

Bridging the Gap: A University and a Local Food Bank Turn Food Waste into Food Security

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WRITER'S COMMENT: The topic of this essay came from an assignment in my UWP journalism course, where we were tasked with writing a feature-length article on a social justice issue prevalent in California. I chose to cover food insecurity based on a prior internship I'd held working on a 12-month initiative at UC Davis that brought together researchers, community leaders, and non-profits from the surrounding Yolo County to alleviate local hunger while reducing agricultural waste. I ended my internship before the project was finished and so took the opportunity to learn how the initiative had progressed through writing this article. Over the course of the quarter, I interviewed university professors and experts on food waste, as well as non-profit directors who were all working on the initiative. I sought to uncover the problems that inspired the cross-cutting project and how those affected by food insecurity were involved in the process. I would like to thank Mr. Sasha Abramsky for his feedback while writing this article and for encouraging me to submit it to Prized Writing.

INSTRUCTOR'S COMMENT: Funke Aderonmu's essay, "Bridging the Gap: A University and a Local Food Bank Turn Food Waste into Food Security," is a sophisticated journalistic exploration of creative approaches to deal with the local crisis of hunger and "food insecurity." "Funke came into my journalism class in the spring of 2017 with a powerful desire to tell the story of hunger in one of the most fertile agricultural regions on earth. Over the course of 10 weeks, she delved deep into this topic, carrying out numerous interviews with local activists and food bank workers. The result is a layered, nuanced

story—of those who produce food, those who are hungry and those who devote their time and their energy to working with vulnerable, in-need individuals and families. In the roughly 2,000 words that make up this article, Funke’s emerging talents as a journalist shine through. I am truly delighted for her that her article is being published in Prized Writing. It deserves to be widely read.

— Sasha Abramsky, University Writing Program

On the morning of September 16th, 2016, a food science researcher, two non-profit directors and 15 women from rural Yolo County convened at a food innovation lab on the UC Davis campus to run a cooking demonstration using tomatoes as the main ingredient. For a few hours that Saturday, the group of women from nearby, predominantly low-income communities cooked tomato-based dishes in collaboration with the researcher and directors who were there to study and explore how the dishes prepared could be packaged and distributed to feed the more than 30,000 people in Yolo County who struggle with food insecurity, according to the hunger advocacy organization Feeding America.

The cooking demonstration was the high point of a 12-month, \$60,000 endeavor to transform excess agricultural produce into a viable solution to hunger in Yolo County. Named “Feeding Yolo and Beyond,” the ambitious pilot project was spearheaded in January 2016 by the Innovation Institute for Food and Health. Only a few years into its nascence at UC Davis, the Innovation Institute launched the FYAB project with the aim of leveraging the brainpower of the university in food science research and technology to alleviate local hunger. The Institute assembled a team of experts in food and nutrition led by researchers from UC Davis, with representatives from the Yolo Food Bank and local nonprofit Family Hui. If successful, the Innovation Institute envisioned that the project would serve as a model for tackling hunger throughout the state, nation, and world.

That a pilot project focused on tackling food insecurity was implemented in the agriculturally bountiful region of Yolo County is in many ways emblematic of the paradox of hunger in California. The state stands as a top agricultural producer in the US, supplying 400 agricultural commodities annually, according to the California Department of Food

and Agriculture. Yet California's 13.9 percent hunger rate is higher than the national average of 13 percent, according to 2015 statistics from the US Department of Agriculture.

This paradox of "hunger in the midst of abundance" in California is also characteristic of the food security challenges Yolo County faces. The region is home to large-scale farms and ranches that produce some of the key fruits, vegetables, nuts and grains with which California feeds the rest of the nation and parts of the world. However, very little of this agricultural bounty finds itself onto the tables of households in Yolo County, such that many of the county's communities have been deemed "food deserts." Life in a food desert limits access to fresh and nutritious food options, where the key identifier is a lack of grocery stores within a given town's vicinity. According to the US Department of Agriculture, about one million Californians live in food deserts.

So when the Innovation Institute developed a project to close the gap between the excess produce from farms and limited access to fresh fruits and vegetables for many Yolo County residents, it chose a partner that had essentially assumed the role of grocery store in a place where very few existed—the Yolo Food Bank.

"The Yolo Food Bank is both blessed and cursed to be in such an area," remarked Kyeema Zerbe, Associate Director at the Innovation Institute. Part food bank, part distribution center, the Yolo Food Bank is a step up from the typical community food bank. With over 60 distribution partners and nine direct service programs, the YFB distributes four million pounds of food annually, and in any given month it serves 17,000 households in the surrounding area.

The Food Bank recently launched the EndHungerYolo Campaign, a \$6 million initiative to build "the food bank of the future," in hopes that it will serve as a model for eradicating hunger and food insecurity in Yolo County. Already bolstered by a \$2.5 million grant from the Yoche Dehe Winton foundation, the campaign aims to expand the YFB's facilities to house a food packing space among other amenities, and to revamp its programs to include a culinary academy in partnership with the local Woodland Community College.

"If we cannot end hunger here, with this abundance of resources at our disposal, then what hope is there of ending it anywhere else?" YFB Executive Director, Kevin Sanchez emphatically asks. This drive to take hold of the resources available to address hunger undergirds the YFB's

involvement with the Innovation Institute. As Sanchez explained in a phone interview, “I’d always pondered why we couldn’t access unused produce for the food bank.” It was this desire—to be able to capture unused produce from nearby farms, with a way to store and preserve it for the YFB’s clients—that drew Sanchez to the idea of working with the Innovation Institute.

The issue of food waste is systemic to the agriculture industry. Some of the food grown on farms can get discarded for a variety of reasons, ranging from spoilage to aesthetic concerns. Since much of the produce grown on California farms has minimal amounts of chemical preservatives, it is susceptible to rotting soon after harvest. After harvest, diseases can still attack the produce, at which point it becomes imperative to discard the affected fruits or vegetables. The physical appearance of produce also plays a key role in wastage. “Sometimes things aren’t marketed because they have spots or not enough color,” explains Elizabeth Mitcham of the UC Davis Post-Harvest Lab. In such cases, the odd scar or outer blemish leads perfectly edible produce to get thrown out or composted.

“[Reducing] postharvest loss is important for sustainability,” Mitcham explains. “You spend a lot of resources [to grow food] and if the food goes to waste, all those resources have then been wasted.” The problem of agricultural waste has engendered a number of programs and policies designed to exploit this leftover produce for hunger alleviation. The California Association of Food Banks, an advocacy and membership organization based in Oakland, runs the Farm to Family program where it partners with local farmers to deliver excess produce to its 43-member food banks. The California Department of Food and Agriculture houses a similar program, Farm to Fork, which targets produce towards individuals and school districts.

At the federal level, the Bill Emerson Good Samaritan Donation Act stands as a major piece of legislation geared towards encouraging food and agriculture businesses to donate more of their excess food with limited liability. Named after a former congressman and anti-hunger advocate, the law allows for individuals and organizations to donate food and groceries to non-profits free of liability in the event of harm caused by the donated produce. The Environmental Protection Agency has also taken part in the movement through its Food Recovery Hierarchy, which regards donating extra food to food banks, shelters and soup kitchens as “the highest and best use for perishable food,” second only to “reducing

the volume of surplus food generated.”

While providing excess produce to those struggling with hunger and food insecurity might seem like a noble idea to many, the actual process of collecting and distributing this produce is what Sanchez refers to as “a different beast.” It requires coordination with the harvesting cycle of farmers and a mechanism for collecting the produce once it has been harvested. To address this challenge, the FYAB team worked with farmers to create an inventory of what crops they grew at various times of the year and when these were harvested. As for collection, they deliberated on how best to enter the fields to capture the leftover produce soon after it was harvested. The team experimented with using YFB volunteers to follow agricultural workers with giant bins in order to pick up any produce the workers rejected. Sanchez says this method was logistically less than ideal and admits that he hasn’t quite figured out what the best method would be. However, he plans to make improvements that build on what was learned from the experiment.

Once the produce is captured, getting it into the hands of those who need it presents its own set of challenges. For one, not many food-insecure Californians are obtaining their food from food banks. The Californian Association of Food Banks’ network of 40 food banks serves two million people across the state. Yet the Let’s Get Healthy California Task Force estimates that 5.4 million Californians—more than twice the number of those served by food banks—face food insecurity. This is surprising considering California has one of the lowest participation rates in the country for its food assistance program, known as CalFresh, according to the Alliance to Transform CalFresh.

Among the myriad of factors that affect individual and household use of food banks, a frequently overlooked reason is the lack of culturally relevant food choices available. Kyeema Zerbe emphasized this issue during an in-person conversation, stating that the goal of the pilot was more than just about providing food, but providing food that fits and would be relevant to clients’ communities. “They were not our research subjects, they were our research partners,” Zerbe says of the food insecure in Yolo County.

Accordingly, the FYAB team sought to tap into the knowledge of low-income residents through the help of Family Hui, a non-profit organization that provides resources and parenting support in parenting for the purpose of “creating healthy, thriving families and communities.”

Family Hui staff worked with community leaders known as *promotoras* from surrounding towns like Knights Landing and Esparto, to understand what kinds of foods were in high demand in the community and what form of food packaging would most effectively meet their needs. They collected survey data and held focus groups to gather information on what types of produce community members used on a regular basis. Wanting to match the needs of the community with what was available on farms, the team became drawn to using tomatoes as the key product for the pilot project.

The next step in the project was devising a way to package the produce that would extend the shelf life without compromising nutrition. Dr. Juliana de Moura Bell, UC Davis Professor of Food Science was charged with coming up with an effective and economical solution to this puzzle.

When it comes to produce preservation, refrigeration would be the ideal mode of choice, Mitcham explains. But the Yolo Food Bank was limited in its refrigeration storage capacity. To get around this, Dr. de Moura Bell employed pickling, dehydration, and canning techniques that would extend the tomato's shelf life and were simple enough to be done by the average person. She ultimately taught these techniques to the 15 women at the cooking demonstration, who then used the preserved tomatoes to create the four dishes that were being tested in the Lab.

"It was really fun," Dr. de Moura Bell says of her time spent with the women. She sees her role that day teaching the community simple ways to make their produce last longer, as an opportunity to enable them to have greater independence in addressing their food security challenges. What resulted from the pilot project was a stepping stone in addressing the difficult problem of hunger.

For all that was achieved by the FYAB team in a year, an additional accomplishment involved being able to work constructively as a team. "When you put a room full of strangers together it's always a challenge" Kevin Sanchez admits, somewhat jokingly.

Several months after the conclusion of the project, each of the partners have set out new plans to build on lessons learned. "It was a success in what we learned going through it, not in providing a solution," Kyeema Zerbe describes as her main takeaway from the initiative. The Innovation Institute plans to expand its study into food waste by examining the energy and infrastructure components of food storage and processing, and how this can be made more efficient.

Family Hui is taking a deeper look into community-level interactions around sensitive subjects such as drug abuse in their locality. As for the Yolo Food Bank, the organization is steadily progressing in its campaign to end hunger in Yolo County. It plans to expand current facilities to develop new community services, like a cooking academy which will be based on sustainable rather than charitable models of growth in addressing hunger. In thinking about her next steps, Dr. de Moura Bell hopes to engage UC Davis students to help design techniques for packaging and processing other excess produce from farms, such as carrots, in ways that will suit the unique preferences of various ethnic communities struggling with food insecurity in Yolo County.