

## Consumer paradox: As media turn less negative on genetically modified crops, Canadian consumers remain ambivalent about innovative food products

**C**anadians have high trust in Canada's food safety system, but not new food products

Gauging consumer attitudes to genetically modified (GM) crops has been taking place for over 20 years, with results showing gradually increasing acceptance. A recent study found an [80% decline in GM crop-related social media posts](#) and more balanced mainstream media reporting. The authors of this research indicate that both forms of media may be developing more favourable views of GM crops and biotechnology. But is this the case when it comes to the Canadian consumer and their food, have their concerns changed since the first GM products were approved in the 1990s?

### Two major takeaways:



**52%**

**Just over half of consumers trust the food industry to do the right thing.**

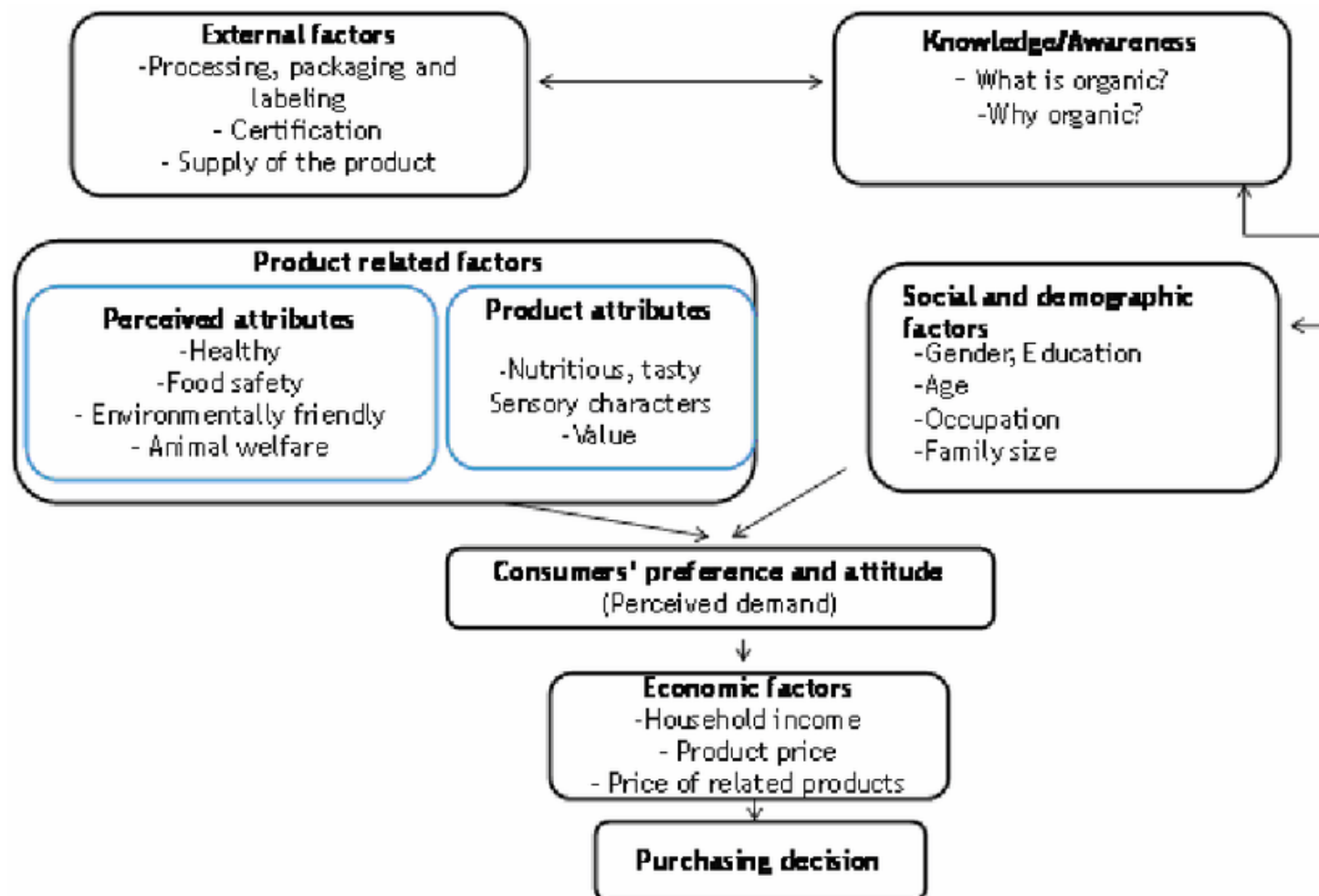


**24%**

**Almost a quarter actively distrust the food industry.**

Credit: Signal Theory

There have been numerous studies involving Canadian consumer attitudes towards GM crops, in which studies between 2000 and 2010 showed the majority of consumers were opposed to GM food products. In recent years, attitudes have shifted, one study found that [if GM foods were priced the same as non-GM foods](#), the majority of survey respondents were willing to purchase the GM variety. At the same time, there have been very few studies regarding consumer attitudes towards the newest plant breeding technology, [genome editing](#). To gain a sense of the attitudes and perceptions toward gene-edited food products, Oswaldo Vasquez surveyed Canadian consumers for his [Master's thesis research](#). In total, he collected 497 English-speaking survey responses in 2018, from Canadian consumers.



Framework of attitudes towards organic foods. Credit: Bonti-Ankomah and Yiridoe

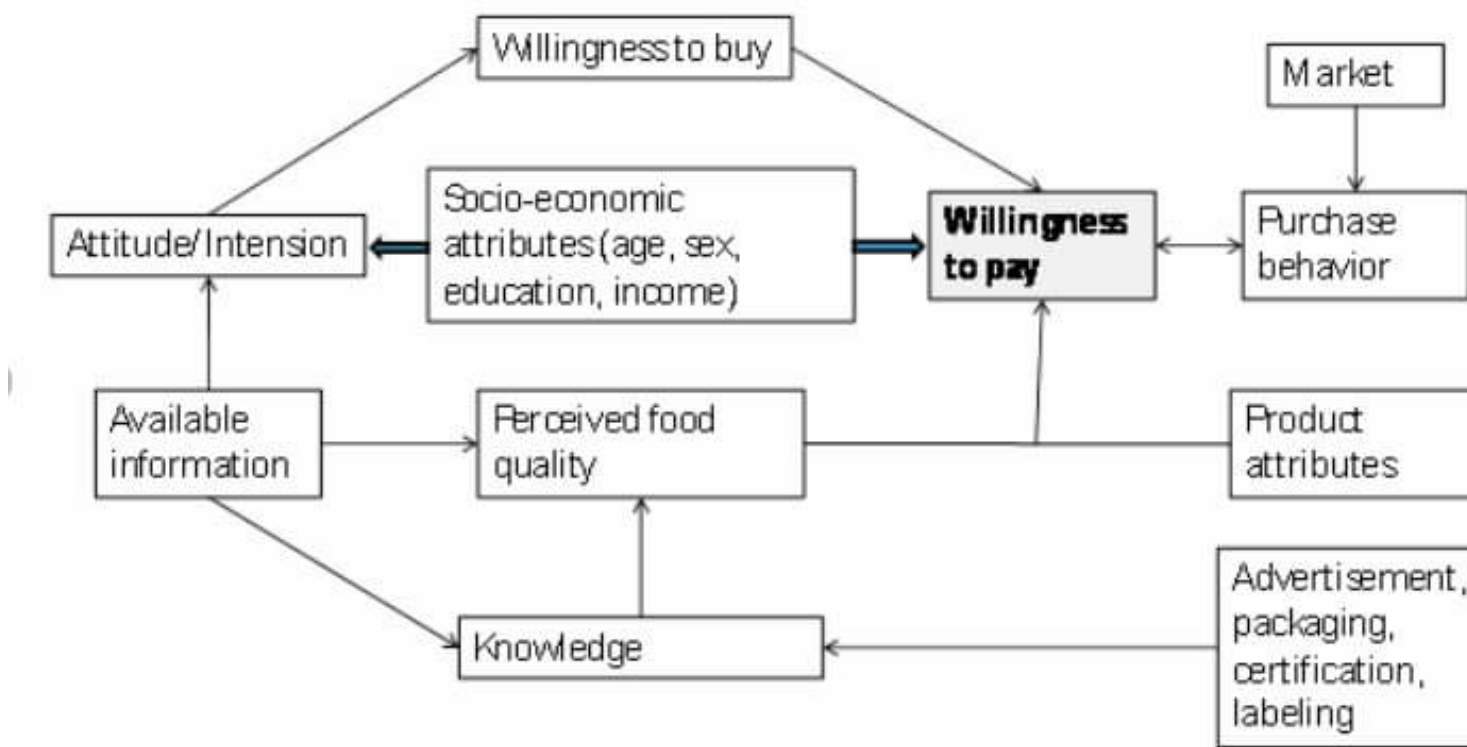
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## What food purchase factors matter to consumers?

To better gauge consumers' attitudes towards genome-edited foods, Oswaldo first needed to determine which purchasing factors were of greatest priority for consumers. In total, 11 different food values were provided, with participants asked to indicate which were the most important for themselves. Results indicated that nutrition (64%), price (57%), and taste (55%) were the three leading factors. In addition, respondents were asked about their level of confidence in Canada's food safety system, of which 97% expressed confidence. While there is confidence in food safety, when it comes to knowledge about food technologies, more than half of respondents self-rated as very poor or poor for genetics (50%), plant breeding (56%) and genome editing (72%). Even though knowledge about genome editing was limited, respondents strongly believed that the technology could increase the nutritional values of food (56%),

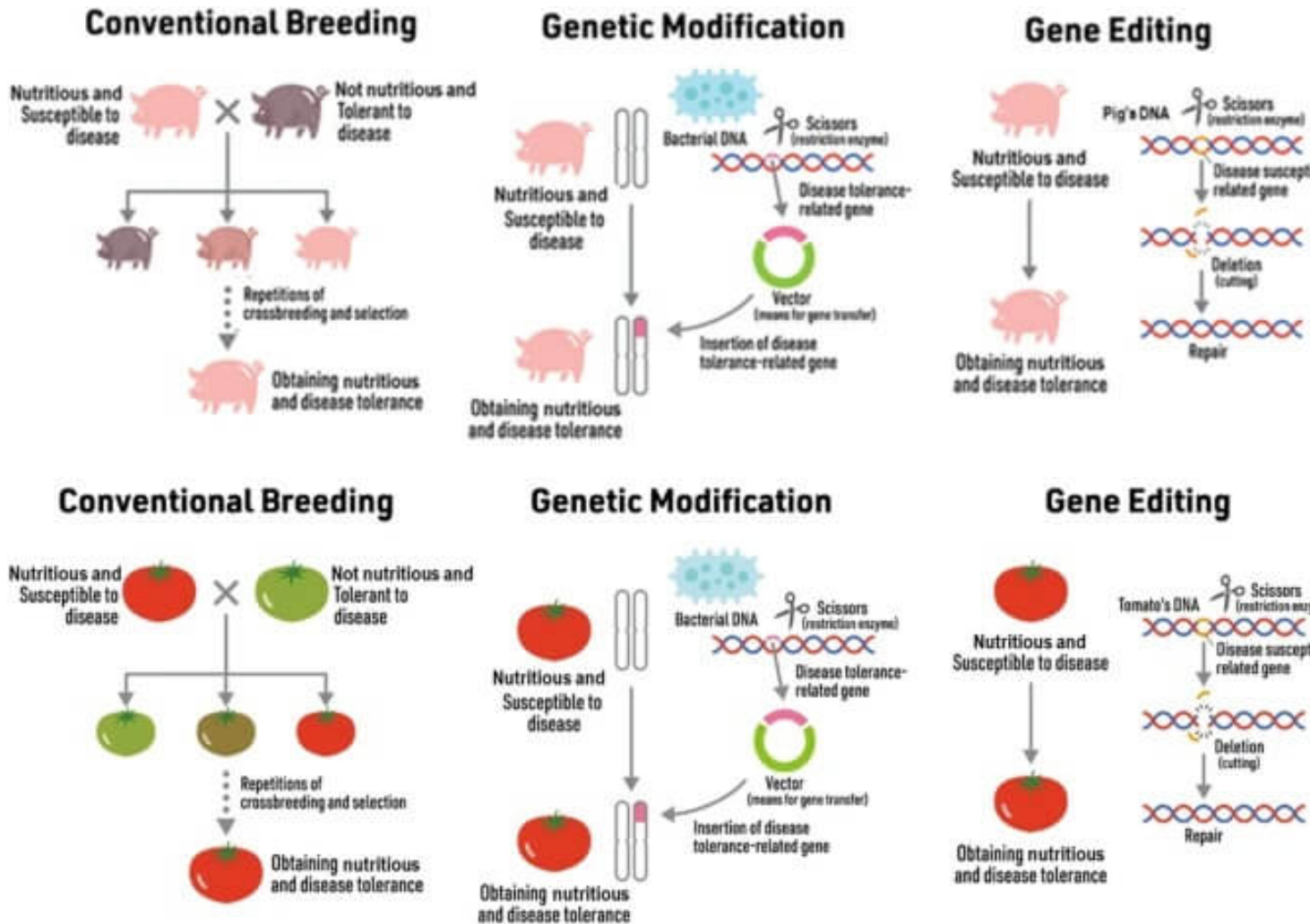
develop crops that better resist insects (53%) and reduce pesticide residues on food (49%).



General food framework of consumer choice. Credit: Bonti-Ankomah and Yiridoe

## The neutral Canadian

Results revealed that the majority of respondents expressed a neutral attitude towards GM technology (54%) and gene editing (50%). Positive attitude results show a greater positive attitude (positive and strongly positive) for genome editing (29%) in comparison to GM (16%). While consumers have a neutral attitude toward GM and genome editing, it is apparent that they don't have a strong understanding of the impacts of the products of these technologies. When respondents were asked to agree or disagree with perceived risks, the majority (50%) indicated that [genome editing could lead to a loss of biodiversity, which is not the case](#). When asked if genome editing could lead to more food allergies, 62% were undecided, while slightly more respondents agreed (21%) than disagreed (17%). There is no evidence that genome editing or GM leads to [more food allergies](#), as over 4400 risks assessments have been done on these products, all of which determined any risk from a GM crop is equivalent to the risk of conventional or organic crops. Unfortunately, 56% of respondents agreed with the statement that genome editing tampers with nature. [Natural rates of mutation can be as high as 20 genes](#) from one generation to the next, depending on the crop variety, whereas genome-edited varieties may change the function of as few as 1-2 genes. Respondents identified that they believe genome editing technologies were capable of providing future benefits, but their lack of knowledge about genome editing has resulted in them expressing caution in the products.



Science is rarely simple, especially compared to the emotional thrust of anti-science arguments. Credit: Naoko Kato-Nitta et. al.

## The Consumer Paradox

Canadian respondents to this survey present a paradox. Respondents indicate they are highly confident in Canada's food safety system. Yet the majority also identified that they know little about the science of food production, resulting in low acceptance of food products created using innovative technologies. The results indicate that at a high level, Canadian consumers are highly confident in the food products that are in grocery stores, but as they are requested to provide perspectives about the future of food innovation, this confidence declines. The results highlight what messages need to be communicated to better inform and assure consumers about the application of new plant breeding technologies.

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