How Canada can support more diverse & resilient food systems

June 2017

“We have a food system that contributes almost one third of our greenhouse gas emissions. We need a shift that favours diversity in our food system.” - Emile Frison, IPES-Food

Why we need a shift

While modern food and farming systems have succeeded in supplying large volumes of foods to global markets, they have also exacerbated some of the most significant challenges that our agricultural sector faces today. Indeed, our current food system contributes almost one third of our greenhouse gas emissions, and is largely responsible for the widespread land degradation, water and soil pollution, and the rapid rise of diet-related disease that we are seeing around the world and in Canada today.

In light of climate change, it is more important than ever to support farming practices that strengthen our climate resilience, lower our environmental footprint, increase farm viability and improve food security at home and abroad. The best way to do so is to move towards diversified agroecological farming practices. A growing body of international experts are urging us to transition towards these more sustainable models. And quickly.
A shift towards more sustainable & resilient systems: Agroecology

Agroecology is the science and know-how behind sustainable agriculture. It is a multi-functional, systems approach that takes into account environmental impacts, animal welfare, and human social dimensions of our food. It relies on holistic strategies to build long-term health and sustainability of agro-ecosystems. In a nutshell, agroecology:

- **Is knowledge intensive**, relying on innovative methods of land, water, and natural resource conservation and management
- **Uses organic inputs** from within the system, instead of external, synthetic inputs
- **Relies on diversification**, working with a wide range of species in a way that optimizes biodiversity
- **Uses locally adapted varieties/breeds**, while enhancing their quality and diversity
- **Strengthens the resilience** of systems to cope with disturbance and change
- **Creates innovative social structures** to share knowledge, risks and rewards.

There is a growing body of evidence that suggests that **agroecological practices** keep carbon in the ground, support biodiversity, rebuild soil fertility and sustain yields over time, providing a basis for secure farm livelihoods. The evidence also shows that they compete with conventional agriculture in terms of total outputs, performing particularly strongly under environmental stress.

Indeed, the latest evidence reviewed by the **International Panel of Experts on Sustainable Food Systems** shows that these diversified agroecological systems are succeeding where current systems are failing. Resource efficiency has been shown to be 2-4 times higher on small-scale agroecological farms, while organic systems have been found to host 30% more species and 50% greater abundance of biodiversity than conventional holdings. Furthermore, a 30-year study by the Rodale Institute found that, when compared to GM corn adapted for drought tolerance, organic corn had equivalent or better yields over time, and as much as 31% higher in years of moderate drought. In Canada, a recent study at the University of British Columbia also found that organic agriculture can improve farm profitability by 35 per cent.

“We cannot address economic growth, women’s empowerment or climate change without addressing smallholder agriculture.” – USC CANADA

---

WHAT CANADA CAN DO TO BETTER SUPPORT SUSTAINABLE FOOD SYSTEMS -- IN CANADA AND ABROAD.

Sustainable, agroecological practices around the world have proven that they can increase biodiversity, strengthen ecosystem resilience, reduce and sequester carbon, and improve both food security and farm livelihoods. They are also engines of economic growth, particularly among next generation farmers who are choosing a different path.

These models have shown incredible results. But they are being carried out by small farmer organizations, with little government support or incentives. Moreover, there are many policy blocks and barriers that are currently preventing them from scaling up, moving more rapidly to centre stage, and affecting a true shift in our food system.

With the opportunity to rethink our national and international food and climate policies, here’s the moment for Canada to step up to the plate. Canada can stimulate clean and inclusive economic growth and take immediate action on climate change through strategic investments in agroecology.

Here are some policy measures that Canada can take to accelerate a transition towards a more viable and resilient food future:

1. **Make food security, agriculture, and in particular agroecology, a high priority in Canada’s national and international policies.**
   - Global Affairs Canada’s *International Aid Policy*, and its implementation, should include strong elements of agroecology.
   - Canada’s commitments to climate change action, through the *Paris Agreement* and its instruments (GCF), should include strong elements of agroecological approaches that are essential to both adaptation and mitigation of climate change.
   - *Canada’s new National Food policy* and the next 5 year *Agricultural Policy Framework* should include policies to support a widespread transition to sustainable, ecological agriculture.
   - Take measures to curb trade and investment policies that harm farmers’ food systems and agroecological practices, lead to biodiversity loss, and infringe on of the people’s right to food.
2. **Ensure that sustainable agriculture and agroecology remain central to international negotiations related to food security and climate change; including in the following multilateral instruments:**
   - Committee for World Food Security (CFS)
   - Paris Agreement
   - Sustainable Development Goals (SDGs)
   - Convention on Biological Diversity
   - Food and Agriculture Organization and its subsidiary bodies, including the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

3. **Enact policies that support agroecological and organic farming practices, through:**
   - Facilitating the entry of family farmers into ecological farming, through access to land
   - Providing funding for training, education and knowledge sharing in organic and agroecological practices
   - Providing economic and market incentives for ecological producers
   - Supporting programs to conserve and enhance agricultural biodiversity, such as through participatory plant breeding and seed saving, seed libraries and seed exchanges.

4. **Allocate long term funding to Research & Development, knowledge creation and knowledge transfer that supports agroecological transition and approaches, including:**
   - Supporting farmer to farmer exchanges and action research by farmer organizations themselves.
   - Supporting research on participatory participatory plant breeding (PPB) of locally adapted, agroecological, low-input, seeds.
5. Develop food systems approaches and policies that create vibrant, local and regional markets for ecologically produced food.

- Provide incentives for short supply chains, community-supported agriculture, and alternative retail infrastructures.
- Provide incentives for local procurement of ecologically produced, nutritious foods by institutions as universities, hospitals, schools.

6. Support innovative and inclusive food governance mechanisms, such as:

- City level ‘Food Policy Councils’, modelled on many pre-existing ones, that bring all relevant actors in the food system together to make policies.
- A National Food Policy Council with a similar, inclusive structure and objective.

Through USC Canada’s Bauta Family Initiative for Canadian Seed Security, farmer Loïc Dewavrin and bread-maker Daniel DesRosiers are working together to breed new seeds that are well suited to organic agriculture, are full of nutrition and taste great.
FURTHER READING

- IPES-Food (2016) | "From Uniformity to Diversity: A Paradigm Shift from Industrial Agriculture to Diversified Agroecological Systems" (access the executive summary here)
- Global Alliance for the Future of Food (2016) | "The Future of Food: Seeds of Resilience"
- Development & Peace (2017) | "A Thematic Analysis: Let’s Demystify Agroecology"

The farmer breeders that USC Canada works with in Honduras are developing low-input ecological seeds that grow well in their steep hillsides.

ABOUT USC CANADA

USC Canada seeks to make positive change in the food system by working with small-scale farmers in 12 countries around the world, including Canada. With partners in Africa, Asia, Latin America and Canada, we support programs, training and policies that strengthen biodiversity, food sovereignty and the rights of those at the heart of resilient food systems – women, Indigenous peoples and small-scale farmers. Our domestic program is Canada’s most comprehensive effort to build resilience in Canada’s seed system.

USC CANADA | 56 Sparks Street, Suite 600, Ottawa, ON, K1P 5B1 (613) 234-6827 | usc-canada.org
Founded in 1945 as the Unitarian Service Committee by Lotta Hitschmanova