



GROWN WITH
PURPOSE™

GROWING FOR TODAY
AND TOMORROW

CO-OP AGRO IT'S HERE.

agro.crs



Agenda

- Sustainability
- Farmers and Sustainable Ag
- Grown With Purpose
- Farm to Fork
- Wrap up





Canadian Agriculture

Big Business Big Opportunity Big Responsibility

1. Canada is the 5th largest agricultural exporter in the world.
2. Canada is the largest exporter of Flax, Canola, Peas, Lentils and Mustard.
3. Agriculture employs over 2.3 million people in Canada.
4. 1 in 8 Canadian jobs are in Ag and Agri-Food.
5. There are approximately 158 million acres of total farm area.

Canadian Agriculture

Big Business Big Opportunity Big Responsibility

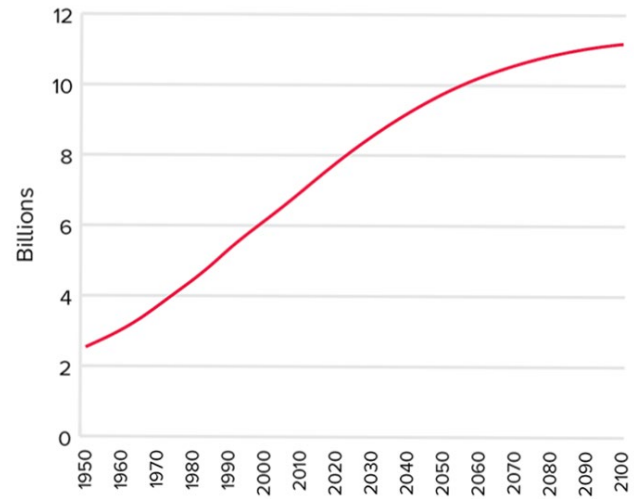
6. Field crop area is 78.5 million acres.
7. 97% of farms are family farms.
8. The amount of energy consumed per dollar of agricultural output fell 17% from 1990 to 2016.
9. Canada is third leading countries capable of producing enough food to feed itself - and help feed a global population currently growing.
10. Farming generates about 8% of Canada's greenhouse gas emissions.



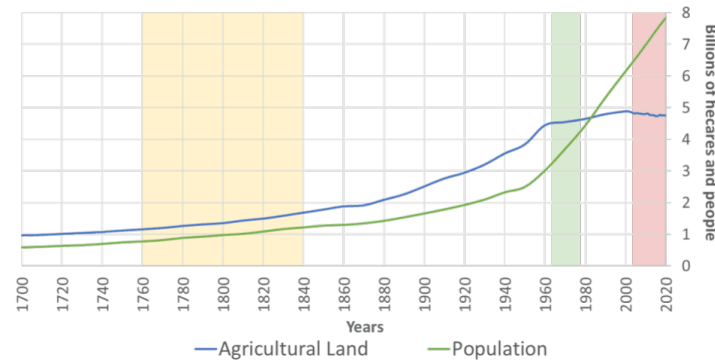
Sustainability



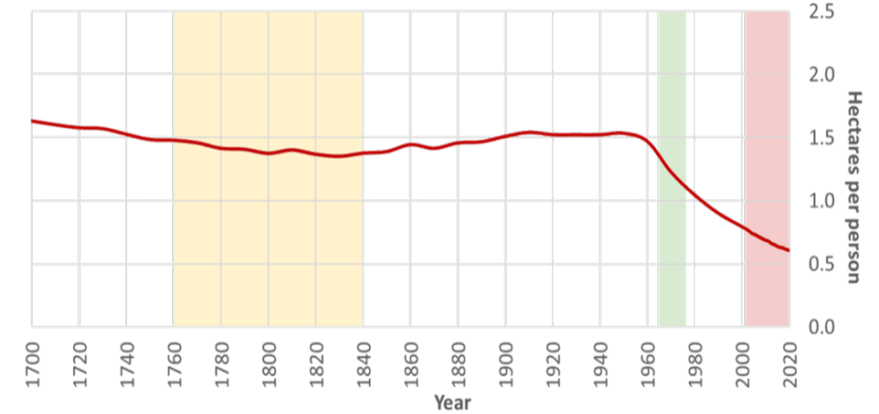
Predicted Population Curve, 1950-2100



Population and Agricultural Land Use: 1700 CE to 2020 CE



Average Amount of Agricultural Land Per Person: 1700 CE to 2020 CE



Why is sustainability such a HOT topic



Defining Sustainability

SUSTAINABLE AGRICULTURE IS DEFINED BY THREE INTERACTIVE COMPONENTS.

“SUSTAINABILITY” IN AGRICULTURE DESCRIBES LONG-TERM APPROACH TO BUSINESS ON-FARM.

Economic Profitability



Environmental Stewardship



Social Responsibility





Economic Profitability

- ▶ Economic Sustainability means that a farm is managed in a way that ensures its long-term profitability.
- ▶ First pillar of Sustainability. Does it make economic sense?
- ▶ ROI is another key aspect.
- ▶ Sustainable Agriculture allows farmers to dig into their operations and dig into the economics of them.
- ▶ Diversifying crops, developing local markets, and reducing dependency on external inputs are strategies employed to achieve this goal.



Environmental Stewardship

- ▶ Sustainable agriculture seeks to enhance and maintain the quality of the natural resources it uses.
- ▶ Key pillars of Environmental Stewardship are
 - ▶ Soil health Management
 - ▶ Water Management
 - ▶ Pest and Disease Management
 - ▶ Waste Management



Social Responsibility

- ▶ Different impacts in different geographies
- ▶ Mental Health
- ▶ Public Trust, Education and resources
- ▶ Ethical Business Practices





HOLISTIC

To be Sustainable





CONNECTING WITH CONSUMERS

Here is what Canadians know about modern farming practices:

Know a lot about
farming practices

9%

Know little to
nothing about
farming practices

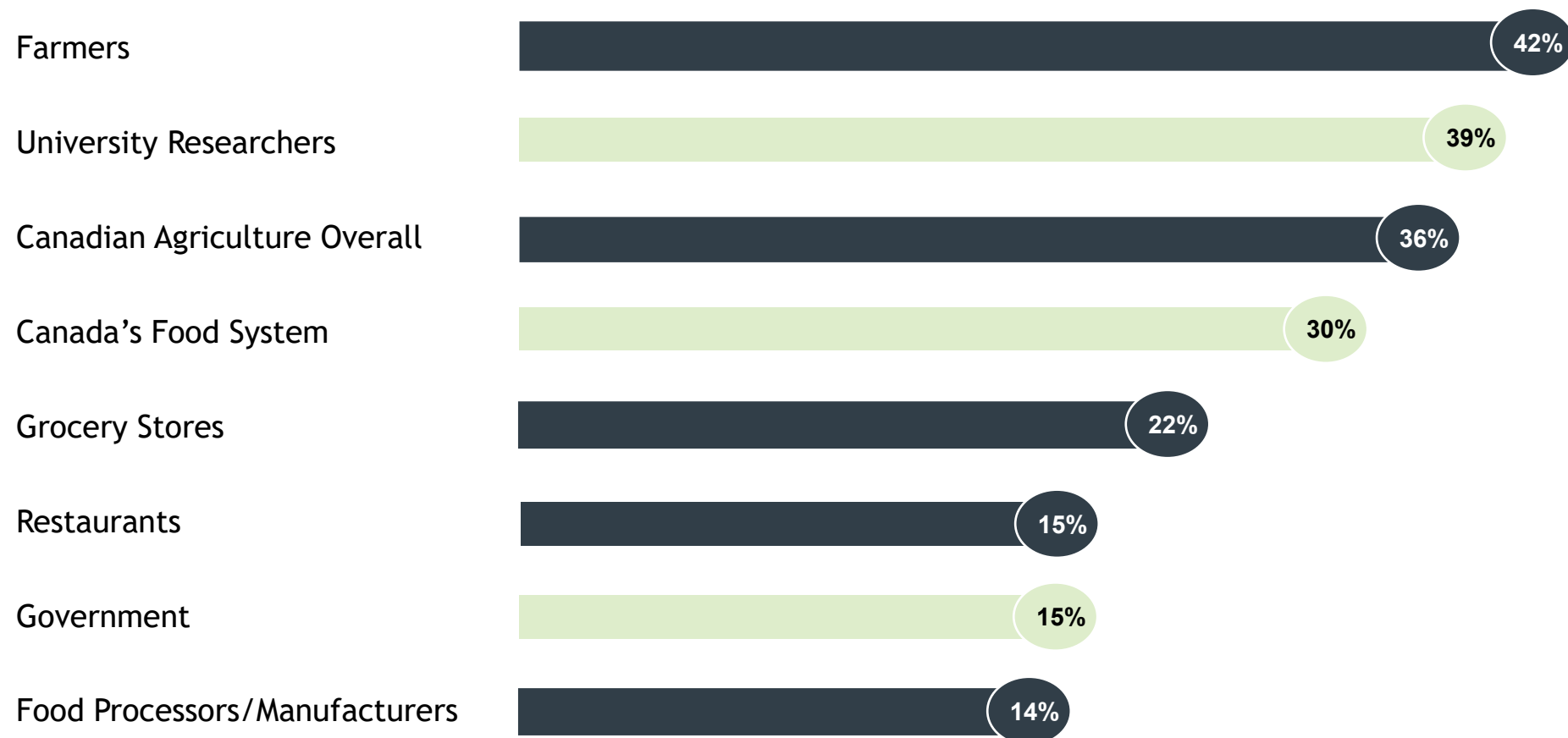
91%



**3 in 5 Canadians want to learn
more about agriculture.**



WHO DO CONSUMERS TRUST?



N = 2189

Source: Canadian Centre for Food Integrity Public Trust Research



WHO DO CANADIANS HOLD RESPONSIBLE FOR PROVIDING THE INFORMATION?





GROWN WITH
PURPOSE™

**WHAT IS GROWN WITH
PURPOSE**



Forward-thinking agronomic program that assesses a farm's planning, use of crop inputs and safe work practices.

GROWN WITH
PURPOSE™

Through sustainable actions we can
protect our soil, water and air for society.

CLIMATE



AIR QUALITY



DRINKING WATER



WATERSHED



**Economically, Environmentally, and
Socially** Sustainable Crop Production.

RIGHT



SOURCE

Matches fertilizer type
to crop needs.

RIGHT



RATE

Matches amount of
fertilizer to crop needs.

RIGHT



TIME

Makes nutrients available
when crops need them.

RIGHT



PLACE

Keeps nutrients where
crops can use them.

Learn more about 4R Nutrient Stewardship.
4r.fertilizercanada.ca




**GROWN WITH
PURPOSE™**

Name: Mr Test
Farm Name: Test Farm
Retail: Saskatoon
RM/County: Corman Park

Province: Saskatchewan
Postal Code: S1S 1S1
Grow Team: Test
Date: Sep 11 2018

CROP	TOTAL ACRES	TOTAL 4R ACRES	BASIC 4R ACRES	INTERMEDIATE 4R ACRES	ADVANCED 4R ACRES
Lentils	400	200	0	0	200
Total	400	200	0	0	200

Based on your responses, you may consider implementing the following practices.

Mapping geo-referenced field boundaries is an important step in variable rate technology, soil testing, field scouting and using satellite imagery.

Herbicide layering, used to mitigate herbicide resistance, is the sequential application of herbicides with different effective modes of action.

Follow proper container disposal methods. All containers should be triple- or pressure-rinsed, punctured to render the container non-reusable and delivered to designated disposal sites. Please refer to Cleanfarms.ca for specific container disposal procedures.

An economic threshold is the insect's population level or extent of crop damage at which the value of the crop destroyed exceeds the cost of controlling the pest. Economic thresholds can be expressed in a variety of ways, including the number of insects per plant or per square metre or the amount of leaf surface damage. For economic thresholds of insects, please refer to Grow Team's *Agronomy Quick Guide*.

Take note of buffer zones as identified on product labels or in the provincial crop protection guides. Don't spray when the wind is blowing towards a nearby sensitive crop, shelterbelt, garden or water body. Newer labels may indicate the distances required from the downwind edge of the boom, but older labels may not.

Equipment calibration (seeding, spraying, combining) is an important agronomic consideration to optimize yield.

CO-OP and design trademark are registered trademarks of TMC Distributing Ltd., Saskatoon S7X 3M9.

CO-OP AGRO IT'S HERE.

www.agro.crs

Yes

No



Health and Safety

PPE used when mixing protection products or fertilizer?

Proper storage of crop products and fertilizers?

Understands what to do in exposure to fertilizers and protection products?

Has a procedure in the event of a chemical spill and/or product exposure?

1. I typically grow pulses, soybeans or another annual legume as part of my rotation.

- ☐ Yes
☐ No

5. I regularly apply N after the soil freezes or when the ground is covered by snow.

- ☐ True
☐ False

3. Which best describes your N sources?

- ☐ At least 50% of my total fertilizer N goes down (treated with inhibitors or coated for slow release)
☐ Between 10 and 50% of my fertilizer N goes down
☐ I use a standard (non-EEF) ammonium sulphate, or UAN.

4. Which best describes how you set N rates?

- ☐ I apply variable rates based on soil test results, advanced quantitative tools, or precision farming maps to set management zones.
☐ I apply variable rates based on crop rotation, cropping history, soil test results, or management zones.
☐ I set specific N rates for different crops, soil tests, and/or other tools.
☐ I may vary my blend of N sources, but I apply the same rate to all crops planted to the same field.

5. I regularly apply N

- ☐ True
☐ False

6. I regularly grow fall-seeded crops such as winter wheat, fall rye, winter triticale.

- ☐ Yes
☐ No

8. Which statement best describes the N placement practices you most commonly use (excluding placement of N containing P sources such as MAP and DAP to meet P requirements)?

- ☐ I subsurface band my N in spring or apply in-season using a subsurface band, or surface band of urea or UAN treated with an inhibitor.

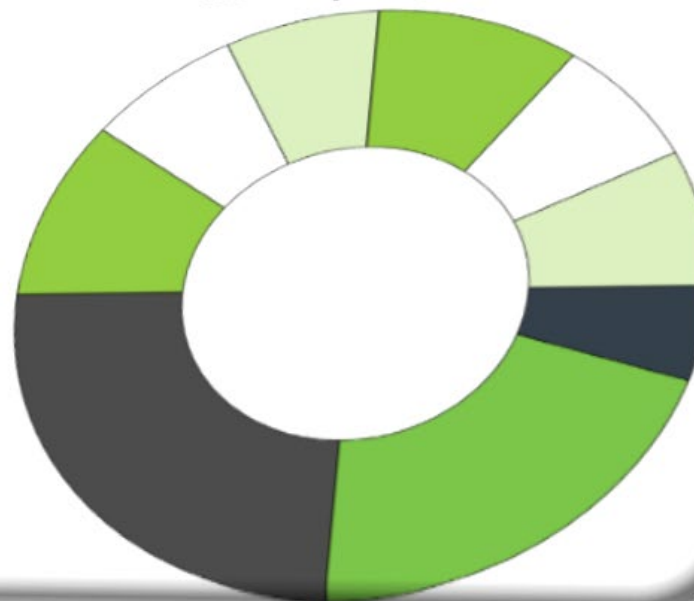
Retail: Saskatoon
RM County: Coral Park
Postal Code: S0E1E0

Farm Name: Jim's Farm
Grow Team Member: Yes
4R Farm Acres: 2000

Grower: Jim
Province: Saskatchewan
Total Farm Acres: 2000
Raw Score: 15/18
Percentage Score: 83.00
4R Level: Advanced 4R

Crop	Total Acres	4R Acres
Wheat	200	200
Barley	150	150
Oats	150	150
Canola	100	100
Soybeans	400	400
Peas	500	500
Lentils	200	200
Flax	150	150
Corn	150	150
Other	0	0
Total	2000	2000

4R Crops by Acres



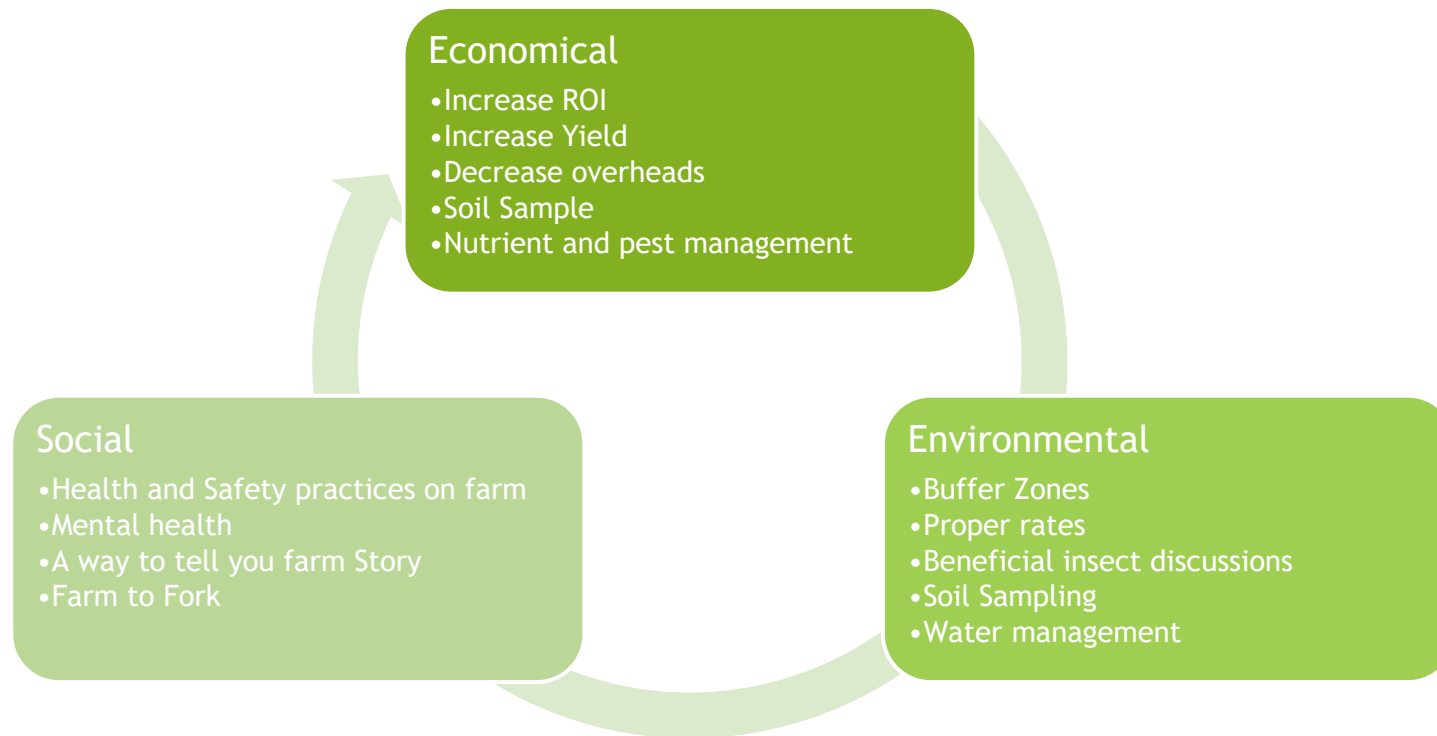
Raw Score:

Percentage Score:

4R Level:



Sustainable GWP



Farmers can generate reports that can show and prove their sustainability practices through Grown with Purpose! They can also have their acres reported directly to Fertilizer Canada to report their 4R acres.

FARM TO FORK
AND GROWN
WITH PURPOSE

The background features a series of overlapping, semi-transparent green triangles and polygons that create a dynamic, layered effect. The colors range from a light, pale green to a deep, forest green. The geometric shapes are primarily located on the right side of the image, with some extending towards the center, leaving the left side mostly white where the text is placed.

Co-op Creates a Unique Farm-to-Fork Experience



Co-op Agro Centre

The team at each local Co-op Agro Centre works with Western Canadian producers to advise them on the best production practices and supply them with the products needed to grow, fuel, equip, feed and build their farms and ranches.



Western Canadian Producers

Crops are grown and livestock is raised on locally owned and operated farms and ranches.

GROWN WITH PURPOSE.

Designation given to products grown with verified sustainable farming practices.



Processing Collaboration

Fresh fruits and vegetables, quality meats and innovative food products are made right here in Western Canada from locally produced ingredients.



Co-op Food Store

Food store shelves are stocked with high-quality products that are made, manufactured, grown, processed, raised or roasted in Western Canada.



Western Canadians

Members enjoy a broad selection of delicious, local food products and benefit from cashback and equity.



CREATING CONNECTIONS WITH CO-OP GOLD LAGER

Gordon Moellenbeck on his mixed farm operation near Englefeld Saskatchewan.

- Works with the Grow Team at Humboldt Co-op
- Collaboration with grower, distiller & brewer
- Gordon has been a Co-op member “forever”
- Focus on environmental stewardship and safe practices
- Keeping small, local communities viable
- Tasting Event at Saskatoon Co-op



Let's Raise a Glass to Co-op Gold Lager!



Meet Gordon Moellenbeck, the local Co-op certified Grown With Purpose farmer from Englefeld, SK that supplied a portion of the barley for our new Co-op Gold Lager



Prairie Malt from Biggar, SK, the local malting company that prepared the barley for brewing our new Co-op Gold Lager



A truly local Co-op Beer



Great Western Brewing from Saskatoon, SK, the local brewer that created our new Co-op Gold Lager



Our new Co-op Gold Lager is a smooth, crisp, clean and thirst-quenching lager perfect for hot days on the deck



Sold in Co-op liquor stores all over Saskatchewan!

Co-op Gold Lager is a well-balanced refreshing crisp, clean lager, lightly hopped with minimal after taste and 5% alcohol/volume. Available in 6 pack cans.

Gordon relies on Co-op for everything from groceries to crop inputs.

Co-op provides agronomic expertise to local growers to produce safe, nutritional food in a sustainable manner that is sold on grocery shelves at local Co-ops across Western Canada.

GROWN WITH PURPOSE



WHAT'S NEXT FOR GWP AND FARM TO FORK?

Grown With Purpose

- Carbon, and Nitrous oxide in field real time data collection
- Moving GWP into our digital agronomy suite AgZone Field
- Market opportunities*
- Carbon Credits*
- Looking at moving Grown With Purpose Grain into different Business units
 - GWP grain in feed mills that can be fed to livestock creating a closed loop on farm to fork GWP products.

