Introduction to drip irrigation and low cost water saving techniques to improve agriculture production

Small business management training for coconut farmers

Training for resilience building in agriculture in Dominica

Training in composting for backyard gardeners
Introduction to drip irrigation and low cost water saving techniques to improve agriculture production

On 14 September, CARDI Senior Technician based in Antigua and Barbuda Bradbury Browne hosted a webinar on ‘Efficient low cost irrigation and water saving techniques for increased production’. This was the 2nd webinar under the Caribbean Climate Responsive Agriculture Forum organized by the Inter-American Institute for Cooperation on Agriculture (IICA).

Over the last few years, countries across the Region have been experiencing varying degrees of water stress, which have negatively impacted agriculture production. As one of the largest using sectors of freshwater, it is important that farmers improve their overall water use efficiency, so agriculture’s impact on freshwater resources is reduced, and the sector’s resilience to water risks improved.

To this end, the webinar introduced and discussed the merits of furrow, sub surface, drip and sprinkler irrigation systems. The presentation zeroed in on the fundamentals of drip irrigation systems, and discussed how automated irrigation technology can promote optimal crop growth, while reducing overall water consumption compared to other forms of irrigation. Participants were also introduced to equipment such as tensiometer, moisture probe, moisture meter and water meter and learnt of their usefulness in an irrigation system. Mr. Browne also discussed the importance of a field plan, irrigation scheduling and the setting up of a water harvesting system.

Throughout the session, Mr. Browne shared his vast practical experience of setting up drip irrigation systems for a variety of commercial crops in Antigua and Barbuda, and gave insights on how mulching and water meter and learnt of their usefulness in an irrigation system. Mr. Browne also discussed the importance of a field plan, irrigation scheduling and the setting up of a water harvesting system.

The webinar was attended by over 400 participants from 18 countries. The feedback was positive with many noting that it was a very informative session which provided information that can be immediately used to improve their water usage.

In closing, Mr. Browne noted that rainfall is predicted to decrease across the Region further exacerbating water stress conditions in some countries. He noted that this together with the concurrent depletion of aquifers, saline water intrusion and ground water pollution can spell disaster for countries. ‘Now is the time to commit to adopting sustainable water use management practices in Caribbean agriculture’, he concluded.

Small Business management training for coconut farmers

The Coconut palm is more than just a beautiful, natural aesthetic that inhabits Guyana and every island within the Caribbean archipelago. It is synonymous with the Caribbean’s image and culture. Besides being visually abundant, the coconut is also an important contributor to food security, both at the small scale and industrial levels. The palm serves a multi-functional role producing a variety of products, which are consumed regionally and internationally, as well as creating sources of employment and income for farmers. However, for these farmers and processors to reap the full benefits of this multi-functional plant, they must be able to understand and manage the business aspects of the industry.

Hence why, collaboratively, The International Trade Centre (ITC) and the Small Business Bureau (SBB), conducted a three day training course, on small business management for coconut farmers in Region 2, Guyana. At the opening ceremony on 26 September 2022, Region 2’s Chairperson, Vilma De Silva, spoke to farmers, urging for their implementation of the information shared in their respective businesses. Elated that her region was chosen for such training and will benefit established agro-processors, she stated, “For any enterprise to grow capacity building is important and for that to happen the business owner must realize that record keeping is the key... in this region we have over 700 coconut farmers and it’s a big business here.”

ITC Coordinator Raymond Trotz, mentioned that the training is under a collaborative project with CARDI, which focuses on entrepreneurship, financial management, record keeping and business administration. The project he stated is part of the ITC’s Alliances for Action (A4A) initiative, to develop the coconut industry, under Phase II of the EU/CARIFDRUM-funded project Alliances for Coconuts II, which is being implemented in 12 countries.

Recognizing how promising the A4A’s approach is to farmers in developing agri-business enterprises from production to processing and marketing, Trotz said “The main thrust of Coconut II is capacity building of small holder farmers to facilitate and provide support to development of the region’s coconut value chain.”

With over 1,800 Guyanese coconut farmers, he continued that many from Regions 4, 3, 2, 10, and 5 were also equipped with similar training.
New National Agro-processing Facility for Dominica

With the support of the European Union and the Caribbean Development Bank, Dominica is now working to establish a new national agro-processing facility that will strengthen the food value chain, improve quality standards, and widen access to export markets. The agro-processing Project is being implemented by the Ministry of Trade, Commerce, Entrepreneurship, Innovation, Business and Export Development and the Dominica Export Import Agency (DEXIA) in collaboration with the Ministry of Blue and Green Economy, Agriculture and National Food Security.

The new initiative marks the first phase of the establishment of the new national agro-processing facility in Dominica.


St. Lucia Government approves subsidy for banana farmers

Banana farmers in St. Lucia will receive a 30 percent subsidy on inputs in light of the rising cost of production and productivity challenges faced by stakeholders in the sector. Agriculture Minister Alfred Prospere said the subsidy will help farmers maintain the production output of their farms. Prospere said the high cost of inputs is a major challenge faced by farmers and this latest decision by the government demonstrates the priority placed on building resilient, sustainable agriculture livelihoods, and underscores the importance of the banana industry to St. Lucia.


Grenada launches spice replanting program

Grenada’s Ministry of Agriculture is intensifying its efforts to increase the production of spices on the island with the launch of the Spice Replanting Program. During the recent launch in the southeastern parish of St. David, it was announced that the government wants to have 100,000 spices under production in various locations around the island. Before Hurricane Ivan in 2004, St. David cultivated various spices – nutmeg, cocoa, pimento, cinnamon, nutmeg, sapote, and tonka bean, among others. However, the loss of spice plantations, coupled with poor management of existing fields, resulted in a significant decline.


SBDC and Ministry of Agriculture partner to launch sustainable food grant in the Bahamas

The Small Business Development Centre (SBDC) is collaborating with the Ministry of Agriculture, Marine Resources and Family Island Affairs to launch a Sustainable Food Grant which will provide up to $50,000 in funding to start-ups and existing businesses in the farming and fishing industries. Under the grant titled, “Developing Production Systems for National Food Security,” officials expect that entrepreneurs will be empowered to transform food systems in The Bahamas, as well as assist in mitigating food scarcity, food imports, supply chain disruptions, and rising food costs.

An additional goal of the programme is to encourage the participation of women and youth in the food production sector.

Training For Resilience Building In Agriculture In Dominica

The Agriculture Sector in Dominica and the wider Caribbean is inherently vulnerable to climate change. Farm holdings are small, usually located on steep erodible slopes, are very heavily reliant on rainfall, susceptible to droughts and has limited investment in heat and drought tolerant crops. Further, the general absence of site and varietal specific yield results in manual approaches to yield optimization and to investigating the impacts of agro-ecology on production. Crop modeling offers hope for improving yield prediction and optimization in a changing climate especially because it can explore a number of “what if” scenarios in a virtual environment which would otherwise be both time and cost prohibitive.

CARDI is an implementing partner of The CAMBIO NET Caribbean Cooperation project which seeks to build a new agriculture in the Caribbean/Amazonia area. The project is co-financed by the INTERREG Caraïbes programme under the European Development Fund, under the Economic, Social and Territorial Cohesion Policy of the European Union.

In keeping with Dominica’s vision of becoming a Global Centre for Climate Resilience, CARDI coordinated a training workshop on “Innovative Digital Tools to Aid Decision Making for Agriculture Resilience” from 27- 30 September, 2022 at the UWI Open Campus in Roseau.

The training introduced participants to the FAO AquaCrop Model and the Decision Support System for Agro-technology Transfer (DSSAT) Model. Trainers discussed the merits of both models and provided hands-on training in gathering input data and using the models. In addition, participants gained a better understanding of climate smart agriculture practices and the ACCEPT Agri-Online Portal and insights into Climate Smart All-platform Application.

The workshop was facilitated by a team of regional scientists led by leading Crop Modelling expert in the region, Dr. Dale Rankine, and included researcher and lecturer in the Climate Studies Group UWI, Mona, Dr. Jayaka Campbell and postgraduate student, Matthew Davis and expert in Climate Smart Agriculture (CSA) compliance, Mr Steve Maximay. A total of 17 persons, including 8 women and 9 men, from across several organizations: Division of Agriculture, Dominica State College, World University Services of Canada, Goodwill Secondary School, CARDI and one farmer, received training in the use of crop modelling tools, FAO Aquacrop model and DSSAT. In a post workshop evaluation, 80 percent of respondents indicated that the training was useful or very useful. Follow up activities will include crop modelling research in a selected crop together and strengthening climate services for the agriculture sector.

Training in composting for backyard gardeners

There is a growing movement to use more environmentally friendly inputs in agriculture. Compost – a nutrient rich organic soil amendment is being more widely used among farmers especially home gardeners as they embrace more environmentally friendly and sustainable food production practices.

Through IICA’s Bio-economy Program in 2021, three composting bins with a collective capacity of 92 cubic feet were constructed at CARDI’s Field Station in Westerhall. In September, 22 members of the Grenada Backyard Gardeners Network Initiative (BGGN) were trained in compost making. These sessions were facilitated by Reuben Raymond, CARDI Technician and Derek Charles, National Specialist, IICA. The group benefited from both practical and theoretical training sessions on the importance of compost and compost making. The group learnt about the best types of materials to use as feedstocks and importance of timely turning and monitoring to ensure the production of high quality compost. It was emphasized that farmers must use the organic material that is readily available on the farm thus minimizing the cost of operations. Reuben noted that “While the benefits of using compost are immeasurable, it is important farmers learn to do it the right way to achieve the maximum benefits from it.”

For this initiative, the materials used for composting were crop residues from the CARDI’s Field Station and neighbouring farms and bagasse from the Cane Co. Sugar Cane factory. The compost is used in CARDI’s vegetable seedling production program and coconut nursery.

The benefits of compost are many: It recycles organic materials and reduces waste. Food Loss and Waste remains a challenge for sustainable development. According to FAO’s State of Food and Agriculture (2019) report, around 14 percent of the world’s food continues to be lost after it is harvested and before it reaches the shops; while UNEP’s Food Waste Index Report shows that a further 17 percent of our food ends up being wasted in retail and by consumers, particularly in households. Therefore, compost is an excellent way to recoup some of the nutrients that are locked up in food waste.

Compost also helps replenish depleted soils by improving soil health and water holding capacity. Once properly made, compost increases beneficial microorganisms and reduces the soils pathogen load and weed seeds.
From the field

St. Lucia

CARDI and the Sir Arthur Lewis Community College have signed a Letter of Agreement to support the implementation of activities under the EU/CARIFORUM financed project: Alliances for Coconut Industry Development in the Caribbean. Activities will be implemented to strengthen the capacity of stakeholders involved in coconut production.

Cayman Islands

CARDI collaborated with the Department of Agriculture to host a field day for farmers on root and tuber production. Participants were introduced to good agricultural practices for cassava, sweet potato and yam.

Antigua and Barbuda

CARDI’s Executive Director Ansari Hosein and CARDI’s Representative in Antigua and Barbuda, Paul Lucas paid a courtesy visit to Honourable Minister of Agriculture Fisheries and Barbuda Affairs Samantha Marshall. The team provided an update on CARDI’s work in country as well as elicited feedback on mutual areas for future collaboration.

St. Vincent and the Grenadines

In District 5, CARDI together with the Ministry of Agriculture examined on farm IPM practices for the Sweet Potato Weevil and White Grub – two pests of economic importance. The team also established a sweet potato evaluation plot to assess 7 sweet potato cultivars resistant to both pests.