

IL Crop Improvement Association

Puerto Rico farm provides services for plant breeders and seed producers



The Illinois Crop Improvement Association has operated a farm in Puerto Rico since 1985. (Chris Lusvardi photos)



Juana Diaz, PR • 787-260-0022
www.ilcrop.com

Key Personnel

- Lizandro Perez, station manager
- Emmanuel Lasalle, farm supervisor
- Francisco Perez, trait introgression supervisor
- Irma Alvarado, assistant quality manager
- Eddie Rivera Torres, supervisor
- Doug Miller, CEO
- Hannah Hudson, operations manager

Company Profile

- Over 200 acre winter farm in operation for 35 years.
- Provides services for plant breeders and seed producers to achieve faster genetic gain, increase trait introgression, and speed new seed innovations to market faster.
- Supports seed companies by offering seed certification and phytosanitary inspections.
- Crops include soybean, corn, sunflower, cotton, peanut, sorghum, and canola.

Operating a farm in Puerto Rico, as the Illinois Crop Improvement Association (IL Crop) has since 1985, has its advantages.

The growing conditions on the island are ideal due to the region's warm climate, rich soil, and drip irrigation system, Station Manager Lizandro Perez says.

While the island has faced challenges in that time, particularly in recent years, Perez notes Puerto Rico offers one of the best options for winter work for plant breeders and seed producers. Knowing how to overcome the challenges is part of how he says the Champaign, IL-based company's 35 years of experience in Puerto Rico can be a benefit.

"We have experienced staff who can handle projects for our clients," Perez says. "We've been able to adapt to the seed business to keep going."

Operational Benefits

According to Perez, the size of the IL Crop farm in Puerto Rico has varied over the years, depending on the needs of customers including breeders and seed producers.

The farm, located on 200 acres near Juana Diaz, provides a space for year-round research opportunities, he adds.

Puerto Rico offers the chance for at least two growing cycles per year, un-

like other parts of the United States and Canada. Furthermore, the climate in Puerto Rico is particularly useful for winter growouts between November and February, Perez says.

"We will conduct research all-year round," Perez explains. "Sometimes we'll spend the summer making modifications so we're ready to go for planting season."

When it comes time for planting to begin, Perez knows how significant it is to get the seed in the ground.

"In this business, one or two days are very important," he says. "If we lose the planting window, it can set us back over a week."



Station Manager Lizandro Perez in January on the farm near Juana Diaz, PR.

Other benefits of having the farm in Puerto Rico include being able to operate like in other parts of the United States, which Perez says makes the movement of seed easy.

"We can move seed in and out of here efficiently," he says.

Plus, Perez adds, the standards for regulations of labor and materials are the same. He says Puerto Rico has a large amount of agricultural labor expertise.

Farming Services

Perez explains IL Crop staff works with their clients to provide services throughout the growing season, from planting to harvest, in addition to working with clients with continuous programs throughout the year.

The farm also supports other seed companies on the island by offering seed certification and phytosanitary inspections, he says.

The Puerto Rico farm started as a site for post-control growouts of U.S. seed corn produced under the Organization for Economic Cooperation and Development (OECD) Seed Schemes. Soon after that, plant breeders asked to do nursery seed production and the operation grew from there.

Over the years, the IL Crop farm has been used primarily for corn, soybean, sorghum, sunflower, peanut, and a wide range of other crops including broomcorn, cotton, cowpea, drybean, kenaf, pearl millet, peas, popcorn, and spring grains.

Each year provides an opportunity to try growing different types of crops. For example, Perez points out canola was planted this year for the first time.

"We're learning from this cycle," he says. "Now we know more about how canola grows here."

Additionally, Perez says part of the job for IL Crop staff is to make sure



Netting is placed over crops such as sorghum to protect against insects and birds.

weeds don't grow and they'll use various methods of control to make that happen.

"We need to keep the ground clean and clear of weeds," Perez says.

Although the amount of daylight during the winter is shorter than during the summer growing season in the Midwest, Perez says floodlights are used to extend the amount of light on certain crops to keep them flowering. They want to make sure plants with different maturities are covered, he says.

Planting and harvesting equipment is used on the farm and stored in an area near the office, Perez says. The office includes a conference room and a working area with printers and paper items.

Buildings on the farm also provide space for cold storage of seed samples and pesticide storage. A lyophilizer, or freeze dryer, is available for tissue samples.

Perez says the farming services IL Crop staff provides continue through harvest. He says crops in the nurseries are harvested, while those used for growouts aren't typically harvested.

Assisting Plant Breeders

University of Nebraska-Lincoln plant breeder Carlos Urrea says planting crops at the IL Crop farm and other sites in Puerto Rico allow him to speed up his



A drip irrigation system and floodlights are among the technology used to help grow crops on the farm in Puerto Rico.

dry edible bean breeding program.

One benefit he finds is being able to conduct a shadow breeding program between Nebraska and Puerto Rico.

"It makes a big difference," Urrea says. "We can make progress in our program and release new varieties."

Urrea says growing dry edible beans at the IL Crop farm allows him to select varieties with more disease resistance, especially ones related to heat and drought stress.

Working Through Challenges

Some of the most recent challenges to face the operation started when Hurricane Maria hit Puerto Rico in September 2017. Perez says the farm was without power for over two weeks following the storm and lost all communication.

"We did learn from it," Perez says. "Some customers decided not to send crops that year, but we did have a season."

Some of the changes put in place after the hurricane proved to be useful when a series of earthquakes struck the island in January, Perez says.

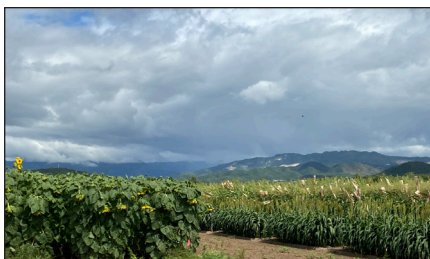
While the earthquakes were happening, he says the farm would lose power for extended periods of time as the island's fragile infrastructure system was once again exposed. But the farm used generators installed after Hurricane Maria to keep the irrigation system running and office functioning.

Since the earthquakes, Puerto Rico has been further impacted by the ongoing restrictions during the COVID-19 crisis. While Puerto Rico has enacted significant restrictions and most businesses have been closed, the IL Crop farm has been operating under an exemption along with the rest of the seed industry on the island.

Chris Lusvardi, editor



Plant breeders and seed producers use the farm for winter growouts, nursery seed production, and other research activities.



A variety of seeds, including sunflower and sorghum, are grown on IL Crop farm in Puerto Rico. (Chris Lusvardi photos)