

Ava Cavanaugh
Norwell High School
Ossian, IN, USA
Guatemala, Food Waste

Guatemala: Solutions to Nutrition and Hunger

Guatemala is an impoverished country with many problems regarding the population's well-being. It struggles in infant, child, and maternal mortality, malnutrition, and literacy. The Mayan indigenous population suffers more than the rest of the population, even though they make up 42% of the population. Guatemala is the single most populous country in Central America, meaning there are more people per square kilometer than any other Latin America country. Additionally, Guatemala has the highest fertility rate and highest population growth in Latin America, as well as the youngest, with over half of the population under the age of 19. There is an imbalanced distribution of food, health care, safe water, and other necessary resources. Guatemalans already struggle to provide enough food for their families, and, with the previously mentioned growth rate, it is fast becoming a losing battle. By having supermarkets and restaurants donate their unused or unwanted food to the Ceiba Tree Project, this can help solve food scarcity, hunger, and food waste in impoverished areas in Guatemala.

Guatemala has a population of 17.9 million (about the population of New York). Out of the 17.9 million, 49% of Guatemalans live in rural areas, while the rest live in urban areas. The typical family size is 4-5 people. Houses are usually made of adobe, cinder blocks or planks and tend to be roofed with thatch, clay tiles, shakes, or corrugated metal. Homes most commonly have dirt floors. Guatemala is a presidential republic, headed by a newly elected President Alejandro Giammattei and Vice President Cesar Guillermo Castillo Reyes. The climate is hot and humid in the lowlands, and in the highlands, it becomes cooler with increasing altitude. Nearly two-fifths of Guatemala's labor force is engaged in agriculture, with the same proportion employed in the service sector and about one fifth working in manufacturing and construction. The average annual wage is US \$13,260.69, or 103,277 Quetzal, or Q in Guatemalan money. Out of the land, 41.2% is used for agricultural purposes, and Guatemala's agricultural exports are sugar, coffee, bananas, fruits, vegetables, and cardamom. The average farm size in Guatemala is varied. Statistically, 2.6% of the farms over 45 hectares control 65% of the agricultural land. The average size of these farms is 200 hectares with the largest ones being 9,000+ hectares. Small farms (those with less than 7 hectares) control 16% of the agricultural land, even though they make up 88% of the farms.

For reference, Guatemala is smaller in land size than Pennsylvania. As a result, there is a lack of economic opportunity, and some remote villages have little or no access to the outside world. Typical family diets consist of local dishes like fish, chicken tongue and brains, beans, tortillas, and fruit like bananas, papayas, and jocotes. These meals depend on the availability of food. Rural families traditionally get their food from open air markets, and depending on the proximity of these markets, women may have to walk many kilometers in their traditional dress and poorly made and uncomfortable shoes to get to the nearest market. Sadly, it is not unusual for women to

not even have sandals, and these unfortunate women walk over stone-filled mountains and burning pavement.

Food waste is rampant in Guatemala, as the urban areas consume and waste food much like developed countries do, though the indigenous people disproportionately suffer from poverty and hunger much more than the impoverished in developed countries do. Unlike in the United States, there are no food drives or supermarkets to help the needy access basic resources like food. To go along with this, public schools give a minimal amount of food to the students every other Wednesday. According to Pamela English, a former principal and long-time resident of Guatemala, minimal means “that they are giving not enough to feed the family for the week; however, it is not the school’s obligation anyway” (Cavanaugh and English). Roughly half of children between 6 months and 5 years suffer from chronic malnutrition because of food waste. The urban population is not affected by food waste but are the consumers that create the food waste. In contrast, the rural population is suffering badly from food waste. They are not themselves wasteful and utilize every bit of food they have, but there is simply not enough food to feed them the amount they need. The children suffer the most because they need the food to grow.

The food waste makes people work harder to be able to buy nutritious foods and provide enough of it to feed their families. Guatemalans frequently clear the land to utilize the fertile soil. The farmers are forced to supply enough food to satisfy exportation demands as well as internal demands. Additionally, many large international companies monopolize the land and most of the food from their crops becomes exported, altogether bypassing the starving people mere miles away. Commercial plantation agriculture produces coffee, cotton, sugarcane, bananas, and cattle for exportation occurs on large estates on the Pacific piedmont, coastal plains, and the Moravia valley. In sharp contrast, the domestic peasant agriculture produces maize (corn), beans, and squash on tiny milpas (temporary forest clearings) and small farms in the highlands. However, the production of these staples lags behind population growth. For every 1,000 people, there are 22 births and for every 1,000 people, there are approximately 5 deaths. With the increasing food scarcity that comes with population growth, this number is likely to change. Therefore, the population will continue to increase, along with it the food demand. With most of the agricultural bounty shipped off to developed countries and the small farms and milpas already lagging behind the population, things will only get more dire in the coming years.

Still, this could be remedied. An environmentally conscious and sustainable solution is having supermarkets, restaurants, and schools donate their unused or unneeded food to the poor sector, in a project called the Ceiba Tree Project. This project has its origin from Mayan mythology, as the Ceiba Tree is the Mayan mythological tree of life. This is a fitting name for what the project is created to do; give life to hungry people by giving them food. The food would not be wasted, and in fact, it would be better than supermarkets and restaurants trying to sell their almost expired or damaged food to consumers who do not need it. The cost of bringing in food from outside of the country would be nonexistent since the food would already be in Guatemala. Supermarkets and restaurants (such as the popular Pollo Campero) could also advertise their role in giving back to the country. Having schools, restaurants, markets, and other businesses donate their unused food and leftovers to feed the impoverished areas of Guatemala is the best solution for hunger and food waste. The World Food Programme (WFP) would have a significant role in

the Ceiba Tree Project. The two groups would be responsible for managing and funding, as well as collecting, sorting, transporting, and distributing the food.

However, the WFP would not be entirely responsible for Ceiba Tree. Civic organizations, not-for-profits, churches, and schools could help collect the food and having fundraisers, and (with the exception of schools) sort, transport, and distribute the food. In exchange for giving their leftover food to the Ceiba Tree Project, the businesses and schools can advertise their role in the project. Moreover, customers can apply for a membership card. This membership would be accepted at all the locations and business involved in Ceiba Tree. It would round up purchases to the nearest quetzal, and the extra change would go to funding. The motives for using the membership would be the user's name entered into a weekly drawing. Each time the membership was used, the user's name would be entered into the drawing, and the more the membership was used, the higher the possibility of their name being drawn. The prizes could be free meals, coupons, and other items of value to the consumers, depending on the businesses involved. The goal of the drawing would be to get the people to use their membership more often, thus collecting more funding for the project.

Community members would be a major part in the project's success, as they are the ones who would apply for the membership card, use the card, and provide funding for the project. To be on the safe side, the Ceiba Tree Project leaders would go through paperwork for the Guatemala Tax Administration (SAT) and the Guatemalan Institute of Social Security (IGSS). According to Pamela English, anything that is done with donations of money requires authorization from the government. Ceiba Tree would depend on schools, not-for-profit organizations, civic organizations, and churches for operation. However, it is plausible to hire the unemployed to do the work when there are no organizations there to do it. The funding would also have to go to their wages. There is a significant amount of unemployment in Guatemala, and the openings would be filled quickly with eager workers.

The project would need a policy or contract with the businesses and schools with the minimum amount of food they would be providing each week. Every 6 months, the businesses could decide if they wanted to renew their contract and continue giving food to the project. In the way of distribution, schoolhouses could be used. Schoolhouses are the central part of a rural town and its surrounding areas. The collected donations would go to these rural schools (such as the public high school Escuela Normal Rural Dr. Pedra Molina in Chimaltenango or the elementary school La Escuela de El Quetzal in San Marcos), and people from the surrounding areas could come and receive evenly sorted food items handed out by volunteers. This way the project could reach a wider area quickly and efficiently. Likewise, any food left over at the location could be given to the school to help feed their students.

The transportation method could also bring in donations. Chicken buses, brightly colored old school buses called *camionetas* by locals, have at least one bus terminal in each major city in Guatemala. These buses can be rented to transport food at a cheaper rate than using a box truck. At each bus terminal that the donations are loaded at, a bin could be set up where locals can donate food to the less fortunate if they choose. Antigua locals could donate avocado, papaya, and corn. Atitlan locals could donate fish that they have caught out of Lake Atitlan. Each bus terminal could potentially eradicate the shortage of food, given the kindness of the locals. Once

the buses leave the terminal, they fan out on different routes to deliver the precious cargo to the rural areas (like Amazon Prime vans here in the United States).

Something to consider while undergoing this project is the need for traditional and/or nonperishable food that does not require modern methods of cooking. The impoverished do not have much in the way of electricity, so microwaveable meals or anything that requires refrigeration is out of the question. Since the indigenous people make up most of the impoverished population, traditional foods are a necessity. Bananas, beans, and maize are staple foods, and corn tortillas go with every meal. Therefore, the food given could be the traditional produce. However, hunger can make a person resort to eating unfamiliar foods, so prepackaged potato chips or cookies would also be welcomed.

In conclusion, there is much to be done about the food shortage and malnutrition in Guatemala. Guatemalans are already struggling to provide enough nourishing food for their families. With the current growth rate, food will only get scarcer for the impoverished Guatemalans, and the government will have millions of starving people to feed. While some efforts have been put in place to prevent malnutrition and hunger in Guatemala, they are not enough. If the country cannot tackle its malnutrition issue, how will it ever rise to be among the ranks of the developed nations? If people continue to have worry about their next meal, or fret that their paycheck may not be able to sustain their spouse and children, the current efforts are not enough. The Guatemalans now are not necessarily starving, but that will change soon if nothing is done. Must indigenous women continue to walk for kilometers under the unforgiving Guatemalan sun in their heavy cotton garments just to get food for their families? Must urban Guatemalans continue to waste food with no thought to their underfed indigenous counterparts? Businesses, restaurants, schools, and supermarkets hold the key to ending the anguish and worry of hunger and malnutrition. Having supermarkets and restaurants donate their unused or unwanted food to the slums helps solve food scarcity, hunger, and food waste in impoverished areas in Guatemala. If the Ceiba Tree Project is put into motion, Guatemalans will reap the benefits for many generations to come.

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