Innovation & commercialization: rural challenges & multi-level responses

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Overview

Purpose
- Innovation. It matters & needed
- Rural response

Road map
- About RDI & new initiative
- Define innovation
- Gaps
- Barriers
- Rural examples
About RDI
About RDI

- **Mission** Contribute to evidence-based rural policy discussions with stakeholders

- **Mandates**
  - Applied research
  - Disseminate knowledge
  - Learning
About RDI

• Engaging stakeholders
• Conducting research
• Informing policy and practices

“Applied research is an approach for identifying and solving problems and responding to opportunities with others, eg. stakeholders”
# About RDI

<table>
<thead>
<tr>
<th>Strategic research directions</th>
<th>Selection of projects &amp; activities</th>
<th></th>
</tr>
</thead>
</table>
| **Immigration & labour force**                    | -Northern Territorial consultations  
-29 community consultations  
*Refugees in rural areas |  |
| **Rural economic development**                    | -Regional development models (MB)  
-Think tank – Prairie eco strategy  
-Functional economic rural regions |  |
| **Governance and capacity bldg**                  | -Municipal amalgamation (111 to 49)  
-Local immigration partnerships |  |
| **Infrastructure & services**                     | -Rural broadband (Ireland & Cda)    |  |
| **Innovation & commercialization**                | -Food processing trajectory to 2020  
-Growth from innovation |  |
About RDI

• 500 reports & presentations – free
• Journal of Rural and Community Development – free

244 Peer-reviewed articles - JRCD

69 Learning events 2009-'14

Access to knowledge
About RDI

229 BU students and 100 other students, 31 reports, presentations & $422,000+ student wages since 2009

$422k
Student wages 2009 - 2015

66 BU Faculty & 539 other faculty, 96 faculty peer reviewed articles, 5 books and chapters, 66 reports, 69 conferences/learning events since 2009
About RDI

• Partnership bldg
• $2.5M Cdn
• 7 yrs, 2014-2021
About RDI

Participants and Partners from 9 Countries

- Over 30 Partners: Universities, Governments, Organizations interested in rural policy
- Over 60 Individuals: Faculty, Government Representatives, Policy Organizations, International Organizations

Hosting conferences and webinars reaching over 1,000 People

11 Teams
- 7 Knowledge Mobilization Teams
- 4 Research Teams
Rural innovation
What is Innovation?

"...the design, development and/or implementation of new or altered products, services, processes, systems, organizational structures or business models for the purpose of creating new value for customers in a way that improves the financial returns for the firm."

**Disruptive Innovation**
Game-changers, like the automobile, the internet, or vaccines

**Incremental Innovation**
Making things bigger, faster, better

Innovation strategies for rural Manitoba
What is Innovation?

**INNOVATION**

New or better ways of doing valued things

**COMMERCIALIZATION**

The process of capturing the value, by taking the innovation to market

Innovation strategies for rural Manitoba
3 dimensions of innovation

<table>
<thead>
<tr>
<th>Type of Innovation Initiative</th>
<th>Novelty of Innovation Initiative</th>
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<tbody>
<tr>
<td>PROCESS</td>
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Impact of Innovation Initiative

- SMALL
- MODERATE
- LARGE

Sources: Agriculture Canada, 2006; Becheikh, 2006; OECD, 2004, Ashton et al. 2015.
What is Commercialization?

Innovation ecology
Systemic Barriers

- Difficulty in raising risk capital
- The supports that do exist are fragmented
- The culture in the province is largely risk-averse
Innovation approaches in rural Manitoba

3 cases

- Provincial approach
- Rural regional approach
- Rural sector approach
Provincial Approach

Innovation ecology – local & global

ACCELERATE COMMERCIALIZATION

STIMULATE ACCESS TO CAPITAL

PROMOTE ENTREPRENEURS & START-UP

CONNECT

PROMOTE

MEASURE

Innovation strategies for rural Manitoba
Provincial Approach

Rural Regional Approach

Address barriers
• Fragmented supports
• Risk-adverse culture

Building on strengths
• Diversification centres
• Business advisors
• Ag associations
• Start up funding
• Capital Funding $1-3m
Rural Regional Approach

- 62 municipalities
- Economic strengths
  - Agriculture, Construction, Oil & gas
- Distance to market
A continuum of opportunities for adaptation & adoption in innovation
• from elsewhere into the community, and
• from the community into the world
<table>
<thead>
<tr>
<th>Step 1: Strategic roundtable meeting</th>
<th>Step 2: Action plan</th>
<th>Step 3: Demonstration</th>
<th>Step 4: Leading innovation transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRDC Roles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Identify &amp; invite association and related stakeholders to meeting</td>
<td>• Work collaboratively with association to define roles</td>
<td>• Assist association with extending invitations throughout the southwest to a “bright idea” demonstration</td>
<td>• Organize a leadership debriefing meeting with association and stakeholders</td>
</tr>
<tr>
<td>• Provide facilitator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Association Roles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Bring forward 2-4 transferable innovations suitable for the southwest</td>
<td>• Commit to lead innovation transfer</td>
<td>• Lead demonstration activities with SRDC</td>
<td>• Provide feedback about the innovation transfer process</td>
</tr>
<tr>
<td>Outcomes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Innovation to transfer is selected</td>
<td>• Roles are outlined</td>
<td>• Innovation is demonstrated</td>
<td>• Innovation transferred is learned by the SRDC and association</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Feedback gathered</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Entrepreneurship culture supported</td>
<td></td>
</tr>
</tbody>
</table>

Innovation strategies for rural Manitoba
Rural Region Approach

- **Fund a coordinator**, multiple years
- **Sponsor events** – Makers’ Fairs
- **Strengthen network** / innovation helix – business, community, govt, post-secondary
- **Equip associations** – certify innovation facilitators
- **Learn innovation by doing it** – high school, college, and university curriculum
- **Legitimize & celebrate innovation** – social marketing campaigns
Rural Sectoral Approach

Food & Beverage Processing Industry
Growth Pathways to 2020

Source: Ashton et al. 2014.
Rural Sectoral Approach

Figure 2. Estimates of Sales for 2011 for Pork, Canola, Potatoes and Existing Companies ($2012m)

Sources: CANSIM Table 301-0006, Revenue from Goods Manufactured; RDI linear projections; interviews

Source: Ashton et al. 2014.
Rural Sectoral Approach

Table 1. Profile of Three Diverse Food Processing Companies in Manitoba

<table>
<thead>
<tr>
<th>Case Study Criteria</th>
<th>Richardson Milling</th>
<th>shape foods</th>
<th>Prairie Garden Purees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Website</td>
<td><a href="http://www.richardson.ca">www.richardson.ca</a></td>
<td><a href="http://www.shapefoods.com">www.shapefoods.com</a></td>
<td>canadianprairiegarden.com</td>
</tr>
<tr>
<td>Commodity</td>
<td>Oats</td>
<td>Flax</td>
<td>Vegetable, Fruit &amp; Pulse</td>
</tr>
<tr>
<td>Product</td>
<td>Flakes &amp; flour</td>
<td>Oil &amp; meal</td>
<td>Purees</td>
</tr>
<tr>
<td>Start full production</td>
<td>1991</td>
<td>2008</td>
<td>2014</td>
</tr>
<tr>
<td>Location</td>
<td>Portage la Prairie</td>
<td>Brandon</td>
<td>Portage la Prairie</td>
</tr>
<tr>
<td>Ownership</td>
<td>Part of James Richardson &amp; Sons Ltd, a family owned multi-enterprise corporation</td>
<td>Privately owned</td>
<td>Privately owned – partners are CAPE Fund and First Peoples Economic Growth Fund Inc.</td>
</tr>
<tr>
<td># Employees</td>
<td>115-130</td>
<td>No data</td>
<td>10+</td>
</tr>
</tbody>
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# 3 dimensions of innovation

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<td>10</td>
<td></td>
</tr>
<tr>
<td>PRODUCTS</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
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<td>ORGANIZATIONAL</td>
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</tr>
<tr>
<td>7</td>
<td></td>
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**Impact of Innovation Initiative**

- SMALL
- MODERATE
- LARGE

**Sources:** Agriculture Canada, 2006; Becheikh, 2006; OECD, 2004, Ashton et al. 2015.
Figure 1: Types of innovation initiatives in three food processing cases

Legend

→ Linkages to additional innovations
↔ Pairing between innovation types.
Rural Sectoral Approach

Number of Innovation Initiatives

- Outside Resources
- Grower
- Transport
- Pre-Processor
- Processor
- Distributor
- Food Manufacturer

Legend:
- RM
- SF
- CPG
### Rural Sectoral Approach

**Figure 4:** Duration estimates of commercializing innovation initiatives across the 3 case studies

<table>
<thead>
<tr>
<th>SME</th>
<th>Innovation Focus</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RICHARDSON MILLING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RM8</td>
<td>Oat fractions</td>
<td>Past</td>
</tr>
<tr>
<td>RM7</td>
<td>Gluten free</td>
<td>Future</td>
</tr>
<tr>
<td>RM6</td>
<td>Health claims</td>
<td>Present</td>
</tr>
<tr>
<td>RM5</td>
<td>Plant breeding and agronomy</td>
<td></td>
</tr>
<tr>
<td>RM4</td>
<td>Acquisition</td>
<td></td>
</tr>
<tr>
<td>RM3</td>
<td>Grower education</td>
<td></td>
</tr>
<tr>
<td>RM2</td>
<td>Gaining market share</td>
<td></td>
</tr>
<tr>
<td>RM1</td>
<td>Product development and kiln</td>
<td></td>
</tr>
<tr>
<td></td>
<td>past</td>
<td></td>
</tr>
<tr>
<td></td>
<td>present</td>
<td></td>
</tr>
<tr>
<td></td>
<td>future</td>
<td></td>
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| **SHAPER FOODS**                     |          |
| SF7 | Health claims                         |          |
| SF6 | Plant breeding and agronomy           |          |
| SF5 | Expanding products and markets        |          |
| SF4 | Product development                    |          |
| SF3 | Oil flavours                           |          |
| SF2 | Ingredients diversification           |          |
| SF1 | Unique process                         |          |
|     | past                                 |          |
|     | present                              |          |
|     | future                               |          |

| **CANADIAN PRAIRIE GARDEN**           |          |
| CPG9 | Health claims/natural                 |          |
| CPG8 | Expansion of production capacity      |          |
| CPG7 | Product development and demos         |          |
| CPG6 | Food safety                           |          |
| CPG5 | Plant breeding and agronomy           |          |
| CPG4 | Pre-processing                         |          |
| CPG3 | Hiring experts                         |          |
| CPG2 | Aseptic packaging                      |          |
| CPG1 | Unique process                         |          |
|     | past                                 |          |
|     | present                              |          |
|     | future                               |          |
Rural Sectoral Approach

Growth from innovation

- Expand market for products
- Increase market share
- Increase efficiency – profits
- Create new companies – profit centres
- Diversify expertise with new employees
- Continue R&D to remain competitive
Rural Matters in Innovation

Summary

• Several approaches needed, Not one
• Geographical coverage & accessible infrastructure
• Adaptation & adoption with regional capacity
• Not one, many along sectoral supply chain
Rural Matters in Innovation

Thank you!

Questions, comments, suggestions
Rural Matters in Innovation

Sponsors

- Southwest Regional Development Corporation
- Brandon University
- RDI Rural Development Institute
- Manitoba
- RPLC Rural Policy Learning Commons
- CAPR Communauté d’apprentissage des politiques rurales