RDNO Regional Agricultural Plan
Market Opportunities Analysis

Submitted by: Upland Consulting
January 14, 2015
Table of Contents

Table of Tables ........................................................................................................................................ iv
Table of Figures ........................................................................................................................................ iv
Acknowledgements ................................................................................................................................. vi
Acronyms ................................................................................................................................................ vii
Executive Summary ................................................................................................................................. 1
Introduction ............................................................................................................................................... 2
Scope and Intent ........................................................................................................................................ 3
Methodology ............................................................................................................................................ 4
  Stakeholder Engagement Strategy .......................................................................................................... 4
  Regional Agricultural Advisory Committee (RAAC) Meetings ............................................................... 4
  Regional Food System Workshop .......................................................................................................... 5
  Open Houses .......................................................................................................................................... 5
  Focus Group Sessions ........................................................................................................................... 6
  Surveys and Interviews .......................................................................................................................... 6
  Literature Review and Secondary Research .......................................................................................... 7
Economic Indicators ................................................................................................................................... 8
  Community Overview ............................................................................................................................ 8
  Employment Trends .............................................................................................................................. 8
  Community Support for Agriculture .................................................................................................... 9
Agriculture Market Analysis ..................................................................................................................... 13
  BC Agrifoods Sector Outlook ................................................................................................................ 13
  Outlook for the RDNO Agricultural Sector .......................................................................................... 14
    Current Situation ................................................................................................................................ 14
    Food Self-Sufficiency ........................................................................................................................... 14
    Market Potential ................................................................................................................................. 14
Key Issues and Opportunities .................................................................................................................. 15
  1) Biophysical considerations ............................................................................................................... 15
  2) Marketing and branding ..................................................................................................................... 17
  3) Costs of doing business and the need for (re)investment ................................................................ 19
  4) Transportation and distribution ......................................................................................................... 20
  5) Access to skilled and affordable labour ............................................................................................. 21
  6) Expansion of niche and value-added products .................................................................................. 22
  7) The regional tourism market ............................................................................................................ 23
  8) Regulatory challenges ....................................................................................................................... 24
Marketing Boards and Quotas ................................................................. 24
Meat Inspection Regulation (MIR) and Class E Pilot Project ..................... 25
GMOs and Use of Chemicals .................................................................... 26
9) Innovation, research, and education ..................................................... 27
Summary of Challenges and Opportunities ............................................. 28
Success Stories .................................................................................... 30
Bellmann Specialty Produce .................................................................... 30
The BX Press ....................................................................................... 30
Davison Orchards ................................................................................ 30
Fieldstone Organics ............................................................................. 30
Okanagan Spirits ................................................................................ 30
Pilgrim’s Produce ................................................................................ 31
Planet Bee ......................................................................................... 31
The Village Cheese Company .................................................................. 31
Zelaney Farms ..................................................................................... 31
Conclusion .......................................................................................... 32

Table of Tables
Table 1. Population projections for the RDNO .......................................... 8
Table 2. Net ALR loss between 1974 and 2013 ......................................... 10
Table 3. Amount of ALR lost between 1974 and 2013 in various regional districts .... 10
Table 4. Farming plans for the next 5 years ............................................ 20
Table 5. Summary of challenges and opportunities ................................ 28

Table of Figures
Figure 1. Local apple juice for sale at Swan Lake nursery .......................... 2
Figure 2. Regional Food System Workshop participant ............................. 4
Figure 3. Regional Food System workshop invitation ................................ 5
Figure 4. RAP booth at the Vernon Farmers Market .................................. 6
Figure 5. Discussing the RAP at the Armstrong Farmers Market ................ 7
Figure 6. Local cheese for sale in Armstrong ........................................... 9
Figure 7. Productive farmland near Cherryville .................................................................10
Figure 8. Polyhouses on a farm near Mara .............................................................................11
Figure 9. Community members discussing agriculture in the North Okanagan .....................12
Figure 10. Dairy farm outside of Enderby ...............................................................................13
Figure 11. Active farming near Spallumcheen ......................................................................15
Figure 12. Irrigated fields in Spallumcheen ..........................................................................16
Figure 13. Fieldstone Organics products on display at Swan Lake Nursery .........................17
Figure 14. Cheese making facility in Armstrong ..................................................................21
Figure 15. Value-added farm products for sale in Vernon ......................................................22
Figure 16. Davison Orchards in Vernon ...............................................................................23
Figure 17. Sign displayed at a Vernon-area restaurant .............................................................25
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[Image of logos: Canada, Investment Agriculture Foundation of British Columbia, British Columbia]
## Acronyms

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<th>Acronym</th>
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<tr>
<td>AAFC</td>
<td>Agriculture and Agri-Food Canada</td>
</tr>
<tr>
<td>AFIS</td>
<td>Armstrong Food Initiative Society</td>
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<tr>
<td>AGRI</td>
<td>BC Ministry of Agriculture</td>
</tr>
<tr>
<td>ALC</td>
<td>Agricultural Land Commission</td>
</tr>
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<td>ALR</td>
<td>Agricultural Land Reserve</td>
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<td>ARDCorp</td>
<td>Agriculture Research and Development Corporation</td>
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<td>BCAA</td>
<td>BC Assessment Authority</td>
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<td>BC Agriculture Council</td>
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<td>BCEMB</td>
<td>BC Egg Marketing Board</td>
</tr>
<tr>
<td>BCMMB</td>
<td>BC Milk Marketing Board</td>
</tr>
<tr>
<td>BC MPA</td>
<td>BC Milk Producers Association</td>
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<td>BCMoE</td>
<td>BC Ministry of Environment</td>
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<td>CFIA</td>
<td>Canadian Food Inspection Agency</td>
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<td>CLI</td>
<td>Canadian Land Inventory</td>
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<td>Community Supported Agriculture</td>
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<tr>
<td>FIRB</td>
<td>Farm Industry Review Board</td>
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<tr>
<td>FPPA</td>
<td>Farm Practices Protection (Right to Farm) Act</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GMO</td>
<td>Genetically Modified Organisms</td>
</tr>
<tr>
<td>GVW</td>
<td>Greater Vernon Water</td>
</tr>
<tr>
<td>GVWU</td>
<td>Greater Vernon Water Utility</td>
</tr>
<tr>
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<td>Investment Agriculture Foundation of BC</td>
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<td>Interior Health Authority</td>
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<tr>
<td>LGA</td>
<td>Local Government Act</td>
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<td>LTSA</td>
<td>Land Title and Survey Authority of BC</td>
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<tr>
<td>LUI</td>
<td>Land Use Inventory</td>
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<td>MIR</td>
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<td>MOA</td>
<td>Market Opportunities Analysis</td>
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<td>OCP</td>
<td>Official Community Plan</td>
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<td>PHSA</td>
<td>Provincial Health Services Authority</td>
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<td>Regional Agricultural Advisory Committee</td>
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<td>RAP</td>
<td>Regional Agricultural Plan</td>
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<td>REF</td>
<td>Real Estate Foundation</td>
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<td>Regional District of North Okanagan</td>
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<td>RGS</td>
<td>Regional Growth Strategy</td>
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<tr>
<td>SRW</td>
<td>Shuswap River Watershed</td>
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<tr>
<td>SSFPA</td>
<td>Small Scale Food Processor Association</td>
</tr>
<tr>
<td>SWOT</td>
<td>Strengths Weaknesses Opportunities Threats</td>
</tr>
<tr>
<td>UBCM</td>
<td>Union of BC Municipalities</td>
</tr>
<tr>
<td>WDM</td>
<td>Water Demand Model</td>
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<tr>
<td>WWOOF</td>
<td>Willing Workers on Organic Farms</td>
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</table>
Executive Summary

This Market Opportunities Analysis (MOA) helps to identify opportunities for the local food and farming businesses in the Regional District of the North Okanagan (RDNO) to thrive and contribute to a resilient local economy. It was developed using literature reviews and research; online and paper surveys; one-on-one interviews with local key stakeholders; feedback from a Regional Food System Workshop; Open Houses; and two Focus Group sessions. The MOA is a working document that is meant to be used in conjunction with the Background Report, in order to create the final Regional Agricultural Plan (RAP).

The population of the RDNO is approximately 81,000 individuals, which is expected to increase to close to 105,000 by the year 2031. There is strong community support for agriculture in the RDNO, indicated by the nearly 60% of community survey respondents claimed that they would be willing to pay a premium for locally-sourced foods in order to support local farmers. In addition to access to fresh, local food, the majority of all survey respondents associated farming with green space, a rural lifestyle, and scenic values.

According to the BC Ministry of Agriculture, the total farmland area is 84,339 ha (up from 76,624 ha in 2006), suggesting that land outside of the ALR is also being farmed and the amount of land lost from the ALR since it was designated in 1974 is relatively low when compared to other regions in areas of high population growth. The agricultural sector contributes 1,805 jobs in the RDNO (4.6%), and the number of farm operators rose from 1,715 in 2001 to 1,770 in 2011, indicating that the agricultural sector is fairly stable in the region and may be attracting new entrants. It is important to note though, that the number of operators over the age of 55 increased from 900 in 2001 to 1,020 in 2011, while the number of operators under the age of 35 decreased from 100 to 70 in that same time period.

The RDNO is currently only 20% food self-sufficient based to the amount of land currently under cultivation and irrigated. This, combined with the community support for purchasing local products indicates ample room for the agricultural sector to expand in terms of production to meet local food needs. The fact that much of the food being produced in the region is exported to other parts of BC, Canada, and abroad also impacts the resiliency of the local food system.

A number of challenges and key issues have been identified through the Regional Food System Workshop, Open Houses and Focus Group sessions. The list of top issues, in no particular order, is:

1. Biophysical considerations (including climate, soils, water, invasive species)
2. Marketing and branding
3. Costs of doing business and the need for (re)investment
4. Transportation and distribution
5. Access to skilled and affordable labour
6. Expansion of niche and value-added products
7. The regional tourism market
8. Regulatory challenges
9. Innovation, research, and education

Opportunities and solutions to overcome these challenges were also identified by stakeholders and a summary of these has been provided within the MOA. Local and regional government have a lot to offer new and existing farmers with robust agriculture-related infrastructure and services, a supportive consumer and agriculture community and partnerships with academic institutions that could be further enhanced. While there are a number of challenges to be addressed through policy recommendations and consumer engagement, there is room for growth and a keen interest in preserving the sector.
The purpose of this Market Opportunities Analysis (MOA) is to identify opportunities for agriculture to thrive and contribute to the economic sustainability of the North Okanagan region. It uses results from research and stakeholder consultation to determine challenges and opportunities for the Regional Agricultural Plan (RAP). It was developed using the following tools:

1. Literature review and research;
2. Responses from two surveys (one for farmers and one for community members);
3. Results from one-on-one interviews with local key stakeholders in the agricultural community;
4. Feedback from the Regional Food System workshop, two open houses, and two focus group sessions; and
5. A high level calculation of annual food demand and associated potential revenue for the North Okanagan region and area farmers.

This report is a working document and it is meant to be used in conjunction with the Background Report to provide important direction towards completing the final RAP.

The MOA is structured using the following subsections:

- Scope and intent
- Community overview
- Snapshot of agriculture in the North Okanagan
- Stakeholder engagement methodology
- Summary of survey and interview feedback
- Global, national, and provincial market context
- Capacity for market expansion
- Discussion of key issues and opportunities
- Success stories
- Summary of key issues and opportunities
Scope and Intent

It is intended that the issues and opportunities brought forth in this report will be discussed and debated within the regional agricultural community. Some of the issues and opportunities will lead to recommended actions within the final Regional Agricultural Plan (RAP). Feedback from these discussions will be used in conjunction with the Background Report and this MOA to provide important direction towards completing the final RAP. Therefore, the MOA is intended to be used as a foundation document in conjunction with the Background Report, upon which the final RAP will be created.

It is important to note that, while the document has been developed for the Regional District of North Okanagan (RDNO), it is not the responsibility of the RDNO to accept, adopt, endorse, or accommodate any or all of the issues, opportunities, or trends included within the MOA. The RAP will represent a community endeavor and as a result it will require the effort of many individuals and organizations in the region to succeed.

This MOA completes the following Objectives listed in the RAP’s Terms of Reference:

Project outcomes fulfilled by the MOA include:
- Identify and explore current issues and opportunities relating to agriculture;
- Engage stakeholders to contribute to a comprehensive action plan that is reflective of their input; and
- Identify opportunities and policies that will support and enhance the economic sustainability and resilience of the agricultural industry.

Specific project objectives fulfilled by the MOA include:
- To identify agricultural issues, trends, opportunities, and challenges facing the agricultural industry; and
- To develop strategies and policies to take advantage of opportunities and mitigate challenges.

The term “sustainable agriculture” is used throughout this report. For consistency, the definition of “sustainable agriculture” as it appears in the Township of Spallumcheen Agricultural Plan is used:

“A sustainable agriculture is one that, over the long term, enhances environmental quality and the resource base on which agriculture depends; provides for basic human food and fiber needs; is economically viable; and enhances the quality of life for farmers and society as a whole.”

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Methodology

Stakeholder Engagement Strategy

Facilitating meaningful dialogue amongst stakeholders across the North Okanagan was a critical goal at the outset of the plan. Community planning exercises are dynamic, sometimes contentious, with different parties bringing diverse viewpoints and interests to the table. A stakeholder engagement strategy was designed to be fair, inclusive, and considerate of these differing perspectives. To effectively engage the North Okanagan community throughout the development of the RAP, a number of tools were used. These included regular meetings with the Regional Agricultural Advisory Committee (RAAC), open houses, online and paper-based surveys, interviews, focus group sessions, and presence at local community events. This strategy allowed numerous community members to provide input into the Plan and helped to ensure all voices were heard.

Key stakeholders were also identified early in the process to ensure that the right people were being consulted with regards to the plan. These stakeholders were represented on the RAAC as well as through other community and farmer groups. The stakeholder engagement process also included educational components such as interactive presentations, handouts, posters and web content, in order to assist stakeholders in providing informed input about long term land use and community development.

Stakeholders, agricultural producers, and community members were paramount in helping to:
- Identify barriers and opportunities for agriculture;
- Gain valuable insights and information from various representatives of the agricultural and food community;
- Engage participants in meaningful conversations on agricultural planning and initiatives; and
- Use all input and feedback to develop appropriate and relevant policy and implementation recommendations.

Regional Agricultural Advisory Committee (RAAC) Meetings

The RAAC is consulted regularly and as such has a key role in steering the development of the plan. The RAAC was consulted at critical points throughout the process by being presented with...
updates on the RAP at RAAC meetings either by RDNO staff or by in-person presentations by members of the consulting team.

**Regional Food System Workshop**

A Regional Food System Workshop was held on February 18, 2014. The day-long workshop involved stakeholders representing the majority of food system participants from around the North Okanagan, including Armstrong, Vernon, Spallumcheen, Lumby, Enderby and Coldstream. The workshop was made possible, as an additional component of the RAP, through the Healthy Communities Grant from the Interior Health Authority (IHA). Those invited to the workshop were chosen due to their role as designated industry representatives, business owners or their representatives, community organization leaders, food system service providers or representative of community economic and tourism interests that are involved with agriculture and food access promotion. A postcard was developed, printed, and mailed to each invitee.

Phone calls and follow-up emails were also used to encourage attendance. Of those 60 invited, 24 indicated that they would be in attendance, and on the day of the workshop, 18 attended. Participants represented two Farmers Market Associations, the Okanagan Indian Band, the Organic Growers Association, IHA, the Armstrong Food Initiative, the Food Action Society, the Salvation Army/ Vernon Food Bank, Community Kitchens, Vernon Tourism, the North Okanagan Gleaners Association, as well as several producers from the region. The commitment of time and input from the participants demonstrated both the importance of the food system to the overall health, viability and identity of agriculture in the North Okanagan, as well as the importance of continued successes in the enhancement and promotion of the food system by each individual participant. Results from the Regional Food System Workshop were used to inform early focus and scope for the RAP and to develop a framework for the survey and first Focus Group session.

**Open Houses**

An open house is an opportunity for a larger group of people to interact in the agricultural planning conversation. This includes both presenting information to local residents and stakeholders and facilitating exercises that gather information in return. The first series of open houses occurred in conjunction with the Vernon and Armstrong Farmers’ Markets in May 2014. RDNO staff and the consulting team set up booths at both events as a way to present the intention of the RAP to the public and allow an opportunity to meet the consultant team. Shoppers at the Farmers’ Markets were asked to fill out community surveys and farmers/vendors were asked to fill out the farmer surveys. There was an excellent response rate at both of these events, which was helpful in framing the key issues, challenges and
opportunities in the North Okanagan region. A second round of open houses will be held later in the process to present the draft RAP to members of the public for comment and input.

**Focus Group Sessions**

Focus Group Sessions provide an opportunity for key stakeholders to provide in-depth discussion on key priorities for the RAP, vision, and overview of an initial strengths, weaknesses, opportunities, and threats (SWOT) analysis for the MOA. The first Focus Group session was held in May 2014 and included eight participants who helped review the results of the Regional Food System Workshop and refine the list of key challenges and opportunities facing the farming community in the region. They represented a diversity of producers (poultry, beef, sheep, vegetable production and dairy) as well as processors (Rogers Food and North Okanagan Poultry Processing). The second Focus Group was held in November 2014, prior to the development of the draft RAP. Over 30 participants attended this day-long session to refine the vision statement, key RAP objectives, and discuss recommendations and pilot projects.

**Surveys and Interviews**

Electronic and hard copy surveys were developed to solicit feedback on support for local food production, potential economic/policy opportunities, alternatives, and strategies. Two survey versions were created to best target the interests of farmers and community members. Hard copies of the survey were distributed in person at the Vernon and Armstrong farmers markets in May 2014 and were made available at other events in the community. The surveys were also made available online to enable members of the interested public to provide input on a range of key issues outside of, or in addition to, formal meetings and public events. The surveys were open for respondents to submit from May 23, 2014 to August 1, 2014.

The survey received over 400 responses. Of these, farmers provided 122 responses. Input received was used to develop the list of issues and opportunities for this MOA and to refine the list of key priorities for the RAP. It is important to note that the survey participants do not represent a random sample due to the fact that they were able to self-select on their choice to fill out the survey (i.e. participation was voluntary). Key findings from the surveys are included in the body of this report.

Interviews were conducted one-on-one by phone or in person with a select number of producers and processors who did not attend the first Focus Group and/or who did not
complete a survey. These interviews are ongoing and will continue to be used to inform the priorities and recommendations developed in the RAP.

**Literature Review and Secondary Research**

A number of reports and documents were consulted in developing this MOA. These include Statistics Canada Census reports, the Agricultural Census, background documents developed for the Regional Growth Strategy (RGS), as well as reports published by the Agricultural Land Commission (ALC) and BC Ministry of Agriculture documents. All data sources are listed as footnotes and in the References section.

![Figure 22. Discussing the RAP at the Armstrong Farmers Market.](image-url)
Economic Indicators

Community Overview

The RDNO is a federation of six municipalities (City of Armstrong, District of Coldstream, City of Enderby, Village of Lumby, Township of Spallumcheen and City of Vernon) and five Electoral Areas (B, C, D, E, and F) that work collaboratively to enhance the environmental, social and economic well-being of the residents and communities it serves.

According to the 2011 Stats Canada census there were 81,237 individuals living in 38,208 private dwellings in the RDNO in 2011. Of those dwellings, 33,747 were occupied by usual residents. This represents an average number of 2.7 persons per census family. The total area of the RDNO is 7,503 km² with an average population density of 10.8 people/km². Approximately 65% of the RDNO population resides in the Greater Vernon area. The population is expected to rise to close to 105,000 by 2031.

Table 1. Population projections for the RDNO

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<tr>
<th>Jurisdiction</th>
<th>2006</th>
<th>2011</th>
<th>2016</th>
<th>2021</th>
<th>2026</th>
<th>2031</th>
<th>% Growth/year</th>
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<td>RDNO</td>
<td>78,877</td>
<td>85,023</td>
<td>90,191</td>
<td>95,199</td>
<td>99,975</td>
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Employment Trends

The most recent labour and employment figures for the RDNO are from 2006. At that time there was a total labour force of 39,400 individuals and an average income of $36,400 (using 2009 income data). The main economic drivers of the North Okanagan region are retail trade, medical services, and construction. In 2006, the majority of employment was in the following sectors:

- Retail trade (12.7% of labour force)
- Health care and assistance (11.3% of labour force)
- Manufacturing (11.1% of the labour force)
- Construction (10.3% of labour force)

2Community Statistics for the Regional District of North Okanagan. Statistics Canada, 2011 Census Data. Note that these figures vary slightly from the population projection figures used in the Regional Growth Strategy.

Agriculture\(^4\) represented 1,805 (4.6\%) jobs. In conjunction with food and beverage manufacturing\(^5\) this number rose to 2,370 (6.0\%) jobs. Within that category, the number of farm operators increased from 1,715 in 2001 to 1,770 in 2011, indicating that the agricultural sector is fairly stable in the region and may be attracting new entrants. However, these new entrants are not necessarily young. The number of operators over the age of 55 climbed from 900 in 2001 to 1,020 in 2011, while the number of operators under the age of 35 decreased from 100 in 2001 to 70 in 2011.

Despite the relatively low proportion of jobs, the sector provides local and regional economic benefits, as well as opportunities for local access to agricultural produce and products. The North Okanagan Food Security Assessment and Action Plan found that in 2005, agriculture contributed 3.3\% to the regional economy. In 2007, the Action Plan identified 50 local wholesalers, 36 mainstream retail outlets and 18 alternative retailers, which indicated a variety of avenues for the sale of local food products. In 2011, total gross farm receipts in the RDNO were estimated to be worth over $126 million (Statistics Canada 2011). The BC Government regularly provides employment projections on a regional basis. The RDNO falls within the Okanagan College Region for these projections\(^6\). According to the latest figures, there is a 1.3\% annual growth in employment demand for all sectors in the region, which compares to 1.8\% provincially. Projected annual growth rates in occupational demand for agriculture is 1.7\% from 2010 to 2015 for the region. This category includes contractors, operators, and supervisors in agriculture, horticulture, and aquaculture, farmers and farm managers, general farm workers, and nursery and greenhouse workers.

### Community Support for Agriculture

The RDNO has a total area of 750,260 ha, of which 65,124 ha (or 8.7\%) is in the Agricultural Land Reserve (ALR). This represents 39\% of all ALR lands in the Okanagan. Most of the ALR is located

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\(^4\) “Agriculture” includes those jobs associated with crop production, animal production, support activities for crop and animal production.

\(^5\) “Food and beverage manufacturing” includes food manufacturing, beverage and tobacco product manufacturing.

in the valley bottoms where non-farm development pressure is greatest.

According to the BC Ministry of Agriculture, total farmland area is 84,339 ha (up from 76,624 ha in 2006), whereas land in the ALR is 65124 ha. This suggests that land outside of the ALR is also being farmed. Since 1974, the RDNO has lost a net amount of 5,160 ha of ALR lands\(^7\). That figure includes a decrease by approximately 800 hectares since 2001, mainly due to ALR boundary reviews conducted in Electoral Areas D and E (2001) and Electoral Areas B, C, and F (2009).

![Figure 24. Productive farmland near Cherryville.](image)

<table>
<thead>
<tr>
<th>ALR area at designation (1974)</th>
<th>70,283 ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land included in the ALR since 1974</td>
<td>+ 1,569 ha</td>
</tr>
<tr>
<td>Land excluded from the ALR since 1974</td>
<td>- 6,728 ha</td>
</tr>
<tr>
<td>Net ALR (2013)</td>
<td>= 65,124 ha</td>
</tr>
</tbody>
</table>

The amount of land lost from the ALR since it was designated in 1974 is relatively low compared to other regions in areas of high population growth. This is one indication of the high level of support for farming and the ALR that exists in the North Okanagan.

<table>
<thead>
<tr>
<th>Regional District</th>
<th>Net amount of ALR (%) lost between 1974 and 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Okanagan</td>
<td>7.3</td>
</tr>
<tr>
<td>Central Okanagan</td>
<td>17.6</td>
</tr>
<tr>
<td>Okanagan-Smilikameen</td>
<td>3.0</td>
</tr>
<tr>
<td>Capital</td>
<td>16.3</td>
</tr>
<tr>
<td>Metro Vancouver</td>
<td>8.8</td>
</tr>
<tr>
<td>Fraser Valley</td>
<td>6.7</td>
</tr>
<tr>
<td>Columbia Shuswap</td>
<td>19.1</td>
</tr>
<tr>
<td>Nanaimo</td>
<td>11.1</td>
</tr>
</tbody>
</table>

Another indication of high support for agriculture is that during the recent development of the RDNO’s RGS. As part of that process, a Quality of Life survey was conducted in 2013 and was completed by over 1,400 residents. Survey respondents rated Agriculture & Food Systems as the second-best policy area after Environment & Natural Lands. The RGS agriculture and food system polices were recommended, through consensus, by a Working Group that included agricultural producers, urban agriculture organizations, educational institutions and local, regional and provincial staff. The vision statement for the RGS explicitly highlights the importance of agriculture within the RDNO community:

The RDNO is a unique region that will continue to be recognized for its diverse natural habitats, robust economies, outstanding recreational opportunities and the high quality of urban and rural lifestyles provided in established communities. As such, the Regional Board will strive to conserve and enhance the very reasons that make the North Okanagan so attractive by ensuring:

- Growth is managed to reflect our social, environmental and economic values;
- The Region’s natural constraints to growth are water availability, agricultural lands, and environmentally-sensitive areas;
- Rural and urban lifestyle choices are maintained through designated growth areas and urban boundary management;
- Agricultural lands are protected and a sustainable regional food system is supported and encouraged;
- A strong, sustainable, and diverse economy that reflects our values and the identities of our communities;
- Our natural systems, including air, land and water, are respected and protected; and
- Inclusive, accountable and effective governance based upon a foundation of regional cooperation.

As such, undertaking the RAP was the priority RGS implementation project for 2014/2015. The preparation of the RAP builds upon previous food system work undertaken in the region\(^8\) and is significant for the ongoing economic development and community health of the North Okanagan. The results from the RAP’s Community Survey also provides an indication of the strong level of support for local food production in the region. A full 36% of respondents said that they had “above average” or “very high” knowledge levels regarding agriculture in the North Okanagan. Over 78% are familiar with farmers markets in the

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\(^8\) See the North Okanagan Food Security Assessment and Action Plan (2007) and the North Okanagan Food System Plan (2009).
RDNO and 44% are aware of the North Okanagan Food Action Society events. In terms of supporting local producers, 47% responded that they buy local “sometimes” and another 35% buy local “always.”

Many members of the community are members of organizations that support local agriculture either directly or indirectly. The list of organizations mentioned in the survey results include:

- 4-H Club
- Armstrong Food Initiative Society volunteer
- BeeSAFE
- Central Okanagan Food Policy Council
- Cherryville Garden Club
- Community Futures
- Community Garden member
- Community Supported Agriculture member
- East Hill Community Garden
- Enderby Garden Club
- Food bank/gleaners
- GMO Free
- Good Food Box program volunteer
- Kindale
- Lumby Garden Club
- The Sustainable Environment Network Society
- Vernon Permaculture
- Young Agrarians
- Master Gardeners of the Okanagan
- Monashee Garden Club
- Monashee Community Co-op
- North Okanagan Community Kitchens
- North Okanagan Food Action Society volunteer
- North Okanagan Naturalist Club
- North Okanagan Organic Association
- Okanagan Farm Fresh
- Patchwork Farms
- Pesticide Free Lumby
- Radical Action with Migrants in Agriculture
- Seed Savers
- Vernon & District Garden Club
- Seed exchange

Figure 26. Community members discussing agriculture in the North Okanagan.
In addition to access to fresh, local food, the majority of all survey respondents associated farming with green space, a rural lifestyle, and scenic values. Nearly 60% of respondents claimed that they would be willing to pay a premium for locally-sourced foods in order to support local farmers. These results all point to a regional source of consumers who are knowledgeable and supportive of agriculture and who are interested and willing to buy products that have been grown and crafted locally.

**Agriculture Market Analysis**

**BC Agrifoods Sector Outlook**

In 2012, B.C. agricultural and seafood exports went to over 130 countries and represented $2.5 billion in economic activity. BC’s advantage includes the diversity of its agrifoods commodities. North Okanagan agriculture therefore operates within the context of a global marketplace. The Economic Forecast Council expects BC’s Gross Domestic Product (GDP) will grow by 1.6 % in 2013 and 2.5 % in 2014. Risks to the economic outlook include the a further slowing of domestic economic activity; renewed weakness in the US economy; the ongoing European sovereign debt crisis threatening the stability of global financial markets; exchange rate volatility; and slower than anticipated economic growth in Asia dampening demand for BC’s exports.

By 2030, Canada is expected to be one of only a handful of countries exporting more food than it imports. However, a strong Canadian dollar and the high costs of energy and other inputs have placed pressure on the agricultural sector. International and national competitors, with similar or lower costs and larger economies of scale, will likely continue to squeeze profit margins for BC’s producers and processors. In 2011, BC’s agriculture and processing sectors (which include fisheries and aquaculture) provided almost 61,000 jobs and $10.9 billion in annual revenue.

The BC Government has issued a 2017 target of $14 billion of annual revenue.

Growing support in B.C. for locally produced food is leading to changes in eating habits and consumer choices. These changes have contributed to the number of farmers’ markets across B.C. increasing from about 100 to almost 150 with total direct sales also increasing by approximately 150% between 2006 and 2012.

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10 Ibid.
11 Ibid.
Outlook for the RDNO Agricultural Sector

Current Situation

Currently, the RDNO contains approximately 65,000 ha of land within the ALR, but the area actively farmed in the region is roughly 84,300 ha according to Statistics Canada 2011 data. This indicates that land outside of the ALR is available for agriculture and actively in production. The current population of the RDNO is approximately 85,000 and is expected to reach nearly 105,000 by 2031. In order to measure food self-sufficiency, the BC Ministry of Agriculture developed a Food Self-Reliance model, which estimates that 0.524 ha of land (irrigated and non-irrigated) is required to produce an adequate and healthy diet for one person to live for one year.

Food Self-Sufficiency

Using the indicators above, in order to be self-sufficient with the current population in the region, a total of 44,550 ha of land would need to be under cultivation and irrigated. By comparison, the 2011 Census of Agriculture noted that only 8,960 ha were reported being irrigated in the RDNO. This corresponds to only 20% self-sufficiency, indicating room for the agricultural sector to expand in terms of production to meet local food needs. This figure is likely a gross overestimate due to the fact that much of the food being produced is shipped out of the region. Therefore we can assume that actual regional food self-sufficiency is below 20%. Using population predictions, the number of irrigated hectares will need to grow to 53,711 ha by 2031. If the number of irrigated parcels under production doesn’t grow, then status quo figures indicate that the self-sufficiency rating will drop to 16% or lower by 2031.

Market Potential

In 2006, the average household (2.4 persons) in BC consumed $8,000 in food per year, or $3,333 per person per household. The most recent Statistics Canada data indicates that there are an average of 2.7 persons in RDNO households, therefore the estimated annual household spending on food is $9,000. There are 33,747 households being occupied in the RDNO, suggesting that over $303.7 million is spent annually on food in the RDNO. The total farm gate receipts for the region in 2011 was $126.2 million. Therefore, if all the income made by RDNO producers was from sales made to North Okanagan residents, it would still only satisfy about 42% of the regional spending on food. Given the diversity of food being produced in the region this represents a real opportunity for local farms to invest in their businesses and expand their production levels.

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15 The 2011 Agricultural Census. Cansim tables derived by query through the Statistics Canada website. Accessed 2014. The number of irrigated hectares may in fact be higher, as the Census data is self-reported, however the amount of irrigated land is still likely much lower than that necessary to sustain the population in food.
Key Issues and Opportunities

Based on discussions with stakeholders at the Regional Food System Workshop, Open Houses, Focus Group sessions, results from both the community member and farmer surveys, and the literature review, several key issues have emerged. A discussion of each of these issues along with potential opportunities associated with the issues is presented in this section.

The list of issues, in no particular order, is:

1. Biophysical considerations (including climate, soils, water, invasive species)
2. Marketing and branding
3. Costs of doing business and the need for (re)investment
4. Transportation and distribution
5. Access to skilled and affordable labour
6. Expansion of niche and value-added products
7. The regional tourism market
8. Regulatory challenges
9. Innovation, research, and education

Context is provided for each issue, along with a discussion of challenges and opportunities for each.

1) Biophysical considerations

The North Okanagan region has a relatively moderate climate, highly fertile land, and more growing degree days than most regions of BC. As long as irrigation water can be accessed, the region is well-suited to growing a wide variety of crops and is one of the more productive growing regions in Canada. Most farmers who replied to the survey agree that the North Okanagan has great climate and soils for growing food. There is some concern amongst producers as to how they will adapt to climate change, or how the younger generation of farmers will cope with changing climate regimes.

Continued access to irrigation water is a concern for many farmers. As part of the consultation process, farmers were asked to identify any specific biophysical constraints on their farms. The top response from farmers was high irrigation needs coupled with seasonal water scarcity challenges. If agricultural production is to expand to meet the needs of a growing population, the sources of irrigation water for producers will need to be secured. Many indicated that the water rates are too high (or that...
there are not lower rates for farmers) and that rights to water access and licensing is grandfathered, so new water licenses can be hard to come by.

Most farms in the region are located either within the Okanagan watershed or the Shuswap River Watershed (SRW). Details of surface and groundwater resources in these basins are provided in the Background Report. Irrigation accounts for a significant amount of surface water and groundwater consumption through the Okanagan and Shuswap River watersheds.

There are more than 1,200 licenses for surface water use in the SRW recorded with the BC MoE. More than 95% of the allocated water is licensed to agricultural use for irrigation and water utility use for irrigation and water works. Summer water consumption within the SRW is up to 2.5 times higher than the annual average use due to agricultural and domestic irrigation. As such, in-stream flows are significantly reduced during the late summer and early fall. Surface water availability is further compounded by a trend of lower summer flows over the last 30 years attributed to climate change. The groundwater use in the Lower Shuswap River was estimated to be as high as 44% of total groundwater flow, due to withdrawals from private wells and municipal water wells.

Irrigation for agriculture in the Greater Vernon Area is within the Okanagan watershed and uses approximately 80% of the water supplied by Greater Vernon Water Utility (GVWU). The 2012 GVWU Master Water Plan proposed changes to this water service, however a referendum conducted in November 2014 failed to garner support for borrowing funds to expand the water service, which would have involved the creation of a twinned water main to provide irrigation water to agricultural users in Lavington and Coldstream, increasing the size of the irrigation main line, and the addition of a pump station for agricultural water supply.

The City of Vernon provides reclaimed water from the Greater Vernon Water Reclamation Centre to a small number of agricultural lands. Data provided in the RGS Monitoring and Evaluation Report (2014) reflects this and indicates that only a small portion (approximately 10%) of the irrigated area in the North Okanagan uses reclaimed water from the community water system. Most producers are using on-site water sources for irrigation. This water system is separate from that included in the irrigation water system expansion proposal, which is the subject of the referendum. The Master Water Plan indicates that integration of this small water system may be considered, but it is discussed in greater depth in the Liquid Waste Management Plan (2013), undertaken by the City of Vernon.

Almost every summer during the height of the growing season, the North Okanagan experiences some level of water scarcity. Since 2005, many communities within the Greater Vernon area of the RDNO have started installing water meters and an agricultural water-metering program has been in place in the GVWU area since 2008, when it was initiated as a pilot project.
There is a general lack of knowledge amongst producers regarding agricultural water sources and purveyors, consumption rates, pricing, licencing, and the relationships between regulatory agencies and the Okanagan Basin Water Board (OBWB). The North Okanagan community benefits from in-depth research conducted by the OBWB on the use of water by farmers in the area, and a priority project area for the Water Stewardship Council of the OBWB, with assistance from agricultural industry representatives, has been the research into balancing agricultural water use, protection of necessary irrigation volumes and ensuring water access be balanced between all water uses in the Okanagan watershed. Receiving information related to the resources such as the Water Demand Model and other research can be a challenge for some producers who do not readily access online resources. The new Water Sustainability Act (2014) suggests that Regional Water Management Plans or Strategies will be encouraged in the future. There appears to be a strong role for local producers in the development of these strategies or plans.

2) Marketing and branding

The North Okanagan has benefitted from many agricultural marketing successes including small-scale, organic, conventional, dairy, beef, flowers, poultry, sheep, vegetable, orchards, wineries. However, according to the 2007 North Okanagan Food Security Report, food producers and processors noted that it was easier to export their goods to other regions in BC due to the additional costs of selling locally like advertising, storage, packaging, etc. Regardless, the survey results indicated that producers are generally committed to selling locally, and most do retail at least a portion of their products within the region. Support for farmers markets is on the rise, with several new markets in the RDNO having started in the last few years. This is not surprising considering that the North Okanagan Food Security and Action Plan noted that the Vernon Farmers’ Market alone contributes $1.2 million per year to the local economy through 1,660 daily customers, each of them spending an average of $18.86 per visit.

On the other hand, several producers noted in the survey that selling at the farmers market is not a convenient option for them – usually due to scheduling, logistics, or that they didn’t believe it was financially worth it. In addition to farmers markets, many opportunities for marketing farm products exist, including:

- In-Store Advertising: advertising support in the store where their products are offered. Pictures of the farmers and their families could be presented along with information about each farm. Dedicated sections in local grocery stores (10 to 12 feet of shelf-space) could be set aside for local farm products. This is already being done by some North Okanagan retailers including Butcher Boys Grocery, Swan Lake Nursery, Quality Greens, and others.
Online and Social Media: Apps, websites, tweets, and Facebook posts relating to local food and agriculture all add to the extension of awareness and understanding of the regional food system.

Farmers’ Institute: This organization would have a different mandate than producer associations. The group could create a mentoring program to support new and existing farmers in the area, and improve information and knowledge transfer between farmers.

Branding for Local Food: The potential exists to develop a regional brand which would allow for immediate recognition by local consumers as well as visitors.

There is a large market for fresh and processed foods in the Okanagan. As of 2007 there were 50 local wholesalers, 36 mainstream retail outlets, and 18 alternative retailers in the North Okanagan. Local products available include organic and non-organic produce, meat, poultry and eggs, dairy products, non-dairy products, flour/cereals, medicinal herbs, ginseng, organic spelt, beer, and wine.

Based on survey results, the main products that are sold locally (aside from hay and forage) include apples, strawberries, sweet cherries, plums, apricots, corn, asparagus, potatoes and squash. Producers have discovered that selling their products locally involves increased costs in the areas of advertising, transport, storage, packaging and retailing, which are often paid for by the buyer when products are sold to large companies for export out of the region.

The research conducted for the Splatsin Agriculture Strategy suggested that the ten most lucrative crops to produce in the North Okanagan are:

1. Parsley
2. Parsnips
3. Beets
4. Garlic
5. Tomatoes
6. Lettuce
7. Strawberries
8. Spinach
9. Carrots
10. Sweet cherries

Despite this research, RDNO producers are not necessarily growing these most lucrative crops. The top responses from the survey, in order of highest to lowest number of producers, include (bolded entries indicate one of the most lucrative crops as listed above):

1. Hay
2. Alfalfa
3. Garlic, Corn (tie)
4. Zucchini/squash
5. Field tomatoes
6. Carrots, Herbs, Apples (tie)
7. Beans, Onions (tie)
8. Beets
9. Kale, Potatoes, Raspberries (tie)
10. Strawberries

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In the Community Survey, respondents were asked which products (not value-added) they would like to see locally available. The top responses were:

- Nuts
- Berries

According to the results of the Farmer Survey, the RDNO is home to:

- 11 raspberry producers
- 10 strawberry producers
- 4 walnut producers
- 3 hazelnut producers
- 1 chestnut producer

### 3) Costs of doing business and the need for (re)investment

BC producers experience high costs for land, labour, chemical and fertilizer inputs and fuel. Farmers in most of BC have difficulty producing sufficient financial resources to afford adequate farm labour, equipment, and other farm inputs (seeds, feed, soil amendments, etc.) to enhance production levels. Most farmers need financial assistance in order to scale up their production and often one family member must work off the farm. North Okanagan farmers responded overwhelmingly through the survey and one-on-one interviews that the cost of land, taxes, and inputs are some of the top concerns facing agriculture in the RDNO. Local farmers are concerned that lower priced, imported food may be bringing down the price of locally grown food, which directly affects farmers’ sales revenues. Local food producers are having difficulty competing with large agri-businesses.

The cost of land can be a barrier to those who are interested in starting a new farm. It’s clear that expansion or start-ups of any business type requires significant investments. For agriculture that includes land, plants, animals, equipment, labour, training, permits, licences, or technology. Despite these costs, interest rates are currently relatively low, and now would likely be a good time to invest in the agricultural sector.

Several suggestions put forward in both the community survey and farmer survey suggested either easing land taxes for those who are producing food or increasing taxes for those who live on farmland, but don’t use the land for production purposes. These suggestions ignore the fact that ALR land is already taxed at a lower rate than land outside the ALR and that land both within and outside the ALR can be granted “Farm Status” for further tax reductions. Farmers should be encouraged to take advantage in this reduction in taxes if they are not already doing so. In order to be eligible, minimum farm income requirements are calculated as follows: $10,000 on land less than 0.8 hectares (1.98 acres); $2,500 on land between 0.8 hectares (1.98 acres) and 4 hectares (10 acres); on land larger than 4 hectares (10 acres), $2,500 plus five per cent of the actual value of any farm land in excess of 4 hectares; and $10,000, in order to qualify unused land where the area in production by the owner makes up at least 25% of the portion of the parcel outside the ALR\(^\text{19}\). Some sales of qualifying agricultural products must occur every year.

\(^{19}\) BC Assessment Authority: Farm Tax Status. 
During the first Focus Group Session in May 2014, producers indicated the difficulty of accessing land for leasing and for new entrants to agriculture. There were concerns raised about the limitations to land tenure and leasing and that the length of land rentals restricted the inclination or ability for farmers to invest in infrastructure or land and soil improvements. Some of the farmers present in the Focus Group session also mentioned that they were actively looking for land to lease, which indicated a desire to expand current production and potential for market growth.

Results from the farmer survey indicate that many are hoping to expand their operations within the short term (next five years).

Table 4. Farming plans for the next 5 years.

<table>
<thead>
<tr>
<th>Future Farm Plans</th>
<th>Number of respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expand operations</td>
<td>38</td>
<td>38%</td>
</tr>
<tr>
<td>Continue as usual</td>
<td>30</td>
<td>30%</td>
</tr>
<tr>
<td>Transfer ownership, but continue living there</td>
<td>11</td>
<td>11%</td>
</tr>
<tr>
<td>Reduce operations</td>
<td>8</td>
<td>8%</td>
</tr>
<tr>
<td>Sell</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>Discontinue</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Subdivide</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Transfer ownership and move away</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>101</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

4) Transportation and distribution

Many transportation and distribution networks abound in the North Okanagan, with Highway 97, Highway 6, and Highway 97A travelling through a significant section of RDNO. Producers within the region have excellent access to local communities and markets as well as a number of major cities such as Vernon, Kamloops, Kelowna, Penticton, Calgary and Vancouver by air and ground transportation, including train. However, while the transportation routes exist, the cost of the fuel and freight out of the North Okanagan region makes shipping and transportation prohibitive for many producers. The need to ship livestock out of the region to be finished and/or processed is a major transportation-related concern.

Support systems and infrastructure for collecting, storing, processing, and distributing food to major retail markets have long been established and operate efficiently at the provincial and national levels (Sysco, Gordon Food Services, and Overwaitea are examples). While some North Okanagan suppliers have developed contracts with these distributors, other producers may have difficulty accessing this distribution system because:

- Many producers are too small to meet production requirements of larger scale retail outlets;
- Many producers in rural and outlying areas cannot efficiently transport products to a distribution point or center;
- There may be information gaps around labeling, quality control, traceability, and food safety; or
- Some supply-managed industries (such as dairy) have little control over the distribution of their product.
Producers have an untapped opportunity to work co-operatively to either secure space on trucks and trains moving through the region or to support the creation of new regional food transportation and distribution businesses.

Figure 31. Cheese making facility in Armstrong.

5) Access to skilled and affordable labour

Across BC, the farming industry is experiencing a shortage of seasonal and/or skilled agricultural workers. Based on survey responses and the first Focus Group session, many producers noted that the availability of workers wasn’t the major concern, but the low wages that farmers can offer leads to an inability to retain skilled farm labour. Very few farms have employees and those that do usually only have 1-2 paid employees.

Residents in the region have long based their occupation on natural resources. Historically jobs have centered around gold rushes, railroad construction, mineral exploration and mining, highway projects, forestry, fishing, tourism, farming and ranching. Downturns have resulted in unemployment, wage disparities, rapid shifts in population, and lost opportunities for associated businesses. Despite these challenges, people are attracted to the area by its beauty and quality of rural life.

The labour issue is a bit of a “chicken and egg” problem for local farmers. Many acknowledge that additional labour resources are required in order for operations to scale up production; however most farms cannot afford to hire labour, even seasonally, at current profit margins. When labour is sought, it can be difficult to find good help. The population in the region is aging, with many in retirement, and many members of the younger generation leaving the region for higher paying work opportunities. Several stakeholders mentioned the lure of the oil and gas sector in northern BC and felt that many people in the 25-55 year age range were leaving on short-term work opportunities out of the region.
6) Expansion of niche and value-added products

Increasing consumer awareness of the benefits of eating locally is increasing the demand for fresh and processed local food products. Direct sales in the form of the number of farmers markets and BC’s high level of educated and health-conscious consumers has produced a 500% increase in organic food purchases in BC since 2006. Other value-added sectors that are doing well include alcoholic beverages - craft beer retail sales have increased 20% each year since 2006 and Okanagan wines have done very well in the past 10 years, winning national and international awards. Experience-based products (such as corn sold at a corn maze, or apple pie sold at a u-pick apple orchard) are also popular with consumers. According to the community survey, consumers are willing to pay premium prices for products locally.

The RGS Quality of Life survey responses indicated that local food access is considered to be just above “good” and respondents indicated that this issue needs somewhat more attention than it currently receives. Results from the RAP community survey indicate that there is potential for value-added local products that address changing trends in the food industry. Specific value-added products that consumers would like to see locally include:

- Canned goods (according to Farmer Survey, only 11 are producing)
- Sauces, marinades, jams
- Baked goods (according to Farmer Survey, only 3 are producing)
- Frozen goods

The North Okanagan Food Action Plan (2007) identified 23 identified food processors in the region. Their range of goods and services included milk and soy products, poultry and eggs, meats and sausage, produce, honey, ginseng, coffee roasting, spring water, wine, and beer. There is also a market for frozen produce such as frozen berries and pie fillings. The ALC’s regulation permits the processing of farm products in the ALR provided 50% arise from the farm operation. Processing facilities on ALR that are not associated with a farm, or have off farm inputs greater than 50%, require that an application be submitted to the ALC.

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7) The regional tourism market

Providing farm tours and serving prepared food on-site is one way that farmers have been able to continue farming in a profitable manner, and many Okanagan farms are examples of this. At least three maps are available to residents and visitors who wish to visit farms in the RDNO. Many farmers indicated in the survey that they would be interested in being involved in agritourism, however few had specific suggestions as to what that activity may be. A few producers were concerned that agritourism would mean large fairgrounds, equestrian centres, or rodeos.

Recent discussions at the ALC suggest that local governments and producers are requesting more clarification around the definition of “agritourism” specifically as it pertains to scale, permanence, and type of activity. It is likely that the ALC will be working to define some of these terms for producers and local governments in the near future. In the meantime, an agritourism strategy or agritourism framework could be developed within input by the RDNO farming community. Both the Spallumcheen Agricultural Area Plan and the Coldstream Agricultural Plan call for working locally and regionally towards an agritourism strategy.

In Kelowna, the Laurel Packinghouse pays tribute to the Central Okanagan’s rich agricultural heritage. The museum, located in an agri-industrial building over 100 years hold, includes the BC Orchard Industry Museum and the BC Wine Museum. It also serves as an event location for meetings, conferences, and celebrations. There is an opportunity to create a similar tribute to the North Okanagan’s agricultural history while leveraging the tourism value into an economic opportunity for producers by including retail services within an agricultural museum. The District of Coldstream’s Agricultural Plan also speaks to the opportunity for more museums or historical venues to celebrate the agricultural community’s contribution to the local and regional identity.

An additional opportunity that ties into agritourism is a public market. A study commissioned by the City of Vernon in 2011 examined the feasibility of a public market for the area. The results suggest that there is a feasible “operational” option within the City of Vernon for such a facility. The recommended business model would include five specific business units including:

1. Small public market for high quality/unique “North Okanagan” products;
2. Commercial kitchen and food processing teaching area;

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21 Township of Spallumcheen Agricultural Area Plan, 2006.
3. Restaurants with locally sourced menus;
4. Community event area; and,
5. Vernon and North Okanagan Tourism and Visitor’s Centre.

Respondents to both the Farmer Survey and the Community Survey noted that they would like to see a year-round indoor farmers market. Some other agritourism options that were suggested in the survey responses included U-Picks, trail rides and hikes, wine tastings, farm crawls, Circle Farm Tours, Feast of Fields, and more. A number of community members also noted that a single publication that is updated on a regular basis (similar to the Comox Valley’s Growers Guide) would be very useful from a consumer perspective, rather than having to refer to several maps that may be in various stages of updates.

8) Regulatory challenges

A few key regulatory issues were raised during the consultation with consumers and producers. These included the role of Marketing Boards and Quota, the Meat Inspection Regulation (MIR), and the issue of Genetically Modified Organisms (GMOs). While the role of local governments is limited in all of these regulatory issues, there may be opportunities to work with provincial and senior levels of government. In particular, the RDNO may consider collaborating with other Regional Districts in the Southern Interior on solutions to issues of mutual concern. Learning opportunities may be created within the community on each topic.

Marketing Boards and Quotas

There are currently eight Boards and Commissions in place in BC that manage quota and/or marketing for a variety of products in BC. These are:
- BC Broiler Hatching Egg Commission
- BC Chicken Marketing Board
- BC Cranberry Marketing Commission
- BC Egg Marketing Board
- BC Hog Marketing Commission
- BC Milk Marketing Board
- BC Turkey Marketing Board
- BC Vegetable Marketing Commission

Marketing boards generally control shipments, distribution, and advertising so that producers (over a certain threshold) are unable to sell their products at the farm gate or directly to retailers. A producer must generally leave the system in order for another one to enter it. The system does require someone with the ability to navigate the licencing process and to keep up with ongoing paperwork as required. This creates efficiencies and benefits for those holding quota: it ensures a level marketing playing field, fair prices for products, and streamlined processing systems. On the other hand, it can also create challenges for producers who wish to enter the industry and/or who wish to market or sell their goods directly to retailers and restaurants.

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Meat Inspection Regulation (MIR) and Class E Pilot Project

The Provincial Meat Inspection Regulation (MIR) sets out construction, inspection and other requirements for provincially licensed slaughter facilities in BC. The regulation came into force in 2004, compliance became mandatory in September of 2007 and significant changes to licence classes were made in 2010 and 2013. The language of the regulation allows for innovative approaches, such as mobile slaughter facilities that can provide services to several rural communities. However, many small-scale producers criticized the move as restricting their ability to slaughter their animals in areas not served by provincially-licensed facilities. The MIR has resulted in a reduction of locally-available abattoirs for beef and poultry producers. This creates high costs associated with meat processing for farmers who need to ship their animals to other communities in order to process livestock, or have eggs graded for sale. This has led for calls for the province to allow the North Okanagan to be exempt from the MIR licensing restrictions, as has been granted for some of the more remote parts of the province.

The following meat processing facilities exist within or near to the RDNO:

**Poultry**
- North Okanagan Poultry Processors (Armstrong)
- Silvernails Abattoir (Falkland)
- Farmcrest Foods Ltd (Salmon Arm)
- Okanagan Poultry Processors (Kelowna)

**Red Meat**
- Valley Wide Meats (Enderby)
- Lambert Creek Organic Meats (Grindrod)
- Riverside Natural Meats (Salmon Arm)
- Longhorn Farms Abattoir (Kelowna)
- Kelowna Free Graze Lamb (Kelowna)

For producers in Cherryville, the closest processing facilities are in the Slocan Valley.

The RDNO has been working on this issue since 2006 and commissioned a *MIR Impact Report* in 2008. More recently (2013), the RDNO partnered with the BC Ministry of Agriculture to launch a Class E Pilot

Project. Pilot project participants had to reside within the RDNO, and be located within two hours travel time of a provincially licensed Class A or B abattoir that offers the services that they require. Five producers applied and were accepted to the RDNO pilot program. There were from Lumby (2), Armstrong (2), and Gardom Lake. However, by mid-2014 only one license had been issued through the pilot program. IHA staff explained the delays based on the fact that each applicant is progressing through the program at different rates.  

Now that ten years have passed since MIR was introduced in 2004, an opportunity exists for the RDNO to partner with IHA and other regional districts to explore the resulting economic impacts that MIR has had on local businesses and communicate these findings with provincial regulatory authorities.

**GMOs and Use of Chemicals**

In Canada, the regulation of genetically modified organisms (GMOs) is primarily done at the federal level. According to the federal government regulatory system, a GMO is an organism that was produced through modification techniques that include traditional breeding, hybridization and genetic engineering. The Canadian Food Inspection Agency (CFIA) has primary responsibility for regulation of GMO crops. CFIA is responsible for the administration and enforcement of the Seeds Act, and for the assessment and regulation of all plants and crops, including products derived from biotechnology. Other federal departments carry out functions related to GMO products. Health Canada is responsible under the Food and Drugs Act (FDA) and associated regulations for conducting safety assessments for all new foods and drugs, including products developed using biotechnology. The province has jurisdiction over local health, environmental and agricultural issues, subject to federal regulations. The Farm Practices Protection (Right to Farm) Act legislation in BC permits farmers to undertake normal agricultural practices that cannot be regulated or prohibited by local government, including using approved genetically engineered seeds, plants or animals.

To date, the RDNO Board of Directors has taken the following actions regarding concerns expressed by some community members regarding GMO products, foods and organisms:

- Letter sent on February 4, 2013 to the CFIA requesting GMO food labeling;
- Requested advice on GMO crops from the RAAC for the Board of Directors consideration;
- Participated in a Union of British Columbia of Municipalities (UBCM) resolution in 2012 requesting leadership from provincial and federal governments regarding GMO crops; and,
- Forwarded the request from BeeSAFE to the Ministry of Agriculture regarding the development of a GMO Transition Guide.

The UBCM resolution that passed in 2013 by approximately 60% of the attending delegates states:

“That UBCM ask the British Columbia government to legislate the prohibition of importing, exporting and growing plants and seeds containing genetically engineered DNA, and raising GE animals within BC, and to declare, through legislation, that BC is a GE Free area in respect to all plant and animal species.”

Staff at the RDNO have pointed out that they do not have the expertise internally to conduct an investigation into the risks and benefits of GMOs. The Board of Directors has requested that the RAAC consider this issue and the Committee has members that represent divergent opinions on the matter.

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27 “Pressure continues on meat rules”, Vernon Morning Star, May 11 20
An opportunity exists for a food system and agriculture speaker series at the University of British Columbia Okanagan or Okanagan College, with a focus on GMOs.

9) Innovation, research, and education

In order to stay competitive against imports, the local agricultural sector must be innovative. This may mean working more efficiently, exploring economies of scale, or working collaboratively and cooperatively. It will also require partnering with research institutes and students. During the first focus group session in May 2014, it was clear that there is considerable support and willingness to work together amongst farmers and farm-related businesses. While there is a role for individual commodity group organizations, it was evident that farmers are willing to cooperate and collaborate when necessary. Success will be most easily realized if they can be leveraged through the RAP and within the agricultural community.

In particular, there is a need to plan and adapt to the ongoing challenges presented by climate change and water scarcity. Research into marketing and product development is another area that was brought up in the survey. Issue topics that are of interest that have been mentioned by farmers in both the Focus Group session in the survey include:

- Water-efficient farm practices
- Regionally-specific climate change planning and adaptation
- Pest and disease management for regionally-relevant crops
- Locally appropriate wine grape varieties
- Land tenure options for retiring farmers
- Crop trials for niche or emerging products
- Management options for noxious weeds
- Historical research into the agricultural community

Opportunities to collaborate on research through the Pacific Agricultural Research Centre, UBC Okanagan, Okanagan College, School Districts #22 and #83, and other learning institutions could be broadened. This could be initiated by individual producers, agricultural organizations, or the RDNO. The Patchworks Farm model is one example of a successful collaboration between Kindale and the RDNO, District of Coldstream, City of Vernon, producers, local food organizations, and UBC Okanagan.

The need to provide education opportunities for farmers (in technical skills, business, and policy issues) and the public (in the food system and agricultural history) came up often in discussions with both producers and members of the community. Programs such as the Provincial Ag-in-the-Classroom have been successful in raising the agricultural literacy of school-aged children around the province. This program could be amplified and made more relevant by integrating presentations by farmers, processors, and other members of the food system to schools.

Producers could benefit from being made aware of the large amount of education resources offered by the Ministry of Agriculture through their Agriculture in the Classroom programming. Many producers were not sure of what courses or materials were available to them. Several mentioned through the Farmer Survey that they would like to see an appointed staff member at the RDNO be able to provide extension services to help them navigate the often complicated levels of administration and bureaucracy associated with the agricultural industry, especially related to processing and food safety.
Summary of Challenges and Opportunities

A summary of opportunities is presented in order to stimulate discussion. They are not presented as approved recommendations. Furthermore, lead agencies or organizations have not been identified to carry out any of these initiatives at this stage. A fulsome evaluation of these options is part of the ongoing consultation and planning process.

Table 5. Summary of challenges and opportunities.

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<tr>
<th>Issue</th>
<th>Challenges</th>
<th>Opportunities</th>
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| 1. Biophysical considerations | • Water scarcity - especially in the summer months.  
• Lack of understanding of water governance structure.  
• Uncertainty over the impacts of climate change.  
• Lack of noxious weed control strategy for farmland. | • Host a forum on agricultural water issues in conjunction with the Okanagan Basin Water Board.  
• Support research and knowledge extension in preparing and planning for extreme weather and climate change adaptation and planning for climate change mitigation.  
• Develop a regional noxious weed program that focuses on the impacts that weeds have on the local food system. |
| 2. Marketing and branding | • No unifying brand or tagline for North Okanagan agricultural products exists.  
• Farmers are not producing the most lucrative crops.  
• Lack of presence in social media, online advertising. | • Consider contracting out the development of a logo/brand for North Okanagan products.  
• Develop an agritourism strategy (see Issue #8 for more on this topic).  
• Take advantage of marketing research indicating which crops and products will sell well in the region.  
• Leverage existing presence in grocery stores to the larger chain stores.  
• Develop a social media campaign for North Okanagan agriculture. |
| 3. Cost of doing business and the need for (re)investment | • The cost farmland is high for relatively low returns for most producers.  
• Other input (equipment, seeds) costs are also high.  
• These barriers limit new entrants who want to get into farming. | • Connections between those who own ALR but don’t have farm tax status (aren’t producing) with those who want to lease land.  
• Further explore how farmers wish to expand their operations in the next few years.  
• Take advantage of low interest rates for loans to use towards re-investment. |
| 4. Transportation and distribution | • Cost of transportation and distribution is rising along with the cost of fuel.  
• Some producers have developed agreements with major distributors, but not all have.  
• Many small-scale farms are using many small-scale transportation options and this is missing potential economies of scale. | • Connect small-scale farmers to determine transportation needs and assess if leveraging many short trips into less longer distance trips would be feasible.  
• Create an environment for producers and distributors to come together to discuss demand and supply needs and distribution options.  
• Consider developing an agri-industrial strategy that would explore supply, demand, transportation, and distribution needs. This could tie into the Regional Employment Lands Action Plan currently in development. |
| 5. Access to skilled and affordable labour | • Many young people going north for jobs in the oil and gas sector.  
• Skilled labour more and more difficult to come by.  
• Producers can’t expand operations if there isn’t a secure labour base. | • Distribute information on existing agricultural labour pools.  
• Collaborate with existing organizations on initiatives that match farm labourers with producers.  
• Support or develop a regionally-specific farm internship program. |
|---|---|---|
| 6. Niche and value-added products | • The type of locally-produced products in demand by the community do not always match what is actually being offered by producers.  
• Local producers are not accessing and taking advantage of information about investing in niche products development.  
• Value-added infrastructure (cold storage, processing) is not being used to its greatest potential. | • Distribute market information results from the Community Survey to producers in the region so that they can see what is locally in demand.  
• Host meetings on the feasibility of local production and sales of the following products: nuts, berries, herbs, and dairy (cow).  
• Update research into current state of processing infrastructure and equipment in the region and distribute it through the agricultural community. |
| 7. The regional tourism market | • Current initiatives are somewhat disjointed and lack an overall strategy.  
• Producers cannot always attend seasonal farmers markets due to schedules. | • Develop a regional agri-tourism strategy.  
• Create a year-round indoor market for producers using recommendations found in the City of Vernon Public Market Feasibility study.  
• Explore opportunities to collaborate with museums and historical societies in the region to celebrate the agricultural history of the region. |
| 8. Regulatory challenges | • Marketing commissions and quotas limit new entrants and control ability to sell locally.  
• MIR limits the processing and sales of locally-raised meats.  
• Agricultural community is divided on GMO issue. | • Collaborate with all levels of government to reduce hurdles for producers, especially those who wish to develop value-added products.  
• Explore regional regulatory opportunities that may support a positive environment for producers. |
| 9. Innovation, research, and education | • Lack of information about regionally-relevant crop production  
• Need for information about climate change impacts on agriculture and adaptation  
• Policy issues, such as land tenure, require attention  
• Producers not always aware of provincial education resources | • Collaboration with post-secondary academic institutes  
• Increase communication of research needs with academia and government research stations  
• Leverage existing in-school agricultural education programs  
• Provide extension to farmers who have difficulty navigating confusing paperwork |
Success Stories

There are many successful businesses and agricultural endeavours in the North Okanagan area. The following are a selection of these.

Bellmann Specialty Produce
Bellmann Specialty Produce is located in Grandview Flats in Spallumcheen. Their focus is on using sustainable agricultural production to grow high quality vegetables and fruit. Their background is in the food and hospitality industry, so quality definitely comes before quantity. They have a farm stand on site and also sell to local retail and wholesale markets such as Sysco and Gordon Food Services. Products they grow include: radishes, zucchini, carrots, raspberries, squash and root vegetables. To learn more about them and check out their product schedule visit their website at: http://www.bellmannspecialtyproduce.com/.

The BX Press
The BX Press is a new cidery that opened in 2014 on East Vernon Road in the BX region. They have created 4 hand-crafted ciders that have received an excellent response in their short time under production. The owners are third-generation farmers on that land growing apples that are used in the ciders they produce. The cidery hosts a tasting room on site to sample ciders and, when they are sold out, offer fresh apples for sale as well. They also sell to a number of local liquor stores and restaurants in both Vernon and Kelowna. Find out more about The BX Press here: http://thebxpress.com/

Davison Orchards
Davison Orchards is also located on Bella Vista Road in Vernon and is a family business has grown substantially over the last 60 years. There are currently three generations living and working together on the farm. The farm produces a wide variety of tree fruits that they process on site into value-added products such as preserves, baked goods, syrups and much more. They also produce mixed vegetables on site with u-pick options. The family has capitalized on their agritourism capacity by providing a café, store, petting farm, play area and tours for visitors. They employ a large number of individuals from the local community. You can learn more about Davison Orchards on their website at: http://www.davisonorchards.ca/.

Fieldstone Organics
Fieldstone Organics is BC’s only certified organic grain handling facility. They provide whole grains, legumes and seeds for bulk, wholesale and retail customers. They are certified organic for handling and work with a number of local organic Okanagan growers to supply the majority of their needs. They do source from other areas in Canada as well, when needed to supplement their supply. Fieldstone Organics began as a cooperative of organic growers in Armstrong in the early 2000s who required grain processing equipment and support for their individual businesses. Today, they offer those same custom services to other growers in addition to the products that they sell through retail and wholesale markets. Check them out at: http://www.fieldstoneorganics.ca/.

Okanagan Spirits
Okanagan Spirits is an internationally acclaimed craft distillery featuring a unique selection of specialty spirits such as fruit brandies, liqueurs, marc (grappa), vodka, whisky and Taboo Genuine Absinthe. They use local ingredients (100% BC fruit) where possible and produce their products in copper stills without the use of additives, chemicals or artificial flavours. Okanagan Spirits sells direct to restaurants and resorts, as well as globally at Canadian Embassies. They have two distilleries located in downtown
Vernon and downtown Kelowna and offer tours and tastings at both. Learn more about them here: http://www.okanaganspirits.com/.

Pilgrim’s Produce
Pilgrim’s Produce is located in front of Eagle Rock in Spallumcheen. The farm was started in 1991 and is certified to the BC Certified Organic Program by the North Okanagan Organic Association. They grow a variety of fruits and vegetables for farmers markets, u-pick and for Community Supported Agriculture (CSA) customers. They also partner with other local farmers to supplement their production. In 2003, Pilgrim’s Produce was given the Armstrong/Spallumcheen Agriculture award and in 2006, the Okanagan branch of BC Institute of Agrologists honoured them as Farm Family of the Year for Outstanding Service to the Okanagan Agriculture Industry. In 2012, the owner, Rob Hettle, was also given the Founder’s Award by the Certified Organic Association of BC. Pilgrim’s Produce is well-known for mentoring and supporting new and young farmers in the region. To learn more about their story visit: http://www.pilgrimsproduce.com/.

Planet Bee
Planet Bee Honey Farm and Gift Shop is located on Bella Vista Road in Vernon. The owners have developed a very successful agritourism venture with the following attractions:

- Educational tours of their hives, honey extraction process and bottling process
- Honey tastings
- Tastings of their locally produced mead
- On-site gift shop where you can purchase all of their products

Planet Bee is open year-round, but they suggest stopping by during the summer to see the bees in action. Their educational tours provide a way for consumers to learn about agriculture and honey production as well as bee behaviour. You can learn more about them here: http://www.planetbee.com/.

The Village Cheese Company
The Village Cheese Company is located in the City of Armstrong. They are a small family-owned cheese company that makes artisan cheese from local whole milk from the Okanagan Valley. They do all of their own pasteurization and packaging in their cheese plant in Armstrong and operate an extensive store with other local products available for purchase. They also operate a small café on site. Village Cheese provides products for other retail outlets and sell at the local farmers markets in the region as well. They offer tours of their facility and are open 7 days a week. You can learn more about them here: http://villagecheese.com/.

Zelaney Farms
Zelaney Farm is a 20 acre vegetable and strawberry farm located in Coldstream. The family has been farming the land since 1987 and operate a farm store that is open from May to October each year. They also sell at the Vernon and Kelowna farmers’ markets four times per week in the summer months and are strong supporters of both markets. Zelaney Farm uses sustainable agriculture practices such as Integrated Pest Management (IPM), crop rotations and hand weeding to grow high quality produce. Products they grow include: carrots, radishes, spinach, strawberries, beans, beets, broccoli, potatoes, cabbage, herbs, corn, onions and bedding plants. To find out more about them and which markets they sell at visit: http://www.zelaneyfarms.ca/.
Conclusion

This MOA was created to help identify opportunities and challenges for the North Okanagan agricultural community. It was developed based on extensive community consultation and literature research. The list of top issues, in no particular order, is:

10. Biophysical considerations (including climate, soils, water, invasive species)
11. Marketing and branding
12. Costs of doing business and the need for (re)investment
13. Transportation and distribution
14. Access to skilled and affordable labour
15. Expansion of niche and value-added products
16. The regional tourism market
17. Regulatory challenges
18. Innovation, research, and education

Economic and regulatory challenges notwithstanding, the fact that the North Okanagan is currently only 20% food self-sufficient (at most) based to the amount of land currently under cultivation and irrigated indicates a wealth of opportunity for the sector. Many opportunities to overcome challenges were identified in this report and the results will be used, along with the Background Report, to develop detailed recommended actions and an implementation strategy for the RAP.

Local and regional government have a lot to offer new and existing farmers with robust agriculture-related infrastructure and services, a supportive consumer and agriculture community and partnerships with academic institutions that could be further enhanced.