Why Biodiversity Conservation on Farmland Matters in Canada

Carolyn Callaghan, CWF
CC IUCN Annual General Meeting January 19, 2017
“RECOGNIZING that environmentally unsustainable industrial-scale agricultural and animal husbandry enterprises pose serious threats to the global climate, biodiversity, sustainability, the survival of indigenous populations and their knowledge of traditional agriculture and the health of human and animal populations.”
The need to provide food for people has resulted in:

“the intensification and industrialization of agriculture, including aquaculture, while traditionally farmed areas, biodiversity and natural ecosystems have been lost, and water resources have been depleted and degraded. Ecological communities and evolutionary processes have been disrupted. Ongoing use of pesticides, herbicides and fertilizers affect the biodiversity and ecosystem services that support our food production systems, and we have lost crop genetic diversity, nitrified our freshwater and coastal ecosystems, and disrupted pollinator systems.”
• The sector generates over $100 billion for the Canadian economy ~ 7% of GDP (one in eight jobs).

• Canada is the world’s fifth-largest exporter of agriculture and agri-food products.

• In 2015, total value of Canadian agricultural exports exceeded $60 billion, with products exported to ~200 countries.
SAR on farmlands in Canada

- 513 species with digitized ranges
- Schedule 1 SAR and COSEWIC listed
- 462 occur within agricultural extent (90%)
The number of wildlife species using each of the cover types for breeding and feeding on agricultural land in Canada.

Source: Environmental Sustainability of Canadian Agriculture: Agri-Environmental Indicator Report Series – Report #4
Wildlife Habitat Capacity (AAFC)

• Since 1986, there has been a significant decline in wildlife capacity on farmland, most notably in the Mixedwood Plains Ecozone of Ontario and Quebec.

Source: Agriculture and Agri-Food Canada
Index of wildlife habitat capacity on agricultural land, Canada, 2013 (AAFC)

Source: Agriculture and Agri-Food Canada
Wetland Loss

Source: biodivcanada.ca
Lake Erie: Ecologically Dead

- 2011 algal bloom 2.5 larger than historic record
- Toxin levels in the surface of Lake Erie were up to 200 times above the limit deemed suitable by the WHO
- Phosphorous run-off from farm fields due to changing agricultural practices
Impacts of Pesticides

• Toxicity of imidacloprid accumulated in the bodies of bats if they fed on pesticide-tainted insects.
• Damage the bats' neurons and destroy their echolocation system.
• Some lost their ability to catch insects.
Average size of farm increased 7%
10% fewer farms reported
Tame hay and alfalfa decreased by 14% from
Woodlands and wetlands decreased by 8.8% to 12.1 million acres from 2006 to 2011
Soybean increased by 33% 2006 - 2011
BUT: 50 mil acres of pasture remain (2nd most important land cover)
Meeting Global Food Demands

- 9.1 billion people in 2050
- Require raising overall food production by 70 percent
- Trade in agricultural commodities expected to expand considerably.

Source: U.S. Census Bureau, International Data Base, August 2016 Update.
How Do We Get From Here …
“We need to generate the knowledge ... to create the ‘roadmap’ that can transform our complex food production/consumption systems so that they do not degrade the biodiversity and ecosystem services on which they depend. This will require bringing together currently fragmented organizations and initiatives, and reform of the current systems of counterproductive and perverse subsides, taxes and other incentives, according to national circumstances.”
Agricultural Policy Framework

• Federal-Provincial-Territorial agriculture relations is the agreement to coordinate policy and programming: "policy frameworks";
• The foundation for government agricultural programs and services;
• $3 – 3.5 billion;
• APF: 2003 – 2008;
• Growing Forward: 2008 – 2013;
• Growing Forward 2: 2013 – 2018;

• Goal: “to position Canada as the world leader in food safety, innovation and **environmentally responsible** agricultural production” (AAFC, 2006);
• Five components: business risk management, **environment**, food safety and food quality, science and innovation, renewal, and international (AAFC, 2005);
• Objective of the environment component of the APF is “to help the agriculture and agri-food sector achieve environmental sustainability in the areas of soil, water, air and **biodiversity**” (AAFC, 2005).
APF Programs

- Environmental Farm Plan;
- The Greencover Canada program ($110 million) to support beneficial management practices that improve grassland management practices, protecting water quality, reducing greenhouse-gas emissions, and enhancing biodiversity and wildlife habitat (AAFC, 2005);
- BMPs include converting environmentally sensitive land to perennial cover and planting shelter belts.
Growing Forward: 2008-2013

• Policy Outcomes:
  – A Competitive and Innovative Sector;
  – A Sector that Contributes to Society’s Priorities;
  – A Sector that is Proactive in Managing Risks.

• Little emphasis on biodiversity and no mention of ecosystem services.
Growing Forward 2: 2013 - 2018

• Priorities: innovation, competitiveness and market development;
• St. Andrews Statement: no mention of biodiversity;
• EFP remained;
• Greencover Canada, Shelterbelt programme ended;
• PFRA community pasture program ended and pastures transferring to provinces where their future as native prairie is uncertain.
• Expanding domestic and international markets;
• Enhancing competitiveness;
• Managing risks;
• Supporting the resiliency and environmental sustainability of the sector;
• Improving the growth of the value-added agriculture and agri-food processing sector; and
• Securing and growing public trust in the sector.
“A well-designed and effective agricultural policy framework will help ensure that Canada’s agriculture sector remains a world leader. As worldwide economic growth improves, our agriculture and agri-food sector will be well-positioned to sell Canadian products to an expanding global middle class. I am committed to establishing an agricultural policy framework that enables the sector to take advantage of such opportunities.”

Honourable Lawrence MacAulay, MP Minister of Agriculture and Agri-Food Canada
The Next Policy Framework should contribute to the cost of public goods and services associated with sustainable farming: healthy wildlife and habitats that contribute to ecosystem services including pollination, biological control, clean water, fertile soils, and a stable climate, and cultural services such as beautiful landscapes.
NPF Consultations

- Number of organizations consulted at the national engagement session: 73
- Number of Environmental Organizations: 1
- Number of Online Surveys: 320 completed responses
The new CAP (2014–2020) introduced new “greening measures” to enhance the environmental performance of agriculture: rules on maintaining permanent grassland, crop diversification and Ecological Focus Areas (EFAs).

30% of all direct payments to farmers are conditional on cross compliance with the 'greening measures’ to stop areas slipping into homogenous 'monocultures'.
B-Lines
How To Provide Input to NPF

- Email aafc.npf-pcs.aac@canada.ca
- Next Policy Framework
  Agriculture and Agri-Food Canada
  1341 Baseline Road, Tower 7
  Floor 5, Room 300
  Ottawa ON
  K1A 0C5
- Social media
  - Twitter using #AgNPF
  - Facebook at Agriculture and Agri-Food Canada Facebook