

Ministry of Agriculture, Food  
Security and Enterprise



**Annual General  
Meeting 2021  
Report**



Message from **Hon. Jose Abelardo Mai**, Minister of Agriculture, Food Security and Enterprise:



*I am pleased to be able to share with all the report on the contents of our first AGM since 2011, 9 years ago.*

*There is a need to share information in the world we live in. There is a need to know what is going on in the world of Agriculture we share. There is a need to disseminate information to the public, to have everyone that shelters under the umbrella of this ministry be on the same page. There is a need to consolidate, analyze and propagate. The AGM serves all of these purposes. Some partners we don't really see all the time, some we see often, but definitely, the environment that an AGM creates is a unique one that all of us need to take advantage of.*

*Of course, there is a need to celebrate our accomplishments and recognize our limitations. There is a need to be transparent as a ministry and a need to encourage each other in the attainment of food security. There is a need to remind ourselves to be honest about what we are doing...we are accountable.*

*We have come a very long way as a Ministry of Agriculture since November 12, 2020. The list of accomplishments is very long, given the 5 months that this administration has been in office. But because we all have shared and supported the vision of a Belize independent in its food supply, a Belize innovative in its approach to creating opportunities for farmers and producers, a Belize producing what it consumes and exporting to ensure livelihoods- the cornerstones of Plan Belize, our guiding document- because all of you have bought into the precept of hard work that we subscribe to as the antidote to economic listlessness, these things have been able to happen. So this report is partly a celebration of the hard work you have put in the ground for the past 5 months, but it is also a celebration of the work going on in the 9 years since the last AGM was held.*

*At the same time that we recognize and celebrate the excellent work going on, I am sure some reports will bring to light the challenges that are faced by the industries and commodities that share our common agricultural fabric. I am also sure that every AGM brings these challenges to light; however, one of the hallmarks of this ministry is that challenges do not stop us from achieving. Challenges sharpen our resolve and shape us into better problem solvers and analytical thinkers. So we embrace these challenges as we strive to make the work of this ministry better.*

*My thanks to all who have contributed to the AGM and this report, and let us keep working to keep our country self-sufficient in food and prosperous in agriculture.*



## Table of Contents of Report Summaries

<b>Units and Departments within the Ministry of Agriculture</b>		
1	Agro-Processing-----	4
2	Belize Bureau of Standards-----	4
3	Cooperatives-----	6
4	Extension Service-----	6
5	Fruit Trees and Non-Traditional Crops-----	7
6	Grains and Traditional Crops-----	8
7	Horticulture Unit-----	9
8	Livestock-----	9
9	Policy and Planning-----	10
10	National Food and Nutrition Security Commission-----	11
11	Research, Development and Innovation-----	11
12	Water Management, Climate Change and Projects-----	12
<b>Statutory Bodies</b>		
13	Belize Agricultural Health Authority (BAHA)-----	14
14	Belize Marketing and Development Corporation (BMDC)-----	15
15	Pesticides Control Board (PCB)-----	15
<b>Partners In Development</b>		
16	Belize Livestock Producers' Association (BLPA)-----	16
17	Belize-Mexico Project (AMEXID)-----	16
18	Belize Trade & Investment Development Service (BELTRAIDE)-----	17
19	Caribbean Research and Development Institute (CARDI)-----	18
20	Development Finance Corporation (DFC)-----	18
21	Directorate General for Foreign Trade-----	19
22	Food and Agriculture Organization (FAO)-----	20
23	Inter American Institute for Cooperation on Agriculture (IICA)-----	20
24	International Organization for Plant and Animal Health (OIRSA)---	21
25	Resilient Rural Belize Project-----	22
26	Sugar Industry Research and Development Institute (SIRDI)-----	22
27	Taiwan International Cooperation and Development Fund-----	23
28	Ya'axche Conservation Trust-----	23



## 1. Agro-Processing Unit Report Summary

**Presenter: Anna Howe, Agro-Processing Unit, Central Farm**

The Agro-Processing Unit started as a pilot project in 1999 with the collaboration of the Republic of China (ROC) Taiwan Technical Mission in Belize. The main objective at the time was to enhance food processing technology and the application of food science concepts in Belize.

Presently the main objectives of the Agro-Processing multi-service facility in Central Farm is to provide training and technical assistance for the creation and expansion of small and medium sized agro-processing enterprises. The Agro-Processing Unit focuses on product research and development for the transformation of local produce into value- added agricultural products as well as the transfer of technology for agri-business development to improve income generation and food security. The unit comprises of a coordinator, an extension officer, and 5 processing assistants.

### **General Overview of Agro-Processing Program:**

- **Food and nutrition Security** - To develop a product that has minimal quantities of sugar, remains nutritious and wholesome, with shelf-life of 6 weeks and is acceptable to school children. After the product is developed, a continuation of the product must be carried out in an efficient and effective manner to allow the private sector to take full control of this activity.
- **Diversification & Value Adding** - To promote agro-based products through research & development and to promote Baking Pot food products via The Belize shop, National Agriculture and Trade Show, World Food Day and other events. Promotion of products is based on seasonality as well as size of operation.
- **Strategic Planning/ Institutional Strengthening** - To improve knowledge and skills of agro-processors, farmers, and students to increase value addition, quality, and food safety of products. We also work with the various units of Central Farm to add value to the unit's production. We share information at Agriculture Fairs, Health Fairs, School Fairs, and Career Days. We work with the Ministry of Health, and Ministry of Education to improve school feeding programs.
- **Data & Information** - To develop and maintain a database of agro-processors in each district. This pool of information can be used when developing projects for baseline data gathering for a better planned project, as well as for conducting experiments to gather data on cost of production, shelf life, etc.
- **Infrastructure Improvement** - To improve the capacity and quality of the Agro-processing services. Various components of the structure need to be addressed.



These structural improvements will assist in the proper flow of raw material throughout the entire facility from receiving area to storage area.

1. Accomplishments of the Unit:
  - a. Converted carbohydrate storage crops such as cassava, sweet potato, and coco yam into flour using the chimney solar dryer.
  - b. Development and establishment of Standard Operating Procedures to produce coconut oil.
  - c. Recording of video on how to preserve tomatoes.
  
2. Agricultural Services:
  - a. Provide the enabling environment for linkages
  - b. Conduct product research and development along with processor.
  - c. Facilitate training sessions.
  - d. Assist small and medium sized entrepreneurs.
  - e. Assist in the validation of products.
  - f. Assist the small and medium sized entrepreneurs.
  - g. Conduct technical tours of agro-processing facility.

## **2. Belize Bureau of Standards (BBS) Report Summary**

**Presenter: Jose Trejo, Director BBS**

The Belize Bureau of Standards (BBS) is the national standards body responsible for promoting efficiency and competitive production in goods and services, with Quality Infrastructure (QI) serving as the foundation in achieving this objective. The pillars of Standardization, Metrology, Conformity Assessment (sampling, testing, calibration, inspection, certification procedures) and Accreditation combined, serve to ensure that goods and services, whether produced domestically or imported, meet established regulatory requirements, such as those relating to the health and safety of consumers and the environment. The Bureau is essentially responsible to protect, secure and safeguard the welfare of the country, a function carried out through the Consumer Protection Unit.

The Bureau of Standards has conducted the following activities in the recently:

1. In 2020, despite COVID-19 challenges, standards technical work across national and regional projects progressed in various areas namely:
  - a. The environment: finalization of the specification and labelling for biodegradable products.



- b. In manufacturing: revision of regional standards for sodium hypochlorite solutions (liquid chlorine bleach) and toilet tissue.
  - c. In agriculture: development and revision of standards for packaged coconut water, wheat flour and white sugar; and
  - d. In wholesale and retail trade: labelling of pre-packaged foods – front of package warning labelling and nutrition labelling.
2. A total of eight standards were submitted to the Standards Advisory Council (SAC) for approval namely for biodegradable products (specification and labelling); tires (new and used) and fuels (premium and regular).
  3. Operationalization of three metrology laboratories. This made available for the first time at the national level, traceable calibration services for:
    - a. Mass standards (1 mg to 1,000 kg)
    - b. Non-Automatic Weighing instruments (Class I, II, III, IIII)
    - c. Volumetric measuring instruments (10 ml L to 18.92 L - 5 gallons)

This competence allowed the BBS to support BAHA in attaining accreditation of its PCR laboratory.

4. Continuous monitoring of the marketplace for compliance to the Supplies Control Act, Metrology Act & Standards Act. This included the verification of scales used in trade, verification of industrial scales, verification of fuel pumps and LPG meters, verification of pre-packaged goods and inspection of Price Controlled and Price Regulated Goods.
  - a. Price Controlled Goods – 853 items
  - b. Price Regulated Goods – 304 items
  - c. Industrial Scales – 111 scales
  - d. Fuel Pumps – 1,164 pumps
  - e. Commercial Scales in Supermarket – 369 scales
  - f. Verification of Net Content – 604 items
5. Responding to the increasing demands for Consumer Protection services driven by the pandemic, the BBS expanded and fine-tuned Regulations under the Supplies Control Act. These amendments included:
  - a. Expanding the Price Regulated Goods list (list requiring a maximum (%) markup) to include general sanitizers/cleaners for domestic and commercial application.
  - b. Expanding the list of goods requiring import license to support the conservation of foreign exchange, this included: fish; cheese, ice cream, toilet paper and flour.
  - c. Increased targeted inspections to determine compliance.



6. Other education and awareness activities included:

- a. Biodegradable & Compostable Workshop
- b. World Consumer Rights Day 2020 – Sustainability Fair
- c. World Standards Day 2020 – Protecting the Planet with Standards – Poster Competition
- d. Stakeholder Consultation on Belize’s Draft National Quality Policy

### 3. Cooperatives Department Report Summary

**Presenter: Gareth Murillo, Registrar of Cooperatives**

#### **Mission**

To conduct regulatory services that conform to established standards and provide dynamic and proficient entrepreneurial development programs that are responsive to the increasing human resource, financial, and technical needs of the co-operative sector in Belize.

#### **Vision**

Empowering people through the transfer of knowledge, the promotion of collective participation, and the furtherance of self-sufficiency for the socio-economic development of Belize.

#### **Work of the Department:**

Regulatory oversight of co-operative enterprises via the authority of Chapter 313, Laws of Belize, in the form of:

- registration, dissolution & conflict resolution
- train, qualify, and certify co-operative enterprises
- maintain records on and of co-operative enterprises
- inspection, auditing, and inquiry of finances and records

Business development in the form of:

- entrepreneurship development programs
- guide, advise, and counsel on business performance

The Cooperatives Department achieved the following in the past year:

1. Developed and enhanced of the Cooperatives staff manual and enterprise curriculum.
2. Audited nine enterprises.
3. Conducted four training workshops on SWOT analyses, business performance metrics, and law basics.



4. Held consultations with staff and co-operative members on the review, revision, and updating of legislation; review completed with significant recommendations.
5. Provided support to the Resilient Rural Belize project by facilitating capacity building workshops for farmers in the various designated production zones.
6. Conducted training programs for enterprises countrywide as follows: two on the benefits of organization for small scale producers and service providers; six on co-operative administration and management; four on the conduct of meetings and minutes taking; and, two on introduction to finance and accounting procedures in a co-operative enterprise.

#### **4. Extension Service Report Summary**

**Presenter: Clifford Martinez, Head of Extension**

Major accomplishments of Extension:

1. Weather and Climate Change data - Conducting of National Damage Assessment
  - a. Hurricane Eta
  - b. Hurricane Iota
  - c. Tropical Depression Amanda
  - d. Tropical Storm Cristobal
  - e. Tropical Cyclone Nana
2. Adaptation of the Belize Agriculture Information Management System (BAIMS) tool for data collection and monitoring of key import sensitive commodities.
3. Formalize marketing of key commodities which are import sensitive
4. Improved partnership with private sector through work such as:
  - a. Vector and pest control for example bat or bee control
  - b. Supporting pesticide licensing with PCB
  - c. Farmer training with BLPA and CATIE
  - d. Securing animal health by maintaining an active rabies and tuberculosis vaccination program





## 5. Fruit Trees and Non-Traditional Crops Report Summary

**Presenter: Faye Garnett, Coordinator, Fruit Trees and Non-Traditional Crops**

Fruit tree outreach and developmental activities are coordinated and implemented through the ministry's Central Farm and Stann Creek Agriculture Stations. Between the two stations, the Fruit Tree program consists of one Agronomist, 2 highly experienced field technicians and seven field staff. In the Stann Creek District, the station is dependent on one skilled nurseryman who is responsible to oversee and stock the nursery with assorted fruit trees. Additional support to farmers is provided by members of the Extension service.

The program's main activities can be divided into three main areas: *the Coconut Hybridization Program, the Agriculture Diversification Program and the Fruit Tree Germplasm Bank and Nursery* which produced an assortment of local, non-traditional fruits trees for producers. Buyers often visit the two stations and purchase healthy, grafted, and non-grafted fruit trees and coconut seedlings ranging from \$5.00 - \$12.00 each (dwarfs, hybrids and tall). In many instances, producers also requested for trainings demonstrations and field visits so that advice can be provided on how to improve production and management, especially for coconuts (Photo 1). However, as a result of limited funding in recent years, drought and the impact of Covid-19 on Belizean agriculture production, fruit trees and coconut seedling production significantly dwindled in 2020 resulting in low production and availability of planting material, technical services, and training to producers. With the recent restructuring of the ministry, it is expected that in 2021, this situation will improve, and the fruit tree sector will benefit greater from the ministry's initiatives.

1. Three main activities of Fruit Trees Program:
  - a. Coconut Hybridization Program
  - b. Agriculture Diversification Program
  - c. Fruit Tree Germplasm Bank and Nursery
2. Coconut pests affecting coconuts
  - a. Coconut Palm Weevil (*Rhyncophorus palmarum*),
  - b. Red Ring Disease (*Rhadinaphelenchus cocophilus*)
  - c. Coconut Bud Rot (*Phytophthora Palmivora*).
3. Cover crops used in coconut production production
4. Fruit Tree Nursery and Agriculture Diversification Plot
5. Current and future plans
  - a. Organize the fruit tree sector ensuring a balanced combination of both public and private stakeholders
  - b. Enhance the fruit tree sector database and Information using BAIMS
  - c. Promote and create awareness of the value of fruits for food and nutrition security, agroprocessing, health and wellness, and entrepreneurship through the use of social media, informational brochures, pamphlets, crop guides etc.



- d. Provide fruit tree producers with reliable access to capacity building opportunities (e.g., training in nursery management, crop management, adequate post-harvest practices, and entrepreneurship, cooperativism)
- e. Promote the establishment of diverse small family fruit plots for production and exchange of planting material and develop germplasm collections at the agriculture stations throughout the country.
- f. Make available a diverse range of planting material for access by fruit tree producers
- g. Promote climate resilient and sustainable fruit tree cropping systems among fruit tree producers and stakeholders
- h. Encourage small and medium farmers to plant and supply the commercial industries with quality and adequate quantities of fruit for export; increase quality fruit production by at least 30% in the next 3 years.
- i. Establish linkages between fruit tree producers and processors for product transformation and marketing
- j. Lobby for affordable credit access from national and international credit institutions
- k. Collaborate with the Belize Marketing and Development Corporation for marketing of local fresh and processed products

## **6. Grains and Traditional Crops Report Summary**

**Presenter: Jose Novelo, Director, Project Execution Unit**

The main objective of the grains sector is to improve the competitiveness of grain and legume commodities to satisfy domestic demand, national food security and generate foreign exchange

- 1. Legumes
  - a. Red kidney beans
  - b. Black beans
  - c. Soybeans
  - d. Black eye peas
  - e. Legume sector value of \$34 million BZE.
  - f. Black eye peas affected by *Thrips* infestation.
- 2. Grains
  - a. Corn
  - b. Rice
  - c. Sorghum
  - d. \$69.5 BZE value for grains
  - e. Markets affected by COVID-19



3. Improve competitiveness of traditional exports (sugar, citrus, bananas) and increase foreign exchange. Affected by:
  - a. Land availability
  - b. Climate change
  - c. Water and pest management
  - d. Disaster recovery mechanisms
  - e. Outdated legislation
  - f. Financing
  - g. Sector value of \$222 million BZE

## **7. Horticulture Report Summary**

**Presenter: Gary Ramirez, Director, Horticulture Unit**

The Horticulture Unit is a part of the Research, Development, and Innovation Centre in Central Farm. Although the Unit operates from its office in Central Farm, our responsibility is national as we provide support and work in conjunction with the National Extension Service.

The Coordinator is the head of the Unit. There are six (6) technical officers (one officer stationed in Orange Walk District to provide technical support on Irrigation and Drainage to the Orange Walk, Corozal and Belize Districts), a secretary and a driver who work along with the coordinator to execute the activities of the sub-programs highlighted above. The day-to-day work of the unit is supported by the contribution of thirteen (14) field workers who assigned to various programs

The primary role of the Unit is to contribute to the competitiveness of the agriculture sector through the validation of innovative technologies.

Additionally, the Unit provides a range of development support such as facilitating training sessions, site visit and tours of the various sites in Central Farm and NATS, designing and construction of covered structures, assistance in irrigation and drainage, school garden development, etc.

The Horticulture Unit currently consists of five (5) sub-program areas.

- Protective/Covered structure
- Horticulture
- Small Scale Agriculture
- Irrigation and Drainage
- NATS Garden

4 of the 5 sub-programs operate crop trial/evaluation, training and demonstration sites.

Some of the accomplishments of the unit for the past year include:



1. Identification of open pollinated seeds varieties.
2. Trials on Solid Rain technology.
3. Substitute of Soil potting to Soil Mix.
4. Production of Vegetable Seedling for Farmers.
5. Dismantling and relocating of Green Houses.
6. Transition from Business to Agriculture production.

In developing the draft workplan for the Horticulture Program for the fiscal year 2021-2022, the following steps/processes will be conducted.

1. Extract relevant info from Plan Belize
2. Define/outline priority commodities & critical stakeholders.
3. Define economic benefits and major challenges associated with selected commodities.
4. Identification of lead officers in each District responsible for vegetable production.
5. Development a support, mentorship, training program to help increase technical capacity.
6. Facilitate the activities of existing task force or working groups for priority commodity or critical issues.
7. Organize the review of existing value chain analysis and collaborate with organization proposing to develop others.
8. Development of plan to help management or coordination the wide-ranging issues related to these commodities (CoP, Calendarization of production & Harvesting, etc.)

#### **Recommendations for the Short Term:**

1. Expand and sustain high quality vegetable seedling production to all districts.
  - a. A draft proposal to support seedling production in Central Farm, Toledo, Stann Creek, Sandhill, and Yo Creek station has been developed and submitted for consideration and approval. There need to be some consideration for how to bring production for the Corozal District. (Current recommendations includes collaborating with Escuela Mexico and/or ITVET)
  - b. A distribution/acquisition mechanism needs to be developed and institutionalized, including whether the seedlings will be given out or sold to home gardeners and farmers.
  - c. The type and quantities of seedlings for distribution to farmers, should be well planned and coordinated to target potential production gaps. For example, the



seedlings produced in the next few weeks should be based on crop losses from the 2 recent natural disasters (Eta and Iota).

- d. Seedlings for home and school gardens should be well diversified and be the types of crops that are easy to grow. A mechanism for ordering, production timing and distribution needs to be established and standardized across the country.
2. Evaluate and revamp national agriculture data collection and reporting system.
    - a. Production data is currently reported mid and end of year unlike in the past where planting and harvest data was submitted monthly.
    - b. New and technology strategies for data collection and reporting needs to be explored and developed. For example, given the challenges in Extensions Service to cover the wide range of communities and farmers across the country to collect production data on a monthly basis, a platform should be developed to allow farmers/producers to self-report their productions plans, plantings, harvestings, challenges, and losses. (i.e Mobile numbers for District officers or Stats Unit where farmers/producers can call-in, text-in, or use WhatsApp to share information). This data can be aggregated, and fields monitored for production forecasting and planning.
  3. Develop a robust and coordinated response to impact on the sector by recent natural disasters such Hurricane Eta and Iota that caused widespread flooding and crop losses.
  4. Conduct research and development to identify suitable Irish Potato varieties for Belize growing conditions.

In Belize, Irish potato is grown primarily in the Orange walk and Cayo Districts. The crop typically requires cool conditions for tuber production and is therefore traditionally planted from early November to about mid-February of the following year. Farmers in these farming communities developed the required knowledge and experience to manage the production of the crop.

To support production, potato seed-tubers are imported annually from the United States each year at an average cost of more than \$309,000.00 Belize Dollars. Unfortunately, these varieties have been developed for the temperate climates of the northern latitudes.

5. Production system assessment for priority crops
6. Develop and support an multi agency contraband suppression strategy.



7. Embark on an aggressive and nationwide “buy + Eat local” campaign.
8. Promote Protected Agriculture Initiatives
  - a. Conduct assessment on the number of structures countrywide and current user rate (The last Covered Structure survey was 2015). Promote the calendarization and diversification of production among operators of the structure.
9. Promote of Home/Backyard/School gardening.
10. Nationwide meeting/consultation with farmers and producers.
11. Visibility and Communication
12. Production planning/Calendarization of priority and high import commodities.

#### **Medium term goals of the Horticulture Unit:**

1. Propose & design high impact/Wide coverage/Collective Community Benefit projects for major farmer organizations/Farming clusters/Agro productive regions
2. Engagement of private sector investors to establish buying/receiving centers and even storage for fresh produce.
3. Promote the development and strengthening of farmer organization.

#### **Objectives for Root Crops**

Preliminary activities that need to be pursued in order to define the Ministry’s approach to promoting the production of Root Crops.

1. Consultation & prioritizing of commodities
2. Collection of germplasm
3. Development of a catalog defining (where possible) the locally available material.
4. Cleaning and Micro-propagation of planting material
5. Establishment of planting material multiplication plots.
6. Identification & sourcing of improved varieties/types.

#### **Potential Commodities for development**

1. Sweet potato
2. Yams
3. Coco yams
4. Cassava
5. Yampi



## 8. Livestock Report Summary

**Presenter: Belarmino Esquivel, Director, Livestock**

Some of the objectives of the Cattle Sector included facilitation of export of cattle to Guatemala and Mexico; increasing the productivity and competitiveness of the beef cattle industry through research, innovation and technology transfer; implementing and determining a disease-free national herd; increasing milk production, quality and by-products on market ; increasing number of dairy farmers by 20% by 2025.

1. Cattle
  - a. Exportation of cattle and total value to GDP contribution.
  - b. Strategic plan for assessing the Livestock Industry (with BLPA).
  - c. TB and BR free status.
  - d. Increase in number of dairy farmers and quality of milk as targets.
2. Apiculture
  - a. Establishment of an apiary demonstration unit for the purpose of training and technology transfer;
  - b. Establishment of a honey extraction and harvesting shed;
  - c. Development of a standard apiary management guide;
  - d. Hive inspection form completed and implemented as a quality assurance tool for traceability;
  - e. Drafted and finalized specification for protective equipment;
  - f. Standardized bee box specifications;
  - g. Criteria for selection of beneficiaries and mentors for CDF beekeeping project.
3. Poultry contributed \$1.1 BZE to GDP, increase targeted.
4. Pig, Sheep and Aquaculture target to improve genetics and productivity
  - a. Capacity building in breeding practices
  - b. Establish registry of producers and breeds

## 9. Policy and Planning Unit Report Summary

**Presenter: Milagro Matus, Policy Analyst**

The Ministry of Agriculture's Plan Belize Farm to Table Policy mission is to introduce technologies and policies which foster public and private sector investments in climate smart mitigation, water management and other transformative mechanisms which increase productivity, quality, profitability and create a sustainable environment for gender and youth inclusion and rural development.



Moreover, the goal of the Farm to Table Policy is to increase, diversify and sustain agricultural production, food security, and income generation in Belize by increasing farm-level capacity, improving technology and innovation, raising labor productivity, and increasing regional competitiveness.

To achieve the goal the Ministry is embarking in accomplishing the following policy measures:

- To replace and substitute imports, expand exports and strengthen the linkages between agriculture and the tourism sector.
- To support affordable financing for farmers
- To review entire tax system and enact reforms to have a simplified, fair, efficient and development-driven system.
- To work in partnership with the 4 traditional exports sugar, citrus, banana and shrimp to increase productivity, competitiveness and market penetration.
- To update and implement trade policy agreements.
- To diversify and become innovative in the adaption of climate-smart systems
- To focus on research and development in partnerships with renowned universities
- To support the increase of locally produced commodities and lead the “Buy Local” campaign.
- To include a program for the teaching of agriculture and agri-business in schools.
- To Improve storage and logistic facilities for farmers
- To improve trade and market intelligence and find niche markets for the exporting of the non- traditional commodities
- Policy and Statistics Unit

The Policy and Statistics Unit of the Ministry aims to achieve the overarching goal of improving trade and market intelligence of the agriculture sector. It is a Unit which implements activities which are cross-cutting since data is needed from decision making and necessary to achieve and monitor goals and objectives.

#### Overview of the Agriculture Sector

1. BAIMS- a powerful sector tool for Agricultural Data.
  - a. 13,866 Farms and 12,403 Farmers Registered in BAIMS.
  - b. 78% of total farmers are male, 22% Female
  - c. Value of Agriculture Output- \$537 million
    - i. Agric output in 2020 affected by climactic changes and COVID-19
2. Agriculture Policy support
  - a. Reduce imports of food and feed, including vegetables, milk, cheese, processed/ tinned meats, low quality snacks, beverages and drinks, etc.
  - b. Updated Sugar Industry Act based on consultation with key stakeholders.
  - c. Statutory instruments that enable reduction of taxes on imported machinery and equipment for agriculture and food processing.





- d. Policy approved for affordable financing and appropriate conditions for farmers with credit unions and commercial banks.
  - ii. A re-organized Ministry of Agriculture, Food Security and Enterprise in operation to deliver on the commitments of Plan Belize efficiently and effectively.

## **10. National Food and Nutrition Security Commission (NFNSC) Report Summary**

**Presenter: Emilio Montero, Coordinator, NFNSC**

The Commission is an Inter-sectorial and Inter ministerial organization responsible for the coordination, advocacy and advice to the government and people of Belize and especially the Ministry of Agriculture, Food Security and Enterprise, on all matters relating to Food and Nutrition Security.

It is made of professionals from Government Ministries, the private sector, and NGOs with years of experience in food production, nutrition and other areas, all working as a team to achieve the national food security objective. Therefore, the commission considers itself competent in making recommendations to cabinet on relevant matters and necessary policies regarding programs and projects aiming at sustainable food production, food sovereignty and security.

1. Ensure the development of sustainable, environmentally sound policies, plans and programs for food and nutrition security.
2. Facilitate the design of achievable plans for food and nutrition security with the effective participation of all stakeholders, at all levels, in the decision-making process and evaluation.
3. Advocate for enough supply and continued access to a variety of safe foods and drinking water so that all people, especially the poor and vulnerable groups, can have enough, nutritionally adequate diets, even during periods of poor harvests, natural and human-caused disasters.
4. Promote adequate in-take of macro and micronutrients, combined with adequate health, especially for women, children, elderly and the marginalized throughout the country.
5. Enhance the knowledge, skills and entrepreneurship of all stakeholders for food and nutrition security.
6. Monitor the food and nutrition situation of the country and make recommendations to cabinet for redefinition of the policies and strategies.



7. Promote coordination of programs which have an impact on food and nutrition.
8. Establish functional linkages with other regional and international bodies involved with food and nutrition security.
9. Identify training needs of the commission for the implementation of the food and nutrition security policy.
10. Disseminate information to the public with respect to food and nutrition.

#### NFNSC Program Areas

1. Information, Education and Communication on Food Production, Preparation, and Nutrition
2. Diversified Food Production, Food Processing, Marketing, Storage and Credit Mobilization
3. Maternal and Child Care, School Feeding and Nutrition for the Elderly and the Indigent
4. Creation of Employment and Income Generating Opportunities at the Local Level
5. Food Safety
6. Analysis and Reform of National Policies for Food and Nutrition Security

#### Accomplishments of the unit.

1. Formation of the Belize Parliamentary Alliance against Hunger and Malnutrition to enact legislation for health eating.
2. Launching of the systematization report.
3. Distribution of vegetable seedlings to schools for gardening.
4. Draft cabinet paper for legislation on banning of sugar drinks.
5. “Integrated Food Security Phase Classification”- (IPC) With IPC specialist from PROGRESAN-SICA : - An Introductory Course
6. Development of a National SG Plan with MOECST/MOAFSE/MOHW/UNICEF/PAHO/INCAP
7. Sub-committee member on “CARICOM Action Committee on FNS
8. Resilient Food Systems & Value Chain Development Committee
9. Nutrition Education (Training workshop): “Healthy Body, Healthy Minds” - MOE/MOH/INCAP/PAHO/UNICEF.-(Nov 25-27, 2020)
10. National School Feeding Technical Committee member
11. Belize Parliamentary Alliance against Hunger and Malnutrition-Technical Working Group
12. CARICOM/AMEXCID SF-Focal Point (MOAFSE)



### 13. Mesoamerica Hunger Free Coordinator

Goals for future include working with schools and capacity building in small farmers

## 11. Research, Development and Innovation Report Summary

**Presenter: Ina Sanchez, Director/ Manager, Central Farm RDI Center**

### General Overview

The technical arm of the Ministry consists of four national programs (Livestock, Grains and Traditional Commodities, Vegetable and Root Crops, and Non-traditional Fruit trees) which support, and are supported by, both the Research and Development (R&D) Program and the National Extension Service. The Ministry's organogram reflects the key role of both research and extension – the former generates information via relevant and adaptive research and the latter, through its district offices, disseminates that information while also feeding information on what are the research needs for sustained development of the sector. The R&D program relies on the national programs to carry out research related projects and other initiatives. Furthermore, the program is supported by the different sections at the Research, Development and Innovation Center in Central Farm – that are guided by the following statements and values:

### Vision

To be the research and development center of excellence that is innovative, relevant and responsive to the emerging issues, challenges and opportunities in agriculture.

### Mission

To continue conducting relevant adaptive/on-farm research, validating technologies, promoting innovative techniques and methodologies, and providing developmental services that increases the competitiveness of producers while enhancing sustainable agriculture.

### Values

Integrity; Hard work; Professionalism; Teamwork; Dedication; Positive attitude, Equity

### Research and Services

- a. Aquaculture
  - i. The main focus of the aquaculture is the supply of Tilapia fingerlings to aquaculture producers, provide technical support through its Extension Service and conduct some research in fish feed and management of Tilapia.
- b. Horticulture



- i. The main focus is research and demonstration under Protective Covered Structures and open field conditions. It also engages in providing support to districts in urban/backyard gardening, technical assistance with irrigation and drainage. The unit has small machinery and equipment for small scale agriculture, facility for the production of soil amendments and healthy seedlings.
- c. Crops and Fruit Tree
  - i. The main focus is to supply quality germplasm of corn and beans, including coconut, grafted fruit trees and upkeep of a germplasm bank. It has one of two coconut hybridization program in the Caribbean and Central America.
- d. Livestock
  - i. The main focus is the supply of beef cattle breeding stock. With the assistance of ROC Taiwan, the Ministry has established a Sheep and Goat Breeding Program with relevant facilities (AI, ET, barns, improved pastures, etc.) that will supply quality breeding stock to producers.
- e. Agro-processing.
  - i. This facility has a variety of equipment for the preparation and processing of agricultural commodities. It engages in product development and evaluation, capacity of building of agroprocessors and interested entrepreneurs in agro-processing.
- f. Mechanical and Engineering Support
  - i. The mechanization subunit provides tractor services including bush-hogging, plowing, harrowing, trailer hauling, vehicle and tractor maintenance and repairs among other services. Furthermore, this section assists with carpentry, masonry, plumbing, welding and landscaping needs to the entire RDIC grounds.

The Research and Development Unit implemented the following activities in the year 2021:

1. Evaluated the adaptability of heat and drought tolerant crop varieties to Belize's agro-climatic conditions through the establishment of demonstration plots in 4 locations around the country example tomatoes.
2. Assessed the adaptability and yield of 37 new lines of biofortified red and black beans under climatic stress conditions of high temperature and irregular water availability. The trial was established in May 2020 and conducted by CARDI at the Central Farm Station with funding and technical support from the MFAI in Belize, technical expert guidance from CIAT and coordination of HarvestPlus LAC and IICA. The OYT allowed researchers to observe genotype x environment interactions which gives an indication of adaptability to local growing conditions.
3. Enhanced the research output of the University of Belize Central Farm-Campus through mentorship and guidance in applied agriculture research. Collaboration with the CF-Campus through the UB BSc. program in Climate Smart Agriculture has



- presented a great opportunity for increased research output that is relevant, demanded and addresses main questions of the farming sector.
4. Produced and supplied quality seeds to producers and built capacity through information and technology exchange. Farmers play an important role in the seed supply chain at the local level and the seed supply network of farmer seed producers should be re-established. This will ensure that seeds produced meet quality standards.

## **12. Water Management, Climate Change and Projects Report Summary**

### **Presenter: Dr. Victor Pasqual, Director, Water Management and Climate Change**

The overall goal of MAFSE is to increase, diversify and sustain agricultural production, food security, income and employment generation in Belize.

To achieve these goals, we will require increasing farm-level capacity, improve technology and innovation, raise labor productivity, and be regionally competitive.

Achieving these goals will enable Belize to increase exports, reduce food imports and improve the livelihood and well-being of rural communities.

#### **Plan Belize Policy Priority #6**

Build resilience to climate change disasters and risks management through education, preparation, diversification and innovative climate-smart systems of land use, for the producers and farmers in high-risk prone regions of the country.

Develop institutional capacities and provide training to farmers on climate-smart systems and practices.

Expand the use of irrigation, hydroponics, and greenhouse technology to produce high quality products.

Mobilize financing from international finance institutions and other organizations interested in sustainable agriculture, agroforestry, the environment and resource conservation, climate change management, climate-smart agriculture and risk management innovations.

#### **Water Management /Climate Change/ Project Management is Cross Cutting**

The Program coordinator must work with All Program Coordinators within MAFSE, Various Line Ministries and Departments, Partners in Development and International Financial Institutions.

1. The FAO supported the Government with USD 100,000. The funds were used to:
  - a. design and implement a national irrigation and drainage master plan.
  - b. design a digital platform which will support the identification/selection of areas to promote the expansion of Belize's national irrigation and drainage systems.



2. The Caribbean Development Fund made available USD118,356.50. The funds were used to develop a covered structure project to increase the efficiency of vegetable production under covered structure by improving construction design and irrigation systems for at least 30 farmers by the end of 2021 and build the capacity of Extension Services personnel and farmers.
  - a. The Caribbean Development Fund also supported a Honey production redevelopment support project by allocating USD 281,959 to this project's implementation. The project targeted 75 beekeepers from all 6 district with 50% of the direct beneficiaries being women and youth. Thirteen participants from Belize attended the two weeks training in Guatemala which introduced participants to all the aspects of beekeeping from the biology, best practices, pest and disease management, queen rearing, value addition and marketing of honey. Technical training sessions in all aspects of beekeeping was also extended to UB Students.
3. International Energy for Atomic Agency initiative equating to USD 400,000 in funds will support the implementation of a project focusing on nuclear and isotopic techniques for Optimizing Fertilizer and efficient use of rainfed Agriculture Systems. Project implementation is expected to commence in Early 2022.
4. Through the Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (EnGenDER) administered by UNDP the Ministry was able to develop a proposal for USD 75,000. 00 to assist 250 farmers Nationwide who was affected by impacts of climate change.
5. The Contingent Emergency Response Component (CERC) is a BZD16 M project financed by the World Bank and the Government of Belize. The project was designed to assist farmers over 10,000 farmers with voucher and cash support who were affected by Market Contraction caused by Covid-19 and the 2019 drought. The project started in August 2020 and will be completed in August 2021.
6. Climate Resilient Sustainable Agriculture Project (CRESAP) is a USD 25M project aimed to increase agricultural productivity and build resilience to climate change risks or Emergency event among the targeted producers. The project included: the development of collective small-scale water harvesting and drainage systems, the strengthening of the organizational, operational, technical and business capacities inter alia of farmers and farmers' organizations, the provision of matching grants for equipment, infrastructure and technologies, the support farmers/producers' organizations to access to finance and the provision of technical support in needs identified.
7. Support was also given for maintenance of an irrigation canal for the Valley of Peace Farmers' Association.



### **13. Belize Agricultural Health Authority (BAHA) Report Summary**

**Presenter: Francisco Gutierrez, Acting Managing Director, BAHA**

#### **BAHA's Vision Statement**

To be a trusted and respected agricultural health authority that inspires confidence in the safety, wholesomeness and health of Belize's agriculture, fisheries and food products.

#### **BAHA's Mission Statement**

To serve Belize by providing efficient, competent and cost-effective professional animal health, plant health, quarantine and food safety services that protect human health, animal health and welfare, plant health and the environment, ensure safe and wholesome food, strengthen national food security and facilitate trade and commerce.

#### **BAHA core values and guiding principles**

##### Integrity

- In all endeavors we are truthful, trustworthy and operate in an ethical manner.

##### Competence

- We recruit, develop and retain a competent, creative and highly motivated staff.
- We maintain credibility and recognition through professional and technical capacity.
- We deliver effective and efficient services to our stakeholders.

##### Inclusiveness (team work)

- We value, recognize and respect every individual for their unique skills, talents and contribution to the delivery of our mandate.
- We support a healthy, personal and professional balance and offer competitive retirement, health and other benefits
- We strive to exceed customer needs and expectations through competence, innovation and teamwork

##### Excellence

- We strive for excellence in the delivery of services, being professional, efficient, (professionalism) courteous, transparent and service oriented.
- We reward staff for their outstanding performance and professional development.
- Accountability and Transparency
- We take ownership and responsibility for our actions, inactions, risks and results and use outcomes as learning opportunities.
- We develop effective policies and strategies in consultation with our stakeholders.

#### **Strategic Goals**

- Enhance protection, improve service delivery and increase awareness of public good
- Ensure financial sustainability and optimize the use of resources
- Empower people and strengthen organizational infrastructure



## BAHA 2020 Achievements

1. Technical Programmes- import regulation and export compliance
  - a. Plant Health
    - i. Extensive list, export commodities
    - ii. Import regulation PRA and market access for various products
      - Hass avocados
      - Husked green coconuts
      - Fresh soursop
      - Limes
    - iii. Medfly program
    - iv. Hemp production regulation
    - v. Ongoing surveillance programs
    - vi. Ongoing collaborations, ex. OIRSA
  - b. Animal Health
    - i. Cattle industry support
    - ii. Poultry support
    - iii. Disease surveillance through collaborations
    - iv. Aquatic unit support for shrimp industry
    - v. Lab activities
    - vi. Vet drugs unit
  - c. Food Safety Lab
    - i. Lab accredited
    - ii. Funding secured for instruments
    - iii. Certification
  - d. Quarantine
    - i. Pests intercepted in past year
    - ii. Strengthening of quarantine department
    - iii. Surveillance at borders
2. Trade.
  - a. Upcoming projects in Trade and SPS
3. Human resources
  - a. CBA signed with PSU





## **14. Belize Marketing Development Corporation (BMDC) Report Summary**

**Presenter: Silverio Marin, Administrator, BMDC**

### **Vision**

To become a proactive and dynamic business corporation providing quality and wholesome products and efficient services to its customers in a timely, reliable and competitive manner.

### **Mission**

To promote, develop and deliver high quality goods and services to our clients in a cost effective and competitive manner using a business/investment approach thereby contributing to the economic development of Belize and providing sustainable food supply for the population.

### **Goals and Objectives**

- Assist in the economic development of Belize.
- Ensure food security and the welfare of all citizens of Belize.
- Enhance product development and marketing services.
- Operate on an environmentally friendly sustainable and viable basis.
- Collaborate with all development partners in Belize.
- Provide secure long-term supplies of essential goods at stable economic prices.
- Seek and develop opportunities to increase Belize's export earnings.
- providing competitive and fairly priced goods and services to consumers.
- seeking and developing business opportunities in fields where Belize has competitive advantages or where Belizean community interests can be benefited.
- responding quickly and efficiently to customer's needs for quality service and quality products.
- providing employees of the Corporation with a supportive work environment and career development opportunities.
- Generating employment to assist with the economic development of Belize.

### **Services**

- Local Marketing & Distribution
- Wholesale & Retail
- Market Orientation
- Market Linkage
- Food Security
- Local advertising
- Product Packaging and Labelling
- Marketing Plan Development
- Product Development; Branding



## Accomplishments and achievements

1. Marketing
  - a. Buy Belize campaign
  - b. Food Security
    - i. Fresh produce import mechanism
    - ii. Importation of red and black beans
  - c. Market access
  - d. Digitization
    - i. Agrilinks
    - ii. Belizeon
2. Development
  - a. Value chain development and support for emergent industries
  - b. Fresh produce markets committee
  - c. Agro-processing under Covid-19 implemented
3. Collaborations with various stakeholders at national and international level
4. Way forward
  - a. Value Chain Development
  - b. Build MSME resilience
  - c. Technification and automation
  - d. Collaboration

### 15. Pesticides Control Board (PCB) Report Summary

**Presenter: Miriam Serrut, Registrar of Pesticides, PCB**

The Pesticides Control Board of Belize is a statutory Board under the Ministry of Agriculture, mandated with the implementation of the provisions of the Pesticides Control Act. The Pesticides Control Act was passed in the National Assembly in 1985 to provide for the control of the manufacture, importation, sale, storage and use of pesticides, and related matters. The Act came into effect on 31<sup>st</sup> December 1988.

The fourteen-member Board is appointed by the Minister responsible for agriculture, for a term of two years. Statutory appointments from the public and private sectors include members from the Ministry of Agriculture, Ministry of Health, Department of the Environment, the Belize Agricultural Health Authority and four agriculture producer associations. As required by the Pesticides Control Act, the remaining six members are appointed by the Minister in his discretion from among persons with knowledge of agriculture or the field of pesticides.

The Pesticides Control Board Secretariat (and the Inspectorate) was established in May 1988 in anticipation of the passing of the Act and has been operating since that time in Central Farm in the Cayo District. The Secretariat is responsible for the enforcement of pesticides laws and regulations and the provision of services to the general public in the area of pesticide management.



The achievements of the Pesticides Control Board over the last twenty-five+ years, while limited in view of all that still remains to be addressed, have laid an important foundation for the regulation of pesticides in Belize. The work of pioneering Board members, as well as those who also took on the mantle to deliver for Belize the comprehensive regulation of pesticides for the protection of human health and the environment, is well recognized.

### **Functions of the PCB**

The Pesticides Control Board was established in 1988 under the Ministry of Agriculture to carry out the provisions of the Pesticides Control Act. The Pesticides Control Board is geared toward the comprehensive control of pesticides in Belize. Pesticides are used mostly in agriculture and public health for the control of pests and diseases.

While pesticides play an important role in sustaining our food supply, and for the control of vector-borne human illnesses, they may also be hazardous to human health and the environment if not used as intended.

The Pesticides Control Act defines the functions of the Pesticides Control Board as follows:

- Registration of pesticides
- Licensing of pesticides imports and manufacture.
- Authorization for sale of restricted pesticides.
- Registration of premises for sale of restricted pesticides.
- Authorization for use of restricted pesticides.
- Classification of pesticides.
- Training of pesticide users.
- All other aspects of pesticide manufacture, importation, packaging, preparation for sale, sale, disposal and use.

### **Achievements of the PCB**

1. Pesticide cost has increased globally, should reach 300 billion USD by 2025.
  - a. Agrochemical market value of 31 billion BZE dollars by 2020.
2. Pesticides management not up to standard in low and middle income countries-training needed.
  - a. IPM policies needed
  - b. Pest management resources needed
  - c. Systems needed for monitoring and data collection
3. Register of pesticides used in Belize updated in 2019
  - a. 127 pesticides on register as number of pesticides quadruples
4. Increased training for users with a view to decreasing use of pesticides.
5. 2017-22 PCB Strategic Plan implemented
6. Pesticide registration and permit distribution carried out
7. Grow Safe campaign



## **16. Belize Livestock Producers' Association (BLPA) Report Summary**

**Presenter: Mindy Garcia, Manager, BLPA**

The Belize Livestock Producers' Association is a private, not for profit organization established under the Meat and Livestock Act Chapter 214, Revised Edition 2000. The Association was established under the Meat and Livestock Commission for the purpose of implementing the Meat and Livestock Act. The Livestock industry was formally organized in the late 1970's when the Government of Belize passed the Meat and Livestock Act. The Act allowed for the establishment of the BLPA, which is run by a Board of Director selected from the membership of the Association.

1. Accomplishments of BLPA.
  - a. Livestock Registry
  - b. Export trade to Mexico and Guatemala
  - c. Subsidizing cattle farmers with vaccines and testing
  - d. Improvement and modification of Northern Border Corral
  - e. Assisting Belize River Valley ranchers with improved pasture
  - f. Toledo corral and scale
  - g. National farm audit
  - h. MoU to do BSE surveillance program for control status for cattle industry
  - i. 3 checkpoints for cattle trade activated
  - j. IDB project wrap up
  - k. Support for district cattle offices
  - l. Strategic plan for cattle industry developed
  - m. Carried out cattle trader registration
  - n. Strategic plan presented for implementation
2. Strategic/Communication plan implemented.
3. Surveillance for Bovine Spongiform Encephalopathy (BSE).
4. Statistics- cattle industry numbers on rise.

## **17. Belize-Mexico (AMEXCID) Project Report Summary**

**Presenter: Maria Fernanda Garrido, Third Secretary, Economic Affairs**

The cooperation between Mexico and Belize is carried out under the Programs for Technical and Scientific Cooperation, usually adopted each 2-4 years, between the government of Belize and the Government of Mexico through AMEXCID.

Currently, the cooperation activities are implemented under the IX Program for Technical and Scientific Cooperation 2019-2020.



#### Key Program Partners in Mexico:

- AMEXCID- Mexican Agency for Cooperation and International Development
- SADER- Ministry of Agriculture and Rural Development of Mexico
- INIFAP- National Institute of Forestry, Agricultural and Livestock Research of Mexico
- SENASICA- National Service for Agro-Alimentary Public Health, Safety and Quality of Mexico

#### Projects with INIFAP:

1. Diagnosis and development of sheep production in Belize
2. Technical assistance and training in technologies to enhance production and use of **coconut**
3. Integrated water management for best management practices, assessment and enforcement
4. Strengthening the technical capacity of the Agro-Processing Unit at Central Farm to better support small and medium-size local agro-processing enterprises
5. Strengthen the beekeeping industry through capacity building and technical support to beekeepers and potential beekeepers in the rural communities of Belize

#### Projects with SENASICA:

6. Capacity building for personnel of the Quarantine Department of the Belize Agricultural Health Authority (BAHA) in the areas of Quarantine Administration, Quarantine Inspection of Imports/exports at official ports of entry (POE), and data collection and processing
7. Strengthening and training of experts in phyto and zoosanitary services

#### Activities Update to May 2021:

Project	Activities
<b>Sheep Production</b>	<ul style="list-style-type: none"><li>● Two in-person trainings</li><li>● One remote activity, May 2021</li></ul>



<b>Coconut</b>	<ul style="list-style-type: none"> <li>● Three in-person trainings</li> <li>● One remote activity, April 26-28, 2021</li> </ul>
<b>Beekeeping</b>	<ul style="list-style-type: none"> <li>● One remote activity completed</li> <li>● One remote activity second half of 2021</li> </ul>
<b>Agro-processing</b>	<ul style="list-style-type: none"> <li>● One remote activity completed</li> <li>● One remote activity mid 2021</li> </ul>

**Other initiatives implemented in Belize in coordination with AMEXCID:**

1. The regional initiative Mesoamerica Hunger Free, implemented with FAO
  2. The initiative Mexico – FAO - CARICOM
  3. The Regional Initiative for the Development of Coconut Industry in the Caribbean
- Two of the main results of the cooperation between Mexico and Belize has resulted in the promotion of cattle export to Mexico, with the support of the Mexican company *SuKarne*, and the initiation of the first discussion for the negotiation of the Partial Scope Agreement Belize-Mexico.

**18. Belize Trade & Investment Development Service (BELTRAIDE) Report Summary**

**Presenter: Dr. Leroy Almendarez, Executive Director, BELTRAIDE**

The Belize Trade and Investment Development Service (BELTRAIDE) is a statutory body of the Government of Belize.

BELTRAIDE, a national economic development agency, operates within the portfolio of the Ministry of Economic Development, Petroleum, Investment, Trade and Commerce.

**Our Mission:**

Enhancing Belize's prosperity by fostering investor confidence, entrepreneurship, business growth and innovation.

**Our Vision:**

Enabling a dynamic and competitive business environment for Belize's Socio-economic development.

In order to effectively facilitate our clients, we provide them with the following services:



- Complete Information on business opportunities both within, and outside of Belize, to facilitate Investments and Exports, respectively.
- Development Services which involve facilitating companies throughout the investment process, i.e. from start to finish, often times including lobbying in the best interest of companies, providing contacts to Government Agencies, etc.
- Regular Site Visits to facilitate constant dialogue with clients, in order to address issues affecting their sectors.
- One on one guidance in developing business plan, marketing plan and for product development
- Administer the Fiscal Incentives Program, and the Export Processing Zone Program, on behalf of the Government of Belize.
- Assistance in identifying local companies for joint ventures and identifying suppliers and other business support organizations.
- Provide research related assistance for information requested by our clients.

#### **Achievements of BELTRAIDE:**

1. Cacao project- OAS
  - a. Development of Marketing and Product Diversification Strategy that will guide promotions and branding of the industry at the National, Regional and International level. This strategy will cover:
    - i. The export market for fine flavour cacao,
    - ii. The market for value added cacao product (health food, gastronomy/culinary, spa and wellness etc.)
    - iii. The tourism market for cacao themed tours and other agro/eco-tourism activities.
  - b. Development of institutional framework for the cluster that morphs into an overarching body that represents the interest of industry stakeholders (Belize National Cacao Committee)
  - c. Capacity Building Program for stakeholders
2. Cacao Project – Compete Caribbean Consultancy
  - a. Improve the knowledge of Belize cocoa farmers in agriculture best practices that will increase efficiencies in production, maximize yields and bean quality, and establish more sustainable and resilient operations.
  - b. Conduct training and related technical assistance in Belize in:
    - i. Farm operation best practices to increase productivity;
    - ii. postharvest and quality management. Training will be based on scientific approaches and done online in train-the-trainer format
3. Female Entrepreneurship Program (Female Cacao Farmers)
  - a. Women can depend on their own economic resources through access to their own income from paid employment or from their own business



4. National Investment Policy
  - a. Determine with greater certainty and predictability the national direction for investments towards economic growth and development
  
5. BELTRAIDE Investment Incentive Programs
  - a. Fiscal Incentive (FI) Program
  - b. Designated Processing Areas (DPA) Program
  - c. Micro, Small & Medium Enhancement Programme (MEP)
  
6. Belize Investment Portfolio (BIP) program
7. Buy Belize program support

## **19. Caribbean Agricultural Research and Development Institute (CARDI) Report Summary**

**Presenter: Omaira Avila, Country Representative, CARDI**

For over 30 years the Caribbean Agricultural Research and Development Institute (CARDI) has been steadfast in providing sterling contributions to the growth and development of the agricultural sector of Member Countries of the Caribbean Community (CARICOM). The Heads of Governments of CARICOM in 1975 established CARDI to serve the agricultural research and development needs of the 12 Member Countries within CARICOM. In this context, CARDI as the only regional agricultural institution identified in the Revised Treaty of Chaguaramas has a critical role to play in the implementation and co-ordination of key Technology and Information Systems (TIS). CARDI, through national consultations in Member Countries is impacting on the regional food basket through commodity programmes – small ruminants, sweet potato, and other root crops, cereals and grain legumes, hot peppers and fruits and vegetables.

### **Vision**

The Centre of Excellence in the Caribbean for the provision and application of research for development in agriculture that contributes to the creation of wealth and the competitiveness of the sector in the Region.

### **Mission**

To contribute to the sustainable development of Caribbean people by the generation, transfer and application of appropriate technologies through agricultural research for development

### **Slogan**

Improving Lives through Agricultural Research

## **Achievements of CARDI**





1. CARDI contributes to Food Nutrition Security through development of innovations that contribute to sustainable, climate resilient value chains.
  - a. Value chain services.
  - b. Institutional strengthening.
  - c. Partnerships and strategic alliances.
  - d. Policy and advocacy.
2. CARDI supports 9 of 11 Plan Belize goals.
3. Mechanization and small machinery support to small farmers.
  - a. Ploughing, harrowing, beds for drainage.
  - b. Drying services.
  - c. Technology transfer and capacity building provided to farmers and technical team of the ministry in areas of IPM, GAP and water management.
4. Hot pepper plant genetic programme conservation and promotion
5. Enhanced biodiversity – Seed production (hot pepper, multiplication of open pollinated varieties of bean and corn).
6. Collection of genetic resources
7. Iron fortified beans project
8. Participant in surveillance of pest activity- *Asian bean thrips*
9. Collaboration with SIRDI in wild cane program for electricity
10. Value Chain analysis (coconut).

## 20. Development Finance Corporation (DFC) Report Summary

**Presenter: Asad Magaña, Assistant General Manager, Lending Operations, DFC**

### **Mission**

To provide development financing and related services which contributes to sustainable growth of the Belizean economy.

### **Vision**

The DFC empowers the Belizean economy to be economically, socially and environmentally resilient through the provision of world-class, high-impact, innovative, inclusive and accessible financial products and services.

### **Values**



- Integrity in everything we do
- Respect for people, for our customers, for ourselves
- Commitment to the development of Belize
- Loyalty to our purpose, to our values, to our belief that we can make a difference
- Corporate Social Responsibility commitment to achieving positive social and environmental impact
- Openness to listen, to innovate, to change, to improve

### **DFC Achievements**

1. DFC supports GoB in achieving macro-objectives
  - a. Economic development
  - b. Social development
  - c. Environmental compliance
  - d. Inclusive of gender and broader population sectors
2. Role as development bank
  - a. Loans portfolio of \$117+ million BZE
  - b. Productive sector \$76 million BZE
  - c. \$23.5 BZE for Agro-financing
3. Application procedures.
4. Climate resiliency/ Gender inclusivity.

## **21. Directorate General for Foreign Trade Report Summary**

### **Presenter: Richard Reid, Senior Trade Economist**

The DGFT has portfolio responsibility for matters of international trade and regional economic integration, as a Member State of the Caribbean Community and as a participant in the CARICOM Single Market and Economy (CSME). Note that the CARICOM Single Market regime officially entered into force in 2006, but work is still ongoing on the Single Economy. The DGFT is also highly involved in the arrangements under which financial and technical assistance are made available to the agriculture sector in Belize, in particular from the European Union under the European Development Fund (EDF).

The DGFT has been the most important supporter in promoting development of the Agriculture sector of Belize. The main support is in export trade and the protection and support afforded to domestic producers. The country's main exports are agriculture products, in particular sugar, banana, and citrus. The DGFT provides support primarily through: (a) application of trade policy measures designed to protect the domestic market for domestic producers, to the extent possible within the rules of trade, and (b) by continuously seeking new export markets for Belize's products.

### **Achievements of the DGT:**



1. The DGFT provides support in export trade and the protection and support afforded to domestic producers primarily through:
  - a. application of trade policy measures designed to protect the domestic market for domestic producers, to the extent possible within the rules of trade, and
  - b. by continuously seeking new export markets for Belize's products.
2. Unilateral trade programmes:
  - a. Canada: CARIBCAN (tariff preferences on goods from CARICOM States)
  - b. USA; Caribbean Basin Initiative (tariff preferences on goods from Caribbean States)
3. Regional Integration Agreements:
  - a. CARIFORUM-EU Economic Partnership Agreement (EPA)
  - b. CARIFORUM-United Kingdom Economic Partnership Agreement (EPA)
  - c. The Revised Treaty of Chaguaramas Establishing the CSME
4. CARICOM Bilateral Trade agreements (under principle of non-reciprocity for the LDCs):
  - a. The *CARICOM-Venezuela Agreement on Trade, Economic and Technical Cooperation* (1992)
  - b. The *CARICOM-Columbia Agreement on Trade and Technical Cooperation* (1994)
  - c. The *CARICOM-Cuba Trade and Economic Co-operation Agreement* (2000)
  - d. The *CARICOM-Costa Rica Free Trade Agreement* (2004)
  - e. The *CARICOM-Dominican Republic Free Trade Agreement* (2004)
5. Belize's Bilateral Trade Agreements:
  - a. Belize-Guatemala Partial Scope Agreement (PSA) – corn, beans, meat products
  - b. Belize-Taiwan Partial Scope Agreement (PSA) – shrimp, animal feed, citrus concentrates
6. Pending Negotiations for Trade Agreements
  - Belize-Mexico Partial Scope Agreement (PSA)

## 22. Food and Agriculture Organization (FAO) Report Summary

**Presenter: Armando Aban, FAO National Correspondent, Belize**

The Food and Agriculture Organization (FAO) is a specialized agency of the United Nations that leads international efforts to defeat hunger.

Our goal is to achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives. With over 194 member states, FAO works in over 130 countries worldwide. We believe that everyone can play a part in ending hunger.



## FAO in Belize

1. National and sub- regional projects to improve:
  - a. Water (Irrigation and Drainage), Agro-processing (value chain analysis) and Health Diet and Local Production (School feeding programs).
2. Operationally active projects for period 2020-21 include:
  - a. Sustainable, Inclusive and Resilient Food System. TCP/BZE/3801.
  - b. COVID-19 Response. TCP/BZE/3802.
  - c. South - South Cooperation. TCP/BZE/3802.
  - d. Sustainable Development of Resilient VCs -Implementation of CARICOM COVID-19 TCP/BZE/3802.
  - e. Sustainable and resilient agriculture. GCF (Coastal Fisheries) and GEF (Reserve Maya).

### **23. Inter-American Institute for Cooperation on Agriculture (IICA) Report Summary**

**Presenter: Dr. Gabriel Rodriguez Marques, Country Representative, IICA**

The Inter-American Institute for Cooperation on Agriculture defined its road map based on five hemispheric programs that will lend uniqueness to IICA's vision; channel the Institute's programmatic actions toward the identification of cooperation actions through the design and implementation of projects; and provide technical advice and assistance to governments and other social and economic stakeholders involved in agricultural and rural life in the Americas. The programs are:

- Bioeconomy and Production Development
- Territorial Development and Family Farming
- International Trade and Regional Integration
- Climate Change, Natural Resources and Risk Management
- Agricultural Health, Safety and Food Quality

Additionally, two cross-cutting issues have been identified as essential components in the work undertaken by all five programs:

- Gender and youth
- Innovation and technology

At IICA, we prioritize triangular cooperation and South-South cooperation, and is geared towards efficiency, flexibility, decentralization, collaborative work and networking, with a focus on processes as well as the mobilization of human, institutional and financial resources. These are ways of how we provide support to our member countries.

Despite the global pandemic that put a halt on many of the on-the-ground activities, we were able to successfully implement a number of actions such as:



- The implementation of an Australian Funded project on backyard poultry biosecurity, in collaboration with Belize Poultry Association, the Belize Agricultural Health Authority, and the Ministry of Agriculture, Food Security and Enterprise. The project consisted on providing material and training to build 34 model affordable bio secure chicken coops, training on biosecurity, production of two training videos, a manual on backyard biosecurity and posters. These tools formed a package which can be later used by Agricultural Extension Officers when conducting training with farmers. These tools are available for download from the IICA website.

#### **Accomplishments of IICA:**

1. Implementation of Australian-funded bio-security Backyard Poultry Project. 34 models constructed. Video, posters, and other instructional materials produced.
2. Composting training and trials. To strengthen the precedence of economies thru the adoption of sustainable technologies and waste management best practices.
3. Technical support to PCB (guidelines for constructing efficacy trials)
4. Coordinate for development of Antimicrobial Resistance Surveillance Plan for Belize.
5. Concept note prepared for *Building Guardians for the Forest and Regenerative Agricultural Communities in Forest Buffer Zones across Rural Belize* project. When implemented this project will involve Caribbean Community Center for Climate Change and IICA.
6. Collaboration with BELTRAIDE, Belize Chamber of Commerce and Industry and Belize Hotel Association to produce FABLAB Digital Fabrication Laboratory.
7. Developed an online training platform for Caribbean Climate Online Risk Assessment Tool (CCORAL)

#### **Current IICA activities:**

1. Supporting the regional GCF Readiness Project “Strengthening the foundation for a climate responsive agricultural sector in the Caribbean”
2. STDF project for “Piloting the use of Third-Party Assurance (TPA) Programme in Central America (Belize and Honduras) to improve food safety outcomes for public health and trade”.
3. Liaison with BAHA, MAFSE and IICA partners for the implementation of the 11TH EDF SPS Measures Project- "Strengthening National Legislative Framework”.

#### **Upcoming IICA Activities:**

1. GCF project “Building Guardians of the Forest and Regenerative Agriculture Communities in forest Buffer Zones across Rural Belize”
2. Adaptation Fund "Transformative agriculture, supporting livelihoods and biodiversity, around the Selva Maya”
3. Innovation & Technology and Gender & Youth –FABLAB Belize
4. Canada Fund for Local Initiatives “Supporting a healthy campaign to promote healthy eating habits in children-consuming nutritious foods grown by Belizean farmers”



5. Support for Institutional Strengthening of the BLPA for greater market access

## **24. International Organization for Plant and Animal Health (OIRSA) Report Summary**

**Presenter: Fermin Blanco, Country Representative, OIRSA**

The International Regional Organisation for Plant and Animal Health (Organismo Internacional Regional de Sanidad Agropecuaria, OIRSA), an intergovernmental organization founded in 1953, provides technical assistance to the ministries and departments of agriculture and livestock of nine member states: Belize, the Dominican Republic, Guatemala, Honduras, Nicaragua, Panama, El Salvador, Mexico and Costa Rica. The organization plays an important role in disease and pest control throughout Central America, protecting and strengthening agricultural, forestry- and aquaculture-related development by enhancing production capacity and the safety of crops and agricultural products.

### **Achievements of OIRSA**

1. 51.4% reduction in quarantine treatments due to closure of points of entry, resulting in reduced revenues of 47.9% or US\$189,791 in comparison to 2019.
2. Continued financing of the Pink Hibiscus Mealybug Program and Biological control of pest.
3. Expansion and re-structuring of the laboratory facility to accommodate the production of parasitoids.
4. Field trials for the control of pest and disease with the use of biological agents.
5. Support to the National Registry for Traceability of beef, sheep, and honey. (TRAZAGRO).
6. Sponsored an assortment of vegetable seeds to Ministry of Agriculture to assist farmers affected by hurricane ETA and IOTA.



## **25. Resilient Rural Belize (RRB) Report Summary**

**Presenter: Alfred Serrano, Climate Officer, RRB**

The Resilient Rural Belize Programme is a six-year, US 20 Million Dollar programme aimed at minimizing the impacts of climatic and economic events on rural small farmers while supporting sustainable market access for their produce. The Programme became effective on November 30, 2018 with the signing of a USD 8 Million Loan Agreement between the Government of Belize (GOB) and the International Fund for Agricultural Development (IFAD).

The Programme is operating countrywide and is targeting: (i) poor rural families; (ii) vulnerable rural families; (iii) households with less than 25 acres, engaged in part Bme or full-Bme farming; and (iv) formal and informal farmer organizations (cooperatives, associations, etc.) with the willingness and potential for improving productivity and farmer market access. The programme is expected to reach a total of 6,000 households or approximately 30,000 persons, from which 24,000 is expected to have strengthened resilience. Consistent with the importance of women in the rural economy, and in smallholder farming generally, at least 40% of programme beneficiaries will be women and similarly, recognizing the importance of youth for the sustainability of the sector, youth will comprise at least 20% of programme beneficiaries. The Programme's primary focus is on the production of six vegetables (onions, tomatoes, sweet peppers, cabbage, le<sup>^</sup>uce and habanero peppers), one fruit (pineapple) and honey and related products. Inclusion of other products/commodities is dependent on market opportunities and the interest of small farmers.

The programme has two (2) components:

- **Component 1 – Climate-Resilient Value Chains Development** This component aims to address the constraints faced by small farmers and improve the profitability of the value chain process within the context of developing climate-resilient agriculture while reducing the financial, economic, and climate-related vulnerabilities that producers and households currently experience. Activities will focus on increased productivity and diversification of production, facilitation, innovation development and strengthening of producer organizations.



- Component 2 – Climate Resilient Rural Infrastructure and Assets Development This component is intended to reduce physical vulnerability and anticipated impacts of climate variability and enhance access to markets through a range of public infrastructure investments, including the rehabilitation and provision of roads, drainage, and irrigation. The main selection criteria will be infrastructure schemes of common use (public) that address adaptation to projected climate change events and enhance the opportunities for agribusiness and rural enterprises identified for support under Component 1.

Funding for the Programme is being provided by:

- The International Fund for Agricultural Development – USD 8 Million;
- The Green Climate Fund – USD 8 Million (currently in the final stages of approval)
- The Government of Belize – USD 3.2 Million;
- Programme Beneficiaries – USD 0.8 Million (by way of counterpart matching contributions).

The Ministry of Economic Development and Petroleum (MEDP) is the Lead Programme Agency with overall responsibility for programme implementation. The Ministry of Agriculture (MOA) plays a key role in programme implementation and works closely with the MEDP and the Programme Management Unit to ensure that agricultural sector priorities and strategies are duly taken into account throughout programme implementation. Strategic direction and oversight are provided by a Programme Oversight Committee, chaired by the MEDP, and includes one representative from each of the following institutions: Ministry of Finance, Ministry of Agriculture, Ministry of Works, Ministry of Rural Development, Ministry of Natural Resources and the National Climate Change Office. Day-to-day management and implementation of the project rest with the Programme Management Unit, which is anchored to the MEDP.

RRB Achievements:

1. Program goal
  - a. Minimize the impact of climatic and economic events on smallholder farmers while supporting sustainable market access for their produce
  - b. Build overall resilience to climate change by adopting climate resilience practices
  - c. Increase and diversify overall agricultural production
  - d. Facilitate access to commercial market chains for offtake of surplus production
2. RRB Finances- 40 million Belize dollars.
3. Target areas
  - a. 5 areas, 23 communities impacted by program-approx 9,000 households
  - b. Commodities prioritized include onions, carrots, cabbages, tomatoes, peppers, pineapples, honey
4. Business plans, organizational development plans, climate smart agriculture and capacity building





## **26. Sugar Industry Research and Development Institute (SIRDI) Report Summary**

**Presenter: Leticia Westby, Extension Coordinator, SIRDI**

The Sugar Industry Research and Development Institute (SIRDI) was activated in 2009 as established in the the Sugar Industry Act of 2001. It is the principal entity responsible for the development of an efficient and productive sugar industry research and extension system that is economically viable, financially sustainable and environmentally safe. Its objective is to increase productivity by enabling the sugar industry and the cane farmers to adopt improved cultural practices and technologies. Agriculture is critical for Belize's development due to its foreign exchange earnings, employment, and food and nutrition security. Thus, the sugar industry in northern Belize, which counts with more than 5,000 farmers, is of economic importance, both for the area under production and its contribution to the generation of jobs; however, unfavorable factors exist which limit yields and cane quality. SIRDI remains focused in assisting sugarcane farmers by providing technical support and developing new technologies in sugarcane production that will assist in improving competitiveness and efficiency at field level. This is achieved through the validation and implementation of research programs in areas of good management practices in sugarcane production.

1. SIRDI Research Activities:
  - a. Soil studies have been carried out to support sugar industry.
  - b. Sugar Cane Variety Development Program
  - c. Studies in plant nutrition have been carried out on sugar cane.
  - d. Pesticide control practiced with a view to reducing pesticide use.
  - e. Impact of humidity regime on soil studies
2. Wild cane biomass project for production of electricity has been initiated
  - a. Collaboration with CCCC and CARDI in project
  - b. If successful, the project would show viability of a new bioenergy source
3. Stem borer and other pest project studies carried out.
4. Agricultural services to farmers continue



- a. Tillage, fertilizer application, harvest residue management and drainage
- 5. IPDM Lab activities in support of sugar cane and agriculture
  - a. Production of bio control agents

**27. Taiwan International Cooperation and Development Fund (ICDF) Report Summary**  
**Presenter: Melanio Pech, Consultant, Genetic Improvement in Sheep and Goat Project**  
**under ICDF**

The International Cooperation and Development Fund (Taiwan ICDF) is dedicated to boosting socio-economic development, enhancing human resources and promoting economic relations in a range of developing partner countries. We also offer humanitarian assistance and provide aid in the event of natural disasters or international refugee crises.

To carry out our mission, we offer a range of assistance that centers on four core operations: lending and investment, technical cooperation, humanitarian assistance, and international education and training. Our Fund is used to make direct or indirect investments and to finance lending operations. Revenues generated by the Fund are used to support our bilateral or multilateral technical cooperation projects, humanitarian assistance operations and education and training.

Every new project from the Taiwan ICDF proceeds according to a rigorous project cycle and is backed by mutual covenants signed in cooperation with relevant stakeholders. Our projects are designed to address the strategic development goals of each of our partner countries, pay due consideration to associated regional trends, and maximize results by employing the right combination of capital and technical cooperation.

Ultimately, our work is tailor-made to the local needs of each partner country. Our assistance covers a variety of contemporary development issues such as environment, public health, agriculture, education and information and communications technology.

We are also acting to improve human resources and build institutional capacity at the Taiwan ICDF itself. We believe that as a stronger, more professional organization, we will be better placed to advise decision-making bodies within our government. Efforts to improve our own



organization will also help us to deepen the coverage of our projects and transfer technological know-how on to our partners. We aspire to making the most effective use of manpower and resources, and replicating and adapting successful experiences from one partner country to another.

The Taiwan ICDF is headquartered in Taipei, Taiwan. As of December 31, 2020, we have 110 domestic employees and 151 staff working at overseas missions.

1. Project Overview
  - a. Project Phase 1 started 2015, Phase 2 started March 2020.
  - b. Improved breeding stock
2. Sheep Industry Background
  - a. Follow trend of cattle industry in traceability and marketing
3. Budget
  - a. 4 year span of project Jan 2020 to Dec 2023
  - b. \$3million USD
4. NSGBC accomplishments
  - a. Increased training to farmers and technical staff of the ministry in sheep management and nutrition.
  - b. Increase in lambing and sales.
  - c. Price reduction of breeding stock to farmers.
  - d. Procurement of machinery and equipment to enhance production and productivity.

## **28. Ya'axche Conservation Trust Report Summary**

**Presenter: Christina Garcia, Executive Director**

Ya'axché Conservation Trust (Ya'axché) was founded in 1998 by a consortium of local leaders. The impetus for creating the organization was to safeguard a natural corridor connecting the forests of the Maya Mountains with the lowland forests of the Caribbean coastal plains. This corridor was purchased and named the Golden Stream Corridor Preserve (GSCP).

The young organization then signed a 12-year institutional Memorandum of Understanding with Fauna & Flora International (FFI), the world's oldest conservation organization based out of Cambridge, United Kingdom that same year. This allowed us to access international donors and technical expertise and advice. A year later, Ya'axché secured its first one-year grant from the IUCN to establish administrative aspects of the organization to formalize the organization. Ya'axché proved to be successful in managing GSCP and therefore was asked by the Government of Belize to co-manage the 'crown jewel of Belize', Bladen Nature Reserve in 2008.



Then, in 2015, Ya'axché was also granted co-management rights for the Maya Mountain North Forest Reserve, a key biodiversity area. These protected areas are managed under the organization's Protected Area Management Program which ensures that its biodiversity remains intact.

In an effort to ensure our approach to conservation was as holistic as possible, Ya'axché created a program alongside its Protected Area Management Program, called the Community Outreach and Livelihoods Program, to foster sustainable livelihoods of the local people who buffer the protected areas. It focuses on building capacity for increased community participation in natural resource management.

Ya'axché continues to be creative in its approach through actions – adopting the Spatial Monitoring and Reporting Tool (SMART), implementing sustainable financing initiatives such as EcoTourism Belize, and obtaining the permit for the first agroforestry concession in Belize. Ya'axché now manages 770,000 acres across its focal area called the Maya Golden Landscape. Within this landscape, it manages three protected areas and works with eight communities in an effort to achieve its vision of achieving harmony between nature and human development.

#### Activities of Ya'axche

1. Sustainable use of the natural resources and promotion of smart agricultural practices including beekeeping, establishment of agro-forestry (cacao) and Inga Alley cropping models.
2. Increase in cocoa bean production to 32,001 lbs. in 2020.
3. Sharp increases of honey production in the Maya Golden Landscape and Forest Concession. High interest of Mayan women engaged in beekeeping.

