Schools among the recipients of climate smart agricultural food production systems in Barbados

Working together to rehabilitate Dominica’s coconut industry

Pilot project to assess the effectiveness of bird wailers as a pest control option launched in Tobago

Remembering a pioneering CARDI Researcher, Dr. Janice Reid
Schools among the recipients of climate smart agricultural food production systems in Barbados

Climate/weather smart agricultural food production systems are being installed in 6 schools and 1 community in Barbados under the ‘Promotion of Agricultural Crop Production Systems which Demonstrate Resilience to Climate and Weather’ project, financed by the Government of Ireland (Implementing Agency) and the CARICOM Secretariat (Executing agency). CARDI Barbados is leading the implementation of the project’s activities.

The schools benefiting from this initiative are: Charles F Broome Memorial Primary School, Ellerton Primary School, Mount Tabor Primary School, St. Ambrose Primary School, New Horizons Academy and Welches Primary School. A system is also being installed in the New Castle community. Support is also being provided to upgrade existing climate smart systems at the Coleridge & Parry School and Grantley Adams Memorial School.

Following consultation with the schools’ administration and the New Castle Community group, one of the following 4 systems will be chosen and established: hydroponic crop production using horizontal nutrient film technique or deep flow technique, timer controlled bucket drip system; raised grow beds with drip irrigation; and fruit tree production using a bucket system and vertical trellis system for vine crops.

So far, hydroponic nutrient film technique systems and timer controlled bucket drip systems have been installed at Welches Primary, Ellerton Primary, New Horizon Academy, St. Ambrose Primary and Mount Tabor Primary.

CARDI has also been conducting theoretical and practical training sessions for stakeholders (students, parents, teachers and community members) on the principles and management of the systems.

Weather and climate variability continues to have a profound impact on agricultural crop production in the Region. The uncertainty and risks associated with these, impact food production and availability, revenue generation and sustainable livelihoods. The adoption of climate resilient systems is an important de-risking option that facilitates more reliable food production.

The project partners recognise that the involvement of students and their parents are critical to building awareness and mainstreaming the adoption of these practices and technologies. The project also aims to promote positive attitudes among children, such as learning how to grow healthy food for better nutrition. It is also designed to expose stakeholders to various agronomic and sustainable practices such as: water harvesting, nutrient recycling, water conservation, composting, mulching, record keeping and safe use of bio-pesticides.

Working together to rehabilitate Dominica’s coconut industry

Soon farmers in Dominica will have access to coconut seedlings of a new, superior variety for planting - the Brazilian Green Dwarf.

The Caribbean Agricultural Research and Development Institute (CARDI) through the EU/CARIFORUM financed ‘Coconut Expansion and Enhanced Support for the Caribbean’ project, facilitated the importation of 13,000 seed nuts of the Brazilian Green Dwarf from Tecnologia Na Produção De Coqueiros (COHIBRA), Brazil last year. Minister of Agriculture, Fisheries, Blue and Green Economy, the Honourable Roland Royer, expressed his gratitude to the Institute noting that this activity supports the Ministry’s wider policy initiative of rehabilitating the tree crops sector over the next 3 years.

Lakeyia Joseph, Parliamentary Secretary, highlighted that apart from ‘introducing and propagating the Brazilian Green Dwarf seedlings the programme is also focused on increasing coconut processing and utilization.”

In 2017, Dominica’s coconut industry was hit hard by Hurricane Maria, a category 5 storm that led to loss of more than 95% of the country’s coconut trees. As a result, the supply of quality planting material was impacted, hampering farmers and agroprocessors attempts to capitalise on the surging demand for coconut water and other coconut based products.

An 80% germination rate has been recorded for the imported seed nuts which are being grown out by the Ministry of Agriculture, Fisheries, Blue and Green Economy. From the seedlings produced, approximately 70 ha, of coconut can be established on the island.

The Brazilian Green Dwarf is a widely popular water nut variety. On average a plant produces between 250 – 300 nuts per year under good conditions, with each nut potentially producing between 350 ml to 450 ml of water. An added advantage of this variety is its demonstrated tolerance to Lethal Yellowing. Access to highly productive varieties like the Brazilian Green Dwarf presents profitable opportunities for processors and agripreneurs as well as open the doors for farmers into new markets.

This ‘Coconut Expansion and Enhanced Support for the Caribbean’ project is jointly implemented by CARDI, the International Trade Centre - Alliances 4 Action and other important partners in the Caribbean.
SVG to begin white potato cultivation in February, 2024

Saint Vincent and the Grenadines is expected to begin the cultivation of white potatoes in February this year. Project Coordinator Rohan McDonald told the Agency for Public Information (API) that the initiative on white potatoes is a spill off of the CARICOM Mandate 25/25, which seeks to reduce the food import bill in the region by 25% by the year 2025.

He said Dominica and Jamaica are already cultivating white potatoes on a large scale and the Ministry of Agriculture here in Saint Vincent and the Grenadines is liaising with those countries as they embark on this initiative. McDonald said the project has three phases, namely, to procure the varieties of white potatoes that are suitable for the tropical condition; the testing phase which involves choosing agro-ecological zones that are ideal for the cultivation and production of white potatoes; and the commercialization phase.

Yam rust caused by fungal pathogen affects white, yellow and Portuguese yam varieties

The Ministry of Agriculture, Fisheries, Food Security, and Rural Development, St Lucia, wishes to alert farmers and the public about a recently-identified disease affecting yams. This is known as yam rust and is caused by a fungal pathogen. The Ministry of Agriculture recognizes the critical significance of yams as a staple tuber in our diet and its substantial contribution to farmers as a year-round cash crop supporting their livelihoods.

Yam Rust has been identified in various agricultural regions across the island. Rigorous laboratory testing has confirmed the existence of this disease. The affected yam varieties include White, Yellow, and Portuguese yams. It is imperative for farmers to consistently monitor their crops for any signs of infection. Early detection is crucial, and prompt corrective action is necessary to curtail the further spread of the disease.

The Ministry of Agriculture is actively collaborating with the farming community and our Agricultural Extension Division to implement effective control measures against Yam Rust. Farmers are strongly advised against moving planting materials from one location to another, as this practice significantly contributes to the transmission of the disease between farms.

The Project Coordinator noted that all along these phases the Ministry will consult with all stakeholders including farmers and supermarkets to conduct surveys. He added that once the testing phase is over and they move to commercialization, a production plan would be introduced to indicate when, how much, and where to produce the potatoes. The Project Coordinator said two varieties of white potatoes, the Desiree and the Spunta, are expected to arrive here this week to begin the testing phase.

St. Kitts and Nevis and Nevis signs MOU with Southern University to further boost Federation’s agriculture sector

In a historic event at the Government House, Springfield on December 27, 2023, the Honourable Samal Duggins, Minister of Agriculture for the Government of St. Kitts and Nevis, and Dr. Orlando F. McMeans, Chancellor-Dean, SU Agricultural Research and Extension Center, solidified a partnership through the signing of a Memorandum of Understanding (MOU) on agriculture.

The partnership between Southern University (SU) and the Ministry of Agriculture of St. Kitts and Nevis encompasses various aspects, bringing numerous advantages to both farmers and the wider community. The Southern University Agriculture Research & Extension Centre (SUAREC) will offer crucial advisory services to the Ministry, enhancing the knowledge and skills of the Federation’s farming sector. This joint effort is designed to improve agricultural methods and bolster the farming community with advanced knowledge and techniques in fields like crop enhancement, medicinal plant studies (particularly in medicinal cannabis), and animal husbandry.

Agriculture Minister conducts assessment of local rice industry revitalization efforts

The Ministry of Agriculture, Land and Fisheries Senator the Honourable Kazim Hosein toured several sites under the Trinidad and Tobago’s local rice industry revitalization efforts in July 2022.

Minister Hosein asserted, “The achievements in this revitalization project are a testament to the power of collaboration and strategic planning. The unwavering commitment demonstrated by our regional partners, stakeholders, and the government sets a new standard for operational excellence. This initiative showcases our dedication to elevating local production and securing our nation’s food sovereignty.”

Mr. Nigel Grimes, Technical Advisor to the Ministry, explained that the project is guided by two principles: innovation and efficiency. He emphasized, “From careful seed procurement to the implementation of cutting-edge farming techniques, every aspect of this project reflects our unwavering commitment to raising local production standards.

In 2023, the Ministry of Agriculture, Land and Fisheries (MALF) achieved a pivotal milestone by distributing approximately 200,000 lbs of high-yielding, disease-resistant rice seeds to thirty (30) farmers. The seeds were purchased from the Guyana Rice Development Board (GRDB) and forms a part of the Memorandum of Understanding (MOU) between the Cooperative Republic of Guyana and Trinidad and Tobago in July 2022.

Minister Kazim Hosein praised the initiative as a testament to CARICOM members states’ commitment to reducing the food import bill by 25% by 2025. “Our counterparts in Guyana, under the leadership of the Honourable Zulfikar Mustapha, are continuing to work with us. This initiative would not have come about had it not been for the commitment of our Honourable Prime Minister, Dr. Keith Rowley, and his discussions with the President of the Cooperative Republic of Guyana, His Excellency Dr. Mohamed Irfaan Ali.”
Pilot project to assess the effectiveness of bird wailers as a pest control option launched in Tobago

Habitat loss and changing climatic conditions have been linked to the increased incidence of bird pest damage to agricultural crops in Tobago. Over the last 7 years farmers have been reporting widespread damage to their crops caused by parrots and cocrico in particular, resulting in significant reduced earnings. While cocoa farmers have been hard hit by parrot damage, other crops impacted include avocados, citrus, leafy crops, sweet potato, pigeon peas and papaya.

Following meetings with the Division of Food Security, Natural Resources, the Environment and Sustainable Development of the Tobago House of Assembly, CARDI procured 2 solar powered bird wailers to assess the impact of these in repelling birds from farmers’ plots. The wailers emit sounds of predator birds in distress or other birds to scare off bird pests.

This activity is taking place under the “Demonstration of a solar-powered Wailer/Bird Squawker Sound Deterrent System” project financed by the Digicel Foundation Trinidad and Tobago and Shell Trinidad and Tobago.

In January, 1 system was installed at the Tobago Cocoa Estate in Argyle while the other system is to be installed at a subsidized cost.

On 11 January, 2024, CARDI provided training to the Division’s staff on the use of the system. The Division will continue the testing phase for 6-8 weeks – assessing the devices efficacy and impact. The results will guide whether the technology will be adopted and offered to farmers at a subsidized cost.

Characteristics of the Brazilian Green Dwarf

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<thead>
<tr>
<th>Characteristics</th>
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<tbody>
<tr>
<td>Plants per Hectare (Units)</td>
<td>205</td>
</tr>
<tr>
<td>Planting Distribution (Meters)</td>
<td>7.5 x 7.5</td>
</tr>
<tr>
<td>Start of Flowering (Years)</td>
<td>2 - 3</td>
</tr>
<tr>
<td>Mosaic (Years)</td>
<td>10 - 40</td>
</tr>
<tr>
<td>Fruit Size</td>
<td>Small</td>
</tr>
<tr>
<td>Height (Meters)</td>
<td>8 - 10</td>
</tr>
<tr>
<td>Fruit Production (fruit/Plant/Year)</td>
<td>250-300</td>
</tr>
<tr>
<td>Average Production (fruits/ha/year)</td>
<td>36,375</td>
</tr>
<tr>
<td>Average Weight – Green Fruit (Gams)</td>
<td>300</td>
</tr>
<tr>
<td>Average Weight – Dried Fruit (Gams)</td>
<td>300</td>
</tr>
<tr>
<td>Average Weight – Copra (Gams)</td>
<td>250</td>
</tr>
<tr>
<td>Productivity – Copra (kg/HA)</td>
<td>3,000 - 4,000</td>
</tr>
<tr>
<td>Average Oil Content (%)</td>
<td>25.41</td>
</tr>
<tr>
<td>Productivity Oil (kg/HA)</td>
<td>0.020 - 1.360</td>
</tr>
<tr>
<td>Average Production Coconut Water (ML/FRUIT)</td>
<td>350 - 450</td>
</tr>
<tr>
<td>Average Production Coconut Water (Litre/HA)</td>
<td>32,550</td>
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Remembering a pioneering CARDI Researcher, Dr. Janice Reid (8 October 1943 - 16 December 2023)

It is with a deep sense of sadness we received the news of the passing of Dr. Janice Reid, a former Research Entomologist based at the CARDI Jamaica Unit and one of the pioneers of the Institute’s Integrated Pest Management (IPM) programme.

Dr. Reid joined CARDI Jamaica in 1979 as a Research Entomologist from the Ministry of Agriculture. In 1988, she was appointed as the CARDI Representative in Jamaica. A position she held until 1996, before resigning from the Institute in February 1998.

During her tenure at CARDI, Dr. Reid carried out vital research on several fruit tree, vegetable and root and tuber crops, which helped to improve overall productivity and the quality of the produce. However, her name is synonymous with the integrated management of the Coffee Berry Borer (Hypothenemus hampei). The beetle was first detected in Jamaica in 1978 where associated crop loss was found to be as high as 85%. Dr. Reid’s research work on this invasive pest earned her, her Ph.D. Her research identified factors which enabled the dissemination of the pest and also identified effective control measures. Radical improvement in levels of crop husbandry, judicious use of chemicals and elimination of wild host reservoirs were some of the control tactics proposed to suppress the spread of the pest.

Dr. Reid also led major donor-funded projects on proper pesticide use etc.

Her pragmatic approach, technical knowledge and forthrightness earned her widespread respect among her peers. Dr. Reid also served as an Assistant Lecturer in Crop Protection at the Jamaica School of Agriculture and Adjunct Associate Professor, Department of Epidemiology and Public Health, University of Miami. She was a member of the Board of Trustees of the International Service for National Agricultural Research (ISNAR), a former Board Member the Rural Agricultural Development Authority (RADA) and Chairman of RADA’s Technical Sub Committee.

Dr. Reid was a Trinidadian, who graduated with a BSc in Botany and Zoology from the University of the West Indies, St Augustine and an MSc in Applied Entomology from the University of Guelph. In 1987 she graduated with her PhD from the University of the West Indies, Mona. She was the author of several research papers.

Her guidance, support and shared experiences have been described as exemplary by some of the Institute’s younger researchers that she mentored.

In 2021 Dr. Reid was named a Phenomenal Woman in Agriculture by the Jamaica Agricultural Society.

The management and staff extend heartfelt condolences to her family and friends.

May she rest in eternal peace!
Antigua and Barbuda

The institute hosted 25 Agricultural Science students from 5 secondary schools at the CARDI Field Station in Betty’s Hope for a field day on Pest and Disease Management. Students were exposed to theoretical and practical aspects of managing common agricultural pests and diseases.

St Kitts and Nevis

CARDI St. Kitts and Nevis visited the 2023 agricultural class of the Clarence Fitzroy Bryant College to celebrate CARDI Day.

Using a participatory approach, the Unit engaged students on five critical themes in agriculture with the aim of broadening their knowledge on the subject. These were: Agriculture dependencies, careers in agriculture, types of farming, know your food and pesky little things.