MINISTRY OF AGRO INDUSTRY AND FOOD SECURITY
AGRICULTURAL SERVICES, REDUIT
NATIONAL PLANT PROTECTION OFFICE

ANNUAL REPORT FOR YEAR 2013

1.0 INTRODUCTION

The National Plant Protection Office (NPPO), being the National Plant Protection Service, has been entrusted with an overall responsibility for law enforcement on plant protection matters, as per provisions made under the Plant Protection Act 2006.

The NPPO has the overall responsibilities for disease surveillance, prevention of the entry of exotic pests and diseases, policy formulation of phytosanitary measures as related to international trade, implementation of the White Grub Protocol and issue of Phytosanitary Certificate (PC) for export of agricultural commodities and Plant Import Permit (PIP). The Plant Quarantine Services, being the first line of defence, operates at strategic points of entry i.e. Seaport and Sir Seewoosagur Ramgoolam International Airport on a 24-hr basis 7-day a week.

Furthermore, the Office is mandated to carry out research and development programmes in various specialized disciplines of phyto-pathology and quarantine, and Pest Risk Analysis (PRA). The NPPO provides services such as Plant Disease Diagnostic and Advisory, Seed Health Testing and Treatment, Active Growth Inspection for export, Post Entry Quarantine and Postharvest treatment were provided to the planting community/exporters/importers.

The Office is currently hosting the SPS Enquiry Point and acts as an information desk for reception and dissemination of WTO/SPS matters, and is also the Contact Point for the International Plant Protection Convention (IPPC) as per our international obligation under the WTO.

2. QUARANTINE AND REGULATORY ACTIVITIES

The Plant Quarantine Service (PQS) of the NPPO, ensured a 24-hr all year round control and disease/pest surveillance at strategic points of entry (airport, sea port, post office etc) in connection with inspection of incoming flights and ship vessels, examination and clearance of incoming agricultural consignment, implementation of White Grub Protocol and interception of illegal and/or nonconforming items of plant origin.

The NPPO has its main office at Reduit and four sub-offices: (i) in Arrival Lounge and in (2) Plaisance Air Transport Services at SSR International Airport, Plaine Magnien; and (3) at Mer Rouge and (4) at New Container Terminal at Port Louis. The Quarantine activities together with revenues for the period under review at Reduit, Mer Rouge and Airport are summarised in Annexure I: Table 1, 2 and 3 respectively.
2.1 Reduit Office

2.1.1 Issue of Plant Import Permits (PIP's)

Applications for PIP are made to the Reduit office as well as the Mer Rouge Office, for a wide range of agricultural commodities. Importation of moderate to high risk commodities are carried out through a Pest Risk Analysis (PRA) by Scientific Officers.

On basis of the result of the PRA the application is either rejected or approved. A total of 12,296 PIP were issued for the year 2013.

2.1.2 Issue of Phytosanitary Certificates (PC's)

The Office is also mandated to deliver Phytosanitary Certificates (PC) to prospective exporters and passengers carrying agricultural commodities with them. A total of 4000 commercial and non-commercial PC's were delivered for the year 2013 for agricultural products such as vegetables, fruits, anthurium flowers, other fresh cut flowers (e.g. gerbera, cucurma), ornamentals; vegetables, fruits and flowers seeds; palm seeds, and shoots; medicinal herbs, sugar, wooden articles, and spices.

2.1.3 Treatment of planting materials for export

Treatment of all planting materials was carried out prior to issue of a Phytosanitary Certificate as follows:

- **Bare rooted Plants/seedlings/cuttings:** Dip in a solution mixture of a broad spectrum insecticide and fungicide
- **Seeds:** dusting with a mixture of a broad spectrum insecticide and fungicide

A Total of 249 treatments were carried out.

2.1.4 Active Growth Inspection (AGI) of Anthurium plantations in connection with export of fresh cut flowers (blooms)

Forty three (43) AGI were carried out during the period under review in registered Anthurium shade houses throughout the island with the following objectives:

(i) to monitor status of pests and diseases affecting Anthurium and the production of disease/pest-free and high quality and anthurium blooms Phytosanitary certification for export;

(ii) to carry out detection surveys throughout an established surveillance system for exotic pests/diseases and other targeted quarantine diseases i.e Anthurium bacterial blight caused by *Xanthomonas axonopodis pv. diffenbachiae*.
During the AGI, major diseases encountered were Bacterial Wilt (*Ralstonia solanacearum*), Root Rot (*Phytophthora spp.*), Anthracnose (*Colletotrichum gloeosporioides*). Sporadic attack of pests such as mites, thrips and leaf eating caterpillars were also detected. No quarantine diseases/pests were detected. Recommendations on control measures in collaboration with the Entomology Division were also made to Anthurium growers.

**2.2 PORT LOUIS OFFICE**

Quarantine activities carried out for the period under review are shown in sections 2.2.1 to 2.2.4

**2.2.1 Inspection of Ships/Vessels**

A total of 985 ships / vessels / yatch were inspected for the period under review.

**2.2.2 Inspection/Clearance of incoming agricultural produce**

Imported agricultural produce comprising mainly of second hand agricultural machinery, fruits, vegetables. Pulses, Spices, planting materials (plants, plant parts & seeds), wood & wooden products were inspected and cleared for delivery.

In this connection 4841 Inspection Certificates (CI) were delivered to the importers by the Quarantine Officers at the Port.

**2.2.3 Exportation of agricultural items**

A total of 3332 commercial and non-commercial Phytosanitary Certificates (PC) were issued at the Port-Louis Office for exportation of agricultural products such as vegetables, anthurium blooms, anthurium leaves, other ornamental flowers, wooden structures and other items. Visual inspection of a representative sample of the produce, treatment of planting materials chemical treatment (by dipping), wooden crafts (by fumigation) and, for some countries, a PIP from the importing country is a prerequisite for the issue of the Phytosanitary Certificate.

A total of 89 treatments (dip in mixture of insecticide & fungicide) of fresh planting materials were also carried out prior to the issue of Phytosanitary Certificates.

**2.2.4 Incinerator Plant Facility**

A total of approximately 25697 kg of aircraft kitchen-generated waste and other intercepted items from incoming passengers, Agricultural Marketing Board (AMB) - Cold Room, PATS DHL and UPS were incinerated at the Incinerator Plant. The revenue generated by the Incinerator Plant was Rs 128395.

**2.2.5 Activities in relation to the implementation of the White Grub Protocol**
During the period under review the White Grub Protocol (1 November to 15 January) was implemented at Port-Louis harbour with the following activities:

(i) incoming ships/vessels/yatch from Reunion Island were inspected and no traces of the adult white grub (*Hoplochelus marginalis*) have been observed.

(ii) Fifty seven (57) inspections of ships going to Reunion island were carried out and “Certificat Examen Visuel et Traitement” issued accordingly, and 94 “Attestation Desinsectisation” were received from ships from reunion. Derogation were given to two (2) shipping vessels.

2.3 SSR INTERNATIONAL AIRPORT SUB OFFICES

Quarantine activities carried out for the period under review are shown in sections 2.3.1 to 2.3.4

2.3.1 Inspection of Planes

A total of 8881 incoming planes were attended for inspection and removal of classified quarantine waste (pantry refuse) and monitoring of removal of aircraft kitchen generated waste by the Airport Catering Unit.

2.3.2 Inspection/Clearance of incoming agricultural produce

Imported agricultural produce comprising mainly of fruits, vegetables, aromatic & fine herbs, fresh cut flowers and planting materials (plants, plant parts & seeds) were inspected and cleared for delivery by the Quarantine Officers at the PATS and AMB cold store.

In this connections 1758 Inspection Certificates (CI) were delivered to the importers by the Quarantine Officers at the SSR Int. Airport.

2.3.3 Issue of Phytosanitary Certificate for Export

Agricultural products destined for export were subjected to visual inspection of a representative sample of the produce and treatment of planting materials (dip) was a prerequisite for the issue of the Phytosanitary Certificate.

A total of 491 commercial & non-commercial Phytosanitary Certificates meant for export of agricultural produce were issued at the SSR Int. Airport Office.

2.3.4 Incinerator Plant Facility

A total of approximately 181,506 kg of aircraft kitchen-generated waste and other intercepted items from incoming passengers, Agricultural Marketing Board (AMB) - Cold Room, PATS DHL and UPS were incinerated at the Incinerator Plant.
2.3.5 General Aviation (Mauritius) Ltd

Incinerator Plant Facility

General Aviation (Mauritius) Limited (GAM) is a branch in Mauritius of General Aviation Ltd, an international organization, to cater for special passengers such as private business flights and passengers requiring special treatment. A separate terminal at the airport is being managed with the help of Airports of Mauritius (AML) to offer this service. GAM operates under the purview of the AML and has its own Health, Immigration, Quarantine and Customs Services. GAM also caters for commercial passengers who would have beforehand requested for GAM services. GAM became operational in July 2008 and was officially launched in October 2008.

A furnished office space has been allocated to the NPPO to carry quarantine activities. Officers of the NPPO are carried spraying and boarding of private flights.

2.3.6 Activities in relation to the implementation of the White Grub Protocol

During the period under review the White Grub Protocol (1 November to 15 January) was implemented at the SSR International Airport with the following activities:

(i) planes arriving from Reunion island were inspected and no traces of the adult white grub (*Hoplochelus marginalis*) have been observed during the period under review.

(ii) One hundred and seventeen (117) 'Certificat d'examen visuel' was issued to the attention of the Plant Protection Service of Reunion Island in connection with the inspection of the departure of the first plane to Reunion Island. and 103 “Attestation Desinsectisation” were received from Flights from reunion. No derogations were given.

2.5 SURVEILLANCE, MONITORING AND CONTROL OF IN TRANSIT AGRICULTURAL COMMODITIES

Officers of the NPPO carry out constant monitoring of all incoming and outgoing (i.e. in-transit) agricultural commodities at the Plaisance Air Transport Services (PATS), Agricultural Marketing Board (AMB) cold room at the SSR Int. Airport; the Mauritius Freeport Development Authority, Mer Rouge; and from airport to cruise at seaport.

Implementation of Biosecurity Measures for consignments in transit at SSR International Airport

*Bactrocera invadens* is reported to be a highly destructive and invasive polyphagus fruit fly insect pest infecting both wild and cultivated crops (fruits and vegetables) in several countries in the African continent. It is a quarantine pest for Mauritius and, if introduced, can pose a serious threat to Mauritian agriculture. In transit consignments of fresh fruits and vegetables constitutes a potential pathway of introduction of this pest in our territory.

Due to the recent detection of *B. invadens* in Madagascar and an increasingly high volume of in transit agricultural cargo in Mauritius, the NPPO is implementing strict biosecurity
measures to prevent introduction of this pest in Mauritius. Measures are being taken to prevent the escape of all live stages of the fruit fly as well as other pests from consignments in transit in Mauritius at the SSR International Airport.

These include (a) requirement that all such whole consignment is wrapped/sealed with plastic (on all six sides) and (b) monitoring and visual inspection of all consignments of fresh fruits and vegetables in transit by Officers of the NPPO.

One hundred and eighteen (118) inspections of in transit consignments of fresh fruits and vegetables were carried out. Issues related to 2 consignments which were not covered/properly covered with plastic

2.6 INTERCEPTION OF AGRICULTURAL COMMODITIES

Agricultural commodities entering the country without proper phytosanitary certification and/or without declaration to customs/plant protection authorities are considered as illegal agricultural articles and are potential pathway of introduction for quarantine pests. Officers of the NPPO are posted at points of entry both at airport and seaport to minimise risk of such introduction.

2.6.1 SSR International Airport Office

2.6.1.1 Interception of agricultural produce from incoming passenger at Arrival Lounge

During the period under review approximately 603 kg, 606 units, 16 packets, and 2 trays of non-conforming & illegal entry of agricultural produce of plant and animal origin were made from the incoming passengers at the Arrival Lounge of the SSR Int. Airport. These items consisted mainly of assorted fruits and vegetables, peacock feathers, handicraft items, meat & fish produce, seeds of vegetables and flowers, planting materials, flower bouquet and herbs. 260 detained receipts were issued

Approximately 454 kg, 206 units, 2 bags and 4 packets of intercepted agricultural commodities were secured and destroyed by incineration; 27.5 kg, 106 packets and 2 units mainly seeds were sent to the NPPO for quarantine, 12.5 kg were sent to the Division of veterinary Services for treatment and 7 kg, 291 units and 6 packets of intercepted items of low quarantine risk were reshipped.

2.6.1.2 Interception of agricultural produce at PATS/DHL/UPS/AMB cold room

The Plaisance Air Transport Services (PATS) and DHL Office based at Plaisance Airport were regularly monitored for imported agricultural produce. 104 detained receipts were issued for 4117kg, 259353 units, 73 packets, 4 cans and 4 trays of fruits, vegetables, herbs, spices, fresh & dried ornamentals, seeds and other products of plant and animal origin were intercepted. 3482 kg and 4 trays were destroyed by incineration; 14 kg were reshipped; 15 kg were treated; and 7.5 kg, 258353 units, 73 packets and 4 cans were sent to NPPO for quarantine/seed health testing and clearance.
2.6.2 Port Louis Office

2.6.2.1 Interception of agricultural produce from incoming passengers

Agricultural products were intercepted from incoming passengers and destroyed by incineration. 6 detained receipts were issued.

2.6.2.2 Interception at Port-Louis Post Office and MIDEX

The Quarantine Service has also exercised strict control on importation and illegal entry of agricultural produce particularly seeds, spices, mixed herbs, etc. arriving by parcel post at the Port-Louis Post Office and MIDEX. 130 detained receipt were issued.

Approximately 68.2 kg, 263 units and 377 packets of agricultural items were intercepted at post office comprising mainly of nuts, seeds, dried flowers, and human hair. 63.5 kg, 752 units and 263 packets were destroyed by incineration; 4.7 kg, 28 packets and 10 units were sent to reduit for quarantine/treatment

2.7 POST ENTRY QUARANTINE MONITORING (PEQM) OF IMPORTED PLANTING MATERIALS

Imported planting materials can present a risk to plant health because they have the potential to introduce quarantine pests. Post-entry quarantine (PEQ) facilities that provide the appropriate containment for the risk that has been identified are used as a safeguard measure.

The objective of the PEQ monitoring is to (i) detect at an early stage latent exotic pests that may be introduced through the imported planting materials such as unrooted and rooted cuttings, grafted plants, seedlings, tissue culture plantlets etc. (ii) prevent the entry establishment and spread of the exotic (quarantine) pests associated with the imported crop species.

2.7.1 Imported Tissue culture orchids

Two (2) consignments of orchids, comprising of 5 varieties imported from South Africa and 6 varieties imported from Thailand in the year 2013 underwent PEQ in the Containment Facility at Réduit. The Plantlets were transferred from agar to orchid planting media to undergo for monitoring of hardening for 2 months, followed by a quarantine period of up to three months for quarantine pests and disease. The consignment from South Africa was released as no quarantine pest or disease was detected on them. The second consignment from Thailand is still at the PEQ facility

2.7.2 Imported tissue culture Anthurium andreanum

One consignment comprising of a total of 3,030 tissue-cultured plantlets of 3 varieties of Anthurium andreanum imported from Holland in July 2012, were undergoing PEQ in the Containment Facility at Réduit.
The plantlets were transferred from agar to vermiculite medium to undergo for monitoring of hardening for 2 months, followed by a quarantine period of up to 18 months quarantine pests and diseases, particularly anthurium blight caused by *Xanthomonas axonopodis* pv. *Axonopodis*. The consignment was subsequently released as no quarantine pest or disease was detected.

### 2.8 Monitoring and Inspection of Litchi for Export

Export of commercial consignment of litchi started on 02 November 2013 and ended on 18 December 2013. A total of 223,267 kg of fresh litchis were exported with inspection and certification to France, Switzerland, United Arabic Emirates, Holland, Italy, Canada, Dubai, Belgium, India, Spain and United Kingdom.

In this context, 126 inspections and subsequent phytosanitary certification were carried for the 53 tons of litchi destined for export. Also regular monitoring (check for the absence of pests and diseases) of the litchi orchards and sampling of the fruits was carried out by the Officers of the NPPO. Litchi fruits were tested for quality in terms of Total Soluble Solids (TSS) in collaboration with the Agricultural Chemistry Division. The TSS ranged between 18° and 21° Brix.

### 3 Seed Pathology

The main activities related to seed pathology were as follows:

(a) Field inspections were carried out on various government seed production stations under the Seed production program of the Ministry to inspect the crops in production stage and monitor their disease status.

(b) Seed health testing of imported seeds by various seed dealers, public and private organizations, research institutions and members with a view to screen the seeds against economically important quarantine and regulated non quarantine diseases prior to sale or planting.

(c) Provision Advisory and disease diagnosis service to the public at large.

(d) Provision of a free seed treatment (hot water treatment) facilities to local growers upon request.

Details of above activities are summarised in sub sections 3.1 and 3.2 below.

### 3.1 Monitoring of Locally Produced Seeds on Government Stations

The NPPO is mandated for the monitoring and control of diseases on seed production stations of the Agricultural Services and for seed health monitoring of locally produced seeds.

The present mechanism in place consist of regular visits on seed production stations jointly by a
multidisciplinary team comprising of officers from NPPO, Entomology, Horticulture and Agronomy Divisions according to the established cropping programme by the Horticulture Division.

Field inspections undertaken during active growth stage of the crops give an indication of health status of seeds being produced. Technical recommendations regarding disease control, particularly seed borne diseases are submitted to DSO (Hort) and officer in charge of stations for implementation. In case of crops showing infection by seed borne diseases beyond permissible tolerance level, the produce is disposed for sale instead of seed production.

The aim of this exercise is to monitor the level of seed borne diseases within the locally produced seeds and reduce the level of seed borne infection to an acceptable tolerance level using appropriate cultural and diseases minimising techniques.

In this context 20 routine field inspections were carried out on the 6 Government Stations (Barkly Field Section, Curepipe E.S., Roches Brunes SPC, Richelieu E.S., Plaisance and Belle Vue E.S.) in connection with the Seed Production Programme and plantations of bean, amaranthus, asparagus bean, spongegourd, pumkin, snakegourd, groundnut, onion, bittergourd, Chinese cabbage, bottlegourd, eggplant, pea, okra, snakegourd, lettuce, sweet pepper, broad bean, squash and ridgegourd were surveyed.

High incidence of fruit rot and fruits malformation was recorded on snakegourd at Richelieu and high incidence of fruit rot was observed on bottlegourd plantations at Barkly ES.

**3.2 Seed Health Testing**

**3.2.1 Imported seeds**

Seed Health Testing was done under laboratory conditions on seeds which are particularly known to be affected by seed borne diseases of economic importance. Seed health testing involving standard blotter tests according to ISTA norms (International Seed Testing Association), artificial growing media, biological, serological and growing on tests are currently used for detection and identification of seed borne fungi, bacteria and viruses in seeds samples collected from imported consignments.

Test being performed were as follows:

(i) Microscopic examination to reveal the presence of any surface pathogen in the form of spores or mycelium
(ii) Blotter testing to reveal any seed borne pathogens mostly of fungal origin
(iii) Growing on test performed in greenhouses to check for any pathogen that could possibly be seed transmitted, including bacteria, virus and fungus.

The tests were carried out on a wide range of imported seeds prior to their release.
In all, 110 consignments of imported seeds were tested. A total of 638 samples of seeds imported from France, India, Thailand, Korea, Israel, Holland, USA, Zambia, South Africa, Netherlands, China, Germany, Hong Kong, Chile, Korea, and Italy comprising of seeds of vegetable, flower, aromatic herb and feed seeds were received during the course of the year for the growing-on test.


The results of blotter test have revealed no incidence of seed-borne pathogens was revealed in blotter test.

Growing on test performed in greenhouses as well as blotter test carried out in the laboratory, to check for any pathogen that could possibly be seed transmitted.

### 3.2.2 Imported seeds potato (potato as planting material)

The NPPO provides services for inspection and clearance as well as monitoring of plantation (as and when required) in connection with seed potato for production of seed/table potatoes for local consumption.

For the year 2014, seed potato were imported from 3 countries namely Western Australia, Netherlands and USA by 5 prospective importers/distributors/growers. Twenty five (25) samples of seed Potato were forwarded to NPPO after inspection at the port for examination of same at the NPPO laboratory and growing on test in quarantine greenhouses.
The pests/diseases problems encountered/observed were Potato tuber moth, bacterial soft rot due to *Fusarium spp* bacterial scab and Silver scurf. The level of pest and diseases infection was found to be at an acceptable level, and measures were taken to control infection in the field through appropriate advice to growers to effect treatment of seed potato as well as sorting of seed potatoes prior to plantation.

### 4 RESEARCH AND DEVELOPMENT ACTIVITIES (REDUIT OFFICE)

#### 4.1 Status of virus diseases in vegetable crops in seed production stations in Mauritius

Monitoring surveys were conducted on the main seed production stations of the agricultural services namely Arsenal ES, Bois Marchand SPC, Barkly ES, Roche Brunes SPC, Riche lieu ES, belle Vue ES, Curepipe ES and Plaisance ES. The objective of the survey was to determine the status of viruses affecting leguminous, solanaceous, cucurbitaceous and cruciferous crops.

Symptomatic leaf samples and seed samples were collected and screened for viruses using biological indexation and Enzyme Linked Immunosorbant Assay (ELISA).

The main crops surveyed were Cucumber, snakegourd, tomato, asparagus bean, French bean, cucumber, pumpkin, lettuce, tomato, chilli, onion, and squash.

The viruses detected were Zucchini Yellow Mosaic Virus (ZYMV), Cucumber Mosaic Virus (CMV), Papaya Rinspot virus (PRSV), Bean Common Mosaic Virus (BCMV), Potato Virus Y (PVY), Turnip Mosaic Virus (TuMV), Tomato Mosaic Virus (ToMV) and Tobacco Mosaic Virus (TMV).

#### 4.2 Citrus Improvement Programme

The insect proof repository at the Quarantine Service, Reduit, was donated by Caisse Central de Coopération Française in mid 1990 under the Projet Fruitière and was designed for use as a repository for imported certified citrus materials. The objective of this project was to rehabilitate the existing infrastructures for production of disease free material and establishment of diagnostic tools for indexation of citrus planting materials.

Several scions have been taken from these stocks and delivered to Barkly ES. It can now be used as a pre-multiplication block for production of disease free budwoods for citrus propagation program.

In addition, seedlings have been raised from seeds from Variety Carizo under the same insect proof repository and some seedlings have been grafted with different varieties of citrus species namely Kumquat Marumi, Pomelo Star Ruby, Sweety, Washington NAVEL, New Navel, Kumquat, Meyer and Beauty.

For the year 2013, carrizo seeds were grown and potted and budwoods were collected for grafting at Barkly ES.
4.3 Preparation of Regulations under the Plant Protection Act (2006)

The Plant Protection Act (PPA) was promulgated in November 2006 in order to replace the Plant Act (1976). As per provisions made under section 32 of the PPA (2006) for regulations, a draft Plant Protection Regulation was prepared by a consultant and submitted in year 2007. Several amendments have been made to this draft regulation regarding which were being finalized at the level of the State Law Office (SLO). A meeting was held with the SLO for further discussion on the said regulations, the draft regulation was received from the SLO and was reviewed. Amendments were submitted to the Ministry for onward transmission to the SLO. The new fees for Sulfuryl fluoride treatment were worked out and incorporated in the regulations. A meeting with the SLO was awaited to finalise the new proposals made for incorporated in the regulations.

A meeting was held with PAS Mrs. Mudhoo to discuss and explain the provisions under the Plant Protection Act 2006 and the Plant Protection (import and export control) Regulations 2013 with a view to finalise the stand of the Ministry as regards the proposal made by the Ministry of Finance and Economic Development (MOFED) so as to include the provisions for online processing of PIPs and PCs as per the requirement of the Single Window Project in the Plant Protection legislations.

4.4 Proposal for an Electronic Permit System

In line with the Ministry of Finance and Government’s policy on online application and issue of permits, the Mauritius Network Services in collaboration with the NPPO is implementing an Electronic permit System (MNS) with a view to incorporate the issue of Plant Import permits (PIP), Phytosanitary Certificates (PC) and Certificate of Inspection (CI) under the Tradenet Single Window.

In this context, the MNS drafted a proposal for Online Application of Plant Import permits and Phytosanitary certificates following technical information submitted by the NPPO regarding the present system for issue of PIP, PC and CI.

The document containing the processes for the issue of PIPs, PCs and CI was being finalized. Data Sheet of regulated plants and plant products (for import and export) for online application, and list of exporters and importer is being established in connection with the software development. Import Conditions were also being reviewed and updated.

The Single Window Technical Committee (SWTC) was set up at the level of the Ministry of Finance to monitor technical issues related to the project. The Committee established working sessions with the NPPO as regards fees, administrative issues and policies regarding processing of PIPs, and clearance of regulated products. Four (4) meetings were attended and the following activities were carried out: (1) guidelines and flowcharts on procedures for importation, agricultural clearance and exportation of plants, plants parts and plant products was prepared and submitted the Board of Investment (BOI) for publication on the website of Board of Investment; (2) review of the process flowcharts (for NPPO, AMB and DVS) for the on line EPS for regulated products falling under the purview of the NPPO was reviewed; (3) discussion on (a)
consolidation for fees for NPPO, time frame for processing of permits and administrative procedures, (b) the proposal made by MOFED for inclusion of a provision for online processing of PIPs and PCs in the existing Plant (Importation and Exportation) regulations 1976; (4) the Business Facilitation Bill was finalized which includes the amendments to be made o the Plant Protection Act 2006 so as to make provisions for online processing of PIPs and PCs as per the requirement of Single Window project, and the Business facilitation Act 2013 was enacted; (5) proposal was made to include provision for online processing of PIPs and PCs in the Plant Protection (import and export control) Regulations 2013, a new document that has already been prepared and is being finalized at the level of the SLO and which is expected replace the existing Plant (Importation and Exportation) regulations 1976. A meeting with SLO was awaited to discuss the proposal.

Another meeting was attended at Tariff Unit of the Mauritius Revenue Authority to review the list of products and HS Codes regulated under the PPA 2006 with a view to (i) amend the list for products for which PIP is no longer required and (ii) work out product codes.

A fourth meeting was held with PAS Mrs. Mudhoo to discuss the views of NPPO as regards inclusion of provisions for online processing of PIPs and PCs in the Plant Protection (import and export control) Regulations 2013 instead of the existing Plant (Importation and Exportation) regulations 1976.

Following request from the MNS, the NPPO submitted the following inputs: (1) breakdown of consolidated fees, (2) copy of application for a PIP and inspection certificate and (3) copy of PC.

5 QUARANTINE AND BIOSECURITY (PHYTOSANITARY) PROTOCOLS AND MEASURES AND RELATED AWARENESS ACTIVITIES

5.1 IMPLEMENTATION OF AUSTRALIAN QUARANTINE INSPECTION SERVICES (AQIS) GIANT AFRICAN SNAIL (GAS) COUNTRY ACTION LIST FOR SEA CONTAINERS DESTINED FOR AUSTRALIA

The Australian Quarantine Inspection Services (AQIS) have identified containers originating from and/or transshipping through GAS infected countries as a potential pathway of introduction of GAS into Australia, GAS being considered as invasive alien species and a potential threat to important food crops, natural resources and human health.

In this respect AQIS reviewed its risk management strategies in order to minimize the risk of introduction of this invasive species into Australia and proposed Mauritius an Operating Arrangement that defines the terms of implementation and ongoing operation of a mutual recognition arrangement between AQIS and MAIFPS Mauritius, initially for the inspection and assurance of containers being transshipped through Mauritius to Australia. The scope of this arrangement covers a port hygiene system that effectively manages the biosecurity risk for sea containers being landed in Australia from Mauritius as per ISPM 4 (Establishment of a Pest free Area).
According to the Operating Agreement, the NPPO developed a Standard Operating Procedure (SOP) and supplied to AQIS which was approved by two Officers from AQIS, Dr Lindr Cayzer and Mr Nathan Reid, during their visit in Mauritius from 02 to 04 June 2010. The Operating Agreement still remained to be signed and the name of designated person to sign the agreement is awaited.

However in 2012, AQIS had proposed some amendments to the Operating Agreement. The amendments were studied by Officers of the NPPO and Entomology division. Further clarifications were sought from AQIS, to the reply of which in 2013 the NPPO was informed that the agreement covers GAS and a list of Quarantinable plant diseases and quarantinable pests.

The NPPO was also informed by the Department of Agriculture, Fisheries and Forestry (DAFF) of Australia through the Australian High Commission that Giant African Snails (GAS) were intercepted on a vessel and 2 containers transshipped through Mauritius. All stakeholders namely the Mauritius Port Authority (MPA), Cargo Handling Corporation (CHC), Mediterranean Shipping Company (Mauritius) Ltd (MSC) were also immediately alerted. The NPPO had three (3) meeting with all the stakeholders and the source of infestation was established. Vigilance was increased for containers PARTICULARLY REGARDING CONTAINERS ORIGINATING FROM COUNTRIES IN THE DAFF GAS COUNTRY ACTION LIST. The NPPO and the Entomology division have also intensified surveillance and inspection in the port area (dedicated stacking zone and periphery) to ensure freedom from GAS.

A site visit was also carried out for a monitoring of the implementation of the biosecurity measures put in place it the port area namely inspection of dedicated staking zone, application of baits and clearing of periphery.

A correspondence was addressed to the Australian Authority regarding concerns to specific issues in the SOP. Copies of corrected SOP and QM were also submitted to all stakeholders for comments/approval and comments were received. A favourable reply for our correspondence sent to the Australian authorities was received suggesting Mauritius consider alternative measures so far as the required level of assurance is maintained. Stakeholders were informed of the reply from Australia and views were sought from stakeholders for having a sub staking zone for containers from countries on the CAL for inspection prior to being moved to existing stacking zone was made to the Cargo handling Corporation.

In this context, inspection was carried out for 18 consignment of 3574 containers prior to departure of which 222 containers originating from countries which are on the GAS Country Action list of Australia

5.2 IMPLEMENTATION OF WHITE GRUB PROTOCOL

The White Grub Protocol (WGP) is a Franco-Mauritian bilateral agreement signed by the two parties, namely Mauritius and Reunion Island, in the year 1990. The Protocol provides for phytosanitary measures to prevent the introduction of White Grub insects (hannetons; scarabées),
Hoplochelus marginalis, from Reunion Island. Specific guidelines in relation to movement of planes, ships and people to and from Reunion Island are clearly stipulated; such as specific time of arrival or departure of planes and ships co-relating with the time of flight of the insect (at night), regular monitoring and surveillance program (including spraying program) at airport and seaport areas.

The Protocol was reviewed in 2010 and is now implemented during the period 1st November to 15th January the following year whereby the phytosanitary risk associated with the insect is very acute as this period corresponds to the flight period of the adult insect.

Some twenty three years after the signature of the first Protocol, the White Grub Protocol remains still one of the most successful bilateral agreement between the two parties. Mauritius has so far been kept free from this destructive quarantine pest.

5.2.1 Activities at SSR International Airport

The activities at the SSR Int. Airport consist of (i) inspection of all arriving planes arriving from Reunion island for the presence of the species of adult White Grub present in Reunion island (the main targeted quarantine pest of economic importance to us) and (ii) inspection of the departing planes (early morning) to Reunion island for the presence of the local species of live adult of White Grub that is present in Mauritius.

During the period under review the outcome of the activities at the SSR International were as follows: (i) one hundred and three (103) “Attestation Desinsectisation” were received from Flights from reunion. And one hundred, (ii) seventeen (117) ‘Certificat d'examen visuel’ was issued to the attention of the Plant Protection Service of Reunion Island in connection with the inspection of the departure of the first plane to Reunion Island. (iii) No derogations were given. (iv) No traces of the adult white grub have been observed in the incoming planes.

5.2.2 Activities at Port Louis Harbour

The activities at the Port Louis harbour consist of inspection incoming ships/vessels/yatch from Reunion Island for the presence of the White Grub (Hoplochelus marginalis - the main targeted quarantine pest of economic importance to us) and (ii) inspection of departing ship vessels to Reunion island for the presence of the local species of live adult of White Grub that is present in Mauritius.

During the period under review the outcome of the activities at the SSR International were as follows: (i) Fifty seven (57) inspections of ships going to Reunion island were carried out and “Certificat Examen Visuel et Traitement” issued accordingly, (ii) 94 “Attestation Desinsectisation” were received from ships from reunion, (iii) Derogation were given to two (2) shipping vessels and (iv) No traces of the adult white grub have been observed in incoming ship vessels.
5.2.3 Visit to Reunion Island

As part of the implementation of the Protocol, Officers from the National Plant Protection Service of each island carry out a mission in the sister island each year to monitor in-situ and evaluate the white grub population at the ports and airports. Discussions are held on the Protocol especially on the constraints and weaknesses associated with it.

The delegation also visits the seaports and airports during the flight period of the insect (19:00 to 20:00) and light traps installed at these points of entry and take stock of the existing arrangements for insect trapping in each island.

However for the implementation period of 01 November 2011 to 15 January 2012, the annual visit was not carried out.

5.3 Phytosanitary Measures for Import and Export

In the context of implementation of SPS agreement of WTO, import risk analysis (Pest Risk analysis(PRA)) are carried out prior to the importation with a view to evaluate the probability of introduction, spread and establishment of potential pests and the magnitude of potential economic consequences in Mauritius. Pytosanitary Measures (Import conditions) are formulated accordingly and attached with the import permits that is forwarded to the exporting country for compliance.

In context with the above and during the period under the following activities have been completed:

a. Formulation of Phytosanitary Measures for importation of rambutan, watermelon, pomelo, mangosteen and mango from Malaysia.

b. Formulation of Phytosanitary Measures for importation of Jatropha spp from India.

c. Review of the import conditions cherry tomatoes.

5.4 Interception of New Fruit Fly Species

During the regular fruit fly surveillance by the Entomology division, one new fruit fly species suspected to be Bactrocera invadens was detected in a fruit fly trap at Labourdonais orchard in the north. Following an urgent meeting with different stakeholders, the area was declared quarantine area and specific actions were initiated as per the contingency plan for containment and eradication of the pest.

The collected specimen has been identified by the National History Museum in Belgium and belongs to the Bactrocera dorsalis complex, which also include Bactrocera invadens.
5 Outbreak of Mealy Bugs of Papaya

Following a report of AREU on the unidentified mealy bug that was found to be highly infested on mainly papaya trees in the backyard as well as in the wild in the regions of Albion, Pointe aux Sables, petite Riviere, Gros cailloux and Chebel, a technical committee was set up and met twice under the chairmanship of the Ag DSO of the NPPO for monitoring the status of the pest and to develop a contingency plan for the control and management of the pest.

5.6 Exceptional Importation of Selected Vegetables After Torrential Rains

Following torrential rains in the month of February, the Ministry decided to allow importation of selected vegetables; 250 tons carrots, 150 tons cabbage, 50 tons cauliflower and 20 tons beans to cater for local consumption till April. The quota for importation was allocated by the Ministry to importers willing to import selected vegetables. In this context, 741 PIP were issued and 176427 kg of carrots, 34664 kg of cabbage, and 2134 kg of beans were inspected and released at SSR International Airport.

5.7 World Food Day Celebrations

In the context of the celebration of the World Food Day, open days were organised on 17 – 19 October 2013 at several divisions/parastatals falling under the aegis of the Ministry namely AREU, SFWF, AMB, FARC, SSRBG, NPCS and the Forestry Services. For agricultural services, activities were organised at the Barkly ES, Division of Veterinary Services, Entomology Division and the Animal Production division. The theme chosen to commemorate the World Food day the year 2013 was “Sustainable Food Systems for Food Security and Nutrition”.

The NPPO prepared, displayed and presented comprehensive posters to the public to create better awareness on the plant protection, quarantine and regulatory activities as well as pamphlets regarding services and facilities offered in relation to the import and export trade of agricultural produce. Brochures of the NPPO highlighting the objectives and key facilities offered were distributed to the public.

6 Capital Projects

6.1 Setting up of a Multipurpose Containment Facility

Aim of project:
Under the Non-Sugar Sector Strategic Plan 2003-2007, our Ministry had proposed the setting up of a multipurpose Containment Facility that would interalia serve for:

(i) Introduction and testing for subsequent breeding and multiplication of biological control agents
(ii) Investigation of high risk quarantine material and pathogen, and
Previous activities (completed)

Previous activities comprised of the following:

(i) A feasibility study was carried out in 2008 by a private firm from Belgium on the basis of an international tender process.

(iii) Environmental Impact Assessment by a local private firm.

(iv) Structural Investigation of the existing greenhouses.

(v) Formation of a multidisciplinary technical team in collaboration of the Ministry of Public Infrastructure (MPI) to study the reports and monitor the activities as per the recommendations made therein to demolish the existing greenhouses and construct a new facility through a tender process.

(vi) Initiatives for preparation of project proposals and budgeting by NPPO.

(vii) Survey of site and presentation of a survey plan by the Survey Office.

(viii) Study of the designs in the feasibility report by the architects of MPI with a view to make drawings of the office building and greenhouses.

Activities in FY 2013

Budgetary Funds of Rs 15 million were allocated for the year 2013 for the setting up of a multipurpose containment facility.

On the basis of the outcome of previous activities and recommendations ade in the reports, draft tender document was prepared by the Ministry of Public Infrastructure (MPI) in collaboration of the Procurement and Supply Office, the Engineering Division and the NPPO. In this context, meetings were held at the MPI to review a draft tender document and calculation of cost estimate for the construction (Turnkey project) of the MCF.

The NPPO has submitted the following (i) list of equipment to be provided by the Supplier/Contractor of the MCF for incorporation in the tender document, (ii) a cost estimate of the equipments, (iii) proposed amendments to section on employer’s requirements of the draft tender document and (iii) a soft copy of the location plan of the MCF.

The NPPO has also submitted the project to the Finance Section details as per the Project Request Form with a view transmission of same to the project Plan Committee (MPI). In this connection,
a meeting the Project Plan Committee was attended by NPPO and a “no objection” was obtained from the latter for the implementation of the project.

In line with the requirement of PBB and given the delay in the implementation of the project, additional funds for the construction of the MCF has been also sought for FY 2014.

Followup meetings was held at the level of the Chief agricultural Officer as well as the Ministry of Agro Industry with a view to monitor the implementation of the project and solve the technical issues.

Further activities in the project cycle included the initiation of the bidding exercise for the demolition of 5 existing greenhouses, award of the tender for same and start and completion of the demolition work of 5 existing greenhouses.

Further meetings were held with the MPI under the chairmanship of the CAO to follow up the activities under the project and decide on the likely launching date of the tender document for a Turnkey Project.

Consequently the tender for designing and construction of the MCF has been launched on 19 November 2013 and the closing date for submission of tender was initially the 19 December 2013.

Towards the end of the FY 2013, a pre-bid meeting was held under the chairmanship of the CAO with potential bidders for the project for clarifications regarding certain sections of the tender document. Given the complexity in the construction of the project, there was a request from potential bidders to extend the submission date of the bids. The Ministry had agreed to extend the deadline for submission of bids up to 14 January 2014.

6.2 Setting up of a Sulphuryl Fluoride Treatment Plant for NPPO at Fort George in the Port Area

The Setting up of a Sulphuryl Fluoride Treatment Plant (SFTP) at Fort George in the Port Area is a component under the Multipurpose Quarantine Treatment Project which has the overall objective to provide treatment facilities and services to stakeholders (importers, exporters and public at large) for quarantine the treatment of agricultural products so as to eliminate insect pests prior to export so as to comply with the phytosanitary requirement of trading partners as well as the treatment of imported products for their safe introduction into Mauritius as per the requirement under the Plant Protection Act 2006.

Budgetary Funds of Rs 8 million were allocated in 2012 for implementation of the Fumigation Plant Facility using Sulphuryl Fluoride with an intended quarantine use. Construction of the facility at Fort George in port area which started in May 2012 was completed in August.

The fumigation treatment fee was worked out on the basis of cost benefit analysis and a cost recovery mechanism and a single fee (full load) was submitted to Fees Committee in May.
Subsequently, four additional fees were worked out for treatment of different volumes of commodities ranging from less than 1 cubic meter to 20 cubic meters. These fees were incorporated in the new regulation for submission to the State Law Office.

Furthermore, a training of Officers was been undertaken by the contactor, Steamhouse Ltd during which Officers have been guided, through a checklist, to operate the treatment plant. Procedures for the running the Facility have been fined tuned to offer the fumigation services for selected agricultural products. The SF fumigation treatment Plant became operational and fumigation of 70.64 metre cube of wooden products were carried out in the year 2013.

Suppliers of the SF gas were being sourced.

**7 SPS MATTERS**

**7.1 WTO SANITARY AND PHYTOSANITARY ENQUIRY POINT**

*Notifications-reception and dissemination*

During the year 2013, 1289 Notifications were received on from the WTO. These notifications were studied and 693 notifications regarding food safety were forwarded to the Codex Point and 197 notifications regarding animal health to OIE Focal Point, Veterinary Division. 255 Notifications was obtained regarding plant health and 54 notifications regarding reports and other documents.

**8 MEETINGS, SEMINARS/WORKSHOP/TRAINING ABROAD/LOCAL FOR THE YEAR 2013**

a. 124 meetings were attended by Officers of the NPPO.

b. One (1) Mission abroad was attended by Mr N. Sobun, SSO, on the 4\(^{th}\) Meeting of the SADC Sanitary and Phytosanitary Coordinating Committee from 23 to 26 July 2013 in Centurion South Africa.

c. One (2) training abroad was attended by 4 Officers of the NPPO namely Mrs Pratimah Peethum (Scientific Officer), Mrs Sachita Jawaheer-Unath Ras (Scientific Officer), Mr Chandradeo Oree (Senior Technical Officer) and Mrs Rooksana Soogund (Technical Officer), the FAO/IAEA Regional Training Course on Quarantine and International Standards for Phytosanitary Measures for the Indian Ocean from 1 - 5 July 2013 in Maputo, Mozambique.