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## Heartside Gleaning Initiative Food Waste Survey

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## **Heartside Gleaning Initiative Food Waste Survey**

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### **Abstract**

Residents of the Heartside neighborhood of Grand Rapids experience a significant amount of poverty and food insecurity. The Heartside Gleaning Initiative is a nonprofit organization that assists Heartside residents by redistributing donated, fresh produce to them. Through survey research, our purpose was to assist the Heartside Gleaning Initiative in finding out what happens to this food once it is distributed; specifically how much food is wasted. Participants included residents that receive food donations as well as nonprofit organizations that receive donations and prepare meals for community members. Through community collaborations, we were able to write a survey, perform the survey, and obtain a data summary. It appears that food waste following distribution is not very prevalent, as reported by participants. While our study has limitations, including small sample size, it has opened the door for more research in this area. Recommendations for the future include utilizing information from other class groups including recipe books and nutrition/cooking classes to ensure that food waste does not rise.

## **Introduction**

Food security and food waste are intertwined issues in the United States. While large percentages of food are wasted every day, there are also large amounts of people without adequate amounts of food or nutritious food. According to the Community Research Institute (CRI), in the Heartside District of Grand Rapids, 45% of residents in the neighborhood were below the poverty line in 2000; a total of 969 people. As of 2012, 61.1% of Heartside residents were below 150% of the poverty line (CRI, 2014). Those in poverty have less access to adequate, nutritional food in healthy amounts. According to a survey conducted by the Kent County Health Department, a mere 13% of those surveyed in Kent County responded saying that they eat “balanced meals.” Respondents attribute this to the high prices of produce (Kent County Health Department, 2007). Palmer (2010) states that 40% of the food that is produced in the United States will never be eaten as a result of overproduction and lack of value placed on food. The Kent County Health Department, after conducting a survey, emphasized a need for programs based in the community that could provide fresh produce to residents (Kent County Health Department, 2007). This can particularly be said for the Heartside District where the Heartside Gleaning Initiative says 80% of residents experience food insecurity (Heartside Gleaning Initiative, 2014).

The Heartside Gleaning Initiative (HGI) is a nonprofit program that collects excess produce from local farmers and distributes it to residents of the Heartside neighborhood. Through this process, food that would normally be wasted can be used and those in need of food or nutritious food

can benefit from the produce at no cost. As the organization is growing in its success, there are also a number of needs that have to be as part of the HGI. One of the needs was the lack of knowledge about what happens to the food after it is distributed, in terms of waste. Through survey-based research, our group hopes to provide information regarding food waste to the HGI so that they may alter or add aspects to their program that may reduce this waste.

## **Action Plan**

In order to capitalize on the issue of food waste and management, we need to know what happens after the food is dispersed. The HGI does a wonderful job of making sure residents of the Heartside Community have fresh produce, but we want to make sure all of the hard work of the distribution process isn't going to waste. We want to ensure that the people of the Heartside Community know what to do with their produce to maximize the benefits. The problem with this is that once the food is dispersed, the HGI does not know what happens to it. Does it all get eaten? How much gets thrown away? It is being tossed out because it went bad before the resident could use it or because the resident didn't know how to use it? These are some of the many unanswered questions. In order for steps to be taken to decrease this problem, information needs to be gathered on what exactly the problem is. We need to know how much food is being wasted and why.

In order to obtain the answers on why food is wasted we are going to conduct a survey to the Heartside Residents, as well as the organizations that receive food and prepare it for those in need. The survey will give Professor Sisson, the founding director

of the HGI, a better understanding on what happens after she and her team distribute the produce. The results of this survey will allow for improved practices within the HGI.

In collaboration with Professor Elizabeth DeLaney, also a Johnson Center employee, we created a survey that could be easily understood and would provide accurate data. The survey was conducted on Saturday, October 11 to the Heartside Residents. E-mail copies of the survey were sent in late October to the organizations that receive produce from the HGI. Once survey responses were obtained, the raw surveys were taken to the Statistical Analysis Center on the Grand Valley campus. They were able to help us analyze the data and compile it into an easily understandable summary.

## **Process**

### *Research*

Our efforts were guided by the needs of the HGI; specifically in the area of food waste. Performing this survey required research into the fields of food waste, survey techniques through social work research, and statistical analysis. Research into food waste showed us that a large majority of the Heartside neighborhood experience poverty and food insecurity (Heartside Gleaning Initiative, 2014). This research also showed us how prevalent the food waste issue is in the United States, with the daily United States food waste being enough to fill the Rose Bowl (Palmer, 2010). Social work research techniques showed us proper ways to ask questions in our survey, and statistical analysis allowed us to draw relevant information from our data set. By pulling information and techniques from these fields, we were able to successfully write our survey, have the survey completed by

participants, and utilize a community resource to obtain analyzed data.

### *Methods*

We used methods from a social work research professor to write our survey questions. These methods include writing questions with all inclusive answer choices, and having questions without bias. We utilized peer-review with our surveys. The surveys were reviewed by fellow students as well as a research professor at Grand Valley State University, Professor Elizabeth DeLaney. When giving the surveys, we were prepared to read the surveys to our participants if there were literacy issues. This occurred in a few instances, and allowed us to add more participants to our study. When analyzing our data, we utilized the services of the Statistical Analysis Center at Grand Valley State University. They assisted us with finding out what we want to know from our data and formulating it into a clear summary. Outside sources were a major contribution to our methods and success as a group.

### *Collaboration*

This project would not have been successful without the help of our community partners. Professor Sisson, the founder of the HGI, was always available to add her input. This was appreciated because no one knows the organization like she does. In order to get our survey produced, we first had to ensure its legality. The Human Research Review Committee determined we did not need permission to perform the survey. Professor Elizabeth DeLaney also assisted us in ensuring the survey was not biased in any way and that the answer options were all inclusive. Once the survey was conducted, the results were taken to the Statistical Analysis Center at Grand Valley State University. The results were analyzed

and put into both paper and PowerPoint form. The collaboration with community partners was essential to the success of the project.

## Results

The results of the conducted Food Waste Survey produced encouraging outcomes in regards to the whole purpose of this project, which was to investigate what occurred to the produce after it was distributed to the Heartside residents. The results were provided to us in the form of frequency tables to see why individual foods were wasted, descriptive output summaries, as well as PowerPoint summaries of the individual questions in each survey. We also created summaries to give Professor Sisson as well as the residents who participated in the survey (See appendices A-I for surveys, data results, and summaries).

Among the many questions asked in the survey, a good amount of them were pertinent and tailored to fit the surveys' criteria. The pertinent questions were the following: (1) if you had unused produce, can you tell us why you didn't use it? (2) how much produce would you estimate goes unused in your household? (3) If there is unused produce, how long is the food kept before you dispose of it? (4) How do you dispose of unused produce? (5) Do you have adequate refrigeration and dry good storage space where you live to store fresh produce? (6) Do you share the produce you receive with others outside of your household? (7) If yes to the previous question, who did you share the food with? Also worth mentioning, (8) if available at a specified location, would you attend cooking classes to help you learn how to prepare the available produce? After gathering the results, the following responses were gathered:

For the first question, the majority of the respondents (7 out of the 15 who

responded; 70%) used all of the produce before they could dispose of it. For those who did not use the produce reasoned that they had more than they could use (20%), or didn't know what to do with it (10%). Therefore, as the second question asks, 33.33% estimated that none, and/or less than 20%, but more than 0%, goes unused. For the third question, 7 respondents kept food for a few days before disposing it; 5 kept it for a week, 2 for two weeks, and 1 for over two weeks. The results for the fourth question were that 6 respondents disposed the unused produce by throwing it into the trash, 1 in the compost, and 5 respondents simply gave it away. For the fifth question, 11 respondents had adequate refrigeration and storage, 3 did not, and only 1 was unsure. As for the sixth question, 13 said they shared the produce with others, while 2 did not. Those who shared it with others, 6 were to the family, 8 to their neighbors, and 3 to their friends. Finally, if cooking classes were offered, 7 respondents said they would attend, 4 would not, and 4 would maybe attend. From these results, it appears that food waste is not a huge issue as it pertains to the HGI. As a whole, most residents reported low amounts of food waste, and many instances of sharing food with others, possibly as a way to reduce waste. Similar questions were asked in a survey to the organizations that receive produce and zero of the three organizations reported having any unused produce. Despite the encouraging outcomes of the survey results, we did face some challenges while working on the project.

During the project, we were faced with, what we considered our main limitation, our lack of statistical knowledge. This limitation prevented us from understanding the statistical consultants, whom were helping us analyze the results, to make decisions as to how we wanted to properly organize our results that would best

interpret them. In addition to this limitation, we had a few difficulties pertaining to the survey. First, we could not get a hold of the Johnson Center, in order to have them look over our questions. Secondly, with our completed survey, we could not get more Heartside residents who were willing to respond to it. Also, some the residents could not read, so we helped them by reading it to them. Third, we could not arrange a good time to personally conduct the survey and get in contact with the businesses connected with the HGI for the business survey. It was also challenging to get them to respond to our calls and emails to remind them to fill the surveys out via e-mail. Due to time constraints, we were unable to collect more responses from residents and organizations.

Finally, we lack the knowledge to compile the responses into working data. As a result, we had no way of deciding whether we wanted to group the answers into a separate result, or separate it into two responses at the Statistical Consultant Center. This risked disturbing the results of the entire survey. Also, an issue brought to our attention was that some of the wordings in the questions were confusing to the residents, and some of those questions contradicted each other. This could be a possible reason why respondents answered multiple times for a question, and seemed to answer questions in opposition to their previous responses.

### Future Considerations

Now that the research has been done, the results can help determine what the next steps are. Considering the results of the survey conducted in the Heartside Community, we would suggest taking advantage of what the other Lib 342 student working groups have proposed and

presented to the HGI. They have worked from the survey's results to compose programs to help the residents learn how to use the produce to the fullest. These projects include recipe books and nutrition/cooking classes. The results of this survey open the door to more work that can be done to improve the HGI. Conducting the survey was the first step; now it is vital to initiate solutions in order to solve the problem of unnecessary waste. This will create many opportunities for not only those directly correlated with the Heartside neighborhood, but any organization that is willing to help make a change for a healthier community.

### Works Cited

Community Research Institute (2014). Heartside. Retrieved from <http://cridata.org/GeoProfile.aspx?type=31&loc=2634000031013>

Heartside Gleaning Initiative. (2014). *Heartside Gleaning Initiative: For a healthier Heartside community*. [Brochure]. Grand Rapids, MI

Kent County Health Department (2007, April 1). Evaluating Community Food Security Kent County/ Retrieved from <http://cridata.org/dataitem.aspx?id=226>

Palmer, S. (2010, March). Paying the High Price of Food Waste. *Environmental Nutrition*, 1. Retrieved October 10, 2014, from [http://go.galegroup.com.ezproxy.gvsu.edu/p/s/i.do?action=interpret&id=GALE%7CA220767420&v=2.1&u=lom\\_gvalleysu&it=r&p=HRCA&m=1&sw=w&authCount=1](http://go.galegroup.com.ezproxy.gvsu.edu/p/s/i.do?action=interpret&id=GALE%7CA220767420&v=2.1&u=lom_gvalleysu&it=r&p=HRCA&m=1&sw=w&authCount=1)

**Appendix A  
Resident Survey**

**Heartside Gleaning Initiative Food Waste Survey**

The Heartside Gleaning Initiative is a non-profit organization that collects donated produce from local farmers and redistributes it to residents of the Heartside neighborhood. Please answer the following questions to help us better understand food waste following distribution from the Heartside Gleaning Initiative.

**Please indicate your gender.**

- Male
- Female
- Other

**Which range indicates your age?**

- 18-25
- 26-35
- 36-45
- 46-64
- over 65

**Please indicate your race. More than one may be chosen.**

- Caucasian
- African American
- American Indian or Alaska Native
- Asian Indian
- Chinese
- Filipino
- Japanese
- Korean
- Vietnamese
- Guamanian or Chamorro
- Samoan
- Native Hawaiian or Other Pacific Islander
- Other, please indicate: \_\_\_\_\_

**Please indicate your ethnicity.**

- Hispanic or Latino
- Not Hispanic or Latino

**How many people live in your household?**

- 1
- 2-4
- 5-7
- 7+

**How often in the last month did you receive produce from the Heartside Gleaning Initiative?**

- Once a month
- Twice a month
- Three times a month
- More than three times a month

**Which of the produce did you receive and use?**

- apples
- cherries
- cantaloupe
- rhubarb
- melons
- pears
- strawberries
- seasonal fruit (berries, plums, peaches)
- exotic fruit (mango, pineapple, passion fruit)
- asparagus
- beans
- beets
- broccoli
- brussels sprouts
- cabbage
- carrots
- cauliflower
- celery
- corn
- cucumbers
- eggplant
- greens (turnips, mustard, collards, kale)
- lettuce
- mushrooms
- onions
- peas



- peppers
- potatoes
- radishes
- rutabagas
- spinach
- squash
- Swiss chard
- tomatoes
- turnips
- other, please indicate \_\_\_\_\_

**Which of the produce did you receive and NOT use?**

- none
- apples
- cherries
- cantaloupe
- rhubarb
- melons
- pears
- strawberries
- seasonal fruit (berries, plums, peaches)
- exotic fruit (mango, pineapple, passion fruit)
- asparagus
- beans
- beets
- broccoli
- brussels sprouts
- cabbage
- carrots
- cauliflower
- celery
- corn
- cucumbers
- eggplant
- greens (turnips, mustard, collards, kale)
- lettuce
- mushrooms
- onions
- peas
- peppers

- potatoes
- radishes
- rutabagas
- spinach
- squash
- Swiss chard
- tomatoes
- turnips
- other, please indicate \_\_\_\_\_

**If you had unused produce, can you tell us why you did not use it?**

- I didn't know what to do with it
- the food spoiled before I could use it
- I had more than I could use
- I, or my household, didn't like it
- other, please indicate why \_\_\_\_\_
- all produce was used

**How much produce would you estimate goes unused in your household?**

- none
- less than 20% but more than 0%
- 21-40%
- 41-60%
- 61-80%
- 81% or more

**If there is unused produce, how long is the food kept before you dispose of it?**

- a few days
- a week
- two weeks
- over two weeks

**How do you dispose of unused produce?**

- throw it in the trash
- compost
- preserve it
- give it away
- other, please indicate \_\_\_\_\_

**Do you have adequate refrigeration and dry good storage space where you live to store fresh produce?**

- yes
- no
- unsure

**Do you share the produce you receive with others outside of your household?**

- yes
- no

**If yes to the question above, who did you share the food with?**

- family
- neighbors
- friends
- other, please indicate \_\_\_\_\_

**Please rate the quality of the produce you have received.**

- very poor
- poor
- average
- good
- very good

**If available at 50 Weston, would you attend cooking classes to help you learn how to prepare the available produce?**

- yes
- no
- maybe

**Please rate your overall satisfaction with the Heartside Gleaning Initiative.**

- very satisfied
- satisfied
- neutral
- dissatisfied
- very dissatisfied

**Any additional comments:**

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## **Appendix B Organization Survey**

### **Heartside Gleaning Initiative Food Waste Organization Survey**

The Heartside Gleaning Initiative is a non-profit organization that collects donated produce from local farmers and redistributes it to residents of the Heartside neighborhood. Please answer the following questions to help us better understand food waste following distribution from the Heartside Gleaning Initiative.

**In the last month, how often did you receive produce from the Heartside Gleaning Initiative?**

- Once
- Twice
- Three times
- More than three times

**Which of the produce did you receive and use? Check all that apply.**

- apples
- cherries
- cantaloupe
- rhubarb
- melons
- pears
- strawberries
- seasonal fruit (berries, plums, peaches)
- exotic fruit (mango, pineapple, passion fruit)
- asparagus
- beans
- beets
- broccoli
- brussels sprouts
- cabbage
- carrots
- cauliflower
- celery
- corn
- cucumbers
- eggplant
- greens (turnips, mustard, collards, kale)
- lettuce

- mushrooms
- onions
- peas
- peppers
- potatoes
- radishes
- rutabagas
- spinach
- squash
- Swiss chard
- tomatoes
- turnips
- other, please indicate \_\_\_\_\_

**Which of the produce did you receive and NOT use? Check all that apply.**

- none
- apples
- cherries
- cantaloupe
- rhubarb
- melons
- pears
- strawberries
- seasonal fruit (berries, plums, peaches)
- exotic fruit (mango, pineapple, passion fruit)
- asparagus
- beans
- beets
- broccoli
- brussels sprouts
- cabbage
- carrots
- cauliflower
- celery
- corn
- cucumbers
- eggplant
- greens (turnips, mustard, collards, kale)
- lettuce
- mushrooms

- onions
- peas
- peppers
- potatoes
- radishes
- rutabagas
- spinach
- squash
- Swiss chard
- tomatoes
- turnips
- other, please indicate \_\_\_\_\_

**If you had unused produce, can you tell us why you did not use it? Check all that apply.**

- We didn't know what to do with it
- The food spoiled before we could use it
- We had more than we could use
- Those eating it didn't like it
- Other, please indicate why \_\_\_\_\_
- All produce was used

**How much produce would you estimate goes unused at your organization?**

- none
- Less than 20% but more than 0%
- 21-40%
- 41-60%
- 61-80%
- 81% or more

**If there was unused produce, how long was the food kept before you dispose of it?**

- a few days
- a week
- two weeks
- over two weeks

**How have you disposed of unused produce?**

- throw it in the trash
- compost
- preserve it
- give it away
- other, please indicate \_\_\_\_\_

**Do you have adequate refrigeration and dry good storage space at your organization to store fresh produce?**

- yes
- no
- unsure

**Please rate the quality of the produce you have received.**

- very poor
- poor
- average
- good
- very good

**How would you rate the responses of the clients at your organization regarding the produce offered?**

- very poor
- poor
- average
- good
- very good

**How would you rate your overall satisfaction with the Heartside Gleaning Initiative?**

- very satisfied
- satisfied
- neutral
- dissatisfied
- very dissatisfied

**Any additional comments:**

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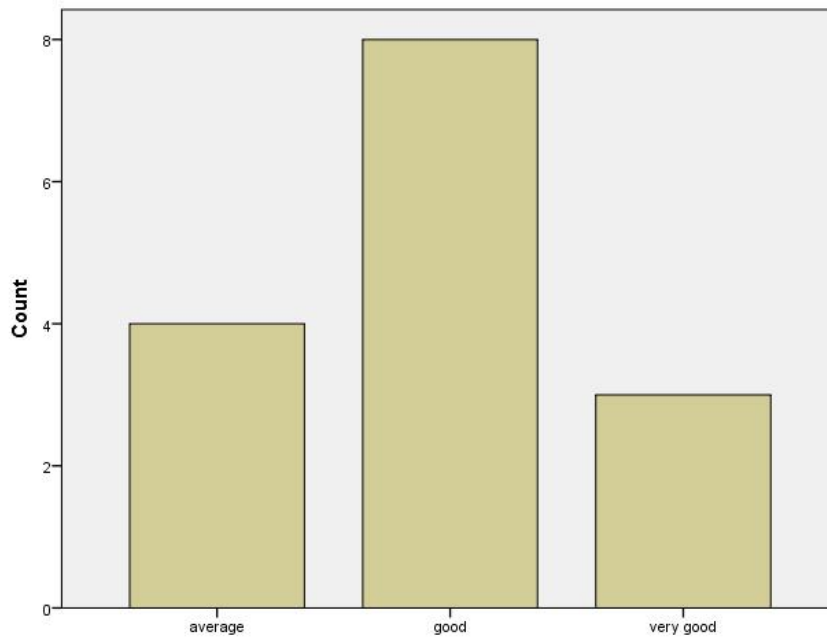
**Appendix C**

**Resident Survey Descriptive Outputs (Provided by Statistical Consulting Center)**

Question 17:

**Please rate the quality of the produce you have received.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	average	4	26.7	26.7	26.7
	good	8	53.3	53.3	80.0
	very good	3	20.0	20.0	100.0
	Total	15	100.0	100.0	



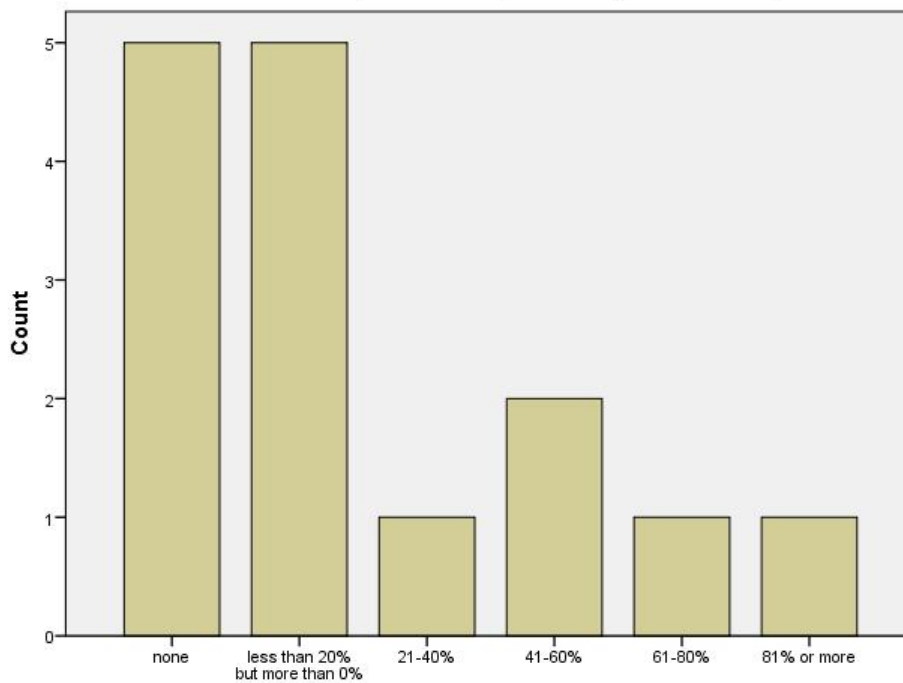
**Please rate the quality of the produce you have received.**



Question 11:

**How much produce would you estimate goes unused in your household?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	none	5	33.3	33.3	33.3
	less than 20% but more than 0%	5	33.3	33.3	66.7
	21-40%	1	6.7	6.7	73.3
	41-60%	2	13.3	13.3	86.7
	61-80%	1	6.7	6.7	93.3
	81% or more	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

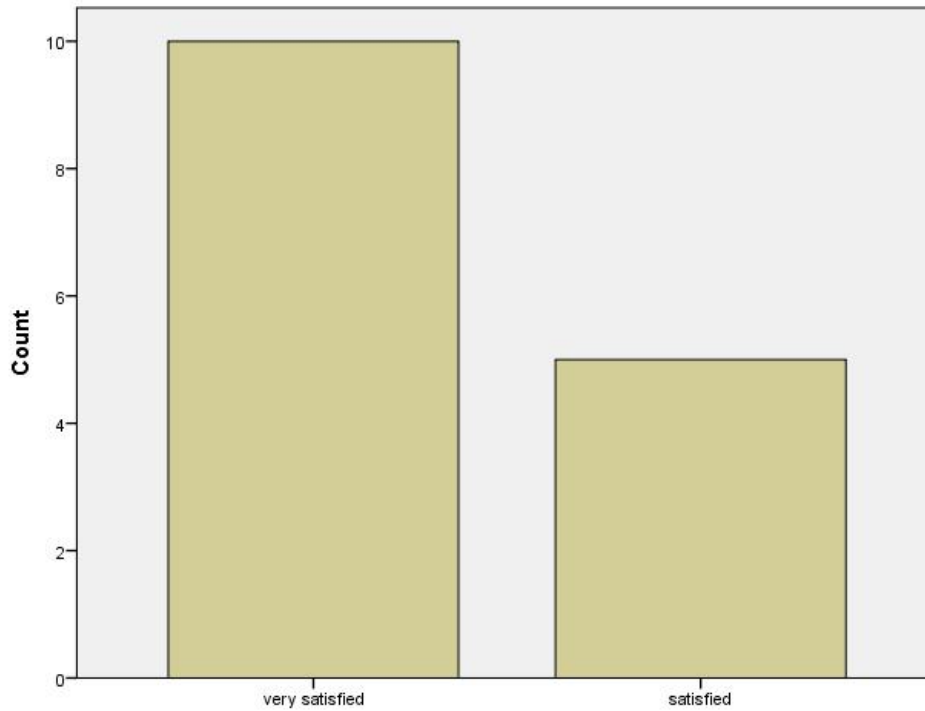


**How much produce would you estimate goes unused in your household?**

Question 19:

**Please rate your overall satisfaction with the Heartside Gleaning Initiative.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very satisfied	10	66.7	66.7	66.7
	satisfied	5	33.3	33.3	100.0
Total		15	100.0	100.0	



**Please rate your overall satisfaction with the Heartside Gleaning Initiative.**

**Appendix D**  
**Resident and Organization Comparison Regarding Produce Quality (Provided by**  
**Statistical Consulting Center)**

Comparing Individuals and Businesses

Please rate the quality of the produce you received

	Observed N	Expected N	Residual
Average	4	5.0	-1.0
Good	8	5.0	3.1
Very Good	3	5.1	-2.1
Total	15		

**Test Statistics**

	Please rate the quality of the produce you received
Chi-Square	2.926 <sup>a</sup>
df	2
Asymp. Sig.	.232

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 5.0.

Null hypothesis: The response pattern of individuals is similar to the response pattern of businesses

Chi-Square test for goodness of fit using the business proportions as the null values.

Chi-Square statistic = 2.926, Degrees of freedom = 2

P-value = 0.232

There is not enough evidence to say that the response pattern of individuals is different from the response pattern of businesses, for question 10.

**Appendix E**  
**Frequency Tables for Why Each Food Was Wasted (Provided by Statistical Consulting Center)**

**Frequency Table**

**Apple Food Spoiled Before I Could Use it**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Cherries Food Spoiled Before I Could Use it**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Cantaloupe Food Spoiled Before I Could Use it**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Melons Food Spoiled Before I Could Use it**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Pears Food Spoiled Before I Could Use it**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Strawberries Food Spoiled Before I Could Use it**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Seasonal\_Fruit Food Spoiled Before I Could Use it**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Exotic\_Fruit Food Spoiled Before I Could Use it**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Eggplant Didn't Know What to do with it**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Eggplant Food Spoiled Before I Could Use it**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Eggplant Had More than I Could Use**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Tomatoes Didn't Know What to do with it**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Tomatoes Food Spoiled Before I Could Use it**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

**Tomatoes Had More than I Could Use**

	Frequency	Percent	Valid Percent	Cumulative Percent
No	14	93.3	93.3	93.3
Valid Yes	1	6.7	6.7	100.0
Total	15	100.0	100.0	

\*Used above frequency tables to create a new data set with variables: produce, reason, and count. The new dataset was used to create the frequency tables below.

**Overall Frequencies (Using the above numbers) – When a reason was given for a produce going unused**

**Reason Produce was Unused**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid We didn't know what to do with it	2	14.3	14.3	14.3
The food spoiled before we could use it	10	71.4	71.4	85.7
We had more than we could use	2	14.3	14.3	100.0
Total	14	100.0	100.0	

14.3% of the time produce was unused was because they did not know what to do with it, 71.4% of the time, the food spoiled, and 14.3% of the time, there was too much produce.

**Unused Produce**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Apples	1	7.1	7.1	7.1
	Cherries	1	7.1	7.1	14.3
	Cantaloupe	1	7.1	7.1	21.4
	Melons	1	7.1	7.1	28.6
	Pears	1	7.1	7.1	35.7
	Strawberries	1	7.1	7.1	42.9
	Seasonal Fruit	1	7.1	7.1	50.0
	Exotic Fruit	1	7.1	7.1	57.1
	Eggplant	3	21.4	21.4	78.6
	Tomatoes	3	21.4	21.4	100.0
	Total	14	100.0	100.0	

Eggplant and tomatoes were unused the most, 3 times each, while everything else was unused one time.

However, there are many cases where some produce was unused and no reason was given, and there is a case where a reason is given, but there was no produce marked as unused. Therefore, these numbers will not match exactly what the frequencies would be for the entire data set without matching up unused produce to a reason.

Out of all the reasons, the only reason apples were unused was because they spoiled.

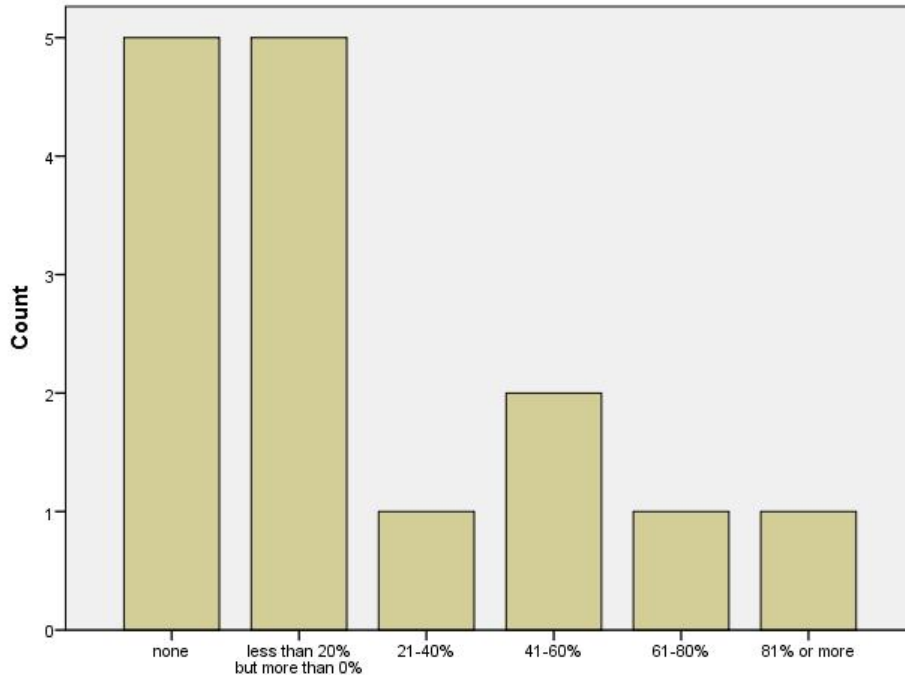


**Appendix F**  
**Student-created Resident Survey Summary (to be given to residents) Based on Results**  
**from Statistical Consulting Center**

Thank you for your participation in our food waste survey for the Heartside Gleaning Initiative!  
 Below you will find some of our main results.

**How much produce would you estimate goes unused in your household?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid none	5	33.3	33.3	33.3
less than 20% but more than 0%	5	33.3	33.3	66.7
21-40%	1	6.7	6.7	73.3
41-60%	2	13.3	13.3	86.7
61-80%	1	6.7	6.7	93.3
81% or more	1	6.7	6.7	100.0
Total	15	100.0	100.0	



**How much produce would you estimate goes unused in your household?**

- 33.33% of participants said that they waste no produce.
- 33.33% said they waste more than 0% but less than 20%
- 6.7% said they waste 21-40%

- 13.3% said they waste 41-60%
- 6.7% reported wasting 61-80%
- 6.7 report waste of 81% or more

**Reason Produce was Unused**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	We didn't know what to do with it	2	14.3	14.3	14.3
	The food spoiled before we could use it	10	71.4	71.4	85.7
	We had more than we could use	2	14.3	14.3	100.0
	Total	14	100.0	100.0	

- 14.3% of the time produce was unused was because residents reported not knowing what to do with it.
- 71.4% of the time, residents reported that the food spoiled before it could be used.
- 14.3% of the time, residents reported having more produce than they could use.

**Unused Produce**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Apples	1	7.1	7.1	7.1
	Cherries	1	7.1	7.1	14.3
	Cantaloupe	1	7.1	7.1	21.4
	Melons	1	7.1	7.1	28.6
	Pears	1	7.1	7.1	35.7
	Strawberries	1	7.1	7.1	42.9
	Seasonal Fruit	1	7.1	7.1	50.0
	Exotic Fruit	1	7.1	7.1	57.1
	Eggplant	3	21.4	21.4	78.6
	Tomatoes	3	21.4	21.4	100.0
	Total	14	100.0	100.0	

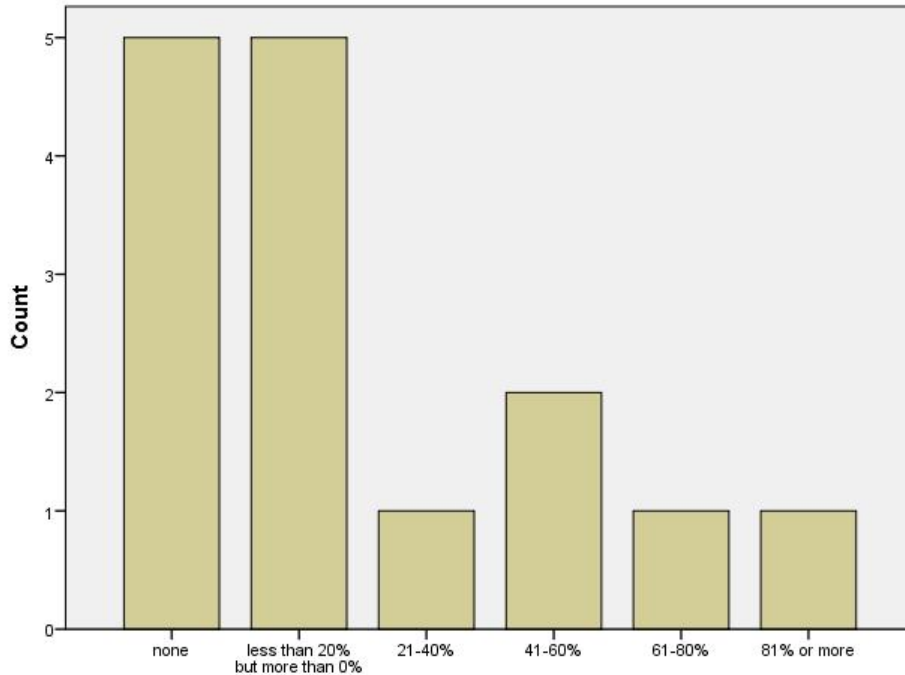
- Eggplant and tomatoes were unused the most, 3 times each, while everything else was unused one time.

**Appendix G**  
**Student Created Summary of Both Surveys (given to Professor Sisson) Created Using**  
**Results from Statistical Consulting Center**

**Resident Results**  
**15 Participants**

**How much produce would you estimate goes unused in your household?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid none	5	33.3	33.3	33.3
less than 20% but more than 0%	5	33.3	33.3	66.7
21-40%	1	6.7	6.7	73.3
41-60%	2	13.3	13.3	86.7
61-80%	1	6.7	6.7	93.3
81% or more	1	6.7	6.7	100.0
Total	15	100.0	100.0	



**How much produce would you estimate goes unused in your household?**

**Reason Produce was Unused**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	We didn't know what to do with it	2	14.3	14.3	14.3
	The food spoiled before we could use it	10	71.4	71.4	85.7
	We had more than we could use	2	14.3	14.3	100.0
	Total	14	100.0	100.0	

- 14.3% of the time, produce was unused because residents reported not knowing what to do with it. 71.4% of the time, residents said the food spoiled before it could be used. 14.3% of the time, residents reported having more produce than they could use.

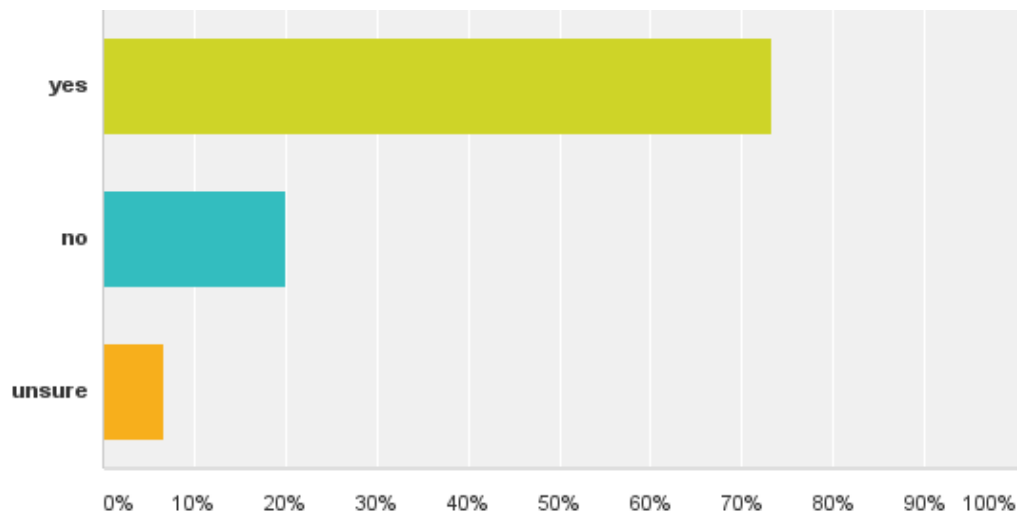
**Unused Produce**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Apples	1	7.1	7.1	7.1
	Cherries	1	7.1	7.1	14.3
	Cantaloupe	1	7.1	7.1	21.4
	Melons	1	7.1	7.1	28.6
	Pears	1	7.1	7.1	35.7
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	Eggplant	3	21.4	21.4	78.6
	Tomatoes	3	21.4	21.4	100.0
	Total	14	100.0	100.0	

- Eggplant and tomatoes were unused the most, 3 times each, while everything else was unused one time.
- However, there are many cases where some produce was unused and no reason was given, and there is a case where a reason is given, but there was no produce marked as unused. Therefore, these numbers will not match exactly what the frequencies would be for the entire data set without matching up unused produce to a reason.
- Out of all the reasons, the only reason apples were unused was because they spoiled.

Do you have adequate refrigeration and dry good storage space where you live to store fresh produce?

Answer Choices	Responses
yes	73.33% 11
no	20.00% 3
unsure	6.67% 1
<b>Total</b>	<b>15</b>



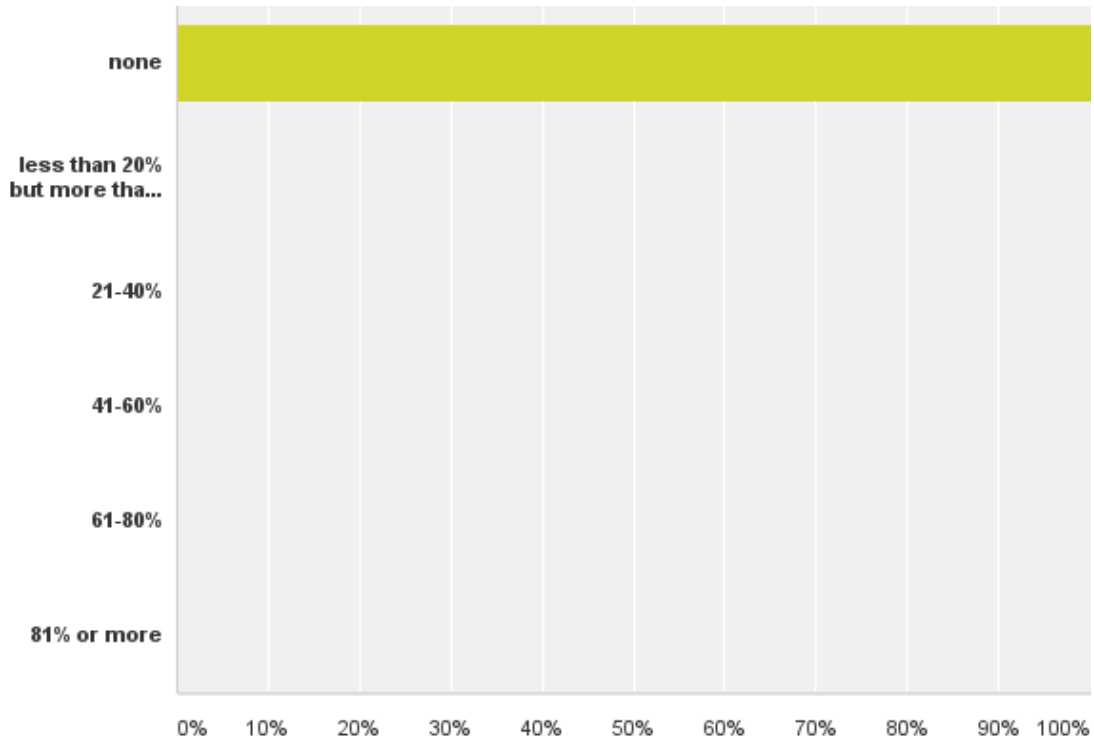
Other resident findings include:

- 86.67% of residents surveyed share produce with others outside of their household
- 46.67% of residents would be interested in cooking classes at 50 Weston, while 26.67% said maybe and 26.67% said no

**Organization Results**  
**3 Participants**

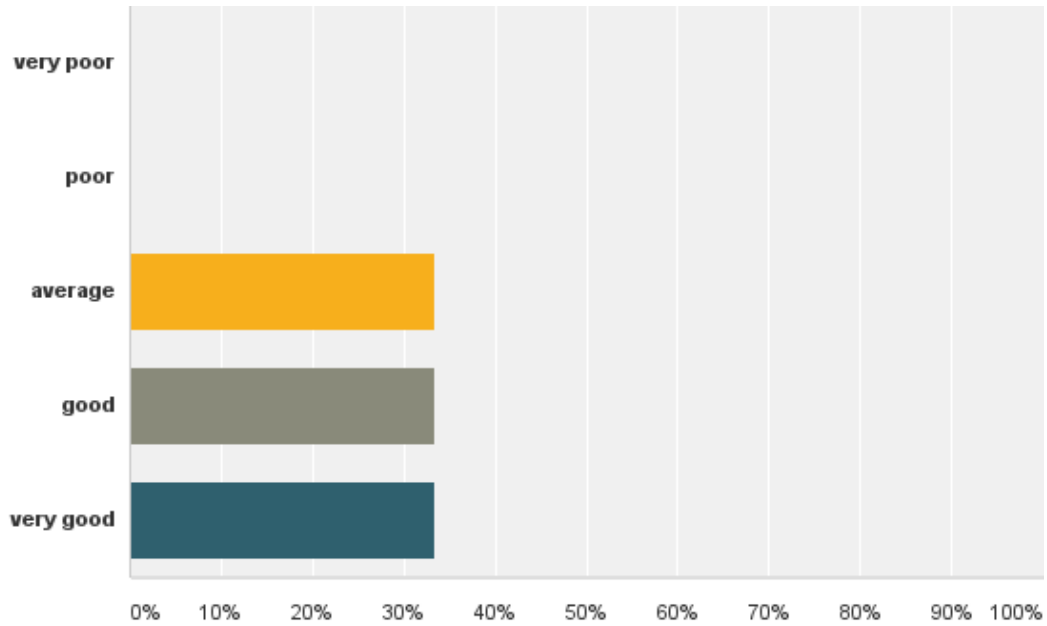
How much produce would you estimate goes unused at your organization?

Answer Choices	Responses
none	100.00% 3
less than 20% but more than 0%	0.00% 0
21-40%	0.00% 0
41-60%	0.00% 0
61-80%	0.00% 0
81% or more	0.00% 0
<b>Total</b>	<b>3</b>



Please rate the quality of the produce you have received.

Answer Choices	Responses
very poor	0.00% 0
poor	0.00% 0
average	33.33% 1
good	33.33% 1
very good	33.33% 1
<b>Total</b>	<b>3</b>



How would you rate the responses of the clients at your organization regarding the produce offered?

Answer Choices	Responses
very poor	0.00% 0
poor	0.00% 0
average	0.00% 0
good	0.00% 0
very good	100.00% 3
<b>Total</b>	<b>3</b>

