

Lamont County Hemp Workshop
February 7, 2019

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Introduction

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The CHTA is a federally-registered not-for-profit industry association. It was incorporated in 2003 and has developed a strong membership base and program of work.

The business of CHTA is directed by the Board of Directors and implemented by management with the support of committees. The CHTA Standing Committees include: Executive; Finance and Audit; and Governance. The CHTA constitutes Ad Hoc Committees to support the organization and its members. The current CHTA Ad Hoc Committees include: Convention; Government Relations; Market Development; Research; and Standards. The Canadian hemp producers have organized themselves under the PRA Committee, which is hosted by CHTA.

Directors are elected by the members. Officers are elected by the Board.

a. Vision

CHTA will become the “go to” organization for industry, government, and consumers looking for expertise and insight into Hemp Food, Fibre, Feed and Fractions in Canada, creating a \$1B industry by 2023.

b. Mission

To champion a diverse and robust Canadian hemp industry which benefits all stakeholders along the value chain.

c. Priorities

1. Governing with Excellence – Board Governance and Committee Structure
2. Government Relations – Clear Communication and Advocacy Goals
3. Promotion and Research Agency Support – Administration Support
4. Public Trust – Education and Awareness
5. Membership – Inform, Communicate and Grow
6. Research Development – Science and International Market Development
7. Risk Management – Standards and Grades

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The organization currently has 358 members, which fall into the following categories: Farmers (189); Manufacturers/Processors (83); Wholesale/Retail (25); Research (11); Hemp Breeder/Seed Supplier (6); Governments (16); Consultants (18); and Other (10). Our membership is geographically located across Canada (334) and internationally (24).

The CHTA enjoys membership from 9 Provinces across Canada. The majority of domestic members have full voting rights within the organization, including being able to nominate and be nominated to the Board of Directors. The Board Directors are elected (half each year for two year terms), at the organization’s annual general meeting (AGM). Officers are elected by Directors at the organizational meeting of the Board following the AGM.

Canadian Hemp Trade Alliance Membership (December 2018)										
Member Category	BC	AB	SK	MB	ON	QC	Atl	Int'l	Total	%
Farmers	11	53	63	42	9	7	3	1	189	53%
Manufacturer/Processor	22	17	9	10	9	3	2	11	83	23%
Wholesale/Retail	6	5	0	0	7	0	3	4	25	7%
Research	3	2	2	3	0	0	0	1	11	3%
Hemp Breeder/Seeder Supplier	1	1	0	0	3	0	0	1	6	2%
Governments	0	9	0	3	3	1	0	0	16	4%
Consultants	1	4	1	3	3	3	1	2	18	5%
Other	1	2	1	2	0	0	0	4	10	3%
Total	45	93	76	63	34	14	9	24	358	100%
%	13%	26%	21%	18%	9%	4%	3%	7%	100%	

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In the Industrial Hemp Regulations, industrial hemp includes Cannabis plants and plant parts, of any variety, that contains 0.3% tetrahydrocannabinol (THC) or less in the leaves and flowering heads. Industrial hemp also includes the derivatives of industrial hemp plants and plant parts, excluding the flowering parts or the leaves. There are multiple market opportunities available to the Canadian hemp industry.

- Canada is a leader in the hemp food sector, with dehulled seed (hearts), oil and protein leading the way.
- CHTA is working with the government of Canada to register hemp grain and its derivatives (whole grain, screenings, hulls, hearts, cake, oil and protein) as livestock feed in the coming year.
- The fibre decortication (separation) sector is set to significantly increase its capacity over the next two years. Value added fibre processors will continue to increase their capacity and range of products. Continued decortication capacity expansion will lead to a viable market for harvested hemp straw, which today is typically disposed of after harvest.
- Harvest of chaff (flowers, leaves and stems) by hemp farmers first occurred in 2018. Sale is restricted to Licensed Processors (LPs) operating within the Cannabis Act. Only

LPs are allowed to extract the cannabinoids (primarily CBD), from the hemp chaff. Expansion of this trade will create a new and viable market for chaff, which today is typically disposed of in the field.

The Canadian industrial hemp industry is set to expand from one revenue source to four revenue sources. This is expected to lead to an expansion of value and seeded acres.

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Industrial hemp is a worldwide crop. Seeded acreage is growing, propelled by food, feed, fibre and fractions. World Total acreage has increased since 2010 by seizing the value of the whole hemp plant.

Worldwide Hemp Acreage						
Year	Canada	Europe	USA	China	Other	Total
2003	9,667	44,765	0	48,976	84,688	188,096
2004	10,321	36,729	0	73,934	87,408	208,392
2005	30,868	35,928	0	53,943	87,453	208,192
2006	50,179	34,579	0	83,778	86,159	254,695
2007	15,367	29,897	0	88,019	85,856	219,139
2008	8,053	26,116	0	58,267	89,299	181,735
2009	13,843	37,967	0	29,208	89,074	170,092
2010	31,273	27,130	0	25,229	85,321	168,953
2011	47,619	20,541	0	28,195	84,601	180,956
2012	56,823	35,241	0	26,094	87,723	205,881
2013	64,940	40,038	0	29,275	87,393	221,646
2014	108,502	47,423	0	29,601	89,185	274,711
2015	84,661	63,319	0	27,789	88,733	264,502
2016	76,332	82,221	9,770	22,091	91,550	281,964
2017	138,015	115,323	25,541	23,000	91,000	392,879
2018	80,000	116,137	50,000	23,000	91,000	360,137

Source: FAO, HC, EIHA, US Congress Reserch (China Underestimated)

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In 2018, the Canadian hemp industry estimated its total sales at \$139 million; \$97 in export and \$42 in domestic. The majority of these sales were based on food (processed grain) products. Some value added fibre and chaff (fractions) sales were also generated in 2018.

Our industry estimates its 2018 expenditures on wages at \$94 million and invested capital at \$53 million to support its production and sales.

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Canadian licensed hemp production was first approved for research purposes in 1998. Significant commercial production began in 2003. Licensed acreage began to expand in 2010, reaching a high of 138,000 acres in 2017. An estimated 80,000 acres of hemp was licensed in 2018.

Canadian Hemp Licensed Hectares									
Year	BC	AB	SK	MB	ON	QC	Atl	Total	Acres
2003	94	485	1,279	1,408	618	20	8	3,912	9,667
2004	18	639	1,004	2,300	183	11	22	4,177	10,321
2005	189	1,109	3,882	6,930	260	103	19	12,492	30,868
2006	77	2,043	6,105	11,655	354	69	4	20,307	50,179
2007	21	1,455	2,350	2,088	119	182	4	6,219	15,367
2008	5	582	1,537	993	8	134	0	3,259	8,053
2009	84	782	2,061	2,435	132	92	16	5,602	13,843
2010	1,864	2,086	4,214	3,799	372	321	0	12,656	31,273
2011	21	6,679	4,560	7,272	404	323	12	19,271	47,619
2012	16	5,493	10,214	6,280	433	560	0	22,996	56,823
2013	48	6,380	13,429	5,905	62	443	14	26,281	64,940
2014	17	10,343	21,609	11,052	352	532	5	43,910	108,502
2015	72	9,940	15,335	8,079	284	506	46	34,262	84,661
2016	351	12,937	8,531	7,298	767	869	138	30,891	76,332
2017	80	18,083	22,760	12,085	474	2,038	334	55,854	138,015
2018	46	10,482	13,193	7,005	275	1,181	194	32,376	80,000
Source: Health Canada (2018 Est)									

The annual variation of acreage in Canada, although trending up, has been attributed to the reliance on Food as a sole revenue stream. Our industry believes that lower marketing risks associated with incorporating Feed, Fibre and Fractions revenue streams will support continued expansion with less annual volatility.

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Canadian hemp exports accelerated after 2015, with grain – primarily dehulled grain for food - leading the way. Total 2018 exports are estimated at C\$96 million, an increase of C\$3 million from 2017.

Canadian Hemp Exports (C\$ '000)					
Year	Grain	Oil	Protein	Fibre	Total
2011	67,600	1,020	3,960	10	72,590
2012	13,904	1,625	5,313	31	20,873
2013	28,591	2,748	7,366	15	38,720
2014	32,483	3,720	11,566	97	47,866
2015	72,338	6,549	23,522	133	102,542
2016	123,210	8,116	14,453	135	145,914
2017	63,626	11,349	17,467	514	92,956
2018	62,290	17,846	15,589	89	95,814

Source: Statistics Canada (2018 Est)

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Canada's largest hemp exports, accounting for approximately 65% of total value, are comprised of grain (dehulled or for processing) and seed (for planting). Hemp oil and protein exports are also significant, each contributing almost 20% of total export value. Hemp fibre exports have been increasing, and currently account for about 1% of total export value.

The United States is responsible for almost 90% of Canada's hemp exports, leading in all product categories. South Korea was a major export market in 2016, and currently is responsible for about 3% of total exports. Other markets of interest are Australia, the Netherlands, United Kingdom, India and Japan.

Canadian Hemp Exports (C\$'000)							
Country	2013	2014	2015	2016	2017	2018*	#1
USA	36,160	42,343	93,001	83,442	75,569	84,408	Seed/Grain
South Korea	4	221	819	44,943	5,741	2,729	Seed/Grain
Australia	138	160	71	227	387	2,534	Seed/Grain
Netherlands	0	144	1,232	6,477	2,559	1,253	Seed/Grain
United Kingdom	527	908	933	1,420	2,290	1,149	Seed/Grain
India	555	2,132	2,128	1,516	1,541	925	Protein
Japan	344	538	1,701	1,111	798	799	Protein
New Zealand	31	177	100	108	168	411	Oil
Germany	188	333	753	352	782	395	Oil
Slovakia	78	203	227	1,491	833	332	Oil
Italy	50	125	470	545	522	225	Seed/Grain
France	0	64	51	894	268	117	Protein
Finland	102	0	215	373	489	110	Seed/Grain
Belgium	0	1	7	539	122	100	Oil
Spain	0	1	1	256	80	38	Seed/Grain
Ireland	294	116	12	344	99	0	Seed/Grain
Poland	80	41	640	764	312	0	Seed/Grain
Turkey	0	0	34	441	0	0	Seed/Grain
Others	219	359	147	671	396	288	Seed/Grain
Total	38,770	47,866	102,542	145,914	92,956	95,814	

Source: Statistics Canada, 2018 estimated

Hemp grain (dehulled or for processing) is Canada's largest hemp imports, accounting for over 50% of total export value. Hemp seed (for planting) and hemp oil are also significant, each contributing over 15% of total value. Hemp fibre imports have been increasing, and currently account for less than 10% of total import value.

The United States is the source for about 50% of Canada's hemp imports. The Netherlands (seed) and China (grain) each supply Canada with about 15% of total imported hemp by value. An increasingly large share of Canadian hemp imports is actually reimported Canadian hemp; grain that has been value added (dehulled or oil) in the USA.

Canadian Hemp Imports (C\$'000)							
Country	2013	2014	2015	2016	2017	2018*	#1
USA	200	126	111	106	726	806	Grain
Netherlands	12	99	4	4	141	290	Seed
China	22	10	122	107	149	219	Grain
"Canada"	7	26	28	82	177	164	Grain
France	15	61	39	61	42	72	Fibre
Lithuania	0	1	1	163	450	19	Grain
Poland	0	0	0	0	852	1	Oil
Mexico	25	4	158	29	6	0	Grain
Others	73	86	108	205	70	55	Grain
Total	354	413	571	757	2,613	1,626	
Source: Statistics Canada, 2018 estimated, "Canada" = Reimports							

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The CHTA leadership conducted its last strategic review in 2017. At that time, an industry development path was identified, based the industry's Strengths, Weaknesses, Opportunities and Threats.

Strengths – Canada is recognized as the global leader in hemp food production. There has been an accumulation of knowledge and experience since implementation of the Industrial Hemp Regulation in 1998. The sector is: industry driven and industry focused with a high level of entrepreneurial energy.

Weaknesses – The Canadian hemp sector is small, and therefore has limited resources to progress the many challenges to industry growth. The lack of stable funding – industry and government – for industry development is a limiting constraint.

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Opportunities – The market demand for many hemp-derived products continues to emerge. Revenue streams from feed, fibre and fractions (i.e. CBD) are beginning to supplement traditional revenue from seed and grain sales. Investor interest has been stimulated by market

and regulatory changes. Ongoing cannabis discussions at the federal level are positive and demonstrate renewed political interest in the development of the Canadian hemp industry.

Threats – The Canadian hemp industry is still small and emerging, with limited consumer awareness. There is increased foreign competition – currently from EU and China – in the Canadian and international food markets. American production will begin to increase, reducing the window of opportunity for sector leadership by Canada. There remains confusion in the cannabis space – fighting to distinguish between hemp and marijuana.

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Canadian hemp is being positioned as a superior food, based on:

- Food specialization – registered varieties and production systems are optimized for food quality;
- Safety – produced under Good Agriculture Practices and GMP processes
- Climate – Canada’s winter temperatures suppress microbials, fungal diseases, and insects; and,
- Traceability and Identity Preservation – growers and growing sites are licensed by the Government of Canada.

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The four pillars of the \$1 Billion Canadian Hemp Industry Blueprint are:

- Food – well developed in Canada, still growing, developing standards, domestic and export food ingredient opportunities (GRAS);
- Feed – need regulatory approval with CFIA;
- Fibre – lots of interest, but need critical mass to attract sufficient decortication and valued added capital investment (capacity) to create a viable market;
- Fractions – tightly restricted due to current Cannabis Act and Industrial Hemp Regulations.

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Blueprint for a \$1 Billion Canadian Hemp Industry:

- Enable all four market opportunities (food, feed, fibre and fractions) through research, education and market development (promotion);
- Influence cannabis policy and regulations to liberalize hemp-derived cannabinoid (i.e. CBD) extraction and sale;
- Establish standards for the industry – starting with food and then proceeding to feed, fibre and fractions;
- Create a stable funding platform for industry development:
 - Cooperate/collaborate with future PRA
 - Establish strategic relationships (i.e. DFCC, PIC, CAP and Prov.)
 - Enhance member funding resources;

- Establish a Long Term International Strategy (LTIS) and associated Strategic Business Plan (SBP).

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The Canadian hemp industry will grow and prosper by seizing the value of the whole plant. Our industry has developed on the back of a single revenue stream – food. The addition of multiple revenue streams (feed, fibre and fractions) will reduce risk and increase producer returns.

Canadian Hemp Industry: History and Growth (C\$, M)							
Year	Grain	Oil	Protein	Fibre	Feed	Fractions	Total
2011	6.76	1.02	3.96	0.01	0.00	0.00	11.75
2012	13.90	1.62	5.31	0.03	0.00	0.00	20.86
2013	28.59	2.75	7.37	0.02	0.00	0.00	38.73
2014	32.48	3.72	11.57	0.10	0.00	0.00	47.87
2015	72.34	6.55	23.52	0.13	0.00	0.00	102.54
2016	123.21	8.12	14.45	0.13	0.00	0.00	145.91
2017	95.00	13.00	22.00	0.50	0.00	0.00	130.50
2018	94.00	14.00	23.00	2.00	0.00	5.00	138.00
2019	175.00	25.00	42.00	10.00	6.00	27.00	285.00
2020	256.00	36.00	60.00	18.00	11.00	48.00	429.00
2021	337.00	47.00	79.00	26.00	16.00	70.00	575.00
2022	459.00	64.00	107.00	38.00	23.00	102.00	793.00
2023	581.00	81.00	134.00	49.00	29.00	134.00	1,008.00

Source: Industry Estimates (Statistics Canada does not report hemp revenue)

The addition of new revenue streams will stimulate increased seeded acreage and total hemp production from a base of \$138 million in 2018 to over \$1 billion in 2023.

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The Canadian hemp industry will make tremendous economic contributions to the Canadian economy as it grows.

Key Performance Indicators	2018 Baseline	2023 Projected
Sales	\$138 million	\$1,008 million
Jobs Payroll	\$94 million	\$689 million
Number of Jobs (FTEs)	1,320	9,576
Annual Invested Capital	\$53 million	\$389 million
Seeded Acres	80,000	450,000
R&D Investment	\$7 million	\$40 million

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Working Relationship: CHTA and PRA:

The CHTA and PRA plan to operate on the basis of a cooperative business model. This model will require: two independent Boards of Directors and Memberships; two independent Business Plans; CHTA providing secretariat and operational services to PRA (cost recovery basis); and a pristine independent and arm's-length (autonomous) working relationship.

Funding Decisions of PRA will be made by its Board, guided by the needs of Canadian hemp producers. CHTA will operate on a cost recovery basis for services provided to the PRA and seek financial support from the PRA for collaborative market development (promotion) and research initiatives.

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Financial Viability of the CHTA and PRA:

The CHTA has operated as a successful industry association for 15 years. Revenue is currently generated from membership fees, voluntary levies, convention registrations and sponsorships. This model is sufficient for basic operations plus a very small research and market development program – not meeting the expansion and wealth creation requirements of the industry.

Implementation of the Canadian Hemp Producers PRA will generate a new and projected growing source of industry funding. The net effect of the PRA will be to increase the total availability of financial resources available to the Canadian hemp industry for research and promotional purposes.

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CHTA Business Plan focusses on five primary activities:

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- Government Relations – Communicate industry needs for specific regulatory reform to enhance industry competitiveness and wealth generation.
- Standards – Developing domestic and international standards for hemp food, feed, fibre and fractions;
- Research – Supporting the development of new hemp genetics and revision of feed and cannabinoid regulations. Supporting the expansion of hemp as a food ingredient (i.e. GRAS, PER and PDCAAS);
- Market Development – Promoting hemp food and fibre products at key domestic and international trade shows;
- Industry Engagement – Promoting the consumption of hemp food as part of a health balanced diet; and, Developing enhanced working relationships with domestic and international industry and regulatory players to facilitate the removal of barriers to industry expansion.

Funding allocated by the PRA to the CHTA will allow the Canadian hemp producers to more fully participate in the growth and development of their industry. The increased overall availability of promotion and research funding will accelerate completion of work already identified as required to remove impediments to industry expansion.

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Resources for the hemp grower:

- CHTA eGuide – Provides practical information for growers who are planning to enter the industry
 - <http://www.hemptrade.ca/eguide>
- Health Canada - Industrial Hemp Licensing Application Guide
 - (<https://www.canada.ca/en/health-canada/services/publications/drugs-health-products/industrial-hemp-licensing-application-guide.html>)

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The four faces of hemp:

- Food
 - Dehulled Hemp Seed (Hearts)
 - Hemp Seed Oil
 - Hemp Protein
- Livestock Feed
- Fibre
- Fractions

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Thank you and Questions

OPTIONAL PRODUCT DETAIL SLIDES

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Dehulled Hemp Seed (Hearts)

- Basis of industry establishment and past growth
- Becoming mainstream
- Wide range of organic and conventional products from multiple suppliers in market
- Branded products are from CHTA members
- Private label product has begun to develop (retail ownership)

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Hemp Seed Oil

- All about health;
- Has the optimum Omega 6 - Omega 3 balance; and,
- Low in saturated fat.

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Hemp Protein

- Hot market sector;
- North American consumers seeking alternatives to animal, whey and soy.

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Livestock Feed

- Robust livestock sector in Canada;
- Hemp is currently prohibited as livestock feed;
- Industry needs primary livestock market for hemp seed, hulls, screenings and secondary livestock market for cake, oil and protein;
- Research required to support CFIA approvals for hemp seed (and derivatives) as feed ingredient; and,
- Eventually, we will need to explore the opportunity for restricted plant parts (i.e. leaves, flowers, stems and stalks) for ruminant forage.

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Fibre

- Hemp straw is primarily a “waste product” in Canada today;
- Most produced hemp straw is burned or stockpiled by farmers;
- Small decortication capacity has not created a viable market for hemp straw;
- Working to establish market opportunities for all fractions from the straw resource;
 - Bast – textiles, paper, insulation, grow mats, bio-composites
 - Hurds – hempcrete, insulation, injection molding, plywood
- Additional investment in decortication is required to build a viable hemp fibre sector.

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Value-added Fibre

A wide range of products are produced from decorticated (separated) hemp fibre. These include textiles, paper, insulation, grow mats, molded panels, hempcrete, structural blocks, insulation, and injection molding. Innovation in the value added hemp fibre sector will develop as a direct result of new decortication investment and capacity.

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Fractions

The Canadian cannabinoid (CBD) market is highly restricted. Licensed industrial hemp growers were first allowed to harvest and sell chaff (flowers, leaves and stems) in Fall 2018. A limited harvest was undertaken, mostly to stimulate further investigation and adaptation.

Farmers are only allowed to sell chaff to Licensed Cannabis Processors (LPs) who can extract cannabinoids from hemp chaff. LPs in turn are only allowed to sell the extracted cannabinoids within the domestic medical marijuana market and through provincially regulated retail channels. LPs have a limited ability to export cannabinoids to international medical marijuana and research markets that have been recognized by Health Canada.

The CHTA is advocating the liberalization of regulations related to hemp-derived cannabinoids (CBD) to allow sales in domestic and international food (low daily intake), supplements (moderate daily intake) and pharmaceutical (high dosage) markets.