
THANK YOU
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FOOD
FOR
THOUGHT

Food for Thought

Issues and Solutions to Food Waste in NYC

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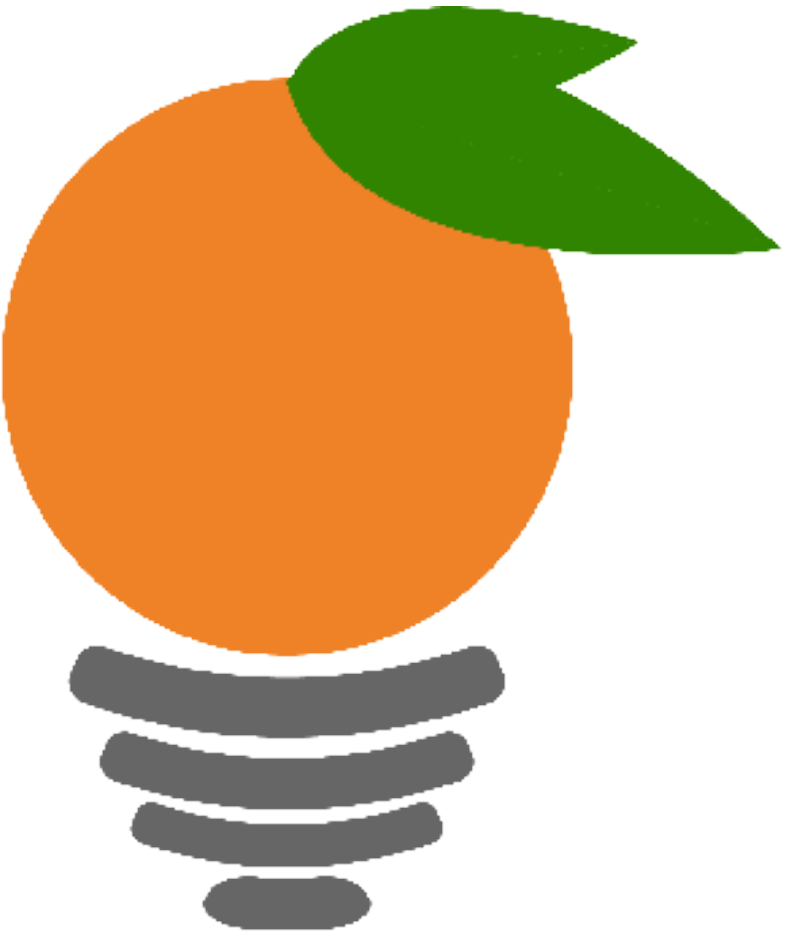
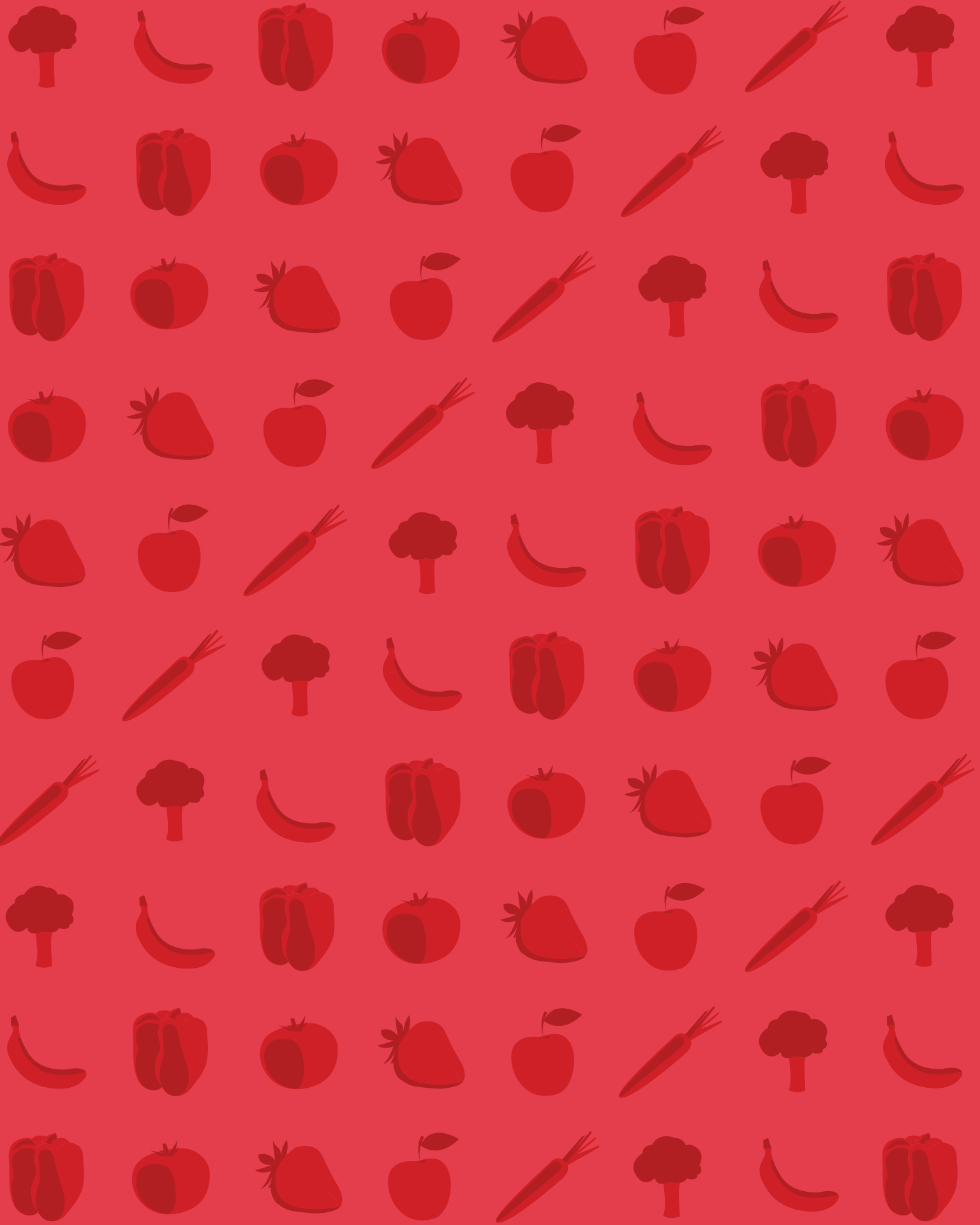


FOOD FOR THOUGHT

Introduction

According to the National Resource Defense Council, 40% of food in America is never eaten. Yet 1 in 8 Americans struggle to put food on the table. The discarded food that is sent to landfills rots and releases methane, also making it a greenhouse-gas concern. People are not conscious about the environmental effects of both wasted food and its packaging. While packaging is important for protecting some foods, it accounts for 45% of waste brought to landfills every year. There are public misconceptions about the sustainability of local and organic foods based on production practices and appearance. One of the main causes of this issue are the high quality standards for food, set by the government and society, on what fresh produce should look like in order to be fit for consumption. Fruits like apples and oranges have reached certain standards like being a specific size and superficially bruise-free. However, it is not to say that the fruits that do not necessarily fit these ideals are not edible. This leads to another cause of food waste. Food that is still edible is not getting efficiently distributed to non-profit organizations that depend on food donations in order to properly sustain those who cannot afford to spend their money on fresh produce. The fact that we are witnessing a concerning surplus in food quantities yet there is also a community of individuals who are experiencing a deficit in food donations and do not get fed on a consistent basis, there is an evidential flaw in the system that needs to be changed.



Pretty Produce

One of the dominant contributors to America's food waste problem, particularly when it comes to supermarket produce, is the issue of "pretty vegetables." All produce is profoundly scrutinized and carefully chosen based on appearance before being sold in stores. Every fruit and vegetable must fit the very stringent criterion of acceptable aesthetics in order to be placed on supermarket shelves. The United States Department of Agriculture certifies apples to be sold when they are, "mature but not overripe, clean, fairly well formed, free from decay, internal browning, internal breakdown, soft scald, scab, freezing injury, visible water core, and broken skins... free from injury caused by bruises, brown surface discoloration, smooth net-like russeting, sunburn or spray burn, limb rubs, hail, drought spots, scars, disease, insects, or other means." Most of these regulations are purely aesthetic and have nothing to do with nutrition or flavor. Customers have little information about the produce they buy, so they resort choosing based on aesthetics. Since this is the case, it is understandable that supermarkets only sell attractive produce. However, about 20% of perfectly edible, nutritious food goes to waste just because it is marginally flawed. As a result of this superficial predicament and the human obsession with perfection, nearly 1/3 of all the food served at supermarkets and restaurants goes to waste. Because consumers are taught to anticipate cosmetic flawlessness when it comes to their goods, supermarkets continuously sell perfect produce while discarding of wholesome foods with vague aesthetic imperfections.

Fortunately, there is a systematic approach to reducing food waste: if retailers begin to sell 'ugly' produce, consumers will begin to buy it. Once a new standard for produce is created—one that embraces differences in size, color, and shape, while promoting health and nutrition—there will be a drastic decrease in excess leftovers. There are many organizations that work to reduce food waste by reselling slightly asymmetrical, blemished, or discolored goods. For example, Ben Simon and Ben Chesler are CEOs of a San Francisco based business founded in August of 2015 with this purpose. Imperfect Produce is an organization that prides itself on bringing awareness to the benefits of imperfection. Their company statement is as follows: "Imperfect fights food waste by finding a home for 'ugly' produce. We source it directly from farms and deliver it to customers' doors for 30-50% less than grocery store prices. Our subscription produce box is affordable, convenient, customizable, healthy, and delicious." In order to motivate consumers to buy slightly different looking produce, the company makes their produce cheaper and more accessible than those in the supermarkets. Rochell Billow writes, "The USDA grading system is based on sizing and condition of ripeness. In other words, the factors supermarkets consider when purchasing produce are appearance, longevity, and packability—taste and nutrition don't even make the list." Produce is being rejected from grocery stores only because of flawed aesthetics; however, food should only be discarded of if it is unsafe for humans to consume. Companies like Imperfect Produce are taking the next step and rethinking ideal appearance when it comes to fruits and vegetables because the slightly scarred apples, misshapen peppers, and miniature avocados are just as fresh and nutritious as 'normal' produce.


Haitian Mango
$2.49
Tomatoes On the Vine
$2.99
Hass Avocado
3 for $5
Ataulfo Mangos
3/5

Improving Packaging

There are two ways that packaging relates to food waste — the physical containment of the item, and the way that we as humans interact with the food items in the process of packaging waste. The main role of food packaging is to protect food from damage or biological factors such as mold and insects and extend its shelf life. Ignazio Blanco, of the Journal Of Thermal Analysis & Calorimetry, explores how packaging can reduce food waste. He suggests that in order to do so, we need "packaging that provides better protection and shelf life for fresh produce as it moves from farm to processor, adoption of new packaging materials and technology to extend shelf life of fresh and processed food, [protection from] damage in transit/storage due to packaging failures, [and] improved design of secondary packaging to ensure it protects the food through the supply chain." Even though packaging is meant to protect food items in these ways, often times produce still get damaged whether it be biologically or physically by the ironically insubstantial material of the packaging. Therefore, more food is discarded and more packaging is thrown in landfills. It is not only packaging itself that can present a change in reducing waste both in food and packaging but we must also consider human involvement and interactions. The Journal of Cleaner Production published a study in which the authors analyze consumer behavior and the environmental effects with two packages of minced meat — a lightweight plastic tube and styrofoam tray. The results show that the tube is the best alternative because while there is less food waste using the tray, the tube has a longer shelf-life and therefore the amount of packaging that is thrown away is reduced. With this information in consideration, we need to either create a system for better recycling of such packaging materials or use environmentally friendly materials that have a longer shelf life in protection against mold or bugs and bruising.

Research has also proven to be effective in innovation of packaging material alternatives. In the Walailak Journal of Science & Technology, Kemija U Industriji, Technologica Acta, and BioResources, each article explores multiple possibilities for new packaging materials. The options discussed include activated carbon, poly(lactic acid)/nanocrystalline cellulose composite material, corn starch-based edible films, and pulp fibers, cellulose nanofibers, and regenerated cellulose films. These alternatives naturally degrade and have non-toxicity, absorption potential, and low cost. In addition, they are flexible, strong, and their thermal and mechanical properties satisfy FDA requirements. Furthermore, they are good barriers for oxygen, carbon dioxide and water vapor. These materials could be the future replacement for plastic wrap or mesh fruit bags. Therefore, these new inventions can prolong shelf-life as well as maintain the quality of food. These packaging possibilities are better overall for food waste and are environmentally friendly themselves. It is necessary that we invest in the implementation of new packaging for our environment and the waste we create.


FOOD FOR THOUGHT
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KIND
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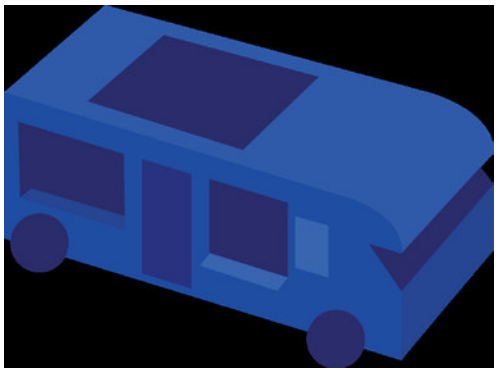
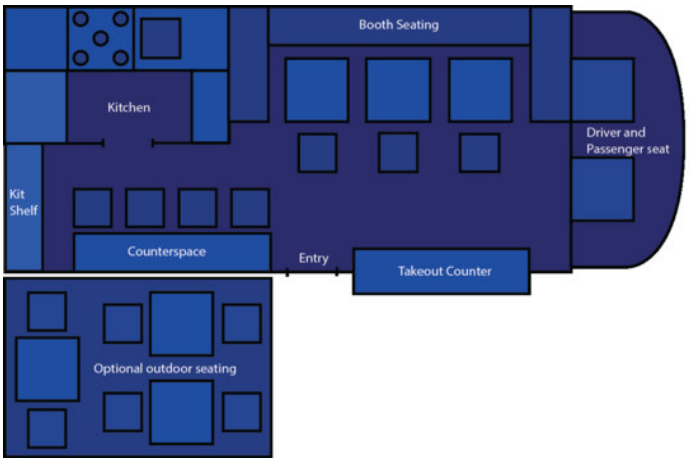
MULTI GRAIN

Food Insecurity

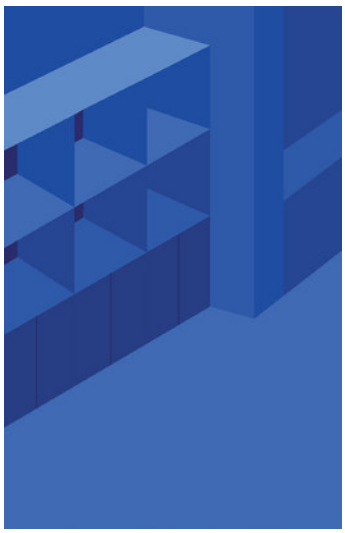
When the UN established The Universal Declaration of Human Rights, one of the factors states that “Everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including food...” While the idea of having enough food is subjective, food security is essentially the nutritional standard and caloric intake of an individual. On a global scale, one can consider developing countries to have nation-wide food insecurity. However, areas in the US could also be considered places experiencing food insecurity. Those situations are called food deserts. A food desert is an urban area in which it is difficult to buy affordable or good-quality fresh food. Neighborhoods with food sources limited to convenient stores and fast food chains most likely do not have access to produce that can properly sustain the residents living there. Individuals living in food deserts depend on donations provided by food pantries, food stamps and soup kitchens in order to have a reliable and consistent food provider. When we think of food donations, we typically think of canned goods and dried foods. While these are good options to satisfy a hungry individual who can’t afford to put food on the table, these products are not necessarily the healthiest. When soup kitchens and food pantries do receive fresh produce donations, the quantities are very limited. There are existing solutions in place to help distribute surplus food in a way that supports food donation. Organizations like City Harvest that deliver surplus food to food drives and soup kitchens like Feeding America make healthy food options more accessible. There is also a federal tax deduction for food business to encourage surplus food donation. Projects like this have definitely made a difference in redistribution.

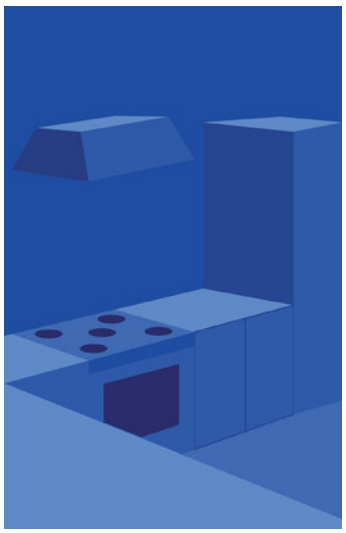
The Meal Mobile is one possible solution to the problem of food insecurity. It consists of an RV that is reconfigured to be a restaurant. This would be a more dynamic alternative to a soup kitchen where the vehicle could pick up food donations directly from businesses that are not already working with organizations like City Harvest. People can get food as takeout like a typical food truck or be able to sit down for a meal. The intention is to create a place that provides free, healthy meals for people who cannot afford them. It also lets them experience a restaurant environment that they may not be able to pay for otherwise or be able to step indoors if the weather is not great. The main version of the Meal Mobile would visit areas known to have larger numbers of unsheltered people or low-income neighborhoods. There could also be a second version that would go to places food trucks normally go, i.e. music festivals, fairs, etc. Customers would have to pay and there would not be any support kits, but all profits would go to supporting the main Meal Mobile system and it would help promote the program. The takeout counter is where people could get food and/or support kits. The barstool counter is for people who want to sit alone while the booth seating allows larger groups of people to sit together. The support kit shelf provides various necessities like tampons, socks, gloves, etc. The kitchen has the typical components you would expect: a refrigerator for pre-made products and fresh produce, stove and counter space for making meals. There would also be optional outdoor seating for when the weather is nice.




Booth Seating
Kitchen
Driver and
Passenger seat
Kit
Shelf
Counterspace
Entry
Takeout Counter
Optional outdoor seating


FOOD FOR THOUGHT
MEAL MOBILE



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Between Farm and Table

A food system is an order of operations made to get food produced from the farm to the consumer's household. There are two mainstream ways to produce food-- conventional and organic farming. Locally grown food systems are often a conventional, centralized way of producing food without the additional price of production and distribution being charged to the consumer. Organic farming is another food production system whose practices are heavily focused on preserving the environment. According to the Food and Agriculture Organization of the United Nations, "every year, consumers in rich countries waste almost as much food (222 million tonnes) as the entire net food production of sub-Saharan Africa (230 million tonnes). Being that the United States is in the top 20 richest countries when ranked by income it is essential to recognize the magnitude food waste that takes place within 365 days." Moreover, there is a misconception due to the conscience of the consumer. The conscience of the consumer when buying either organic or locally grown food acts as an intellectual guide that determines the consumers contribution to the overall system of food waste. Ben Campbell, an extension economist alluded that,"The underlying theme is that consumers understand the "dictionary" definition of local and organic, but often assign incorrect production practices to characterize the terms". Generally, individuals are ignorant of the farming practices associated with local and organic produce; this leads to the false measurement of sustainability associated with either type of food production system. David Pimentel, a Cornell University Professor released a study in 2005 that proved, "organic farming produces the same corn and soybean yields as conventional farming and uses 30 percent less energy and less water." This study illustrates that certified organic farming is able to withstand the necessary production standard for food. While simultaneously improving the relationship between sustainability and farming drastically.

The solution to the dilemma of misinterpretation would include a mobile friendly app that would aim to influence the intellectual conscience of the consumer. It will notify the consumer of where the produce are bought from, local or certified organic. The consumer is rescuing the society from food waste and finding their way through investing in the most sustainable food production possible to alleviate the society of unfavorable circumstances. This mobile application will mitigate food waste by the consumer being aware and coherent of the possible unsustainable food production the produce came from. The app will work similarly to a taxi service. All locations where produce is being sold would be on radar. Along with the foods in season and the origin of production including the farming practices associated with it.Consumers choosing to invest in a food production app will make the individual more conscious of the context of food waste and sustainability.


WHOLE FOODS MARKET
NYPD


KEEP PARK CLEAN

Process

“Food for Thought” is a project created by a group of college students, from Parsons School of Design, in order to bring awareness to America’s rapidly growing food waste problem. Focusing primarily on food waste in New York City, the authors of “Food for Thought” have created a concise and organized book laying out the major causes of food waste, along with their respective solutions. Whether it be on a personal level or on a much larger scale, the advice offered can help mend issues including “pretty vegetables,” packaging waste, and even lack of sustainability during production. Innovative and imaginative, all the original illustration and photography offers a visual aid to propel their ideas. Thorough research, successful collaborations and creative mindsets, combined with many hours of hard work has driven this passionate team to create a piece that is tangible and impressive. The general public must be aware of the effects wasting food has on the environment and economy; this book simplifies this global issue while shedding light on a very critical matter.

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