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## **United States: A Multifaceted Approach for Food Waste**

It's summertime, and the library is all but empty. But it also fills a vacuum left by the end of the academic year. About thirty kids are sitting around a long reading table with plastic trays of food in front of them. This is the kind of summer feeding program schools across the U.S. have for food-insecure children left without school lunches over break. It's especially needed, given that the children live in a food desert-an area without affordable access to nutritious food. But the program directors over ordered. There are fourteen extra meals. A girl asks if she can take one home to her brother, only to find out it's against the rules. She watches as, one by one, the shrink-wrapped trays tumble into the trash.

The irony of this narrative may seem too perfect, but it's emblematic of a much larger problem in the U.S. The national rate of food insecurity is 12.5%. In my home state of Texas, that number is almost 15% (Food Insecurity). Meanwhile, somewhere between 30 and 40% of America's food supply is wasted (Food Waste FAQs). I hardly need to point out the absurdity of this fact. As a global superpower, we have more food than we know what to do with, yet we struggle to ensure our own citizens have enough to eat. The condescending attitude wealthy Americans often hold toward benevolently lifting the "less fortunate" of other nations out of poverty adds a layer of hypocrisy to the issue. The United States' superiority complex in addressing world hunger only serves to undermine the nation's efforts. It's time we take the beam out of our own eye and examine the causes of and solutions to our wastefulness.

Waste plagues the food production process at every step of the supply chain, starting at the agricultural stage. 7% of edible produce is never harvested and left to rot in the fields (How Food [NRDC]). Companies that sell "ugly" produce, such as Imperfect and Misfits Market, imply this is a result of farmers culling crops that aren't attractive. This isn't entirely untrue--farmers don't bother to harvest produce they know won't meet the high aesthetic standards of retailers and consumers. However, some unattractive crops do find their way to the table in the form of canned fruits or shredded vegetables. More agricultural waste comes from market and shipping prices that mean food would cost more to harvest than it would sell for. The estimations farmers make at the beginning of a growing season as to how much of their crop they can sell may later prove inaccurate due to market factors beyond their control. If the price of a crop drops, the expense of harvesting it could suddenly become financially unjustifiable. Farmers who would lose money on their crop are left with no choice but to abandon it.

The retail stage presents its own set of problems. Waste originates in grocery stores and other food retailers from both the supply and demand sides (Teller et. al.). Customers have high expectations of what food is supposed to look like. In response, retail parent companies often introduce arbitrary standards of product quality. Edible food is discarded because it doesn't look as appealing. Inefficient systems of storage and stocking also contribute to preventable spoilage. Moreover, the amount of food ordered in the first place is often more than the store can sell. Stores are more inclined to overstock than to look empty (How Food [NRDC]). Customers have a tendency to pass over items when there are only a few of them

left, assuming something is wrong with the remaining products. Thus, the retailer experiences pressure to consistently keep its aisles full to bursting, even with the knowledge that nowhere near as many products will sell as are present. Ironically, the very dedication to creating the impression of plentiful resources is one of the causes of food waste.

That commitment to the appearance of abundance causes waste in restaurants as well. Unnecessarily large portions result in a ridiculous amount of uneaten food, 84.3% of which is simply thrown out. A single restaurant can produce from 25,000 to 75,000 pounds of wasted food per year (Solving Food). However, restaurants know that the bad optics created by a half-empty plate are more financially damaging than buying food and throwing it in the garbage.

Finally, consumers contribute to the national rate of food waste. American families throw out from 14 to 25% of all the food they buy (Parfitt et. al.). To put this in perspective, that's like walking to the car with four bags of groceries and just dropping one in the parking lot. This is in part because of poor planning regarding how much consumers actually need to purchase. Another reason is the widespread confusion about the distinction between "best by" and "use by"dates. "Use by" dates indicate safety, while "best by" dates are a suggestion based on quality (Best). Many people throw away perishables that have passed their "best by" dates believing they're spoiled. This lack of understanding of a very basic element of American food safety policies is partly responsible for the \$1,365 to \$2,275 worth of food discarded from U.S. households each year.

Clearly, the causes of food loss and waste are multifaceted and therefore require multifaceted solutions. The problem must be attacked at every step of the supply chain. Consumers need to be educated on the ways they can reduce food waste within their homes, such as understanding the difference between "best by" and "use by" dates. Retailers and farmers need an outlet for surplus food that wouldn't cost them more to use than wasteful alternatives. Millions of Americans living in food deserts need all of that wasted food to end up on their tables rather than in dumpsters.

Companies and nonprofits are already working on implementing these measures, though mostly in isolation. The app Food Cowboy and the online marketplace Zero Percent are both systems designed to divert wasted food to charities. By providing an intuitive structure to donating, they make the consumers and retailers they serve more likely to do so by removing extra steps and making donations simple. In India, the online company Rainbow Agri works to connect consumers directly to farmers, so they can sell their surplus product locally (Solving). This allows farmers to sidestep the high aesthetic standards and low market prices they would encounter working with retailers, instead selling to people who are willing to pay more for produce grown in their own community. Government organizations such as the FSA and USDA, as well as independent news outlets like the Washington Post, are working to make available to consumers the information that would help them individually combat food waste.

Individual business decisions can also help fight food waste. Grocery stores creating a lower-priced section for items that have passed "best by" but not "use by" dates could keep unexpired perishables out of the trash. Especially if stores were conscientious about explaining to consumers the implications of such an initiative, they would not only waste less food, but make more money selling products they would ordinarily have thrown out. Restaurants should consider reducing portion size, but offering free seconds.

This would enable them to offer the same amount of food to each customer as before without committing to expending as much on that individual. Customers could rest assured they would still be served enough to eat, but would be much less likely to get eyes bigger than their stomachs. The result would be less food waste and, again, money saved on the part of the retailer.

Though they are steps in the right direction, these solutions are all limited, because they each address only one aspect of food waste at a time. To solve the problem holistically, we need an integrated solution that doesn't require each step in the supply chain to separately decide to change. I propose the Departments of Agriculture and Health and Human Services divert some of the funding currently used for grants to creating an organization that would combine the traits of Rainbow Agri--giving farmers a way to connect their extra food with the demand for it--and Zero Percent--giving retailers the infrastructure to put their wasted food where it counts. Incorporating Food Cowboy's model (diverting the uneaten food of consumers) would complete the supply chain, tackling food loss and waste at every step from farm to table. (For the purposes of this paper, I'll refer to this organization as the Domestic Food Redistribution Agency, or DFRA.)

The next stage of the process would be getting that food into the homes of people who need it. Data about the location, nature, and size of food desserts already exists. The USDA's website has a detailed interactive mapping feature to locate food deserts in any county in the U.S (Mapping). If that information could be integrated by DFRA to connect farmers, retailers, and consumers with a service that would transport the food to areas in need, the benefit to those living there would be incalculable.

One challenge is the lack of food distribution locations in food deserts. By definition, these areas lack any source of nutritious food. In some cases, this could mean there is no location in the community where most residents are accustomed to going in order to get food. In areas where no obvious distribution point exists, DFRA would need to partner with community leaders to define a neighborhood distribution center where people could access food on a regular schedule. That kind of partnership is a way to give communities and citizens agency in combating the problem for themselves, helping to prevent ignorance on the part of DFRA of the community's needs.

Such participation on the part of community members would create a sense of local autonomy and investment in the program, removing--at least in part--the stigma of unchecked and uninformed government interference. If residents of the areas this agency would benefit were allowed to take part in the implementation of the program, they would be less likely to react as if to an invasion. Nonetheless, the suspicious attitude many Americans hold toward any form of government expansion could still trigger opposition from more affluent areas nearby. The DFRA's rollout would need to be accompanied by accurate public information regarding where the money comes from and where it goes. The DFRA would be unlikely to result in a significant increase in taxes in the long term, given that the government funds used to create it already exist in the form of grants. If this information was paired with a campaign to educate more fortunate Americans about why the program is necessary, most would likely decide either that the DFRA is an example of "good government" or that it doesn't impact their own lives and freedoms enough to merit stiff opposition.

Obviously, any initiative this large would need significant funding. Part of the money problem could be mitigated, once again, through partnership. Charitable organizations struggling on their own to get donations would likely welcome the opportunity to be connected with the surplus food of America. In communities where such an arrangement is impossible, the government itself would provide the funding. The Departments of Agriculture, Health and Human Services, and Treasury have made grants available for smaller organizations to take on food insecurity (Mapping). Instead of splintering funding into isolated organizations, this grant money could be diverted into a government program such as DFRA. Any government funds needed beyond those already available would be well worth the payoff: a better life for millions of unnecessarily food-insecure Americans.

The infrastructure and funding are attainable. And the need, without question, deserves our attention. Given how much food we waste and how hungry our own people are, to act as though America has the moral authority to tell other nations how to solve their problems is insensitive and arrogant. If we really care about solving world hunger and not just about achieving sainthood by appearing to do so, we need to take a look around our own backyard. America is, after all, the land of opportunity. This is *our* opportunity, a chance to really make that true for millions of people who no doubt feel forgotten by their wealthy nation. If we are willing to put in the resources, we can do this. No child should ever grow up in a community where she watches food that was supposed to feed hungry children thrown away uneaten. Instead, she should know that there is never too much, but always enough.

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