

Final Review GLOCAL 2017:

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Final Report

Overview:

This summer we rolled out our sticker pilot in a section of North Cambridge. Each week, we went to 12 streets to see whether they put their compost bin out or not. Houses that did put their bin out received a sticker, starting with Beginner Composter, and for each week more that they composted, received higher levels of stickers which ultimately lead to Master Composter. Additionally, we established a control area of 6 streets where we kept track of the number of times each household composted, but did not give out the stickers in an effort to see whether the pilot area was more inclined to compost after receiving the incentive. We had five weeks to roll out this program, and discovered though hard at first, we were able to get into a rhythm by the end of the pilot. The first week we spent six hours in the neighborhood and were only able to cover around ten streets, compared to the last week when we were able to complete all of our streets in the pilot as well as the control in 2.5 hours. It was very gratifying to see progress in efficiency. People on the streets gave us positive feedback and said they liked how the stickers looked and felt they provided a nice reward for the sometimes unpleasant task of composting during the summer.

For a visual overview of our project, watch

https://youtu.be/jNOjcUo_0k0

Issues

Some flaws became clear over the course of our pilot. We had chosen stickers based on the idea that people's bins would be out on the curb at all times, thus allowing neighbors to see the bins and be incentivized. However, most people only have their bins out for trash collection day, and take their bins

away for the rest of the week. Therefore, our pilot ended up being more about individuals being incentivized by the stickers on their bins, rather than neighbors wanting to compete with each other.

Another issue we ran into was that on certain streets there wasn't an even distribution of non-composters and composters. In short, most streets were either majority composters or majority non-composters. On the streets where everyone composted, there were more stickers, so then our pilot had the chance of becoming more effective, compared to streets where nobody composted, where it would be hard to start incentivizing composting because the stickers were so few and far between. An ideal distribution per street would consist of a few houses who composted and received stickers, subsequently motivating their neighbors to follow their lead.

Despite this kink, it is interesting that there are clusters of streets who compost and streets who do not. We think this trend actually supports our idea that incentive works, as clearly streets with people who composted had already gone through a process where they had seen their neighbors compost and had felt pressured to join in.

What comes next:

It became clear by the end of the pilot that peer pressure really does work, with or without stickers. The fact that there were clusters of streets that composted and streets that didn't means that once just one person composts on a street, other people will feel incentivized to follow their example. On streets that already have a trend of composters, stickers could help continue to motivate them, but on streets that don't really compost, the most helpful thing would be to inform them about composting. If we were able to just get one person interested, then that could spark the chain effect of healthy competition among neighbors, resulting in a street full of green bins. In the future, if we went door to door on streets that didn't compost, we could try to incite this chain effect.

Canvassing

Common Complaints

Biobags:

Residents commonly had issues with the biobags disintegrating in the summer, which led to icky composting liquid leaking into bins. Residents had to wash out the bins weekly with a hose to mitigate the issue, which not only was extra work but also not accessible to every resident since not every house had a hose. One resident frequently composted wet tea leaves, but found it extremely difficult as the liquid

created holes in the bags. Additionally, residents claimed that the bags were hard to open without breaking.

Biobags are also expensive, costing upwards of \$5/week. This may be part of the reason that higher income neighborhoods in Cambridge were more likely to compost than low income neighborhoods.

Biobags also would run out quickly and take significant effort to pick up, leading some residents to stop composting out of laziness. In addition people did not always know where to buy biobags.

Pests:

FRUIT FLIES! These were the biggest reason residents stopped composting. Traps are not a long term solution.

Rats or raccoons were common complaints- knocking over and getting inside outdoor bins, and one woman said they infested the interior of her house as well.

**Some general questions were whether pizza boxes should be left on the side of the curb and whether bones were compostable.

Our experience with Canvassing

Canvassing was simultaneously the most rewarding and the most difficult of our tasks with the City of Cambridge this summer. When residents already composted, they were excited to discuss composting. They talked about the pride they felt in being a part of a city that cares so much about the environment, and also the aspects of the program that frustrated them. We received ideas on how to tweak the composting program and composters were nearly always willing to talk. Often people would be hesitant to engage in conversation, but when they found out we just wanted to talk about composting, they were more willing to talk and expressed their gratitude for the program.

However, the primary purpose of canvassing was to convince non- or infrequent composters to start. When we came across non-composters, we found they shut down when we asked about composting and were unwilling to discuss the benefits or hear our arguments. Subsequently, we had limited effectiveness in getting new composters started.

We both learned a great deal about how to handle rejection, as some people perceived us as unwanted solicitors. Despite this fact, when we engaged people in conversation, they tended to be enthusiastic and we would see all their solicitor prejudice fade away.

Survey Responses

We sent out a survey to our pilot area asking general questions about composting, with the intention to gauge how enthusiastic respondents were about the program, discover the main reasons for a North Cambridge citizen not to compost, and learn what would incentivize more composting. Below we analyze the open-response questions.

What Would Motivate you to Compost More?

Every single respondent to the survey already composts, so we did not get insight into why non-composters are not motivated. Many respondents said they already are motivated, so an incentive would not work, but others gave us great ideas, including receiving free composted soil (4 respondents mentioned this), more biobags (4 respondents), and better under-sink bins-- the metal ones (3 respondents). One person replied that Cambridge residents should have to pay a fee for how much trash is produced, which is an interesting path to pursue. Perhaps it would have a similar effect to charging 10c per bag.

What are the Reasons That you do or do not Compost?

There were several common themes among these responses. A primary reason that people composted was for green efficiency and environmental benefits. People were concerned for the environment and did not want to be wasteful by throwing away food. They felt composting was a good way to prevent food from decomposing in landfills and emitting greenhouse gases. One person captured the essence of composting by saying they “like saving the planet.”

People also appreciated that unlike food waste, compost is repurposed and turned into soil. Some people were already backyard composters, but appreciated that the pilot made composting more convenient for them.

Although everyone who responded to the survey does compost, some voiced their complaints. Some said that the biobags frequently leaked which made composting harder. Others were unhappy about the animals on their properties, while still others were concerned about odors. In general however, people were very positive about the program and expressed their hope that it continued.

**We additionally sent out a survey at the end of our pilot to gauge its effectiveness.

Final Data

Flaws in our Data Analysis:

We had to race against time--- at a certain point every Monday, residents bring their bin in from the curb. As a result, many times bins had been put back by the time we reached the neighborhood, leading to gaps in our data. Subsequently, some residents who deserved stickers did not receive them and missed out on the incentive. This resulted in uneven data analysis.

As for the length of our program, five weeks, or even three weeks in some neighborhoods was not enough time to effectively gather data and conclusively be able to tell whether stickers prompted behavioral change. Ideally we would have had at least 3 months of weekly stickering.

Other gaps in data resulted from houses we accidentally missed. Weekly, we would find that about 1/12 houses had been left blank on our data sheet. This invalidated the data for the household in other weeks.

Our pilot and control areas were different neighborhoods, so one of these neighborhoods could have just been composting more frequently even before the start of our program. The fact that our test area composted 30% more than the control might not have just been a result of our stickers, but of previous composting habits.

Human error also affected our data. The first day of data collection was 90 degrees and humid and the second week was pouring rain. Therefore, our focus was not entirely devoted to collecting composting data and mistakes may have been made.

Additionally, there are also many reasons why people might not put their compost bin on the curb entirely unrelated from whether they received a sticker or not. Summer is vacation season, and it could have simply been that a bin was not put on the curb one week because the residents were away.

For the Control:

*****24% of people composted in the control area**

Week by week:

35 composted in first full week (week 3)

51 composted week 4

46 composted in last week (week 5)

Increase from first full week to final week in # of composters:

CLAY: Percent change: -12.5% composted

Week 3: 8, week 5: 7

CLIFTON: Percent change: +18% composted

Week 1: 11, week 5: 13

JACKSON: Percent change: negligible

Week 1: 10, Week 5: 10

MONTGOMERY: Percent change: +12.5% composted

Week 3: 8, Week 5: 9

THERIAULT COURT: Percent change: -50% composted

Week 3: 2, Week 5: 1

For Pilot:

*****51% of people composted in this area**

Week by week:

55 in first week composted--We didn't do some streets

75 composted in the second week

75 composted in the third week

71 composted in the fourth week

76 in the last week composted

Increase from first full week to final week in # of composters:

Brookford:

Week 1: 6 yes

Week 5: 8 yes

33 % increase

Churchill

Week 2: 2 yes

Week 5: 2 yes

No Change

Columbus:

Week 1: 3 yes

Week 5: 3 Yes:

No Change

Harrison:

Week 1: 4 yes

Week 5: 5 yes

25% increase

Kassul:

Week 2: 3 yes

Week 5: 2 yes

33% decrease

Kimbal

Week 2: 2

Week 5: 2

No change

Madison:

Week 1: 16 yes

Week 5 14 Yes

13% decrease

Magoun:

Week 1: 6 Yes

Week 5: 8 yes

33% increase

Muller:

Week 1: 5 yes

Week 5: 5 yes

No change

Newman:

Week 2: 3 yes

Week 5: 1 yes

66% decrease

Richard:

Week 1: 9 yes

Week 5: 9 Yes

No change

Seagrave:

Week 2: 8 yes

Week 5: 7 yes

87.5 change

12.5 decrease

Whittemore:

Week 2: 7 yes

Week 5: 7 yes

No change

As we mentioned before, with just five weeks, it was hard to determine whether our stickers really worked. Some of the houses who had been composting consistently but then missed a week could have been on vacation. With more time, we would be able to recognize a more clear pattern and present more accurate data.

Overall, however, we were happy in our ability to actually execute our pilot this summer, and our experiences have given us a lot of insight around composting. We feel like we both have become composting experts, and think we should carry the idea of incentive composting with us in the hopes of motivating streets to compost, especially once the program expands to all of north Cambridge.