



DOWNSTREAM EVIDENCE REPORT 2023



**ARRELL
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AT THE UNIVERSITY of GUELPH

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About the Net-Zero Food Systems Challenge

The Net-Zero Food Systems Challenge is an experiential learning program that brought together graduate students from across Canada with thought leaders and industry decision-makers to collaboratively develop solutions for a sustainable agriculture and food system. Over the course of six months, students conducted independent research, synthesized academic and industry reports, and compared sustainability practices and commitments of food retailers in Canada and internationally. These reports summarize their findings and identify key opportunities for Canadian food retailers to enhance sustainability within the agri-food system, both upstream (production) and downstream (consumers) from their operations.

This challenge was run by Arrell Food Institute and the Ontario Agricultural College at the University of Guelph, with financial support from Loblaw Companies Limited.



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Executive Summary

In Canada, food retailers like Sobeys, Metro and Loblaw, three of the largest operating within the country, have set ambitious targets to reduce Greenhouse Gas (GHG) emissions within their operational footprints by **50% by 2030**.¹

Canadian food retailers are beginning to recognize that achieving such transformative objectives hinges on consumer participation. Consumers are pivotal players in the paradigm shift towards a more sustainable food system, but their willingness to engage depends on a clear understanding of the intricate concepts surrounding sustainability. In this context, empowering consumers with knowledge and fostering informed choices can help food retailers to co-create a sustainable future.

There are three key opportunities for effective, impactful change that food retailers can adopt now to encourage consumer awareness and purchase of climate-responsible products.

Third-Party Partnerships for a Standardized Measurement Metric



Third-party certification, provided by independent entities, is vital to bolster the credibility of sustainability claims. Collaborative efforts with third-party verifiers in creating environmental scoring systems must harmonize with regulatory requirements and the practical operational dynamics of both food retailers and producers. This form of third-party verification not only enhances consumer trust through transparent and authentic processes but also communicates reliability and quality and empowers food retailers to make data-driven decisions based on reliable and validated information.

Labelling



Embracing transparent eco-labelling, such as the Traffic Light System and QR codes, guides consumers toward more sustainable choices. Clear labelling systems offer simplicity and accessibility for consumers, driving informed purchasing decisions and encouraging manufacturers to improve their sustainability practices.

Storytelling



Using digital storytelling through websites and social media offers compelling narratives about sustainable production and product impact. To implement these strategies, food retailers should authentically share producer/farmer stories and visuals, building strong relationships with both producers and consumers. The ultimate goal is to transform consumers into active participants dedicated to purchasing climate-responsible products.

These practices offer Canadian food retailers an opportunity to deepen consumer understanding about sustainability and stimulate climate-responsible purchasing.

I. Recommendations for Canadian Food Retailers to Engage, Educate and Encourage Consumers to Increase Adoption of Climate-Responsible Products

To reduce the environmental impact of the food retail sector, retailers must actively engage and educate consumers on sustainable products to help reduce emissions along their supply chain. To improve communication with consumers and introduce sustainability initiatives, we propose three key opportunities for food retailers – ones that are effective, that have strong potential for impact and that are ready to adopt quickly.

1. Third-Party Partnerships for Standardized Measurement Metric

An independent party with no vested interest in the outcome can undertake an audit to determine if the product meets sustainability standards. A neutral, third-party certification is pivotal in ensuring credibility compared to self-certified schemes, which lack transparency.¹



Many third-party verifiers exist. Once retailers have identified a third-party verifier that best aligns with their needs, collaborating is a straightforward enrollment process that must be followed by a joint effort to devise an environmental scoring system. This system should not only adhere to

regulatory compliance but must also be practical, aligning seamlessly with the operational dynamics of retailers and producers.

Third-party verification holds significant benefits, including enhanced consumer trust.²
The transparency and authenticity of the process assures consumers that their purchases align with their ethical and environmental values.

Further, the uniformity that results from consistent certification in private label products conveys a subtle message of reliability and quality to consumers. This coherency not only simplifies the shopping experience but also affirms the integrity of the brand. Accumulating consistent and measurable data through third-party certification enables data-driven decision-making for retailers, ensuring that strategies and actions are underpinned by validated and reliable information.

In Europe, a synergy of partnerships stemming from third-party certifications has permeated the market, with notable names such as Foundation Earth, Eco-Score and Planet Score. They have garnered the attention and collaboration of significant retailers, including Tesco, Morrisons, Lidl, Colruyt, Waitrose and Carrefour, showing the validity and applicability of environmental scoring systems within the retail sphere. Tesco has also formed a partnership with the World Wildlife Fund for Nature (WWF). The main feature of this collaboration is the “sustainable basket metric,” a tool designed to measure the environmental impact of frequently purchased grocery products in the UK. Utilizing this approach, Tesco has been monitoring the environmental footprint of its shopping baskets.²

2. Labelling

The application of eco-labels can guide consumers towards climate-responsible products.³ However, there are several challenges with labelling. Information must be accessible and easy to understand, as complexity and ambiguity can lead to consumer disregard. Striking a balance between text and graphics is also essential to convey the

necessary information without overwhelming the shopper. The integrity and reliability of the source of the eco-label are also crucial, as trust plays a significant role in the effectiveness of such labels. Furthermore, as transparency increases, some products may receive lower scores, reflecting their true environmental impact. As a result, some food retailers may choose to only highlight private label items that have positive eco-scores. Lastly, labelling cannot be forced by the food retailer onto products that are outside of their private label if food companies do not wish to comply.

Good labelling practices can address some of the above-mentioned concerns. The Traffic Light System for example, due to its inherent simplicity and intuitive design, stands out as a robust mechanism to enhance consumer awareness about the ecological impact of their food choices. By employing an effortless colour-coding scheme – green signalling low impact, yellow indicating medium and red representing high impact – the system provides a rapid and accessible overview of a product’s sustainability credentials. It has already been applied in various European contexts; for example, a variation of the Traffic Light System has been adopted by supermarket chains in the UK and France.⁴ This transparent system not only helps consumers to make well-informed purchasing decisions but also stimulates manufacturers to enhance their sustainability practices, aligning them with clear, competitive benchmarks.

Additionally, diversifying eco-labelling practices by incorporating technological elements like QR codes and combining environmental impact data with nutritional information offers a multifaceted approach to guide consumer decision-making. QR codes enable the provision of detailed environmental information, but their efficacy depends on user accessibility and technological familiarity; accessible scanning devices led to a significant spike in user engagement with QR codes.⁵ Integrating environmental and nutritional information, such as on Kalera’s lettuce packaging, can help consumers make choices that are both ecologically responsible and health conscious.⁶ The practices that blend detailed information with user-friendly formats solidify eco-labelling as a critical instrument in shifting consumer behaviour towards more sustainable consumption patterns.

Executing a new labelling initiative starts with a well-planned pilot, ensuring everything aligns with third-party standards. This pilot measures how consumers respond to the new labels in a real-world, yet controlled scenario. After carefully analyzing the data and insights from the pilot, a broader rollout across the industry ensures the label is not only informational but also effectively sways purchasing behaviours and meets sustainability targets. This gradual, data-informed approach guarantees that the labelling is not only accurate and credible but also connects authentically with consumers.

Embracing transparent eco-labels elevates a retailer’s sustainability profile and establishes them as a leader in the industry, providing a competitive edge in a crowded marketplace and attracting environmentally mindful consumers.

Besides aligning with governmental sustainability targets, it could pave the way for potential regulatory benefits and boost the brand image, ultimately driving a positive and impactful market presence.

Tesco, for instance, acknowledges that nearly 40% of its Scope 3 emissions came from downstream consumer activities.⁷ In response, Tesco launched the Better Baskets campaign, designed to inform consumers about options that are not only more environmentally friendly but also healthier and budget friendly.⁸ Their feature items include in-store Better Basket zones labelled with the Better Baskets logo. This initiative represents a gradual shift toward encouraging lower carbon purchasing decisions.

Another successful example is Carrefour’s “Going Vegetarian” campaign that incorporates QR codes. They reported a substantial increase of sales of sustainable products (57%), with marginal negative impacts on unsustainable ones (0.06%).⁹ Moreover, numerous retailers, particularly in Europe, are joining forces to implement harmonized eco-labelling using the Traffic Light System.^{10,11}

How do consumers view sustainability claims?

Deloitte Canada found that a significant number of Canadians are stuck in a mindset they referred to as “under-powered”.¹² Consumers in this mindset care about sustainability but are often hindered by factors such as price and limited access to information; they are waiting for more sustainable options to become readily available.



In another study, Deloitte Canada highlighted the barriers that stop consumers from purchasing sustainable products, finding that the majority of Canadians express skepticism toward sustainability messages and claims by brands.¹³ The lack of transparency, credible information and ways to verify these sustainability claims impact purchasing behaviour, with nearly half of the Canadian population reluctant to pay a premium for sustainable products.



This underscores the complex landscape of consumer attitudes and behaviours towards sustainability in Canada. Understanding these dynamics is pivotal for brands looking to effectively engage and win over consumers in the realm of sustainability.

A consumer insights article by BCG Consulting identified eight prominent barriers encountered by consumers when selecting sustainable products across all industries: awareness, availability, pricing, convenience, product quality, trust, social and psychological factors and finally, interest.¹⁴ For the food retail industry, the top three barriers hindering consumers from making sustainable purchases are awareness, product availability and pricing – which means food retailers have an opportunity to address these barriers by educating consumers on sustainability, sourcing sustainable products and increasing their visibility in-store.



Cliona Howie, CEO of Foundation Earth, a third-party eco-labelling organization collaborating with large retail chains in Europe, said that consumers are inundated with diverse labels that suffer from a lack of standardization and impartiality. Data quality plays a pivotal role throughout the entire value chain to build trust in the labelling company; Foundation Earth found that consumers prioritize the credibility of label issuers over the actual scores presented. Consequently, establishing this trust can bolster sales for retailers.¹⁵



3. Storytelling

To strengthen consumer involvement and clearly convey a retailer's commitment to sustainable practices, it is vital to have an informed and proactive consumer base. An effective mechanism to achieve this is through storytelling. Food retailers can hook the consumer through data driven storytelling using empathy and emphasizing shared values.

To maintain trust and strong relationships with producers, retailers must tell stories that are authentic, honest, accurate and verified by the producer. Misrepresented or skewed information may lead to strained relationships between the retailer and producer, and the retailer and consumer, thereby eroding trust and jeopardizing brand reputation.

To implement effective storytelling, retailers can take several steps. During the procurement process, work to understand the origin stories and growing practices of producers. Interview producers to better understand how their production practices lead to sustainability. Feature familiar information such as generational farming and "the family farm", linking the environmental and communal stories that resonate with consumers. Gather additional information such as photos, videos, social media handles and website links from producers to enhance transparency between consumers and producers. Share this information through online and in-person information campaigns, using some of the strategies outlined below:

- Create multi-media digital storytelling content. Translate the producer's sustainability information to compelling stories that can be featured on the retailers' website and shared through informational campaigns. Include articles and documentaries that show the attributes and benefits of sustainable production practices, as well as products that showcase the impact of local partners and suppliers' sustainability initiatives on communities and environments, such as the successful campaign for Ocean Spray cranberry juice. Craft complementary social media content to be featured on various platforms (Instagram, X, Facebook, LinkedIn, etc.).

- Interweave storytelling narratives with innovative purchase incentives. While sustainable products are typically perceived as costly, cost-saving measures such as product markdowns and price discounts can make them more appealing to consumers.^{16,17} Gamification strategies can amplify consumer sustainability awareness. For example, offering green points as rewards for sustainable product purchases, loyalty points for net-zero products, or showcasing GHG emissions data on receipts can encourage more environmentally conscious buying decisions.^{18,19}
- Empower consumer interaction with engaging content. Initiatives should support engagement between the consumer and the message; targeted communication and personalized digital-direct mail or flyers based on previous purchases help achieve this. For in-person campaigns, include the producer story through a QR code on the product packaging and on a banner/sign beside the item in-store. Retailers can provide enriched product information on the website or social media, as in the case of Alara, who offers a blog where consumers can directly engage with articles and join a club on sustainability, thus creating a two-way dialogue that enhances understanding and trust.

By intertwining information, engagement, and incentives with every consumer interaction, retailers can not only boost visibility but also improve the transparency of supply-chain practices to solidify consumer loyalty, repeat business and augmented profits. Consumers become active participants who engage with, understand and become an intrinsic part of the retailer's sustainability initiatives. Together, they pave the way towards a more sustainable future.

Some grocery retailers have begun to integrate storytelling within their marketing and communications plan. Wegmans Food Markets serves as an example of successful sustainability communication. They enhanced their brand image and gained a competitive edge in the marketplace by effectively sharing their sustainability efforts, improving customer relations in the process.^{20,21} Similarly, Sobey's introduced the OurPart program, serving as a customer-facing sustainability storytelling platform. This platform was designed to expand customer education on sustainability initiatives.²²

Additionally, some food brands share their sustainability goals and production practices through impactful online content. Redpath and Ethical Bean Coffee have strong websites and social media platforms that express their community ties and commitment to ethical and sustainable production practices.^{23,24,25} Grocery retailers can link and leverage these stories to capture existing and new sustainability efforts.

Effective sustainability storytelling: Insights from social listening

Social listening involves the systematic monitoring and analysis of online discussions in order to gain insight into consumer perspectives. This approach provides food retailers with a valuable advantage, as it helps them stay well-informed, discover effective strategies that resonate with Canadian consumers, strengthen brands committed to net-zero foods and uncover hidden growth opportunities. Social listening has unveiled key insights that align with the storytelling recommendations for food retailers seeking to strengthen consumer engagement and communicate their commitment to sustainability effectively. By actively monitoring real-time conversations, it becomes evident that certain terms and narratives strongly influence consumer behaviour and perceptions.



The term “climate change” is a significant focal point in sustainability discussions. This term carries considerable weight and should be seamlessly integrated into retailers’ communication materials. Its prominence signifies that consumers are deeply concerned about the environmental impact of their choices and expect retailers to address climate change in their sustainability narratives.

Secondly, cost-saving measures and incentives to promote sustainable products are very important. Consumers often perceive eco-friendly items as more expensive, but incentives can encourage eco-conscious purchasing behaviour and motivate consumers to prioritize sustainability.

II. Sustainability in the Retail Landscape

Competitor Analysis – Differentiating through GHG Scope 3 Targets and Customer Education Initiatives

A competitor analysis of the Canadian and global retail markets identified areas of opportunity within the Canadian market. This analysis offers

valuable insights into both the strengths and areas for improvement within the industry, as well as the positioning of Canadian food retailers on the global stage. It was structured around seven key criteria, each selected for its significance in measuring the ESG performance of the industry. The table below presents the Canadian food retailers (for a comparison between Canadian and global food retailers see Appendix C).

Comparison of Canadian Food Retailer Sustainability Initiatives

Metric	Loblaw	Metro	Empire (Sobeys)
CDP Climate Change Assessment Grade	C	C	Not submitted
Task Force on Climate-Related Financial Disclosures	Aligned	Aligned	Aligned
Net-Zero Targets	- Reduce GHG emissions by 50% by 2030 compared to 2020	- Reduce GHG emissions by 37.5% by 2035 compared to 2020	- Reduce Scope 1 and 2 GHG emissions by 55% from 2019 levels by 2030 - Aid a 64% reduction in suppliers' indirect (Scope 3) emissions by 2027
Plastics and Packaging	- Eliminated plastic bags in 2023 - Targeting sustainable packaging by 2025	- Enforced biennial packaging training for brand suppliers - Removed single-use plastic bags	- Eliminated single-use plastic bags - Aims to reduce own brand plastic waste
Food Waste	- Achieved 50% corporate food waste reduction in 2020 - Aims for zero food waste to landfill across all operations by 2030	- Achieve at least 50% zero waste	- Achieve 50% reduction in food waste sent to landfill by 2025
Responsible Sourcing (local sourcing)	- Expanded eco-friendly PC® Organics and CRSB-certified beef purchases - Ensures sustainable seafood sourcing - Pledges \$150M more in Canadian produce by 2025	- Implemented responsible procurement Supplier Code - Purchased 1.65 million pounds of CRSB-certified beef and sourced 58% GSSI-certified seafood in 2022	- In 2022, 96% sustainable Own Brands seafood - Implemented new sourcing policy - \$1M yearly investment in local firms - Prioritizing 2024 supply chain sustainability
Customer Experience/ Customer Engagement	- Utilizes consumer surveys, receipt-to-online surveys and social media monitoring for customer feedback and engagement	- Gathers input through surveys, customer service feedback and social media - Encourages healthier choices with the 'My Health, My Choice' tool	- Introducing Scene+ Loyalty in 2023 - Expanding sustainability education with OurPart - Gathering feedback through focus groups, surveys, social media and in-store interactions

The CDP Climate Change Assessment,²⁶ recognized as the gold standard in environmental reporting due to its robust and comprehensive dataset covering corporate and municipal actions, found that internationally, Tesco and Carrefour (representing the European market) achieved higher scores than Canadian retailers due to a stronger emphasis on climate change initiatives. This underscores an opportunity for Canadian food retailers to raise their scores by enhancing their ESG initiatives and aligning more closely with industry best practices.



Major Canadian food retailers are aligning their reporting with the Task Force on Climate-Related Financial Disclosures (TCFD)²⁷ which reflects a strong dedication to ESG principles. A key focus within TCFD metrics is the reduction of Greenhouse Gas (GHG) emissions to achieve net-zero status. Each food retailer has set distinct targets for reducing GHG emissions across Scopes 1, 2 and 3, employing varying baseline years and percentage reduction goals. According to Deloitte's Sustainability Action Report, the consumer products industry leads in readiness to disclose Scope 1 GHG emissions but ranks second to last in readiness to disclose Scope 3 GHG emissions.²⁸ As such, defining clearer GHG Scope 3 targets and fostering greater transparency about the strategies and technologies that will be used to achieve these targets will be necessary for our major food retailers.

All food retailers are actively addressing other crucial environmental aspects such as reducing plastic usage, promoting sustainable packaging solutions and minimizing food waste. There is potential for even greater impact by expanding these initiatives to encompass a wider range of products and packaging materials and exploring new opportunities to reduce waste.

Food retailers are placing a strong emphasis on responsible sourcing, which encompasses sustainability, ethical practices and support for local suppliers. Tesco and Carrefour's investments in local suppliers is very clear in their reporting and commitment to achieving net-zero; they have said "Our business can only be sustainable if our suppliers are." Among Canada's food retailers, Sobeys is setting a noteworthy benchmark by aspiring to become a leader in supporting and investing in local suppliers and producers. They have been actively fostering the growth of their suppliers by collaborating with programs such as the Venture Park Food Accelerator, iLaunch Her and the IGA Local Accelerator program. An outstanding example of this commitment is IGA's annual \$1 million investment in ten local companies, aimed at assisting these companies in bringing their products and services to market.

Final Thoughts

Consumers are pivotal players in the paradigm shift towards a more sustainable food system, but their willingness to engage depends on a clear understanding of the intricate concepts surrounding sustainability. Food retailers can take advantage of third-party partnerships for standardized measurement metric, labelling, and storytelling to encourage consumer awareness of climate-responsible products. By empowering consumers with knowledge and fostering informed choices, food retailers are in a unique position to co-create a sustainable future.



Appendix 1 – Literature Evidence of Best Practices for Communicating Products with Sustainability Claims

1. Labelling

The application of eco-labels can guide consumer choices towards sustainability.²⁹ Specifically, a blend of text and visual labels like the Traffic Light System can elevate awareness and drive eco-friendly decisions.³⁰ Considering that front-package labels are often underused, straightforward eco-ranking systems, like colour-coded methods, can simplify decision-making especially for low-engagement products like food.³¹ Incorporating technologies like QR codes, although usage can be contingent on factors like accessibility, is also a valuable approach to augment eco-labelling practices.^{32,33} Lastly, the introduction of simple labelling nudges can foster enhanced transparency and potentially elevate demand for sustainably produced food items.³⁴ Ultimately, effective eco-labelling is influenced by various factors such as clarity, simplicity and consumer characteristics, but approaches like colour-coding, technological integration and consumer education on labels can enhance their impact.

2. In-store and E-commerce Communication

In-store: Retailers can use various in-store strategies to amplify sustainability claims and refine packaging and label design. Although sustainable products often demand premium pricing, embedding cost-saving opportunities, like product markdowns and price discounts, can incentivize sustainability-focused purchases.^{35,36} Moreover, employing gamification like green points rewards for buying sustainable products or incorporating GHG emissions data on

receipts could improve consumer sustainability awareness and purchases.^{37,38} Other market strategies such as information campaigns and farmer stories build product knowledge, thereby increasing consumers' purchasing power and willingness to try new products.^{39,40} Consider the example of Canadian Tire and its Blue Planet line: by emphasizing sustainability through communication at the point of purchase, the company not only reinforced trust in its sustainability efforts but also reportedly experienced a growth in sales.⁴¹

E-commerce: For e-commerce, ensuring web-friendly sustainability marketing is crucial. Investing in a user-friendly online supermarket platform and aligning with public-facing sustainability reports or papers can enhance sustainability communication.⁴² Utilizing social media platforms to not only share in-house content but also reshare information validating retailer claims and aligning with societal or political movements is vital.⁴³ Tactics on retailer websites can include strategic presentation of product options, and implementation of digital nudging strategies such as the decoy effect, a strategy that occurs when the preference for one of the two options changes when another option is added that is less attractive, thus serving as the decoy.⁴⁴ Additionally, leveraging targeted messaging through diverse platforms, including email marketing, can influence consumer behaviour.⁴⁵

Both physical and digital store platforms should aspire to create consumer experiences that are enlightening, empowering and rewarding, with interactive feedback mechanisms to further personalize future consumer experiences.^{46,47}

Appendix 2 – Social Listening

1. The Art of Social Listening

In the dynamic landscape of the retail industry, attentive listening can help to capture the vibrant perspectives of consumers. Social listening is the systematic monitoring and analysis of online conversations to gain insight into consumer minds. A social listening analysis showed that Canadian consumers frequently employ the term “climate change” to describe a broad spectrum of concepts tied to sustainability, but consumers are divided between those who passionately champion climate and sustainability initiatives and those who remain either indifferent or uninformed. This trend can be attributed, in part, to the prevalence of Gen Z, a demographic born between late 1990s and early 2000s and their influence on consumer dynamics.

2. Social Listening as a Valuable Tool for Informed Consumer Engagement

Social listening provides food retailers with a versatile edge: it keeps them informed, uncovers strategies that resonate with Canadian consumers, strengthens brands focused on net-zero foods and unveils concealed growth opportunities. Although current data collection was only a snapshot in time, it aligns with other findings and highlights the tool’s future potential for food retailers.

Retailers must understand consumer viewpoints to connect with them. Social listening is a potent and cost-efficient approach to gain insight into consumers’ unbiased opinions. Researchers examined several questions:

- a. What are the common terminologies used by Canadians to discuss net-zero and sustainability concepts?
- b. What are the prevailing views and attitudes of Canadians towards net-zero initiatives?
- c. Based on consumers’ current knowledge and attitudes, what communication approach would be most effective in promoting net-zero goals in the future?

3. Results

Social listening was conducted on YouTube, Twitter and Reddit. Three distinct approaches were used to conduct the social listening analysis:

- Generating a word cloud from comments to identify the most commonly used words or phrases when discussing net-zero concepts.
- Performing sentiment analysis, a way to determine the polarity of posts in the dataset (neutral, negative or positive).
- Qualitative content analysis, carefully reading and interpreting comments in the datasets to gain deeper insights into the underlying meanings, sentiments and perceptions of consumers regarding net-zero concepts.

a. Word Clouds and Sentiment Analyses

Reddit generated word cloud: On Reddit, the term “climate” appears most frequently as a single word, while the phrase “climate change” is also commonly used in discussions.



Reddit sentiment analysis: Communalytic’s Sentiment Analysis module assesses the emotional tone of the dataset comprising different language texts, using well-known libraries like VADER and TextBlob. It assigns posts to categories of neutral, negative or positive sentiment based on polarity scores:

- Scores near 0 (usually between -0.05 and 0.05) indicate neutrality.
- Scores below -0.05 are classified as negative.
- Scores at or above 0.05 signify positivity.

Within the dataset, the primary focus is solely on texts in the English language.

Results

Based on the analysis of 4527 out of 4716 posts, the results are as follows:

	# of Posts	Negative Sentiment (-1..-0.05)	Neutral Sentiment (-0.05..0.05)	Positive Sentiment (0.05..1)
VADAR (English/EN)	4,497	1,781 (39.60%)	955 (21.24%)	1,761 (39.16%)
TextBlob (English/EN)	4,497	922 (20.50%)	1,673 (37.20%)	1,902 (42.29%)
TextBlob (French/FR)	18	0 (0.00%)	16 (88.89%)	2 (11.11%)
TextBlob (German/DE)	12	0 (0.00%)	12 (100.00%)	0 (0.00%)

The data from Reddit indicates a nearly equal number of positive and negative sentiments about climate change, but in total, the positive sentiments are more prevalent, suggesting a larger number of advocates for climate or net-zero initiatives within the dataset.³

YouTube sentiment analysis: Similar to the sentiment analysis on Reddit, the sentiment analysis of the YouTube data also reveals an almost equal distribution of sentiments with a predominant number of advocates.

Results

Based on the analysis of 200 out of 216 posts, the results are as follows:

	# of Posts	Negative Sentiment (-1..-0.05)	Neutral Sentiment (-0.05..0.05)	Positive Sentiment (0.05..1)
VADAR (English/EN)	195	70 (35.90%)	41 (21.03%)	84 (43.08%)
TextBlob (English/EN)	195	40 (20.51%)	79 (40.51%)	76 (38.97%)
TextBlob (French/FR)	2	0 (0%)	2 (100%)	0 (0%)
TextBlob (German/DE)	3	0 (0%)	3 (100%)	0 (0%)

Twitter generated word cloud: On Twitter, the most frequently used word is “climate.” The word cloud also reflects comments about what people need to embrace net-zero, resulting in words such as “need,” “make,” “get,” “can,” “please,” etc.



b. Content Analysis

During the process of social listening, it became apparent that consumers frequently use the term “climate” to share their ideas and sentiments around net-zero. Other organizations also use climate change concepts to share net-zero terminology with consumers, such as Catapult Energy Systems in the UK, as well as Deloitte – whose research on Canadian consumers identifies a segment described as “climate-active”.^{48,49} This emphasizes the significance of emission reduction in the battle against climate change. Consequently, the inclusion of the term “climate” in communication materials by food retailers is highly recommended to resonate with consumers’ language and ensure effective engagement.

Key Findings	Suggestions for Communication Strategies with Consumers
Consumers commonly employ the term “climate” to describe and express their thoughts and reactions when discussing and responding to net-zero and related terms.	Incorporate the term “climate” in communication materials to align with consumers’ language and ensure effective engagement.
There exists a balanced mixture of positive and negative sentiments regarding net-zero commitments and initiatives.	Craft communication messages that acknowledge the mixed sentiments surrounding net-zero commitments.
Establish strong systems before committing to net-zero initiatives.	Emphasize retailer’s commitment to establishing robust systems and present a comprehensive plan of action to address consumer concerns about the need for strong foundations and a clear roadmap towards net-zero goals.
A detailed plan of action regarding net-zero commitments.	Highlight retailer’s immediate and impactful actions towards sustainability, showcasing initiatives that go beyond long-term targets to demonstrate the company’s commitment to making a difference in the present.
Living sustainably on a cheap budget.	Provide information and resources on living sustainably on a budget, showcasing accessible options and affordable choices for consumers to support climate-responsible food products.
Leadership by example.	Showcase retailer’s leadership in adopting sustainable practices within its own operations, highlighting the company’s efforts to reduce its environmental footprint and set an example for others.

Appendix 3 – Competitor Analysis Complete Table

Metric	Loblaw ⁵⁰	Metro ⁵¹	Empire (Sobeys) ⁵²	Tesco ⁵³
CDP Climate Change Assessment	C	C	Not submitted	A-
Task Force on Climate-Related Financial Disclosures	Aligned	Aligned	Aligned	Aligned
Net-Zero Targets	Reduce GHG emissions by 50% by 2030 compared to 2020.	Reduce GHG emissions by 37.5% by 2035 compared to 2020.	Reduce Scope 1 and 2 GHG emissions by 55% from 2019 levels by 2030 and aid a 64% reduction in suppliers' indirect (Scope 3) emissions by 2027.	Reduce GHG emissions 60% by 2030 from 2015/16 levels and over 50% of suppliers commit to net-zero.
Plastics and Packaging	Eliminated plastic bags in 2023, targeting sustainable packaging by 2025.	Enforced biennial packaging training for brand suppliers and removed single-use plastic bags.	Eliminated single-use plastic bags and aims to reduce own brand plastic waste.	Banned plastic wipes, removed 2B plastic pieces and tea bags to be compostable by 2023.
Food Waste	Achieved 50% corporate food waste reduction in 2020 and aims for zero food waste to landfill across all operations by 2030.	Achieve at least 50% zero waste.	Achieve 50% reduction in food waste sent to landfill by 2025.	Initiated 'The Give Back Express', supplied 2.4 million meals in 2022 and cut food waste by 55% from 2016/17 levels.
Responsible Sourcing (local sourcing)	Expanded eco-friendly PC [®] Organics and CRSB-certified beef purchases, ensures sustainable seafood sourcing and pledges \$150M more in Canadian produce by 2025.	Implemented responsible procurement Supplier Code, purchased 1.65 million pounds of CRSB-certified beef and sourced 58% GSSI-certified seafood in 2022.	In 2022, 96% sustainable Own Brands seafood, new sourcing policy, \$1M yearly investment in local firms, prioritizing 2024 supply chain sustainability.	Tesco explores eco-friendly fertilizers, pilots low-carbon options, has 79.4% of suppliers embracing sustainability and targets global LEAF certification for fresh produce by 2025.
Customer Experience/ Customer Engagement	Utilizes consumer surveys, receipt-to-online surveys and social media monitoring for customer feedback and engagement.	Gathers input through surveys, customer service feedback and social media; encourages healthier choices with the 'My Health, My Choice' tool.	Introducing Scene+ Loyalty in 2023, expanding sustainability education with OurPart and gathering feedback through focus groups, surveys, social media and in-store interactions.	Nearly 40% of Tesco's emissions are customer-related; launched Better Baskets campaign in 2022, backed by independent research, customer surveys and focus groups.

Appendix 3 – Competitor Analysis Complete Table

Metric	Whole Foods ⁵⁴	Walmart ⁵⁵	Carrefour ⁵⁶	Kroger ⁵⁷
CDP Climate Change Assessment	Not scored	C	A-(Carrefour Turkey)	B-
Task Force on Climate-Related Financial Disclosures	Not Aligned	Aligned	Aligned	Aligned
Net-Zero Targets	Reduce GHG emissions by 100% by 2040.	Lower global Scopes 1 and 2 GHG emissions 35% by 2025 and 65% by 2030 vs. 2015 and assist in cutting 30% of indirect (Scope 3) emissions by 2030 vs. 2019.	Cut GHG emissions 50% by 2030 and assist a 29% reduction in indirect (Scope 3) emissions, both compared to 2019.	Cut GHG emissions 50% by 2030 from 2018 levels, considering new Scope 3 and FLAG goals.
Plastics and Packaging	Committed to reducing single-use plastics in our stores.	Achieved 63% sustainable packaging and removed free plastic bags globally by 2022.	Saved 11k tonnes of packaging since 2017, targeting 20k-tonne reduction by 2025.	Aiming for 100% sustainable packaging and enabling various recycling options.
Food Waste	Aiming for a 50% food waste reduction by 2030 and kept over 72% of waste out of landfills in 2022.	Since 2016, cut food waste 12%, diverted 900M pounds and donated 760M pounds globally.	Aiming for a 50% food waste reduction by 2025 and 55% by 2027 compared to 2016.	Aiming to divert 95% of retail food waste from landfills by 2025 and has food waste recycling programs in 92% of stores.
Responsible Sourcing (local sourcing)	In 2022, approved 270 products with regenerative claims and emphasized ingredient quality through the 'Sourced for Good' program.	Aiming for 20 sustainable commodities by 2025, encouraging supplier sustainability and enhancing sector-wide practices through collaboration.	In 2020, updated purchasing for marine and forest protection, eco-packaging and agroecology, targeting 15% of fresh food sales from sustainable agriculture by 2025.	Pursuing ESG-aware sourcing, aligning 95% wild-caught, 99% farm-raised seafood with policy, striving for deforestation-free beef while enhancing produce sustainability.
Customer Experience/ Customer Engagement	Introduced Sourced for Good label for environmentally and ethically aligned purchases and enacted a Regenerative Agriculture Labelling Policy.	Launched 'Built for Better' online shop for eco-friendly products with labels and relaunched Member's Mark brand as 'Made with Our Member and Planet in Mind'.	Set up in-store customer engagement channels, promotes sustainable consumption and employs analysis and dialogue tools to identify key issues and shape policies and plans.	Promotes customer engagement through advertising, adds 'Please Recycle' or How2Recycle logo to multiple Our Brands products.

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