With that potential in mind, and recognizing that the industry has not reached a point where provincial agency operations would be feasible, I am supportive of the concept of a national PRA for hemp. The Ministry will continue to explore this option, participate in discussions with our federal counterparts, and we will consider a federal-provincial agreement that allows for the collection of levies on intra-provincial trade. Please consider this letter a formal indication of my support for the creation of a PRA for hemp, pending the outcomes of discussions moving forward and the continued benefit to Saskatchewan of such an agency.

Thank you and the Canadian Hemp Trade Alliance, for the leadership role you have taken in the development of this burgeoning industry.

Sincerely,

A handwritten signature in blue ink, appearing to read "Lyle Stewart".

Lyle Stewart

○ Alberta Ministry Letter

Mr. Russ Crawford

CANADIAN HEMP PROMOTION AND RESEARCH AGENCY

President, Canadian Hemp Trade Alliance

Dear Mr. Crawford:

Thank you for your May 12, 2017, email regarding the Canadian Hemp Trade Alliance (CHTA) proposal to form a Promotion and Research Agency (PRA) through the federal *Farm Products Agencies Act*. Alberta Agriculture and Forestry staff have followed up with the Saskatchewan Agri-Food Council who have indicated that they agree with the concept of a PRA in relation to federal jurisdiction, but have not made a decision regarding potential delegation of provincial authority to collect service charges on intra-provincial trade.

While I also support the concept of a PRA for the industrial hemp industry in Canada, further analysis is required, such as:

- Consultation with Alberta producers and demonstrated support as it relates to the establishment of a PRA;
- Understanding of how a PRA would benefit Alberta producers;
- Evaluating the option of establishing a provincial commission under the *Marketing of Agricultural Products Act*, or amending a current commission to include industrial hemp as a regulated product to further the interest of Alberta's industrial hemp producers; and
- Understanding the potential impact of the changing legislative landscape at the federal level to ensure decisions are made with a strategic, long-term lens.

The delegation of provincial authority to collect a service charge on intra-provincial trade is a significant decision, and I look forward to continuing our discussion on this matter as it progresses.

Thank you again for writing.

Sincerely,

Oneil Carlier

Minister

Agriculture and Forestry

cc: Norine Moore, Chair, Alberta Agricultural Products Marketing Council

AR 60304

- **The Manitoba Government has indicated they will provide a letter indicating their support for the hemp PRA**

Appendix 6 – Producer Survey Questionnaire

ENGLISH

Press Release

For Immediate Release

Wednesday July 12, 2017

Survey launched to determine producer support for a Promotion and Research Agency for Industrial Hemp Producer members of the Canadian Hemp Trade Alliance are developing an application to be submitted to the Federal Government for the establishment of a Promotion and Research Agency (PRA). For the application to be accepted, the majority of Canadian hemp producers must support the establishment of the agency.

The sponsors of the application will be surveying Canadian industrial hemp producers to determine the level of support for a producer directed PRA. Producers who applied for a cultivation license to grow industrial hemp over the past three years should receive a survey.

Much like commissions and boards in other crops, a hemp PRA would collect a levy on the primary delivery of hemp. Meetings with close to 120 hemp producers across Canada in the spring of 2016 demonstrated there was strong support for a PRA. Producers at those meetings voted 95 % in favor of a mandatory refundable levy of 0.5 % of the value of sales of industrial hemp seed and fibre. Governed by an elected producer board, the PRA would invest funds in research, promotion and market development activities for the benefit of producers and the entire hemp industry.

In many cases funds collected through levies can be leveraged with federal and provincial programs or industry partners on specific projects and research. "Hemp is currently produced in nine provinces across Canada, so we feel a national agency is the best approach for producers across Canada to invest in and grow their industry" states Don Dewar, Chair of the producer committee proposing the application. "We are excited about the potential of hemp"; says Don. "It grows well in all agricultural regions of Canada, great strides have been made in developing varieties that perform well agronomically and are easier to harvest, and most importantly, the processors are working hard to develop domestic and international markets for hemp based products".

The survey is on an electronic platform and will take less than 2 minutes to complete so we hope producers will take the time to give us their opinion. The survey can be found at <http://business.hemptrade.ca/form/view/10148>

Once the survey information is in the committee will decide how to proceed with the PRA application. For more information contact:

- Don Dewar, Dewar Seed Farms, Dauphin, Manitoba 204-648-4649
- Reuben Stone, Stone Farms, Cobden, Ontario 613-281-2734
- Nathan Nieboer, Quattro Ventures, Bow Island, Alberta 403-545-2222
- Dalyce Brewin, Rowland Farms, Taber, Alberta 403-223-8164
- Larry Marshall, Marshall Farms, Shellbrook, Saskatchewan 306-747-2725

FRENCH

Communiqué de presse

Pour diffusion immédiate

Mercredi 26 juillet 2017

Sondage pour déterminer l'appui des producteurs à la création d'un Office de promotion et de recherche pour le chanvre industriel

Des producteurs de chanvre, membres de l'Association canadienne du commerce du chanvre (ACCC), veulent créer un Office de promotion et de recherche (OPR) dédié au chanvre, en déposant une requête au gouvernement fédéral. Pour être recevable, la demande de création de l'OPR doit bénéficier de l'appui de la majorité des producteurs canadiens de chanvre.

Dans ce contexte, les promoteurs de l'OPR désirent sonder les producteurs canadiens de chanvre afin de déterminer leur intérêt. Les producteurs appelés à compléter le sondage sont ceux ayant obtenus une licence de culture de chanvre, octroyées par Santé Canada, au cours des trois dernières années.

Comme pour tous les OPR existants au pays, celui dédié au chanvre aurait la responsabilité de prélever une redevance sur la valeur des ventes primaires des produits du chanvre, soit le grain et la paille. La tenue de diverses rencontres avec des producteurs de chanvre, au printemps 2016, a permis de constater un fort appui de leur part, à 95 % favorable à la création d'un OPR. Ils ont également voté pour un prélèvement de 0,5 % de la valeur des ventes des produits du chanvre. L'OPR serait administré par un conseil de producteurs agricoles élu. L'OPR coordonnerait la stratégie nationale de promotion, de recherche et de mise en marché du chanvre et de ses produits, au bénéfice des producteurs et de l'ensemble de l'industrie canadienne du chanvre.

Dans la majorité des cas, les fonds prélevés serviraient d'effet levier auprès des programmes de recherche fédéraux ou provinciaux, ou dans certains cas, avec des partenaires industriels pour la réalisation de projets de recherches spécifiques. Selon le président du comité demandeur et producteur agricole, Don Dewar, « Le chanvre est actuellement cultivé dans neuf provinces au Canada, de sorte que nous [le comité] estimons qu'un Office nationale serait le meilleur moyen pour les producteurs canadiens de chanvre d'investir et de faire croître leur industrie. Nous sommes impressionnés par le potentiel du chanvre. Il se développe bien dans toutes les régions agricoles du pays, de grandes avancées ont été réalisés dans le développement de variétés performantes au niveau agronomique et qui sont plus faciles à récolter, et surtout, les transformateurs travaillent fort pour développer les marchés nationaux et internationaux pour les produits à base de chanvre ».

Le sondage est sur une plateforme électronique et prendra moins de 2 minutes pour être complété. Nous invitons les producteurs à s'exprimer en grand nombre.

Lien vers le sondage : <http://business.hemptrade.ca/form/view/10293>

Une fois la période de sondage complétée, le comité prendra connaissance des résultats et procédera ou non avec la demande de l'OPR.

Pour plus d'informations, contactez:

- Don Dewar, Dewar Seed Farm, Dauphin, Manitoba 204-648-4649
- Reuben Stone, Stone Farms, Cobden (Ontario) 613-281-2734
- Nathan Nieboer, Quattro Ventures, Bow Island, Alberta 403-545-2222
- Dalyce Brewin, Rowland Farms, Taber (Alberta) 403-223-8164
- Larry Marshall, Marshall Farms, Shellbrook, Saskatchewan 306-747-2725

Appendix 7 - Research Plan Priorities by Market Area

a. Food and Health

- a. Effects of dehulled hempseed, hempseed oil and hemp protein.
- b. Biomarkers for Cardiovascular disease: Serum lipids, inflammatory biomarkers, etc.
- c. Biomarkers for diabetes: Glucose, insulin sensitivity, hemoglobin A1C, etc.
- d. Satiety and weight control.
- e. Supporting natural health products pre-review research in areas like safety and efficacy.

b. Agronomy

a. Production

- i. Maximum economic fertility levels.
- ii. Green manure varieties and termination dates for maximum soil nutrition.
- iii. Effects of extreme seeding dates – yield, height, biomass.
- iv. Economics of soil amendments.
- v. Evaluating new weed control products or methods - Minor Use – conventional and biological.
- vi. Pest controls.

b. Harvesting

- i. Modifications to equipment – saving more seed during high moisture harvesting.
- ii. Reducing aeration drying time – horizontal air flow in bins.
- iii. Methods of incorporating all post-harvest fiber.

c. Fibre

- a. Fiber yield/quality of seed varieties vs dual purpose varieties + economics.
- b. Harvesting of dual purpose varieties to maximize fibre quality.
- c. Retting methods to fulfill specific requirements of various end users of fibre + economics.
- d. Novel uses of hemp post-decortication residues.
- e. Life Cycle Analyses and recyclability of hemp fibre products.

d. Feed

- a. Assessment of the efficacy and safety of (whole hemp, hulled hemp, hemp meal, hempseed oil, screenings, hulls, and chaff) as an animal feed; poultry, swine, dairy, beef.

Appendix 8 – PRA levy Impact on Consumer Prices of Hemp Products

The impact of a levy on seed and fibre production would be negligible for consumers of hemp based products. The following table looks at the relative amount of a .5 % production levy on a range of seed prices relative to the range of retail prices on mainstream hemp seed consumer products.

Hemp Consumer Product / Metric	Shelled Hemp Seed (hemp Hearts)	Unrefined Hemp Oil	Hemp Protein Powder (50%)
Seed Price ¹⁷	\$.80 - \$1.60 per pound	\$.80 - \$1.60 per pound	\$.80 - \$1.60 per pound
Levy per pound of Seed @.5 %	.004 - .008 cents	.004 - .008 cents	.004 - .008 cents
Retail value of consumer product ¹⁸	\$14 to \$24 per Pound	\$8 to \$12 per Pound	\$8 to \$15 per Pound
% of seed in finished retail Product	40%	30%	40%
Levy % of Retail Price	Negligible	Negligible	Negligible

¹⁷ 2017 Farm gate seed prices based on consultations with producers and processors

¹⁸ Consumer product price ranges based on consultations with processors

Appendix 9 – Jurisdictions and Crops with Percent of Value Levies

Most provinces in Canada have regulated producer commissions, boards or associations that collect levies on a percent of the sales value. The following table provides an overview of organizations by province that collect levies on a percent of the sales value. The actual levy percent varies by organization.

Province	Organization
British Columbia	BC Vegetable Marketing Commission BC Cranberry Marketing Commission
Alberta	Alberta Pulse Commission Alberta Forage Seed Commission Alberta Alfalfa Seed Commission Potato Growers of Alberta Commission (on some sales of breeding stock)
Saskatchewan	Saskatchewan Pulse Growers Board Saskatchewan Forage Seed Commission Saskatchewan Mustard Seed Commission
Manitoba	Manitoba Corn Growers Association Manitoba Flax Growers
Ontario	Potato Growers Marketing Board
Quebec	Quebec Potato Growers' Federation
New Brunswick	New Brunswick Potatoes / Pommes de terre Nouveau-Brunswick
Nova Scotia	Nova Scotia Potato Marketing Board
Prince Edward Island	PEI Potato Board

Appendix 10 – Examples of Refund Levels for Crop Commissions and Associations

Almost all western Canadian producer commissions, boards or associations that have the regulated powers to collect levies must also, under their regulations, provide refunds if requested by producers. Refunds are generally not part of boards or commissions regulations in eastern Canada. The following table provides an overview of refund levels for a cross section of commissions and associations in Western Canada. This analysis provides the basis for the working assumption of anticipated refund levels for the hemp PRA.

Organization	Refunds as % of Revenues 2016	Refunds as % of Revenues 2015	Refunds as % of Revenues 2014	Three Year average of refunds
Sask. Forage Seed Commission	6.2	.7	4.7	3.8
Sask. Mustard Seed Commission	2.4	3.2	3.9	3.2
Sask. Canary Seed Commission	5.1	6.2	5.3	5.5
Sask Flax Commission	3.5	3.3	3.3	3.4
Saskatchewan Oat Growers Commission	6.9	5.1	4.8	5.6
Alberta Oat Growers Commission	3.4	.9	1.1	1.8
Alberta Pulse Growers Commission	4.6	4.1	3.7	4.1
Alberta Wheat Commission	4.8	4.4	4.6	4.6
Manitoba Flax Growers	6.3	5.6	4.8	5.6
Manitoba Oat Growers Association	2.2	2.3	3.4	2.6
Manitoba Pulse and Soybean Growers Association	5.4	3.8	6.5	5.2
Weighted average	4.6	3.6	4.2	4.1

Source: Commission and Association Annual Reports

Appendix 11 - Agency Revenue model

Seed Check-off Assumptions

	Metric
% of licensed cultivated acres with harvested hemp	95%
% of conventional acres	75%
% of organic acres	25%
Average seed yield for conventional production pounds per acre	800
Average seed yield for organic production is projected at 65 % of conventional production (highly variable)	520
Commercial value of conventional seed per pound	\$0.80
Commercial value of organic production is assumed to be double conventional seed value	\$1.60

	3 yr. average Cultivation Licensed Acres	% of licensed acres with Harvested Hemp	Total harvested Acres (3 Year Ave)
AB	27,362.3	95%	25,994
MB	21,769.2	95%	20,681
Sask	37,457.4	95%	35,585
BC	362.2	95%	344
On	1,156.2	95%	1,098
Que	1,571.8	95%	1,493
NB	19.0	95%	18
NS	104.3	95%	99
PEI	32.5	95%	31
Total / Ave	89,834.9		85,343

CANADIAN HEMP PROMOTION AND RESEARCH AGENCY

Conventional Hemp Production

	% of Total Acres	Ave Seed Yield Lbs / acre	Total Seed yield lbs	Commercial Seed Value	Total Value	Check-off % of value	Total Levy with Inter & Intra trade	Interprov. share	Interprov. \$'s	With Intra Prov. Levy from Prairie Provinces
AB	19,496	800	15,596,524	\$0.80	\$12,477,219	0.5%	\$62,386	90%	\$56,147.49	\$6,238.61
MB	15,511	800	12,408,463	\$0.80	\$9,926,770	0.5%	\$49,634	0%	\$-	\$49,633.85
Sask	26,688	800	21,350,718	\$0.80	\$17,080,574	0.5%	\$85,403	90%	\$76,862.58	\$8,540.29
BC	258	800	206,431	\$0.80	\$165,145	0.5%	\$826	0%	\$-	
On	824	800	659,015	\$0.80	\$527,212	0.5%	\$2,636	0%	\$-	
Que	1,120	800	895,937	\$0.80	\$716,750	0.5%	\$3,584	0%	\$-	
NB	14	800	10,830	\$0.80	\$8,664	0.5%	\$43	0%	\$-	
NS	74	800	59,470	\$0.80	\$47,576	0.5%	\$238	0%	\$-	
PEI	23	800	18,506	\$0.80	\$14,805	0.5%	\$74	0%	\$-	
Total	64,007		51,205,895		\$40,964,716		\$204,824		\$133,010	\$64,413

CANADIAN HEMP PROMOTION AND RESEARCH AGENCY

Organic Production

	% of Total Acres	Ave Seed Yield Lbs / acre	Total Seed yield lbs	Commercial Seed Value	Total Value	Check-off % of value	Total Check-off	Interprovincial share	Interprovincial \$'s	With Prairie Provinces
AB	6,499	520	3,379,247	\$1.60	\$5,406,795	0.5%	\$27,034	90%	\$24,330.58	\$2,703.40
MB	5,170	520	2,688,500	\$1.60	\$4,301,601	0.5%	\$21,508	0%	\$-	\$21,508.00
Sask	8,896	520	4,625,989	\$1.60	\$7,401,582	0.5%	\$37,008	90%	\$33,307.12	\$3,700.79
BC	86	520	44,727	\$1.60	\$71,563	0.5%	\$358	0%	\$-	
On	275	520	142,787	\$1.60	\$228,459	0.5%	\$1,142	0%	\$-	
Que	373	520	194,120	\$1.60	\$310,592	0.5%	\$1,553	0%	\$-	
NB	5	520	2,347	\$1.60	\$3,754	0.5%	\$19	0%	\$-	
NS	25	520	12,885	\$1.60	\$20,616	0.5%	\$103	0%	\$-	
PEI	8	520	4,010	\$1.60	\$6,415	0.5%	\$32	0%	\$-	
Total	21,336		11,094,611		\$17,751,377		\$88,757		\$57,638	\$27,912

Total seed
Production

62,300,505

Total
check-
off
% of
Levy

\$293,580

100%

\$190,648

65%

\$92,325

96%