Ministers’ Brief

Issue 11, November 2021

FAO and CARDI host Virtual Fish Silage Workshop

Improving the supply of roots and tubers planting material in St Kitts and Nevis

Building capacity in protected agriculture in Grenada

Investigating management strategies for the Coconut Cockle
The Food and Agriculture Organization of the United Nations (FAO) and the Caribbean Agricultural Research and Development Institute (CARDI) recently teamed up to host a virtual Fish Silage for Animal Feed Workshop for 25 participants in Barbados. This event was part of the wider FAO supported project 'Services towards piloting an initiative for an increased production of livestock products in Barbados through the increased utilisation of locally available fish silage-based feed resources.'

At the workshop, participants were introduced to the process of silage making using locally available raw materials. The preliminary results of the feeding trials, involving sheep and rabbits at the Animal Nutrition Unit, were also shared with the attendees. The fish silage based sheep feed had 20.8% more crude protein than the commercial feed and was proven to be both acceptable and palatable to the animals. The data collected over a 7 week period, showed no significant differences in the average daily weight gain of sheep fed commercial feed and the fish silage based feed.

For rabbits, the fish silage based feed was also acceptable and palatable. Data analysis is ongoing and the results will be published subsequently.

The importation of raw materials (corn and soybean meal) for animal feed production into CARICOM, accounts for a significant proportion of the Region's burgeoning food import bill. Over 1500 tonnes of fish waste is produced in Barbados annually. The conversion of these into a protein-rich feed source for small ruminants will help farmers to reduce their feed expenses while enabling them to satisfy the demand for small ruminants in the local market. Moreover, increasing the utilization of locally available ingredients, like fish silage, help to stimulate small business development on the island.

Renata Clarke, Subregional Coordinator at FAO stressed that the collaborative project with CARDI aims at creating opportunities for new agri-businesses while increasing self-reliance and demonstrating the possibilities of the "circular economy" which creates value of what was previously considered as waste. She added that once the farmers adopt the fish silage feed then an increase in livestock, meat production and enhanced earnings for livestock farmers is a real possibility.
A greenhouse has been constructed at the CARDI Grenada Field Station in Westerhall. The protected structure was supplied under the Caribbean Regional Track of the Pilot Program for Climate Resilience (PPCR) project funded by the Climate Investment Fund (CIF) through the Inter-American Development Bank (IADB). CARDI will use the greenhouse to produce and supply quality, coconut and cassava planting material to farmers. In addition, the site will be used to demonstrate good agricultural practices in nursery and greenhouse management technologies to stakeholders.

Grenada, like many small island developing states is considered a climate change “hotspot,” where changing weather patterns are expected to be significant in coming years. The country is prioritizing disaster risk management and climate change adaptation to prepare for immediate and future impacts.

Protected agriculture structures are recognised as a viable option to adapt to climate change and achieve food and nutrition security targets. Through demonstration and building capacity, many growers will become more aware of this innovation through which they will be able to achieve optimum yields. In the past, protected structures have failed mainly because they were inappropriately designed to withstand local weather conditions. This model, installed at CARDI Grenada’s field station, has a split roof and reflective netting as part of its cooling features. A trickle irrigation system is installed which facilitates the efficient use of water resources.

According to CARDI Representative in Grenada, Reginald Andall, “the trickle system enables the water to be directed to the root zone and allows for better disease control as the water does not come in direct contact with the plants.” Other features of the system includes the installation of reusable trellises, an off-site rain water harvesting system which supplies the irrigation water and a solar powered pumping system.

In the event of a hurricane or adverse weather the plastic cover can be removed and secured. The cover can be put back up quickly after and production can be restarted almost immediately.

The Coconut Cockle (Strategus aloeus) is a pest of economic importance to young coconut palms in Guyana. As farmers are being encouraged to expand their production to tap into the lucrative markets for coconut products, experts believe that the rehabilitation and expansion of coconut plantations are directly correlated to the exploding populations of the pest in the country. The adult cockle attacks the meristems of young plants causing death.

The Caribbean Agricultural Research and Development Institute (CARDI) under the European Union (EU) supported project - “Alliances for the Coconut Industry Development Expansion and Enhanced Support for the Caribbean” is working to develop an integrated pest management strategy (IPM) with local stakeholders. In the past, farmers relied on chemical control. Carbamates and organophosphates in particular, while being very effective in treating the cockle have been deregulated and their use prohibited.

The IPM strategy will assess and make recommendations on the effectiveness of cultural, biological and other chemical control methods. A key element will be to investigate the use of environmentally friendly, pheromone trapping techniques. To date, there is no known approach to lure the pest. CARDI has obtained pheromone samples from Costa Rican company ChemTica and trials have begun to test its effectiveness in coconut plantations. An effective pheromone treatment will provide farmers with an environmentally friendly solution and offer them access to niche markets.

CARDI has collaborated with Centre for Agriculture and Bioscience International (CABI) and completed the taxonomic identification of the species. Presently, surveys are being developed to quantify the extent of the pest in Guyana.

The adult coconut cockle is nocturnal and attacks the young plants between 1-3 years old. They pierce the soil at the base of palms, attack the root plate and penetrate the stem until it reaches the meristem and death of the plant occur.
CARDI and CDB will launch the Regional Sweet Potato Value Chain Enhancement and Technology Transfer project on 2nd December 2021. The project will be implemented in five countries with the results shared across the wider CARICOM Region.

Year II students from the University of Belize participate in their crop management field practice at CARDI’s hot pepper field.

CARDI’s Jhaman Kundun (l) and Ansari Hosein (r) paid a courtesy visit to the Permanent Secretary of the Ministry of Agriculture, Ms. Delma Nedd. At the meeting the role and operations of the Institute were discussed as well as opportunities for commercial agriculture production.

Harvest of West Indies Red hot pepper is set to begin soon at the CARDI field station. The berries will be harvested for seed production.

www.cardi.org
@CARDIcaribbean