Building Food Sovereignty in Puerto Rico Through Innovative, Sustainable, and Resilient Agriculture
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Introduction

In 2017, Puerto Rico was struck by two hurricanes within two weeks. On September 7th, Hurricane Irma was a category 5 storm when its eye passed close to the island. Shortly after on September 20th, as Puerto Rico was still recovering from widespread power outages and environmental damage, Hurricane Maria made landfall as a category 4 hurricane. Wind gusts up to 155 mph and over 35 inches of rainfall were recorded.

In the aftermath of Hurricanes Irma and Maria, food insecurity was rampant. The storms directly affected the availability of nutritional food on the island. Puerto Rico had lost 37.5% of its farms and docks were closed for over five days. Food imports increased from 80% to 95%. Despite an increase of food imports, dock closures disrupted food distribution and reduced citizens access to necessary and nutritional food.

Since then, efforts to mitigate the effects of natural disaster on Puerto Rico’s agricultural sector and to establish food sovereignty on the island have increased. These efforts have translated to innovative, sustainable, and resilient agricultural solutions and practices.

Medicinal Garden

OSU students and staff designed a community medicinal garden to be completed on the InterBarranquitas campus. University and community members were consulted to design a culturally significant community centerpiece.

Everyone broke out into groups with designated tasks (irrigation, laying plant beds, etc.)

Through hard work and dedication, OSU and InterBarranquitas students and staff got the foundation of the garden laid. The garden was inaugurated on the morning of March 31st, 2024, with the planting of the first plant by Dr. Negrón, chancellor of the university.

“Vivamos en un mundo lleno de iguanas y fuego intensa. Este es el primer jardín comunitario en Barranquitas.”
- Juan A. Negrón, Ph.D., Chancellor of InterBarranquitas

Plantain Planting

Nestled in the mountains near Barranquitas, Jose Rafael Medina Fuentes and Blanca I. Cordova Fuentes own and maintain a farm that produces plantains and raises chickens.

OSU faculty and students set out to help them clear grass to plant 30+ plantain trees. Even with the help of over 22 of us, Jose Rafael never stopped working among us, showing us true resiliency and hard work.

Overview of Projects and Community Involvement

Dr. Alok Arun’s plant biotechnology lab set out to establish innovative plantain cultivation practices after the loss of plantain trees caused by Hurricanes Irma and Maria. By splitting a single plantain plant into smaller plants and growing those individually, his lab was able to give back to the community of farmers that had lost so much. Selling these cultivated plants at a reduced cost helped local farmers get back on their feet and established trust between them and institutions.

Campamento Caribe is soon to be the largest hydroponic farm in the Caribbean with the goal of bringing fresh and healthy lettuce to local families. Puerto Rico is very reliant on importation of foods. In transit, many leafy greens lose their integrity. This along with the threat of invasive iguanas and intense heat to traditional lettuce farming brought about this company. Campo Caribe aims to bring the production of lettuce back to the island, establishing food sovereignty.

Discussion & Reflection

This enriching learning experience was filled with opportunities to grow as a student and person. Building the first medicinal garden in Barranquitas, planting plantains cultivated by a biotechnology lab, and visiting an innovative hydroponics facility showed us the true heart of resilience: community.

Having a community garden that families can feel belonging in establishes a connection to agriculture, encouraging people to grow their own produce. Knowing the importance of feeling connected to agriculture, Jose Rafael was generous enough to lend us the very tools we used to plant his plantain trees to aid us in the completion of the garden. Those are the same tools we used to plant plantain trees on his farm.

Community is key to building resilience, especially when it comes to establishing food sovereignty in Puerto Rico. Through hard work, institutions, companies, and farmers have employed innovative solutions to create sustainable and resilient agriculture along with food security on La Isla del Encanto (the Island of Enchantment.)

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