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Puerto Rico, Factor Number 13: Demographics

Improving the Culture around Agriculture in Puerto Rico

Samuel Johnson once said that “Agriculture not only gives riches to a nation but the only riches one can call her own.” Agriculture is the key to any successful society, as has been proven throughout history. When a society understands the importance of agriculture, success is much more likely. According to Rivera Magaly, up until the 1940s the island of Puerto Rico had an economy that was comprised of and “dominated” by agriculture. Agriculture now only represents less than one percent of the island’s economy. Puerto Rico now struggles with food insecurity. The island lives off of a food supply that is almost completely imported, making it very dependent on other nations. In order for this small island to become self-reliant, some changes need to be made. But in order to understand Puerto Rican agriculture and its problems, one must understand Puerto Rican culture and families.

According to Dr. Serpa of Lesley University, one of the largest concerns of a Puerto Rican citizen is their family. Family loyalty is taken much more seriously on the island of Puerto Rico than it is in the United States mainland. It is not uncommon to find three generations of a family living under one roof. It is also common practice for adults to live with their parents until they are married. This is different from most American culture, where young adults are encouraged to become independent from their parents before marriage. It is also uncommon to place older family members in retirement or nursing facilities. The U.S. Census Bureau reported that the average family size in Puerto Rico is 2.68 people, which is slightly higher than the 2.54 average in the states. In many households, the mother is in charge of choosing and cooking the meals and the foods that are brought into the house, according to research compiled by students of Framingham State University. Puerto Rican food is commonly known on the island as *cocina criolla* and is generally high in calories, complex carbohydrates, fats, and sodium. In Puerto Rican culture food is generally viewed as a way to relieve emotional stress or to treat illnesses. Traditional *cocina criolla* includes rice or beans and plantains, seafood, pork, chicken, or red meat. Many families have now adapted to the American diet while others continue to eat traditional Puerto Rican cuisine. Puerto Rican children are legally required to attend school between the ages of six and seventeen according to Rivera Magaly on his website “Welcome to Puerto Rico!” There are 1460 public schools and 764 private schools on the island. There are also more than 50 institutions of higher education on the island. The most recent literacy rate is 94%. On the island of Puerto Rico there are over 80 hospitals. Due to the fact that the income of many Puerto Rican families is very low, good healthcare is hard to afford for most typical or poor families in Puerto Rico.

Most people that live on the island of Puerto Rico live in an urban setting, with one third of the island’s population living in the city of San Juan. On the 3,435 square mile island there is an average of 1000 people per square mile (Marino, 32). This fact makes Puerto Rico more densely populated than any of the 50 states, and one of the most densely populated islands on the planet. This overpopulation leads to a lack of land to grow produce for the food supply. With such overpopulation it is not hard to imagine that the average wage is low and unemployment is high. The U.S. Bureau of Labor Statistics reported that the unemployment rate in the city of San Juan (the largest population center on the island) is 10.7%. The Bureau of Labor Statistics also reported the unemployment rates in other population centers on the island, such as Guayama, whose rate is 19.9%, and Mayagüez, whose rate is 13.5%. For comparison, during the U.S. economic recession that began in 2008, the U.S. unemployment rate spiked at 10% in October of 2009. The average hourly wage over the entire island of Puerto Rico is \$8.08. The basic minimum wage in Puerto Rico is anywhere from \$3.61 to \$5.15 per hour. The median yearly household income for Puerto Rican families is only \$19,624. This island with a population of approximately 3.6 million people has

41.4% of its population living below the poverty level, or about 1,490,400 people, as reported by the U.S. Census Bureau. Marino wrote that Puerto Rico's economy is comprised mostly of manufacturing (41.5% of \$93.3 billion dollar economy). Meanwhile less than one percent of the economy is made up of agriculture. This makes locally grown food and produce hard to find, especially in cities, and even harder to find this produce at a price that is reasonable for most families. According to Sadhu Govardhan less than 10% of the food consumed on the island is produced on the island, leaving 90% of Puerto Rico's food source to be imported, mainly from the United States. She also states that it is a known fact that the food supply would be completely depleted within 10 days (fresh produce) to four weeks (canned foods). This fact makes it shockingly obvious how much of a problem food security is on the island of Puerto Rico. There are also not many urban farming practices in place, which, if established, could really help to ensure the success of the entire island's food supply.

There are many barriers that face the typical family on the island. Overpopulation leads to many of the problems a typical family faces. Due to the fact that the island is so overpopulated it makes it that much more difficult to find a well-paying job that would support a family. Since the minimum wage is set so low, and it is harder to find well-paying jobs, it makes it difficult for families to purchase healthy foods and produce to provide them with adequate nutrition. The prices of produce and many foods are also higher because Puerto Rico imports 90% of its food supply. This makes it even more difficult for poor families to access healthy foods. Since most families live in an urban area, it is difficult to become involved with agriculture in a traditional sense, such as working on a farm. Due to the fact that the island is so small, there aren't many farms that actually produce crops, once again making it difficult to become involved. Overpopulation, urbanization, the economy, and the size of the island have really led to difficulty for the average family to be involved with agriculture.

All of these barriers can be grouped into one larger issue, demographics. The population and urbanization of the island of Puerto Rico has led to major problems for its agricultural production. With almost four million people living on an island that is less than 3 times the size of the state of Rhode Island (Population 1.05 million), overpopulation is a large issue for agriculture in Puerto Rico. This fact, coupled with the fact that Puerto Rico has a mountainous interior, whose land is not tillable, and the large majority of the population lives in urban areas, creates major problems or barriers to agricultural productivity. While the population of the island is slowly dropping over time and the demographics are improving overall, due to the fact that many people are moving from the island to the United States mainland, the problem of agriculture in Puerto Rico will continue to stand still as long as the next generation is not taught the importance of agriculture and farming in their communities. Puerto Rico is encountering even more difficulty with agriculture because the current farmers are growing old and there is no one to replace them to continue the business. Even as the population decreases the need for education stays relevant to Puerto Rico's agricultural and economic success. If the trend of young Puerto Ricans not becoming involved in agriculture continues, the agriculture that is still in Puerto Rico will continue to collapse.

There is still hope for Puerto Rico's agricultural industry. There are already several local projects in place that could have a large impact on Puerto Rico and its agriculture and there are easily ways for everyone in the local communities to become involved and help secure a food supply for the island. Communities throughout the world have begun growing community gardens to provide fresh produce to those who live there. This is a feasible idea for many different communities on the island. These gardens can easily be incorporated into an urban area by planting them on rooftops. These gardens can be run by volunteers, eliminating the need for wages, and the gardens could provide the produce to local families. These community gardens could be scaled up in more rural areas to create community or joint farms. This would allow farmers to share equipment, which would help to save them money. This would also give farmers the opportunity to collaborate and share their knowledge, leading to future success. There are also urban farming techniques, such as vertical farming, which could not only provide food to urban areas but also supply jobs in areas with high rates of unemployment. If all of these ideas were to be promoted and

supported by the government of not only Puerto Rico but also the United States, it is very likely they would pick up speed quickly and become very successful. The creation of more local projects could help support communities and push them to care about their own food supply. One local project that, if scaled up, could really be beneficial to Puerto Rico's agricultural industry is the Agroecology project. This project creates educational videos to teach farmers methods of growing their crops which will prove more effective and helpful in the long run. With financial support from the government this project could grow to teach about urban farming techniques, and even get out into the communities to help set up gardens or show how to eat healthy on a budget. Another local project is the FFA. Known to most as the Future Farmers of America, this is an intra-curricular youth organization in high schools and colleges in the United States that incorporates agriculture education into a student's schedule. Students in FFA could become involved in organizing community gardens and teaching the public about agriculture and nutrition. FFA is helpful not only to the community, but it also teaches leadership skills which translates into educated youth that can step up into leadership roles in communities and government to help make effective decisions for the future of Puerto Rico's agriculture industry. The typical family can become involved in these solutions in a variety of ways. The entire family can volunteer in community gardens. The adults can become involved with advocating for agriculture with the local government and teenagers in Puerto Rican families can become involved with FFA, if it is offered at their school, or they can advocate for agricultural education at their school. Community involvement and passion will lead to success for any of these suggestions.

Even though Puerto Rico is a territory of the United States, one of the leading powers of today's world, it still suffers from food insecurity. While there are many causes of food insecurity the overpopulation of the small island could lead to its demise, if changes are not made. As shown in this paper, there are several solutions and projects that could help lead to a better future for Puerto Rico and its agriculture industry. Participation in these programs by the population of Puerto Rico could lead them to not only "riches to their nation," but "riches they could call their own."

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