

# Ministry of Agriculture, Food Security and Enterprise



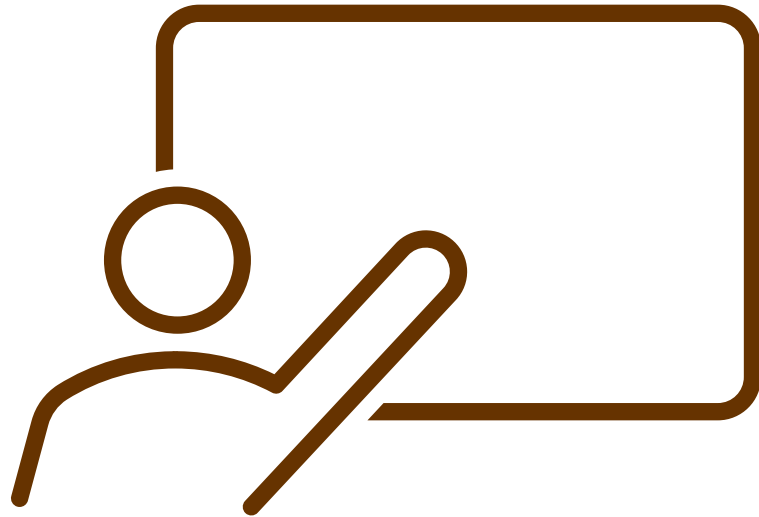
## Non-Traditional Fruit Tree Program



**Presented By: Ms. Fay I. Garnett**  
Program Coordinator  
NATS, Belmopan  
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# Presentation Outline

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- ❖ Introduction
- ❖ Accomplishments 2020-2021
- ❖ Program Approach
- ❖ Priority Commodities
- ❖ Acreage distribution for selected fruits
- ❖ Swot Analysis
- ❖ Agriculture output and Opportunities
- ❖ Roadmap/Strategy Areas
- ❖ Implementation Plan 2021 – 2023



# Introduction - *Traditional vs. Non-traditional fruits*

## Characteristics of Traditional and Non-traditional Fruits

Traditional	Non-Traditional
They earn valuable foreign exchange	They are diverse and mostly found in local/domestic markets
They occupy the most productive land areas in Belize	They have not been able to realize their full potential.
They provide employment for rural communities	They are grown at the backyard level in small acreages
In some cases, they receive extensive support from governments and partner institutions	They lack coordination and an enabling environment to grow
They have strong industry associations	They are often described as underdeveloped, under-capitalized
They are generally well-developed and exported to Europe and North American markets.	There is increase in potential for niche markets (juices/blending, cosmetics, biomedicine, etc.)
They sometimes have guaranteed markets	

# National Fruit Tree Program

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- 3 nurseries (Central Farm, Stann Creek and Orange Walk Stations)
- Human Resources (2 Agronomist, 2 Fruit Tree Technicians, 6 support officers and partners)
- Diverse Nursery Stock (approx.2000 plants)
- Coconut Hybridization Program (10 acres)
- Agriculture Diversification Plot (Seed multiplication, collection of varieties, food security) – (12 acres in CF)
- Facilitation of Trainings and Capacity Building (low, due to covid restrictions)
- Partnerships and Collaborations with national, regional and international partners (E.g., CARDI (Regional Coconut Project) and PCB (Grow Safe Initiative))
- Research and Innovation (Data Collection)



# Accomplishments 2020 - 2021

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# Accomplishments 2021 – 2023

Ms. Teresita Balan and Mr. David Nabet



<b>Activities</b>	<b>Planned in Trimester</b>	<b>Completed in trimester</b>	<b>% completed</b>
<b>Improvement and Planning of Sustainable Crop Management systems for orchard management</b>	4	4	100%
<b>Rehabilitation of Coconut Seed Garden 3 &amp; 4</b>	2	2	100%
<b>Pest and disease control program (Coconut Weevil, Red ring and Phythophtera disease)</b>	1	1	100%
<b>Infrastructural Improvement (nurseries, fence lines, roofs)</b>	5	4	75%
<b>Capacity Building and Outreach Services</b>	1	6	100%

# Accomplishments 2021 – 2023

Ms. Teresita Balan and Mr. David Nabet



Activities	Planned in Trimester	Completed in trimester	% completed
<b>Fruit Tree Stock</b> (Soursop, Golden Plum, Lychee, Wax apple, Starapple, Tambran, Sapodilla, Malayapple, Suriname cherry, Guava and Golden Plum, Mangoes, Custard Apple, Craboo )	1	1	50%
<b>Monthly Inventory of fruit tree plants</b>	4	3	75%
<b>Conversion of Citrus Multiplication Nursery to Fruit Tree Nursery in CF</b>	1	1	85%
<b>Maintenance of fruit tree germplasm bank at ADP plot (Area: 12 acres)</b>	1	1	80%
<b>Maintenance of fruit tree germplasm (5 acres)</b>	1	0	0%
<b>Capacity Building and Outreach Services</b>	1	2	100%
<b>Participation in Regional Coconut Project CARDI/BZE (Technical Committee)</b>	1	1	100%
<b>Participation in the Review process for the Regional Coconut Standards for Water and SOP packaging</b>	2	2	100%

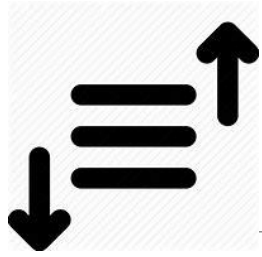


# Moving forward...

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- 1. Assessment of the Non-traditional Fruit Tree Sector in Belize**
- 2. Development of a Strategic Plan/Roadmap**





# Priority Commodities

## Selected Non-traditional commodities - District Priorities

### Discussion:

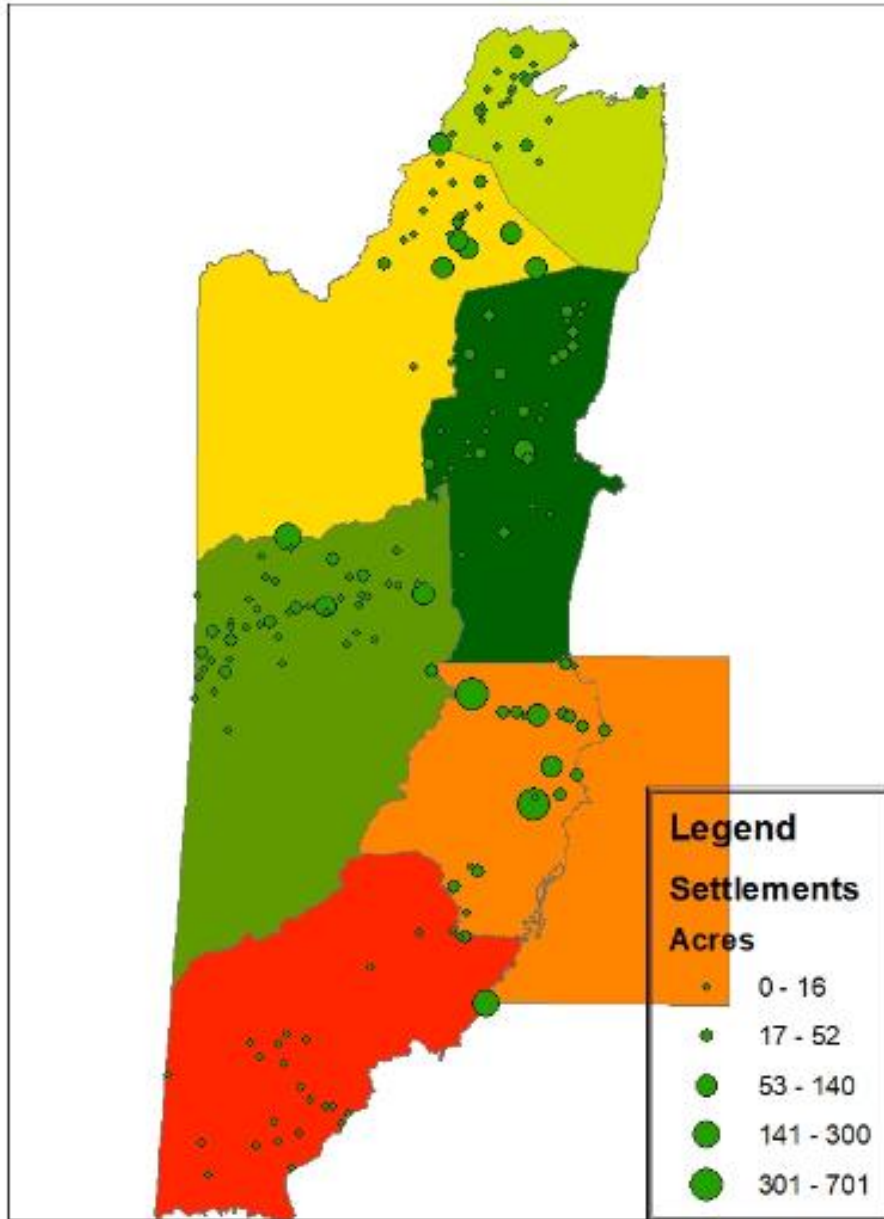
- *High to low priority*
- *Analyze the challenges (cause and effect)*
- *Possible Interventions*

Cayo	Stann Creek	Toledo	Belize	Orange Walk	Corozal
Coconut	Coconuts	Soursop	Coconut	Lime	Soursop
Soursop	Soursop	Avocado	Soursop	Soursop	Mangoes
Pineapple	Pineapple	Lychee	Avocado	Plantain	Citrus
Passion Fruit	Passion Fruit	Rambutan	Mangoes	Coconut	Lime
Lime	Lime	Lime	Pitahaya	Avocado	Avocado
Pitahaya	Citrus	Cacao	Breadfruit	Mamey	

### Selected (2021-2023)

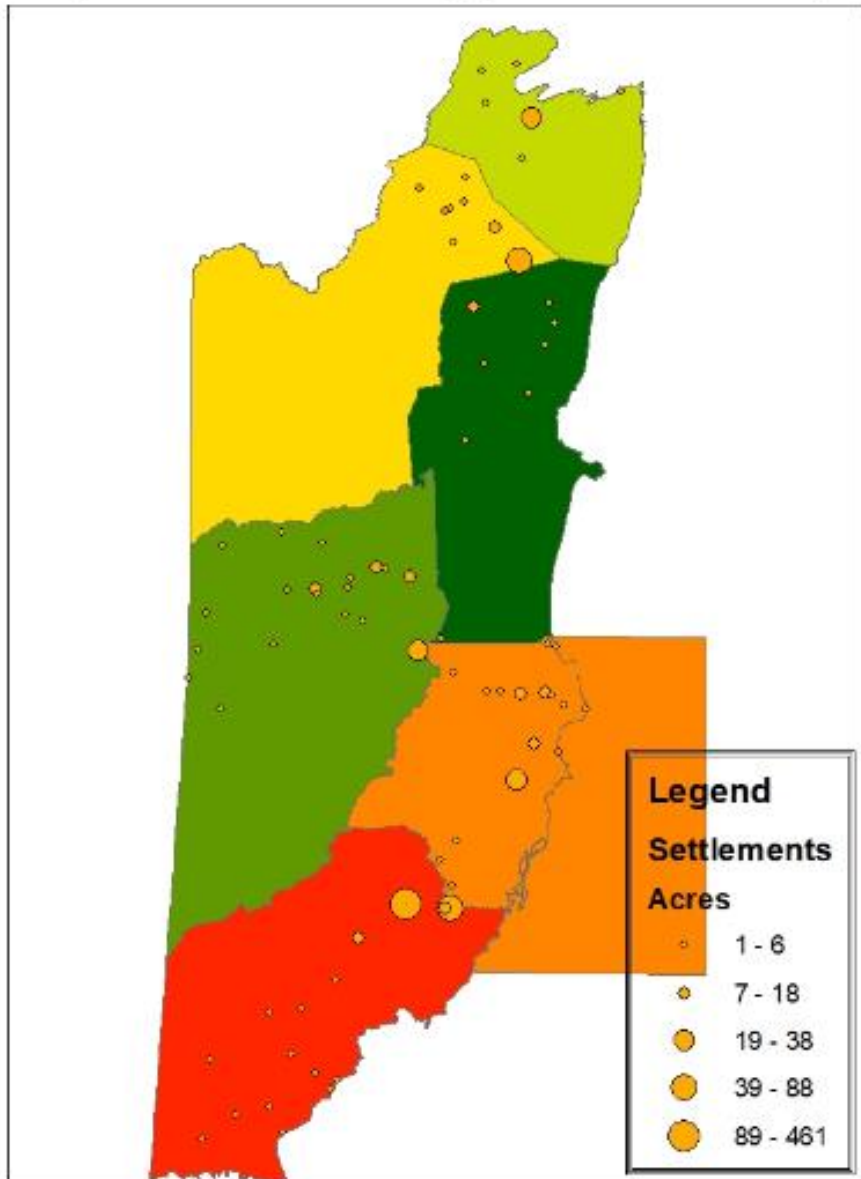
- ✓ **Coconuts**
- ✓ **Pineapples**
- ✓ **Soursop**
- ✓ **Passion Fruit**
- ✓ **Avocado**

## Distribution of Coconut fields in Belize



# Coconut Acreage Distribution

- Large Farms are mostly in the Cayo and Stann Creek Districts
- Medium to Large Farms are mostly in Toledo, Belize and Orange Walk Districts
- Small Farms are scattered throughout the country

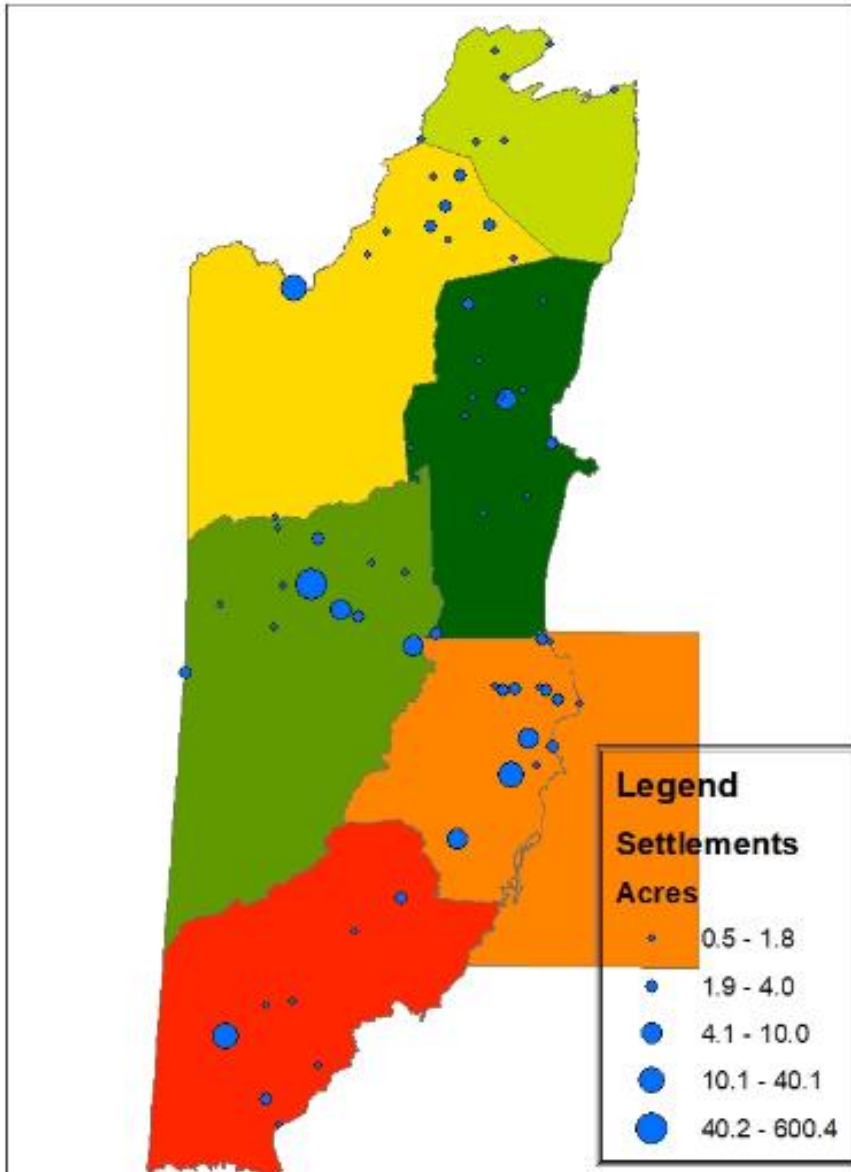


Source: FAO/MS

# Pineapple Acreage Distribution

- Large Farms are in the Toledo District
- Medium to Large Farms are in the Stann Creek Cayo, Orange Walk and Corozal District
- Small Farms are scattered throughout

## Distribution of Soursop fields in Belize



Source: BAIMS

# Soursop Acreage Distribution

- Large Farms are found in Cayo, Toledo and Orange Walk
- Medium to Large farms are in Stann Creek, Orange Walk and Belize Districts
- Small farms are distributed throughout the country

# Preliminary SWOT Analysis of Fruit Sector in Belize

## STRENGTHS

- Diverse Fruit Availability in Belize
- Local Technical expertise
- Infrastructure (nurseries, processing, local markets)
- Existing Public and Private Investments in the Fruit sector
- Local and Export Demands
- Market Access (CARICOM, SICA, US, Europe)

## WEAKNESSES

- Variability in cultivars
- Predominance of small farmer and mixed fruit gardens
- Pest and disease problems
- High cost of production – Labour and inputs
- Limited technical knowledge and/or adoption of optimum agronomic practices
- Limited Research and Development to support fruit production systems
- Limited Market Research Available
- Logistical constraints – difficulty in getting produce to processing units due to transportation cost, lack of proper crates etc.
- Lack of credit/financial support and an enabling environment

# Preliminary SWOT Analysis of Fruit Sector in Belize

## **OPPORTUNITIES**

- Opportunity for partnerships
- Access to niche markets
- Penetration of the Fresh Fruit Market
- Access to new equipment and technology
- Capacity Building (production, processing, marketing)
- Conduct necessary Market Research
- Encourage Healthy eating and increased nutrition
- Increase income and improve livelihoods

## **THREATS**

- Production constraints and inadequate planning
- Unavailability of fruits for processing
- Uncompetitive prices
- Unavailability of markets
- Abandoned plantations
- Natural disasters (hurricanes and pest and disease problems)
- Insufficient Labour force
- Limited land access for planting

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# Non-Traditional Fruits Roadmap

2021 – 2023





# Program Objective

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To develop a **diversified** and **competitive** fruit tree sector through public/private **collaborations** for increased **food security and nutrition**, **production**, **income generation** and **exports** in Belize



# Guiding Policy – *Farm to Table*

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## **Goal**

To increase, diversify and sustain agricultural production, food security, income and employment generation in Belize by;

- Increasing farm-level capacity
- improving technology and innovation
- raising labor productivity
- Regional competitiveness

- ✓ Food Security
- ✓ Export
- ✓ Diversification
- ✓ Grow more
- ✓ Teach
- ✓ New Markets
- ✓ Finance
- ✓ Research

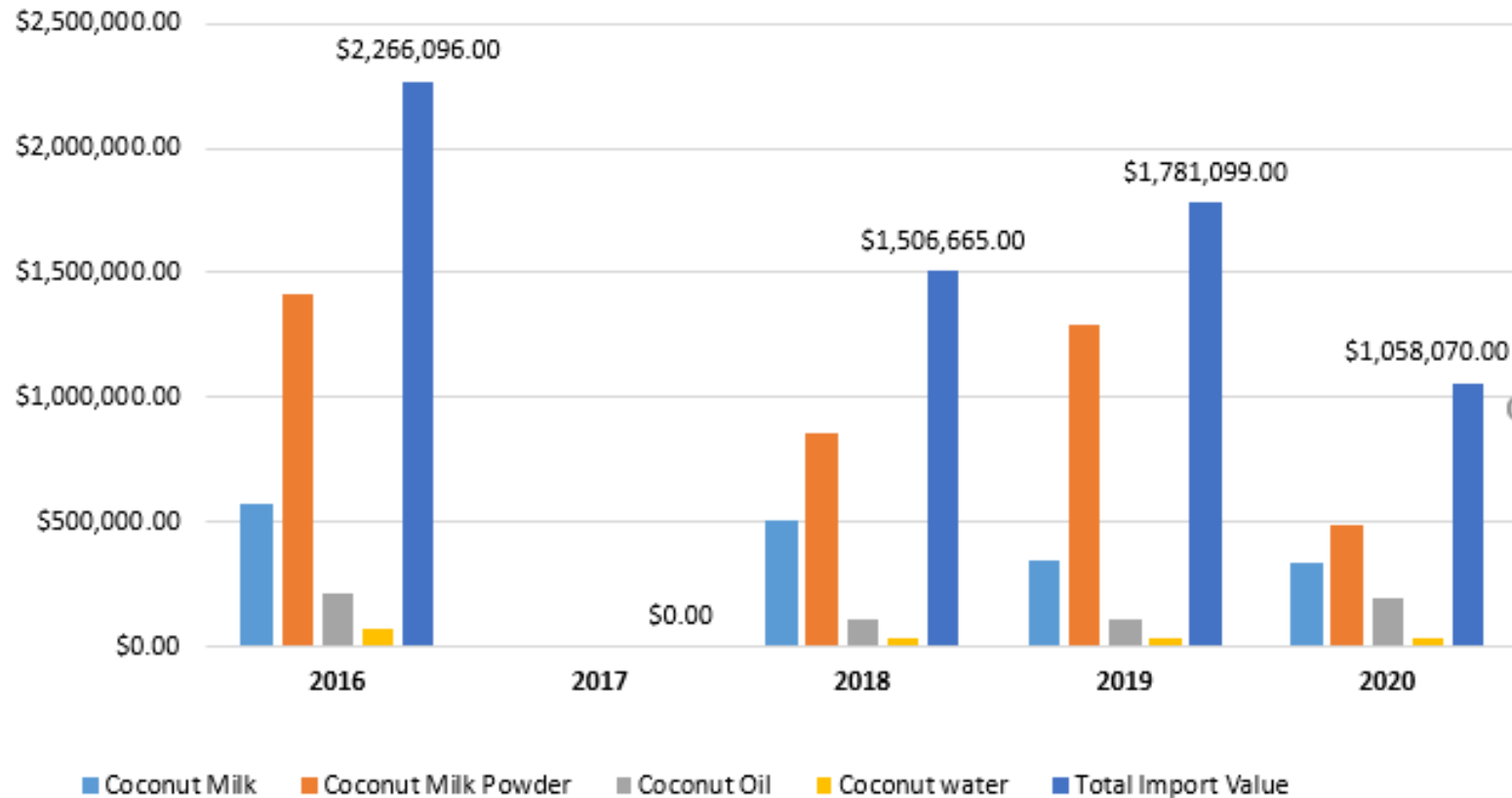
Fruits	Quantity (lbs.) 2019	Quantity (lbs.) 2020	%change Production	Price* (BZ\$) 2019	Price* (BZ\$) 2020	% Price Change
Papayas (export)	739,200	951,580	0.22	\$ 0.43	\$ 0.43	\$0.00
Mangoes	56,000	20,000	-1.80	\$ 0.50	\$ 0.50	\$0.00
Local Papaya	12,134	19,032	0.36	\$ 0.35	\$ 0.30	-\$0.17
Pineapple	7,903,151	8,438,151	0.06	\$ 0.70	\$ 0.72	\$0.03
Watermelon	3,963,650	4,065,202	0.02	\$ 0.45	\$ 0.55	\$0.18
Coconuts (Nuts) dried	25,504,859	17,221,080	-0.48	\$ 0.35	\$ 0.35	\$0.00
Cantaloupe	830,700	1,337,000	0.38	\$ 0.90	\$ 0.90	\$0.00
Jicama	162,900	146,250	-0.11	\$ 1.00	\$ 1.00	\$0.00
Soursop	87,375	208,000	0.58	\$ 3.50	\$ 3.50	\$0.00

## Primary Agriculture Output Value 2020 at Producer's Price Volumes and Price

<b>Fruits</b>			
	Value (BZ\$) 2019	Value (BZ\$) 2020	% Chg Value
Papayas (export)	\$ 315,629.80	\$ 406,389.00	29%
Mangoes	\$ 28,000.00	\$ 10,000.00	-64%
Local Papaya	\$ 4,246.90	\$ 5,709.48	34%
Pineapple	\$ 5,532,205.70	\$ 6,075,468.72	10%
Watermelon	\$ 1,783,642.50	\$ 2,235,861.10	25%
Coconuts (Nuts) dried	\$ 8,926,700.65	\$ 6,027,378.00	-32%
Canteloupe	\$ 747,630.00	\$ 1,203,300.00	61%
Soursop	\$ 305,812.50	\$ 728,000.00	138%
<b>Total Fruits Value</b>	<b>\$ 17,806,768.05</b>	<b>\$ 16,838,356.30</b>	<b>-5%</b>

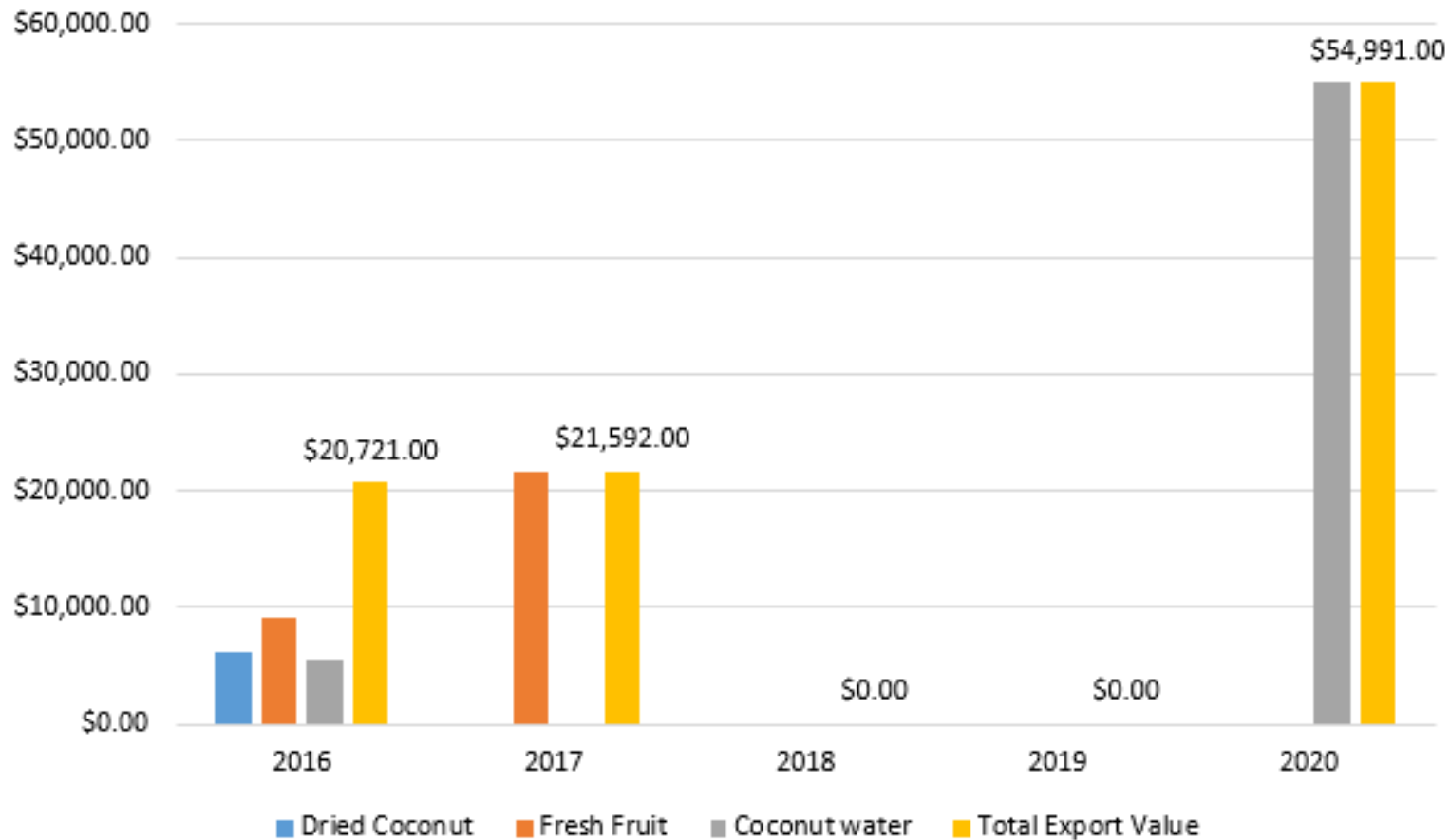
## **Primary Agriculture Output Value 2020 at Producer's Price**

# Imported Coconut Products 2016-2020



- Does not include other products such as flour, cream, cakes, sugar, wafers
- In 2017 only seeds and a small quantity of dried coconut was imported
- The volume required to meet the importation is well within the capabilities of local producers, however, there must be improved management practices and adequate production.

# Exported Non-Traditional Fruits (2019/2020)



- Increasing demand for coconut oil
- Investments are being made to enhance the production output
- Small farmers will be able to supply
- However, we must ensure that crop management is optimum, there are adequate varieties and farmer organization

# Opportunities identified for Non-traditional fruits

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- There is evidence that local industries have invested in new equipment to enhance efficiency and increase volumes of processed coconuts, pineapple and soursop
- The fresh fruit market appears to be lucrative
- Farmers must be organized and must engage in program planting
- Contract Farming agreements will be necessary; this has been concluded and a cabinet paper will soon be drafted for legislation
- Technical capacity to support increase in production of fruits is available
- Credit institutions have funding
- Non-traditional fruits can be supported by support programs such as Agroprocessing, Research, Water management and Climate Change, Cooperatives, Policy and Extension

# Proposed Roadmap to Support Non-Traditional Fruit Sector

## Value Chain Analysis

Collaboration with partner institutions and the private sector to develop each one



## Enhance Fruit Tree Data and Availability

Access to enhanced and available information to support the Fruit Tree Sector



## Capacity Building

Technical capacity building for fruit tree technicians and producers

## Stakeholder Organization

An organized public/private-led fruit tree sector



## Advocate for Credit Access

Implementation of advocacy for affordable credit access for fruit producers from local and International credit institutions



# Proposed Roadmap to support Non-Traditional Fruit Sector

## Promotion and Awareness

National Promotion and Awareness of Fruits for Food and Nutrition Security

## Sustainable and Climate Resilient Fruit Tree Systems

National Promotion of Climate Resilient and Sustainable Fruit Tree Cropping Systems

## Linkages

Established linkages between producers and processors for product transformation and marketing

## Increase Production

Increased production of fruits and fruit products by at least 30% over a 3-year period.





# Implementation Plan 2021-2023

<C:\Users\Fay\Documents\Fruit tree and Non Traditional Crops\Non-Traditional Fruits\AGM Data\Link - FG- Strategic Plan.docx>

No.	Activities	Output	Outcomes
1	Formation of technical committees and Association/Group or Cooperative with representation from the private and public sector.	3 Committees 3 Farmer Groups/Cooperatives/organizations	A well guided Non-traditional Fruit Tree Sector plan which represents the interests and opportunities for small, medium, and large farmers
2	Formation of an Advisory Committee	1 Advisory Committee	Institutional, policy, technical, and financial guidance to the technical committee and Association of farmers who will undertake all the activities proposed and agreed to by each member.
3	Updated and make available fruit tree data indicative of all stakeholder's participation, roles, activities, opportunities, growth potential and investment areas	1 Document which describes the current, medium- and long-term opportunities and potential of Fruit Tree sector in Belize.	comprehensive report describing the sector
4	Participate and support in Value Chain development for selected non- traditional fruits	At least 2 Value chains with program inputs	Representative value chains that can be implemented by non –traditional fruit tree farmers
5	Development of a Non-Traditional Fruit Calendar	1 calendar	Available reference for producers and processors to determine availability of seasonal local fruits, for use in awareness and healthy eating promotion

# Implementation Plan 2021-2023

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No	Activities	Output	Outcomes
6	Tree Producers are trained in Best Practices and Climate Resilience for Specific Commodities for Fresh Fruit and Processing (Coconuts, Soursop, Pineapple, Lime)	At least 120 Fruit Tree producers trained	There is increase knowledge of best practices in fruit tree production.
7	Support increase Gender participation in Training and Capacity building	At least 2 trainings must have a minimum of 40% women and/or youths trained in a specific crop	Gender Equality, Empowerment and strengthening of farm family involvement in agriculture
8	Development of Crop Guides and Fact Sheets	2 Crop guides and 3 fact sheets	Producers and Technicians have reference for Good Agriculture practices and enhanced production
9	Nursery Availability of healthy and productive fruit trees (early, mid and late varieties) in Belize	At least 8000 plants/year	Increase productivity and availability of non-traditional fruits
10	Develop updated Cost of Production for specific crops promoted under the National program	At least 3 cost of productions	Reference available for farmers and investors
11	Lobby for support to fruit tree producers from credit institutions such as credit unions, DFC, and commercial banks with agriculture portfolios.	2 meetings	Support for available credit for farmers, guidelines, requirements
12	Conduct meetings with farmers and buyers to coordinate and discuss plantings, field support, harvests, sample testing etc. to support fruit famers	3 meetings	Increased communication and smooth-flow of business between producers, processors and local buyers

# Implementation Plan 2021-2023

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No	Activities	Output	Outcomes
13	Conduct interactive workshops on crop-specific issues in which stakeholders can collaborate with each other on matters of interest	At least 3 workshops	Depending on the topics of the workshop
14	Facilitate the improvement of communication platforms for stakeholders	At least 3 WhatsApp groups	Improve communication between stakeholders e.g. WhatsApp group for stakeholders to interact and share information by commodity
15	Facilitate adequate technical assistance to effectively increase production on a yearly basis	To at least 3 groups, 3 commodities	Increase production and quality fruits
16	Collaborate in the scheduling and delivery of quality fruits to processors and local fresh fruit	5 commodities	Ensure that all requirements are met with regards to fruit quality, pesticides use and the application of best practices in the fields
17	Conduct a Belize Fruit Festival	1 festival/year	Increase visibility of non-traditional fruits, sales opportunity and the promotion of healthy eating of local produce
18	Support farmers with diverse Home gardens with multiple fruit varieties	12 home gardens	Increase diversity, income generation, seed multiplication, on-farm participatory research

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*Thank you!*

