

Canadian Brassica Genomics Network

Introduction and Overview of the Network

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Genomics Networks

Genome Prairie with Western Economic Diversification Canada has established four regional innovation networks in areas of strategic interest

- Canadian Brassica Genomics Network (CBGN)
- Canadian Flax Genomics Initiative (CFGFI)
- Western Canadian Vaccine Network (WCVNet)
- Genomics and Society Network (GE³LS)

Why a Brassica Genomics Network?

- Currently it is a \$13B industry with \$3B farm gate revenues
- Canola economic activities generate over 214,000 jobs in Canada
- Exports of canola have quadrupled from a level of just under \$705 million in 2000 to over \$2.8 billion in 2006
- Increasing Canola oil content by 1% is equivalent to more than \$60M additional annual revenues to the producers
- In Canadian small grains and oilseeds each 1% increase in harvested yield adds \$136 M to rural economies

Brassica Genomics Research Initiatives

- **Genome Canada, Genome Prairie/Alberta**
 - **Phase 1 Functional Genomics of Abiotic Stress 2002-06**
 - **Phase 2 Enhancing Canola Performance in Genomics 2003-06**
 - **Phase 3 Designing Oilseeds for Tomorrow's Markets 2006-10**
 - **Phase 4 / ABC competition 2009-12**
- **NRC-Genomics and Health Initiative (1999-2011)**
- **AAFC-Crop Genomics Initiatives (1999-2011)**
- **Other projects**
 - **BOP, Bioactive Oils Program, University of Alberta**
 - **CanSeq project, NRC-AAFC and partners**

CBGN Objectives

- ① Maintain and enhance Canada's position in Brassica genomics
- ① Provide guidance and support to the sector
- ① Encourage and facilitate collaborations among stakeholders across the Brassica value-chain

CBGN Benefits

- Identifying areas of common interest and collaboration
- Leveraging investments
- Creating partnerships and exploiting synergies of expertise
- Streamlining research and development initiatives to maximize returns on investment
- Facilitating the development and commercialization of collaborative genomics research projects

Communication

- ◎ Network website: www.cbgn.ca
 - Updates
 - Forum for sharing comments, opinions and ideas
- ◎ Workshops / Meetings

Acknowledgements



Steering Committee members

Genome Prairie

Western Economic Diversification Canada

Steering Committee members

George Haughn (UBC), Dave Hickling (Canola Council), Wilf Keller (Genome Prairie), Peter McVetty (U of M), Jeff Parker (Genome Alberta), Isobel Parkin (AAFC), Reno Pontarollo (Genome Prairie), Xiao Qiu (U of S), Carol Reynolds (Genome Prairie), Janice Tranberg (Crop Life), Randall Weselake (U of A), Jerome Konecsni (NRC-PBI)

Genome Prairie

Daniel Ramage, Ron Krysa, John Taras,
Lana Mollard



Western Economic
Diversification Canada

Diversification de l'économie
de l'Ouest Canada



CBGN Program session

- **Introduction/Overview of Network - Faouzi Bekkaoui**
- **Overview of Research Priorities - Arvel Lawson**
- **Brassica Funding Opportunities- Reno Pontarollo**
- **Status of Brassica Genomics Resources**
 - Faouzi Bekkaoui, PBI Brassica genomics resources and DOTM/BOP TILLING resources
 - Isobel Parkin, Genomics for canola and the next generation of Canadian Brassica crops
 - Genyi Li, Resources for high throughput marker development and large-scale gene silencing at the University of Manitoba
 - Andrew Sharpe, CanSeq Brassica genome sequencing project
- **Next Steps/Concluding Remarks- Wilf Keller**