

Mustard 21 Update

SMDC AGM

CROP PRODUCTION WEEK

January 14, 2009

Saskatoon

PRESENTATION

- **Mustard 21 Initiative**
- **Mustard Vision and Goals**
- **Phase I Findings**
- **Opportunities for mustard**
- **Phase II ...**
 - **Long/Mid/Short-Term – Priorities / Plan**
- **Next Steps**
- **COMMENTS and QUESTIONS**

Mustard 21 Initiative

Phase I was a joint Initiative between:

- Saskatchewan Mustard Development Commission (SMDC)
- Canadian Mustard Association (CMA)

Sask. Mustard Development Commission

VISION

“Investing in the future for mustard grower profitability”

MISSION

“Growing the mustard industry for the benefit of growers through research, communication and market development programs”

Mustard 21

“VISION”

“A value-added sustainable industry of half a billion dollars by 2021 in Canada”

Mustard 21 Goal

Overall ...

Mustard 21 initiative is to **create wealth in Canada** by developing products to increase the overall value of the mustard industry

Mustard 21 Goal

Phase I Goal

To identify key **strategic market opportunities** and develop strategic plan to **create wealth in Canada** with partners

Mustard 21 Project Phase I

Mustard 21 Opportunity Identification

- Literature review
- Industry input
- Experts

Mustard 21 Working Groups

THREE WORKING GROUPS

- **Manufacturing – Industrial, Biopesticide and Processing (Stewart Campbell .. Coordinator)**
- **Human Health (Kelley Fitzpatrick .. Coordinator)**
- **Production, Agronomy & Breeding (Pete Desai Coordinator)**

WORKING GROUPS - ROLE

- **Identifying opportunities for new value creation in Canada from mustard**
- **Help the project coordinator:**
 - **define and evaluate these opportunities**
 - **identify sources to gather information**
 - **prioritize the opportunities**
 - **by giving their expert advise**
 - **develop strategic plan**
 - **communicate to stakeholders and**
 - **sounding board**
- **Define strategic priorities to help accomplish big picture vision**

Mustard 21 Phase I ... “AHAS!!”

- Increasing the Condiment market share was not an option to get to Vision of \$500M value creation **BUT**
- Need to preserve the Canadian share of global market
- Need to **FOCUS ... FOCUS** on
 - Two maybe three **BIG** opportunities
 - Pursue high value products only
 - Invest in developing these products and markets with industry partners
 - **80/20 Rule**

Mustard 21 Phase I ...

- To create value added industry in Canada
“TOTAL UTILIZATION” of seed is critical
- Mustard has unique composition vs. other vegetable oil to create Higher Value Products by utilizing both Oil and Meal
- Supply of mustard quality & quantity is a must

Phase I - Mustard Value Added Priorities

- **MEAL**

- **Biopesticide**
- **Soil amendment (fertilizer)**
- **Mustard flour**
- **Protein**
- **Mucilage (Yellow mustard)**

- **OIL**

- **Bio-diesel additive**
- **Bio-lubricant**
- **Bio-plastic**

Mustard 21

PHASE II

Mustard 21 initiative is to **create wealth in Canada** by developing products to increase the overall value of the mustard industry

Mustard Meal ... Biopesticide

- **LARGE MARKET ... significant volume**
 - Use rate of 100's lbs / acre
- **NATURAL PRODUCT**
- **HIGHER value vs. commodity meal protein**
- **Business Case and marketing Plan**

Mustard Biopesticide

- **MAIN TARGETS**

- Professional turf, Bedding plants, gardens
- Organic produce and selected vegetables
- Horticulture crops

- **ANTI- MICROBIAL**

- Food preservative applications
- Packaged food

Oil ... Biodiesel additive / Bio-lubricant

- Capitalize on composition ... high erucic acid
- NOT pursue Biodiesel opportunity
- Focus on HIGH value market segments
- Renewable chemical feedstock for bioplastics

Oil ... Biodiesel additive / Bio-lubricant

- Oil + meal = > total commodity value
- Oil maybe the byproduct
- Business Case for these two opportunities
- **Opportunity for developing “INDUSTRIAL MUSTARD” focused on just industrial needs**
 - **Biopesticide, biodiesel additive etc.**

INDUSTRIAL PARTNERS

- **Mustard 21 is a facilitator and NOT in business to commercialize or manufacture products**
- **Industry ... develops and commercializes products to create wealth**
- **Industrial Partners**
 - Milligan Bioteck, Foamlake
 - Mustard Capital Inc., Gravelburg
 - Mustard Products technologies Inc., Hague
 - SakaiSpice; Lethbridge
 - **Elevance, Chicago; BioEXX, Saskatoon**
- **Investing to develop mustard based products**

IMPACT

- **Biopesticide / Soil Amendment**

- Regulated industry
- >3X value of mustard meal
- Market potential = 10's thousand acres
- Huge development costs

- **Biodiesel and Biolubricant**

- >5X value of oil
- Major development effort
- Superior claims and performance
- Renewable concept

Mustard 21 TOP Priority

- Realize ALL these great opportunities SUPPLY is critical
- **YIELD** is #1 issue for grower producer
 - Mustard for part of rotation – competitive
 - Key issue that needs attention
 - Hybrid mustard
 - Weed control Herbicide Tolerance
 - Genetics
 - Agronomic and production support
- SMDC / M21 major effort ... establish program to deliver competitive YIELD

Sask. Mustard Development Commission

VISION

“Investing in the future for mustard grower profitability”

MISSION

“Growing the mustard industry for the benefit of growers through research, communication and market development programs”

Mustard 21 – Strategic Issues & Opportunities

1. No major Value added industry in Canada
2. Preserve the present condiment market
3. Yield is major Issue
4. **OPPORTUNITIES**
 - Total Utilization mustard seed
 - Meal ... Natural Biopesticide, Soil amendment fertilizer, flour / protein
 - Oil ... High value products – biodiesel additive and biolubricant (**but NOT biodiesel**)
 - Oil ... Renewable feedstock for chemical industry
 - Industrial Mustard crop

Mustard 21 THANKS

- * Agriculture and Agri-Food Canada (AAFC)... Science and Innovation Program**
- * Advancing Canadian Agriculture and Agri-Food (ACAAF – Agriculture Council of SK)**
 - * Saskatchewan Agriculture**
 - * Industry Partners**
 - * SMDC**