

Title: Sobreviviendo a Floreciendo: Insights on Urban Agriculture in San Juan, Puerto Rico From The Women Immersed

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Events such as hurricanes, earthquakes, and other drastic events can change many things including food practices in a geographic area. In Puerto Rico, these drastic events include the shift to a manufacturing economy, political turmoil, and Hurricane Maria. This paper seeks to understand how urban agriculture has been used by women to ameliorate the effects of these drastic events and what their experiences are.

Puerto Rico is an archipelago in the Caribbean Sea. It is a self-governing Commonwealth of the United States (Mathews, Wagenheim, Wagenheim, 2020). In 2019, it was estimated that 3,193,694 people lived in Puerto Rico. Puerto Rico has a large urban population with 10 percent of all residents living with the San Juan Municipality (United States Census, 2020). This large urban population exerts pressure on the agricultural food system, as well as other industries. Currently, Puerto Rico imports an estimated 85 percent of their agricultural products (Robles & Sadurini, 2017). Past economic development focusing mostly on manufacturing caused many Puerto Ricans to move from the countryside to cities for jobs, resulting in an increase of food supply imports. This makes Puerto Ricans incredibly vulnerable to any changes in their ability to obtain food if there is any damage to airports or docks; which was the case in 2017 when Hurricane Maria made landfall in Puerto Rico (Irizarry-Ruiz, 2016; Dorsey, 2017; Meyer, 2017). News coverage after Hurricane Maria showed Puerto Ricans standing in long lines at grocery stores. This lived experience by Puerto Ricans ignited a desire to increase agricultural production on the island, however there was already a group of people that were doing this: women urban farmers.

Urban and peri-urban agriculture is defined as the growing of horticultural trees, food, other agricultural products, and raising livestock within the built area or the fringes of a city (Resource Center for Urban Agriculture and Forestry, n.d.). Urban agriculture is a system that people living in urban areas use to increase their access to fresh, healthy, and safe food. It is unclear how many globally take part in urban agriculture however, a report by the Food and Agriculture Organization (FAO) found that, in the majority of projects they observed, most of the participants were women, even if the projects were geared to the community at large (2014). Women-led urban farms totaled 90 percent in Managua, 86 percent in Haiti, 70 percent in Belize City, and 25 percent in Quito (FAO, 2014). Traditional gender roles dictate that women must prepare food for their households. This might be the reason for the large rate of participation among women in UPA, to ensure their household has enough food that is culturally appropriate. It is widely known that the majority of humans taking part in urban agriculture are women (FAO, 2014). However, not enough is known about *why* the majority of the humans taking part in this activity are women. Specifically, what are the experiences of minority women: Latinas, Black women, Indigenous women, women in the developing world, and low-income women. As scholars, we don't understand their experiences, the benefits and challenges they encounter, the significance of the urban farms, and what is or could be lost in the event of a natural disaster. This research seeks to uncover the experiences of women in San Juan, Puerto Rico involved in urban agriculture.

The research in this paper took place on urban farms throughout San Juan, Puerto Rico from July 11th, 2019 to August 9th, 2019. The lead author, Ana Zepeda, conducted semi-

structured in-depth interviews with nine women with interviews lasting between 45 minutes and one hour and 45 minutes. Purposive snowball sampling was used to identify women, who were all distinctly involved in different areas of urban agriculture in San Juan. The interviewees were asked 13 open-ended questions around the topics of: urban agriculture, disaster response, food resiliency, food sovereignty, changes in the food system over time, and community support.

Our findings demonstrate that urban agriculture does create changes on food practices by women and the communities. Most women indicated that they acquired most if not all their fresh produce, such as bananas, plantains, cilantro, mango, and greens, from the urban farms. Some women had developed an acquired taste for the produce grown in the garden. For example one woman said that to her the spinach at the supermarket tasted like gasoline but the spinach she grew agroecologically in the urban garden had better flavor. We also found that many of the urban farms also ran programs for youth to become familiar with growing their own food. Women interviewed said that they were not only growing culturally relevant fruits and vegetables, but also growing products that were not part of their typical diet. By doing so women were not only exposing children to new produce, but also perhaps constructing a taste palate in these children that prefers fruits and vegetables. Furthermore, by growing their own products, women were resisting the imported food system in Puerto Rico.

Because only 15 percent of the food consumed in Puerto Rico is grown locally, we can assume that urban agriculture contributes to this small percentage (Robles & Sadurini, 2017). The findings of our study further illuminate the need and importance of urban agriculture. Urban agriculture provides some of the only locally grown produce, specifically in urban areas and in neighborhoods of lower socioeconomic backgrounds. Furthermore, urban agriculture products can be sold to generate income for the community garden or for women in general. This is especially important in Puerto Rico, where women have higher rates of food insecurity and more likely to be heads of households (Durana, 2017; (Santiago-Torres et al., 2019) Finally, as we sought to uncover *why* women engage in urban agriculture, we found that the overwhelming presence of women in urban agriculture in Puerto Rico is changing the narrative that only men are involved in agriculture. We asked women if they liked urban farming and what they liked about it. The purpose of this question was to understand if they were doing it out of necessity and perhaps didn't like it at all. We learned that all of the women really enjoyed urban farming. Some said they felt as if it were a therapy, many said that they enjoyed bringing something to life. Due to the lack of funding from the government most huertos are ran by a farm manager that volunteers their time. There is only one in which the farm manager receives a wage. The farm manager must recruit volunteers to help with the labor on the urban farm. In an ideal world these volunteers would be from the community. However, over time huertos saw the number of volunteers decrease over time and even more after Hurricane Maria. In Gender Studies, we often talk about the Second Shift that women work, in which women leave their paid labor job and come home to continue to feed their families, clean, and take care of children (Russell Hochschild, 1989). However, we must now also consider the third shift of labor many women in lower-income countries do: the labor that women do to provide their families with food or better-quality food (Som Castellano, 2016). While, local consumers are eager to buy produce grown in Puerto Rico, market insecurity and smaller production makes this difficult for urban farmers. Local *huertos* sell their produce at much lower prices than the grocery stores. If there was more government support available for these huertos the socioeconomic benefits could perhaps be life changing. For example, farm managers would be able to paid a wage, they could hire help on the farm, they could sell products to communities and restaurants. Many women

described that the *huertos* are very important for the community, as a space for food cultivation and production as well as community gathering center. After Hurricane Maria, these spaces became important because they were spots where information was exchanged and where locals knew they could obtain necessities such as food and water. Many communities would also cook big meals and distribute to neighbors. Women stated that this part after Hurricane Maria was very significant to them and they were able to see how their communities came together to help one another. One woman detailed how the huerto in her community is used to celebrate holidays and birthdays. She added that a lot of the community members show up for these events. In addition the collective cooking of meals was common during the 2019 protests in Puerto Rico, where one of the main critiques was the archipelago's status as a colony and its dependence on the United States. Through urban agriculture, women in Puerto Rico are creating a resistance to the import-oriented agricultural system their leaders continue to perpetuate and support.

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