Environmental performance of LEAF certified foodservice operations

Executive summary

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Acknowledgements

Summary

The Canadian food service industry continues to face particularly hard challenges throughout the Covid-19 pandemic. Once the major challenges of the pandemic are overcome, all industries and society will face the biggest challenge of the century, move towards environmentally sustainable operations. For more than 10 years, LEAF has been at the forefront guiding the Canadian food sector towards improved environmental performance and certified those who have achieved set levels of sustainability. Customer demand and tighter environmental regulation into the future will only make this transition towards sustainability more imperative. The main purpose of this report is to assess the effectiveness of the certification and auditing process by comparing the environmental performance of LEAF certified operations vs. conventional food service operators. A quantitative analysis of the evidence reveals that LEAF certified operations consistently outperforms conventional food service operators in the large majority of metrics assessed. A further quantitative analysis of LEAF certified venues across time showed that LEAF certified venues have consistently improved their environmentally sustainable operations to different degrees. These results set a solid evidence base for the benefits that the LEAF certification process has brought to Canadian foodservice operators.

A detailed review of LEAF's audit process, backed by some of the quantitative findings, highlighted the sections where improvements to pursue a higher standard of sustainability or to building a more robust data collection process should be prioritized. A scan of other sustainability certifications as well as the literature on perceptions of sustainability in the food service industry shows that the LEAF certification process and audit are very comprehensive and manage to balance out the various dimensions of environmental sustainability. This is by no means an easy undertaking, and future projects that look to enhance the auditing process need to balance out the pursuit of high environmental sustainability standards with feasibility of assessment, cost of implementation vs. adoption, market competition, and advancements in food service regulatory frameworks.

Introduction

For more than 10 years LEAF has been at the forefront guiding the Canadian food sector towards improved environmental performance and certified those who have achieved set levels of sustainability. Customer demand and tighter environmental regulation into the future will only make this transition towards sustainability more imperative. The main purpose of this report is to assess the effectiveness of the certification and auditing process by comparing the environmental performance of LEAF certified operations vs. conventional food service operators. In subsequent sections a detailed analysis within LEAF certified operations and suggestions to improve the auditing process to reflect a high standard of sustainability and implementability are explored.

Context

LEAF carries out detailed environmental sustainability audits of Canadian food service providers. The latest version of the Audit (4.2) has 301 questionnaire indicators organized in ten overarching sustainability categories:

1. Food purchasing & menu items
2. Supplies
3. Energy
4. Water
5. Building and location

6. Furnishing and decoration
7. Chemicals
8. Waste and recycling
9. Employees (training and uniforms)
10. Policies and innovation

There are LEAF certified venues in five provinces, Alberta currently has the most certified venues with 20, followed by Ontario and Quebec. Manitoba and British Columbia are the other two provinces with certified venues. Despite having a smaller population and fewer restaurants than Ontario or Quebec, Alberta's high number of certified venues is a consequence of LEAF's origins in that province. The first audit was carried out in 2010 and the latest in 2020 (not all information from 2020 is included). 2016 was the single year when most restaurants were initially certified. The first few years saw a decline after the first adopters from 2011, there is no significant trend in the number of certified venues by year, hinting at the possibility that constant or exponential growth characteristic of initial phases of adoption hasn't started – and will probably be delayed by the Covid-19 pandemic. There is no indication of a declining trend either, which is expected because the market for environmental certification in Canada is still nascent. Furthermore,

economic downturns affect the number of new certifications which were present in Alberta in particular in 2013 and 2015.
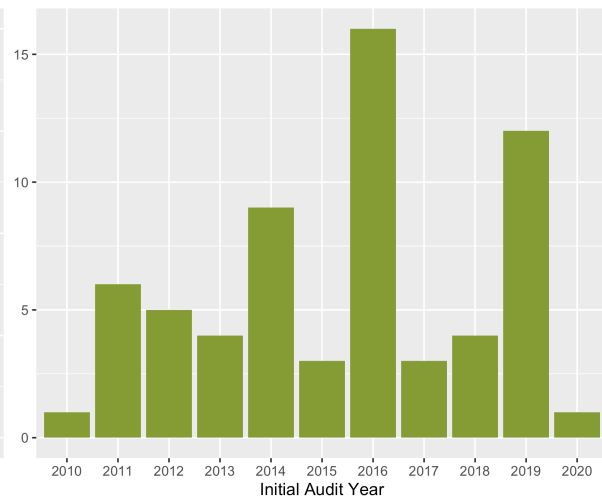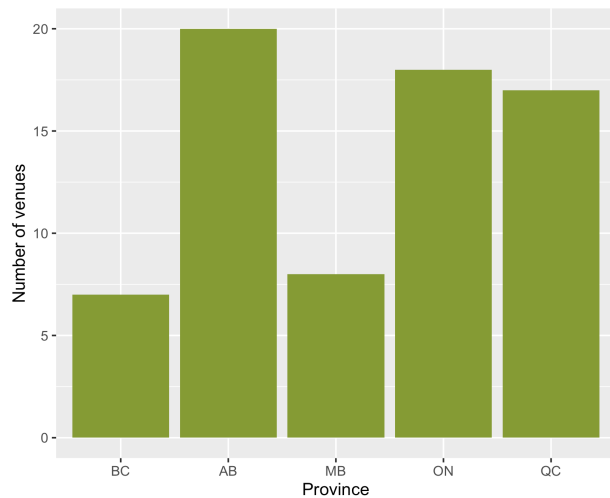

Figure 1: Number of LEAF certified venues by Province

Figure 2: Number of new LEAF certifications by year

Benchmarking

To compare the environmental sustainability performance of LEAF certified venues against conventional venues we used 1) the 2018 State of Restaurant Sustainability by the National Restaurant Association (USA) that surveyed 500 restaurants in the USA, 2) the 2017 Food and Menu Trends Survey by the National Restaurant Association with a sample of 309 restaurants, and 3) a 2019 Restaurants Canada Food Service Facts report to compare to the domestic industry. In all sources for comparison the questionnaire items tend to ask for a low level of specificity, e.g. "Does the restaurant have water saving faucet aerators?". The LEAF audit process is more specific in differentiation between different types of aerators –some more efficient than others, as well as inquiring about the percentage of aerators in the facility that are water saving. To make the two sets of data comparable, the LEAF data was summarized to match the benchmark specificity, e.g. if a venue had any form of water saving faucet aerators it was deemed equivalent to having answered yes to the question by the NRA survey.
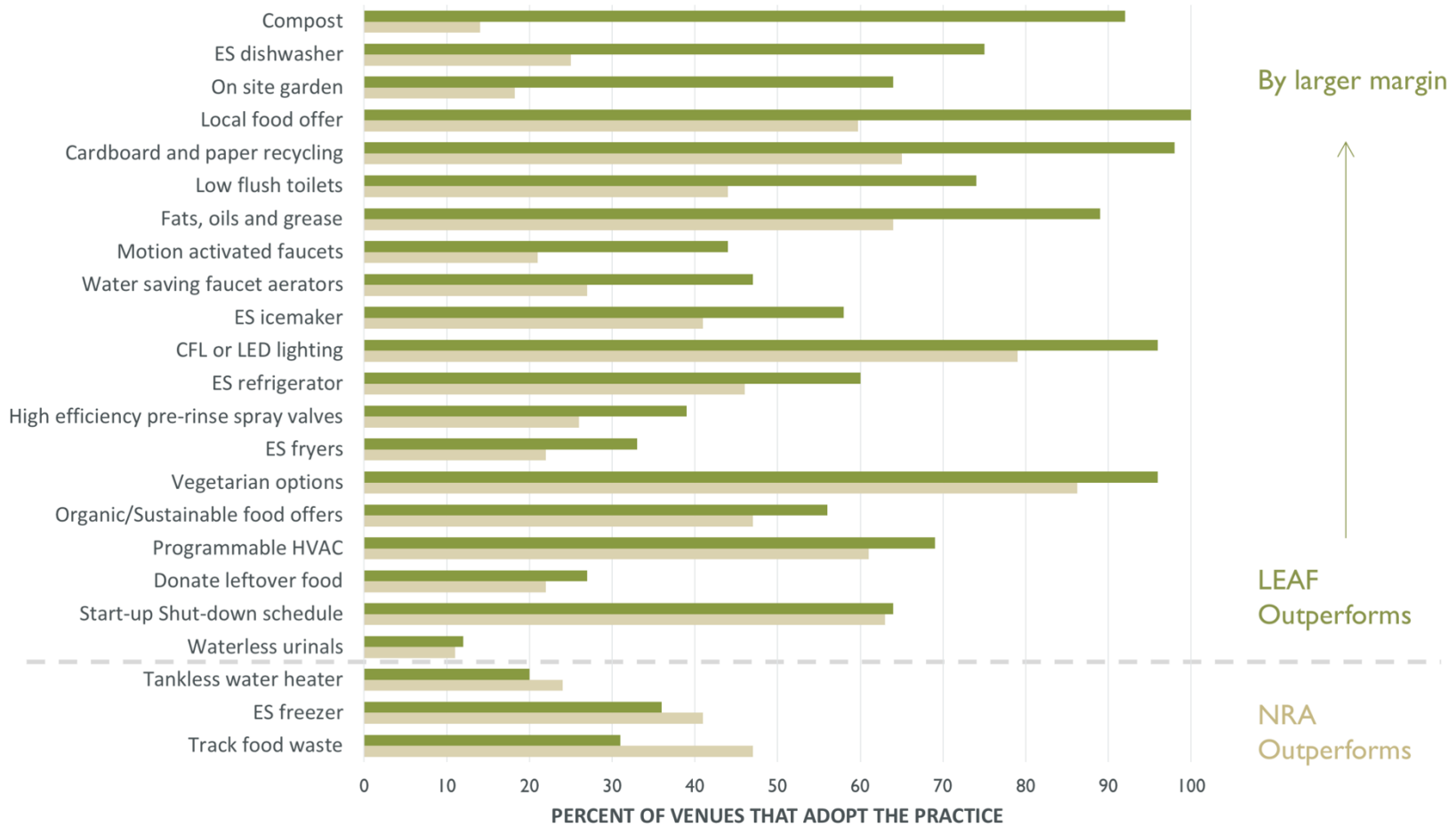
Figure 3: Comparison of LEAF certified to non-certified venues in the US

The reference for comparison is with a sample of 500 venues surveyed by the US National Restaurant association in 2018

LEAF Certified facilities outperforms the US food service industry in 15 dimensions, whereas there is opportunity to encourage further adoption of sustainable practices in 3 dimensions: carrying out waste audits, switching to the use of Energy Star freezers, and use tankless water heaters.

The data for conventional Canadian food service venues is sparse and aggregated to a much higher level. LEAF certified venues still outperform Canadian conventional food service operators in 4 out of 4 indicators, with the last indicator being more indirectly assessed due to LEAF's audits not including such a question. However, the outcome of that comparison based on LEAF's model of certification is that all venues are indeed committed to improve the environmental sustainability of their operations, venues must be visited at least every three years, a stage when any new criteria are evaluated and venues need to meet those new criteria to stay certified.
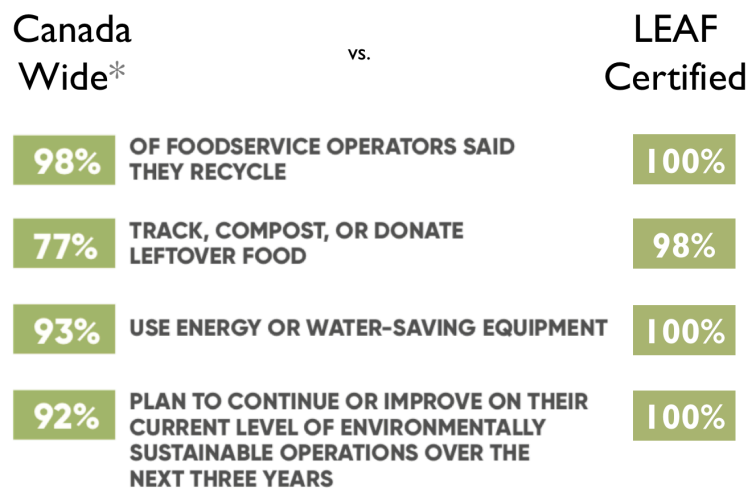

Figure 4: Comparison of LEAF certified to non-certified venues in Canada.

The comparison data is sourced from a Food Service Facts 2019 report by Restaurant Canada

Recommendations

Possible Audit Improvements

A template that automatically checks for errors such as exceeding maximum points in a category, subcategory or indicator, automatic assignment of cases that don't apply, or requiring some lines to be filled with points or NA would make future iteration of the analysis simpler and more robust. It might also simplify the process for data collection during audits. Options include REDCap, Qualtrics, and even an excel spreadsheet with conditional formatting to highlight possible mistakes or check cells. Due to time limitations this project could not include a thorough check of these problems with the data and implementing those checks on past data was not possible. This iteration of the analysis could not include certain desired performance metrics that could have been possible with adequate input of NA's. One such performance metric was the average percent of adoption of practices grouped by subcategory. To do this we first could average percentage adoption within the venue by subcategory. For example, obtaining 100% in local food sourced under 200km and having a zero instead of NA in local under 500km would bring to 50% subcategory performance, but the venue actually had the best possible score in the more important of the two categories. One of the supplementary deliverables to the report is an Audit template that showcases a theoretical venue that got the maximum points possible across all categories, checking for consistency and with a column dedicated to show exclusively the rules regarding when a particular indicator can or should be NA.

Strategic suggestions

The process of auditing and creating a comparable metric across restaurant venues is a daunting task. LEAF has managed to conduct the audits consistently for more than a decade showing their success at the task. The methodology certainly captures a very comprehensive set of sustainability domains. However, there might still be room for improvement, especially when the goal into the future might be to become a standard backed up or required by any level of governmental regulation. Some of those opportunities and nuances are explored in this section.

While conducting this comparison exercise, I found that comparing between certified venues within LEAF using a points based system poses some problems. The first one is the lack of control for size of the operation. Even though some operations might be quite sustainable, they might not get enough points because the operation is rather small. A larger facility will tend to have more equipment for preparation, triggering more points assigned in the certified equipment subcategory which gives a very high proportion of the total points (the most of any subcategory in the full audit). The asymmetry is further exacerbated by the fact that a larger restaurant will

tend to have a higher economy of scale and thus investing in certified equipment might be more appealing from the beginning since the extra initial cost will be recouped sooner. A similar consideration goes for supplies, a larger venue or a chain of venues, can bargain better prices for the same usually costlier env. certified supplies. Creating a separate template for smaller vs larger venues is definitely not recommended. And having extra equipment does pose an extra investment all together as might having to store more supplies because of larger uncertainty in demand in larger venues. These aspects might balance off financially. The best way to assess this would be normalized points results by the profitability or revenue of the venue. This is sensitive information for restaurants and is unlikely to be shared. However, the auditing process already requires receipts for water and energy bills as well as food purchases to establish the proportion of local or certified sustainable foods and beverages. These values can already help establish the size of the operation, and more interestingly allow for the calculation of valuable sustainability performance indicators that address my second nuance:

Water efficiency = Monthly Calories of Food / Monthly Water Use

Energy efficiency = Monthly Calories of Food / Monthly Electricity Use

GHG emissions efficiency = Monthly Calories of Food / (Monthly Electricity Use * GHG emission factor from electricity source)

The food nominator in the previous equations could be exchanged between calories of food, total protein content of food, weight of food, or value ($) of food. They would address different aspects and are complementary.

This type of analysis requires quality data and some processing to convert from food weight or value to Calories or protein content. Furthermore, an equivalent set of data would need to be acquired for conventional food service venues to ensure that a comparison can be conducted. There is great value in such research and would most likely need to be backed up by a research institution and preferably an industry group such as Restaurants Canada, and a regulatory government body like Environment and Climate Change Canada, but equivalent institutions at the Provincial level would also be viable. This strong evidence would further clarify the question of whether environmental certifications such as LEAF's can improve the environmental sustainability of a food service operator, specifically in comparison to non certified venues of the food service industry.

References

The State of Restaurant Sustainability 2018, *National Restaurant Association*

2017 Food and Menu Trends Survey, *National Restaurant Association*

Food Service Facts 2019: Planet, People, Profit. *Restaurants Canada*