



**PESTICIDES AND
TOXIC CHEMICALS
CONTROL BOARD**

ANNUAL REPORT 2012



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EXECUTIVE SUMMARY

The Pesticides and Toxic Chemicals Control Board (PTCCB) is a semi-autonomous Agency which was established in accordance with the relevant legal provisions enshrined in the Pesticides and Toxic Chemicals Control Act 2000 (No. 13 of 2000).

The Board, which operates under the Ministry of Agriculture, is charged principally with making arrangements and providing facilities for controlling the manufacture, importation, transport, storage, selling, using and advertising of pesticides and toxic chemicals in Guyana.

PTCCB is operated by its permanent Secretariat which carries out the mandatory responsibilities and the operational and administrative policies handed down by 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 2012 are as follows:-

- General Administration
- Inspection and Enforcement
- Registration and Licensing
- Quality Control
- Training
- Internal Capacity Building
- Overseas Participation
- Analytical Testing
- Monitoring and Evaluation
- Public Awareness

Details pertaining to these activities are documented individually in the body of this Annual Report.

This Report demonstrates comprehensively that the PTCCB continued to carry out its mandate, as it had done over the years since its establishment, in a proactive manner in partnership with the Ministry of Agriculture, sister Agencies, representatives of the Private Sector and relevant overseas based organizations.

Importantly, strong emphasis was placed on interactive sessions with importers, manufacturers, traders, farmers and other end users of chemicals in Guyana.

The PTCCB remains committed to carrying out its mandatory responsibilities during the year 2013 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 Board additionally through the Rotterdam and Stockholm Conventions and in collaboration with other International Chemicals Management Agencies will be meeting the obligations as it relates to a lifecycle approach to chemicals management.



INTRODUCTION

This Report documents the activities of the Pesticides and Toxic Chemicals Control Board (PTCCB) for the year 2012. It highlights the accomplishments and discusses constraints associated with the Board's objectives with respect to activities initiated during the year 2012. The Report also includes the Board's objectives and achievements for 2013.

BOARD OF DIRECTORS

The Directorate of the Board was appointed for the period 1st January to 31st December 2012. The membership of the Board for this year was as follows:

- Dr. Leslie Munroe – Chairman
- Dr. ChandranauthRagnauth – Deputy Chairman
- Mr. Khame Sharma– Director
- Ms.KarenAlleyne – Director
- Dr. DindyalPermaul – Director
- Dr. AshookSookdeo – Director
- Dr. Dagleish Joseph – Director
- Dr. Elizabeth Ramlal – Director
- Mr. KuldipRagnauth – Director
- Mr. Dexter Glasglow – Director

Ms. Trecia David - Registrar of Pesticides and Toxic Chemicals 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).

Meetings of the Board

Statutory Meetings of the Board were scheduled to be held on the Last Wednesday of every month. However only ten such Meetings were conducted. The punctuality of the Members in attendance at the Meetings was exceptional throughout the year.

Arrangements were in place for the conduct of technical meetings during the period under review as might have been necessary. However, there were not necessary.

Signatories of the Board

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

- (1) Chairman of the Board – Dr. Leslie Munroe;
- (2) Deputy Chairman – Dr. ChandranauthRagunauth
- (3) Director - Dr. DindyalPermaul; and
- (4) Secretary of the Board – Ms. Trecia David

The order of signatories of the Board remained the same i.e. Chairman and/or Secretary with any other Director.

Responsibilities of the Board

The Board is charged with the responsibilities for making arrangements and providing facilities for controlling the manufacture, importation, transport, storage, selling, using and advertising of pesticides and toxic chemicals in Guyana.

Objectives of the Board

The primary objective of the Board for the period under review was to reduce the imports of unregistered pesticides, strengthen public awareness activities and ensure proper operations of the pesticides laboratory. As such much emphasis was placed on capacity building to allow technical expertise to enhance these specific areas.

It was also the Board'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.

The specific objectives of the Board for the year under review were as follows:

- (i) Fulfilling the International Requirement of the Board for the Rotterdam Convention;
- (ii) Fulfilling the International Requirement of the Board for the Stockholm Convention on Persistent Organic Pollutants (POPs); - Developing a National Implementation Plan for Guyana;
- (iii) Registration of Pest Control Operators;
- (iv) Development of a comprehensive Pest Control Operator Training Manual;
- (v) Certification of Pest Control Operators;
- (vi) Pesticides Awareness Week 2012;
- (vii) Pesticides Corners in Secondary School Program;
- (viii) Training and Awareness countrywide;
- (ix) Stakeholders Training Sessions; and
- (x) Reduction of Illegal Imports and vending of pesticides.

SECRETARIAT OF THE BOARD

Organizational Chart

The organization of the Board contains four divisions: Licensing and Registration, Enforcement and Training, Administration and Analytical. Each Division was headed by senior personnel. The total staff compliment of the Board is twelve (12).

General Administration

The implementation of the policies of the Board is carried out by an adequately staffed Secretariat located at the compound of the National Agricultural Research and Extension Institute, Mon Repos, East Coast Demerara. This Secretariat, which is headed by the Registrar holds responsibility for General Administration and Operations including (i) training and (ii) enforcement of the rules and regulations associated with the manufacture, importation, transport, storage, selling, using and advertising of pesticides and toxic chemicals in Guyana.

Staff Development

Throughout the period under review the Board, in recognition of the need for capacity building towards facilitating the provision of services to farmers and other stakeholders allowed staff to participate in a number of training exercises conducted by other Agencies and International stakeholders.

- (i) International Project Development under the Global Environment Facility (GEF)
- (ii) Obsolete Pesticides and Bio-pesticides through the Coordinating Group of Pesticides Control Board
- (iii) International Committee on Chemical Management through UNEP
- (iv) Pesticides Formulation and Residual Analysis by Agrofina Labs, Argentina, and

ACHIEVEMENTS – 2012

The Pesticides and Toxic Chemicals Control Board's Achievements for the period under review were as follow:

Pesticides Submitted For Registration

The Board received sixty one hundred and eight (108) applications requesting registration of which sixty one (61) were registered. The unregistered 47 was as a result of incomplete submissions for registration. The Board approved the Registration of a Total of 220 products at the end of 2012.

Prohibited Pesticides

The Board as a signatory to the Rotterdam Convention was informed that at the Fifth Conference of the Party held in June, 2012 the following chemicals have been listed in Annex III of the Convention:

1. Aldicarb
2. Alachor
3. Endosulfan

The Board in its obligations to the Convention is compiling is Final Notification for these chemicals and all products related to these chemicals for transmission to the Convention signaling Guyana's decisions.

Pesticides and Toxic Chemicals Laboratory

Physical-chemical and chromatographic analysis methods were collected from the documents submitted for registration of formulated pesticide products to aid the laboratory in analyzing formulated pesticides products. Method development was carried out on a total of 13 active ingredients.

Physical-chemical Testing

The following physical-chemical tests were performed on seventeen (17) pesticide products during August to December:-

- * Colour, state, odor, appearance, density, pH and persistent foaming

Laboratory Documentation

During the year under review the laboratory staff continued to work on developing, correcting and reviewing documented data to ensure that the laboratory meet the GYS 223:2005 standard for accreditation.

The Quality Manual, Safety Manual, Standard Operating Procedures, Work Instructions and Forms were completed and submitted to the Guyana National Bureau of Standard (GNBS) for assessment and approval. This is still being finalized through a GAP analysis.

Analytical Work

Method development was done with sixteen pesticides:

- * Lambda-cyhalothrin; GC-MS method (February, March, April, May)
- * Alpha-cypermethrin: GC-FID (September)
- * Lambda-cyhalothrin: GC-FID (September)
- * Cypermethrin: GC-FID (September)

In-house equipment training

The lab technician was trained in the following:

- * Use of pipette bulbs and automatic pipetter
- * Calibration of the analytical balance (Mettler Toledo)
- * Calibration of pH meter
- * Conducting the following physical-chemical tests: - density; pH; and persistent foaming

FAO-IAEA e-learning courses

Staffs were presented with information based on the following course materials:-

- * Pesticide Quality: This course contained information about pesticide quality from a regulatory as well as an analytical perspective.
- * Quality Management Systems: The course covered topics relating to the management of quality at a residue analytical laboratory.
- * Documentation of Work According to GPL
- * Measurement Uncertainty
- * Method validation: The course covered introductory concepts to validation such as importance; stages; requirements; scope; and checklist for method development, characterization and ruggedness testing.

Occupational Safety and Health

The following trainings were attended by all lab staff:

- * First aid training
- * Fire Safety and Extinguisher
- * GYS:2003 Standard on General Requirements for Safety in Laboratories

Quality Management

Staff participated in the following GNBS facilitated Quality Management courses:

- * GYS 170:2009 standard
- * ISO 17025 standard

- * Method Validation
- * Root Cause Analysis
- * Data Analysis

Webinars

Staff participated in the following webinars:

- * Become a Smooth GC and GC-MS Operator: by Erin Hook, Thermo Fisher Scientific. The main focus was practical GC and GC-MS maintenance and troubleshooting.
- * How to get Rugged Results in Pesticides Analysis using Triple Quadrupole GC-MS-MS: by Katerina Mastovska, Excellon International LLC.
- * Pesticide Screener: A Comprehensive Approach to Multi-Target Pesticide Screening Using LC- Time-of-Flight Mass Spectrometry: by George McLeod, Bruker UK Ltd.
- * From Helium to Hydrogen: GC-MS Case Study on SVOCs in Water: by Alex Semyonov and Jessie Butler, Thermo Fisher Scientific. The presentation addressed issues relating to moving away from the use of Helium as the carrier gas.

Health and safety

The Safety Officer conducted First Aid reviews on the following:

- * Shock and bleeding
- * Treatment of chemical burns and inhalation of chemical fumes
- * Heat emergencies and cold emergencies
- * Broken bones, sprains and

Regional and International Meetings

The Board was represented at the Global Environment Facility (GEF) expanded constituency workshop (ECW). The ECW provided participated countries with the exposure of how GEF funds could be accessed since many Caribbean countries were lacking in accessing the funds.

The PTCCB participated in the Seventeenth Meeting of the Coordinating Group of Pesticides Control Boards of The Caribbean (CGPC) under the theme “Striving towards Safe Pesticide Use.” The meeting showcased presentations from countries within the Caribbean which highlighted the status of chemicals management throughout its lifecycle within those countries.

The PTCCB represented the Government of Guyana at the third session of the International Conference on Chemicals Management (ICCM 3) in Nairobi, Kenya. The conference envisioned the sound management of chemicals throughout its lifecycle, and of hazardous wastes, in ways that lead to minimization of significant adverse effects on human health and the environment.

National Implementation Plan for the Stockholm Convention

The Board commenced work on the development of the National Implementation Plan (NIP) for the Stockholm Convention of Persistent Organic Pollutants (POPs). The National Implementation Plan will be completed in APRIL, 2013.

Training and Awareness

The Board conducted the first ever training and certification of the Basic proficiency for Pest Control Applicators in Guyana. The programme targeted all Pest Control Operators and was tailored to widen their knowledge in the safe and sensible management of pest control operations in urban, rural, domestic, industrial, public and private sectors. This training also saw the development of a Commercial Pest Control Training Manual.

The Board concluded the provision of training to farmers and other stakeholders in December 2012. A total of 884 persons were trained on the safe use, handling, storage and disposal of pesticides. The beneficiaries expressed appreciation for the presence of Directors of the Board at some of these training sessions. A number of pesticide equipment was distributed to farmers such as measuring equipment, gloves, respirators and overalls. The participants were trained on the following topics:

- Management of Pesticides in Guyana;
- Pesticides Act and Regulations;
- Benefits and Risks of Pesticides Use;
- Pesticides Classification;
- Pesticides Labeling;
- Safe Handling and Correct Use of Pesticides;
- Classification of Pest;
- Pest Control Measures and Practices;
- Dose Rates and Recommendations;
- MRLs; and
- Storage and Disposal of Pesticides.
- Safe application of household use pesticides.

The PTCCB facilitated refresher training and awareness sessions with other agencies such as the Customs and Trade Administration, Guyana Police Force, Pesticides Importers and Distributors. This exercise shared information on the new developments within the Pesticides Industry both locally and internationally.

A week was designated Pesticides Awareness Week in October, 2012 for the first time in Guyana; this activity involved the Board using various media programmes such as Farmers Connection, Farming Today and Infomercials on television in addition to advertisements in the various newspapers and newsletter to send out pertinent pesticides messages to the nation.

The Board participated in agricultural and other relevant national exhibitions throughout the year by displaying models to raise awareness to the general public on the following topics:

- Commercial and Domestic Pest Control operations and services offered by Pest Control Operators
- Main types of pesticides and its use
- Benefits and risks of using pesticides
- Mode of action of contact and systemic pesticides
- Pesticides storage

The Pesticides Corner in Secondary Schools programme was expanded to two schools each in regions 2,3,4,5,6 and 10 in the form of a school competition. The objectives of this initiative were to:

- Educate and share information on pesticides safety when using, handling, storing, distributing and disposing of pesticides
- Educate the young minds of our children with as much knowledge as possible on pesticides
- Allow involvement of students in creating a pesticides awareness corner that will assist in educating their peers
- Transfer of knowledge gained on pesticides to other members of their household and communities.

The competition was won by President's College with Anna Regina Multilateral and Black Bush Secondary gaining first and second runners up respectively.

The Directors, Registrar and Inspectors of the Board provided training, at a number of locations throughout the country, to farmers on the safe use, handling and storage of pesticides. The training was conducted in collaboration with the Guyana Rice Development Board (GRDB), the Farmers Field School Programme, GuySuCo's Cane Farming Committee and the Extension Unit of the Ministry of Agriculture. Training Sessions were held in Regions 1, 2, 3, 4, 5, 6 and 10.

The Board conducted a guest lecture on the safe use and management of pesticides for the second year diploma students of the Guyana School of Agriculture.

COMPLAINTS AND INVESTIGATIONS

During the year under review the Board investigated the following pesticides related complaints:

- Chemical spray incident at Mr. Gobarde's residence located at Lot 163 Section 'B', Letter Kenny Village, Corentyne, Berbice.

- Chemical spray incident at Mr. HameedAhmad's farm located at Hague Backdam, West Coast Demerara.
- Chemical spray incident at Mr. Leslie Codogan's residence located at Lot 8 Section 'A' Onverwagt, West Coast Berbice.
- Chemical spray incident at Mr. Richard Somwar's residence located at Lot 'G' Good Hope, East Coast Demerara.
- Chemical spray incident at Messrs. Charles Sahai and George Sahaifarms located at ZeelugtBackdam, East Bank Essequibo.
- Chemical spray incident at Ms. Seelochinie's residence located at Lot 69 Meten-Meer-Zorg Ocean Garden, West Coast Demerara.
- Chemical spray incident at Messrs. JairamLakhiram and HarrichandDhanraj farms located at La Jalousie Railway Embankment, West Coast Demerara.
- Chemical spray incident at Mr. LakeramManiram's residence located at Lot 206 De Souza Street, Better Hope South, East Coast Demerara.
- Chemical spray incident at seven cash crop plots at Little Biaboo, Mahaica River.



PESTICIDES IMPORTATION

Pesticides

The total import value of pesticides for the year was One Billion, Four Hundred and Twenty Nine Million, Nine Hundred and Ninety One Thousand, Six Hundred and Six Guyana Dollars (\$1,429,991,606.95).

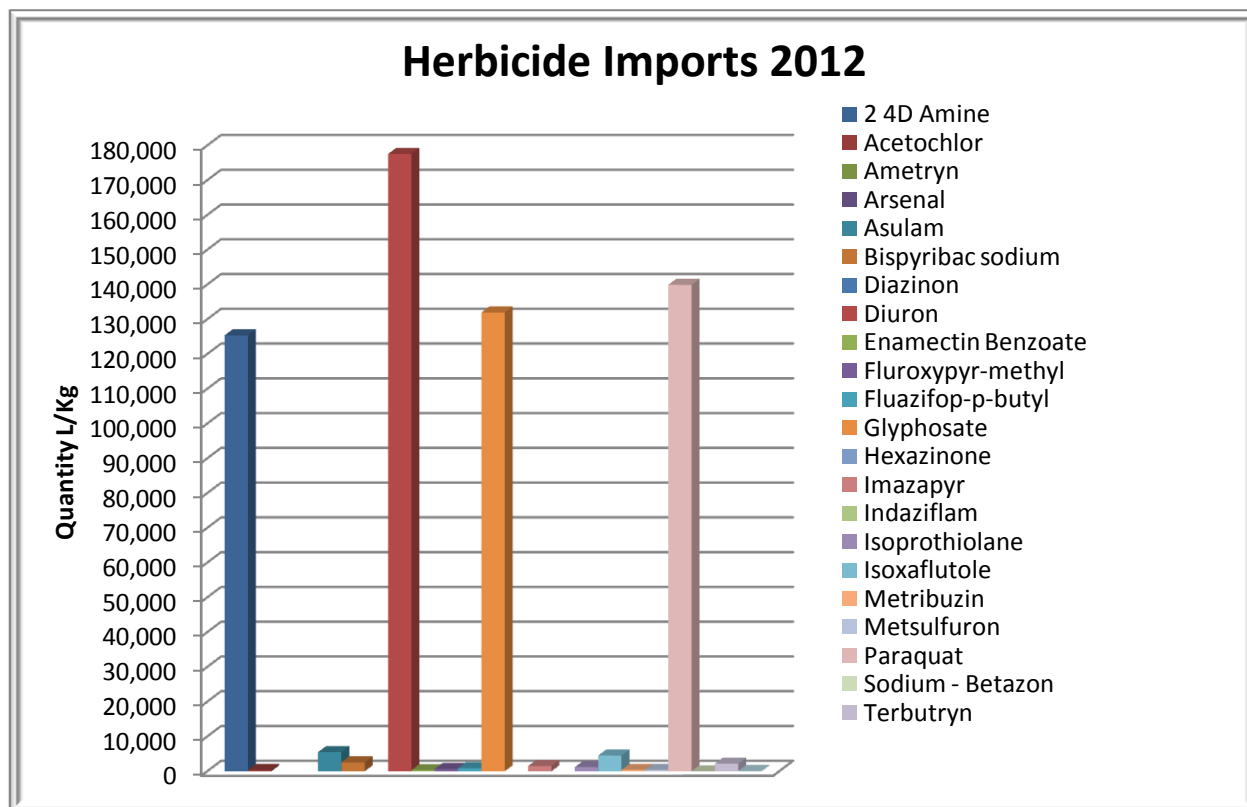


Figure 1 Shows Herbicides Imported for 2012

Diuron, Paraquat Dichloride, Glyphosate and 2, 4 D Amine were the most imported herbicides respectively for the year in review.

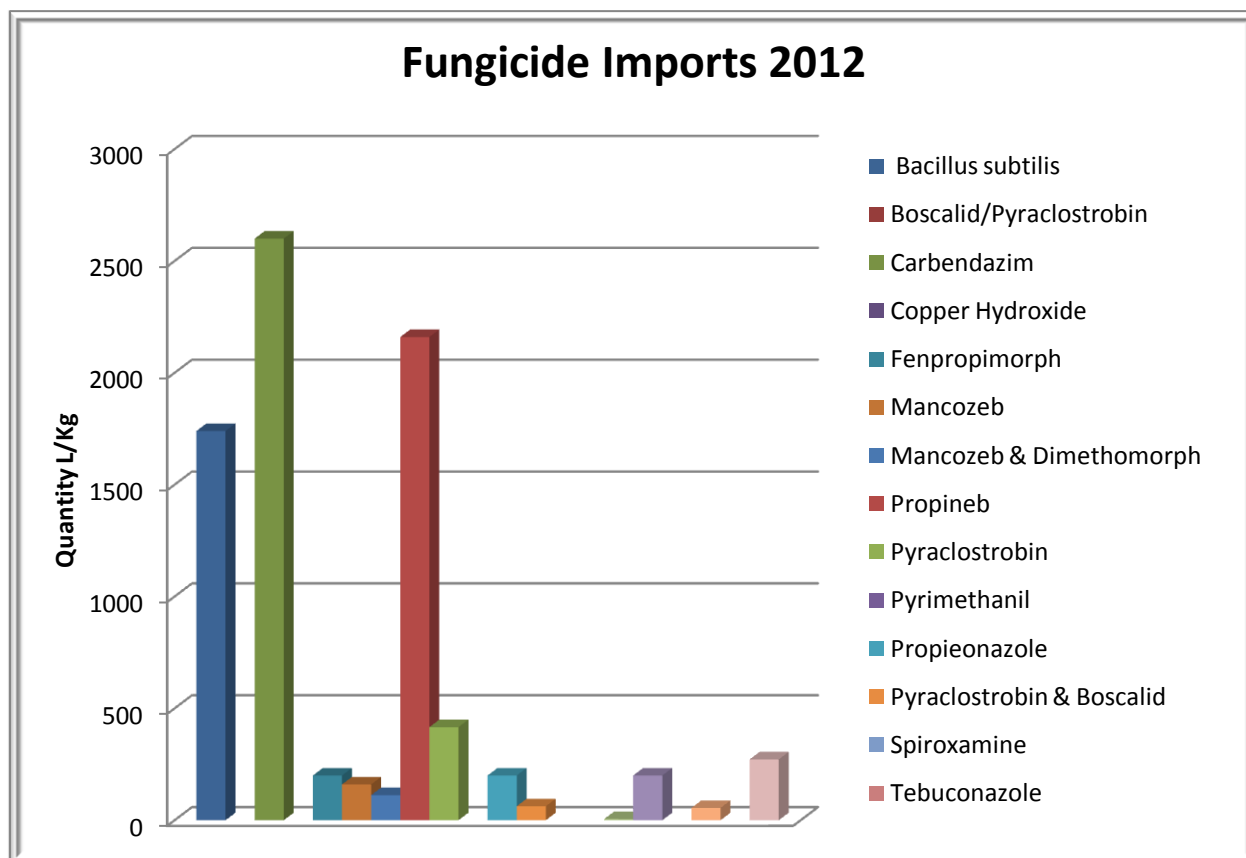


Figure 3 Shows Fungicides Imported for 2012

A number of new fungicides were added to the pesticide industry during the year in review, allowing for pesticide rotation in fields. Carbendazim, Propineb and Bacillus subtilis were the most imported fungicides for the year in review.

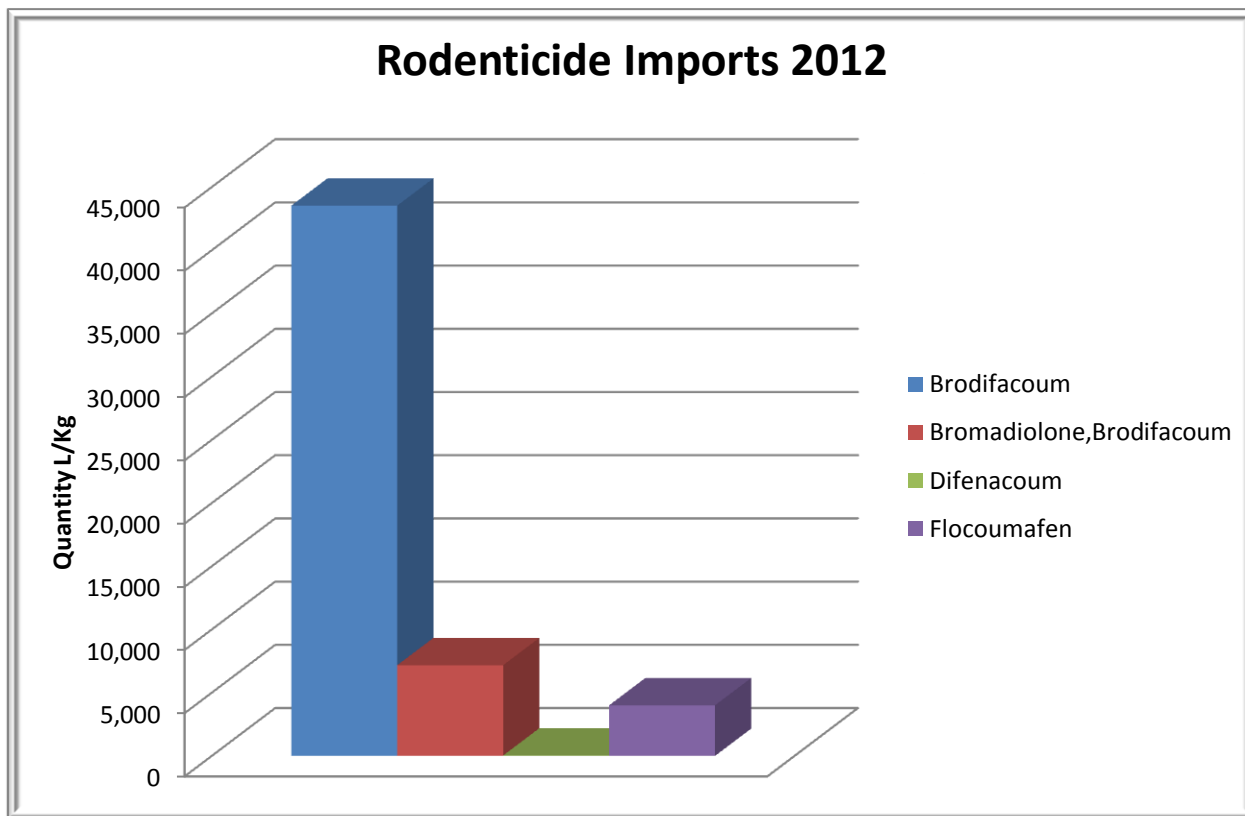


Figure 4 Shows Rodenticides Imported for 2012

The main rodenticides imported can be seen in the graph above. Brodifacoum was the most imported rodenticides for the year in review.

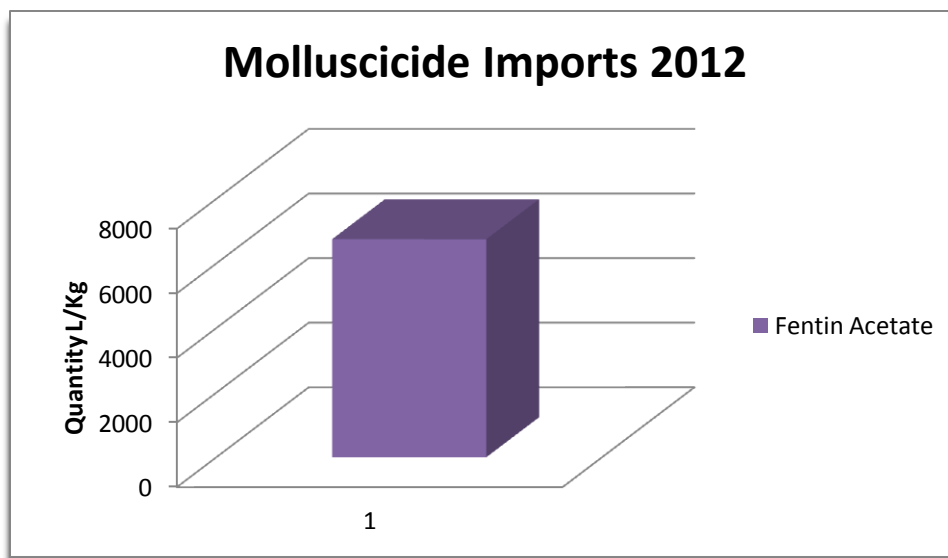


Figure 5 Shows Molluscicide Imported for 2012

Fentin Acetate is the main Molluscicide imported for 2012.

Table 1 Value of Importation for 2012

Pesticides	Total Cost Imported
Insecticides	\$640,838,965.88
Herbicides	\$678,784,776.56
Fungicides	\$27,298,584.18
Molluscicide	\$26,428,025.00
Rodenticides	\$56,641,255.33
Total	\$1,429,991,606.95

VENDING OF PESTICIDES AND TOXIC CHEMICALS

The Board certified one hundred and fifty three vending premises for the year. This represents an increase in the number of premises from the previous year by 5.

During the year under review there were twenty six seizures of illegal and unlicensed chemicals from vending premises across the country. Most of seizures were based on unregistered or illegal chemicals being offered for sale. This is in keeping with the regulations of registering all products being offered for sale by pesticides vendors.

ACCOUNTS 2012

The Auditor General's Office completed their examination of the Board's Financial Statement for 2011, 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 Board as at 31 December 2011, and its deficit for the year then ended, was in conformity with generally accepted accounting practices. The Accounts for the Board for 2012 are schedule for auditing by March, 2013.

BUDGET 2013

The proposed budget of the Board for the year 2013 reflects a total expenditure of Seventy Nine Million, Nine Hundred and Seventy Four Thousand Dollars (\$ 79,974,000.00). The increase pertains to the functional operations of the pesticide laboratory in 2013, along with infrastructure development such as a construction of comprehensive storage facility.

WEBSITE

The Board's Website, <http://www.ptccb.org.gy> was updatede during the year to make it more modern and user friendly. The Board continued to use the website as a means of spreading messages and providing relevant information for the general public.

ENFORCEMENT AND INSPECTION

The Inspectorate Unit carried out a series of enforcement exercises across the country during the period under review. Emphasis were concentrated in the East Berbice region as

intelligence and seizure exercises revealed that most of the unregistered pesticides came through the Guyana/Suriname border and are being sold directly to farmers. A number of chemicals such as Carbendazim, Bestac, Alpha Cypermethrin, Bravo, Regent, Admajor, Mosquito coils, Insect Repellent, Farmixone, 2,4 D Amine and Glyphosan - were seized throughout the year. However, most of these were in small quantities.

KEY ISSUES AND CHALLENGES

The key issue facing the Board continues to be the implementation of the Pesticides and Toxic Chemicals Regulations with the major challenge being monitoring of the Regulations throughout Guyana. However the following issues are the main challenges facing Board in its quest for the management of pesticides and toxic chemicals in Guyana:

- **Illegal Chemicals** – Assistance of Berbice Anti Smuggling Squad is limited or mostly non-existent and they are failing to deliver on their mandate to reduce illegal entry of pesticides into Guyana. This illegal entry is also affecting the financial status of the Board and will eventually affect the standard of Guyana's agriculture production and quality of agriculture produce.
- **Supply of consumables** – The process for the supply of consumables to the laboratory has proven to be very tedious and expensive because of the need for sourcing to be done through the suppliers of the Gas Chromatograph. The Board has moved to correct this situation by sourcing directly from suppliers in North America for cheaper and faster results.
- **Adequately trained laboratory staff** - For the year under review the Pesticides Laboratory personnel were mostly engaged in human resource capacity building to operate the GCMS and HPLC as such the deliverables in terms of results from analysis were limited. It is anticipated that with the current training regime for the laboratory staff analytical work can commence in the year ahead.



PROPOSED ACTIVITIES 2013

FUTURE PLANS: 2013 ONWARDS

One of the primary future plans of The Board remains the development of a comprehensive registration scheme and being able to provide the necessary infrastructure required for the establishment of appropriate educational, advisory, health-care and extension services aimed at enabling and exercising adequate control over quality, sale and usage of pesticides.

Projections 2013 PTCCB

1. Registration of 64 pesticides for import, sale and use in Guyana
 - Reduction of dangers associated with these products to human health and environment
2. Licensing of 2000 imports of pesticides and toxic chemicals
 - Approval of all chemicals imported, information gathering and availability as too quantities, names, types, targets pest etc.
3. Training and certification and Licensing of 16 Pest Control Operators
 - Ensuring use of household pest control products, use of registered operators, reduce use of agricultural pesticides in household pest control
4. Licensing of 145 pesticide vendors countrywide
 - Ensures availability of registered pesticides to farmers
5. Training and awareness programmes reaching 2000 farmers and farm hands
6. Increase public awareness via newspaper, inews, website, newsletter
 - Benefit decrease in illegal trade and vending of household and agri. pesticides
7. Training of Extension agents and students from the Guyana School of Agriculture
8. Execute investigations relative to the mis-use of pesticides
9. Training provided on the following area:
 - Pest and Disease Management;
 - Safe and Effective Use of Pesticides
 - Disposal and storage in Pesticides
10. Analytical works by the laboratory to support the Board
 - The Pesticide Laboratory supports the Board in ensuring food safety in agriculture production
 - Verifies quality and types of pesticides used in agriculture
 - Instituting programmes to allow accreditation
11. In field sensitization technique for pesticide contamination. The Tracer Kit technology demonstration in field educating farmers on types and levels of pesticides contamination.

12. Development of National Implementation Plan (NIP) Project for the Stockholm Convention on Persistent Organic Pollutants (POPs) under the Global Environment Facility (GEF). NIP finalized and endorsed by March, 2013.

The Pesticides and Toxic Chemicals Control Board aims at fulfilling its mandate in 2013 through further capacity building, executing of regulatory objectives and continued implementation and monitoring of regulatory requirements with respect to pesticides and toxic chemicals. The Board aims to further adapt and develop management tools that will enable the sound management of chemicals in Guyana, through a lifecycle approach.

1. Strengthen enforcement and inspection to eliminate illegal imports of pesticides
2. Training and awareness to Customs and Trade Administration to strengthen enforcement and reduce Transboundary movement of chemicals, reduce illegal imports
3. Training and awareness meetings with Guyana Police Force
4. Training and awareness to extensions agents, pesticide vendors
5. Development of Public Awareness Materials specifically Pesticide Manual for vendors and farmers etc.
6. Enforce Transportation Requirements for Guyana to ensure management of pesticide accidents spills etc.
7. Update Pesticide Information System and Website – data availability with regards to pesticide use and Guyana
8. Build staff capacity through international training on projects
 - Inspectorate training on inspection and enforcement
 - Obsolete and bio pesticides
 - Laboratory analysis of formulated products
9. Distribute at trainings Gloves, Respirators, measuring utensil, conversion handbook
10. Construct a comprehensive pesticides storage facility for storage of obsolete and

CONCLUSION

An analysis of the activities of the Board for the period under review would demonstrate that, apart from the routine administrative and operational strategies, genuine and bold initiatives were employed towards achieving its mandatory objectives. While some of the targeted strategies are ongoing, it would be found that the Board's Secretariat was efficient in carrying out its routine responsibilities, notwithstanding the stated constraints under which it functioned.

The Board will continue to work with the Ministry of Agriculture, sister Agencies and external stakeholders towards meeting its mandate under the Act and Regulations.



**PESTICIDES AND
TOXIC CHEMICALS
CONTROL BOARD**

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