



Presentation to the Northern Alberta Development Council



Community

Environment

Economy

Northern Alberta Hemp Processing Initiative (NAHPI) Terms of Reference

- ❖ Hemp fibre is renowned for its high tensile properties that make it durable and strong, as well as its resistance to rotting and wear and tear. Two distinct types of fibres are found in the stock of the plant.

Hurd



Bast fibre

Bast fibres

- ❖ Strong long & tender fibres
- ❖ Excellent durability and absorbency
- ❖ Anti-mildew and anti-microbial properties
- ❖ In demand for automotive and building construction industries:
 - ❖ Car panels
 - ❖ Insulation
 - ❖ Carpeting
 - ❖ Paneling



Hurds

- ❖ Core fibres from sturdy, wood-like stalk
- ❖ Anti-mildew and anti-microbial activities
- ❖ Used in building construction industry
 - ❖ Simulated cedar shakes
 - ❖ Fibre boards
 - ❖ Other materials



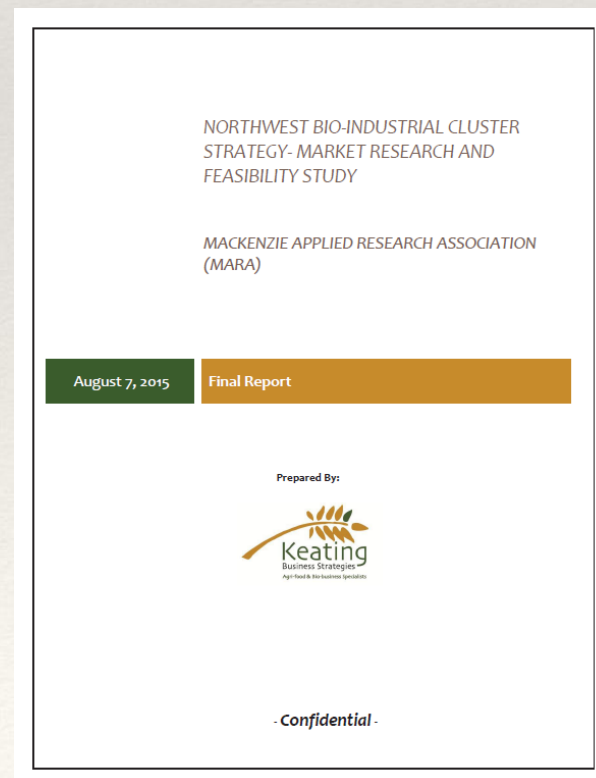
NAHPI Partners

- ❖ **Conseil de développement économique de l'Alberta (CDEA):** Suzanne Prévost, Justine Simard, Diane Chiasson
- ❖ **Alberta Innovates – Technology Futures (AITF):** Jan Slaski, Byron James
- ❖ **Northeast Alberta Hub:** Bob Bezpalko
- ❖ **Community Futures, Lac La Biche:** Gene Wesley, Stephen Evans
- ❖ **Smoky Applied Research and Development Association (SARDA):** Shelleen Gerbig
- ❖ **Alberta Government:** Patti Breland, Lori-Jo Graham
- ❖ **Peace Region Economic Development Alliance (PREDA):** Dan Debbit
- ❖ **Eco-West,** Dany Robidoux, François Catellier
- ❖ **Canadian Hemp Trade Alliance,** Kim Shukla



MARA Pre-Feasibility

- ❖ **Utilize Vegreville fibre processing plant**
 - ❖ **Optimize fibre processing and extraction methods**
 - ❖ **Produce commercial samples to potential buyers**
- ❖ **Ensure long term contracts are established with reputable buyers**



Goal of Baseline Study and Outreach Missions

- ❖ **To line up**
 - ❖ **Market partners**
 - ❖ **And/or long-term contracts**
- ❖ **for a sustainable fibre hemp processing plant in Northern Alberta**

Study background

Alberta Economy

- ❖ **Profoundly impacted by steep and prolonged drop in oil prices**
- ❖ **Alberta Treasury Board 2016 Report: - Impact has spread to:**
 - Retail activity
 - Housing
 - Construction
 - Labour Markets
 - Manufacturing
- ❖ **Forest fires in Wood Buffalo region**
 - ❖ **Temporarily disrupted oil production**

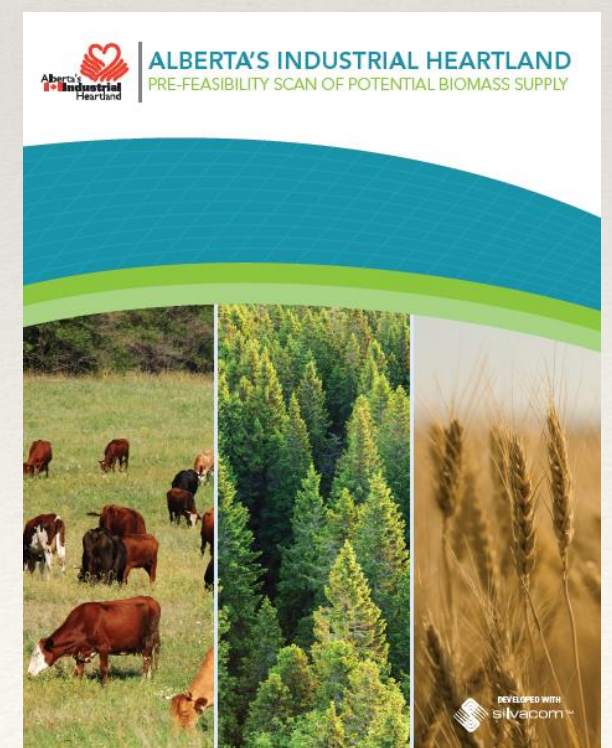
Study background

- ❖ Alberta leading the prairies in hemp production
 - ❖ 32,000 acres grown for organic **seed, oil** and **meal** markets in 2016
 - ❖ No shortage of interest to grow hemp in Northern Alberta
 - ❖ Natural advantage in growing long-stemmed hemp for fibre
 - ❖ Stumbling block:
 - ❖ Decortication piece
 - ❖ Lack of current long-term markets for hemp fibre products



Study background

- ❖ Alberta Industrial Heartland Association pre-feasibility on biomass supply
 - ❖ BRIMS framework
 - ❖ Theoretical biomass production in the heartland region is close to 600,000 tonnes



Study background

- ❖ INRA France Life Cycle Analysis of field production of fibre hemp
 - ❖ Effect of production practices on environmental impacts
 - ❖ Sugar Beets – high impacts
 - ❖ Wheat – Intermediate impacts
 - ❖ Hemp – Low impacts



Study background

- ❖ AITF in 3rd year of 5-year agreement with Heilongjiang Academy of Sciences (HAS)
- ❖ China-Canada Hemp Crop Utilization Joint Research Center
- ❖ Corresponding Task Force on Market Research



Study objectives

- ❖ **NAHPI** wish to build on existing information
 - ❖ Feasibility of a industrial hemp fibre processing plant
 - ❖ Northern AB geographical advantage to tidewater as compared to AB SK and MB prairies
- ❖ Objectives:
 - ❖ To provide NAHPI partners with sufficient info to justify
 - ❖ Acceptance
 - ❖ Modification
 - ❖ Or rejection of proposed initiative for further financing and implementation

Study results

- ❖ Verification of a market for hemp fibre
- ❖ Identification of potential partners
- ❖ Detailed assessment of potential sustainability after completion
- ❖ Detailed plan for project activities:
 - ❖ Indicators for project objectives and results
 - ❖ Design specifications
 - ❖ Required resources
 - ❖ Institutional structure for implementation
 - ❖ Responsibilities of various bodies
 - ❖ Project timing/phasing

Study results

- ❖ Estimated costs and logical framework planning matrix
- ❖ Engineering designs
- ❖ Technical specifications
- ❖ Tender documents for any physical works and supplies
- ❖ Draft financing proposal and Business Plan
- ❖ Recommendations for next steps and any further actions necessary to secure project financing and implementation
- ❖ Identification of hemp fibre processing site and its feeder decortication sites

Issues to be studied

- ❖ **Relevance** of a possible intervention as determined by
 - ❖ Coherence with Alberta's macro-economic environment and overall development objectives
 - ❖ Beneficiaries and stakeholders
 - ❖ All organizations and agencies affected by or involved in the proposed project including NAHPI partners
 - ❖ Private companies

Issues to be studied

- ❖ **Feasibility** of proposed project determined by an analysis of the alternative technical solutions
- ❖ **Pre-conditions** necessary for the start of the project
- ❖ **Sustainability** based on factors deemed important the NAHPI partners

Case Studies



11/22/2016 11:17 am

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Work plan

- ❖ 24-month work plan
 - ❖ Phase 1 – Research and business development – 16 months
 - I. ID/scope of potential investment opportunities
 - II. Market Outreach
 - ❖ Phase 2 - Implementation – 8 months
 - III. Business Plan

Work plan – Baseline Study

- ❖ fact finding/data collection /surveys omitted in the pre-feasibility study or requiring updating;
- ❖ additional workshops and consultations to ensure local participation;
- ❖ Case studies looking at fibre industries that did not make it (flax, Isobord) versus industries that are processing today;
- ❖ Quantification of the potential hemp fibre market by industry – automotive, aircraft, building products
- ❖ Identification of prospective market partners

Work plan – Market Outreach

- ❖ Fact-Finding Missions to Target Markets
- ❖ Hemp fibre product development and fine-tuning at AITF Vegreville Pilot Plant
- ❖ Hosting Reciprocal incoming missions from interested market partners
- ❖ Contract signing mission

Work plan – Implementation

- ❖ identification and analysis of alternative solutions for the proposed project should long-term contracts for hemp fibre not be secured;
- ❖ analysis of candidate sites;
- ❖ consultation meetings with decision makers'/stake holders to identify the preferred technical solutions and sites;
- ❖ preparation of engineering, design and tender documents for the plants;
- ❖ preparation of the draft and final business plan

Timelines

NAHPI rev 00

	Task Name	Duration	Start Date	End Date	Assigned To	At Risk	Status	% Complete
1								
2	Hemp Project Start and End Dates	761d	01/03/17	31/03/19		🚩		
3	<input type="checkbox"/> Phase 1: Research & Business Development	408d	01/03/17	12/04/18		🚩		39%
4	Feasibility Study	122d	01/03/17	30/06/17		🚩	In Progress	50%
5	Market Outreach	199d	26/09/17	12/04/18		🚩	Not Started	50%
6	Market Outreach Planning	87d	01/07/17	25/09/17		🚩		
7	<input type="checkbox"/> Phase 2: Implementation	212d	01/09/18	31/03/19		🚩		
8	Business Plan	212d	01/09/18	31/03/19		🚩	Not Started	
9								
10	Tokyo Motor Show	6d	27/10/17	01/11/17		🚩		
11	Geneva 87th International Motor Show (2018)	3d	06/03/18	08/03/18		🚩		
12	Detroit North American Int. Auto Show	3d	16/01/18	18/01/18		🚩		
13	Hamburg - Aircraft Interiors Expo	3d	10/04/18	12/04/18		🚩		
14	Long Beach California - Aircraft Interiors Expo	3d	26/09/17	28/09/17		🚩		
15	Ottawa - 2017 Canadian Aerospace Summit	2d	07/11/17	08/11/17		🚩		
16	Shanghai International Building & Construction Fair	4d	21/03/18	24/03/18		🚩		
17	Boston - Greenbuild Int. Conference & Expo	2d	08/11/17	09/11/17		🚩		
18	Londo UK - Ecobuild	3d	06/03/18	08/03/18		🚩		
19	Toronto - Construct Canada	3d	29/11/17	01/12/17		🚩		



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