CARDI signs agreement with UWI to introduce innovative technology to monitor coconut tree pest

Coconut seed gardens to improve supply of planting material to farmers

Re-imagining agriculture for sustainability in Jamaica

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igned, sealed and delivered. The project entitled ‘Innovative Early Detection Pest and Disease Management System using IoT® sensor in the Real-Time Digital Monitoring of South American Palm Weevil for Conserving Coastal Coconut Palms in Select CARIFORUM Countries’, has been given the go-ahead. The agreement between CARDI and UWI, for the Institute to implement this project was signed in March 2023 by Executive Director, Ansari Hosein.

The project will introduce never before used technology in the Region – a sensor which facilitates early detection of the larval stage of the South American Palm Weevil (SAPW) on coconut palms. The SAPW is a pest of major economic concern as it negatively impacts coconut production and is also a carrier for the nematode which causes Red Ring Disease. Unfortunately, the SAPW is only detected when infestation is advanced and symptoms such as tree mortality are visible. At this stage, mitigation actions are often uneconomical.

“The project will introduce never before used technology in the Region – a sensor which facilitates early detection of the larval stage of the South American Palm Weevil (SAPW) on coconut palms.”

Coconut is one of the main crops found growing along the Caribbean’s coastline and contributes to its aesthetic, socioeconomic and environmental value. Due to its ability to survive in marginal and fragile environments, coconut production serves as a source of income and employment for small holder farmers. It also plays an important role in coastal protection through soil stabilization, and protection against strong winds, storm surges, flooding and hurricanes. The tree also sequesters carbon and is important in climate change mitigation.

HIT RESET Caribbean is funded by the ACP Innovation Fund, OACPS Research and Innovation Programme, a programme implemented by the Organisation of African, Caribbean and Pacific States, with the financial contribution of the European Union. It is being jointly implemented by the University of the West Indies, Caribbean Disaster Emergency Management Agency and Antonio de Kom University of Suriname.

This intervention is timely notes Project Manager, Dr. Annika Minott as an aging tree population and hot drier climates will exacerbate the impacts of the SAPW and disproportionately increase the vulnerability of coastal communities.

This is one of 13 innovative projects under the Harnessing Innovative Technologies to support Resilient Settlements on the Coastal Zones of the Caribbean (HIT RESET Caribbean) project. It will be implemented in 9 coastal communities in Trinidad and Tobago, St. Vincent and the Grenadines and St. Lucia.

In the short term the project is expected to improve the well-being and livelihoods of residents by supporting the development of resilient coastal settlements through the use of technology.

Coconut seed gardens to improve supply of planting material to farmers

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nder the European Union (EU)/CARIFORUM funded Alliances for Coconut Industry Development project, CARDI established 7 coconut seed gardens to boost the supply of planting material to farmers in Trinidad and Tobago. Four seed gardens were established at: The Chaguaramas National Seed Bank, Rio Claro Demonstration Station, Research Station Centro and Marper Farms Propagation Station. These sites, in Trinidad are managed by the Ministry of Agriculture, Land and Fisheries (MALF). In Tobago, 1 seed garden was established at the Kendall Farm School. Two gardens were also established on private holdings.

“This initiative supports MALF’s coconut rehabilitation and replanting development programme.”

Twenty seven superior mother palms for the dwarf and tall varieties were identified and characterised across coconut growing areas in Trinidad and Tobago. The criteria used for selection of the mother palms included: high water content (at least 500 ml per nut), more than 15 nuts per bunch with each tree producing at least 12 bunches per year. For the tall varieties in particular, large kernel size was important. From these trees a total of 1,400 seed nuts were collected and germinated in 2 coconut nurseries established under the project at the MALF’s National Seed Bank. Chaguaramas and Blue Waters Farm, Trinicity. From these nurseries 1,000 superior seedlings were selected and transplanted onto 7 one acre germplasm seed gardens.

This initiative supports MALF’s coconut rehabilitation and replanting development programme. Coconut cultivation not only allows farmers and processors to tap into the growing lucrative markets for fresh coconut and coconut based products, it is also of tremendous environmental value. Along the Caribbean’s coastline coconut trees are usually the first line of defence against strong winds and storm surges. They are critical to protecting against soil erosion and recognised as an important crop for climate mitigation.

By 2026, it is estimated that approximately 35,000 seed nuts/year will be produced from these 7 seed gardens - sufficient to establish approximately 350 acres of superior germplasm.

In June 2022, a team of Caribbean researchers from the Coconut Industry Board (Jamaica), CARDI and the Ministry of Agriculture, Land and Fisheries (MALF), with counterparts from the Universities of Delaware and Florida discovered a new species of planthopper in the genus Melanoliarus. The team collected the new species on coconut palms in Trinidad while conducting a survey to assess the occurrence of lethal yellowing (LY) and its confirmed vector Haplaxius crudus.

The planthopper was named Melanoliarus castro sp. n.

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Belize exports cattle valued at over $14.5 million to Guatemala, Mexico in first four months of 2023

Belize has exported 10,982 head of cattle valued at over $14,544,780 in the first four months of 2023, according to statistics from the Ministry of Agriculture, Food Security, and Enterprise (MAFSE).

MAFSE’s Principal Agriculture Officer and National Director of Livestock Belarmino Esquivel said a total of 9,364 head of cattle valued at $12,360,480 were exported to Guatemala over the first four months. During that time, 1,618 livestock valued at $2,184,300 were exported to Mexico.

Exports to Mexico are more formal than those to Guatemala as the sanitary controls imposed by the Mexican animal health authority, Senasica, are far more demanding than those by Guatemala.

Montserrat agro processing facility in the works

After the devastation caused by the deadly 1995 volcanic eruption in Montserrat, the tiny British Overseas Territory is still rebuilding its infrastructure and economic sectors some 27 years later.

However, the country’s population of just under 50,000 is receiving an important boost from the Caribbean Development Bank’s (CDB) Micro, Small and Medium Enterprises Unit, to shore up its food security efforts.

The Market Assessment and Development of a Technical Plan for The Establishment of an Agro-Processing Facility in Montserrat is an initiative that seeks to reduce the island's food imports, and place residents on a more sustainable path to food security by utilising the abundant local supply of various fruits and vegetables. Dr Selwyn Maloney, the Director of Montserrat’s Ministry of Agriculture and the person responsible for the project’s execution, lamented Montserratians’ current dependence on imported foods, a situation that adds to the many vulnerabilities they already face.

Sustainable Apiculture through Queen Rearing Program

Over the past three (3) weeks the Antigua Beekeepers Cooperative (ABC) in collaboration with the Iyanola Apiculture Collective (IAC) from St. Lucia with technical support from the Inter-American Institute for Cooperation on Agriculture (IICA) has been engaging in rearing queen bees.

This initiative is the upscaling of a completed project funded under the Global Environmental Facility (GEF) Small Grants Programme, entitled “To promote the growth and sustainable development of the local pollinators (Apiculture Industry) and local honey through training and production in collaboration with the SVGBA and the Ministry of Agriculture” (2020 -2021).

The main objectives of the project were to promote the growth and sustainable development of the Apiculture Industry through training and production, in collaboration with the St. Vincent and the Grenadines Beekeepers Cooperative (SVGBA) and the Ministry of Agriculture. Also, a second objective was to support the development of an Apiculture Industry in Antigua and Barbuda through development of business models for commercial apiaries and capacity building in beekeeping, and development of hive products.

$8m UWI chocolate factory to open by January

UWI, St Augustine has further invested in the local cocoa industry, as the construction of the UWI Chocolate Couverture Factory is under way.

Pro Vice-Chancellor and campus principal Prof. Rose-Marie Belle Antoine said UWI is now one step closer to fulfilling a dream that will further enhance national development.

The factory is being built at the Business Innovation Centre of the university’s Cocoa Research Centre at its field station in Mt Hope.

On Monday 24 April, officials laid a foundation block at the site.

Antoine said the factory will be a “tangible mark” of UWI’s commitment and service to TT and the rest of the Caribbean. Calling it a “flagship project,” she said it represents the best of the university, of which she is very proud.
Re-imagining agriculture for sustainability in Jamaica

Farm Fest was hosted by the Knockalva Polytechnic College (KPC) as part of its 83rd anniversary celebration as well as to commemorate Farmers’ month in Jamaica. The college, located in Hanover offers tertiary-level programmes in various agriculture disciplines, so students can achieve certification that is aligned to the industry. This was the second staging of the event and was held under the theme ‘Re-imagining Agriculture for Sustainability’.

CARDI Jamaica, a longstanding partner of the college participated in the event on 27 April 2023 as a silver sponsor. Under the EU/CARIFORUM-funded regional coconut project being implemented by the International Trade Centre (ITC) and CARDI, a coconut nursery was constructed on the college’s campus. The Minister of Agriculture and Fisheries, Honourable Pearnel Charles Jnr. after viewing the 3,000 capacity coconut nursery expressed his appreciation for the project’s support to the Coconut Industry Board. He also commended the invaluable practical experience the KPC students would gain on good nursery operations. The Minister also visited the CARDI booth which provided information on the Institute’s research and development activities on other crops and livestock. In keeping with the theme of the event, CARDI also used the opportunity to share with students and teachers career opportunities in agriculture.

Minister Charles explained that the only way forward is for youths to be trained, excited, motivated, and energised to transform our agriculture sector.

Ms. Natalie Thompson, Principal, KPC, in outlining some of the event’s objectives, spoke of the acquisition of knowledge about agricultural practices, and challenging KPC’s students and staff to embrace their role in the realisation of the national goals for sustainable development.

During his address, Minister Charles expressed the Government’s recognition of the importance of the engagement of youths in re-imagining agriculture for sustainable development. He further explained that the Government has policies that target a 20% involvement of youth in initiatives undertaken. He stated that the only way forward is for the youths to be trained, excited, motivated and energised to transform our agriculture sector.

CARDI participates in Belize’s premier agricultural show

Scores of agriculture enthusiasts converged from 28 to 30 April 2023, at the National Agriculture and Trade Show (NATS) organised by the Ministry of Agriculture, Food Security and Enterprise. The NATS is one of the largest agricultural events in Belize attracting farmers, agribusinesses and stakeholders. It provides a platform for exhibitors to showcase their latest agricultural technologies, products and services and a space to discuss key issues affecting the sector.

At the event, CARDI showcased some of the latest research and development initiatives in Belize. Among these were, ongoing work to identify tolerant crop varieties and its flagship seed and grain programme. On a smaller scale the Institute is also involved in the production of hot pepper seeds. Visitors were able to learn about these initiatives through interactive displays and discussions with staff. In keeping with the theme of the event ‘Innovations in Technology: Driving a Climate Resilient and Competitive Agriculture and Food Sector’ a coconut climber designed by a farmer, and a portable nursery and plastic mulcher developed by CARDI Belize were displayed. The latter was developed using open source designs and can lay irrigation tape and plastic simultaneously.

Visitors to the booth also got the opportunity to view several value added products. There was particularly high interest by visitors for a pepper mash produced by CARDI and the University of Belize using the discarded pulp from the hot pepper seed production programme.

The Ninth International Conference on Agricultural Statistics

The Ninth International Conference on Agricultural Statistics will take place in Suriname from 29 to 30 May 2023. The conference aims to provide a platform for agricultural statisticians, researchers, and policymakers to share their findings and discuss the latest developments in agricultural statistics.

The conference will cover various themes related to agricultural statistics, including agricultural production, food security, and rural development. Attendees will have the opportunity to present their research, participate in workshops and networking sessions, and attend keynote speeches by leading experts in the field.

Upcoming Events

- OCEC Trade Expo
  - Converge, Connect and Collaborate
  - Learn More
- Washington D.C.
  - The Ninth International Conference on Agricultural Statistics
- Suriname
  - HIT Reset Kick Off Meeting

Axel Perez, a 23 years old from Corozal District is the Youth Farmer of the Year. He is the holder of an Associate Degree in Agri Business and operates a 1 acre family farm where a range of short term crops are produced using irrigation and fertigation. Axel is also a bee keeper and dedicates 3 acres to his apiary. In the future he plans to further his studies to become an Agronomist.

As part of their prize package CARDI donated seeds for corn, bean and hot pepper – sufficient to establish one acre each. In addition, the CARDI team will provide free technical advice to all winners for one year.

Ms. Esmeralda Stanley. On her 30 acres farm in the Toledo District, Ms Stanley cultivates lime, coconut, cassava and pineapple to feed her family and to sell at the market. Ms. Stanley has also diversified her operations into livestock production, poultry rearing and agro processing.

Mr. Adrian Bartley was adjudged, Male Farmer of the Year. He is the holder of the Youth Farmer of the Year competition. Mr. Bartley has employed several term crops are produced using irrigation and fertigation. Axel is also a bee keeper and dedicates 3 acres to his apiary. In the future he plans to further his studies to become an Agronomist.

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Roberto Can, Graduate Assistant represented the Institute on the judging panel for the Farmers of Year competition.

Mr Adrian Bartley was adjudged, Male Farmer of the Year. Currently, he cultivates 5 acres of land with a variety of vegetables including habanero, tomatoes and sweet pepper and rears chickens. All produce are sold at the markets in Belize City and Belmopan. Mr. Bartley has employed several climate smart, on-farm practices and would soon introduce greenhouse technology. In the future, he plans to work with farmers in his community to have a registered organisation.

The Female Farmer of the Year title was won by Ms. Esmeralda Stanley. On her 30 acres farm in the Toledo District, Ms Stanley cultivates lime, coconut, cassava and pineapple to feed her family and to sell at the market. Ms. Stanley has also diversified her operations into livestock production, poultry rearing and agro processing.
Trinidad & Tobago

CARDI participated in the Faculty of Food and Agriculture's Sustainable Seeds of Survival Fair as part of their Earth Day celebrations. The Institute distributed seeds for our open pollinated corn (YC001) and Antigua pumpkin varieties and seedlings for Moruga Red hot pepper to stakeholders and students. The objectives were to promote planting of locally available varieties and a greener environment.

Belize

A team from the Ministry of Agriculture, Food Security, and Enterprise (MAFSE) visited the CARDI booth at the National Agriculture Trade Show. From left: Omaira Avila Rostant, CARDI Representative, Mr Servulo Baiza, Chief Executive Officer, Dr. Victoriano Pascual, Chief Agricultural Officer and Jose Mai, Minister of Agriculture. Joining them were the Farmers of the Year winners.

Barbados

Coconut seedlings for the green and brown dwarf varieties produced by CARDI Barbados were distributed to Barbados Agricultural Development and Marketing Corporation (BADMC). The BADMC is establishing a coconut plantation to generate planting material for farmers on the island.

Tobago

CARDI participated in the MIC’s Institute of Technology career day on 20 April 2023. The Institute used the opportunity to introduce students to exciting new career paths in agriculture and highlighted, CARDI’s research and development activities in Tobago and across the wider Caribbean.