Canadian Roundtable for Sustainable Crops

HOW SOIL HEALTH MATTERS IN THE MARKET

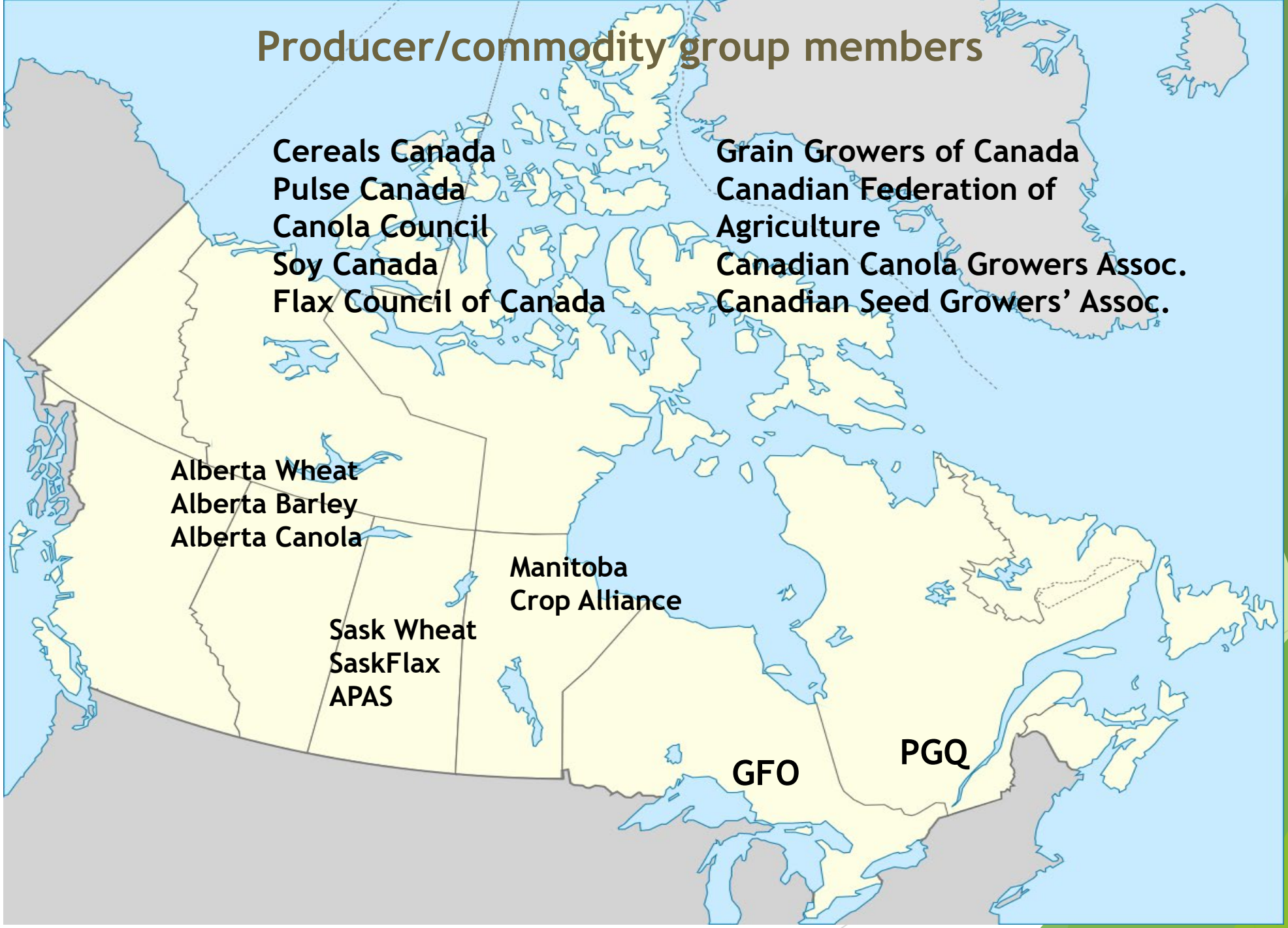
SCCC Summit on Canadian Soil Health

November 18th, 2021

Canadian Roundtable for Sustainable Crops (CRSC)

- **Formed** in 2013 to facilitate cross-commodity collaboration on sustainable agriculture issues facing grains sector participants
- **Members** include input suppliers, farm groups, commodity organizations, grain companies, food processors/food service and sustainability organizations
- **Activities** include sustainability measurement research and analysis, dialogue and outreach, development of a Code of Practice for sustainable production
- **Scope** includes annual field crops (grains, oilseeds, pulses, special crops)

Producer/commodity group members



Stakeholder Members

Alltech Crop Science
BASF
Bayer
CropLife Canada
Fertilizer Canada
Sollio
Syngenta

Seeds Canada

ADM
Bunge
Cargill
Combyne Ag
Richardson International
Viterra

Agricultural Research Council of Alberta
Western Grain Research Foundation

Farm Credit Canada

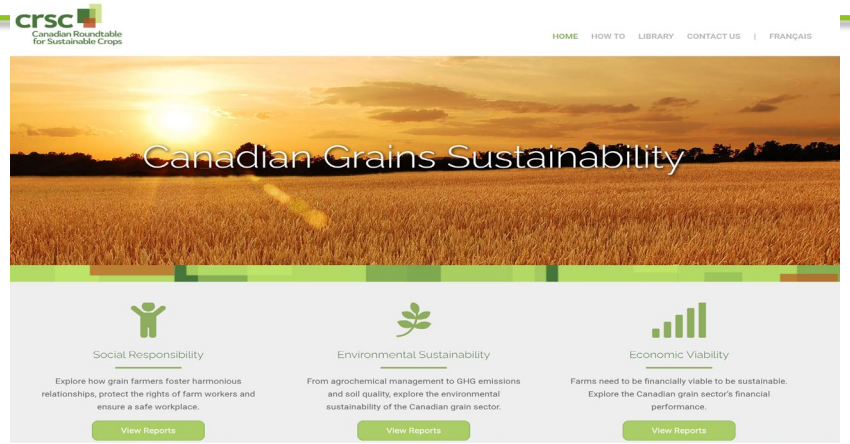
Control Union Certifications
SGS Canada Ltd.

Ducks Unlimited Canada
Soil Conservation Council of Canada

Animal Nutrition Association of Canada
Maple Leaf Foods
McDonald's
Warburton's

CRSC Initiatives

Canadian Grains Sustainability Metrics Platform



Responsible Grain Code of Practices

RESPONSIBLE GRAIN
CANADIAN FARM STANDARDS

Market Considerations

- International Certification Standards
- Carbon capture and emissions reduction
- Eco-labelling
- Regenerative

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International certification standards for grains

- First commodity-specific standards was Roundtable for Sustainable Palm, followed by Roundtable for Responsible Soy: responsive to deforestation, land tenure and employment issues
- Unilever set own standards
- E.U. uses ISCC (International Sustainability and Carbon Certification)
- SAI – Farm Sustainability Assessment is benchmarking system that measures comparability

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Certification requirements for soil health - 2018

- A **crop rotation** plan is implemented on the farm to promote a time gap on the same field.
- A **soil management plan** shall be established in a continuous process including a risk assessment of the areas regarding wind erosion, water erosion, loss of soil organic matter, soil compaction, and loss of soil fertility, as well as the contamination with hazardous substances or salinization.
- Crops, pasture and animal housing are allocated to land with **suitable soil and topography**.
- In order to maintain or improve soil conditions, **periodic soil analysis** shall be conducted on soil pH, macro- and micronutrients, salinization and soil organic matter.
- Management practices must be put in place that maintain or **enhance Soil Organic Carbon/Organic Matter.**
- Producer **adopts techniques to maintain and control soil quality** (physical, chemical and biological) such as precision farming, residue management, crop rotation, no tillage, contour tillage, grass waterways, terraces, nitrogen-fixing plants, green manures and agro-forestry techniques.
- Producer adopts techniques to **prevent soil erosion** such as contouring and using terraces, seeding cover crops, minimizing tillage and placing wind breaks

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SAI – Farm Sustainability Assessment 3.0 - 2021

- Present a **clear soil management plan** which identifies the major risks to soil and the suitability of the land for its intended use based on soil type, topography, organic carbon levels, risk of erosion, compaction, salinisation/desertification, and actions to be applied on the farm to maintain/ improve the soil health.
- Have evidence available to show the farm **monitors soil cover** and uses effective land management systems to minimise erosion.
- Demonstrate evidence of practices adopted to **enhance soil organic matter**.
- Show the farm adopts practices to **stimulate soil biological activity** and thereby build up long-term soil productivity and health.
- Be aware and demonstrate evidence of practices adopted to **minimise soil disturbance**.
- Identify areas of the farm most susceptible to **compaction** and demonstrate evidence of practices adopted to reduce the risk of compaction.
- Identify areas of the farm most susceptible to **waterlogging** and adopt practices to reduce the risk of poor drainage.
- Adopt the **use of soil amendments** as part of the soil management plan to improve the physical, biological and chemical health of the soil.
- Show that **crops are grown in rotation** or that the farm uses a mixed cropping system.

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GHG emissions reduction

- **General Mills**
  - **Brands include Pillsbury, Nature Valley, Betty Crocker, Pillsbury**
  - **2030 goal:** Reduce absolute GHG emissions across our full value chain by 30 percent.
  - **2050 goal:** Reduce absolute GHG emissions across our full value chain to sustainable levels in line with scientific consensus.

- **McCains Foods**
  - **Brands include McCains plus other international potato brands;** large users of vegetable oils, plus in Canada virtually all potato farmers also grow grains and oilseeds
  - 30% reduction in emission intensity (Scope 3) by 2030 (2017 baseline)

- **Maple Leaf Foods**
  - **Brands include Plant-based Field Roast Meat and Cheese Co.**
  - Execute our science-based targets (SBTs): 30% absolute reduction for Scope 1 & 2 emissions and 30% intensity reduction (per 1,000 kg. of product produced) for Scope 3 emissions (2018 baseline)

- **McDonalds**
  - 36% reduction in supplier GHG emission by 2030 (2018 baseline)

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Branding through Ecolabelling

- Eco-labelling is not yet widely used for production grain crops in Canada
- Regeneration Canada publishes a map of their member farms, although there is not a certification program: most of their members are organic producers
- The following is a recent eco-labelling initiative, and if this is successful, there is potential for a broader eco-labelling built on soil health

- **Habitat-friendly winter wheat**
  - Partners: Ducks Unlimited, Cereals Canada and Prairie wheat commissions
  - Premised on habitat benefits of winter wheat for nesting waterfowl
  - Elevators, millers and food processors are eligible to enroll in program and use the label in their marketing

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Regenerative agriculture

- Although some proponents include other goals, soil health is the common denominator
- First time that a “movement” in North America that has engaged those beyond agriculture that has soil health as the primary goal
- Extending the knowledge of importance of soil health
- Adopted widely by organic organizations as a descriptor of existing system, but also “Regenerative Organic”, with enhanced soil management requirements
- For some is very prescriptive and includes other goals
  - Livestock must be integrated into the farm; “circular” economy
  - Social justice goals
  - Reduction or elimination of mineral fertilizers and/or pesticides

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Use of Regenerative in the market

- Branding: philosophical, basis of “movement”
- To demonstrate commitment to sustainability
  - **General Mills**: *Advance regenerative agriculture on one million acres of farmland by 2030 - estimated to be more than 20% of our North American sourcing footprint.*
  - **PepsiCo:** *We’re working to spread regenerative practices that restore the earth across seven million acres of land by 2030*
  - ***McCain Foods****: Implementing regenerative agriculture practices across 100% of potato acres by 2030*
- To help achieve carbon footprint reduction goals
  - *Research by Maple Leaf Foods and Nutrien*

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Key takeaways

Markets are constantly changing - seize current opportunities!!

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