

# Breaking Beauty Standards: How Ugly Produce Can Reduce Consumer Food Waste

By: Libby Ames

Faculty Advisors: Jean Lavigne and Joe Storlien

## Introduction

One-third of the food produced in the United States is wasted each year, adding to landfills and reducing the amount of food available for consumption. On the pre-consumer end of the food production scale, one in five fruits and vegetables grown in the United States do not meet visual standards for sale, including otherwise edible produce with lumps, a disfigured shape, or discoloration. This produce is wasted because of grocery store standards for the cosmetic appearance of produce, despite the food having no nutritional defects. By wasting one-fifth of the produce grown, there is a subsequent loss of resources used to grow it, such as water, land, and fertilizers that emit greenhouse gases. To address this problem, I consider how education, CSAs, and pre-consumer use could reduce the waste of environmentally degradant inputs or valuable resources in the Twin Cities. To do this, I interviewed a local farmer, co-op buyer, and grocery store produce manager to see how cosmetic standards affect their produce waste. I found that the most necessary step in reducing the amount of produce wasted due to imperfections is to increase public awareness of how to use produce that looks different than standard produce. Once this has been accomplished, produce sales at farmers markets or in Community Supported Agriculture (CSAs) are effective at decreasing the amount of produce wasted due to cosmetic appearance.

## Research Question

There is currently no widespread effort to reduce the amount of produce wasted due to uniformity requirements in Minnesota. In order to address this problem, my research shows how the sale of otherwise discarded imperfect produce in the Twin Cities area would reduce the waste of environmentally degradant inputs or valuable resources. The data I collected points to three potential solutions: educational efforts, a CSA food share, and pre-consumer use.



*"That feeling when your [pear] arrives looking ready to star in an animated movie. Pears like this are excellent for baking or juicing, as our customers know well."*

*Imperfect Produce uses social media to educate customers about how to use their produce and normalizes its misshapen appearance.*

## Common Imperfections:

 Size	 Shape	 Scars
 Lack of Demand	 Discoloration	 Surplus

<https://www.imperfectproduce.com/why-ugly-fruit-imperfect>

## Methods

I investigated the practices and business plans of several companies that currently practice some form of "ugly" produce recovery. One company, Imperfect Produce, is active in several cities around the United States, but not in Minnesota. I analyzed their practices to determine what elements of their operations would be most successful in the Twin Cities. I supported my findings with interviews with Costa's Greenhouse, the Wedge, Co-op and Coborn's Grocery. Costa's is a farm in the Twin Cities that has experience with uniformity restrictions. The Wedge is a co-op in the Twin Cities that has to consider cosmetic standards when making purchases. Finally, Coborn's grocery store is a local store that provides a section of "misfit" produce where imperfect produce is sold. Each of these sources provided their input on what the most effective solution would be for the Twin Cities area.

## Conclusion

One potential solution to the amount of wasted edible produce in the Twin Cities area would be a system of commercial kitchen use, canning, or otherwise altering the appearance of the food in pre-consumer use while maintaining its taste. By creating a system that could achieve this, the integrity of the produce would remain and the appearance of the final product would match what consumers are used to seeing. However, this does not seem to be the most feasible wide-spread solution for the Twin Cities because chefs would have to be willing to work from a seasonal menu. A more likely potential solution is to create a CSA-like food share program, similar to the program in place with Imperfect Produce. This CSA share will include weekly boxes of imperfect produce that are distributed to customers. The produce will be sourced directly from local farmers who are unable to sell this produce otherwise because of grocery store standards. The idea behind a CSA ensures that farmers receive adequate compensation for the amount of produce they produce in a season, regardless of the amount that is not purchased by grocery stores due to imperfections or non-uniformity in appearance. By paying an upfront fee at the beginning of each season, participants in this CSA will receive fresh and unique-looking produce, as well as information on how to use their imperfect produce most effectively. In order for this solution to be feasible, there will need to be an increase in education to change the mind of the consumer to accept the idea of consuming imperfect produce.

	Education	CSA	Pre-Consumer Use
<b>Efforts towards a Solution</b>	European Union dedicated 2014 as the "Year Against Food Waste."	Imperfect Produce delivers customizable CSA shares to customers .	The Wedge uses cosmetically defective produce in their deli and juice bar.
	Prior to 2014, the EU wasted 89 million tons of food annually. After 2014, this was only down to 88 million tons annually.	Customers specify what kinds of produce, the amount of food, and how often they would like to receive their share.	Pre-consumer use alters the appearance of produce while maintaining its nutritional integrity.
<b>Challenges</b>	Imperfect Produce uses social media platforms to normalize unusual-looking produce and provide tips for its use.	This produce is sold at a 30% discount and is delivered directly to the doorstep of the customer.	Costa's Greenhouse sells peppers to Chipotle, the Wedge sells produce to schools, and both donate produce to food banks.
	Education is ineffective on its own—initiatives need implementable action to hold standing.	CSAs are ineffective when potential customers are not educated on the produce they receive or how to use it. They can create just as much food waste as conventional methods.	Pre-consumer use would require chefs that are able to adjust to seasonal influxes of produce.