

DEVELOPING INDUSTRY CLUSTERS BREI CONFERENCE 2017 EDMONTON, AB.

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Developing Industry Clusters



“Clusters” are dense regional networks of companies, universities, research institutions, and other stakeholders involved in a single industry.

Solving the Puzzle

- Know Your Cluster
- Identify the Players
- Benchmark and Brand
- Understand the Pre-Requisites
- Co-ordinate and Collaborate
- Tactics



- My 12 year old can do one of these in under 5 seconds, he says its all algorithms.

Developing Industry Clusters

Industry “Clusters” typically consist of;

- 1) Established companies**
- 2) Start-up businesses**
- 3) Universities and Research Institutions**
- 4) Support groups or champions**
- 5) Local**
- 6) Provincial**
- 7) Federal**

Developing Industry Clusters

Lets have a quick look at the Sask Ag-Bioscience Industry Cluster



Established companies



The miracles of science™



Bayer CropScience



Developing Industry Clusters

Start-up Businesses

Spectrum
Technologies, Inc.

Biolin
RESEARCH INCORPORATED

EcoLibra
ecologically balanced systems

Metabolix
Bio-Industrial Evolution™

OMD open mind
developments

AGRIsoma
Sustainable Energy Founded in Agriculture

LINNAEUS
PLANT SCIENCES INC.

Bioriginal

quantum
biosciences

CanniMed®

Okanagan
Specialty
Fruits

VIRGIN
PLANTS

PTE
Prairie Tide
Chemicals Inc.

NorQuin®
Northern Quinoa Corporation

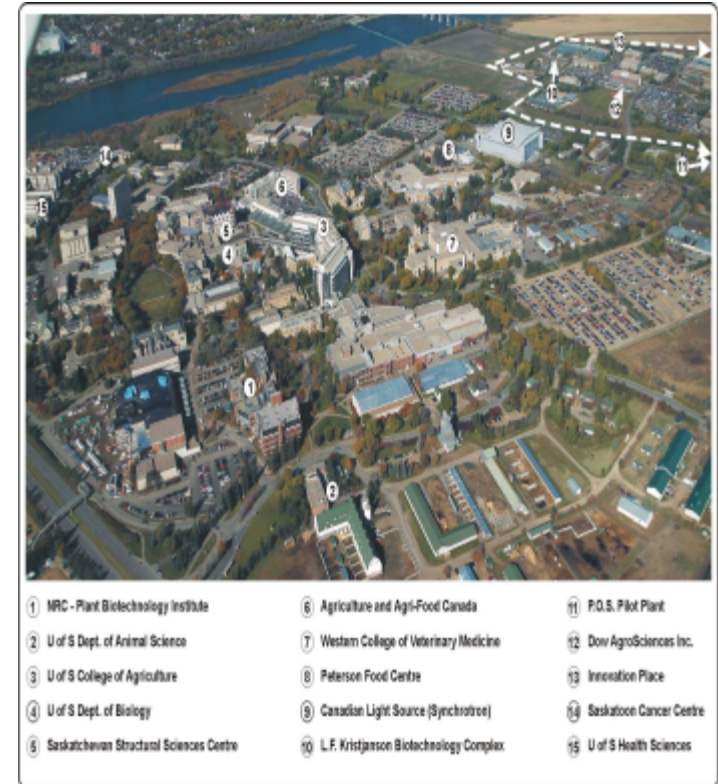
InfraReady
PRODUCTS (1998) LIMITED

PRAIRIE
PLANT SYSTEMS INC.

W3
Ag-West Bio

Developing Industry Clusters

Universities and Other Research Institutions



- | | | |
|---|---|----------------------------|
| 1 MRC - Plant Biotechnology Institute | 6 Agriculture and Agri-Food Canada | 11 P.O.S. Pilot Plant |
| 2 U of S Dept. of Animal Science | 7 Western College of Veterinary Medicine | 12 Dow AgroSciences Inc. |
| 3 U of S College of Agriculture | 8 Peterken Food Centre | 13 Innovation Place |
| 4 U of S Dept. of Biology | 9 Canadian Light Source (Synchrotron) | 14 Saskatoon Cancer Centre |
| 5 Saskatchewan Structural Sciences Centre | 10 L.F. Kristjanson Biotechnology Complex | 15 U of S Health Sciences |

Developing Industry Clusters

Support Groups and Champions



Agriculture in the Classroom
Connecting Kids and Agriculture



Developing Industry Clusters

Local



Saskatchewan's Business Resource Centre



UNIVERSITY OF SASKATCHEWAN
Innovation Enterprise
OFFICE OF THE VICE-PRESIDENT RESEARCH
RESEARCH.USASK.CA/IE



PIC INVESTMENT GROUP INC.

theChamber
GREATER SASKATOON CHAMBER OF COMMERCE



Developing Industry Clusters

Provincial



UNIVERSITY OF SASKATCHEWAN
Global Institute for
Water Security
School of Environment
and Sustainability
USASK.CA



GIFS | GLOBAL INSTITUTE
FOR FOOD SECURITY

POTASHCORP - A FOUNDING PARTNER



Developing Industry Clusters

Federal



Global Affairs
Canada



*NRC Industrial Research
Assistance Program*



Developing Industry Clusters

Benchmark and Brand



Need help starting your bio-based business?
Looking for research partnerships or
Investment opportunities?

You're in the right place

We grow biobusiness in Saskatchewan



Ag Bioscience Research and Development (Saskatchewan)		
2014		
Parameter	Measure	Measure
Number of Private Companies / Institutions / Grower organizations	136	141
Public employment (full time permanent)	1215	1509
Private employment (full time permanent)	429	448
Post-Secondary Enrolment in Biosciences (University & Polytechnical)	1733	1,923
Journal articles published (annual - SK origin - 2014)	526	536
Patents Issued (annual-SK origin - 2014)	57	36
Contribution to Provincial GDP (Billions)	\$3.90	\$3.65
Provincial Gov't. Bioscience R&D investment	\$27,000,000.00	\$26,800,000.00
Private Sector R&D investment	\$67,813,133.00	\$83,143,547.00
Producer Organization R&D investment	\$27,183,154.22	\$33,521,453.75
Public Sector R&D funding	\$146,396,718.00	\$170,377,636.00
Total Ag Bioscience R&D funding	\$241,393,005.22	\$313,842,636.75

Developing Industry Clusters

Understand the Pre-Requisites:

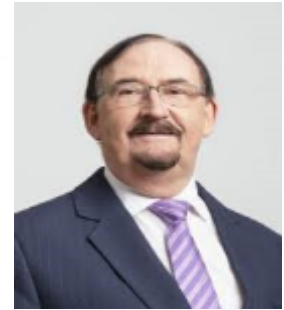
the achievement of scientific pre-eminence,

the development and maintenance of new technologies for emerging industries,

the attraction of major technology companies,

and the creation of home-grown technology companies.

Example: Saskatchewan hosts 30 Research Chairs in Ag Biosciences.



Developing Industry Clusters

Co-ordinate and Collaborate



NATURAL
PRODUCTS
CANADA



Developing Industry Clusters

Tactics

- Each actor in the cluster has their own goals, objectives and game plan.
- AWB draws up a tactical game plan for the industry cluster as a whole based on a five year strategic plans.



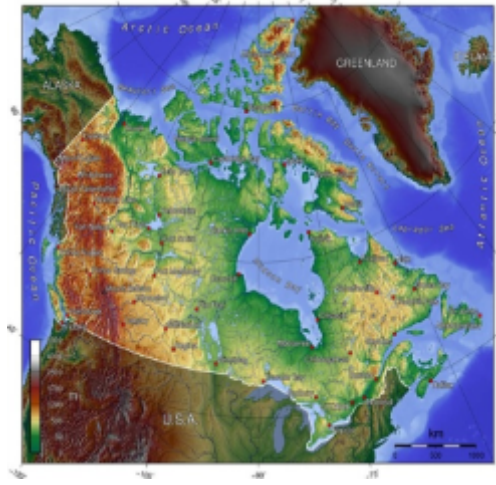
Developing Industry Clusters

Look At

Global Drivers



National Drivers



Strategic Plan



Canadian Agriculture and the Bioeconomy

Global Drivers

- Free Trade-Protectionism
- Climate Mitigation –Adaptation
- Commodity Super-Cycles
- Oil Self Sufficiency
- Big Data
- Trend to Sustainability
- Acceptance of Genomics Tools
- Renewed Focus on Biological Inputs
- Investment Interest – Non Traditional Sources
- Mergers and Acquisitions
- Consumer Power
- Traceability & Social License



Canadian Agriculture and the Bioeconomy



National Drivers

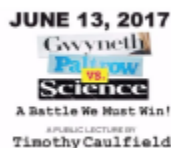
- Carbon Monetization
- Public Investment in Research
- Next Gen. Bio-Feedstocks
- Currency Exchange & FDI
- Production Trends
- Monoculture Risk
- Farm-Gate Profitability
- Consumer & market Trends
- Food Rules
- Farmland Values
- Projected Changes in Canada's Climate

Tactical Approach

- Draw the World to your Cluster



- Take your Cluster to the World



and



Host, Host, Host



Thank You
Questions – Comments

