Improving Quality Coffee of Puerto Rico and the Impact of Irma and Maria Hurricanes on Coffee Production and Its Potential Effect on Education in the Control of CBB

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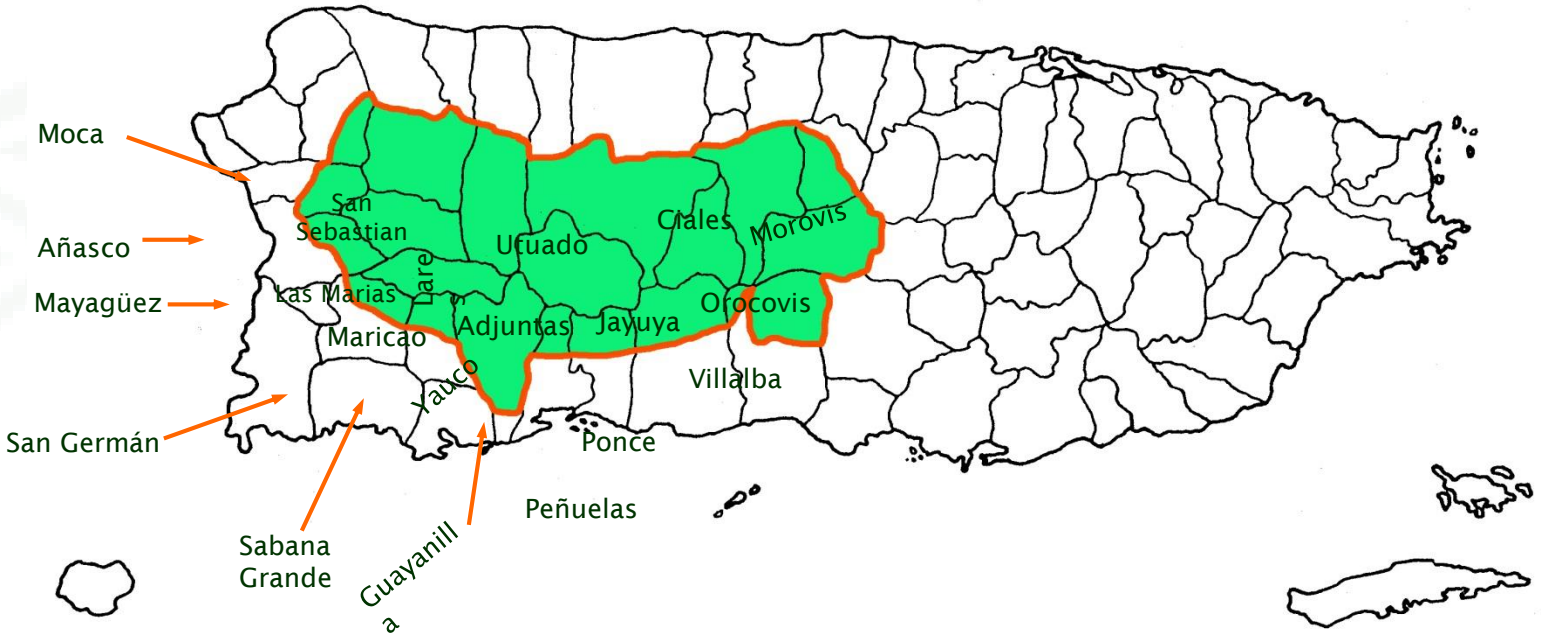
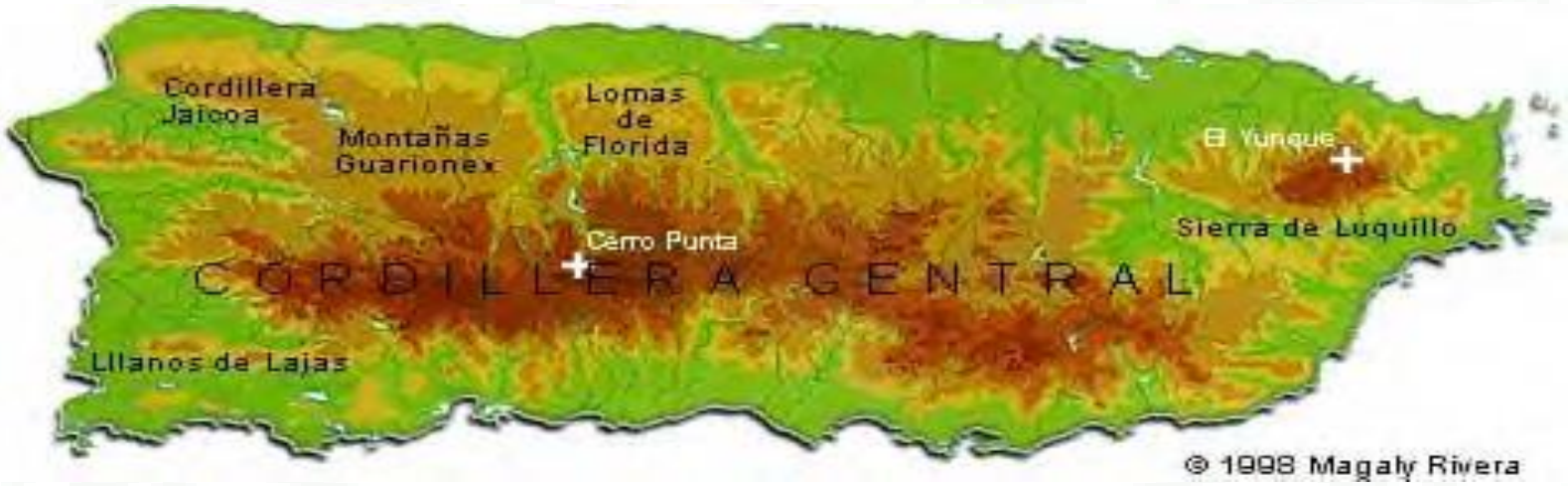
Areawide IPM for Coffee Berry Borer in Hawaii and Puerto Rico

CRAM'S PHYSICAL NORTH AMERICA





Coffee Production Area
Puerto Rico

Puerto Rican Coffee
Economic and Environmental Impact

- Production region covers 22 municipalities in the west-central mountains
- The region has limited economic development alternatives and a high proportion of people with social and economic disadvantages, living below the poverty level
- Directly and indirectly supports more than 200,000 residents
- Multiplier effect on the economy
  - **$1.0 at farm level → $3.4 in PR economy**
- Avoid the exodus of rural population to urban areas
- Coffee as secondary forest preserves the environment and watershed

Production Challenges

- Increases in operating costs
  - Access to capital
- Reduction in subsidies and incentives
- Increase and / or make more efficient labor for harvest
- Weather events and climate change (hurricanes , tropical storms and droughts)
- Pest control
  - Coffee rust
  - **Coffee berry borer**

Production Challenges for Coffees Produced in the USA Puerto Rico and Hawaii have the higher costs compared with the rest of the coffee producing countries

- **Compliance Labor and Environmental Regulations**
  - Compliance Federal and State Labor and Safety Regulations
    - Social security, unemployment benefits, and safety regulations
    - Minimun salaries
  - Compliance Federal and State Environmental Regulations
    - Pesticides regulations (use and residuals)
    - Environmental regulations for processing and roasting
      - Water, soil and natural resources conservation

Production and marketing strategies to overcome limitations

- **Hawaii**
  - ➢Production and Marketing of Quality Coffees to Higher Price Markets
  - ➢Certification of Origin: Kona Coffee
- **Puerto Rico**
  - ➢Reemphasized the importance of rediscovering the quality of local beans
    - PR main exporter of coffee to the European market in the 18th and 19th Centuries
  - ➢Due to our similarities taking the Hawaiian

Coffee strategies as a reference

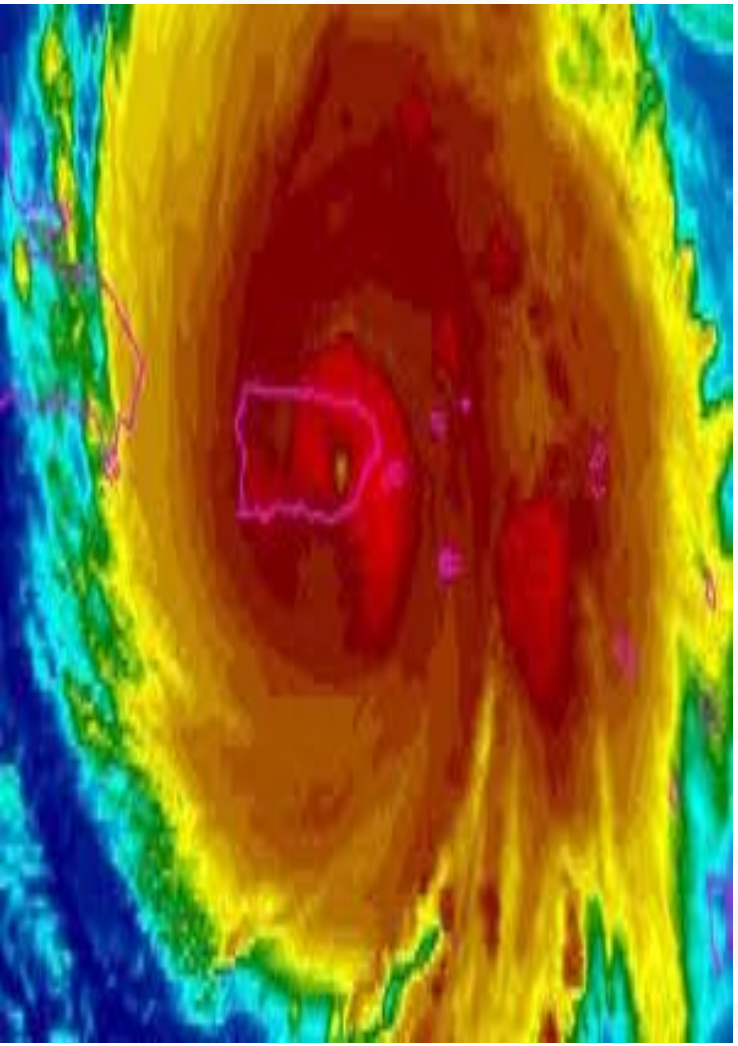
PR Strategies Towards the Production of Quality Coffee

USDA-AMS-FSMIP Project: Improving Quality Practices Knowledge to Access the Specialty Coffee Markets

- Increase the production of quality coffee that might give access to markets that pay higher prices, increasing coffee stakeholder's profits
- Since 2016, the UPR AEXS and the Agricultural Extension Service (AES), and the Department of Agriculture of PR have created a group specialized in the production and elaboration of quality coffee ***Los Cafetaleros de Puerto Rico*** that has been training coffee growers, and stakeholders
  - **Emphasis on CBB control to avoid negative effect on cupping analysis**

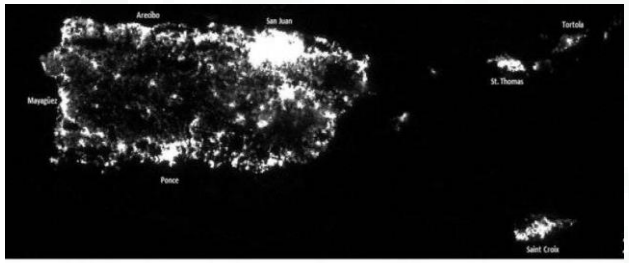
Los Cafetaleros de Puerto Rico
Specialized Group in Quality Coffee Production

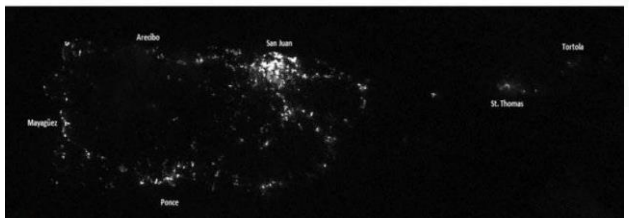
Impact of Irma and Maria Hurricanes on PR



- Hurricanes were identified as one of the challenges for the coffee industry of Puerto Rico.
- Unfortunately we had to face this challenge again. September 2017, Hurricanes Irma and Maria impacted Puerto Rico, severely damaging the infrastructure of housing, transportation, and communication, electric power generation, access to food, fuel, and potable water.

Impact of Irma and Maria Hurricanes on PR





Impact of Irma and Maria Hurricanes on PR

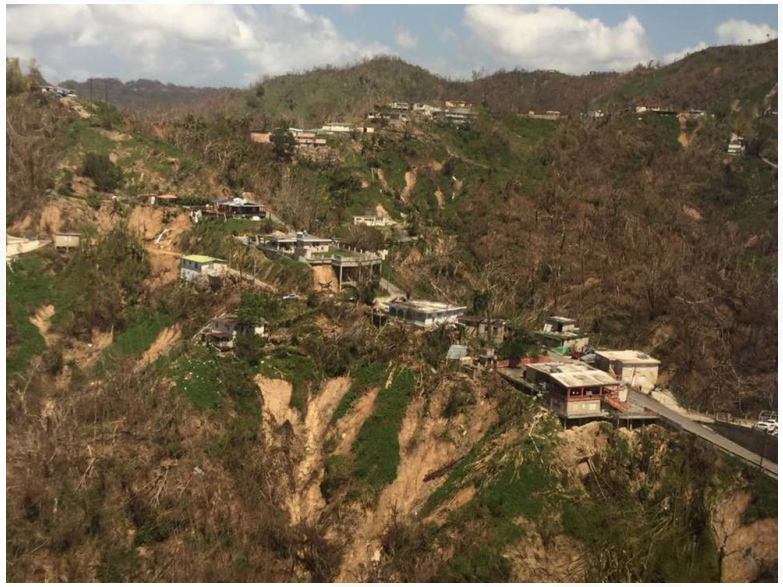
Before

After

- The agricultural sector and the natural resources of soil, water, flora, and fauna were also significantly impacted.

Impact of Irma and Maria Hurricanes on PR Coffee Production Region

- The coffee producing area located in the mountains of the island received one of the greatest damage



Impact of Irma and Maria Hurricanes on PR Coffee Production Region

The recovery of coffee production will be accompanied by the establishment of new plantation

Rebuilding Puerto Rico and the Coffee Production Region

- The specialized coffee group has begun to offer farmers training in the recovery of coffee plantations.
- This also provides the Agricultural Extension Service and Agricultural Experiment Station of the UPR-Mayagüez with an opportunity to reinforce the farmers' education in:
  - Production of quality coffees
  - Establishment of other crops of short productive cycles as supplementary income
  - CBB control practices.

Rebuilding Puerto Rico and the Coffee Production Region

- Despite the losses suffered because of hurricanes when we ask farmers if they are going to continue producing coffee, their answer is **YES, we will plant again**
- Beyond our professional responsibilities we have the commitment to emotionally and materially support farmers to the extent possible by the resources we have available

After the Hurricane: What we learned

Although it is difficult to prepare for such a catastrophic event we recommend the following previous measures:

1) Protect in a place with wind-resistant infrastructure coffee seeds
2) Register in USDA-FSA to facilitate request for emergency aid available through USDA

3) Put in a safe place the important documents like identification and titles of ownership of the farm
4) Creation of a financing fund for Farmers

USDA's emergency aid programs are paid by reimbursement (do first – payment after certification), and farmers will have non or little investment capital since savings were spent for home repair, and food and fuel purchases

After the Hurricane: What we learned

Once the catastrophic event has passed:

1. Take photos as evidence of damage
2. The State and Federal Agencies do not have locally enough personnel to provide aid to the farmers so it is recommended:
   a) Make a plan of action before the catastrophic events that contains
      1) Transfer of personnel from USDA agencies to the affected area to support locally personnel
      2) Extend the closing dates of the emergency and regular programs since farmers will not request aid in the short term if the communication infrastructures were affected by the event

Project Areawide IPM for Coffee Berry Borer in Hawaii and Puerto Rico

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UNIVERSITY OF HAWAII AT MANOA

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College of Tropical Agriculture and Human Resources
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Recinto de Mayagüez

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CENTER FOR EXCELLENCE IN QUARANTINE & INVASIVE SPECIES
at University of Puerto Rico

Part of the Hawaii and Puerto Rico CBB group meet on Puerto Rico to discuss the status of the US Coffee industry, CBB impact, and this joint proposal. San Juan, PR 21 Sept 2016

Mahalo

Gracias

Thank you