

Mustard 21

Leading Canada's Mustard Industry
through the 21st Century

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Outline

- History and context
- Process
- Vision and Goals
- Progress to date
- Next steps

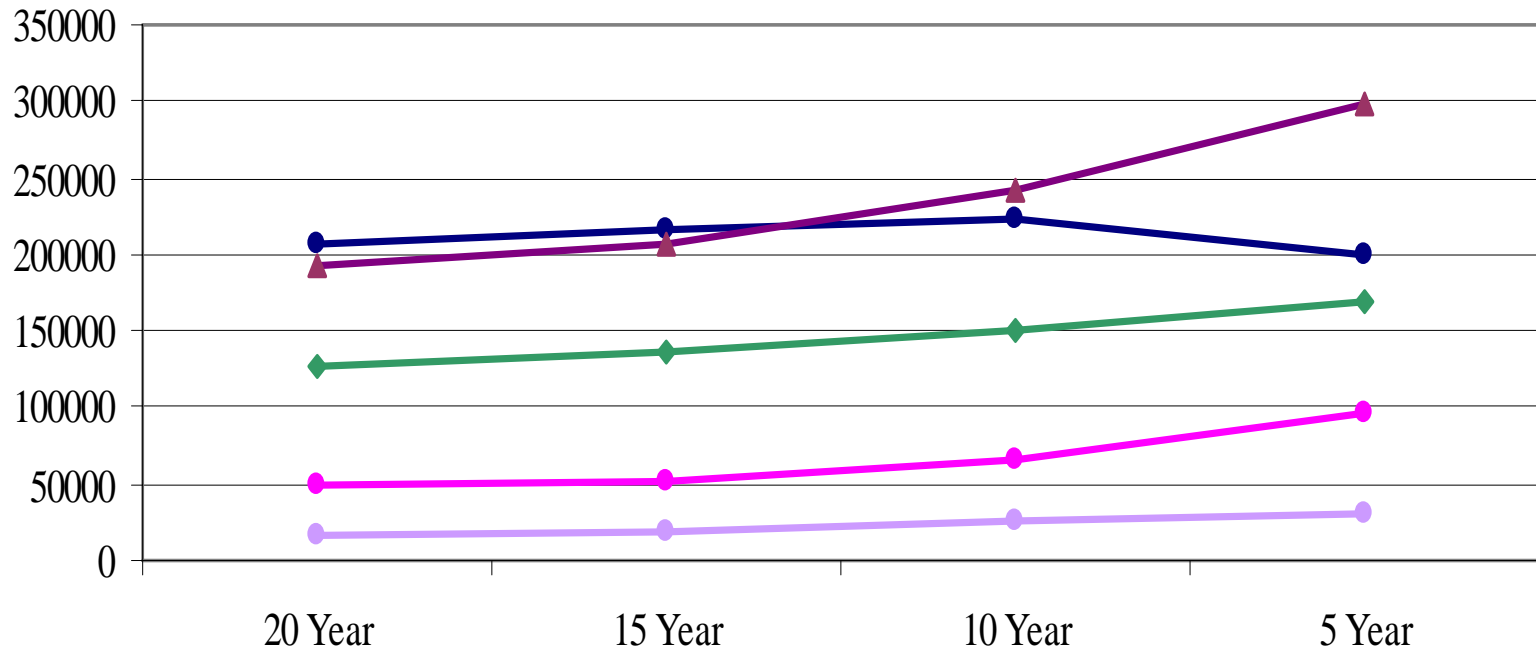
Historical context

- 1936
- Dominate global trade
- Established world class research and development infrastructure
- Most experienced mustard growers in the world
- Variety registration and IP system

Current Reality

- In 2004, ~87 per cent of Canadian mustard was exported as whole seed
 - United States, Japan and Belgium
- Escalating production and transportation costs
- Rising Canadian dollar

20 year production trend ending in 2004



—●— Canada Total

—●— Eastern Europe Total

—◆— Asia Total

—●— US Total

—▲— Major Competition Total

APF Broker Program

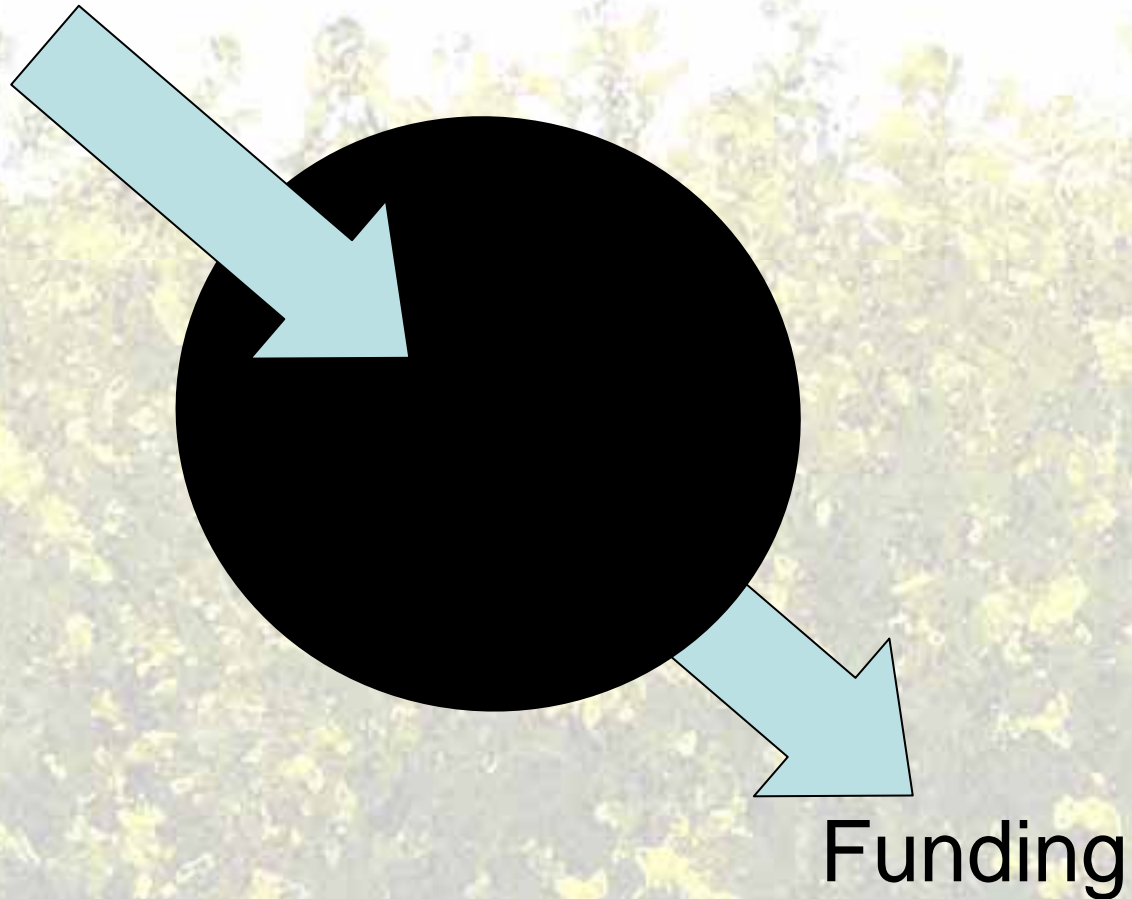
- To create and support “broker” organizations and activities working between the agricultural sector, industry, government and universities to accelerate the identification of new strategic innovation opportunities.

Mustard 21

- Letter of Intent
 - Historical context and current situation
 - Case for investing in mustard research
- Full proposal
 - The development of a strategic plan on where to invest in mustard research and development over the next 10 years

APF Broker Program

- Full Proposal



Vision

- A value-added sustainable industry in Canada of half a billion dollars from a million acres by 2021.

Goals

- Increasing the value of the mustard seed industry in Canada by an additional \$500M from the present ~ \$72M through development of new products and applications.

Goals

- Increasing domestic processing, extraction and use of mustard seed from ~13% of 240K ha of present production to 50% of 500K ha production.

Goals

- Increasing the competitiveness of Canada's global position as mustard supplier.
- Aligning production, agronomy and breeding to develop newer mustard cultivars to meet the requirements of the domestic value chain.

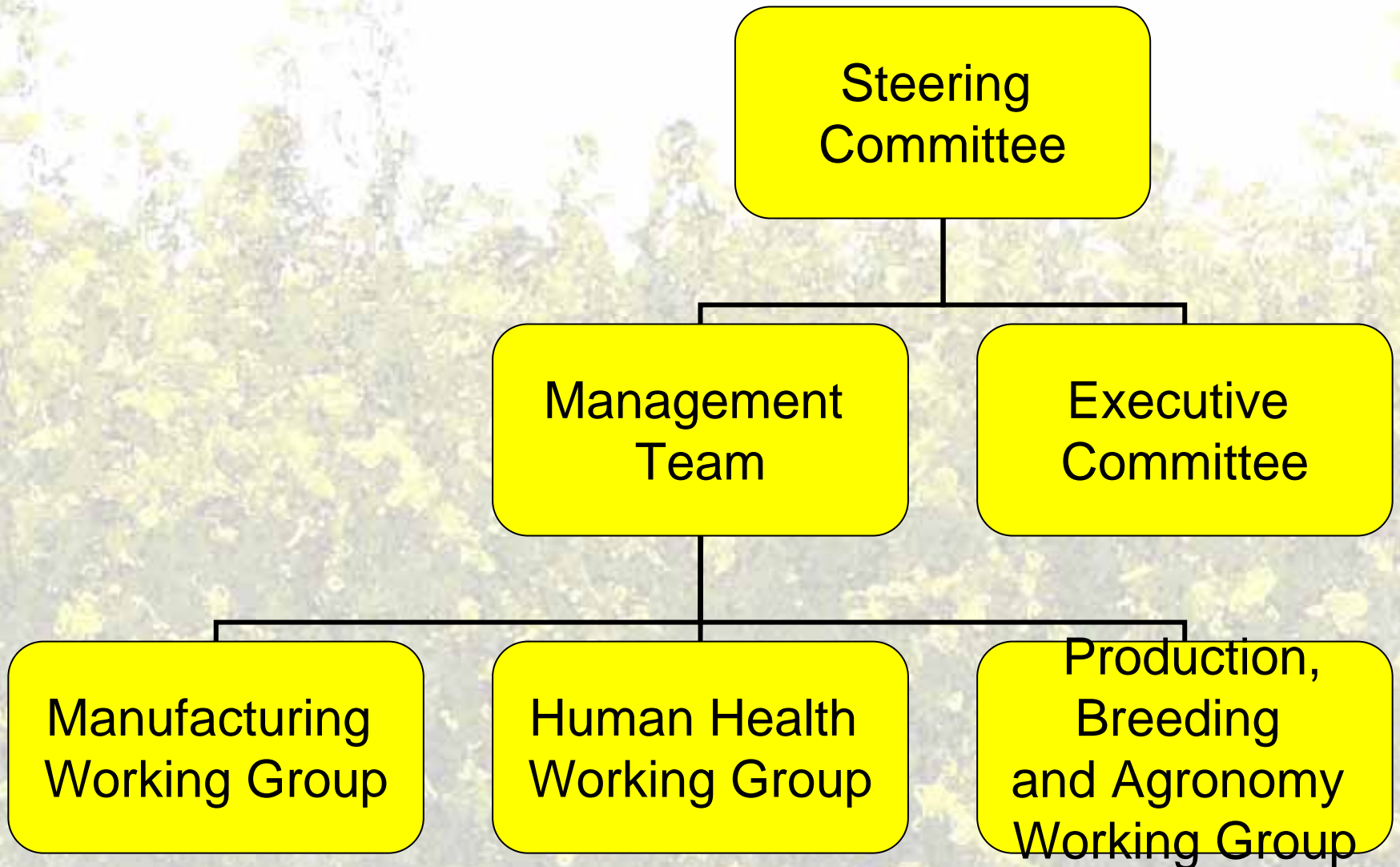
Goals

- Establishing an action plan with key stakeholders and industrial partners on future governance and commitment to implement the strategy after April 1, 2008.

Pillars

- Manufacturing industrial ingredients and oleochemical products
- Human health and food products
- Production, agronomy and breeding

Structure



Manufacturing

- Bio-refining study
 - Scientific, patent and trade literature review of the potential to “bio-refine” mustard into new, high value products
 - Prioritize opportunities (technical feasibility, market size and commercial criteria)

Manufacturing

- Biofuels and fuel additive study
 - Scientific, patent and trade literature review of the potential to apply known conversions to create new high value renewable fuels and fuels additives
 - Prioritize opportunities (technical feasibility, market size and commercial criteria)

Manufacturing

- Mustard oleochemical study
 - Scientific, patent and trade literature review of the potential to apply oleochemistry conversions to create new derivatives and bioproducts
 - Prioritize opportunities (technical feasibility, market size and commercial criteria)

Human health and food products

- Effects of yellow mustard gum on glycemic control in a rodent model of Type II Diabetes Mellitus
 - Mustard gum will improve glycemic control
 - Compared to β -Glucan from wheat and barley and flax mucilage
 - Proof of concept research

Human health and food products

- Opportunities for human health (market)
 - Comprehensive evaluation of health and nutrition market for mustard and mustard components for including;
 - Customer profile
 - Market size
 - Regulatory, research and innovation environment
 - Disease drivers
 - Allergens

Human health and food products

- Opportunity for food applications
 - Comprehensive evaluation of mustard and mustard components as food ingredients and additives
 - Literature review of food application uses
 - Market assessment of new food product development opportunities

Production

- Mustard production and hybridization
- Herbicide database and future options
- Disseminate information on outcrossing potential
- Potential grower survey

Budget and Funding Partners

Agriculture and Agri-Food Canada	\$758,000
Saskatchewan Agriculture	\$75,000
Saskatchewan Mustard Development Commission	\$32,000
Partners	\$90,000
Total	\$955,000

Next Steps

- Management Team and the Working Groups will continue to develop their respective strategies
- Steering Committee will meet in late February to review preliminary recommendations
- Submit the final report to AAFC, SA
- Phase II

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Questions / Comments