Growing Forward with Organics
Why organic farming should be included in the Next Generation of Agri-Food Policy

Prepared by the Organic Value Chain Roundtable April 2008

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Introduction

This document has been prepared by the national Organic Value Chain Roundtable as a presentation to consultations on the new agricultural policy framework for Canada (Growing Forward). The document is designed to represent the views and opinions of the diverse group of organic sector participants who make up the Organic Value Chain Roundtable, and provides recommendations for governments to help them nurture organic farming and manufacturing throughout the implementation of Growing Forward. Growing Forward with Organics has been distributed to governments and to the entire organic sector in the hope that the information contained herein will be useful for policy makers and for organic sector participants.

Summary

Recently, the Canadian organic industry has received great support from the Federal government and many provincial governments. This support has allowed the sector to organise itself as never before, to ensure the development of a national organic regulation—a law for organics in Canada. There is momentum building towards organic farming and it is imperative that the organic industry is able to exploit this opportunity if the sector is to reach its potential.

The Canadian food and agriculture sector is facing some significant environmental, food safety, and financial difficulties. These difficulties are affecting perceptions of Canadian food, both domestically and internationally. These realities explain, in part, the development of the new "Growing Forward" (Next Generation of Agri-Food Policy) being negotiated by the federal, provincial and territorial governments.

Organic farming has a positive role to play in Canadian agriculture. Organic farming offers credible solutions to many of the problems facing agriculture. Organic farming can address both agricultural profitability and environmental policy goals. With recognition and support from government, the organic sector can become a significant percentage of the agri-food economy and rural landscape, with attendant environmental, economic, and social benefits.

The one consistent impediment to growth in the organic industry across the country is a lack of local supply. Without consistent supply, value-chain partnerships cannot be forged, processing facilities cannot emerge, and Canadian consumers search for locally produced organic food in vain. More than anything else, the organic sector needs the support of Canadian governments to help meet the growing demand for organic food.

The organic industry suggests that Growing Forward should pay attention to organic farming as a legitimate goal of agri-food policy. Specific programs should be developed to support organic farming, and traditional programs should be augmented to enhance their usefulness to organic farmers. The potential for growth in the organic sector is phenomenal; let's work together to strengthen agriculture, the Canadian environment, and the economy.

1. The Current Opportunity for Organics

The many hours of volunteer effort on behalf of organic farming in Canada have resulted in the largest opportunity for growth the organic sector has ever seen:

- The Organic Products Regulation is poised for implementation on December 14 2008. Six persons are working fulltime on this endeavour in the Canada Organic Office (CFIA) in Ottawa.
- The Canadian organic industry now has a national representative organisation—the Organic Federation of Canada/Fédération biologique du Canada with a staffed office in Montreal.
- The national organic standard is being revised to suit international and Canadian requirements.
- The Organic Value Chain Roundtable has become the national think-tank for the growth of organics in the Country—the Market Development Working Group (of the Roundtable) is developing a countrywide launch of the Canada Organic Logo in conjunction with the CFIA.
- The development of “Growing Forward – Toward a new Agricultural Policy Framework” provides a unique opportunity for governments to include organic farming within agricultural programming.
- Lon Borgerson, Legislative Secretary for Organic Farming in Saskatchewan, has just presented “Going Organic: A Report on the Opportunities for Organic Agriculture in Saskatchewan” to the Saskatchewan government. The report contains 34 recommendations to support growth in organics—everything from financial support to organic representative groups, to strategies to encourage First Nations people in organic farming.
- Total Canadian retail sales of organic products through all market channels was $1 billion in 2006 ($412 million through retail channels, representing close to 1% of total retail food sales) Retail sales expanded by 28% from 2005 to 2006 and are expected to continue to grow by more than 20% annually for the time being[1]

2. The Canadian Organic Sector

The latest statistics (Canadian Organic Growers 2005) indicate there are 3,618 organic farms in Canada farming 530,919 hectares with an additional 47,955 hectares of transitional land being farmed organically. There were 817 organic food processors including a wide range of manufactured food and beverage products, as well as seed cleaning and bagging operations, and the production of livestock feeds.

In 2005, Canadians spent $1 billion on organic food—estimates of Canadian production of that total range between 15-40% (of the 2676 food items examined by Nielson, 47% were labelled as grown, packaged or processed in Canada and 51% were imported - 2% were unknown). Demand for organic food is growing at 15-25% per year, the fastest growing segment in a relatively stagnant food industry. Supply, especially domestic supply, is unable to keep up with demand.

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[1] Retail Sales of Certified Organic Food Products in Canada, May 2007, data collected by The Nielson Company and compiled by Anne Macey for the Organic Agriculture Centre of Canada

3. Organisation of the Organic Sector

Three national organisations are wholly dedicated to represent the interests of the organic industry:

1. Organic Federation of Canada – federation of provincial organic associations
2. Canadian Organic Growers – membership organisation of organic farmers
3. Organic Trade Association Canada – membership organisation representing organic producers, processors, distributors, and retailers

There are larger industry groups that represent significant numbers of organic operations:

- Canadian Health Food Association
- Canadian Produce Marketing Association
- Canadian Council of Grocery Distributors
- Canadian Federation of Independent Grocers
- Canadian Association of Importers and Exporters
- Coffee Association of Canada

There are provincial organisations in every province (and the Yukon) and there are certification bodies (some Canadian, some foreign) that have traditionally played a role in the development of the sector.

4. The Current Organic Situation in Canada

4.1. The Organic Products Regulations

The Organic Products Regulations become effective on December 14 2008. The CFIA Canada Organic Office is working closely with the organic industry to ensure a smooth transition to a mandatory organic regime.

When the US published its organic rule in 2001, there was an instant surge of activity in the organic sector. We expect a similar effect in Canada. The Organic Value Chain Roundtable is working with the CFIA to develop a communications campaign for the launch of the new Canada Organic Regime.

4.2. The Organic Value Chain Roundtable

Agriculture and Agri-Food Canada has chosen to develop an organic value chain roundtable within the AAFC Food Value Chain Bureau. There have been three meetings since the first meeting was held in Toronto on December 14th 2006. As one of only eight (the first one that is not commodity-based) value chain roundtables in the country, the organic sector is recognised as an emerging opportunity for agriculture—both for export and for national trade.

4.3. National and provincial organic strategic plans

There are now official organic strategic plans in BC, Ontario, Quebec, and there is a National Strategic Plan for the Organic Food and Farming Sector; there is also a regional marketing plan for Atlantic Canada. All strategic plans have a common issue—the need for increased organic production to ensure the sector flourishes.

There is tremendous potential for displacing organic imports. As well, many food sectors are being shorted organic food—meat products in particular. There are pockets of production around the country, but in most cases, the amounts are too small for farmers to access conventional retail markets. More production is needed to enable value-added processing and the development of distribution channels.

Most studies indicate that the most efficient way to increase organic production is to encourage the transition of non-organic farmers to organic methods. To successfully transition a farmer into organic farming means providing more than just information—farmers should be mentored throughout the process, both in production and marketing techniques.

4.4. The Organic Federation of Canada

Incorporated in December 2006, the Organic Federation of Canada has the mandate, "To represent the Canadian organic industry while working with provincial, territorial, and federal governments as partners on national organic regulatory issues." The OFC includes organisations from every province as well as the Yukon. At present, the OFC is concentrating on the implementation of the Organic Products Regulations and the revision of the Canada Organic Standard.

4.5. Organic Agricultural Centre of Canada

The Organic Agricultural Centre of Canada has established itself as a credible scientific resource for the Canadian organic sector, conducting an essential role in providing education, production research and market data. The Organic Agricultural Centre of Canada has the only Research Chair in Organic Agriculture in the country.

5. Why Should the Canadian Governments Support Organic Farming?

5.1. Organic Farming Benefits the Environment

The following references provide solid evidence of the environmental benefits of organic farming in Canada:

1. A 12-year Manitoba study of two forage and grain crop rotations and two crop production systems (organic versus conventional management) on energy use, energy output and energy-use efficiency, found energy use was 50% lower with organic than with conventional management. Energy efficiency (output energy/input energy) was highest in the organic and integrated (i.e. forage included) rotations.[2]

2. A recent Ontario study of 15 organic dairy farms found that farm nutrient loading, and risk of off farm losses to air and water, is greatly reduced under commercial organic dairy production compared with more intensive confinement-based livestock systems.[3] In PEI, where losses of nitrates to groundwater is currently a major concern, studies on commercial organic potato farms in PEI have found much lower soil nitrates in the soil after potato harvest than in more intensive conventional systems.[4]

[2] 2Hoeppner, J.W. et al. 2006. Energy use and efficiency in two Canadian organic and conventional crop production systems. Renewable Agriculture and Food Systems 21:60-67.
[3] Roberts, C.J. et al. 2008. Nutrient budgets of Ontario organic dairy farms. Canadian Journal of Soil Science 88: 1-7 (In press).
[4] Lynch, D.H. et al. 2008. Organic amendment effects on tuber yield, plant N uptake and soil mineral N under organic potato production. Submitted Renewable Agriculture and Food Systems

3. Plant biodiversity is enhanced in organic farming systems. In a recent Ontario study of crop fields and woody hedgerows (boundary and centre) of 16 conventional and 14 organic sites, there was a clear difference in species richness and composition between the organic and conventional study sites. Fields and woody hedgerows situated in organic sites consistently harboured more native and exotic plant species than those in conventional systems. Numerous species were only found in organic hedgerows and included several long-lived herbaceous forest species.[5]

4. A 9-yr comparison of selected minimum-tillage strategies for grain production of corn, soybean, and wheat at USDA-ARS Beltsville, MD, from 1994 to 2002 found soil total carbon and nitrogen was higher at all depth intervals to 30 cm in the organic compared with that in all other systems. Soil biological properties also appear to benefit from organic production regimes. The extended (5-year) rotations characteristic of organic potato farms in Atlantic Canada have recently been shown to have marked benefits to soil micro- and macro-fauna.[6]

5. An Atlantic Canada Dairy Sustainability Model investigation concluded that an organic seasonal-grazing dairy system generated 10% less soil erosion and 40% less nitrate leaching compared to the average of all other dairy profiles studied, including low-input and intensive dairy systems.[7]

5.2. Organic Farming and Climate Change

There is some empirical research on organic farming systems that demonstrates greenhouse gas emission reductions, greater adaptive capacity in the face of climate variability and significant carbon sequestration potential. For example:

1. A study carried out for the federal German parliament came to the following conclusions when comparing conventional and organic farming systems[8]:

    a) The organic systems used 65% less energy than the conventional ones. The main differences in fossil fuel consumption were associated with the “operating materials”, synthetics pesticides and fertilizers and imported feedstuffs.

    b) Although conventional operations fixed more carbon in shoots and harvested main crops, the organic systems tended to have much higher root masses. Roots in organic systems had 1.6 times more bound carbon dioxide, most of it associated with legume crops such as alfalfa and red clover. When all biomass generated in ecological systems is contrasted with conventional ones, the above ground production is similar.

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[5] Boutin et al., 2008. Plant diversity in crop fields and woody hedgerows of organic and conventional farms in contrasting landscapes. Agriculture, Ecosystems & Environment 123: 185-193.

[6] Nelson, et al. 2007. Changes in soil health throughout an organic potato rotation. Poster presented at Canadian Society of Soil Science annual conference. June 3-7th, St. Catherine de la Jacques Cartier, Que.

[7] Main, M.H. et al. 2002. Sustainability profiles of Canadian dairy farms. Presentation to the IFOAM Scientific Congress, Victoria BC. August 2002; Main, M.H. 2001. Development and Application of the Atlantic Dairy Sustainability Model (ADSM) to Evaluate Effects of Pasture Utilization, Crop Input Levels, and Milk Yields on Sustainability of Dairying in Maritime Canada. M.Sc. Thesis. NSAC and Dalhousie University, Halifax, NS.

[8] A summary of the report was prepared by the authors Ulrick Kopke and Guido Haas and reported in **New Farmer and Grower** Spring 1996

c) Ecological systems generally have more active soil micro-flora and detectable increases in the assimilation of carbon dioxide, whereas conventional systems have less carbon dioxide bound up in soil organic matter.

2. A Danish study of wholesale national conversion to organic farming found 10-51% reductions in net energy use relative to 1996 conventional agriculture, depending on the scenario of wholesale conversion. Scenarios varied by yields of animal and crop production and extent of self-reliance in animal feed. These reductions in net energy use were associated with significant reductions in greenhouse gas emissions, particularly nitrous oxide emissions.[9]

3. Drinkwater et al. in their study contrasting conventional and alternative longer course organic corn - soybean cropping systems in Pennsylvania, found that longer rotations involving leguminous plants did not necessarily add more total organic matter to the soil, but because of the lower carbon to nitrogen ratio additions resulted in greater organic carbon sequestration and improved soil physical properties[10]. As well, they cut nitrogen losses in half compared to the conventional system. A recent update (5 more years of data, to 23 years in total for the trials) shows that the organic rotations are actually accumulating 15-28% more organic carbon than the conventional trials[11].

4. The most comprehensive comparative studies to date have been carried out by research teams at Michigan State University. They have compared corn-soybean-wheat systems under conventional tillage, no-till, low input and organic systems (with legumes, but without animals and manure). Using CO2 equivalents (g/m/year) as their measure for systems comparisons, they found that no-till had the lowest net Global Warming Potential (GWP) (14), followed by organic (41), low-input (63) and conventional tillage (114)[12]. The no-till system superiority over organic was a result of higher soil C sequestration (-110 to -29). However, there is some debate about the extent to which no-till systems actually sequester carbon. In some studies, soil C content increases within the top 7.5 cm of the soil profile, but results in no changes over the entire profile[13]. The Michigan study only measured soil C changes in the top 7.5 cm, so the C sequestration benefits of no-till may be overestimated relative to organic systems. The Michigan study also found that perennial crops (alfalfa, poplars) and succession communities all had much lower emissions and in fact, most were net sinks.

5. A German case study comparing a comparable organic and integrated farm found a 30% reduction in CO2 equivalents, and about a 20% reduction in animal emissions on the organic farm, largely because of lower emissions from animal waste management. This result was obtained despite having higher livestock units[14].

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[9] Dalgaard, T. et al. 2003. Energy balance comparison of organic and conventional farming. In: OECD (ed.). **Organic Farming: sustainability, policies and markets**. CABI Publishing, UK. Pp. 127-138.

[10] Liebhardt, W.C. et al. 1989. Crop production during conversion from conventional to low-input methods. **Agronomy J.** 81:150-159; Drinkwater, L.E. et al. 1998. Legume-based cropping systems have reduced carbon and nitrogen losses. **Nature** 396:262-265

[11] See the Rodale Institute web site, http://www.rodaleinstitute.org

[12] Robertson, G.P. et al. 2000. Greenhouse gases in intensive agriculture: contributions of individual gases to the radiative forcing of the atmosphere. **Science** 289 (15 Sept):1922-1925.

[13] Wander, M.M. 1998. Tillage impacts on depth distribution of total and particulate organic matter in three Illinois soils. **Soil Science Society of America** 62:1704-1711; Needelman, B.A. 1999. Interaction of tillage and soil texture: biologically active soil organic matter in Illinois. **Soil Science Society of America** 63:1326-1334.

[14] Flessa, H. et al. 2002. Integrated evaluation of greenhouse gas emissions (CO_2, CH_4, N_2O) from two farming systems in Southern Germany. **Agriculture, Ecosystems and Environment** 91:175-189.

6. Other studies, from the US mid-west, examining corn, soybean, wheat systems reveal that longer rotations involving legumes leave farms better able to withstand drought[15]. One series of studies from the University of Nebraska showed that the longer rotations reduced the risks of suffering through a bad year, and less variable net returns[16]. The Rodale trials show 25-75% greater corn and soybean yields in drought years[17]. These longer rotation systems have performed consistently as well or better than short corn - soybean rotations. This result appears to be due to some combination of root development, associations with soil organisms and soil tilth[18]. Organic matter, especially in more loamy soils, can improve soil aggregation. Aggregation creates more pore space for root movement. The traditional view is that the kind of organic matter is less significant than the quantity, but it is the more digested organic matter fractions that appear to be significant for these processes - microbial gums and mucilage, low molecular weight fulvic acid molecules, and fats and waxes[19]. Farming systems that favour these organic matter components do better.

7. A 12-year organic vs. conventional cropping trial in Manitoba showed that energy efficiency was nearly doubled in the organic systems studied, with the greatest efficiencies coming from a wheat - alfalfa - alfalfa - flax rotation. The absence of inorganic N fertilizer is the main contributor to reduced energy inputs and greater efficiency[20].

8. A study of organic vs. conventional apple production in Washington state found 9% lower energy inputs and 7% higher energy efficiency in the organic system[21].

9. A modelling study in Atlantic Canada examining 19 different dairy production scenarios found that a seasonal - grazing organic system was 64% more energy efficient and emitted 29% less greenhouse gases compared with the average of all other analyzed systems[22].

5.3. Consumer demand and acceptance of organic food

1. Increasingly, consumers are demanding to know where their food comes from. Organic certification systems were (and are) the leaders in identity preservation. With the advent of a national regulatory system (and brand), consumers will receive even more assurance about the integrity of the organic food they purchase.

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[15] Welsh, R. 1999. **The economics of organic grain and soybean production in the US mid-west.** PSPR#13. Henry A. Wallace Institute for Alternative Agriculture, Beltsville, MD.

[16] Helmers, G.A. et al. 1986. An economic analysis of alternative cropping systems for east-central Nebraska. **American J. Alternative Agriculture** 1:153-158.

[17] See the Rodale Institute web site

[18] Lotter, D.W. Organic agriculture. **J. Sustainable Agriculture** 21:59-128

[19] MacRae, R.J. and Mehuys, G.R. 1985. The effect of green manuring on the physical properties of temperate-area soils. **Advances in Soil Science** 3:71-94

[20] Entz, M. et al. 2004. A complete organic/conventional farm energy audit on the Canadian prairies. Presentation to the 23rd Annual Organic Agriculture Conference, Guelph, ON. Jan. 2004.

[21] Reganold, J.P. et al. 2001. Sustainability of three apple production systems. **Nature** 410 (19 April):926-930.

[22] Main, M.H. et al. 2002. Sustainability profiles of Canadian dairy farms. Presentation to the IFOAM Scientific Congress, Victoria BC. August 2002; Main, M.H. 2001. Development and Application of the Atlantic Dairy Sustainability Model (ADSM) to Evaluate Effects of Pasture Utilization, Crop Input Levels, and Milk Yields on Sustainability of Dairying in Maritime Canada. **M.Sc. Thesis**. NSAC and Dalhousie University, Halifax, NS.

2. Consumers are concerned about additives in food. Organic food offers consumers the choice of food that contains little or no additives—with organic certification to prove it. Of the 500 or so additives in general use, only 30 or so are generally permitted in organic processing.[23]

3. Consumers are concerned about the way food is grown. Synthetic pesticides and fertilisers, hormone treatments, genetically engineered organisms are some of the products that consumers are avoiding—these products are prohibited in organic production.

5.4. Economic benefits for farmers

Many farmers are in financial difficulty. Though prices have increased, the costs of inputs to maintain yield levels rise at a higher rate than average price levels. In government facilitated discussions about solving these problems, most of the attention has focussed on the design of farm financial safety net programs, the squeeze on prices associated with US and EU subsidies, global market pressures, and the need for even greater productivity. There has been little attention devoted to input cost reductions and markets with price premiums—which are the norm for organic practitioners.

Organic farming can be a good solution for farmers who struggle to survive and to help reduce dependence over the long term on government subsidies that only maintain the artificial value of some types of production. International research shows that organic agriculture systems are usually more profitable than non-organic farming systems. This is because; though yields are slightly lower (in some cases), input costs are greatly reduced, while prices are always higher.

Globally, organic plant yields are on average 10% below non-organic systems. Global averages do vary between extensive and intensive systems because the non-organic comparator is different. In Europe, where non-organic production is very intensive, organic system yields look comparatively poorer than in extensive system like those found in North America and Australia. In North America and Australia, organic crop yields generally range from 20% less to slightly more. In Europe, they can be 20-40% less, except in forages where the range is more like 0-30%.[24]

Yields in organic systems continue to rise as understanding of them grows and as more money is devoted to research. These increases are not always as great as those under some conventional systems, but occur at much lower environmental costs.[25]

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[23] Heaton, S. 2002. Assessing organic food quality: is it better for you? In: Powell et al. (eds). UK Organic Research 2002: Proceedings of the COR Conference, 26-28th March 2002, Aberystwyth, Wales. Pp. 55-60.

[24] MacRae, R.J. et al. 1990. Farm-scale agronomic and economic conversion to sustainable agriculture. Advances in Agronomy 43:155-198; Stanhill, G. 1990. The comparative productivity of organic agriculture. Agriculture, Ecosystems and Environment 30:1-26; Lampkin, N.H. and Padel, S. (eds.). 1994. The Economics of Organic Farming: An international perspective. CAB International, Wallingford, Oxon, UK.; Pretty, J.M. 1995. Regenerative Agriculture. IISD, London; Stockdale, E.A. et al. 2001. Agronomic and environmental implications of organic farming systems. Advances in Agronomy 70:261-327; Lotter, D.W. 2003. Organic agriculture. J. Sustainable Agriculture 21:59-128.

[25] , J. 1992. The Environmental Impact of Farm Support Policies in Ontario. Report to the Policy Committee, Ontario Round Table on Environment and Economy. January, 1992.

Gross margins are at least as good, if not better than, systems under non-organic regimes. In more extensive systems, input cost reductions are often sufficient to maintain gross margins, whereas in more intensive production systems such as are found in Europe, premiums are often required to offset yield declines. In Europe, most farm comparisons show profits for organic farms lie between plus or minus 20% of non-organic. Three factors usually account for these positive income results:

1. First, operating costs may be up to one third lower, particularly for energy, chemicals, and drugs. Variable input costs are 50-60% lower for cereals and grain legumes, 10-20% lower for potatoes and horticultural crops, and 20-25% lower for dairy cows.

2. Second, where premium prices are available, the likelihood of a superior net income situation is even greater.

3. Third, many organic farmers achieve higher net income by making more direct links with consumers which allows them to capture a greater percentage of the consumer dollar

5.5. Organic farming creates diverse revenue streams

Although a good safety net system is important, governments should help to create the conditions to improve farm financial health and lower financial risks. Organic farming systems can create these conditions. They are at least as, if not more, profitable than non-organic systems as well as less vulnerable to climate variability. In general, they have a greater capacity to resist both wet and dry conditions. This occurs because these systems rely on building soil organic matter levels to ensure optimum health for crops and greater pest resistance. The side benefit is both greater moisture retention capacity during dry years and better soil tilth for improved drainage during wet ones.

As well, these systems tend to be more diverse, providing more revenue streams. Reduced yields or revenues in one crop/animal/product are less likely to penalize the operation as dramatically as in systems where financial health is dependent on a limited number of crops or animals. Overall, these farming systems are less likely than many conventional farms to suffer yield and revenue losses that would trigger safety net payments.[26]

Organic apple production in the Okanagan Valley of British Columbia provides a graphic example of the financial benefits of organic farming. While non-organic apple producers had one of their worst years ever in 2006, organic producers had an extremely profitable season.

5.6. Organic Certification

The organic industry has been the leader in identity preservation going back to the first organic certification systems in the 1980s. Organic certification requires an auditable trace-back for all certified products. This system is set to be enshrined in law with the implementation of the Organic Products Regulations. The organic certification system is closely allied with the policy Agriculture and Agri-Food Canada and the Canadian Food Inspection Agency is encouraging for other sectors of agriculture.

[26] , J. 1992. The Environmental Impact of Farm Support Policies in Ontario. Report to the Policy Committee, Ontario Round Table on Environment and Economy. January, 1992.

6. Market Demand

6.1. Local market short of product

Though organic farming is increasing, it is not increasing near enough to meet the demand. Except for certain commodities, in the height of the growing season, there are never enough local organic products. This dearth of available organic food means that distributors must import organic food and retailers are unable to promote organic food, as they would like. Information from Canadian retailers (via the Organic Value Chain Roundtable) confirms that they would like to promote local organic food but they are unable to locate a consistent supply of Canadian grown products year-round.

Low production makes things difficult for manufacturers as well. They are reluctant to expand without a steady supply, and if they do expand, it is usually by importing their ingredients.

7. How "Growing Forward" can help advance the Canadian Organic Industry

The Organic Value Chain Roundtable has reviewed the latest communication from the Growing Forward consultations (Growing Forward – National Consultation Document, February 2008) and has provided specific comments (below) describing how we feel the proposed programs could be used to support the Canadian organic industry.

(A) A Competitive and Innovative Sector

7.1. Capacity to Innovate

As innovation is at the centre of Growing Forward's efforts, it is essential that program and policy vehicles allow for consideration of the innovative products and processes of organic agriculture. In some instances, this will require specific acknowledgement of the organic sector, such as:

- Translating new technology into commercial gain:
  - organic operations require innovative management systems, production equipment and identity preservation technologies in order to compete in their developing market;
- Anticipating and responding to opportunities:
  - identifying strategic opportunities for the organic sector will require very specialized information exchange and collaboration of government, academic and industry decision-makers and stakeholders;
  - a "bio-economy strategy" must be defined so as to include organic agriculture and the obstacles it faces, including threats to integrity through the introduction of prohibited substances etc., so as to develop competitive international advantage for the sector;
- Expanding and focusing science capacity to address key priorities:
  - it will be essential to establish an organic "science cluster" to begin the work of mobilizing capacity in this under-supported area;
  - as the organic sector is an emerging market with all private capital being reinvested in the rapid growth and expansion of the market, the

organic sector may also need specialized funding formulas for partnership opportunities via matching investment initiatives.

7.2. Regulatory Performance

With the Organic Products Regulations representing the first new federal food regulation in Canada in decades, considerable attention will need to be spent on ensuring the organic sector can continue to grow without encountering new regulatory or technical barriers, or administrative requirements, both in terms of international and inter-provincial trade. Federal and provincial Governments in Canada could support the organic sector and ensure a level playing field across the country by ensuring all jurisdictions comply with the Organic Products Regulations. New initiatives under Growing Forward could further consider the organic sector in the following areas:

- Investments to improve the approvals process:
  - enhanced transparency of the submission process for novel foods is an important goal, and evaluation criteria should include considerations of potential impacts on the organic sector of introducing novel foods and food additives;
- Helping industry navigate the regulatory process:
  - the organic sector could benefit from government support in the transition into compliance with the new Organic Products Regulations requirements.

7.3. Industry Success in Global and Domestic Markets

Continued success and access to markets for the organic sector will depend upon the negotiation of equivalency or other trade agreements with Canada's major trading partners for organic products, to reduce administrative and technical barriers to trade for Canadian producers and manufacturers. The other targets for Industry Success of Growing Forward can apply to the organic sector:

- Supporting the implementation of industry-led strategies
- Differentiating Canadian products from those of the competition
- Providing market intelligence and support
  - the global organic sector has its own host of technical barriers and administrative requirements, as well as differing standards and regulations defining organic products in given markets. Canadian exporters of organic products would need specially-tailored training, development, and information services to continue to access these markets and leverage opportunities.

7.4. Capacity to Adapt and Succeed

Organic agriculture has been a success story for producers in Canada. Currently, the global organic supply cannot meet demand, which offers Canadian producers and manufacturers a significant opportunity. However, the learning curve, the transitional marketing challenges, and the financial considerations are all challenges to the capacity to succeed—and are in many respects unique to the organic sector:

- Helping farmers put in place plans to develop and adapt their businesses
  - organic producers would benefit from increased professional advisory services, specific to organic production, as proposed in Growing Forward;

  - organic processors/ manufacturers increased professional advisory services, specific to organic manufacturing, as proposed in Growing Forward.
- Enhancing farmers' knowledge and skills:
  - organic agriculture is a knowledge-based agro-economy and organic farmers must constantly learn new techniques for growing, pest management, and systems management. Support for organic organizations, for organic mentoring, for organic extension resources, and for organic educational events and resources is urgently needed by the sector.

(B) A Sector that Contributes to Society's Priorities

7.5. Food Safety

A December 2007 consumer survey on behalf of CFIA found that "things such as pesticides, chemicals, GMO, hormones in meat and dairy products, and the lingering worries about the impact of mad cow disease on the meat supply were a much greater concern [to the public] than food borne illness or food poisoning." Although ensuring food safety is a clear priority for governments, it seems clear that more can be done to respond to consumers' priorities through supporting organic agriculture. Specifically:

- Support for on-farm food safety:
  - Governments could support the creation of an organic Hazard Analysis Critical Control Point (HACCP) model which will integrate the requirements of on-farm food safety with organic production standards (which cross various commodities and sectors and therefore may not be captured under the current Growing Forward framework);
- Support for post-farm food safety:
  - Governments could support the creation of an organic HACCP model which will integrate the requirements of off-farm food safety with organic production standards (which cross various commodities and sectors and therefore may not be captured under the current Growing Forward framework);
- Science to improve food safety systems:
  - The proposal in Growing Forward, if applied to the organic sector, would be a welcome investment in organic food safety research;
  - Governments could also support science research into the human health benefits of production practices which reduce the application of chemical fertilizers and pesticides to food crops.

7.6. Improving Environmental Performance

Organic agriculture originated out of environmental concerns: its specific goals are to build the microbiology in the soil and to lessen impacts on and chemical residues in the earth, air, water, humans, livestock and wildlife. Organic agriculture also uses much less energy than non-organic agriculture and sequesters significantly more carbon into the soil from the atmosphere than other agricultural methods. For this reason, environmental performance indicators and targeted support should make specific mention of organic production, and more research needs to be conducted into organic agriculture and the environment, particularly:

- Improved research capacity to support environmental performance:
  - as described in Growing Forward, and applied to the organic sector
- Supporting environmental performance:
  - as described in Growing Forward, and applied to the organic sector
- Targeted support for improved environmental performance:
  - Governments could prioritize organic farms and farms transitioning to organic for recognition and support under Environmental Farm Plan and Beneficial Management Systems programming, in recognition of organic farmers' leadership in agro-environmental stewardship and conservation.

(C) A Sector that is Proactive in Managing Risk

7.7. Preventing and Preparing for Problems

Organic farming and organic food manufacturing takes risk mitigation and preparedness very seriously. Organic agriculture, via third-party certification and inspection, was the leader in identity preservation in the food system.

- Broad strategies to mitigate risks:
  - The development of national animal and plant health risk mitigation strategies will need to take the specific requirements of organic product standards into consideration. In the past, similar strategies or policy decisions have been established which contravene the requirements of organic standards (e.g. the principle of outdoor access for livestock);
  - Governments can also do more to modernize risk management systems such as crop insurance to be more responsive to organic production.

8. Conclusion

Now is a good time to promote organic farming in Canada. With the implementation of the Organic Products Regulation there will be an upsurge in demand. It is imperative that Canada's farmers are positioned to meet that demand or it will be serviced by imported organic product. New tools are needed to ensure farmers who undertake organic farming are successful, and to encourage more farmers to take up organic farming.

Research in organic farming is increasing (though more is needed), providing instruction for new entrants and assistance for established organic farmers. Organic farming is becoming mainstream, even within established commodity groups. Effective delivery of current organic research to interested farmers is crucial to ensuring there are more and better organic farmers in Canada.

Governments are beginning to realise the potential of organic farming as an antidote to many of the problems facing agriculture. Demand for organic food has not slackened; the retail sector is asking for more locally grown and processed organic food. The Canadian organic sector is organised and anxious to work in partnership with governments to increase organic acreage in Canada. Together, let us do something that will help Canadians feel good about agriculture, the environment, and about themselves.