

**PESTICIDES AND TOXIC  
CHEMICALS CONTROL BOARD  
ANNUAL REPORT, 2019**

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## **EXECUTIVE SUMMARY**

The Pesticides and Toxic Chemicals Control Board (PTCCB) is a semi-autonomous Agency within the Ministry of Agriculture (MOA) and operates under the Pesticides and Toxic Chemicals Control Act 2000 (No. 13 of 2000). Its principle function is the management of pesticides and toxic chemicals with specific focus on the manufacturing, importation, transport, storage, selling, using and advertising of these chemicals in Guyana.

PTCCB is operated by its permanent secretariat which carries out the mandate, operational and administrative policies coming from the Board of Directors.

During the year under review, the PTCCB was involved with a wide range of pertinent activities which were all integrally linked to the principal responsibilities.

The key areas of activity of the PTCCB during the year 2018 were as follows:

- General Administration
- Inspection and Enforcement
- Registration and Licensing
- Training
- Internal Capacity Building
- Overseas Participation
- Quality Control & Residue Monitoring
- Monitoring and Evaluation
- Public Awareness
- International Cooperation – Conventions and Instruments
- Capital Project Management

This Report demonstrates comprehensively that the PTCCB continued its mandate, as it had done over the years since its establishment, in a proactive manner and in partnership with sister agencies of the MOA and representatives of the private sector, pesticides stakeholders, farmers and relevant overseas based organizations.

The PTCCB remains committed to its mandatory responsibilities during the year 2019 with specific focus being placed on strengthening chemicals management through (i) Enforcement of Regulations (No. 8 of 2004) and (ii) Providing the necessary infrastructure, required for the establishment of appropriate educational, advisory, and extension services for enabling and exercising adequate control over quality, sale, storage, import, distribution and usage of pesticides, while ensuring that the interest of end-users and importers' rights are well protected.

The PTCCB additionally through the Rotterdam and Stockholm Conventions, Food and Agriculture Organization (FAO) and in collaboration with other International Chemicals Management Instruments will continue to meet its obligations as it relates to a lifecycle approach to chemicals management.

## 2.0 INTRODUCTION

This report documents the activities of the PTCCB for the year 2018. It highlights the accomplishments and discusses constraints associated with the PTCCB's objectives with respect to activities initiated during the year under review. The report highlights the tools utilized towards achieving sound chemicals management, identifies gaps and mechanisms implemented to address all aspects of chemicals management in Guyana.

### 2.1 Responsibilities and objectives of the PTCCB

The PTCCB is charged with the responsibilities for making arrangements and providing facilities for controlling the manufacture, import, transport, storage, sale, use and advertising of pesticides and toxic chemicals in Guyana.

The primary objective of the PTCCB is to fulfill its mandate under the Pesticides and Toxic Chemicals Control Act 2000 (No. 13 of 2000) and its associated Regulations.

It was also the PTCCB's objective to develop effective and workable criteria and protocols to be used to achieve the target goals with the minimum displacement of production or trade and to collaborate with the pertinent stakeholders in helping them to achieve their respective and collective economic targets with minimal negative impact to human health and the ecosystem.

The specific achievements of the PTCCB for the year under review were as follows:

- (i) Registration and licensing of pesticides;
- (ii) Licensing of vendors;
- (iii) Enforcement activities for sound chemicals management;
- (iv) Registration of pest control operators (PCOs);
- (v) Certification of pest control applicators;
- (vi) Training and awareness countrywide;
- (vii) Stakeholders training sessions;
- (viii) Reduction of illegal imports and vending of pesticides;
- (ix) Pesticides awareness week programs;
- (x) Promoting the sound management of chemicals using Guidance Documents from International Instruments such as the Strategic Approach to International Chemicals Management (SAICM) and the International Code of Conduct on Pesticides Management (CODE);
- (xi) Fulfilling the international requirement of the PTCCB for the Rotterdam and Stockholm Conventions; and
- (xii) Implementation of the country specific components of the FAO Regional Project on Chemicals Management.

## 2.2 Board of Directors

There were two Board of Directors established during the period under the review. The 14<sup>th</sup> Board of Directors which was established 1<sup>st</sup> July, 2018 to June, 2018 was as follows:

- Dr. Leslie Munroe – Chairman
- Dr. Chandranauth Raghunath – Deputy Chairman
- Mr. Khame Sharma – Director
- Ms. Karen Alleyne – Director
- Mr. Charles Ogle – Director
- Dr. Shamdeo Persaud – Director
- Mr. David Josiah – Director

The 15<sup>th</sup> Board of Directors of the PTCCB was established in July 2018 for two years and comprised of the following:

- Dr. Leslie Munroe – Chairman
- Dr. Chandranauth Raghunath – Deputy Chairman
- Mr. Charles Ogle – Director
- Mr. Owen Bovel - Director
- Mr. Marlon Cole - Director
- Mr. Kemraj Parsram - Director
- Ms. Yonette Helyigar - Director
- Ms. Monique Ifill - Director

Ms. Trecia David - Registrar of the PTCCB continued to function in the capacity of secretary to the Board in accordance with the relevant provisions enshrined in the Pesticides and Toxic Chemicals Control Act 2000 (No. 13 of 2000).

### 2.21 Meetings of the Board of Directors

Statutory meetings were scheduled to be held on the last Wednesday of every month; ten such meetings were held. The regularity of the Directors in attendance was exceptional throughout the year.

### 2.22 Technical Committees

Arrangements were in place for the conduct of technical meetings during the period under review as may have been necessary.

Seven technical meeting was convened to discuss and review the following:

1. PTCCB's Programme of Work for 2018.
2. PTCCB's 2017 Annual Report Review and Finalization
3. Development, Review and Finalization of PTCCB's Occupational Safety and Health Manual

Directors also participated and gave technical support to the following programmes:

- Pesticides awareness program in secondary school
- Community outreach program to Region 7
- Meetings with key stakeholder groups
- Pesticides Awareness Week 2018
- Public awareness activities
- Complaints and investigations of pesticide incidents

### **2.23 Signatories of the PTCCB**

The signatories of the PTCCB for the year under review were:

- a) Deputy Chairman – Dr. Raghunath Chandranauth;
- b) Director - Ms. Monique Ifill
- c) Secretary of the Board – Ms. Trecia David; and
- d) Accountant – Ms. Chandramatti Basdeo

## **3.0 SECRETARIAT OF THE BOARD**

### **3.1 Organizational Chart**

The organizational chart highlights the four main departments of the PTCCB and can be viewed in *Appendix I*.

#### **3.31 Departments of the PTCCB**

1. Financial management department
2. Implementation department
3. Administrative department
4. Pesticides and Toxic Chemicals Laboratory

The PTCCB also recognized the need for additional staffing to complement its human resource capacity in light of its expanding mandate in implementing the Pesticides and Toxic Chemicals Regulations 2004.

### **3.2 General Administration**

The implementation of the policies of the PTCCB is carried out by an adequately staffed secretariat, located in the compound of the National Agricultural Research and Extension Institute (NAREI), Mon Repos, East Coast Demerara. The secretariat, which is headed by the Registrar holds responsibility for general administration and operations including (i) training (ii) enforcement of the rules and regulations associated with the manufacture, import, transport, storage, selling, using and advertising of pesticides and toxic chemicals in Guyana and (iii) analytical monitoring of all pesticides and toxic chemicals including monitoring for residues in food.

### **3.3 Human Resource and Capacity Building**

#### **3.31 Employment**

The total staff compliment of the Board during the period under review was twenty-three (23). The following persons were officially recruited in 2018:

1. Joshua Ferreira, Inspector
2. Danroy Ambrose, Inspector
3. Rajdai Raghoo, Data Input Clerk

The following members of staff tendered their resignations with the PTCCB in 2018:

1. Sheirdath Ramsammy, Inspector
2. Kalyani Sooklall, Accounts Clerk



### 3. Mahendra Ram, Laboratory Technician

#### **3.32 Staff Training and development**

Ms. Alecia Hall continues to pursue a Bachelor of Science Degree in Chemistry at the University of Guyana (UG) on a Public Service Ministry scholarship and will return to serve the PTCCB upon completion. She successfully completed the Associate Degree in Chemistry with Distinction during the period under review.

Ms. Rayanna King commenced studies in pursuit of a Diploma in Occupational Safety and Health with the University of Guyana. This programme is a two-year programme. Ms. Bhavina Pooran and Ms. Durpattie Parsram completed the United Nations Institute for Training and Research (UNITAR) training on the “Classifying and Labelling of Chemicals According to the United Nations Global Harmonized System (GHS).

Throughout the period under review the PTCCB, in recognition of the need for capacity building to adequately provide efficient and effective services to its key stakeholders and general public provided staff personnel with numerous capacity building opportunities. These included training exercises from international organizations and other agencies, participation in regional and international workshops and meetings, as well as educational opportunities for advancing staff qualifications in specific areas of need (*See Appendix II*).

## 4.0 ACHIEVEMENTS – 2018

The Pesticides and Toxic Chemicals Control Board (PTCCB) is pleased to present its major achievements for the period under review.

### 4.1 Registration and Licensing

#### 4.1.1 Pesticides submitted for registration

The PTCCB received 33 pesticides applications for registration during the period under review. These products were evaluated to ensure that submissions were in keeping with the regulation before registration. Four products satisfied the registration requirements and were registered for import and use in Guyana in 2018.

A total of 342 pesticides are now officially registered for import and use in Guyana. **Table I** highlights the category of pesticides currently registered by toxicity category. The List of Registered Pesticides for use in Guyana is updated annually and is printed for free distribution (*see Appendix III*).

Table I: Pesticides Registered by Toxicity Category

Hazard Class	Hazard Category	Number of Pesticides Registered	Percentage per Category
I A	Extremely Toxic	9	3
I B	Highly Toxic	16	5
II	Moderately Toxic	155	45
III	Slightly Toxic	96	28
IV	Unlikely to present acute hazard	66	19
<b>Total</b>		<b>342</b>	<b>100</b>

#### 4.1.2 Toxic Chemicals registration

The PTCCB continues to register toxic chemicals for import and use in the manufacturing and oil and gas sector.

#### 4.1.3 Pesticides and Toxic Chemicals Licenses

The PTCCB issued 2,616 import licenses for pesticides and toxic chemicals of which 2,483 were toxic chemicals and 133 for pesticides. **Table II** represents a breakdown of import licenses issued for pesticides and toxic chemicals for 2018. **Table III** is a comparison of licenses issued for 2017 –

2018. *Appendix IV* represents the analysis of all cost and quantities of pesticides and toxic chemicals imported for 2018.

**Table II:** Monthly Breakdown of Pesticides and Toxic Chemicals Import Licenses issued for 2018

IMPORT LICENSE ISSUANCE 2018		
MONTH	TOXIC CHEMICALS	PESTICIDES
January	156	12
February	155	6
March	215	10
April	198	8
May	190	11
June	205	16
July	216	13
August	215	10
September	191	11
October	288	14
November	233	14
December	221	8
<b>TOTAL</b>	<b>2,483</b>	<b>133</b>

**Table III:** 2017-2018 Comparison of Pesticides and Toxic Chemicals Import Licenses Issued

MONTH	2017		2018	
	TOXIC CHEMICALS	PESTICIDES	TOXIC CHEMICALS	PESTICIDES
January	173	16	156	12
February	132	6	155	6
March	201	10	215	10
April	203	8	198	8
May	170	21	190	11
June	220	9	205	16
July	168	7	216	13
August	193	17	215	10
September	183	13	191	11
October	240	10	288	14
November	236	16	233	14
December	168	10	221	8
<b>TOTAL</b>	<b>2,287</b>	<b>143</b>	<b>2,483</b>	<b>133</b>

## 4.12 Restricted Use Pesticides

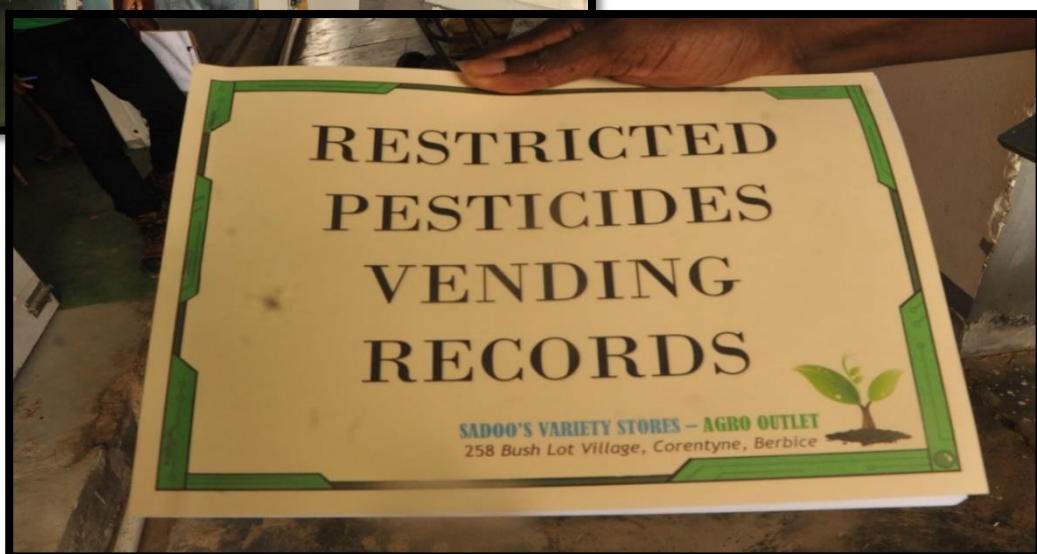
The PTCCB conducted inspection and enforcement activities towards the implementation of the Pesticides and Toxic Chemicals Control Regulations 2004 Part II subpart C, Restricted use pesticides of the following five (5) pesticides:

- a) Aluminium Phosphide and its products
- b) Paraquat Dichloride and its products
- c) Methomyl and its products
- d) Oxamyl and its products
- e) DDT (dichlorodiphenyltrichloroethane)

The distribution, sale and use of these substances were monitored from registered vending sites countrywide. Distributors and vendors must adhere to record keeping requirements of the Regulations, while members of the public must produce identification documents to purchase restricted use pesticides.



*Plate 1: Monitoring Restricted Use Pesticides.*



#### **4.13 Prohibited Pesticides and Toxic Chemicals**

Guyana in keeping with its obligations to the Rotterdam and Stockholm Conventions on chemicals management, aim at the protection of human health and the environment through elimination of persistent organic pollutants (POP's) updated the list of prohibited pesticides and toxic chemicals (*See Appendix V*).

#### **4.14 Importers of Pesticides & Toxic Chemicals**

The PTCCB in keeping with its mandate to raise awareness to all stakeholder groups including importer and manufacturers of chemicals to enable broader responsibility and private sector involvement in chemicals management conducted meetings with pesticide and toxic chemicals stakeholders. These meetings highlighted new developments and initiatives in pesticides related matters, implementation of same and expected outcomes at the national, regional and international levels.

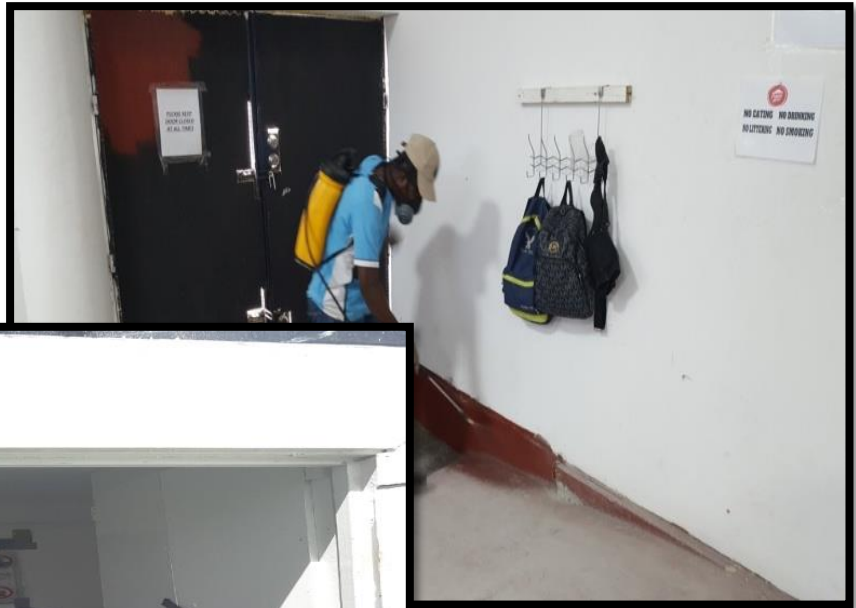
*The main issues the PTCCB addressed with the importers were:*

1. Registration of pesticides and toxic chemicals
2. Registration and import of bio-pesticides
3. Import of veterinary pesticides
4. Illegal import of pesticides and toxic chemicals
5. Inspections of containers of imported pesticides
6. Illegal distribution (house to house sale) of pesticides by registered importers.

#### **4.15 Pest Control Operators (PCOs)**

The PTCCB in keeping with the Regulations registered a total of 23 Commercial PCO's for 2018 which included 21 urban, domestic and industrial PCO's and two agricultural (aircraft operator) PCOs. Inspections and enforcement activities were conducted with PCO's to ensure adherence to regulatory policies. All pest control operators were monitored by the Inspectorate for the period under review. **Table IV** presents a list of registered PCOs for 2018.

*Plate 2: Field inspections of Pest Control Operators, 2018*



**Table IV: Registered Pest Control Operators (PCO's) 2018**

<b>URBAN, DOMESTIC AND INDUSTRIAL</b>		
<b>No.</b>	<b>Company Name</b>	<b>Address</b>
1	X-INSECTS Pest Control	Lot 102 Block CC Agriculture Road, Mon Repos West. East Coast Demerara.
2	Food Safety Management Inc.	83 Area 'F' Air Strip Road, Ogle, East Coast Demerara.
3	Terminex Pest Control	Lot 41 Kisson Street, Better Hope North, East Coast Demerara
4	Door to Door Pest Control	Lot 29 Second Street Industry, East Coast Demerara.
5	PesPros Pest Control & Hygiene services	Lot 87 5th Street, Cummings Lodge, East Coast Demerara.
6	Rid -O- Pes Inc.	Lot 75 Sixth Street Albertain, Georgetown.
7	Target Services	568 Munroe Street, Continental Park, East Bank Demerara.
8	Miracle Extermination Services	Lot 2 C Norton Street, Wortmanville, Georgetown.
9	Rentokil Initial Guyana Ltd.	Lot 8 Charles and Drysdale Streets, Charlestown, Georgetown.
10	Pablo Pest Control	Lot 95 Sugar Cane Street South Ruimveldt Gardens, Georgetown.
11	Pestex Environmental Solutions	Lot 18 Public Road, Mc Doom, East Bank Demerara.
12	Zenith Pest Control Services Plus	Lot 208 Section A Diamond E.B.D.
13	Termitary & Weed Control	Lot 333 Wisroc Housing Scheme Linden or 262 Bulletwood Street, McKenzie, Linden.
14	Nand Persaud & Company Limited Pest Control Department	Number 36 Village Corentyne, Berbice.
15	GUY-SUR	Lot 297, Block 8, Mon Repos, E.C.D.
16	Pessolutions	Lot 20 Second Street, Strathspey, East Coast Demerara.
17	Killet Pest Control	Lot 34, Arakaka Place, Bel-Air Park Georgetown.
18	Terminate Pest Control Service	Lot 1473 Glasgow Housing Scheme, East Bank Berbice.
19	Extermax Pest Control	Lot 1231, Central Amelia's Ward, Mackenzie, Linden.



20	Western Pest Control	Lot 34 Strathearn Street, Goed Fortune Housing Scheme, West Bank Demerara.
21	LP Termite Treatment	Lot 158, Da Silva Street, Newtown, Kitty, Georgetown.
<b>AGRICULTURAL</b>		
22	Air Services Limited	Eugene F. Correia International Airport, Ogle.
23	GuySuCo Inc.	La Bonne Intention(LBI) Estate, East Coast Demerara

#### 4.16 Vending Premises Licensed 2018

One hundred and ninety seven (197) pesticides vendors were registered to handle, store and distribute pesticides in Guyana. This is in keeping with the Board's mandate in ensuring sound chemicals management in Guyana. One on one meetings coupled with inspection activities were undertaken during the year so as to ensure vendors are knowledgeable and well equipped to work

SUMMARY OF VENDING APPLICATIONS AND LICENSES 2018	
Licensing Pesticide Vendors	Total
Licensed Pesticides Vendors, 2017	185
Vending License Renewals, 2018	185
New applicant, 2018	12
Licensed Pesticides Vendors, 2018	197

with pesticides.

**Table V:** Summary of vending applications and licenses 2018

The PTCCB also launched its Pesticides Vendors Education Programme. This programme ensures that all potential pesticides vendors possess the relevant knowledge as is outlined in the Pesticides



and Toxic Chemicals Control Regulations 2004 before being licensed. New employees of licensed vendors are also trained so as to ensure sound chemicals management practices.

A total of 12 persons wrote the Pesticides Vendors Examination all of whom were successful. The list of licensed pesticide vendors can be viewed in **Appendix VI**.



**Plate 3: Licensing Exercise of Pesticides Vendor**

## **4.2 Inspection and Enforcement**

The PTCCB's inspection and enforcement department conducted inspection exercises on all 197 vending premises to evaluate their compliance with the Pesticides and Toxic Chemicals Control Act 2000Part V.

***Random inspections and enforcement activities were also conducted in the following areas:***

- a) Regions 1,2,3,4,5,6,7,9 and 10
- b) Public markets and supermarkets
- c) General stores and hardware stores
- d) Toxic chemicals and pesticide importers
- e) Pest control operators
- f) Ports of entry and
- g) Inspections based on information received.

These activities resulted in 22 confiscations of unregistered pesticides and toxic chemicals products and also included information sharing and exchange. A detailed outline of all enforcement activities and confiscations is presented in Appendix VII. A total of 2013.3kg of illegal pesticides was confiscated for year under review.

Table VI: Summary of Stakeholders Inspections, 2018

Stakeholders Targeted		Numbers of Inspections Conducted
1.	<b>Manufacturers</b>	4
2.	<b>Pesticides Importers, Vendors and Distributors</b>	792
3.	<b>Supermarkets &amp; General Stores</b>	56
4.	<b>Pest Control Operators</b>	30
5.	<b>Pesticides Storage Facilities</b>	25
6.	<b>Inspections – Ports of Entry</b>	6
7.	<b>Toxic Chemicals Importers</b>	54

#### 4.21 Images of Confiscated Products

*Plate 4: Illegal Agrochemicals and Household Use Pesticides Confiscated during enforcement activities, 2018.*



## 4.22 Inspections: Wharves and Warehouses

Six inspection exercises were carried out in collaboration with the Guyana Revenue Authority, Customs and Trade Administration at Wharf and Warehouses, to monitor pesticide imports. These inspections ensured that only registered pesticides were imported and were compliant with licenses issued.



*Plate 5: Inspection of containers with imported pesticides at GRA, Wharves & Warehouses, 2018*



### **4.23 Inspections, Major Pesticide Storage Facilities**

Twenty-five (25) inspections were conducted at major pesticides storage facilities and recommendations were made for corrections of any non-compliances that were observed. These facilities are strategically mapped by the PTCCB to allow for monitoring in cases of a chemical emergency.

### **4.24 Inspections: Toxic Chemical Importers and Industries**

The PTCCB continued its monitoring of toxic chemical manufacturers, importers, distributor and other toxic chemical stakeholders. A total of 54 toxic chemical sites were inspected. Detailed reports highlighting compliances, non-compliances and recommendations on next steps were provided to each inspected stakeholder. Inspections would examine the following key areas:

1. Infrastructure
2. Chemical products
3. Spillage Prevention, Clean up & Disposal
4. Sound environmental management practices
5. Training and awareness

### **4.25 Inspection, Supermarkets and General Stores**

In 2018, 792 inspections of pesticide importers, vendors, distributors, toxic chemical importers, supermarkets, general and hardware stores and community markets countrywide yielded illegal/unregistered pesticides. These resulted in the confiscation of 2 tonnes of illegal pesticides for the period under review. This represented a reduction in over 8 tonnes which was confiscated the previous year.

***Picture 6: Inspection carried out at supermarket***



## **4.26 Complaints and Investigation**

The PTCCB received, investigated and reported on the following complaints of chemicals incidences during the year under review.

### **4.26.1 Liliendall Incident**

The PTCCB received a complaint by Ms. Bahgwandai Harkishon through the Sparendam Police Station alleging that her neighbor Ms. Carol Smith of A2 Pump Road, Liliendal East Coast Demerara sprayed some of her plants with an unknown pesticide. The PTCCB conducted an investigation of the incident and it was concluded that a pesticide may have been used on the plants affected but a complete chemical analysis was required to definitively determine if it was a pesticide.

### **4.26.2 Mahaicony Incident**

The PTCCB was requested to conduct an investigation into a complaint made by Mr. Boodram Sooklall through the Mahaicony Police Station alleging that, Mr. Otis Scotland caused pesticide damage to his crops, while spraying for weeds. Both the complainant and the accused reside in the community of Mahaicony and cultivate cash crops for commercial use on adjacent lands.

Following the investigation it was concluded that a pesticide may have been used on the plants affected but a complete chemical analysis is needed to definitively determine if it was a pesticide. Persons were advised that extreme caution should be taken when applying chemicals around persons occupying surrounding premises, when applying pesticides persons should notify neighbors and other individuals in the immediate vicinity.

### **4.26.3 No. 51 Village Incident**

The PTCCB was contacted by No. 51 Village Police station for assistance in an investigation whereby Mr. Bhojnarine Permanand of No.53 Village who did some farming in the area on the northern side of the public road, allegedly misused a pesticide which resulted in damages to other farmers in the immediate vicinity to him. The affected farmers were Mr. Safraz Abdul Wahid of No.53 Village; and Mr. Chitram Budhna and Tularam Budhna who also resided in the same area and jointly farmed together.

It was concluded that a pesticide may have been misused resulting in the damages to surrounding vegetation and the victims' crops, but given the length of time between the occurrence of the incident and the report reaching the PTCCB it is highly unlikely that any pesticides residue would still be present in the plants for the laboratory to detect. As such guidance was provided on the importance of providing notification to others before applying a pesticide.

#### **4.26.4 Hope Coconut Industries Incident**

The PTCCB received a request from the Cove and John Police Station to assist in the investigation of an alleged sabotage of coconut trees at the Hope Coconut Industries.

The findings of the investigation revealed that holes were drilled into seventeen-coconut trees trunks but whether a pesticide was placed into these holes could not have been physically determined. Laboratory testing of the affected plant parts was recommended to determine if a pesticide was present which could have been the cause of the effects exhibited by the coconut trees, namely, premature dropping of young nuts, drooped branches and the growing points being moist, noxiously scented and pale brownish in appearance.

The evidence on the trees indicated that someone indeed drilled holes into the trunks of all the trees, however, based on physical observation the team could not definitively conclude whether a chemical was the cause of the symptoms observed on the coconut trees.

There was evidence of heart rot disease observed on some of the affected trees, which could have resulted because of a fungal infection. Analysis of plant parts collected during the investigation revealed no pesticide residue.

#### **4.26.5 Mahaica Incident**

The PTCCB was contacted by Mr. Kapieldo Rampersaud alleging that all of her father's cash crops were damaged as a result of using Caribbean Chemicals' **Fentin Acetate 60% WP (Group B Fungicide)** to treat snails/slugs on plants.

Based on the observation during the PTCCB's investigation and the fact that this incident actually occurred two months prior to the complaint and there is no plant evidence available, no findings were derived.

#### **4.26.6 Crabwood Creek Incident**

Inspectors of the Pesticides and Toxic Chemicals Control Board (PTCCB) acting on intelligence, collaborated with the Guyana Police Force, Skeldon Police Station and conducted an operation at the Crabwood Creek Backland, Grant 1779, Corentyne Berbice where a quantity of unregistered/illegal pesticides was confiscated. Mr. Armongan's contraventions were as follows:

#### **Contravention of the Pesticides and Toxic Chemicals Control Act**

1. Mr. Armogan is not registered or licensed in accordance with the above-stated Act to import, store, distribute or sell pesticides and toxic chemicals.
2. The pesticides confiscated from Mr. Armogan's residence are not registered for import, distribution, sale, use and storage in Guyana and are therefore illegal.
3. The storage of the illegal pesticides was not in accordance with the above-stated Act and its associate Regulations 2004 (No. 8 of 2004) Part VII.

#### **Violations of the Act**

The Pesticides and Toxic Chemicals Regulations 2004 (No. 8 of 2004) Part XII Regulatory Enforcement, Subpart A- General, Violations of the Act 246 states that it is unlawful for anyone to:

1. Manufacture, distribute or sell an unregistered pesticides
2. Fail to register a pesticide manufacturer, import or distribution establishment or to sell or distribute pesticides without a pesticides vendor license.



*Inspectors of PTCCB conducting enforcement exercises at Veerasammy Armogan located at Crabwood Creek Backland Grant 1779, Corentyne Region 6*

## **4.27 Training and Awareness Programme**

### **4.27.1 Farmers Training and Awareness Programs**

The PTCCB conducted awareness sessions countrywide in an effort to further enhance chemicals management in Guyana. These training sessions discussed topics relating to the safe use, handling, storage and disposal of pesticides in the field, in homes and kitchen gardens. Emphasis was placed on proper storage of pesticides and the use of household pesticides in homes, with discussions on its impact to human health and the environment. A total of 5542 persons were reached through the PTCCB's training and awareness programmes in 2018 (see **Appendix VIII**).



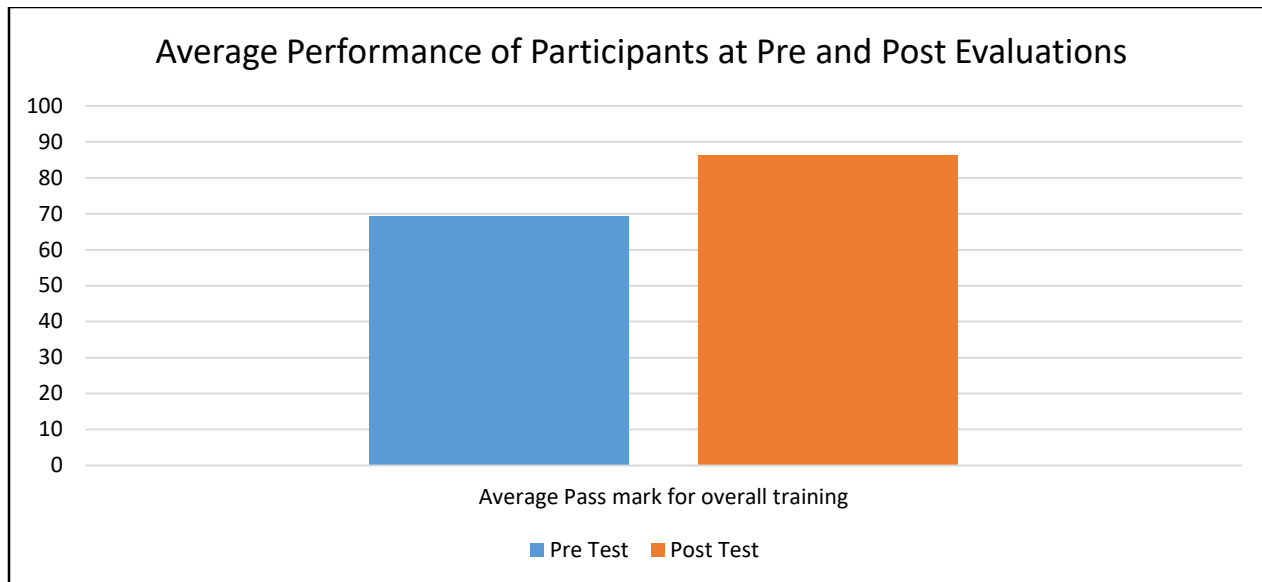


*Plate 7: Awareness Sessions 2018*

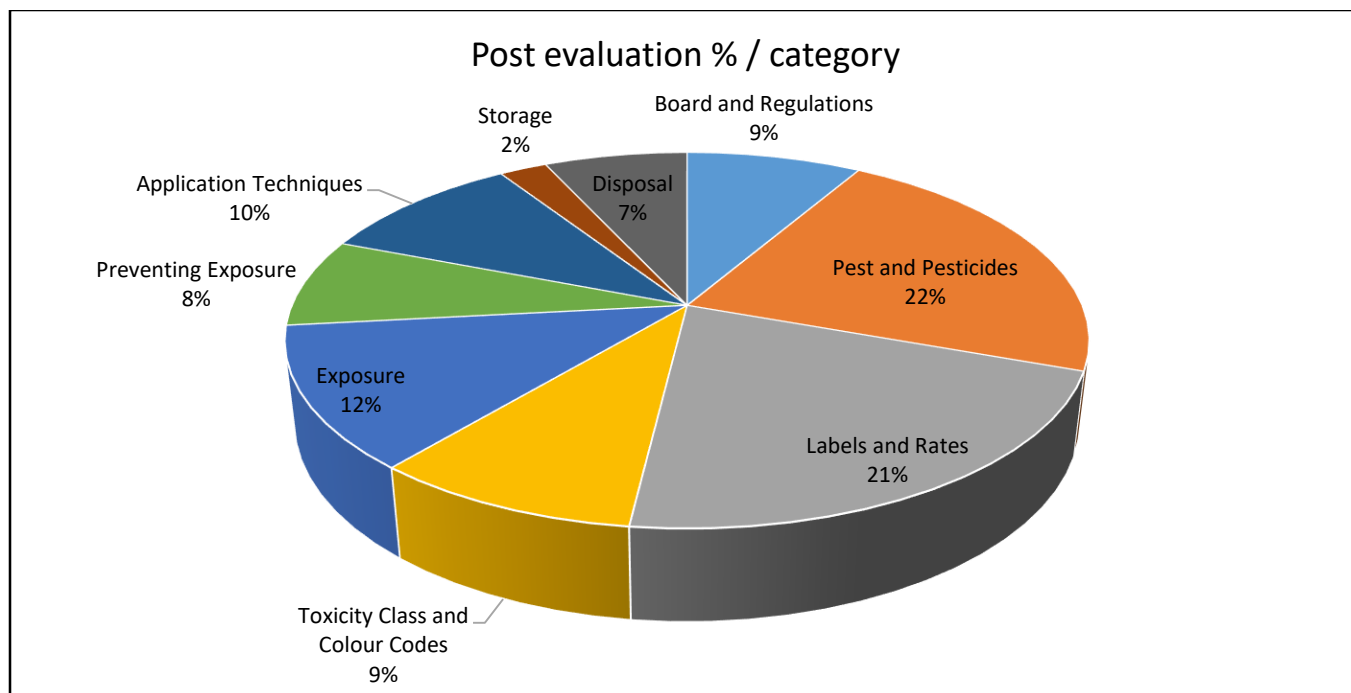


***Plate 8: Awareness Sessions  
Region 7.***

The PTCCB conducted training evaluations to examine the knowledge gained by participants from the awareness sessions. These also allowed for the identification of areas of the training program syllabus that needs to be altered/reinforced when conducting trainings. Majority of the population that participated in the pre and post evaluation tests performed better on the post-test after they would have gained knowledge from the training program.



**Figure 1.0: Average Performance of Participants at Pre and Post Evaluations**



**Figure 2.0: Post Evaluation Understanding / Category**

Based on the overall post evaluation majority of the population understood Pest and Pesticides followed by Labels and Rates categories. The least understood category was Storage.



#### **4.27.2 National Tree Day, 2018**

The PTCCB attended the National Tree Day ceremony at the Ebini Agricultural Station, Region 10. The tree day theme for 2018 was; “Trees; Good for the Community, Great for the Country.” The Regional Chairman, Mr. Renis Moriah, Honourable Ministers Holder and Gerrido Lowe were the feature speakers that emphasized the importance of trees in a sustainable environment.



*Plate 9: Hon. Minister of Agriculture, Holder delivering the feature address.*

**Plate 10: Staff of the PTCCB at National Tree Day activities at Ebini.**



### **4.27.3 Pesticides Awareness in Secondary School**

The PTCCB held its annual pesticides awareness in Secondary School Programme. A total of 10 secondary schools raised awareness on pesticides using dramatic pieces which they created. Four of the ten schools that participated in the competition qualified for the finals to compete for cash prizes and trophies. The four schools were Soesdyke Secondary, Saint Cuthbert's Secondary, Linden Foundation Secondary and Winifred Gaskin Memorial Secondary.

All the schools that participated were awarded with a consolation prize of \$20,000.00 Guyana dollars' worth in text books. The PTCCB also hosted a Facebook leg of the competition which was won by Winifred Gaskin. In the finals which was held at the National Cultural Centre, Winifred Gaskin placed 4<sup>th</sup>, Saint Cuthbert's 3<sup>rd</sup>, whilst Linden Foundation 2<sup>nd</sup> and Soesdyke Secondary won the entire competition.

The Minister of Agriculture, the Honourable Mr. Noel Holder gave the feature address in which he congratulated all the participating schools for doing such an amazing job and he urged them to share what they learnt with their families and friends.



***Plate 11: Hon. Minister of Agriculture delivering feature address - Pesticides Awareness in Secondary Schools Drama Competition***

**Plate 12: Hon. Minister of Agriculture presenting the first place trophy to Soesdyke Secondary at the Pesticides Awareness in Secondary Schools Drama Competition Finals**



#### **4.27.4 World Food Day**

The PTCCB attended the World Food Day observance activities held at Lake Mainstay Wyaka in Region 2. The theme for world food day 2018 was; “Working for Zero Hunger”. The PTCCB displayed an awareness booth on chemicals management at the event which focused on the theme.



**Plate 13: Hon. Minister of Agriculture interacting with PTCCB at World Food Day**



**Plate 14: Students interacting with staff of PTCCB – World Food Day**



#### **4.27.5 Regional Agriculture and Commercial Exhibition**

The PTCCB participated in the Regional Agriculture and Commercial Exhibition (RACE) which took place in Lethem region 9 by displaying a booth that highlighted the mandate of the PTCCB. Inspectors also visited, inspected and licensed pesticides vendors in the community.



**Plate 15: Inspector inspecting a pesticide vendor in Lethem Region.**

**Plate 16:**  
**Inspector**  
**interacting**  
**with**  
**President**  
**Granger**  
**at the R.A.C.E**  
**event held**  
**in Lethem**  
**Region 9.**



#### **4.27.6 Open Day, PTCCB**

The PTCCB participated in the Ministry of Agriculture's (MoA) Open Day activities by holding a mini pesticides awareness exhibition in the National Agriculture Research and Extension Institute's (NAREI) parking lot.

**Plate 17:**  
**Staff of**  
**PTCCB**  
**interacting**  
**with persons**  
**at the**  
**mini exhibition**







*Plate 18: PTCCB Booth MOA Open Day*

#### **4.27.7 Pesticides Awareness Week**

Pesticides Awareness Week 2018 was launched on the 21<sup>st</sup> of October with the Registrar and Deputy Registrar of the PTCCB appearing on the National Communications Network (NCN). The pair outlined the activities planned for the upcoming week and also shared the theme for the week which was; “Increase Food Safety, Reduce Dependency on Pesticides. Adopt Integrated Pest Management (IPM).”

#### **4.27.8 Pest Control Applicators Certification**

The PTCCB hosted the graduation ceremony for the Basic and Intermediate proficiency Pest Control Operator’s training programme. The ceremony was held at De Impeccable Banquet Hall. The Permanent Secretary of the MoA, Ms. Delma Nedd gave the feature address in which she implored the graduates to be professional and implement what they have learnt. A total of 49 persons graduated in the Basic Proficiency and 27 graduated in the Intermediate Proficiency.



*Plate 19: Permanent Secretary of MoA Ms. Delma Nedd giving the feature address at the Pest Control Applicators' Intermediate and Basic proficiency Graduation Ceremony.*



*Plate 20: Graduates of the Pest Control Applicators' Intermediate and Basic proficiency*

#### 4.27.9 Essequibo Expo, 2018

Staff of the PTCCB participated in the Essequibo night Exposition which was held at the Anna Regina Ground in Region 2. A booth was displayed which raised awareness of the role of the PTCCB in chemicals management.



*Plate 21: Staff of PTCCB interacting with persons at the Essequibo Night exhibition held at the Anna Regina Community Centre Ground (2018/10/26)*





#### 4.27.10 MMA Open Day

The PTCCB participated in the Mahaica Mahaicony Abary (MMA) open day Exhibition which took place in the MMA compound in Onverwagt region 5. A booth was displayed which raised awareness of the role of the PTCCB in chemicals management.



*Plate 22: Staff of PTCCB interacting with persons at the MMA open day exhibition held in the MMA compound Onverwagt W.C.B Region 5*

## **4.28 Pesticides and Toxic Chemicals Laboratory (PTCL)**

The PTCL supports the PTCCB in fulfillment of its mandate through analytical services aimed at investigating the quality of formulated pesticides imported and the determination of pesticide residues in agricultural produce. The laboratory is also expected to support food safety in Guyana. With the goal in mind of having the laboratory confirmed to, and working under the guidance of local and international standards extension works of the Pesticides and Toxic Chemicals Control Board - Laboratory started in April of 2017 and continued into 2018 (*March,2018*).

During this period Laboratory staff had to be relocated and tremendous progress was made by the staff of the laboratory in light of revision and updating of the Quality management system. On completion of the expansion of the facility, in April of 2018 the Laboratory staff was relocated back to the laboratory but laboratory works were delayed due to a lack of laboratory furnishings which were to be installed. Works however continued on the laboratory quality management system for the remainder of the year.

### **4.28.1 Formulated Unit**

#### **4.28.1.1 Human Resource and Capacity Building**

During the course of the year 2018, staff of the laboratory attended local trainings provided by the Guyana National Bureau of standards and continued works on the Quality management system. In addition to the said, steps were taken by the Laboratory staff to have all the equipment in working condition.

One Ms. Aliecia Hall-Mc Donald who is in receipt of a scholarship from the Pesticides and Toxic Chemicals Control board displayed stellar academic performance in her pursuit of a Degree in Chemistry at the University of Guyana.

The staff of Pesticides and Toxic Chemicals Laboratory (QCU) benefitted from following training highlighted in table 5 below during the period under review.

NAME of STAFF	TRAINING	DATE /VENUE
<b>Ms. Reshmi Bissessar</b>	Introduction to the Science of Measurement	22 <sup>nd</sup> February, 2018 @ GNBS
<b>Ms. Rhea Benn &amp; Mr. Anooj Ramsomeeran</b>	Safety Management for Laboratories	28 <sup>th</sup> – 30 <sup>th</sup> May, 2018 @ GNBS
<b>Ms. Reshmi Bissessar</b>	Measurement Uncertainty and Method Validation and Verification	9 <sup>th</sup> -13 <sup>th</sup> July, 2018 @ GNBS
<b>Ms. Rhea Benn</b>	ISO/IEC 17025:2017 and Internal Auditing	6 <sup>th</sup> -9 <sup>th</sup> August,2018 @ GNBS

Ms. Reshmi Bissessar attended a training session on *Measurement Uncertainty and Method Validation and Verification* Training at Guyana National Bureau of Standards from 9<sup>th</sup>- 13<sup>th</sup> July, 2018. The consultant Ms. Shivanna Mahabir-Lee discussed the concepts, contributions, sources, components of significance, mathematical tools and estimation approaches in evaluating measurement uncertainty for a test samples.


On the 20<sup>th</sup> July, 2018 Ms. Lee visited the Pesticides and Toxic Chemicals Laboratory to further train staff in-house on the criteria for validating method of analysis. During the practical exercise, excel file using the single-validation lab approach for calculating bias, within-lab reproducibility, root mean square, combined uncertainty and expanded uncertainty was done.

Date	Measured value	Bias			
Jul-18	19.933	-0.0670			
Aug-18	20.212	0.2120			
Sep-18	19.885	-0.1150			
Oct-18	19.769	-0.2310			
Nov-18	20.025	0.0250			
Dec-18	20.134	0.1340			
Jan-19	20.158	0.1580			
Feb-19	19.992	-0.0080			Sq
Mar-19	19.851	-0.1490	Cref	20.0000	
Apr-19	19.997	-0.0030	uCref	0.2500	0.0625
May-19	20.056	0.0560	RMS	0.0892	0.0080
Jun-19	21.058	1.0580	s(bias)	0.3315	0.1099
Mean	20.08916667		n	12	
<b>SD u(R)</b>	<b>0.331515757</b>	0.33151576	ubias^2		0.079609253
uR^2	0.109902697		ubias		0.282151116
uc	0.435329702				
U	0.870659404				

$$u(bias) = \sqrt{RMS_{bias}^2 + s_{bias}^2 / n + u(Cref)^2}$$

#### 4.28.1.2 Subcontracting of Samples- Kaizen Laboratory

Two samples, both containing 70% imidacloprid as the active ingredient were submitted to Kaizen Environmental Service Inc. Guyana for the determination of active ingredient concentration. This was done to determine the quality of a pesticide product, due to claims of its ineffectiveness by farmers. The sample was revealed to satisfy its chemical composition in relation to its active ingredient content. The image below shows the tabulated results for the samples:



**KAIZEN**  
Environmental Services (Guyana) Inc.

58 High Street  
Kingston  
Georgetown, Guyana  
Tel: (592) 231-0346 / (592) 231-0348  
Email: Inquiries@kaizen-guy.com

**ANALYSIS DATA REPORT**

Customer: Pesticides & Toxic Control Board

Customer's Address: NARI Compound, Mon Repo, East Coast Demerara.

Customer Contact: Tricia David

Client Job #: 18-1125

Item(s) Analyzed: Grandules

Date of Sampling: 24-Jul-18

Sampled By: Client

Date of Receipt: 24-Jul-18

Report Date: 15-Aug-18

Lab File #: 000524-1-2

**ANALYSIS RESULTS**

Parameter Name	Units	Results	
		000524-1 PTCCB/CK/2506/2018/ A	000524-2 PTCCB/CK/2506/2018/ B
IMIDACLOPRID	%	70.2	72.8

## **4.28.2 Pesticide Residue Unit**

### **4.28.2.1 Human Resource and Capacity Building**

Ms. Rayanna King and Mr. Morris Solomon participated in free basic online courses on Method validation and Mass Spectrometry with respect to pesticide residue analysis. These courses were facilitated by the Joint Institute for Food Safety and Applied Nutrition, University of Maryland. The Method validation course focused on ensuring the participant were made familiar with jargon used in the process, steps required, and outcomes of the process of validating a method.

The mass spectrometry course focused on the basics of mass spectrometry and basic data analysis with respect to pesticide residues.

## **5.0 Meetings and Other Events**

### **5.1 Integrated Weed Management in Rice**

The Inspectorate Department represented the PTCCB at a training seminar provided by Rotam Agrochemicals at the Guyana Rice Development Board, Burma Research Station, Mahaicony. Inspectors of the PTCCB were trained in concepts of integrated weed management in rice which included:

- i. pesticides with negative charge (Glyphosate, Arsenal and 2,4-D) and how these chemicals are affected by water hardness;
- ii. pesticides with positive charge (Paraquat and Diuron) are not affected by water hardness;
- iii. using of good agricultural practices to integrate new methods of weeds management in rice cultivation e.g. cultural control;
- iv. the advantages and disadvantages of using weedicide resistant varieties of rice; and
- v. calibration of pesticide application equipment (knapsack sprayer).

### **5.2 Univar Product Use Training**

The PTCCB attended a pesticides product presentation and training held at Giftland Mall, Lilendaal East Coast Demerara. The training was hosted by Arod, Syngenta, Verdegen and Univar Environmental Sciences in collaboration with local Importer/Distributor; A plus distributors. The stakeholders present included Pest Control Operators (PCOs), vector control officers and



environmental officers. The Companies displayed products such as Verdegen mosquito repellent gel, Bio Bags, The Annihilizer, Arod UV light traps etc. The session was aimed at introducing new products that were environmentally friendly, raising awareness and improving professional vector and pest control techniques.

### **5.3 Codex Committee Webinar**

Representatives from the PTCCB participated in a webinar at the Inter-American Institute for Cooperation on Agriculture (IICA) Boardroom, Georgetown, Guyana. The purpose of the workshop was to prepare the participating countries for the Codex Committee on Pesticide Residues (CCPR) 50.

Different agenda items discussed were:

- (1) Chile's request for guidance on the way forward with current lack of definitions and recommendations for bio pesticides, bio fertilizers and bio stimulants and how this should be addressed. It was however, recommended that Chile submit a discussion paper on bio pesticides, bio fertilizers and bio stimulants for consideration by Codex Committee on Food Labeling(CCFL), CCPR and Codex Committee on Contaminants In Food(CCCF).
- (2) Establishment of Codex schedules and priority lists of pesticides.
- (3) Information on national registrations of pesticides.

### **5.4 Radiation Sources and Management in Guyana**

The Pesticides and Toxic Chemicals Control Board (PTCCB) attended a training held at the Environmental Protection Agency (EPA) in collaboration with the International Atomic Energy Agency (IAEA) concerning basic radiation safety and the regulation of radiation sources. Project RLA 9082 on "Establishing and strengthening sustainable national regulatory infrastructures for the control of radioactive sources under the IAEA" was discussed.

The discussion of the project focused on building the competence and expertise needed by national regulatory bodies to establish and operate an adequate regulatory programme for the safety and security of radiation sources. The various aspects as it relates to safety when handling radioactive materials was the focal point of the meeting. The shared management and regulating the lifecycle of radioactive material source among EPA and Ministry of Public Health (MoPH) was also discussed.

## **5.5 Incident Command Systems Training**

Staff of the PTCCB participated in an “Incident command systems training” held at the Civil Defence Commission (CDC). The aim of the training was to build capacity of related stakeholders and establish a standardized approach to command, control and coordination of emergency response as it relates to building Guyana’s disaster risk management capabilities. The focal point of this training as it relates to the PTCCB was pesticides and toxic chemicals risk management approaches.

## **5.6 Establishing a Memorandum of Understand with the Guyana Revenue Authority**

The Deputy Registrar and the Chairman attended a meeting with Guyana Revenue Authority (GRA) management officials at Commissioner General Boardroom, GRA Headoffice. Present from GRA were Ms. Helleger-Assistant Commissioner, Mr. Corbet- Assistant Commissioner Agri. Processing Unit, Mr. John- Private Warehouse Manager, Mr. Hyman-Deputy Commissioner, Mr. Wills- Deputy Commissioner Legal Services, Mr. Moore-Assistant Commissioner Law Division and Ms. Beckles-Assistant Commissioner Law Division.

Some of the issues that the PTCCB faces on a daily basis were raised as it relates to importation of illegal pesticides. The GRA requested a list of all pesticides and toxic chemicals that PTCCB was mandated to manage and also stated that GRA is willing to work in collaboration with PTCCB in regards to seizures of contraband products and collection of same by PTCCB.

Training for staff of GRA in monitoring for pesticides and toxic chemicals was requested. A memorandum of understanding (MOU) was developed pertaining to the collaboration of the two agencies regarding enforcement activities and outlining the roles of GRA and PTCCB.

## **5.7 Cost Recovery Analysis of Guyana under Regional Obsolete Pesticides Product**

The PTCCB facilitated pesticides stakeholder meetings with a consultant from FAO, Mr. Inniss, concerning the PTCCB’s function as it relates to the cost recovery analysis of the agency. These meetings were conducted during the 27 – 29 April, 2018 and entailed discussion between various pesticide stakeholders and the consultant. Guyana’s PTCCB will be used as pilot country to assess the capabilities of the agency to strengthen other pesticides and toxic chemicals authorities across the Caribbean on their financial sustainability.

## **5.7 Cost Recovery Analysis of Guyana under Regional Obsolete Pesticides Product**

The PTCCB attended a meeting with the Mayor and City Council (M&CC) concerning the illegal street vending of pesticides in Georgetown. Ms. S Jerrick (Deputy Town Clerk), Mr. C Dey (Chief Environmental Health Officer) Mr. K Boston (Acting Deputy City Constable), Mr. A Foo (Chief Constable) and Dr. S Renolds (Medical Officer) were the representatives present from M&CC. The PTCCB requested the assistance of the M&CC in addressing the current issue of illegal street-vending of pesticides and toxic chemicals through collaboration of the two agencies in enforcement activities in the city. Ms. S Jerrick agreed to the collaboration of the agencies and gave full support for this initiative.

## **5.8 Hydro-chlorofluorocarbons Phase Out Management Plan**

The PTCCB participated in a four-day workshop held by the National Ozone Action Unit on the Hydrochlorofluorocarbons (HCFC) Phase-out Management Plan. The workshop was geared at strengthening the enforcement framework for monitoring the importation of Ozone Depleting Substances and other controlled chemicals in keeping with Guyana's obligations under Multilateral Environmental Agreements and our national pursuit of a green economy. The sessions were facilitated by Mr. Bishnunarine Tulsie, along with representatives of relevant national agencies.

## **5.9 Electronic Single Window**

The PTCCB attended a two-days' workshop that was coordinated by the collaboration of Ministry of Business and the International Development Bank (IDB). This workshop was held at Herdmanston Lodge, Georgetown and aimed at implementing an Electronic Single Window system for trade and investment in Guyana.

## **5.10 Electronic Single Window**

The PTCCB was represented at a five days' workshop that was coordinated by Guyana National Bureau of Standards (GNBS). This workshop was aimed at training inspectors under various agencies on the **ISO/IEC 17020:2012** standard for inspectorate bodies with the aim of improving and strengthening various inspection agencies as to overall achieve a network of competent Conformity Assessment Bodies.

## **6.0 ACCOUNTS 2018**

The Accounts for the PTCCB for 2018 was prepared and submitted to Audit Office in keeping with Boards work plan for auditing. The Auditor General's Office shall examine the PTCCB's Financial Statement for 2017, as required under Section 41 of the Pesticides and Toxic Chemicals Control Act and the Financial Management Act, and validated that the Financial Statements reflected fairly in all materials respects, that the financial position of the PTCCB as at 31 December 2018. The total expenditure for 2018 in executing the mandate of the PTCCB is two hundred million, fifty seven thousand, three hundred and sixty three dollars (\$200,057,363.06).

## **7.0 BUDGET 2019**

The proposed budget of the Board for the year 2019 reflects a proposed total expenditure of one hundred and eighty eight million, one hundred and seventy one thousand dollars (\$188,171.00). This expenditure will be used for delivery of the Boards program and daily operations.

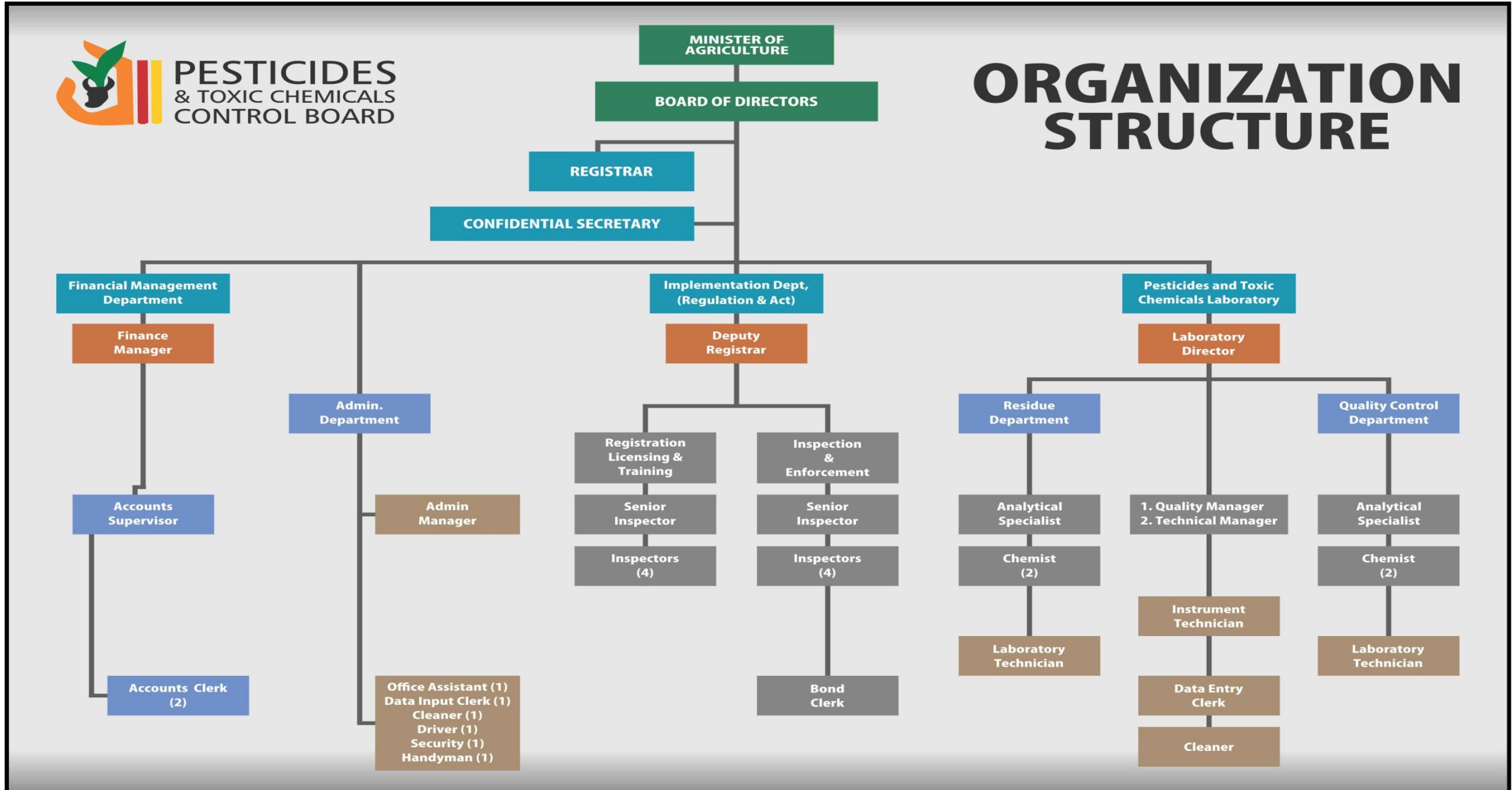
## **8.0 WEBSITE**

The Board's Website, <http://www.ptccb.org.gy> was continuously updated during the year to make it more user friendly and to ensure that all services of the Board are available to the public. The Board continued to use the website for awareness raising, sharing of information with various stakeholders and providing information for the general public. The website has been a source of information to nationally, regionally and internationally. In addition, it also provides linkages to the PTCCB's Facebook and YouTube public information pages.

## **APPENDICES**



## APPENDIX 1: Organization Structure



## APPENDIX II

### CAPACITY BUILDING & STAFF DEVELOPMENT 2018

#### National Training/Workshops

Date	Training/ Workshop	Participants
<b>22<sup>nd</sup> February, 2018</b>	Introduction To Measurement Science- Metrology (GNBS)	<ul style="list-style-type: none"> <li>• Morris Solomon</li> <li>• Reshmi Bissessar</li> <li>• Rayanna King</li> <li>• Rhea Benn</li> <li>• Anooj Ramsoomeran</li> </ul>
<b>28<sup>th</sup> – 30<sup>th</sup> May, 2018</b>	General Requirements for safety in Laboratory based on the requirements of GYS235:2003 (GNBS)	<ul style="list-style-type: none"> <li>• Rhea Benn</li> <li>• Anooj Ramsoomeran</li> </ul>
<b>19<sup>th</sup> -22<sup>nd</sup> June, 2018</b>	Customs Workshop- National Ozone Action Unit, HCFC Phase out Management Plan	<ul style="list-style-type: none"> <li>• Yekini Johnson</li> <li>• Bhavina Pooran</li> </ul>
<b>19<sup>th</sup> June – 31<sup>st</sup> July, 2018</b>	Mastering the Art of Public Speaking (University of Guyana)	<ul style="list-style-type: none"> <li>• Suresh Amichand</li> <li>• Yekini Johnson</li> <li>• Bhavina Pooran</li> <li>• Kishan Narine</li> <li>• Dietmar Chichester</li> </ul>
<b>9<sup>th</sup> -13<sup>th</sup> July, 2018</b>	Measuring Uncertainty And Method Validation And Verification Training (GNBS)	<ul style="list-style-type: none"> <li>• Reshmi Bissessar</li> <li>• Rayanna King</li> </ul>
<b>9<sup>th</sup> – 10<sup>th</sup> July, 2018</b>	Implementation of an Electronic Single Window Risk Management Workshop	<ul style="list-style-type: none"> <li>• Durpattie Parsram</li> </ul>
<b>23<sup>rd</sup> – 27<sup>th</sup> July, 2018</b>	International standard ISO/IEC 17020:2012 Standard- Conformity assessment- Requirements for the operation of various types of bodies performing Inspection (GNBS)	<ul style="list-style-type: none"> <li>• Dietmar Chichester</li> </ul>
<b>17<sup>th</sup> -21<sup>st</sup> September, 2018</b>	International standard ISO/IEC 17020:2012 Standard- Conformity assessment- Requirements for the operation of various types of bodies performing Inspection (GNBS)	<ul style="list-style-type: none"> <li>• Kishan Narine</li> </ul>
<b>1<sup>st</sup> -5<sup>th</sup> October, 2018</b>	Records and Registry Management (Department of Public Service)	<ul style="list-style-type: none"> <li>• Rajdai Raghoo</li> </ul>

<b>1<sup>st</sup> October-9<sup>th</sup> December, 2018</b>	“Classifying and Labelling Chemicals According to the UN GHS”	<ul style="list-style-type: none"> <li>• Bhavina Pooran</li> <li>• Durpattie Parsram</li> </ul>
<b>2018-2019</b>	Diploma in Occupational Health and Safety for Chemist	<ul style="list-style-type: none"> <li>• Rayanna Aceama King</li> </ul>

### **International Meeting/Workshop/Training**

<b>Date</b>	<b>Training/ Workshop</b>	<b>Participants</b>
<b>29<sup>th</sup> -31<sup>st</sup> January, 2018</b>	Second meeting of the inter-sessional process for considering SAICM and the sound management of chemicals and waste beyond 2020, and the third meeting of the OEWG in Panama City, Panama	<ul style="list-style-type: none"> <li>• Trecia David</li> </ul>
<b>16<sup>th</sup> -18<sup>th</sup> April, 2018-</b>	Orientation Workshop for members of the Chemical Review Committee (CRC) of the Rotterdam Convention. Rome, Italy	<ul style="list-style-type: none"> <li>• Suresh Amichand</li> </ul>
<b>14<sup>th</sup> - 15<sup>th</sup> June, 2018</b>	22 <sup>nd</sup> Meeting of the Coordinating Group of Pesticides Control Boards of the Caribbean (CGPC) from the 11 <sup>th</sup> to the 13 <sup>th</sup> June, 2018 and 3 <sup>rd</sup> Meeting of the Project Steering Committee (PSC) for the project GCP/SLC/204/GFF- Disposal of Obsolete Pesticides including POPs, Promotion of Alternatives and Strengthening Pesticides Management in the Caribbean in Barbados	<ul style="list-style-type: none"> <li>• Trecia David</li> </ul>
<b>11<sup>th</sup> - 14<sup>th</sup> September, 2018</b>	Fourteenth Meeting of the Chemical Review Committee (CRC14). Rome, Italy.	<ul style="list-style-type: none"> <li>• Suresh Amichand</li> </ul>

### APPENDIX III

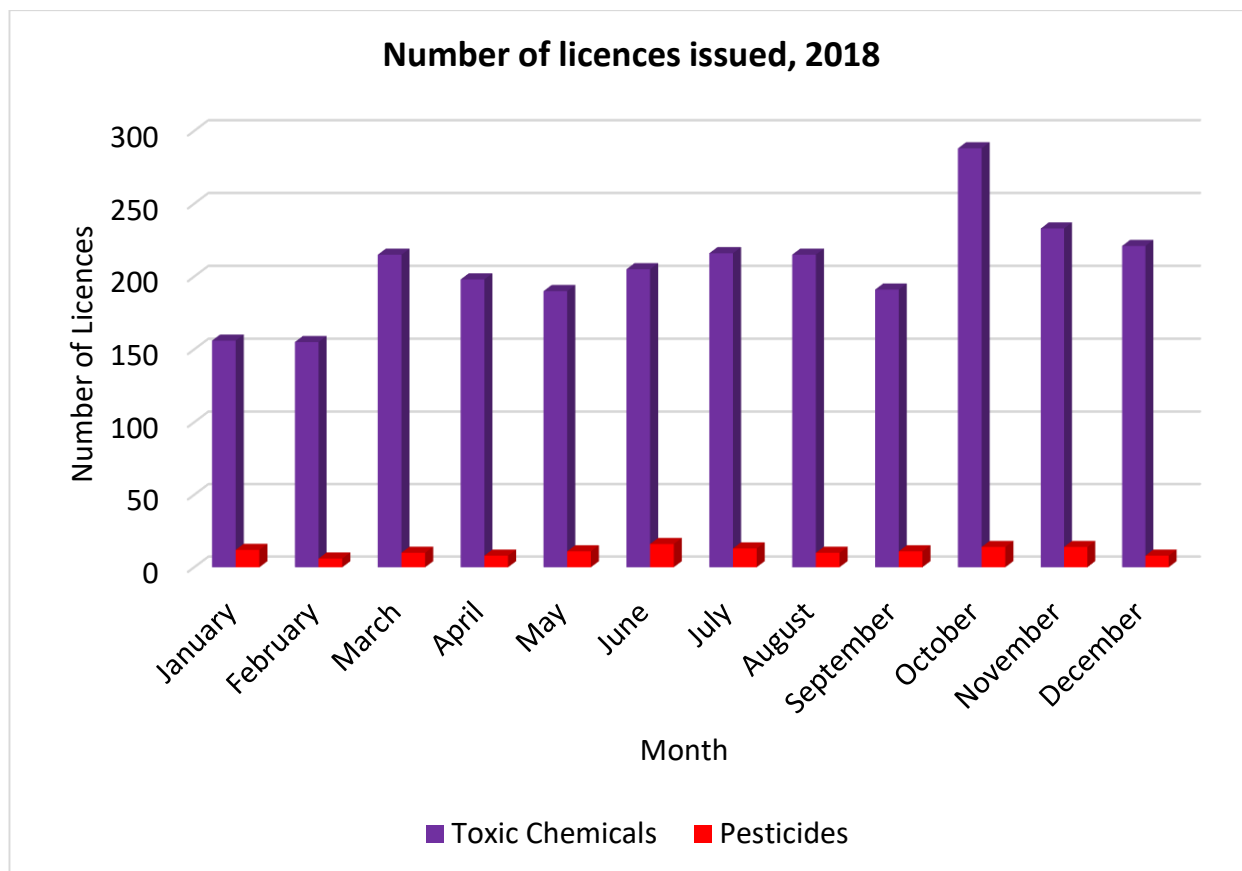
#### REGISTER OF PESTICIDES

<b>Pesticide Category</b>	<b>Number of Products Registered</b>
Adjuvant	1
Emulsifier	1
Fungicide	50
Fumigant	7
Herbicide	121
Insecticide	181
Miticide	1
Molluscicide	6
Nematicide	1
Organic Acaricide	1
Organic Fungicide	2
Organic Insecticide	2
Plant Growth Regulator	4
Repellent	13
Rodenticide	11
Termiticide	2
<b>Total</b>	<b>404</b>

## APPENDIX IV

### Pesticides and Toxic Chemicals Imports, 2018

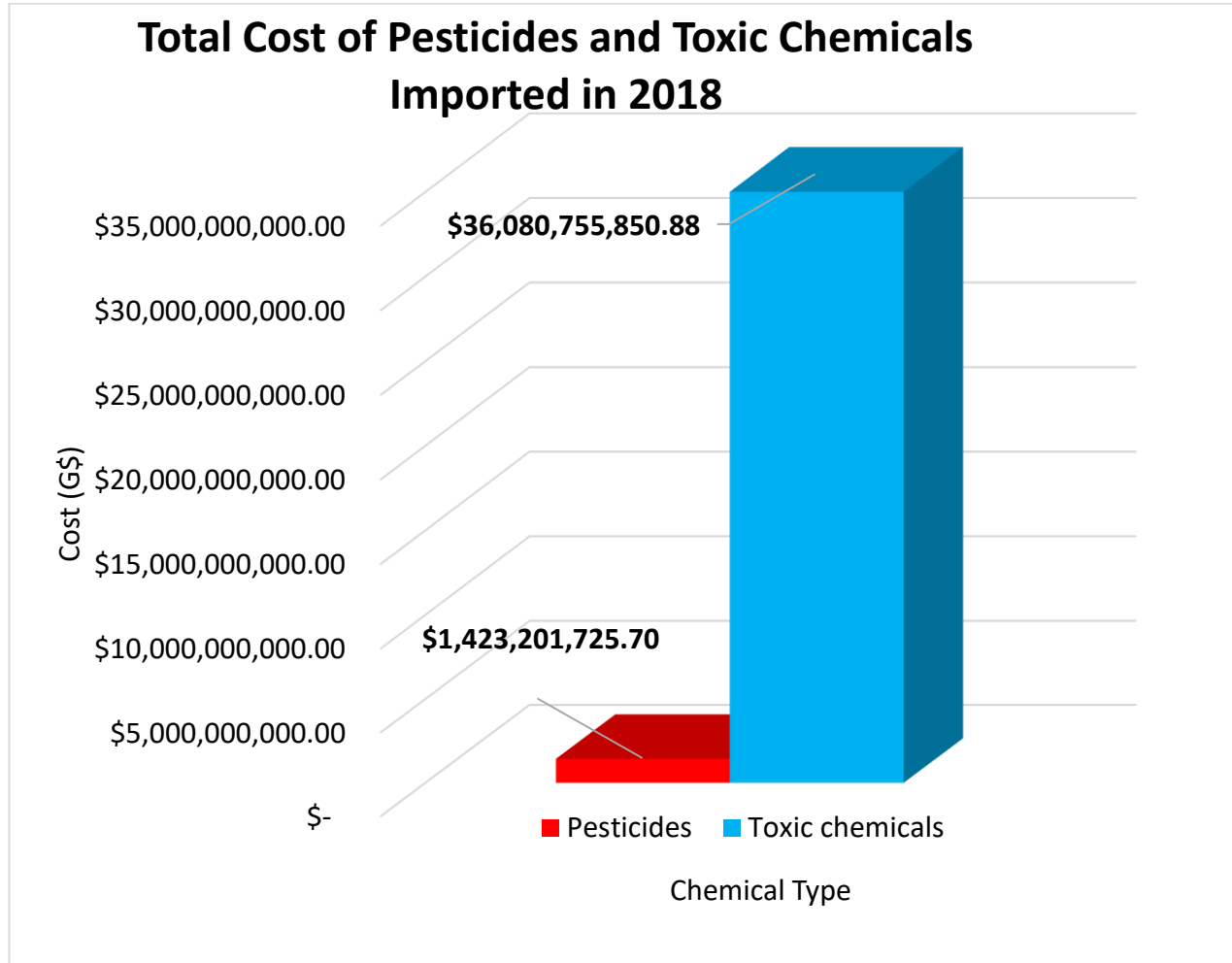
Figure 1: Pesticides and Toxic Chemicals Imports, 2018



MONTH	2018	
	TOXIC CHEMICALS	PESTICIDES
January	156	12
February	155	6
March	215	10
April	198	8
May	190	11
June	205	16
July	216	13
August	215	10
September	191	11
October	288	14
November	233	14
December	221	8
<b>TOTAL</b>	<b>2,483</b>	<b>133</b>



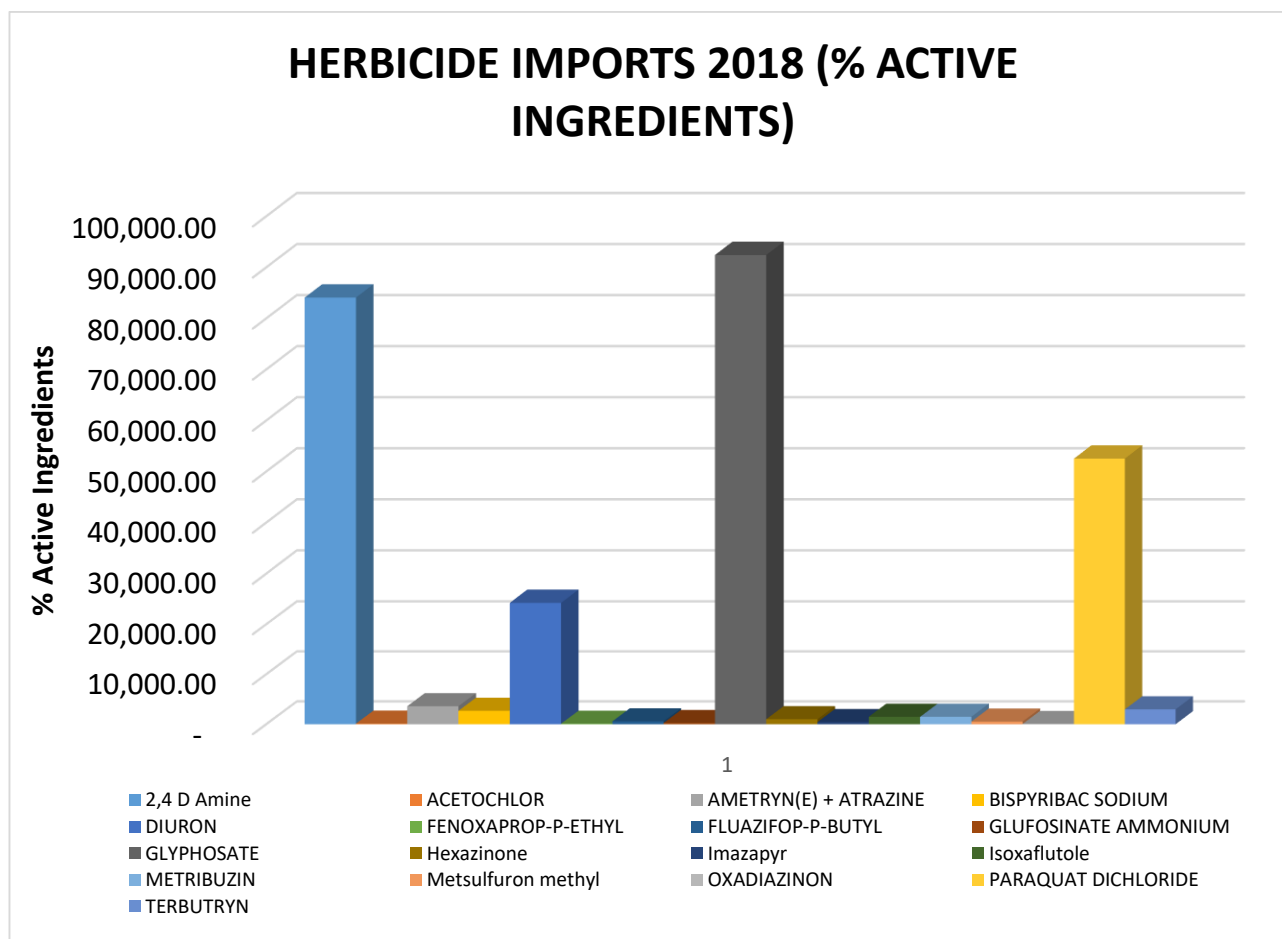
**Figure 2:** Pesticides and Toxic Chemicals Import Cost, 2018



Chemical Types	Import Cost (G\$)
Pesticides	\$ 1,423,201,725.70
Toxic chemicals	\$ 36,080,755,850.88

The PTCCB recording an increase in the imports of toxic chemicals due to the newly established and expanding oil and gas sector.

Figure 3: Herbicides Import, 2018



Chemical Name	Total A.I (kg)
2,4 D Amine	84,085.60
Acetochlor	114.93
Ametryn(E) + Atrazine	3,600.00
Bispyribac Sodium	2,694.00
Diuron	24,276.00
Fenoxaprop-P-Ethyl	110.00
Fluazifop-P-Butyl	587.50
Glufosinate Ammonium	255.90
Glyphosate	92,419.22
Hexazinone	1,005.00
Imazapyr	444.89
Isoxaflutole	1,499.40
Metribuzin	1,485.00
Metsulfuron Methyl	540.00
Oxadiazinon	62.40
Paraquat Dichloride	52,534.24
Terbutryn	2,975.00
<b>Total</b>	<b>268,689.08</b>

Glyphosate (92,419.22 kg) was the most imported herbicide for the period under review. 2,4 D Amine (84,085.60 kg), Paraquat (52,534.24 kg), and Diuron (24,276.00 kg) were also largely imported. Herbicides also commonly known as weedkillers, are pesticides used to control unwanted plants.

**Figure 4: Insecticides Imported, 2018**

Chemical Name	Total A.I.
<b>(S)-Hydroprene</b>	76.72
<b>Acetamiprid</b>	1,000.00
<b>Alpha Cypermethrin</b>	7,993.20
<b>Azamethipos</b>	2.82
<b>Bifenthrin</b>	32.87
<b>Carbaryl</b>	4,437.50
<b>Carbosulfan</b>	1,920.00
<b>Cartap Hydrochloride</b>	500.00
<b>Chlorantraniliprole</b>	0.23
<b>Chlorfenapyr</b>	29.28
<b>Chlorfenvinphos</b>	224.00
<b>Chlorpyrifos</b>	2,084.04
<b>Chlorpyrifos &amp; Cypermethrin</b>	7,798.60
<b>Cyfluthrin</b>	9.62
<b>Cypermethrin</b>	1,034.66
<b>D-Allethrin</b>	112.22
<b>Deltamethrin</b>	0.72
<b>Diazinon</b>	660.00
<b>Diethyl Toluamide</b>	210.39
<b>Disodium Octaborate Tetrahydrate</b>	15.93
<b>Emamectin Benzoate</b>	25.00

<b>Fenitrothion</b>	<b>1,200.00</b>
<b>Fipronil</b>	3,359.95
<b>Imidacloprid 10% + Z-9 Tricosene 1%</b>	0.92
<b>Imidacloprid</b>	13,816.36
<b>Imidacloprid 30% + Abamectin 2.8%</b>	65.60
<b>Imiprothrin &amp; Cyfluthrin</b>	37.85
<b>Imiprothrin &amp; Cypermethrin</b>	4.41
<b>Indoxacarb</b>	0.05
<b>Lambda Cyhalothrin</b>	484.38
<b>Lufenuron</b>	6.00
<b>Malathion</b>	1,995.00
<b>Methomyl</b>	974.00
<b>Methoxyfenozide</b>	68.44
<b>Oxamyl</b>	480.00
<b>Permethrin</b>	59.97
<b>Permethrin + Piperonyl Butoxide</b>	10.45
<b>Prallethrin, Imiprothrin &amp; Cyphenothrin</b>	21.25
<b>Sodium Tetraborate Decahydrate</b>	1.25
<b>Spinetoram</b>	22.14
<b>Tetramethrin, Allethrin &amp; Cyphenothrin</b>	1,064.34
<b>Tetramethrin, D-Allethrin &amp; Cypermethrin</b>	277.26
<b>Thiamethoxam</b>	125.00
<b>Triazophos</b>	666.00
<b>Total</b>	<b>52,908.43</b>

Imidacloprid (13,816.36 kg), Alpha Cypermethrin (7993 kg) and combination chemical chlorpyrifos and cypermethrin (7798 kg) were the most imported agriculture use insecticides.

Insecticides are pesticides that are formulated to kill, harm, repel or mitigate one or more species of insect.

## INSECTICIDE IMPORTS 2018 (% ACTIVE INGREDIENTS)

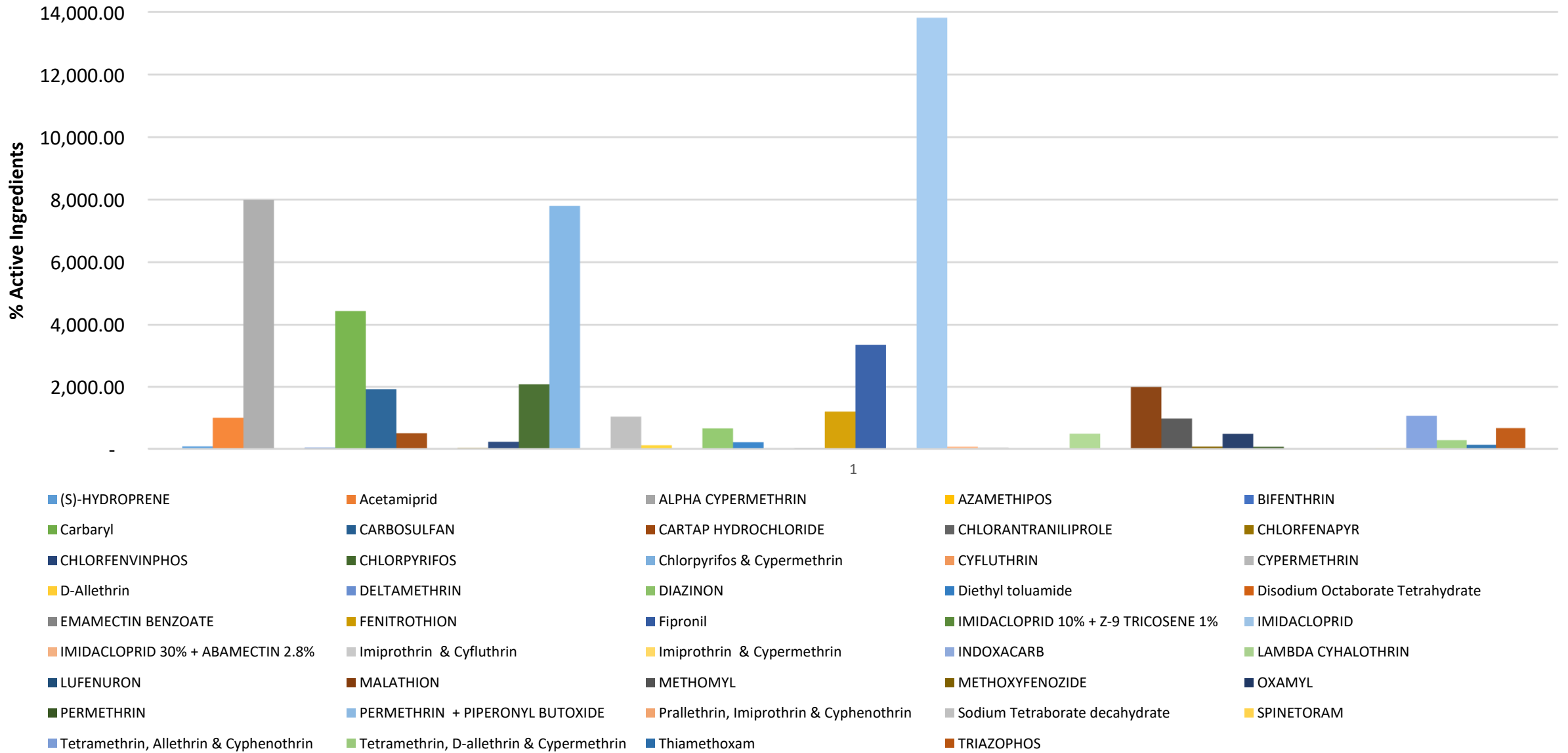
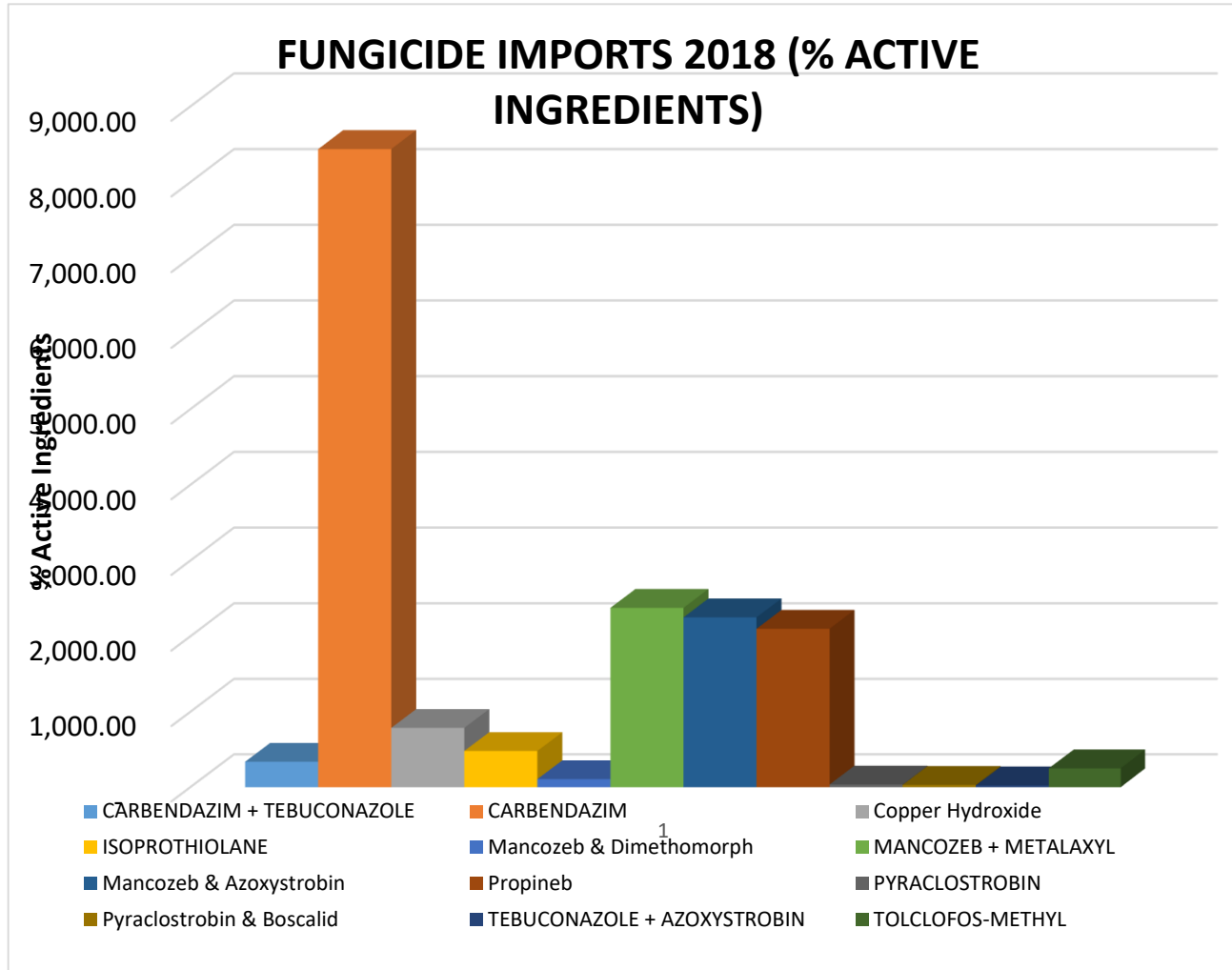


Figure 5: Fungicides Import, 2018

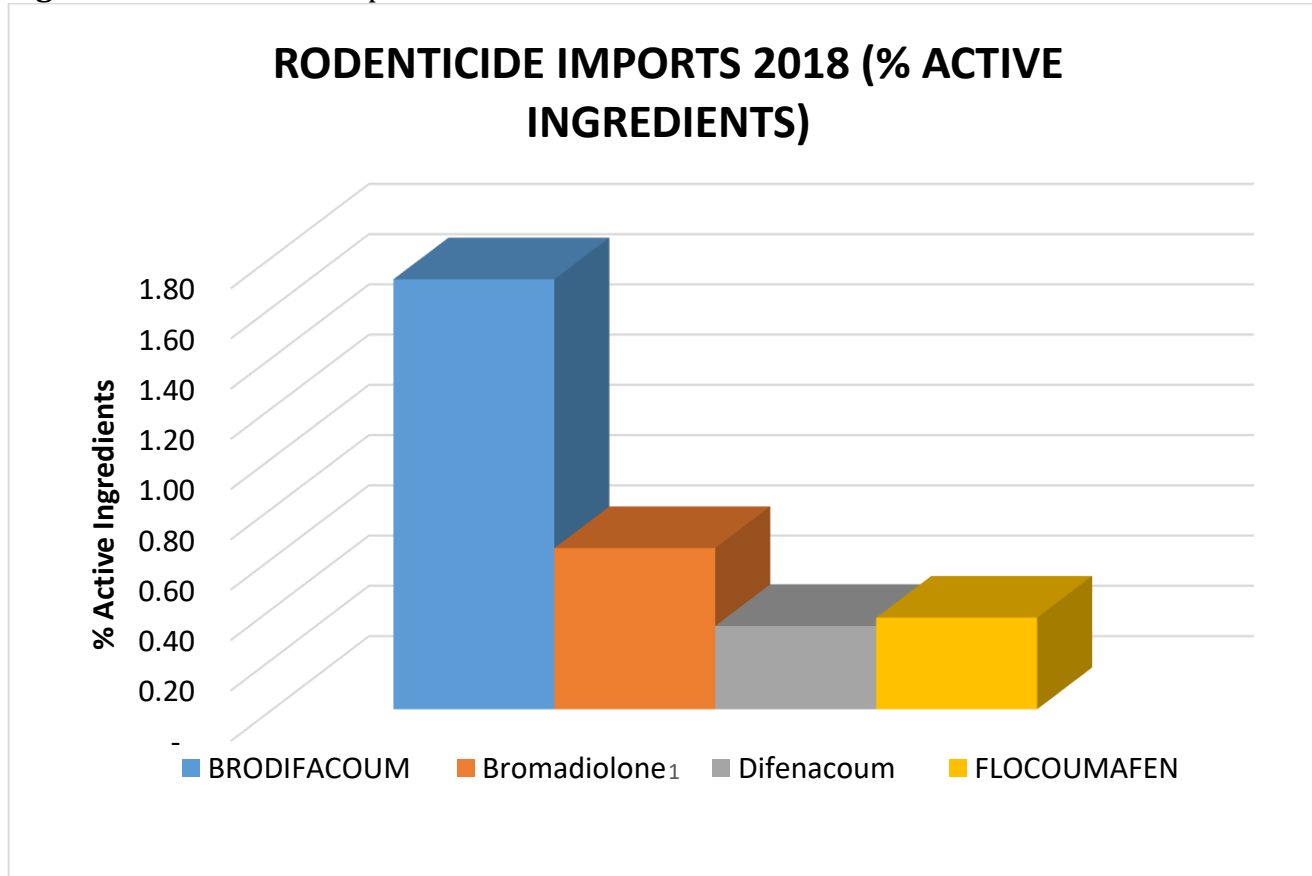


Chemical Name	Total A.I.
<b>Carbendazim + Tebuconazole</b>	337.50
<b>Carbendazim</b>	8,437.00
<b>Copper Hydroxide</b>	786.33
<b>Isoprothiolane</b>	480.00
<b>Mancozeb &amp; Dimethomorph</b>	106.61
<b>Mancozeb + Metalaxyl</b>	2,376.00
<b>Mancozeb &amp; Azoxystrobin</b>	2,250.00
<b>Propineb</b>	2,100.00
<b>Pyraclostrobin</b>	35.74
<b>Pyraclostrobin &amp; Boscalid</b>	31.01
<b>Tebuconazole + Azoxystrobin</b>	24.00
<b>Tolclofos-Methyl</b>	250.00
<b>Total</b>	<b>17,214.18</b>

Carbendazim (8,437 kg) was the most imported fungicide for the period under review. Fungicides are pesticides that kill or prevent the growth of fungi and their spores. They can be used to control fungi that damage plants, including rusts, mildews and blights. They might also be used to control mold and mildew in other settings.



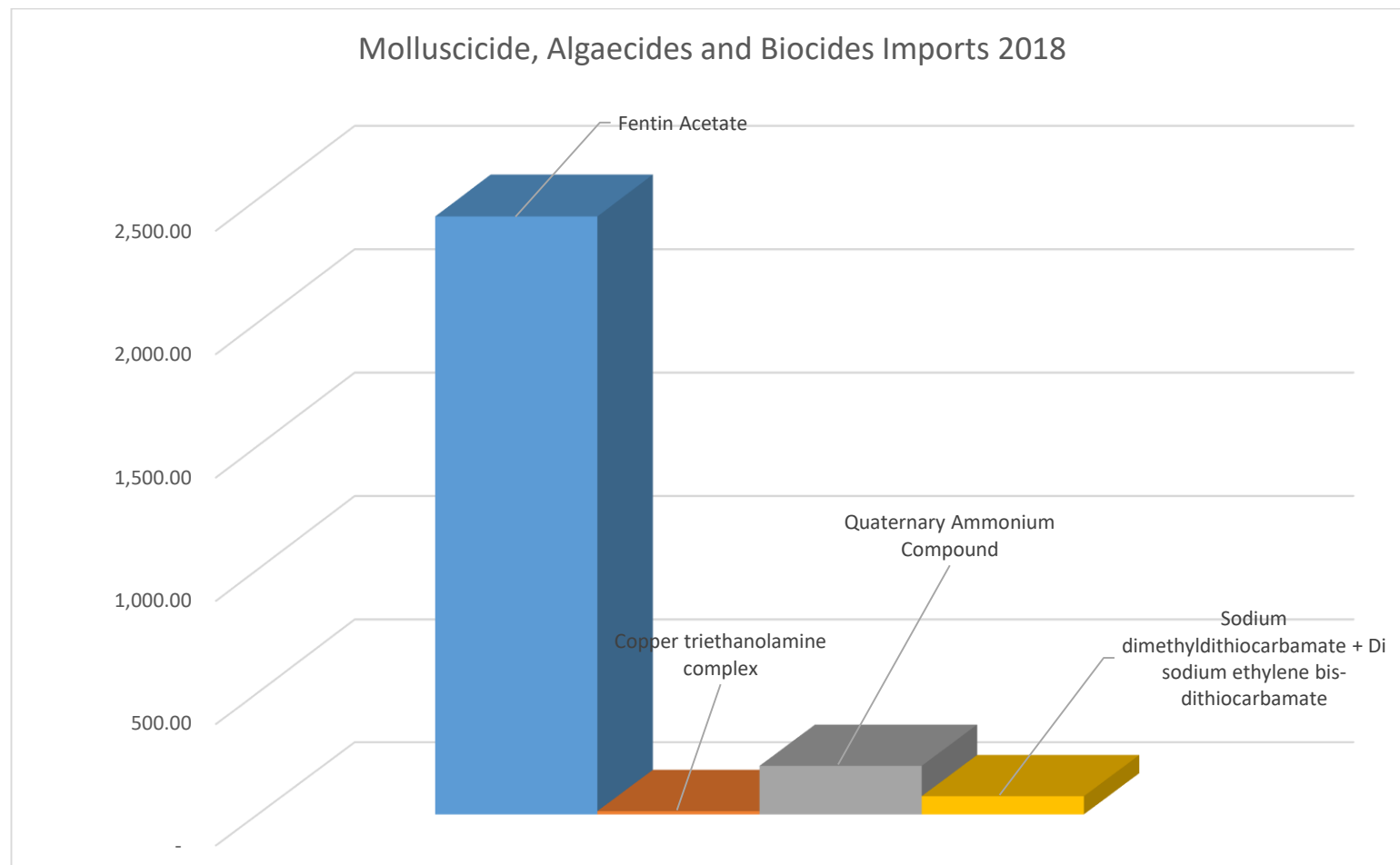
Figure 6: Rodenticides Import 2018



Rodenticide A.I. Imports 2018	
Chemical Name	A.I Quantity (Kg)
BRODIFACOUM	1.71
Bromadiolone	0.64
Difenacoum	0.33
FLOCOUMAFEN	0.36
<b>Total</b>	<b>3.04</b>

For the year in review, Brodifacoum (1.71 kg) was the most imported rodenticide. Rodenticides are pesticides that kill rodents. Although rodents play important roles in nature, they may sometimes require control. They can damage crops, violate housing codes, transmit disease, and in some cases cause ecological damage

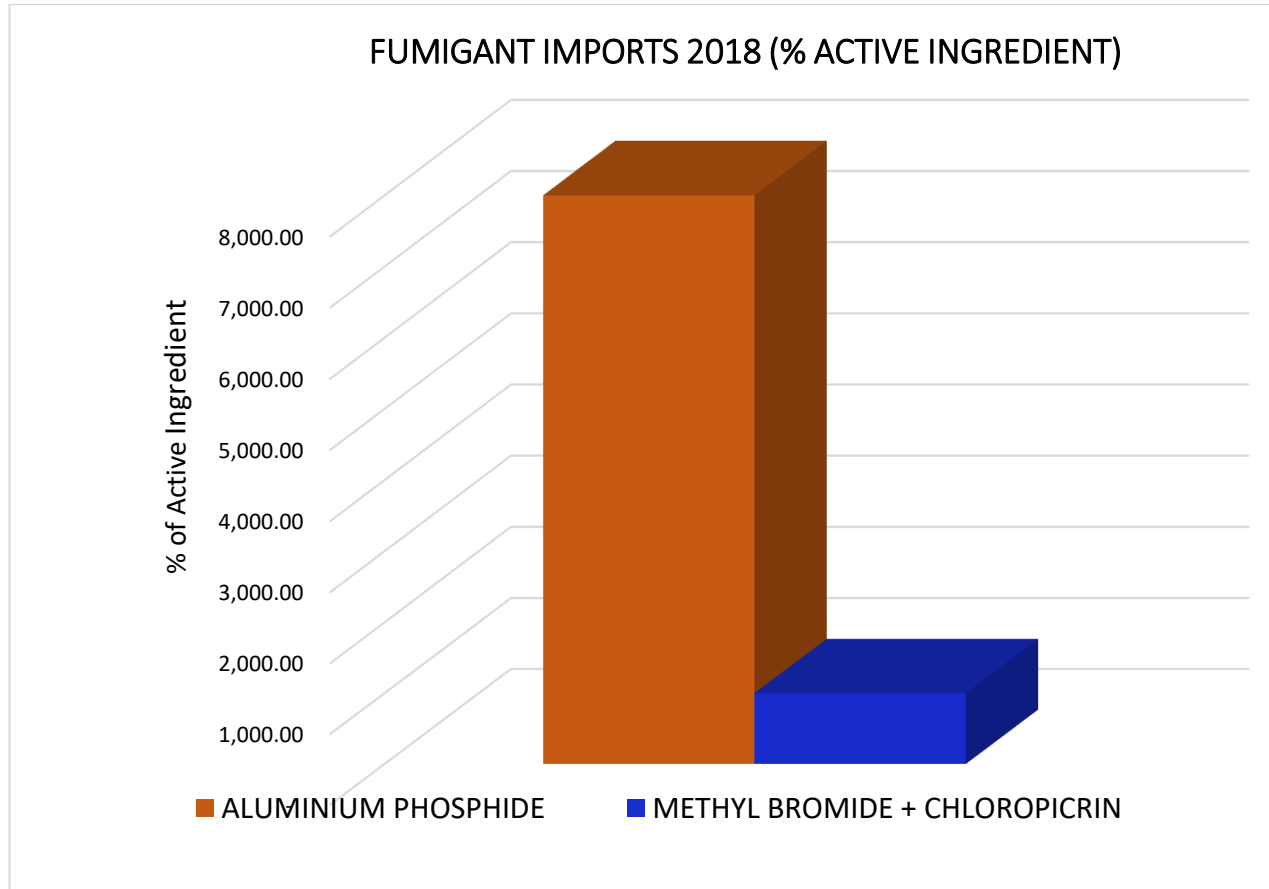
**Figure 7: Molluscicides, Algaecides and Biocides Import 2018**



Molluscicide A.I. Imports 2018	
Chemical Name	A.I Quantity (Kg)
Fentin Acetate	2,430.00
Copper triethanolamine complex	13.63
Quaternary Ammonium Compound	200.00
Sodium dimethyldithiocarbamate + Di sodium ethylene bis-dithiocarbamate	75.00

Fentin acetate (2430 kg) was the only imported molluscicide for 2018. Molluscicides also known as snail baits and snail pellets, are pesticides against molluscs, which are usually used in agriculture or gardening, in order to control gastropod pests specifically slugs and snails which damage crops or other valued plants by feeding on them.

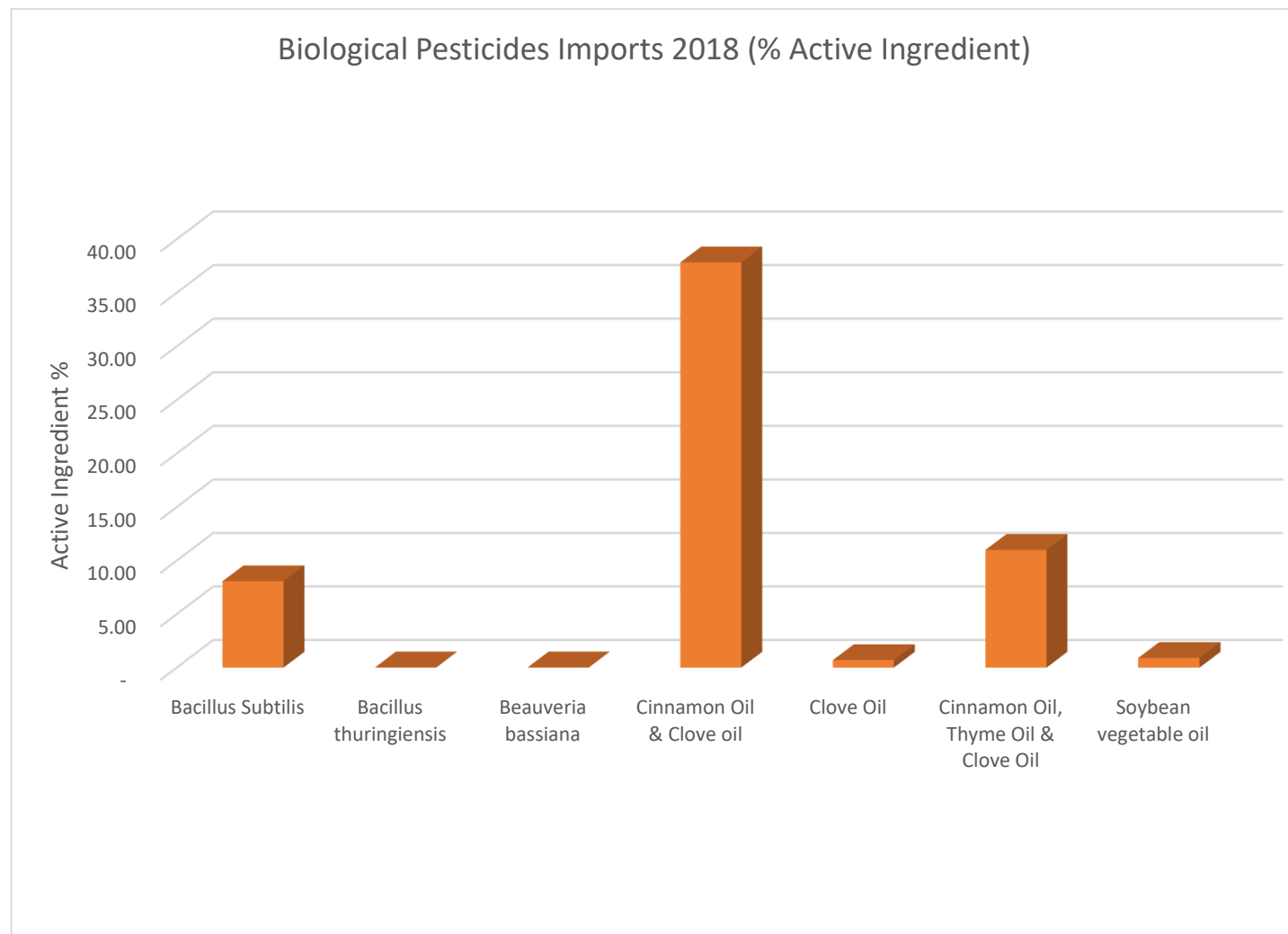
**Figure 8: Fumigants Import 2018**



Fumigant Imports 2018	
Chemical Name	Total A.I. %
Aluminium Phosphide	8,013.60
Methyl Bromide + Chloropicrin	1,000.00
<b>Total</b>	<b>9,013.60</b>

Aluminium Phosphide, a restricted use pesticides was the only fumigant imported for use in treatment of storage pest in grains. Methyl Bromide was re-introduced into Guyana during the year for fumigation of lumber exports for India. Fumigants are any volatile, poisonous substance used to kill insects, nematodes, and other animals or plants that damage stored foods or seeds, human dwellings, clothing, and nursery stock.

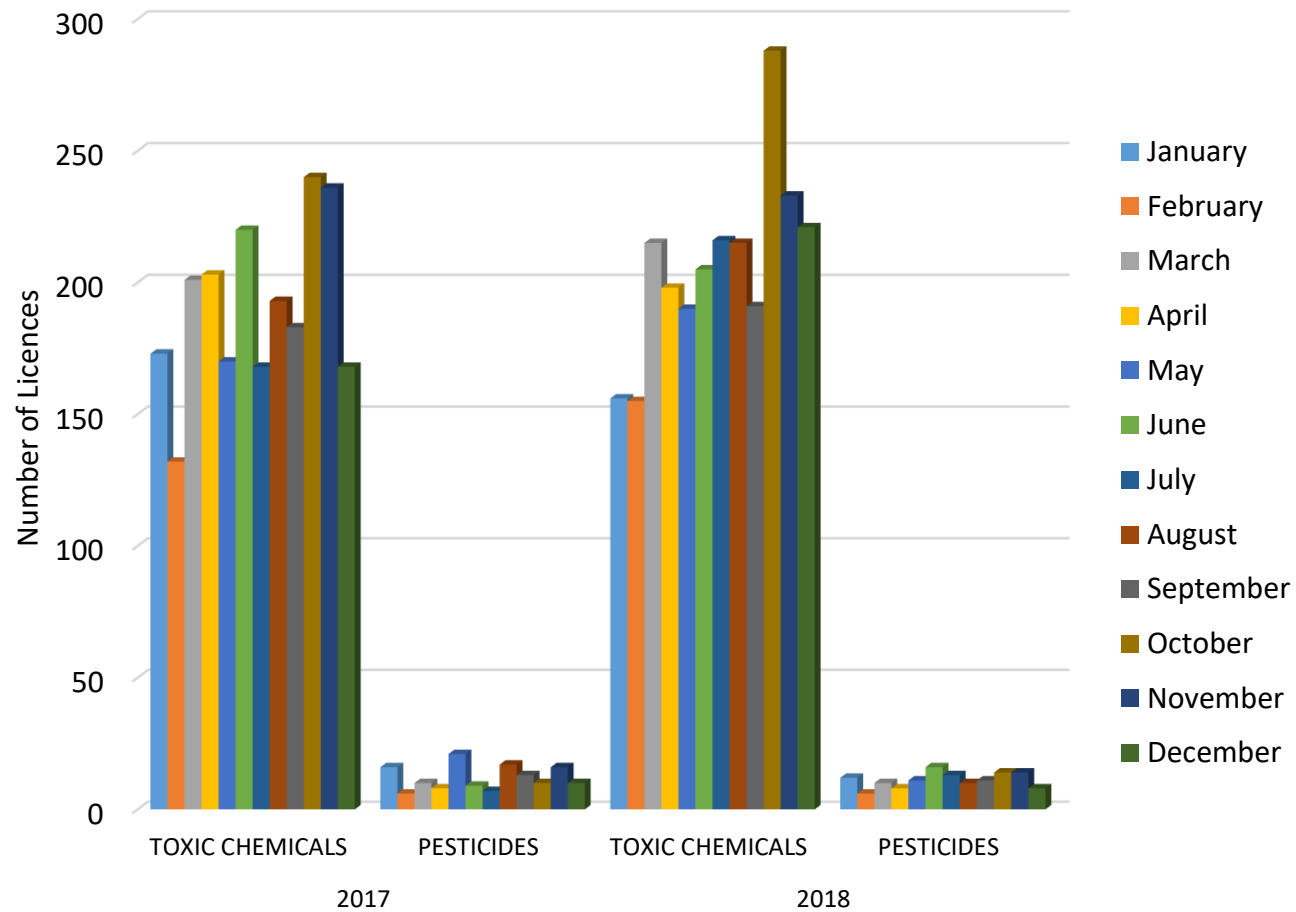
**Figure 9: Biological Pesticides Imports 2018**



Chemical Name	Total A.I. %
<b>Bacillus Subtilis</b>	8.07
<b>Bacillus thuringiensis</b>	0.02
<b>Beauveria bassiana</b>	0.02
<b>Cinnamon Oil &amp; Clove oil</b>	37.83
<b>Clove Oil</b>	0.70
<b>Cinnamon Oil, Thyme Oil &amp; Clove Oil</b>	11.00
<b>Soybean vegetable oil</b>	0.90
<b>Total</b>	<b>58.54</b>

**Figure 10: Comparative Review of Import Licenses Issuance 2017-2018**

**Graph showing a comparison of the total number of import licences issued in 2017 and 2018 for pesticides and toxic chemicals**



MONTH	2017		2018	
	TOXIC CHEMICALS	PESTICIDES	TOXIC CHEMICALS	PESTICIDES
<b>January</b>	<b>173</b>	<b>16</b>	<b>156</b>	<b>12</b>
<b>February</b>	<b>132</b>	<b>6</b>	<b>155</b>	<b>6</b>
<b>March</b>	<b>201</b>	<b>10</b>	<b>215</b>	<b>10</b>
<b>April</b>	<b>203</b>	<b>8</b>	<b>198</b>	<b>8</b>
<b>May</b>	<b>170</b>	<b>21</b>	<b>190</b>	<b>11</b>
<b>June</b>	<b>220</b>	<b>9</b>	<b>205</b>	<b>16</b>
<b>July</b>	<b>168</b>	<b>7</b>	<b>216</b>	<b>13</b>
<b>August</b>	<b>193</b>	<b>17</b>	<b>215</b>	<b>10</b>
<b>September</b>	<b>183</b>	<b>13</b>	<b>191</b>	<b>11</b>
<b>October</b>	<b>240</b>	<b>10</b>	<b>288</b>	<b>14</b>
<b>November</b>	<b>236</b>	<b>16</b>	<b>233</b>	<b>14</b>
<b>December</b>	<b>168</b>	<b>10</b>	<b>221</b>	<b>8</b>
<b>TOTAL</b>	<b>2,287</b>	<b>143</b>	<b>2,483</b>	<b>133</b>



## APPENDIX V:

### List of Prohibited Pesticides and Toxic Chemicals

<b>Chemical</b>	<b>Status</b>
2,4,5-T and its salts and esters	Banned
Alachlor	Banned
Aldicarb	Banned
Aldrin	Banned
Aluminum Phosphide	Restricted Use
Binapacryl	Banned
Captafol	Banned
Chlordane	Banned
Chlordimeform	Banned
Chlorobenzilate	Banned
DDT	Restricted Use
Dieldrin	Banned
Dinitro-ortho-cresol (DNOC) and its salts (such as ammonium salt, potassium salt and sodium salt)	Banned
Dinoseb and its salts and esters	Banned
EDB (1,2-dibromoethane)	Banned
Endrin	Banned
Endosulfan	Banned
Ethylene dichloride	Banned
Ethylene oxide	Banned
Fluoroacetamide	Banned
HCH (mixed isomers)	Banned
Heptachlor	Banned
Hexachlorobenzene	Banned
Lindane (gamma-HCH)	Banned
Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds	Banned

Monocrotophos	Restricted Use
Methyl parathion	Banned
Mirex	Banned
Parathion	Banned
Pentachlorophenol and its salts and esters	Banned
Toxaphene (Camphechlor)	Banned
≤ Tributyl tin compounds	Banned
Dustable powder formulations containing a combination of benomyl at or above 7%, carbofuran at or above 10% and thiram at or above 15%	Banned
Methamidophos (Soluble liquid formulations of the substance that exceed 600 g active ingredient/l)	Banned
Methyl-parathion (Emulsifiable concentrates (EC) at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)	Banned
Phosphamidon (Soluble liquid formulations of the substance that exceed 1000 g active ingredient/l)	Banned
Actinolite asbestos	Banned
Anthophyllite	Banned
Amosite asbestos	Banned
Crocidolite	Banned
Tremolite	Banned
Polybrominated Biphenyls (PBBs)	Banned
Polychlorinated Biphenyls (PCBs)	Banned
Polychlorinated Terphenyls (PCTs)	Banned
Tetraethyl lead	Banned
Tetramethyl lead	Banned
Tris(2,3 dibromopropyl)phosphate	Banned

**APPENDIX VI:**  
**Licensed Pesticides Vendors, 2018**

No.	NAME	ADDRESS
	<b>Region # 1</b>	
1	Marcellus Francis	Mabarumma Kumaka North West Region
	<b>Region # 2</b>	
1	Roopnarine Bisnauth	Stall #5 Supenaam Market, Essequibo Coast
2	Paras Ramdial	Supenaam Market, Essequibo Coast
3	Ram Bisnauth	Stall #3 Supenaam Market ,Essequibo Coast
4	Charles Henry	Stall #1 Supenaam Market ,Essequibo Coast
5	T and R Bisnauth	Lot A6 Spring Garden ,Essequibo Coast
6	Yoolaim Bacchus	92b Makeshift Aurora ,Essequibo Coast
7	Faizul Alli	22 Vilvoorden ,Essequibo Coast
8	A & M.Z Yassim	Lot 11 Middlesex, Essequibo Coast
9	Parmanan Persaud	78 Huist Dierrien ,Essequibo
10	Jasoda Shevnandan	4 Rivers Town ,Essequibo Coast
11	Indar Singh	22 Airy Hall ,Essequibo Coast
12	Ganeshwar Lall	Lot 'I' Maria's Lodge ,Essequibo Coast
13	H&J Persaud & Sons	Lot 43 Johana Cecilia Essequibo Coast
14	Takoor Persaud Hardware Store	lot 7 Golden Fleece ,Essequibo Coast
15	Deolall Sancharie	lot 1 Hoff Van Aurich, Essequibo Coast
16	OJ's Investment	47 Public Road Queenstown ,Essequibo Coast
17	Imam Bacchus & Sons Ltd.	Affaiance, Essequibo Coast
18	Balram Kawal	11 Land of Plenty, Essequibo Coast
19	Massy Industries	Land of Plenty,Essequibo Coast
20	Azad Bacchus	47 Cottonfield ,Essequibo Coast
21	Builder's Hardware & General Supplies	Anna Regina ,Essequibo

22	Tekram Sankar	28 Dennis Street, Anna Regina, Essequibo Coast
23	Caribbean Chemicals	Lot C Anna Regina ,Essequibo Coast
24	Ariff Mohammed Khan	Lima ,Essequibo Coast
25	Jaishree Azam	Lima New Housing Scheme ,Essequibo Coast
26	Telac Dhari Persaud	Lot 1 Sparta ,Essequibo Coast
27	Roopesh Latchman	6 'B' Back Street, Windsor Castle, Essequibo Coast
28	Satrahan Ganeach	lot 18 Back Street Windsor Castle, Essequibo Coast
29	Samaroo's Investment	201 Hampton Court, Essequibo Coast
30	Rupert Paul	Lot 158 Devonshire Castle, Essequibo Coast
31	Chate Narine	6 Paradise ,Essequibo Coast
32	Vincent Persaud	West Bury ,Essequibo Coast
33	Sukhdeo Trading Enterprise	Bounty Hall ,Essequibo Coast
34	Bissoondial Narine	Lot 2 Summerset & Berks, Essequibo Coast
35	Anand Singh	New Road, Essequibo Coast
36	GM&R Trading	Lot 100 Charity, Essequibo Coast
37	Mahendra Ramnarine & Lelawattie Persaud	Lot 104 Charity River Dam ,Essequibo Coast
38	Alfro Alphonso	Stall 13 Charity Market ,Essequibo Coast
	<b>Region # 3</b>	
1	Krishna Katwaru	90-91 Canal #2 ,W.B.D
2	Krishna Gopal	South Section Canal #2 Polder,W.B.D
3	Lalta Digamber	40 N-Sec Canal #2 ,W.B.D
4	Lalta Digamber	39 New Road ,W.C.D
5	Alvin Parag	2 Independence street La Grange ,W.B.D
6	Pharmacare Pharmacy & Variety Store(Valu Rite Pharmacy)	Lot 14 Pouderoyen Public Road W.C.D
7	Davendra Baksh	Track 'R' Stelling Road, Vreed En Hoop, W.C.D
8	Ramesh Sugrim and Ryan Sugrim	Lot 8 La Union, W.C.D
9	F&Z Chemicals & Pet supplies	Lot B Blankenburg Public Road ,W.C.D

10	Narindra Ramnauth & Briglall Wholesales and Retail Fuel	Lot B , Railway line, Windsor Forest, W.C.D
11	Mohamed Ayube Ali	8 Station Street, Leonora , W.C.D
12	C Dhaniram General Store	Lot 94 Block 8 Tuschen ,E.B.E
13	Deonarine Ramgobin	Block 'C' Orangestein ,W.C.D
14	Laldeo Bukhan	118 Tuschen New Scheme ,E.B.E
15	Laldeo Bukhan	252-254 Parika Highway ,E.B.E
16	Laldeo Bukhan	214 Parika Old Road ,E.B.E
17	Monica Thompson	1982 Parika ,E.B.E
18	Boodhoo's General Store	299 N1/2 Parika Highway ,E.B.E
19	Faizul Ally	Plot #7 Parika Backdam, E.B.E
20	Rajesh Ganesh	Lot 32 Parika Backdam ,E.B.E
21	Ravendra Narine	Block E, Lookout Parika Backdam
22	Debi Bajan Rambhajan	Present Hope, E.B.E
23	Zaman Nazier	Lot 19 Present Hope Hubu Back dam E.B.E
24	Satnarine Sahadeo	Lot 31 Belle Plaine ,Wakenaam Island
25	Nand Kishore Jairam	Lot 16 Belle Plaine ,Wakenaam Island
26	Makeram Rambaran	18 Belle Plaine ,Wakenaam Island
27	Satnarine Singh	Block 5 Sans Souci, Wakenaam
28	Noon Persaud	Lot 22 Good Success ,Wakenaam
	<b>Region # 4</b>	
1	Massy Industries Ltd.	R5 Ruimveldt ,Georgetown
2	Caribbean Chemicals	45 Croal Street Stabroek, Georgetown
3	Gardenland Nursery	Lot 1 Brickdam Stabroek, Georgetown
4	Deonarine Ramgobin	44 Robb Street, Georgetown
5	Guyana Stores Ltd.	19 water street ,Georgetown
6	AGROIN	Lot 1 La Pennitence Public Road Georgetown
7	A' Plus Distributors	Lot 1 La Pennitence Public Road Georgetown



<b>8</b>	#1 Plant Shop	Lot 70 Sheriff Street ,Georgetown
<b>9</b>	Amazon Agri & Garden Centre (FCT)	213 Barr Street Kitty, G/Town
<b>10</b>	Carlos Renato Jadunauth	Lot 5 Alliance Road Timehri, E.B.D
<b>11</b>	Carlos Renato Jadunauth	Leacock's Estate Soesdyke/ Hillfoot EBD
<b>12</b>	Amarnauth Jadunauth	Lot 2 Soesdyke ,E.B.D
<b>13</b>	Baljeet Seepersaud	276 Section C Grove Bloack Y ,E.B.D
<b>14</b>	P&S Grocery and Variety Store	681 Section C Block Y Golden Grove, Diamond new scheme EBD
<b>15</b>	Gafoors Industries	Land of canaan, East Bank Demerara
<b>16</b>	Herman Permaul	Lot 4 Back Street, Better Hope Scheme, E.C.D
<b>17</b>	Keith K.C. Vasconcellos	Lot 1 LBI Housing Scheme, E.C.D
<b>18</b>	Modern Agri.	31 Agriculture Road, Triumph, E.C.D
<b>19</b>	Nandrainie Meusa	Mon Repos Market, Stall # 185, E.C.D
<b>20</b>	Christopher Bisnath	Mon Repos Market, Stall # 355 & 356,E.C.D
<b>21</b>	Christopher Bisnath	116 Mon Repos South,E.C.D
<b>22</b>	Arjune Budhu	532 Simon Sue Street, Enterprise,E.C.D
<b>23</b>	James Ally	39 Logwood, Enmore,E.C.D
<b>24</b>	Narine's Pharmacy	29 Logwood, Enmore,E.C.D
<b>25</b>	Tarmatie Wahid	Lot 10 Cove & John School Road,E.C.D
<b>26</b>	Bisnauth Prasad	27 Craig Milne Street, Cove & John,E.C.D
<b>27</b>	Lebert Charles	Lot 335B Victoria Village ECD
<b>28</b>	Jailall Persaud	Lot 82 Lowland, E.C.D
<b>29</b>	Heimwantie Persaud	Lot 228 Hope Estate ,E.C.D
<b>30</b>	Nareshwar Rangunandan	57 Section C Access Road, Cloonbrook, E.C.D
<b>31</b>	Y.K. Sahib and Sons	Lot 1 Section A, Clonbrook, E.C.D
<b>32</b>	Salik Basdeo	Lot 18 New Road Unity ECD
<b>33</b>	Mark Anthony Persaud	76 Goodhope, Mahaica ,E.C.D
<b>34</b>	Neimeraj Khilawan	Lot 1 Public Road Belmonte, Mahaica, E.C.D
<b>35</b>	Bibi Shadiana Hamid- Dass	Mahaica Market, Stalls 49-50, E.C.D

36	Khamraj Bholanath	Mahaica Market, Stalls 28-29, E.C.D
37	Tularam Bholanath	Mahaica Market E.C.D Stalls 29,30,31
38	Ramchan & Sukraj Ramasar	86 Vereeniging, Mahaica ,E.C.D
39	Khemraj Karu	Cane Grove Estate, Mahaica,E.C.D
40	Gaindawattee Ramkarran	Cane Grove Estate 125, E.C.D
41	Deodat Ganeshram	Lot 145 Manager's line Cane Grove ECD
42	Paramdai Virsawmi	Lot 41 Virginia Village, Cane Grove, ECD
	<b>Region # 5</b>	
1	Viticharan Singh	De Hoop Front Mahaica, E.C.D
2	Vinod Bakridi	De Hoop , Mahaica, East Coast Demerara
3	Gangaram Sharma Agardeo	Lot 1A Fredrich Johana, E.C.D
4	Dwarka Singh Basmatee	Lot 10 Mahaica Creek ECD
5	Mulchan Persaud	# 10 De Hoop Branch Road, Mahaica, E.C.D
6	Dhanpaul Persaud	Little Biaboo, Mahaica river
7	Chetram Ramdass	Lot 5 'A' Little Biaboo, E.C.D
8	S & R Farming Supplies Ent.	Lot 5 Plantation Prospect, Mahaicony, ECD
9	Madray Rathanam	Lot 8 Quaker's Hall West, Mahaicony, E.C.D
10	Sewsankar Persaud	Persiverance, Mahaicony ,E.C.D
11	Jenie Balkaran	Wash Clothes, Mahaicony ,E.C.D
12	Deopar Trading Enterprise	Wash Clothes Mahaicony, E.C.D
13	Paulette's Variety Store	Lot 1 Perth Village, Mahaicony ,E.C.D
14	Dhanmattie Mahadeo	Lot 3 SubLot 15 Airyhall Mahaicony ECD
15	Yudhisthir Singh(opposite blue busshed)	Lot 1 Dundee Mahaicony, E.C.D
16	Mohamed J Hasan	10 Dundee, Mahaicony ,E.C.D
17	MARDS RICE MILLING COMPLEX	Burma, Mahaicony, ECD
18	Rajmattie Persaud	E & F Little Abary ECD
19	Teekachand Ramdat	Lot 2, Golden Fleece, WCB

20	Nardeo Bassoodeo	Lot 5 Golden Fleece, WCB
21	Chitra Samaroo	Lot 5 Pln. Washington ,W.C.B
22	Harinarine Singh	Lot 6 'D' Bush Lot ,W.C.B
23	Abdul Samad Rahim	Lot 7 B Bush Lot, W.C.B
24	Bibi Shafena Khan	Lot 7 b Plantation Hope, Bath Settlement, W.C.B
25	Ancil Ramdat	Lot 647 Squatting Area, Bath Settlement, W.C.B
26	Dhaniram Ramchand	Lot 2 Bath Settlement ,W.C.B
27	Robin Indal and Chandanie Deonarine	Lot 45 'D' Bath Settlement, WCB
28	Sirirampersaud	Lot D 15 Wellington, Bath Settlement ,W.C.B
29	Khan's General Store & Agri Centre (Zakir Ahamad Khan)	Lot G 11 Bath Settlement, W.C.B
30	Goolcharran Boodhoo & Soma Nemdhari	Lot 131 Section 'C' Bushlot Village WCB
31	Naideen Sirkisson	Lot D 11 Bath Settlement, W.C.B
32	Haridwar Ramsaroop (Steve and son Chemical Shop)	192 B Woodly Park W.C.B
33	Ramkarran Ramgobin	Lot 241 # 9 Village, WCB
34	Odesh Deodat (D & D Parlour and grocery)	Lot 10 No. 3 Village WCB
35	Ameena Gaffar (tyre shop)	9 Cotton Tree, WCB
36	Bisram Basantram	lot 14 Cotton Tree ,W.C.B
37	Nandalall Ramlal	Lot 3 A D'Edward village ,W.B.B
	<b>Region # 6</b>	
1	Massy Industries Ltd.	Lot 3 Strand New Amsterdam ,Berbice
2	EMA Inc. (Medical Care Pharmacy)	Lot 16 Main and Lad Lane New Amsterdam ,Berbice
3	Ramesh Maraj and Sons	Lot 12 Chapel street New Amsterdam Berbice
4	Jason Beram Singh	19 Main and Pope Streets, New Amsterdam ,Berbice
5	Varush Persaud	Highbury Village, E.B.B
6	Imtiaz Zulfikar Ally	Lot 79 Main Road&Middle Street, Rosehall Town ,Berbice
7	Poonai Bhigroog	Lot 72A Rosehall Town ,Berbice

8	Vishnu Sukhram	Rosehall Town ,Berbice
9	Advance Agricultural and General Supplies	Lot 29 Section B Bloomfield Village, Corentyne,Berbice
10	V.Sukhram's Filling Station	Hogsty, Berbice
11	Seeram Dipnarine	Lot 68 Adventure Village, Corentyne Berbice.
12	Videsh Ganesh	Lot 258 Bushlot Village Corentyne Berbice
13	Makarran Singh	Lot 19 Bush Lot Farm, Corentyne Berbice
14	Vimal Ganesh	Wellington Park, Corentyne, Berbice
15	NPG Packaging	Wellington Park, Corentyne ,Berbice
16	Deomattie Sukhram	Bengal Farm, Corentyne, Berbice
17	Telackram Neerahoo	Lot 323 # 46 Village, Corentyne, Berbice
18	Mukesh Kaydahar	Lot 55 # 54 Village,Berbice
19	Seunarine Hardeen	325 # 55 Village, Corentyne ,Berbice
20	Abdool Jameel Uddin	#57 Village, Corentyne ,Berbice
21	Jagesh Kumar	Lot 150 # 58 Village, Corentyne, Berbice
22	Vikash Enterprises	Lot 79 Section B No. 64 Village, Corentyne ,Berbice
23	Balchand Lutchminarine	Lot 137 Section 'A' No. 68 Village, Berbice
24	Abdool Jameel Uddin	#71 Village, Corentyne, Berbice
25	Sheik Sattaur	#71 Village, Corentyne, Berbice
26	Haimchand Dasrat (hong kong sign board)	Lot 51 # 72 Village, Corentyne Berbice
27	Imtiaz Zulfikar Ally / Hurcilla Rhamatally	30 Springlands, Corriverton, Berbice
28	Mohaber Ganga' s General Store	Lot 71 Springlands, Corriverton, Berbice
29	Chand Kumar Hardyal	90 Springlands, Corriverton ,Berbice
30	Khalil Nizamudeen	41 Rampoor Scheme, Corriverton ,Bebice
31	Dudnath's Hardware & Agri Centre	Lot 1 Sec.A #79 Corriverton ,Berbice
32	Bhavna Khemraj	Lot 10 Line Path 'E', Corriverton, Berbice
33	R. Prasad Industries	Lot 7-11 Grant 1802 Crabwood Creek Berbice
34	Bhavna Khemraj	8 Grant 1651, Crabwood Creek ,Berbice
35	Haresh Rama	24 Grant 1651, Crabwood Creek ,Berbice
36	Anand Ally (7 houses after NDC)	Lot 09 Section A Grant 1802 Crabwood Creek Berbice

37	Mohamed Hafiz Baksh	23 Zone Yakusari South, BBP ,Berbice
38	Nazim K Zaman	Lot 11 Johanna South, BBP, Corentyne ,Berbice
39	Outram Ramprashad	49 Mibikuri North, BBP ,Berbice
40	Alvin Parag	Lot 172 Mibicuri South Black Bush Polder, Berbice
41	Durpatie Agardeo	3 Lesbeholden South, B.B.P, Berbice
42	Amarnauth Hardwar	55 Lesbeholden South , BBP ,Berbice
43	Thakurmattie Ramnarine	C2 14 Lesbeholden South, BBP, Corentyne ,Berbice
	<b>Region # 7</b>	
1	Winston David	Stall # 68 Bartica Market
2	Boodhoo's General Store	Lot 58 Second Avenue, Bartica
	<b>Region # 9</b>	
1	S&S Kisson General Store (Sucil & Simon Kisson)	151 Aranaputa Valley
2	Mohamed Hussain (Satisfaction Delux)	Amazonas Hotel, Lethem Rupununi Region # 9
3	Global Agriculture Investment	Lot 10 Barrack Street , Lethem Region # 9
	<b>Region # 10</b>	
1	Farmer's Friends and Pet Shop	85 Pine Street Mackenzie, Linden
2	Rambharrat Farm Supplies and Nursery	Leap Compound, Potaro Road, Mackenzie ,Linden
3	Pearl's Pet Supplies	Wismar Market, Linden



## APPENDIX VII

### Confiscated Illegal Pesticides 2018

Date	Name	Location	Items Confiscated	Active Ingredients	Quantity
8 <sup>th</sup> Feb, 2018	K. Itwaru & Sons Supermarket	Enmore Public Road, E.C.D	GreenLeaf Ant Killing Bait	Fipronil	1.7kg
			Greenleaf Cockroach Killing Bait	Fipronil	1.5kg
			Greenleaf Fly Killing Bait	Azamrthiphos	0.1kg
15 <sup>th</sup> Feb, 2018	Glorious General Store	Hartfield Street, G/t.	Unknown Pesticide (Chinese Language)	Unknown	1.9kg
19 <sup>th</sup> March, 2018	A Wen Supermarket	Lot 1115 Section A Block X Diamond, E.B.D	Ant Killing Bait (Guyanese Marking)	Unknown	0.34kg
			Fly Killing Bait	Unknown	0.4kg
			Fly Killing Bait	Unknown	0.24kg
22 <sup>nd</sup> March, 2018	Hinds Service Station	Wisroc Junction, Linden	BNC Coils	d-allethrin	24 packs
22 <sup>nd</sup> March, 2018	Trust Mart Supermarket	Lot 10 North Mackenzie, Linden	Chim tai coils	Unknown	7.5kg
			Zenden Coils	Unknown	8.75kg
			Greenleaf Cockroach killing bait	Fipronil	0.155kg

22nd March, 2018	McRae's Supermarket	43-71 Toucan drive, Amelia's Ward, Linden	Chim tai coils	Unknown	16.75kg
22nd March, 2018	Long Xin Supermarket	42 Central Amelia's Ward	Zenden Coils (Dutch)	Unknown	30.75kg
			Greenleaf ant killing bait	Fipronil	0.22kg
23rd March, 2018	Fazia's Collections	Lot 7 Anna Cathrina W.C.D	Ludeo Cockroach killer	Esbiothrin,tetramethrin, cypermethrin	96L
			Ludeo Mosquito Killer	Tetramethrin, permethrin, alphacypermethrin	96L
			Ludeo insect killer	Esbiothrin,tetramethrin, cypermethrin	96L
			Super Ludeo for flying and crawling insects	Unknown	120L
			Ludeo all insect killer	Unknown	120L
			Ludeo Insecticide spray	Tetramethrin, permethrin, alphacypermethrin	120L
28th March, 2018	Krsna Supermarket	Bushlot Village Corentyne, Berbice.	Lion brand mosquito incense	Unknown	55 boxes
			Flash Aerosol	D-tetramethrin, Permethrin	10.8L

28th March, 2018	Good Life Supermarket	Belvidere, C/tyne, Berbice.	Flash Aerosol	D-tetramethrin, Permethrin	4.95L
28th March, 2018	China Town Supermarket	No. 2 Sheet Anchor, Canje, Berbice.	Zenden coil	Unknown	2.25kg
			Green leaf ant killing bait	Fipronil	0.21kg
			Green leaf cockroach killing bait	Fipronil	0.215kg
4th June,2018	Guyana Revenue Authority(Repossession)	Bank Road, Springlands, Berbice	Aluminum Phosphide 57%	Aluminum Phosphide	40kg
			Bestac 10% EC	Alpha cypermethrin	17.5L
			Bestac 10 EC	Alpha cypermethrin	20L
			Beste 10 EC	Alpha cypermethrin	12L
			Karatos 2.5%	Lambda cyhalothrin	10L
			Diazinon 600 EC	Diazinon	1L
			Glyphosate 5400	Glyphosate	21L
			Graskoning 100%	Paraquat dichloride	9L
			2,4-D Amine 720 G/L	2,4-D Amine	1L
			2,4-D Amine 72% EC	2,4-D Amine	1L
			Glyphosate 480 G/L	Glyphosate	1L
			Glyphosate 480 G/L Herbicide	Glyphosate	1L

			Angloxone 20 SL	Bipgnidimum paraquat	1L
			Acide Chlorhydrique	Acide Chlorhydrique	5L
			Ammonique alkali	Ammonique alkali	13L
			Alkali mmonique	Ammonique alkali	2L
			Ammonia	Ammonia	5L
			Rio Ammonia	Ammonia	2L
13th June, 2018	Spads Incorporated	268 Thomas street, G/town	Pool Algicide	Copper triethanolamine complex (Metalic copper equivalent)	136.2L
19th of June, 2018	Deryke Dowdhari	26 B Letter Kenny Public Road, Berbice.	Off Deep Woods Insect Repellent	Deet	2.5L
			Raid	D-cis trans allethrin, 3-phenoxybenzyl d-cis, 2-dimethyl-3-cyclopropane-carboxylate.	6.24L
			Black Flag flying insect killer	Tetramethrin, cyclopropane-carboxylate	2.12L
9th August, 2018	Ansa McAl Trading Ltd	60 Betervergwagting E.C.D	Extermin Mites & Flea	Imiprothrin	0.4L
			Extermin 2 in 1	Imiprothrin	0.4L

			Extermin Insecticide	D-phemathrin	0.4L
9th August, 2018	Caribbean Chemicals	45 Croal Street, Stabroek, G/t.	Trinexapac-ethyl 250 gal E.C	Trinexapac-ethyl	300L
9th August, 2018	Convenience Supermarket	3 Durban Street Louisa road Wortmanville, G/t	Chim Tai Coils	D- trans Allethrin	2kg
16th August, 2018	Family Supermarket	23 Block XV, Cornelia Ida, W.C.D.	Greenleaf Ant Killing Bait	Fipronil	245g
			Greenleaf Fly Killing Bait	Fipronil	75g
			Heimaoshen coil	Unknown	5 boxes
16th August, 2018	People's Supermarket	Lot F, New Road, W.C.D.	Heimaoshen coil	Unknown	54 boxes
17th September, 2018	The Outdoor Store and Pet Shop	Lot 8 Church Street, Georgetown	No More Algae	Copper Sulfate Diuron	1.89kg
			Algae Control	Polyoxyethylene Ethylene Dichloride	7.2L
3rd October, 2018	Foodmaxx	Giftland Mall, Pattensen, E.C.D	Copper's Drop Dead	Permethrin	4.4L
			Spectracide Mosquito Stop	Permethrin	1.9L
			Tat Power/Jet Stream	Prallethrin, Lambda-cyhalothrin	340g
28th October, 2018	Crabwood Creek Backland	Grant 1779, Corentyne, Berbice	Fentin Acetate 45% W.P	Fentin Acetate	150kg
			Fipronil 20% SC	Fipronil	30L

			Beste 10 EC	Alpha Cypermethrin	96L
			Admister Insecticide	Imidacloprid	12L
TOTAL					2013.347 kgs



## APPENDIX VIII

### Public Awareness Trainings and Community Outreach Programmes

Activity	Location	Number of Participants
Community outreach training	Burma Rice Research centre WCB	34
Community outreach training	Strathaven, Cane Grove, Mahaica ECD	22
Community outreach training	Beterverwagting, ECD	23
Community outreach training	Durban Backlands	24
PCO's Basic training	Guyana School of Agriculture(GSA) compound Mon Repos ECD	20
PCO's Basic training	Guyana School of Agriculture(GSA) compound Mon Repos ECD	21
PCO's Basic training	Guyana School of Agriculture(GSA) compound Mon Repos ECD	38
PCO's Basic training	Guyana School of Agriculture(GSA) compound Mon Repos ECD	37
PCO's Basic Examination	Guyana School of Agriculture(GSA) compound Mon Repos ECD	51
PCO's Intermediate training	PTCCB Boardroom, NAREI compund Mon Repos, ECD	30
Community outreach training	Mibicuri BBP Berbice	43
Household pesticide training	Mayor and City Council(M&CC), Regent Street, Georgetown	17
Community outreach training	St.John's Primary School, Plaisance ECD	26
Pesticide awareness training	Soesdyke Secondary School, Soesdyke ECD	16
Pesticide awareness training	Guyana Revenue Authority, Camp St. Georgetown.	18
Community outreach training	Enterprise ECD	53
Community outreach training	Friendship EBD	28

Community outreach training	Supply, Mahaica ECD	34
Community outreach training	University of Guyana Turkeyen ECD	40
Community outreach training	Ogle, ECD	33
Community outreach training	Pakuri village(St. Cuthbert's mission)	40
Pesticide awareness training	Police Training Centre, Eve Leary, Kingston Georgetown	113
School drama competition	Vergenoegen Secondary School	378
School drama competition	Vreed-en-Hoop Secondary School	572
School drama competition	Harmony Secondary School	335
School drama competition	Linden Foundation Secondary	946
School drama competition	St.Joseph High School	698
School drama competition	Fraser's Educational Institute	215
School drama competition	St.Cuthbert's Secondary School	130
School drama competition	Soesdyke Secondary School	678
School drama competition	Skeldon High School	546
School drama competition	Winifred Gaskin Secondary	162
RACE event	Lethem market square exhibition	25
Community outreach training	Bartica, Region # 7	61
Community outreach training	Karrau, Region # 7	35
<b>Total</b>		<b>5542</b>

## **FUTURE PLANS: 2019 ONWARDS...**

The PTCCB aims to continue to strengthen chemicals management in Guyana in a lifecycle approach by enhancing education and awareness programmes and implementation of the Pesticides and Toxic Chemicals Control Regulations 2004 (No. 8 of 2004).

### **“Embracing Sustainable Development Through Sound Chemicals Management” - 2019**

Sound chemicals management is an integral part of sustainable development in any country. Every country must ensure the highest level of protection from the risk these chemicals pose to human health and the environment. Guyana, through the Pesticides and Toxic Chemicals Control Board (PTCCB) is committed to ensuring sound chemicals management countrywide. The PTCCB continues to execute its mandate through the holistic and comprehensive management of pesticides and toxic chemicals in Guyana through an open and collaborative approach at the national level.

Through its work program the PTCCB monitors pesticides and toxic chemicals in a lifecycle approach with the registration and monitoring of all chemicals imported, licensing of vendors countrywide, confiscation of illegal pesticides and toxic chemicals and training and awareness programme dedicated to educate chemical users and the general public.

The PTCCB is committed to monitoring the use patterns and practices of chemicals by examining pesticides residues in agricultural produce. Formulated product analysis also allows for monitoring the quality of pesticides imported for use in Guyana. To this end, the PTCCB recently expanded its laboratory facilities to ensure effective and efficient operations. The expansion of its facilities will also allow for the certification and accreditation of the laboratory which will enhance the revenue generation capacity of the PTCCB to achieve its mandate.

Guyana continues to benefit from international support in the area of chemicals management as the FAO/GEF regional project continues to be implemented. Project components currently the development of a pilot project on empty pesticides container management at the national level, identification and phase out of highly hazardous pesticides registered, promotion of alternatives to highly hazardous pesticide and integrated pest management. Guyana continues to fulfill its

obligations to the Rotterdam and Stockholm Convention which provides opportunities for technical support and capacity building.

The Pesticides and Toxic Chemicals Control Board will continue to build on the foundation of those ongoing initiatives in 2019 through its increasing regulatory and technical capacity.

The focus of the PTCCB for 2019 therefore encompasses sound chemicals management through the reduction in use of highly hazardous pesticides, promotion of alternatives, technical capacity building, pesticides container management and the effective monitoring of toxic chemicals in the industrial and manufacturing sectors. Reduction in use of highly hazardous pesticides through promotion of alternatives will have a significant catalytic effect on reduction of risks to the environment and farmers and improve food quality due to reduction in harmful pesticide residues.

The Board will continue to promote proper storage of pesticides so as ensure reduce accessibility by non-pesticide users and children. The sale and use of pesticides to persons under the age of eighteen will continue through a collaborative approach with the Occupational Safety and Health Department.

## CONCLUSION

*An analysis of the activities of the PTCCB for the period under review would demonstrate that, apart from the routine administrative and operational strategies, genuine and novel initiatives were employed towards achieving its mandatory objectives. While some of the targeted strategies are ongoing, it would be found that the PTCCB was efficient in carrying out its routine responsibilities, implemented new initiatives all in the fulfillment of its mandate, notwithstanding the constraints under which it functioned.*

*The PTCCB will continue to work with the Ministry of Agriculture, sister agencies, private sector and external stakeholders towards achieving its mandate under its Act and Regulations.*

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