

# The Pesticides Control Board

Statutory Board under the Ministry of Agriculture and  
Food Security and Enterprise

Annual General Meeting

Day 2, 8 April 2022



# OUTLINE

This report documents the activities of the Pesticides Control Board (PCB) for the year 2021. It highlights the accomplishments and discusses constraints associated with the PCB's objectives with respect to activities initiated during the year under review. This report highlights the tools utilized towards achieving sound chemicals management, identifies gaps and mechanisms implemented to address all aspects of chemicals management in Belize. The report is divided into four technical programs:

1. Registration and permits.
2. Post Registration Surveillance,
3. Training,
4. Farmer assistance that aim to improve and promote responsible use and management of pesticides
5. Public Awareness - Promoting outreach programs and initiatives that aim to improve the regulatory process and promote responsible use and management of pesticides



# Strategic Goal 1

*Improve quality and efficiency of the registration and post registration surveillance processes*



# Program 1: Registration and Permits

## × Registration

Agriculture		Public Health	
Adjuvants	8	Rodenticides	3
Bio-Pesticides	7	Wood Preservative	1
Fungicides	3	Insect Repellent	2
Herbicides	11	Insecticides	3
Insecticides	8		
<b>Total</b>	<b>37</b>		<b>9</b>

Ag Registrations were approved in the following crops:

- ✓ Banana
- ✓ Plantain
- ✓ Sugarcane
- ✓ Beans
- ✓ Corn
- ✓ Pastures
- ✓ Rice
- ✓ Sorghum
- ✓ Cotton
- ✓ Eggplant
- ✓ Melon
- ✓ Okra
- ✓ Ornamentals
- ✓ Potato
- ✓ Tobacco
- ✓ Tomatillo
- ✓ Pepper
- ✓ Cassava
- ✓ Sweet pepper
- ✓ Cucurbits
- ✓ Tomato



# PESTICIDES CONTROL BOARD, BELIZE

Register of Pesticides

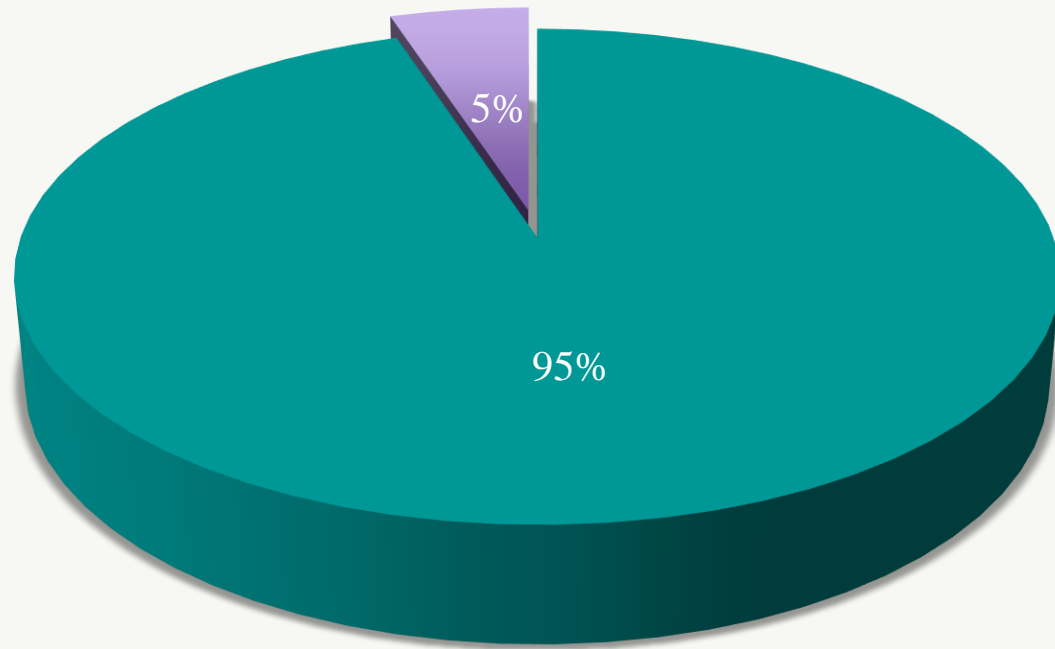
is real-time information.

Actions	Registration Holder	Trade Name	Registration No	Registration Date	Expiry Date	Type	Use Category	Form
	<input type="text" value="Select an option"/>	<input type="text" value="Select an option"/>	<input type="text" value="Quick Search"/>	<input type="text" value="Quick Search"/>	<input type="text" value="Quick Search"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="button" value="View"/>	Drexel Chemical Co.	Ametryne 50 SC (Drexel)	0003-1	24/11/2020	24/11/2025	Herbicide	Agricultural Use	Suspe
<input type="button" value="View"/>	Bestenfelden Panama, S.A.	Amerial 50 SC	0003-10	26/09/2019	26/09/2024	Herbicide	Agricultural Use	Suspe
<input type="button" value="View"/>	Shandong Weifang Rainbow Chemical Co., Ltd	Amepax 80 WG	0003-11	12/08/2021	12/08/2026	Herbicide	Agricultural Use	Water
<input type="button" value="View"/>	Agro Insumos, S. A.	Krismat 75 WG	0003-5M	28/10/2019	28/10/2024	Herbicide	Agricultural Use	Water
<input type="button" value="View"/>	ADAMA Crop Solutions ACC, S.A.	Ametrex 50 SC	0003-6	16/12/2019	16/12/2024	Herbicide	Agricultural Use	Suspe
<input type="button" value="View"/>	ADAMA Crop Solutions ACC, S.A.	Ametrex 80 WG	0003-7	16/12/2019	16/12/2024	Herbicide	Agricultural Use	Wetta
<input type="button" value="View"/>	ADAMA Crop Solutions ACC, S.A.	Amigan 65 WG	0003-9M	22/06/2020	22/06/2025	Herbicide	Agricultural Use	Water
<input type="button" value="View"/>	UPL Costa Rica S.A.	Asulox 40 SL	0004-1	18/12/2018	18/12/2023	Herbicide	Agricultural Use	Solub
<input type="button" value="View"/>	Agro Insumos, S. A.	GESAPRIM 90 WG	0005-1	24/11/2020	24/11/2025	Herbicide	Agricultural Use	Water
<input type="button" value="View"/>	Shandong Binnong Technology Co. Ltd.	Azoprim 90 WG	0005-10	29/09/2020	29/09/2025	Herbicide	Agricultural Use	Water

<https://login.pcbbelize.com/registrations/manual>



## ✘ Registration Renewals



■ Agriculture ■ Public Health



Ally 60 WG (*metsulfuron-methyl*) was voluntarily withdrawn from the Register of Pesticides by the registration holder.

# ✘ Management Information System for the programs



The Registration Committee evaluators were now able to access registration applications from any time and space



## ✕ Permits

Districts		Minor-Use Authorization		Experimental Permit	
		Agriculture	Public Health	Agriculture	
Total	Belize	2	27	Cayo	1
	Cayo	80	16		
	Orange Walk	3	1		
	Stann Creek	28	10		
		113	54		1

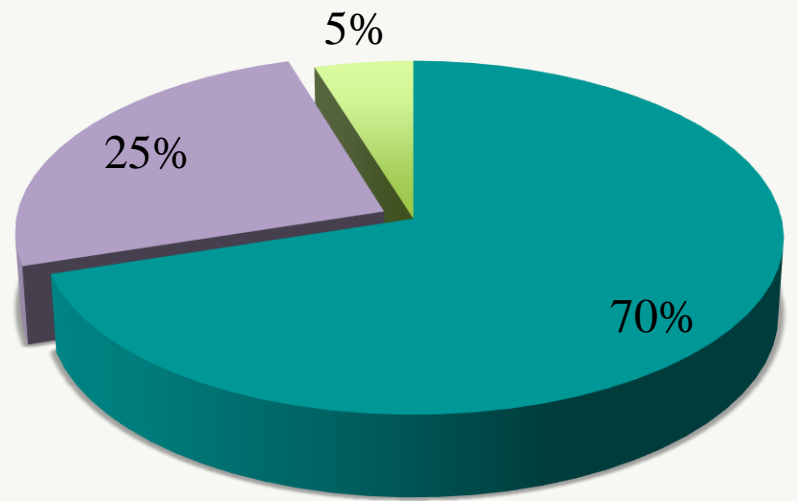
An unregistered pesticide can enter the country via the permits system. There are two types of permits: Minor-Use Authorizations and Experimental Permits.

- ✓ Minor-Use Authorizations are for end users with critical agronomic or public health need(s).
- ✓ Experimental permits are for end users that wish to either conduct a demonstration and/or laboratory trial or run an efficacy trial to support a registration application.





# MUA End-Users Profile



■ Small farmers ■ Banana Industry ■ PCOs

- ✓ The most critical agronomic need under which MUA were approved was due to the devastating effect caused by *Spodoptera* spp (fall army worm).
- ✓ The Banana Industry keeps having challenges with the Maximum Residue Limits (MRLs) of pesticides thus they had to alter the insecticidal tree bags they normally use. They are always exploring alternatives to meet European standards. In the last quarter of the year 2021, two of these insecticidal tree bags were registered.
- ✓ With the expansion of non-traditional fruit trees specifically sour-sop and coconut, there are no in-country registered pesticides for these commodities. Thus, the permit system allows any grower to import products recommended for this use.
- ✓ The Ministry of Health is also a permit client of the PCB. Their vector control program uses public health larvicides, insecticides and on occasions impregnated bed nets for mosquitos.



# Program 2: Post Registration Surveillance



# Monitoring & Enforcement

Licensing Pesticide Handling Facilities (2021)	Total
Total Retailers	59
Ceased vending	2
New Application received 2021	14
Approved as of December 2021	5
In Process	9

- ✓ In keeping with the Board's mandate in ensuring sound chemical management in Belize, one-on-one meetings coupled with inspection activities were undertaken to ensure retailers are knowledgeable and well-equipped to work with pesticides.



# Monitoring & Enforcement

## Pesticide Handling facilities - 2021

	Retail Store	Importers Warehouse	Formulation/Rebottling
<b>Belize</b>	4	2	2
<b>Cayo</b>	24	5	2
<b>Corozal</b>	8	0	0
<b>Orange Walk</b>	8	1	0
<b>Stann Creek</b>	5	1	0
<b>Toledo</b>	10	0	0
<b>Total</b>	<b>59</b>	<b>9</b>	<b>4</b>

Four quarterly inspection visits per facility was conducted during the year.

These monitoring and inspection activities are to ensure compliance with PCB regulations in reference to storage, sale and distribution, record keeping, and handling of pesticides.

Random inspections and enforcement activities were also conducted in the following areas: General stores, Supermarkets and Hardware stores, Pest Control Operators, Points of Entry, Inspections based on information received or public complaints.



# Monitoring & Enforcement



- ✓ One inspection exercise was carried out in collaboration with our strategic partners to inspect two repackaging facility to ensure compliance with PCB regulation.

# Review of Pesticides Imports Data 2020 to 2021

Year	Sum of Total A.I (MT)
2020	1,334.69
2021	1,123.03

an increase in importation of pesticides and its related substances as compared to previous years

The reason for an increase in importation can be attributed to the following

1. An increase in agricultural production particularly grains,
2. Favourable climatic conditions prevailed – less drought,
3. More Belizeans went back into farming after the tourism industry collapsed.
4. High incidence of pests and diseases (Asian Bean Thrips)

This was a decrease of 15.86 % from 2020 imports.



# ...by classification

<b>Classification</b>	<b>2020 Sum of Total A.I (Mt)</b>	<b>2021 Sum of Total A.I (Mt)</b>
<b>Herbicide</b>	558.73	373.64
<b>Adjuvant-spray oil</b>	417.33	368.81
<b>Fungicide</b>	200.64	240.95
<b>Adjuvant</b>	97.01	90.72
<b>Insecticide</b>	54.16	43.93
<b>Wood Preservative</b>	3.00	2.46
<b>Seed Treatment</b>	1.83	0.64
<b>Domestic Insecticide</b>	1.78	1.42
<b>Others</b>	0.21	0.47
<b>Grand Total</b>	1334.69	1123.04

Imports records show that herbicide, fungicide and insecticides amounted to 60 % of total imports.

40% are comprised of adjuvants, seed treatment, domestic use and wood preservative.

Herbicide saw a decrease of 33.12 % compared to 2020,

Fungicide recorded an increase of 20.09 % from previous year.



# ...by classification

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Fungicide use in the country,

Of the 240 metric tons of Active ingredient imported, Mancozeb accounts for 78% .

Mancozeb is also one of the commonly used fungicide by small farmers for vegetable production.

Since 2017, we have seen farmers using a lot more seed treatment products which comes in combinations of 3 to 4 active ingredients.





## ...by activity

Sum of Total A.I (MT)	Year 2020	Year 2021
<b>Agricultural Use</b>	1,318.58	1,105.75
<b>Public Health Use</b>	16.11	17.28

98 % of total imports are classified for agricultural use

2% are comprised of pesticides classified for public health purposes.



## ...by Point of Entry

Sum of Total A.I (MT)	Year 2020	Year 2021
<b>Row Labels</b>	2020	2021
<b>Big Creek Port</b>	5.28	32.07
<b>Benque Viejo Western Border</b>	841.96	864.77
<b>Port of Belize</b>	487.37	225.92
<b>Santa Elena</b>	0.063	0.259
<b>Northern Border</b>		

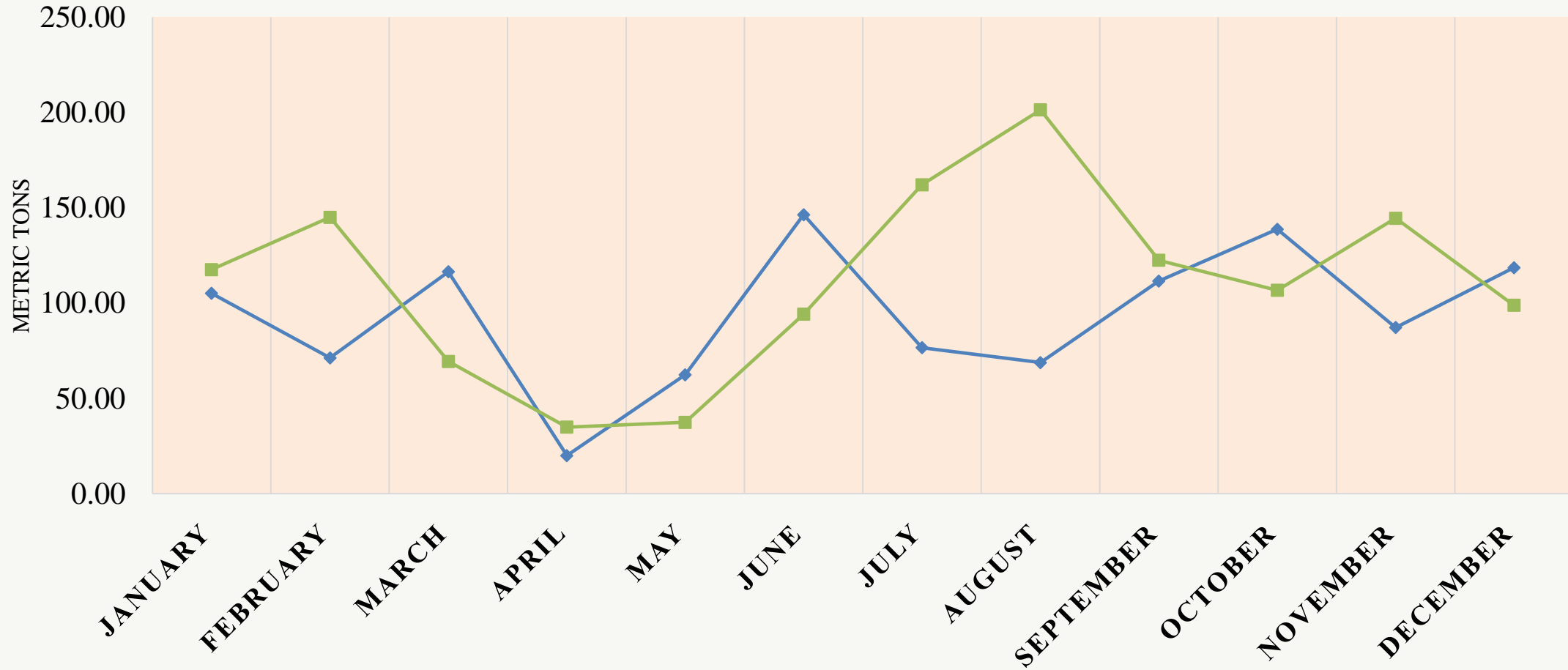
BVWB recorded an increase of 2.7% and 77% of total imports for 2021.

POB recorded a decrease of 53.64% and 20% of total imports for 2021.



# IMPORTS DATA BY MONTH

—◆— 2021 —■— 2020



# Top Ten most used pesticides in Belize

Top 10 Imported Pesticides	2020 Importation (mt of a.i.)	2021 Importation (mt of a.i.)
<b>Mancozeb</b>	154.97	203.33
<b>Glyphosate</b>	189.24	157.81
<b>2,4-D</b>	91.03	67.49
<b>Atrazine</b>	63.01	41.95
<b>Paraquat</b>	49.97	36.69
<b>Diuron</b>	67.42	13.85
<b>Ametryn</b>	42.30	26.00
<b>Malathion</b>	21.44	17.97
<b>Terbutryn</b>	19.75	-
<b>Pendimethalin</b>	10.78	6.425

Mancozeb was the most used pesticide in Belize for 2021

Nine are herbicides

One insecticide.

Six are classified as Restricted Use and the rest as General Use.

Glyphosate topped the list as the most widely used pesticide in Belize over the last 10 years



# Strategic Goal 2

*Safeguard the responsible use and management of pesticides*



# Program 3

## National Pesticides Certification & Training

District	Female	Male	New	Renewal	Total
Cayo	35	454	323	166	489
Toledo	42	366	235	173	408
Stann Creek	25	255	184	96	280
Orange Walk	12	112	47	77	124
Corozal	14	69	45	38	83
Belize	14	65	69	10	79
<b>Total</b>	<b>142</b>	<b>1321</b>	<b>903</b>	<b>560</b>	<b>1463</b>

Eight centralized training sites

Conducted 82 training sessions

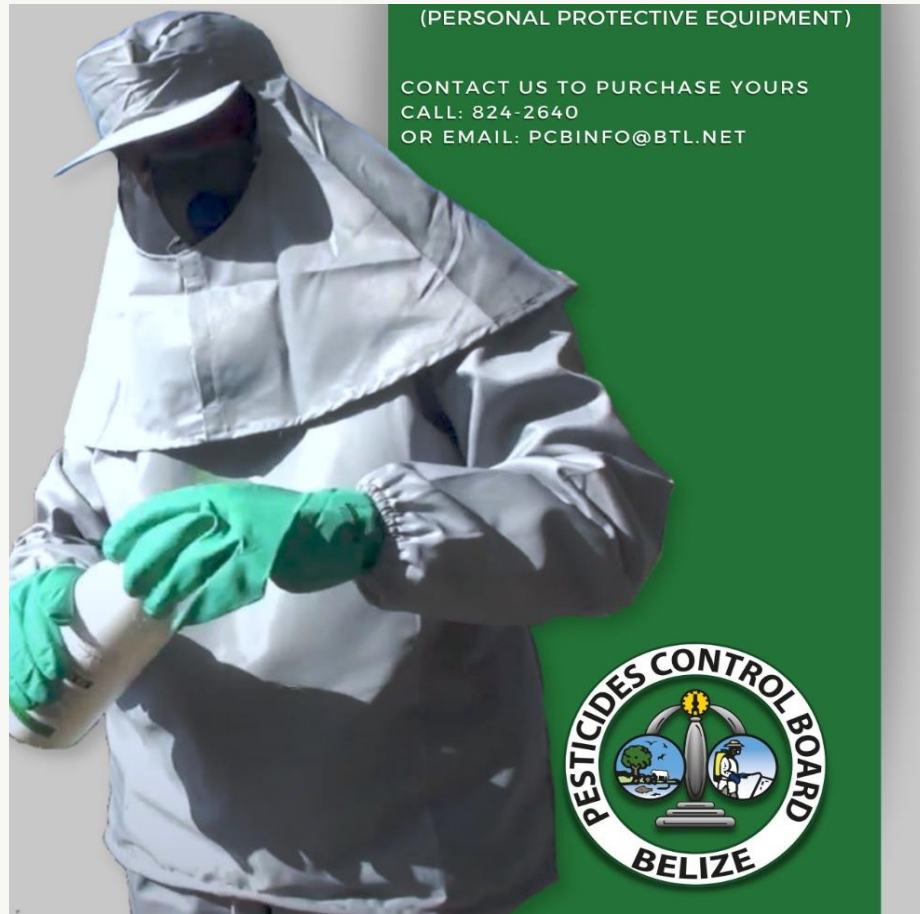
62 training sessions countrywide at clustered agricultural communities upon request.

Toledo and Cayo districts recorded the highest number of applicants getting certified which accounts to 62%, followed by the Stann Creek district with 19%



# Program 3

## National Pesticides Certification & Training



Training module included topics related to rational use and management of pesticides, storage, disposal and classification of pesticides among others.

Emphasis were placed on use of personal protective equipment(PPE) and pre-harvest interval.

For the year 2021, 253 PPE kits were distributed as follows

- large farms (34%),
- vector control program of the ministry of health(29%),
- Small farmers (9%)
- Pesticide Handling Facilities(17%).



	Belize		Cayo		Corozal		Orange walk		Stann Creek		Toledo		
Row Labels	Male	Fem	Male	Fem	Male	Fem	Male	Fem	Male	Fem	Male	Fem	Grand Total
17-20	1	1	18		4		2	1	9	1	5	1	43
21-30	10	1	85	8	12	3	14		36	4	67	12	252
31-40	14	4	101	14	11	1	21	1	41	3	80	13	304
41-50	18	6	96	6	14	3	26	3	50	7	84	6	319
51-60	15	1	71	5	18	4	31	7	75	5	66	5	303
61-70	7	1	61	2	7	2	9		36	5	48	5	183
71-80			19		3	1	7		8		15		53
81-90			3				2				1		6
<b>Grand Total</b>	65	14	454	35	69	14	112	12	255	25	366	42	1463

Most applicants trained and certified were between the age group 31 to 60 years which accounts to 63%.

Applicants between 21 to 30 years accounts to 17% .

Of note is the fact that only 2% of younger age group (17 to 20 years) were trained and certified.



# Program 4

## Farmer Assistance Program

- Responsible Pesticide Management Training Session in Trio, Toledo with pineapple farmers. A total of 11 farmers were recognized.



*Amplomyia bifasciata*





...Going forward,

Collaborating with Sustainable Harvest International in carrying out two rounds of demonstrations in the production of bio-products for pest control and nutrition with three farmer groups in Concepcion, Corozal District; Nagubank, Belize District and Trio, Stann Creek District.

The project objective is to reduce reliance on Restricted-Use Pesticides (and adopt safer alternatives).



...Going forward,

The partnership is to work with these three groups of farmers for a period of two years: April 2022 to March 2024, with the following suggestions for project components:

- baseline survey of pesticide management practices
- identification of crop/pest/restricted-use pesticide combination to be targeted for reducing reliance on-farm field trials and demonstrations
- identification of pesticide management practices that need to be improved eg. phase out of sausage can as a measuring utensil  
farmer training and community outreach
- tangible farmer assistance.
- information management, documentation and visibility
- project impact assessment and report



# Program 5

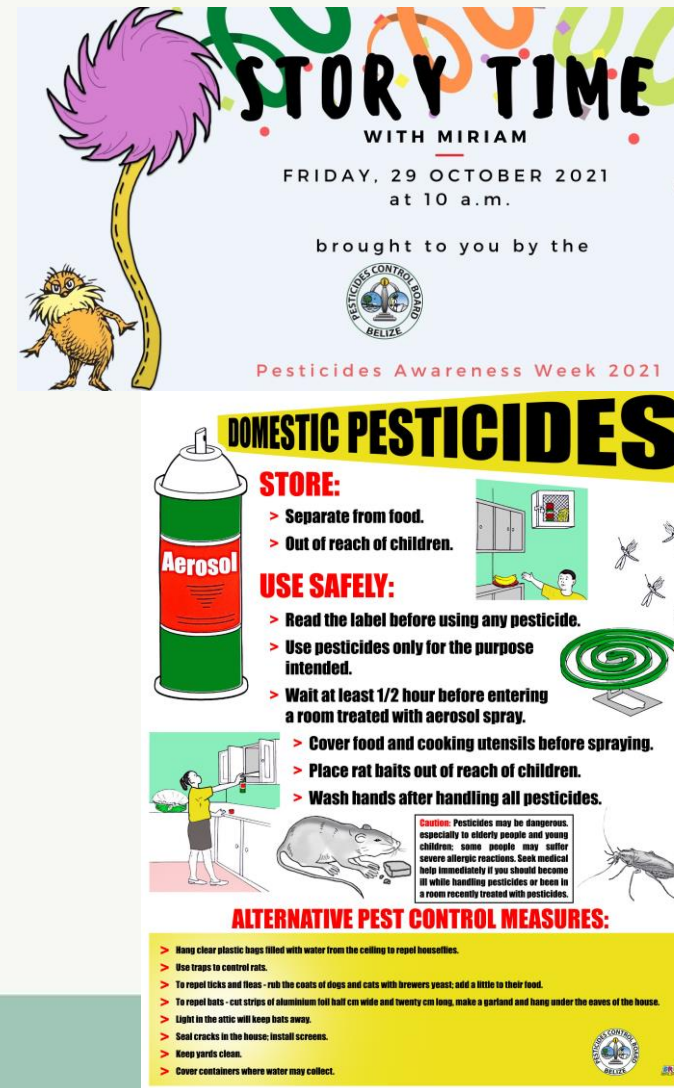
## Promotion & Outreach


For a second year in a row the Institution planned its VIRTUAL Pesticides Awareness Week.

An awareness campaign that has been an annual event since 2015 along side the Coordinating Group of Pesticide Control Boards of the Caribbean (CGPC).

Year 2021 made special emphasis on public health pesticides with the theme being

*Choose, Use Alternative to Toxic Household Agricultural and Public Health Pesticides for A Better Life and Environment: Our Actions are our Future*



**STORY TIME**  
WITH MIRIAM  
FRIDAY, 29 OCTOBER 2021  
at 10 a.m.  
brought to you by the  
  
Pesticides Awareness Week 2021

### DOMESTIC PESTICIDES

**STORE:**

- > Separate from food.
- > Out of reach of children.

**USE SAFELY:**

- > Read the label before using any pesticide.
- > Use pesticides only for the purpose intended.
- > Wait at least 1/2 hour before entering a room treated with aerosol spray.
- > Cover food and cooking utensils before spraying.
- > Place rat baits out of reach of children.
- > Wash hands after handling all pesticides.

**Caution:** Pesticides may be dangerous, especially to elderly people and young children: some people may suffer severe allergic reactions. Seek medical help immediately if you should become ill while handling pesticides or been in a room recently treated with pesticides.

**ALTERNATIVE PEST CONTROL MEASURES:**

- > Hang clear plastic bags filled with water from the ceiling to repel houseflies.
- > Use traps to control rats.
- > To repel ticks and fleas - rub the coats of dogs and cats with brewers yeast; add a little to their food.
- > To repel bats - cut strips of aluminum foil half cm wide and twenty cm long, make a garland and hang under the eaves of the house.
- > Light in the attic will keep bats away.
- > Seal cracks in the house; install screens.
- > Keep yards clean.
- > Cover containers where water may collect.



 **FACEBOOK LIVE**  
Pesticides Awareness Week 2021

Miriam | Ginnel

## "Talking Pesticides"

WEDNESDAY, 27 OCTOBER 2021  
at 2 p.m.  
on our FB page & The National Channel



# Highlight of first Strategic Plan

Focused largely on major actions at the technical and operational levels, addressing key areas for the improvement of internal mechanisms and processes that facilitate the execution of the SP and the achievement of its goals and objectives.

The assessment of the implementation of the 2017 – 2022 SP will commence in April 2022, alongside the development of a new SP, aligned with strategic goals that are expected to usher in a new era for pesticide management and regulation in Belize. Subject to stakeholder feedback, further developmental and modernization work to enhance governance, management and operations could be expected to remain relevant in the new SP, with a special emphasis on

- Science-based decision making to address pesticides causing adverse effects to human health and the environment
- A comprehensive update of the pesticide legislative framework to give a legal basis to full scope of the PCB's mandate, within the ambit of national development plans and global sustainable development goals
- Achieving an optimal and modern management system with the desired staffing to effectively and efficiently implement the PCB mandate

Continued efforts to improve transparency and accountability in all aspects of PCB work



# Key Drivers for 2022 to 2023 work plan

A few key opportunities were taken advantage of during 2021 – 2022 that will serve as key drivers for the 2022 – 2023 work plan:

- Collaboration with Sustainable Harvest International to develop a joint programme of work to assist three farmer groups in the improvement of their pest and pesticide management practices (a survey to obtain baseline data has been conducted)
- Field survey: Collection and analysis of data on pesticide poisoning incidents among farmers in Belize 2021 (Rotterdam Convention/University of Belize)
- Development of an Empty pesticide container management plan (GEF/BCRC/DOE)
- Submission of a PCB budget for the Climate Resilient Sustainable Agriculture Project (CRESAP) for US250,000 over 5 years (World Bank/GOB/MAFSE)
- Technical Assistants' participation in the Climate Smart Agriculture (CSA) Capacity Building Program (Resilient Rural Belize/CATIE)
- Preliminary discussions with FAO and CATIE for support with the legislation update project and the updating of the PCB training program respectively
- Commencement of stakeholder discussion series (pesticide registration) for update of pesticide legislation.



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Thank You

