



THE CANADIAN CENTRE FOR  
**FOOD INTEGRITY**

**Public  
Opinion:**



**a study of Canadian  
conversations online on  
food and farming**



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**FOOD INTEGRITY**

The Canadian Centre for Food Integrity (CCFI) is a national charity with a clearly defined mandate as a service provider to help Canada's food system earn trust by coordinating research, dialogue, resources and training.

CCFI was launched in Canada in June 2016 as a program, and in April 2017 became its own distinct organization. In these early stages of development, many milestones have been achieved - the first being diverse leadership and investment from across Canada's food system. A solid foundation has been created, with many opportunities for growth and collaboration.



Come to the table and help Canada's food system earn trust for the future.

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- 2018 Public Trust Research: Insights to Action
- 2017 Public Trust Research: Tackling Transparency and How it Builds Trust
- 2016 Public Trust Research: With Insights From Moms, Millennials and Foodies



# PUBLIC OPINION: A STUDY OF CANADIAN CONVERSATIONS ONLINE ON FOOD AND FARMING

## BETTER UNDERSTANDING THE SILENT MAJORITY: A POWERFUL NEW WAY TO OBSERVE PUBLIC DISCOURSE

This research was conducted by Tactix, who utilized a powerful Artificial Intelligence (AI) public opinion research tool developed by Advanced Symbolics. The AI research tool crawls across several social media platforms and scientifically measures public sentiment.

Like conventional polling, the process starts by building a representative sample. Unlike polling, the sample size is much larger - more than **250,000** Canadian residents.

The AI research tool avoids introducing biases by not asking questions. Asking people a question naturally cause them to develop opinions on subjects they did not necessarily care about before. The AI tool can passively monitor its sample population, waiting for them to voice their opinions rather than inciting them to develop one.

By ‘listening’ to discussions across social media platforms, it can determine how many Canadians are concerned about an issue without being primed with - and influenced by - questions.

## OVERVIEW OF RESEARCH

The overall research objective of this study was to uncover how Canadians are discussing topics that matter to the entire food system (i.e. farmers, food processors, food retailers, and government).

The study assessed the social media conversations of 254,900 Canadians for 24 months between January 2017 and January 2019. To safeguard privacy, the AI tool collects only publicly available information in compliance with the terms of use of different social media websites. Critically important however,

is that no human encounters personal identifying information. The study assessed conversations on social platforms including Facebook, Twitter and Reddit.

The research covered topics related to food, health, farm practices, and specifically GMOs, hormones, antibiotics, and pesticides.



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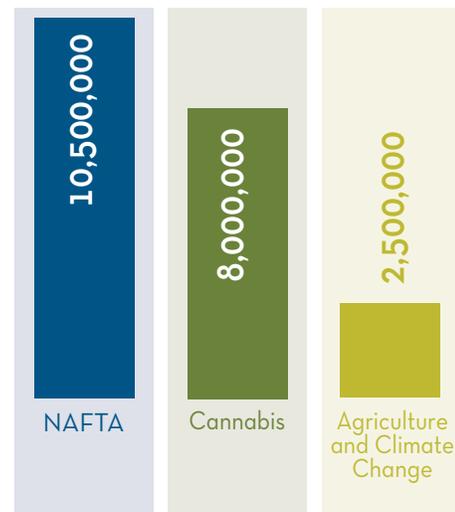
# CONVERSATIONS IN CONTEXT

Canadians' perspectives on the agri-food industry and food systems in Canada over the past two years has been largely concentrated around a few hot button issues, including GMOs and climate change. The share of voice on other niche topics, such as animal welfare, are being greatly magnified by select activist groups and amplified by news media attention.

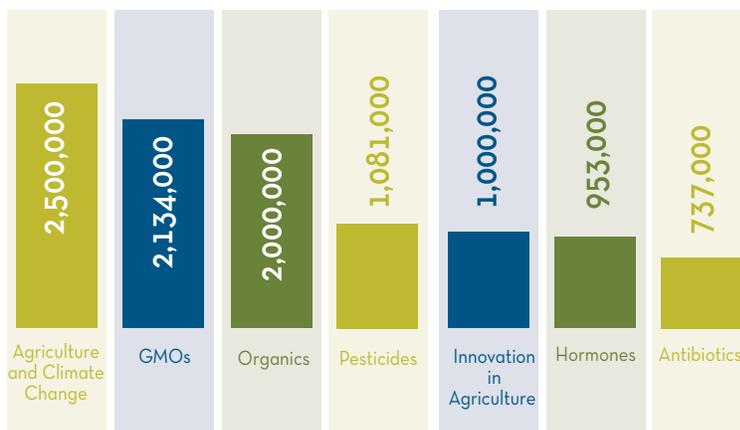
There is no other issue in modern agriculture today that generates as much dialogue by Canadians at the national level as the impact modern farming has on the environment resulting in a single-issue phenomenon: climate change.

More than 2.5 million Canadians have been actively interested and discussing the relationship between modern farming and climate change. As a benchmark of comparison for other nationally prevalent issues, approximately 10.5 million Canadians were actively discussing NAFTA over the same time period. Between 5 and 8 million Canadians were discussing Cannabis (including recreational use, medical use, and oils).

## TOP ISSUES - FOOD AND FARMING



Numbers of Canadians Discussing



Numbers of Canadians Discussing

Aside from climate change, GMOs generated the largest volume of conversations followed by organics at about two million engagements each. One million Canadians discussed pesticides, innovation in agriculture and hormones, while fewer Canadians were discussing antibiotics in food.

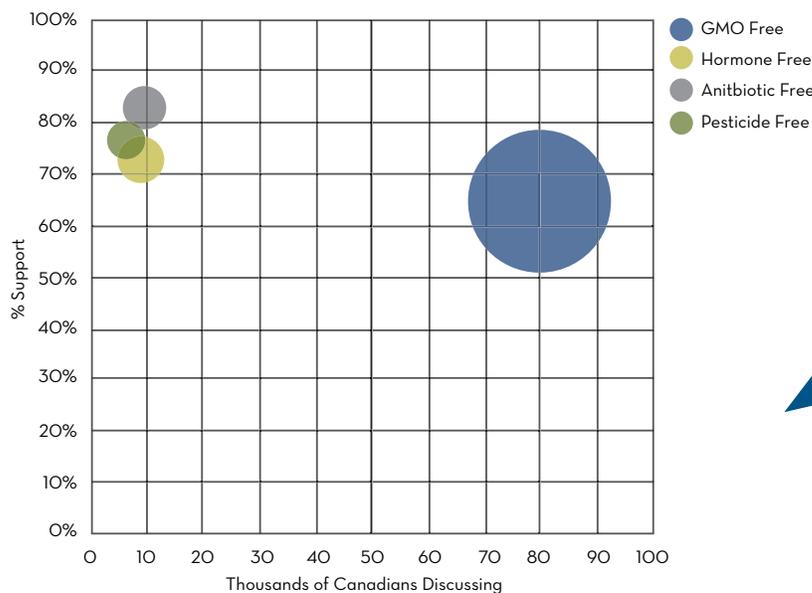
# EVERYTHING “FREE”?

The growing market trend towards labeling food “free from x” has never been more prevalent. CCFI assessed the extent to which Canadians supported their food being free from each topic. To uncover true opposition towards the technologies, we considered not only how supportive people were towards food being “free from x”, but also how many Canadians are actively discussing that **stance** for each issue.

for food free from hormones, pesticides, and antibiotics, the total number of Canadians actively discussing these topics positively is relatively low (10,000 versus 10.5 million for NAFTA and 8 million for cannabis) and when Canadians discuss these topics, support for “x-free” outweighs negative comments (68-85% positive). In contrast, while Canadians are more balanced in terms of their approach towards GMO free, more than seven times as many Canadians are discussing the issue.

As shown in the chart below, when it comes to a desire

## DISCUSSION VS SUPPORT FOR FOOD BEING “X FREE”



While many Canadians supported having food that is free from hormones, pesticides, and antibiotics, the total number of Canadians actively discussing these topics positively is relatively low.

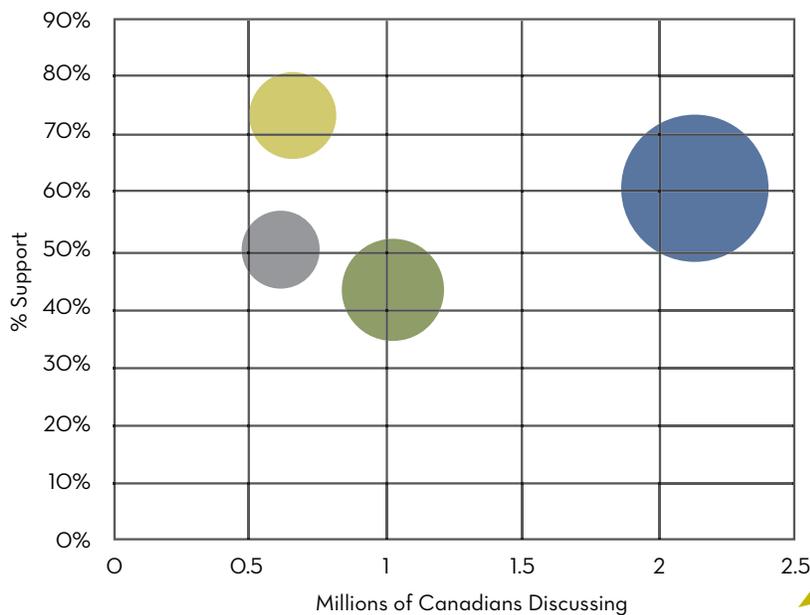
The table below provides examples of the types of discussions and terms being used by those who either support or oppose a position of trusting/looking for products that are ‘free from’ each topic. Overall, both supporters and detractors discuss the benefits – either of the issue or the absence of it.

	Those who <b>oppose</b> this are discussing:	Those who <b>support</b> this are discussing:
Pesticide Free	Invasive plant and bug species compromising agriculture	Reduced risk to public health, especially cancer risk; better for bee populations
Antibiotic Free	Animals aren’t in optimal health, therefore meat quality is compromised	Concern over health benefits for humans
Hormone Free	Marketing gimmick, particularly on Canadian dairy	Canadian standards for milk/beef are better for human health than US standards
GMO Free	Non-GMO label is not accurate/ can be misleading	Better for human health and the environment



# I DON'T WANT THAT IN MY FOOD

## DISCUSSION VS SUPPORT FOR “X IN FOOD IS BAD”



- GMO in food are bad
- Hormones in food are bad
- Antibiotics in food are bad
- Pesticides in food are bad

Unlike the relatively low number of Canadians discussing products being labelled “free from x”, far more Canadians are engaged on the broader issue of whether or not the presence of antibiotics, hormones, or pesticides in their food is bad (500,000 – 1 million). Sentiment is relatively split regarding whether or not antibiotics or pesticides in food is bad, but Canadians are far more negative when it comes to the presence of hormones in their food.

Once again, the highest volume of engagement relates to GMOs; among the 2 million+ Canadians discussing this topic, six in ten feel GMO food is bad.

## WHAT ARE CANADIANS SAYING?

	Those who oppose this are discussing:	Those who support this are discussing:
Pesticides in food are bad	Protecting plants, necessary for managing weeds	Link to declining bee population, risk to human health
Antibiotics in food are bad	Animals stay healthy	Antibiotic resistance crisis, increase of “superbugs”
Hormones in food are bad	rBST (growth hormone) in dairy is not allowed in Canada, leads to less use of pesticides	Particularly in dairy, hormones have adverse effects on human health such as immune system and natural hormone balance
GMOs in food are bad	GMOs allow farmers to use fewer pesticides, same nutrient or better than non-GMO foods at better price	Animals suffer due to GMOs, chemical companies, production of superbugs, invasive species and threatening biodiversity

# THE INFLUENCE OF MEDIA AND CURRENT EVENTS

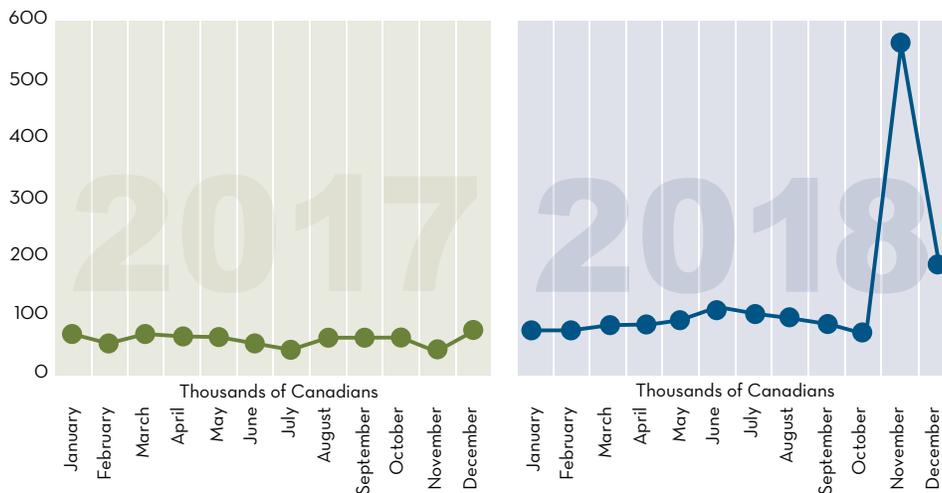
Events that occurred most recently are weighed more heavily in people's minds. People are not only subject to the availability bias, but another psychological bias called the recency bias: events that occurred more recently are weighed more heavily in people's minds. Because of this, it is apparent that news media drives engagement and interest of Canadians.

Concerns towards GMOs has fluctuated greatly in the past two years, peaking in November 2018 when a national documentary aired. Monthly engagement went from a base rate of 60,000 Canadians, shooting

up to 560,000 Canadians discussing GMOs in November.

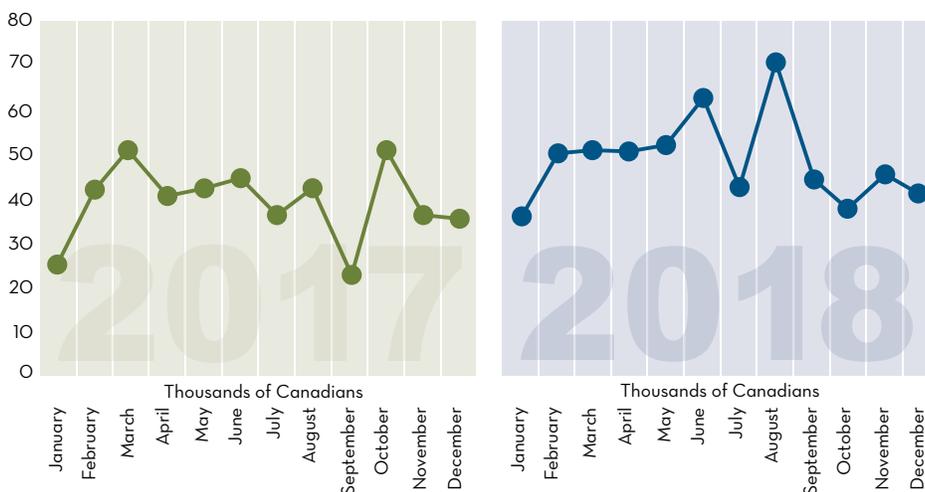
In contrast to the perception that GMOs are harmful, which fluctuated significantly with the recency bias, concern towards pesticides remained comparatively more level throughout the past two years (with a base rate of 42,000 Canadians peaking at 70,000 in August of 2018). Despite a series of campaigns and reports regarding pesticide and human health, the needle on Canadians' engagement has not fluctuated significantly.

## ENGAGEMENT OVER TIME ON GMOs



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## ENGAGEMENT OVER TIME ON PESTICIDES.



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# FARMERS ON THE FRONTLINE

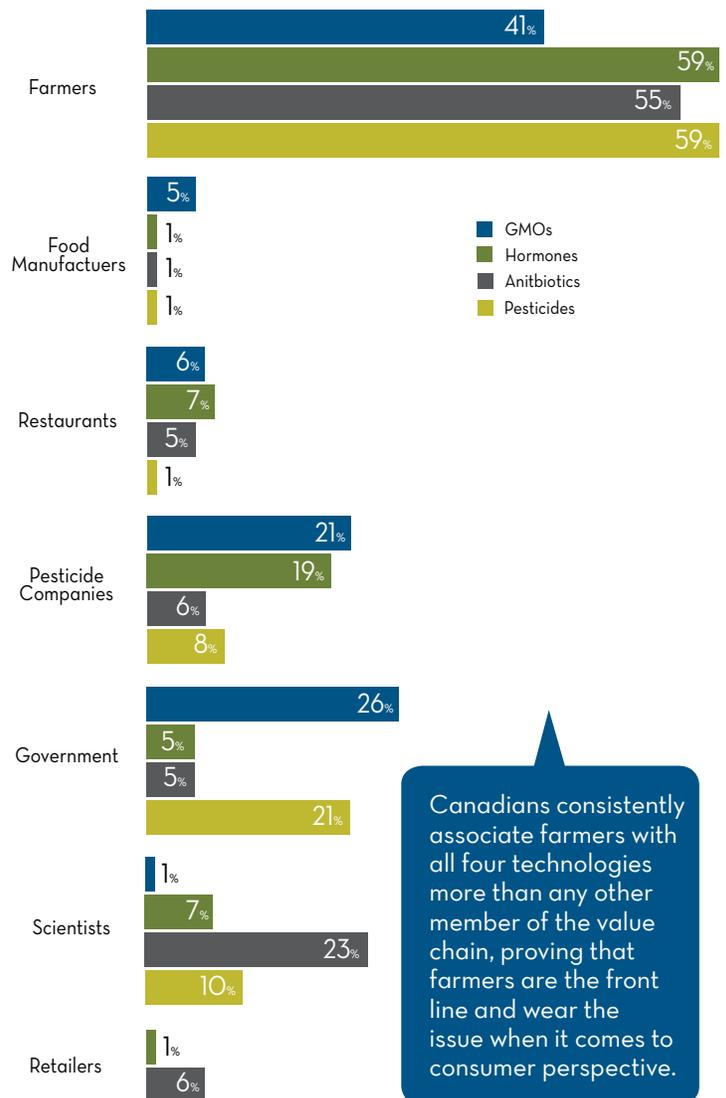
While Canadians have varying opinions on the four individual technologies examined within the research (GMOs, Pesticides, Hormones and Antibiotics), there is one common theme all Canadians firmly associate with each of these technologies: farmers. Farmers are associated with these technologies more than any other member of the value chain proving that farmers are the front line and wear the issue when it comes to public opinion.

- 60% of the analyzed discussions associated pesticides with farmers, while only 21% associated pesticides with government, and only 10% with scientists.
- The results are similar for hormones, antibiotics, and GMOs.
- While GMOs were the least associated with farmers at 41%, this is still substantially more than the number of discussions that associate GMOs with the next closest stakeholder (government at 26%).

The implications on future messaging is significant; Canadians are not predisposed towards listening to assurances about government regulatory safety measures because government is not the primary stakeholder that is associated with the technology.

In contrast, farmers have compelling stories and can act as key figures for educating the general public on agriculture issues. And when it comes to retailers, Canadians do not see a role for them in telling the story about why farmers need access to technologies.

## STAKEHOLDERS ASSOCIATED WITH EACH ISSUE



Canadians consistently associate farmers with all four technologies more than any other member of the value chain, proving that farmers are the front line and wear the issue when it comes to consumer perspective.

# THE IMPORTANCE OF LANGUAGE

What's really behind the issues? When 86% of Canadians strongly support agriculture being a highly-innovative sector, what is it that they are picturing? When there are more than five-times the number of Canadians discussing the environmental implications of modern farming than the average agricultural issue, what are people thinking of?

The reason is, simply, that words matter.

The language being used by different groups is not aligned. The language that people themselves use is not always aligned with the words they're really

thinking about. It's important to not only uncover what people really mean when they talk about an issue, but to use the language that they are comfortable talking about.

As an example, 'organic' means...whatever people want it to mean. Although more than 2 million people engaged in the topic of organics and 92% of those discussing the issue positively, a substantial portion are imbuing upon 'organic' a number of other characteristics they view as positive. The association that most people make between organic food is with local farming, even though there is often no such association.

## TRADITIONAL DEMOGRAPHICS ARE LESS IMPACTFUL THAN GEOGRAPHY

Demographics have traditionally been thought of as being the most impactful way to segment audiences and understand unique profiles of people who hold radically different views. Millennials' opinions are typically contrasted against those of the Baby Boomers; food is often looked at through a gendered lens to measure differing perspectives men and women may hold towards key issues; and, race is occasionally anticipated to be a determining factor for outlook on key issues. However, in this study none of these factors attributed to significant differences in opinion:

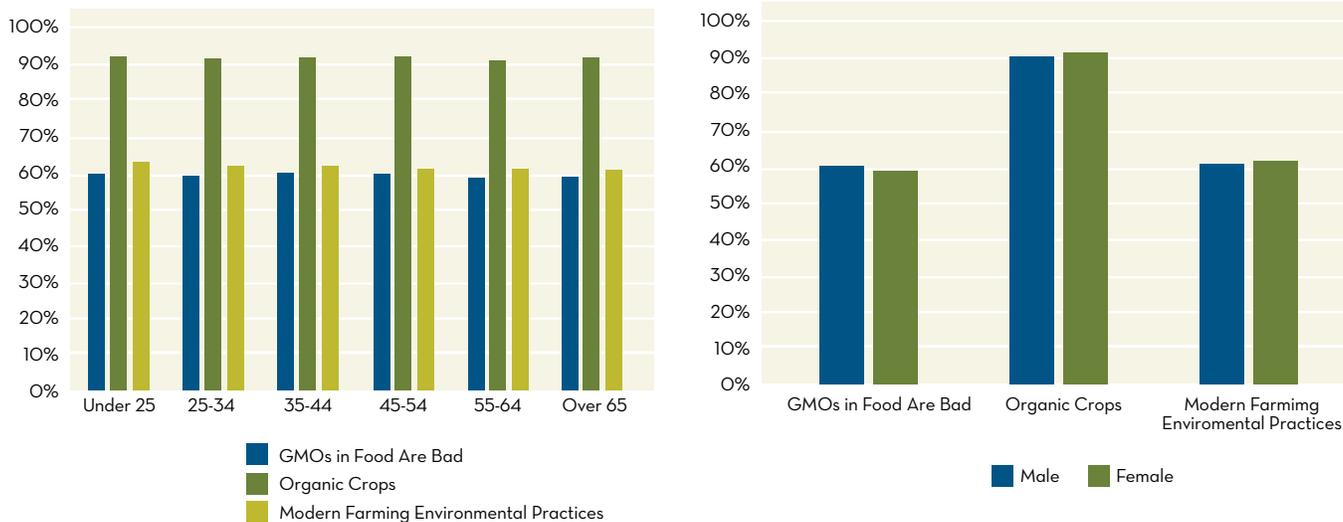
- On all topics, all age groups were within 1-2% of each other.
- Race similarly had no bearing on opinion, with all variability falling within the margin of error.

- There were differences between genders on a few subjects ("GMOs and hormones in food are bad", as an example), but men and women were largely aligned on the issues.

Returning to the three large issues which drive the agriculture conversation at a national level - opposition to GMOs, calls for organic food, and discussions on the link between modern agriculture and climate change - we see that in all three of these cases neither age, race, nor gender played a meaningful role in determining a person's attitudes.

Millennials and Baby Boomers were surprisingly found to be similarly aligned in many views on issues relating to agri-food and food systems in Canada.

## SUPPORT FOR KEY TOPICS NOT INFLUENCED BY AGE OR GENDER



Though age, race, and gender did not influence opinion, region most certainly did. The opinions of Quebecers were generally at odds with the rest of Canadians. Only 42% of Quebecers were supportive of the subject “hormones in food are bad”; the next lowest support was British Columbia at 67%, and the rest of the country was in the mid to high 70s. Similarly, Quebecers were the least supportive of “farmers need innovative technologies” at 46%, compared to the 80s and above of the other provinces. The AI tool analyzed French discussions as well as English ones, so language is not likely the cause of these differences.

## KEY TAKEAWAYS FROM THE CANADIAN CONVERSATION REPORT:

1. Opinions vary across the four technologies assessed – GMOs, hormones, antibiotics, pesticides – but most Canadians associate all of them with farmers, more than any other food system stakeholder.
2. “It’s not what you say, it’s what they hear.” Availability bias and recency bias play enormous roles amongst both the supporters and opponents of modern agriculture on key issues including the role of innovation itself. A resounding 86% of the one million Canadians who discussed the topic of innovation believe that agriculture is indeed one of the innovative sectors in Canada. But as with most public affairs issues, events and news media coverage drive public interest in an issue.
3. Age, race and gender did not have a significant impact on opinion, but region did. Quebec was frequently the outlier from the rest of Canada on key issues. And for the most part, millennials and baby boomers were surprisingly found to be similarly aligned in many views on issues relating to agri-food and food systems in Canada.



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## FROM INSIGHTS TO ACTIONS

The Canadian Centre for Food Integrity coordinates this research for the benefit of the entire food system and those interested in conversations about food and how it's produced. A better understanding of the Canadian public's views, expectations and disconnects is the foundation needed to increase public trust in our food system for the future. The research is meant to be shared broadly and put to work by the entire sector.

Funding for this activity has been provided by Agriculture and Agri-Food  
Canada under the Canadian Agricultural Adaptation Program.

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Canadian Centre For Food Integrity Public Trust Research.  
With thanks to our partners TACTIX who managed and  
interpreted the research.

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