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Impact of Vermont's Single-Use Plastics Ban on Consumers and Food Businesses

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Impact of Vermont's Single-Use Plastics Ban on Consumers and Food Businesses

Introduction

In the United States, plastics comprise a major category of materials in municipal landfills and have contributed to environmental problems. In fact, plastics make up nearly one-fifth of products in municipal landfills in the United States and one-eighth of products in Vermont's one municipal landfill.^{1,2} To mitigate the harmful effects of single-use plastic products and lessen the burden of plastics on Vermont's landfill, in 2019, Vermont's State Government passed a single-use products law (Act 69 of 2019).³ The law, which went into effect on July 1, 2020, prohibits stores and food service establishments from providing single-use plastic carryout bags at the point of sale, expanded polystyrene (commonly called Styrofoam) food and beverage containers, plastic straws (except upon customer request), and plastic stirrers. Additionally, the law permits stores to provide single-use paper bags at the point of sale if the customer is charged at least 10 cents per bag.

To study the impact of the single-use products law, we conducted two statewide online surveys in 2021 and 2022: a general population survey (i.e., consumer survey) and a food business survey. The consumer survey asked about the plastic bag ban, was embedded within the 2022 Vermonter Poll – an annual statewide public opinion survey – and was completed by 783 Vermont residents. The sample represents the adult population of Vermont with respect to gender distribution and household size, but over-represents older adults and those with greater incomes and education. The food business survey was distributed across the state through the email lists of non-profit, business, and state agencies; public posts on Front Porch Forum; posters in public places; and newspaper advertisements. The food business survey addressed all aspects of the single-use products law and was completed by 95 food service and food retail professionals. This report summarizes the findings of both surveys relevant to Vermont's single-use products law.

Key Takeaways

1. Following implementation of the law, Vermonters reported using, on average, 91% fewer plastic bags (6 per week). This does not appear to have been offset by substantially greater use of single-use paper bags.
2. Most respondents to the consumer survey (66%) agreed that the environmental benefits of the plastic bag ban outweigh the economics costs.
3. Few consumers (18%) or food business professionals (18%) reported feeling confused about the requirements of the law.
4. Charging for paper bags was identified by food business owners and managers as the most challenging requirement to comply with.
5. Across food businesses, the law has a mostly neutral or positive effect on revenue and cleanliness.
6. Food service owners and managers report more negative impacts on operating costs, customer satisfaction, and employee satisfaction than food retailers.



Survey of Vermont Consumers

Opinions about the plastic bag ban

The plastic bag ban appears to be well-understood by Vermont's residents, with few (18%) reporting feeling confused about its requirements (Figure 1). Overall, the ban appeared to receive public support following implementation. About two-thirds of survey respondents (66%) strongly or somewhat agreed that the environmental benefits of the ban outweigh the economic costs and almost three-quarters (73%) reported that they feel morally obligated to reduce their use of plastic bags to protect the environment. A little less than a third of respondents (28%) felt that stores should be allowed to provide plastic bags for a charge, but a small portion (15%) felt that the law should go further and additionally ban paper shopping bags. More than half of respondents believed that the plastic bag ban has been strictly enforced (61%) or were unsure about the level of enforcement (21%).

Plastic and paper bag use before and after the ban

The most substantial component of the single-use products law was the ban on providing single-use plastic carryout bags. Following implementation of the

ban, survey respondents reported using fewer plastic bags but slightly increasing their use of paper bags from food stores and food service establishments despite the mandatory \$0.10 fee per paper bag (Figure 2). On average, consumers reported getting over six plastic bags per week prior to the ban, but less than one per week after, suggesting that the ban has resulted in reduced plastic bag use, but not eliminated it.

Number of plastic bags used per week



Number of paper bags used per week



Figure 2. Number of plastic and paper bags used from food stores and food services before and after implementation of the single-use products law

Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree

I am confused about the requirements of the plastic bag ban



The environmental benefits of the ban are greater than the economic costs



I feel morally obliged to reduce my use of plastic bags to protect the environment



Stores should be allowed to provide plastic carryout bags at checkout for a charge



Paper shopping bags should also be banned



The ban has been strictly enforced



Figure 1. Vermont consumers' opinions about the plastic bag ban (%)

Survey of Food Retail and Service Professionals

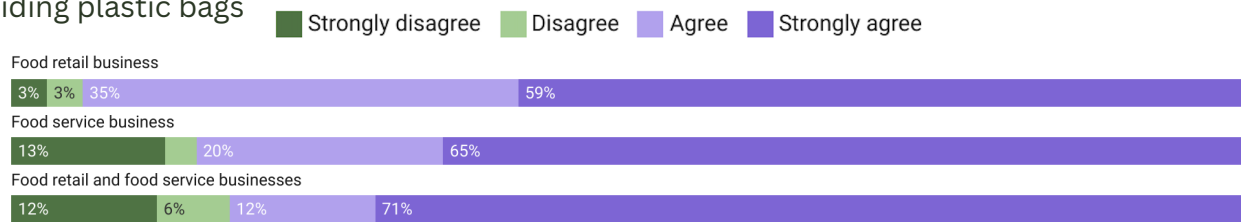
Respondents to the food business survey represented a variety of food establishments, including restaurants, fast food, catering, institutions, food trucks, grocery stores, cooperatives, convenience stores, mass merchandizers, and farmers' markets. Over half (53%) reported being business owners or managers while the remainder (47%) were employees. We divided respondents into three categories based on where they work: food retail (n=36), food service (n=42), and both

food retail and food service (n=17). Survey respondents were asked about all aspects of the Vermont's single-use products law.

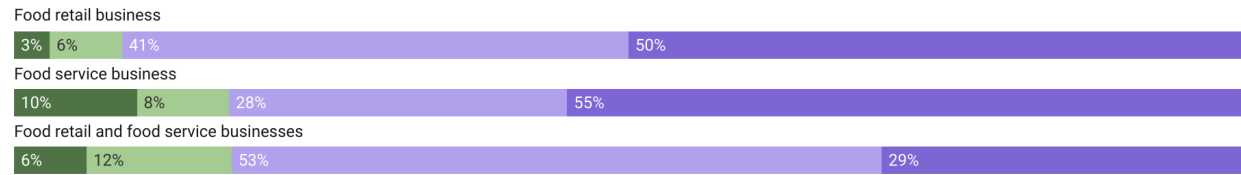
Support for the Single-Use Products Law

The data suggest high levels of support among food service professionals for all aspects of the law (Figure 3). Among food retail professionals, the highest level of support was for the ban on providing plastic bags (94%). Among food service

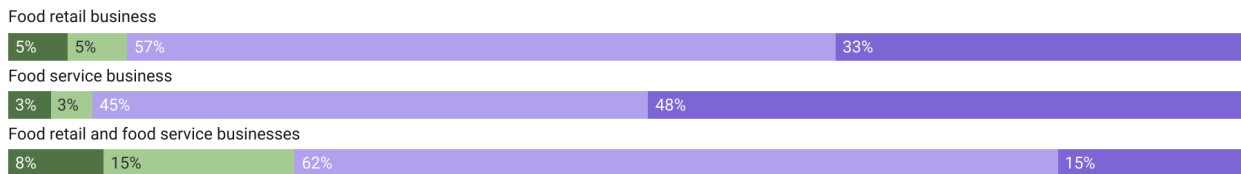
Ban on providing plastic bags



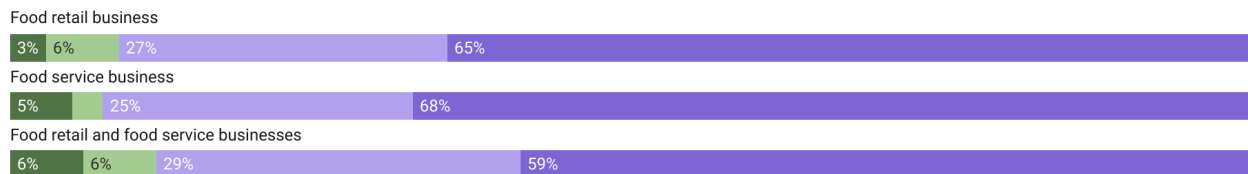
Ban on automatically providing plastic straws



Ban on providing plastic stirrers



Ban on expanded polystyrene containers



Charge for paper bags

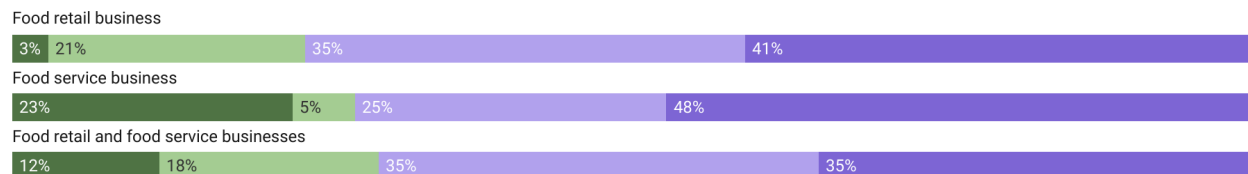


Figure 3. Vermont food business professionals who support each aspect of the single-use products law (%)

professionals, the highest level of support was tied between the bans on providing expanded polystyrene containers and plastic stirrers (both 93%). Those who worked in both industries were most likely to support the ban on expanded polystyrene containers (88%).

Impacts of the Law by Business Type

Aside from the plastic bag ban, respondents were asked to report whether their food business was impacted by other aspects of the law. Food retail professionals were most likely to report being impacted by the charge for paper bags and the ban on expanded polystyrene containers, while food service professionals and those who worked in both types of food businesses were most likely to report being impacted by the bans on expanded polystyrene containers and providing plastic stirrers (Figure 4).

Opinions about the Law

Most food business professionals did not feel confused about the requirements of the law (81%; Figure 5).

Paralleling what was documented among the general population, there appears to be high levels of support for the single-use products law among food retail and food service professionals. Although most (81%) reported that the law has economic costs, almost all agreed that it has benefits for the environment (93%) and society (85%). Less than one-third (27%) felt that their customers opposed the law.

Implementation of the Law and Possible Improvements

Food business professionals had differing beliefs about the implementation of Vermont's single-use products law (Figure 6). Approximately half (56%) felt that stores and food service establishments should have been given more time to implement the changes needed to comply. However, only about one-third (35%) felt that implementation should have been postponed during the COVID-19 pandemic.



Figure 4. Requirements of the law that affect each type of food business (aside from the plastic bag ban) (%)

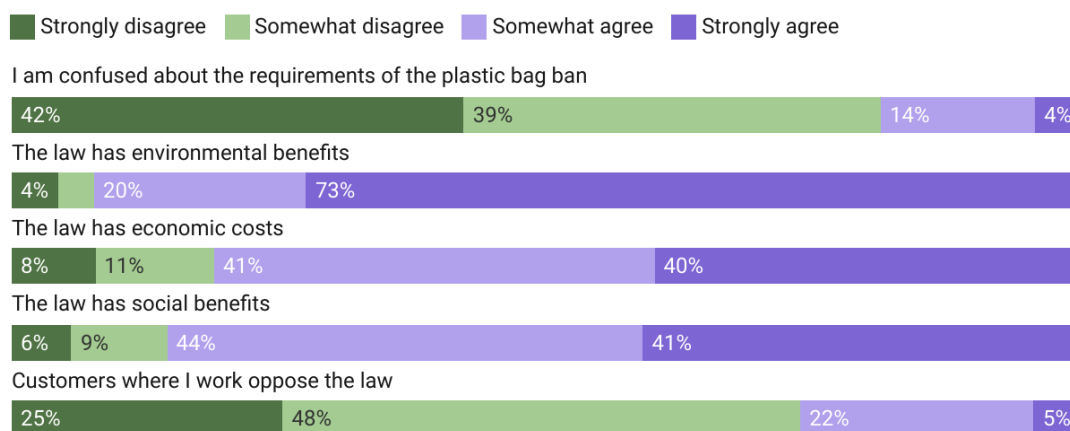
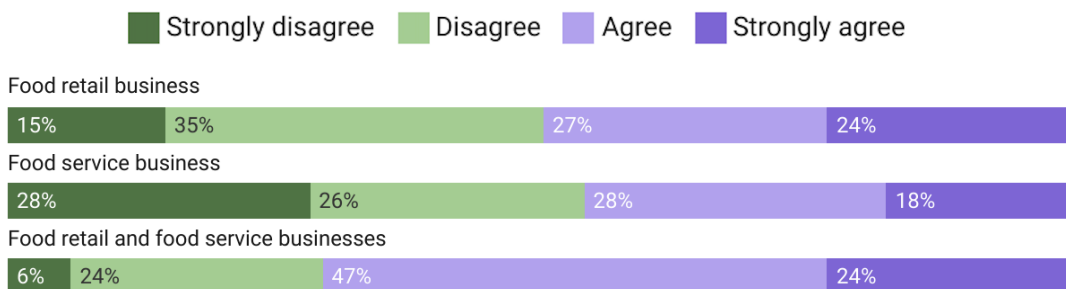


Figure 5. Vermont food business professionals' opinions about the single-use products law (%)

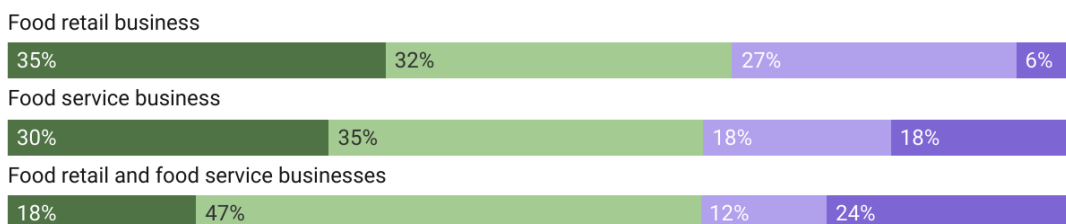
While plastic carryout bags cannot be provided at checkout, stores and food service establishments can provide plastic bags for containing loose objects within the store (e.g., produce, bulk items, meat, fish), containing prescription medications, and containing laundry items.

About two-thirds of food business professionals (70%) felt that the law should go further and additionally ban plastic bags for these uses. However, opinions were split about whether stores and food service establishments should be allowed to provide plastic bags at checkout for a charge, with slightly over half (57%) of respondents disagreeing.

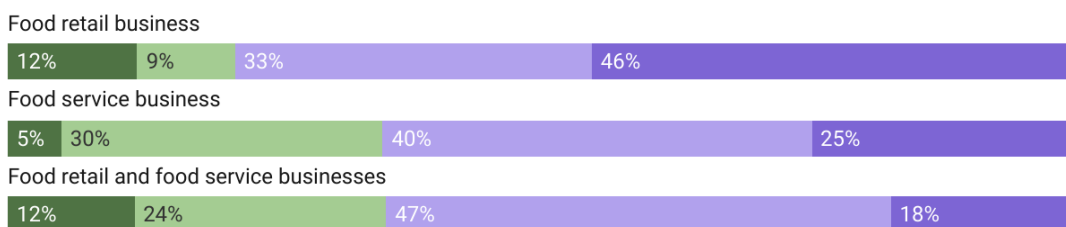
Businesses should have been given more time to implement changes needed to comply with the law



Implementation of the law should have been postponed during the COVID-19 pandemic



The law should also ban use of plastic bags for containing loose objects within the store



Stores and food service establishments should be allowed to provide plastic bags at check-out for a charge

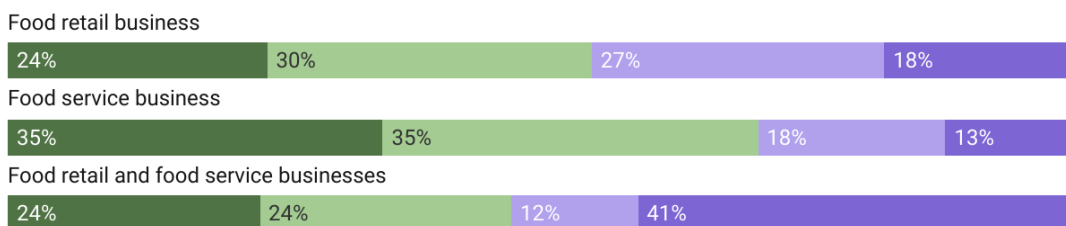


Figure 6. Vermont food business professionals' opinions about implementation of the single-use products law and possible improvements (%)

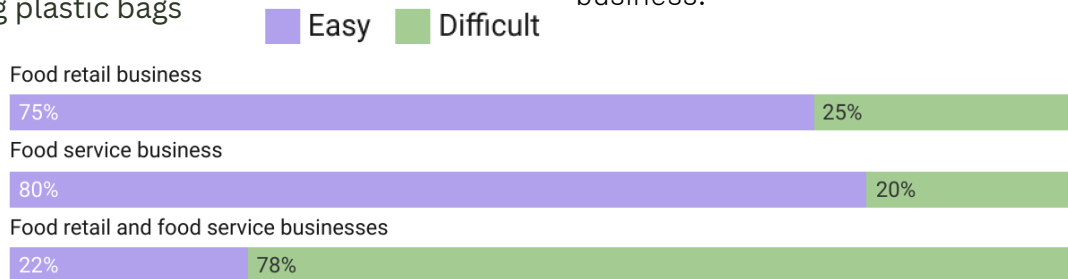
Impacts of the Law on Business

Operations and Costs

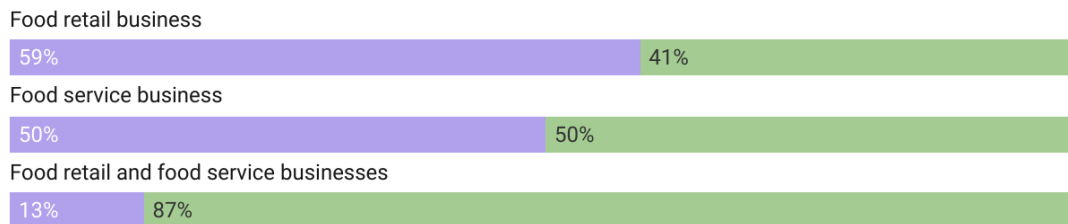
Questions about the impacts of the law on business operations were posed to the 50 business owners and managers that completed the survey. For those who reported being impacted by each aspect of the law, Figure 7 presents the proportion who felt that it has been challenging to comply. Among food retail owners and managers, the most challenging aspects to implement

were adding the charge for paper bags (40%) followed by the bans on plastic bags and plastic stirrers (both 25%). Food service owners and managers similarly identified adding the charge for paper bags to be the most challenging component to comply with (50%) followed by the ban on expanded polystyrene containers (41%) and the ban on automatically providing plastic straws (31%). Across all requirements of the ban, those who ran both food retail and food service businesses reported higher levels of difficulty complying with the law as compared to those who ran just one type of food business.

Ban on providing plastic bags



Charge for paper bags



Ban on automatically providing plastic straws



Ban on providing plastic stirrers

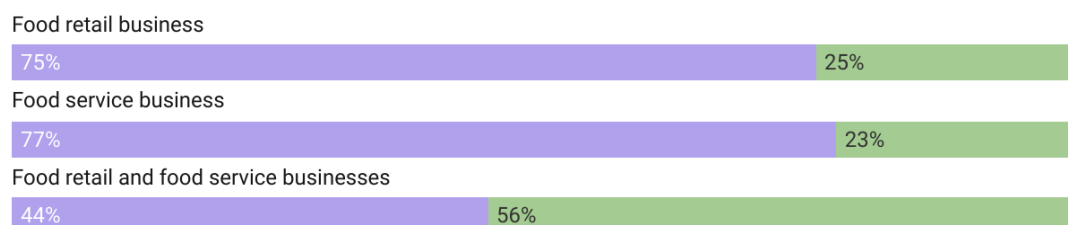


Figure 7. Ease of implementing the single-use products law according to Vermont food business owners and managers (%)

Ban on expanded polystyrene containers

Easy Difficult

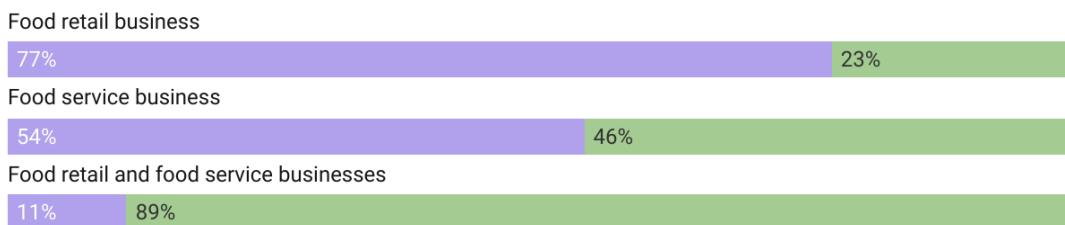


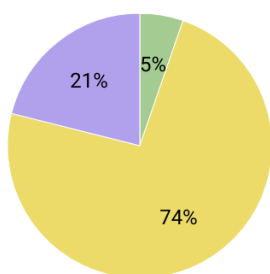
Figure 7 (cont.). Ease of implementing the single-use products law according to Vermont food business owners and managers (%)

The majority of owners and managers (≥ 89%) from all business types felt that the law had a neutral or positive effect on revenue and cleanliness (Figure 8). Compared to food retail owners and managers, a greater proportion of food service owners and managers reported that the law had a negative impact on their operating costs

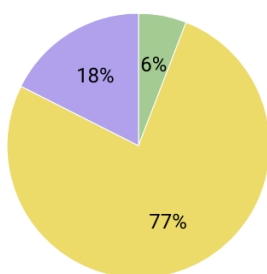
(35% vs. 11%), customer satisfaction (35% vs. 16%), and employee satisfaction (24% vs. 0%). In general, responses about the business impacts from those who owned or managed both food retail and food service operations were more positive and/or neutral than those who owned or managed just one type of food business.

Revenue

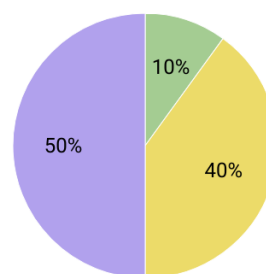
Negative No impact Positive



Food retail business

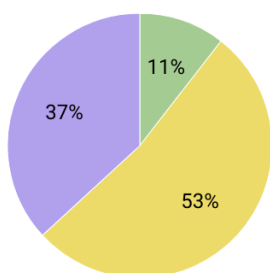


Food service business

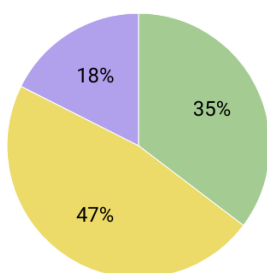


Food retail and food service businesses

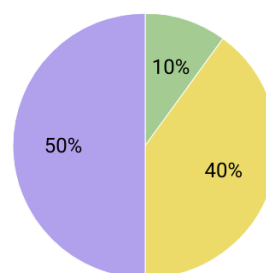
Costs



Food retail business



Food service business

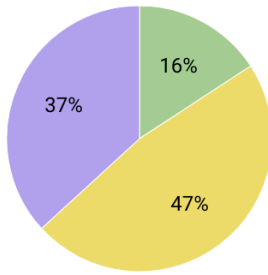


Food retail and food service businesses

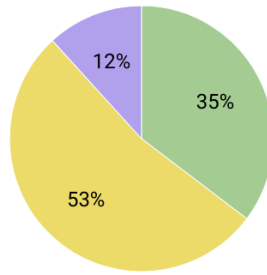
Figure 8. Impacts of Vermont's single-use products ban on food business operations and costs (%)

Customer satisfaction

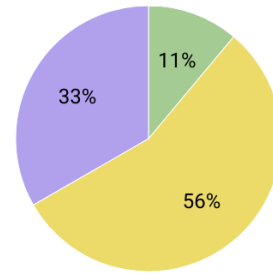
■ Negative
 ■ No impact
 ■ Positive



Food retail business

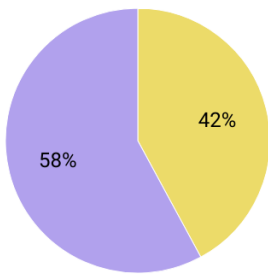


Food service business

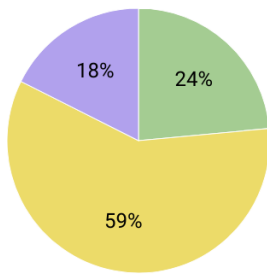


Food retail and food service businesses

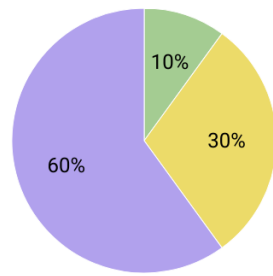
Employee satisfaction



Food retail business

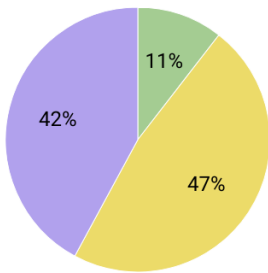


Food service business

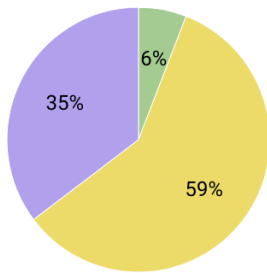


Food retail and food service businesses

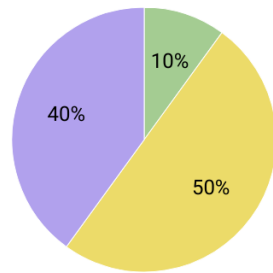
Cleanliness



Food retail business



Food service business



Food retail and food service businesses

Figure 8 (cont.). Impacts of Vermont's single-use products ban on food business operations and costs (%)

Additional Reflections on the Law

Respondents were invited to share any other thoughts about the law or suggestions for information or assistance that would make it easier for their business to comply. Multiple people shared positive sentiments.

We tried to implement this ban before the law and received lots of negative feedback from customers. By having it come via litigation, adoption was immediate and no customer pushback since it wasn't only us. The law made it easy, painless, and awesome.

- Owner of food retail business

Some emphasized that more publicity and public information about the components of the law would be helpful, as would support with the additional costs of compliance and finding alternative disposable tableware products. Several respondents noted that identifying appropriate alternatives to single-use plastics, especially for food service packaging, had been a source of frustration after Vermont's largest commercial compost facility stopped accepting compostable foodware.

We had worked very hard on converting all of our single-use items to be either recyclable or compostable, to be in compliance... a few months ago [we] found out CSWD [Chittenden Solid Waste District] would no longer accept many of the compostable products we switched too. This is extremely frustrating and we've switched back to many of the cheaper, non-compostable products since it's all trash now anyway. Figuring this out would certainly help! People are willing to do the right thing, with reasonable cost, but keeping up with changes, switching products, educating customers... it's all very time-consuming and can be quite frustrating.

- Owner of food retail and food service business

Implications

Vermont has responded to the environmental, economic, and social threats posed by accumulating plastic pollution with policy action to reduce single-use products (especially plastics) in food retail and food services (Act 69 of 2019). The findings from this analysis suggest that the law has been generally well-received and understood by the state's residents and food businesses and that it has resulted in reductions in single-use plastics at point of purchase.

The findings also shed light on aspects of the law that have had a greater impact on different types of food businesses. For those who ran either food retail or food service businesses, the compulsory charge for paper bags has been the most challenging aspect. Those who run both types of businesses have been challenged by both the charge on paper bags and the ban on expanded polystyrene containers. Food businesses may benefit from additional support identifying low-cost alternatives to single-use plastic products that are accepted by local recycling and/or composting facilities.

References

1. Environmental Protection Agency. (2022, September 19). *Plastics: Material-Specific Data*. Environmental Protection Agency. <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/plastics-material-specific-data>.
2. DSM Environmental Services Inc. & MSW Consultants. (2018). *2018 Vermont Waste Characterization*. <https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/2018-VT-Waste-Characterization.pdf>.
3. An act relating to the management of single-use products, Public Law No. 69. (2019). <https://legislature.vermont.gov/Documents/2020/Docs/ACTS/ACT069/ACT069%20As%20Enacted.pdf>.

Acknowledgements

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