BASELINE STUDY FOR THE SEED SECTOR OF MADAGASCAR

By Eddy RANDRIANATSIMBAZAFY

E-mail: ofmata@moov.mg

eddy.randriana@gmail.com

Cette étude a été faite sur financement de l’Union Européenne dans le cadre du Projet COMRAP (COMESA Regional Agricultural Input Program)
TABLE OF CONTENTS

Table of contents ............................................................................................................................................... 2
Acronyms ........................................................................................................................................................... 3

1. GENERAL INFORMATION ON THE SEED SECTOR OF MADAGASCAR ..................................... 4
   1.1. Introduction ........................................................................................................................................... 4
   1.2. Background ......................................................................................................................................... 5

2. SEED CERTIFICATION PROCEDURES ............................................................................................. 5
   2.1. General information .......................................................................................................................... 5
   2.2. Seed classification ............................................................................................................................ 6
   2.3. Certification process ......................................................................................................................... 7

3. VARIETY RELEASE SYSTEMS .............................................................................................................. 7

4. PHYTOSANITARY MEASURES .............................................................................................................. 8
   4.1. General information ........................................................................................................................ 8
   4.2. Phytosanitary measure including the process and the quarantine pest list in Madagascar ........ 8
   4.3. Future plan for phytosanitary measure in Madagascar .................................................................. 10

5. PLANT VARIETY PROTECTION ....................................................................................................... 10

6. SEED IMPORTATION AND EXPORTATION PROCEDURES ......................................................... 10
   6.1. General information ........................................................................................................................ 10
   6.2. Seed importation and exportation procedure ................................................................................. 11

7. MEMBERSHIP TO INTERNATIONAL ORGANISATIONS ............................................................... 12

8. LIST OF FORMS .................................................................................................................................... 12

9. ANNEXES ................................................................................................................................................. 24
ACRONYMS

AMPROSEM Malagasy seed Association
CA-BNI Crédit Agricole
CEM Caisse d’Epargne de Madagascar
CMS Seed Multiplication Center
COMESA Common Market for Eastern and Southern Africa
CONASEM National Seed Council
DUS Distinction Uniformity and Stability
EASTA Association of Seed Control in Eastern Africa
FIFAMANOR Norway and Madagascar Cooperation in livestock and agriculture
FOFIFA National Agricultural Research Center of Madagascar
GDP Gross Domestic Production
GPS Seed Growers Grouping
ISTA International Seed Testing Association
OFMATA Malagasy Office of Tobacco
OMAPI Malagasy Office for Industrial Property
SOC Official Services for Seed Control
SQIF Plant Quarantine Services
UPOV Union for the Protection of New Plant Variety
1. GENERAL INFORMATION ON THE SEED SECTOR IN MADAGASCAR

1.1. Introduction
Madagascar has an area of 595,000 Square km of which around 58 million hectares are arable lands, but only just over 3 million hectares are farmed. The farming population is estimated at 16 million (about 80% of the total population) and is still food insecure. The average farm size is of 1.5 hectares using traditional techniques with low level of mechanization and low rate of use of agricultural inputs (fertilizer, improved seeds, pesticides,...). The majority of farmers who use fertilizers are commercial farmers representing about 5% of the farmers.

Though Agriculture is the mainstay of the economy of Madagascar assuring the majority of its export earnings and strong contributors to its GDP, the road infrastructure is not good enough to allow a good circulation of the produces to access the market. Farmers sell the surplus of produce in the local market. The most common crops are rice, maize, cassava, potato, sweet potatoes and vegetables. The Southern region of Madagascar is the least populated because of the droughts, which affect this part of the island.

Research Centers such as FOFIFA, FIFAMANOR and OFMATA conduct breeding activities to create new and adapted varieties and produce foundation seeds. In addition, foundation seed of crop varieties have good genetic traits are also imported for the production of certified seed to be sold to farmers. The Seed Multiplication Centers (CMS) and the Seed Grower Groupings (GPS) multiply seed for farmers. Professionalism is important to promote the seed sector in Madagascar i.e. seed activities should be only handled by registered seed companies, which can properly undertake seed activities according to the seed legislation. The enforcement of the seed legislation requires as well efforts from the government to ensure that farmers access to quality seeds in a timely manner and at affordable price. The Ministry of Agriculture through its National Seed Council (CONASEM) plays a crucial role for the development of the seed sector in defining the national seed policies.

The seed distribution is through local shops, which play the role of seed retailers/stockists. Most of seeds companies and agro dealers are located in the region where agricultural activities are intensive such as Antananarivo, Antsirabe, Marovoay, Ambatondrazaka and Fianarantsoa. The average distance for a smallholding farmer from an agro dealer is about 70 km. The investment of a small agro dealer is estimated at Euros 3,000 Euro to establish their business. To name a few, ACM, AFAFI, AGRICO, AgriVet, ITA/ICS, SDC-Agri and SEPCM are the major agro dealers that supply retailers. They organized demonstration plot and farmer field day to market their agricultural inputs. In rural area, radio and leaflet play important role for information sharing.

About 5% of farmers get micro-credit from the banks to buy their agricultural inputs. Smallholders also get micro-credit facilities from NGO providing finance services at a reasonable interest rate.

There are projects offering opportunities for agribusiness and smallholders to expand into post-harvest handling, processing, and marketing.

The following are some of the constraints for the agricultural sector:
- The small farmers do not access to loan from the bank because they do not have collaterals;
- There is no good irrigation system and the yield depends on the rain of the season;
- Very low recovery rate for the credit loan from the bank;
- The interest rate for the loan from the bank is unreasonably high.

APROSEM is the national seed trade association of Madagascar working closely with the government for seed sector development.

1.2. Background

The development of the seed sector is considered as the basis of the development of agricultural sector in Madagascar.

Madagascar promulgated its seed law n° 94.038 in 1994, but its application decree was only enacted in 2006 and the enforcement is still a huge challenge. Most farmers still use farm-saved seeds. Hence, it is difficult to get good statistics on seed production and sale in Madagascar. Therefore, one of the priority activities of AMPROSEM (most seed stakeholders are members and their list is in Annex 1) is to build and update the seed database. This is part of national seed strategy adopted on November 11, 2008, which also governs seed trade in Madagascar.

1.2.1. Statistics on seed production

Seed statistics is an important tool for decision-making, but seed database is not available in Madagascar. However, through interview and compilation of available data, a statistics on seed production is in annex 2.

1.2.2. Statistics on seed importation

Madagascar does not have complete statistics on certified seed importation, which is mainly done by international Organizations as relief seed during the disasters due to hurricane or other natural calamities. They kept their database, which this is the only available statistics on certified seed importation.

In most cases, Madagascar imports a limited quantity of basic seed used to produce certified seed in the seed multiplication centers and the seed grower groupings. Statistics on seed importation is in annex 3.

1.2.3. Statistics on seed exportation

Madagascar has limited data on seed exportation and the quantity is very small. SEMANA is the only seed company, which exports vegetable seeds. Available statistics on seed exportation is annex 4.

2. STANDARDS FOR SEED CERTIFICATION

2.1. General information

The Official Seed Control Service (SOC) enforces the seed laws on seed certification whose main assignments are as follows:

a) Receive and record the application for seed production in line with the established standards;
b) Sample seed lots for analysis in the seed laboratory;
c) Carry out any tests to determine seed quality (moisture content, germination, inert matters, seed health, etc.);

d) Undertake varietal purity trial for post control test;

Seeds certification:
All seed commercialized must be certified except for vegetable seeds (certification is optional).

Labeling:
There must be label in seed package delivered by the SOC. The following colors are used for various seed classes:
- White with purple for breeders and pre-basic seeds;
- White for basic seeds;
- Blue for certified seeds of first generation (R1);
- Red for certified seeds of second generation (R2) and for hybrids seeds (F1);
- Green, for quality declared seeds.

There must be the following in the back of the labels:
- Year of production;
- Country of origin;
- Reference to article of Malagasy Seed law;
- Name of Official Seed Control Service (SOC);
- Name of crops;
- Name of variety as it appears in the Malagasy seed catalogue;
- Lot Number;
- Net weight of the sac;
- Chemicals used for treatment.

**Body: Official Seed Control Service (SOC)**

**Head of SOC: Mrs. RANDRIAMILANDY Ketamalala**

**Address:** Nanisana Antananarivo

**E-mail:** ketamalal@yahoo.com

**Telephone:** +26134 06 036 62

### 2.2. Seed classes

Malagasy Seed Laws defines seed classes as follows:

a) Parental line (Go)

Parental line indicates the initial material with a precise production method using maintenance breeding.

b) Pre-basic Seeds (G1,G2,G3)

Pre-basic Seeds G1, G2 and G3 are between parental line and basic seeds and produced by the breeders or its mandated representative.

c) Basic Seeds (G4)

Basic seeds G4 are produced from pre-basic seeds according to a precise production method by the maintainer and it is used to produce certified seed.
d) Certified Seeds

Certified Seeds are produced from basic seeds and it can be the first (R1) or the second generation (R2) from basic seeds.

2.3. Certification processes

Only seed of varieties registered in the catalogue can be certified. The certification process is as follows:

- Field inspection (Isolation, off-types, etc.) by the seed inspector;
- Seed laboratory testing (varietal purity, germination rate, moisture content, seed health, etc.);
- Control of packaging;
- Sealing by the SOC

The SADC seed certification standards are adopted in Madagascar being member of SADC. Capacity building is required for the staff of SOC and the seed laboratories need more equipment.

3. VARIETY RELEASE SYSTEM

When the varieties are released, they are registered in the national variety catalogue managed by the Ministry of Agriculture. The following groups are in this catalogue: Registers will be open for groups of the species below:

- Food crops;
- Fodder and pasture;
- Forest;
- Vegetable crops;
- Fruit trees;
- Ornamental species;

There are two lists in the national variety catalogue of Madagascar:

- List A: Varieties whose seeds can be multiplied and sold in Madagascar;
- List B: Varieties whose seeds can be multiplied in Madagascar;

The national variety Catalogue contains as well particular lists of some species namely:

- List of the old varieties of vegetables and fruit species;
- List of traditional or local varieties notoriously known for their taste and characterized by the national agricultural research system.

The registration of a new variety must meet the following conditions:

1) For registration in list A:
- Distinct, uniform and stable (DUS);
- Value for cultivation and Use (VCU);
- Variety denomination approved in Madagascar

2) For registration in list B:
- Distinct, uniform and stable (DUS);
- Variety denomination approved in Madagascar
The first variety catalog contains 50 varieties and at the disposal of the seed stakeholders (seed producers, seed distributors, etc.). All the new varieties should be registered in this catalog.

A variety release committee will be created by a Ministerial Decree and would be composed of the following:

- The head of variety release and registration Services of his/her representative;
- The head of the Plant quarantine services or his/her representative;
- The head of the silo of national seed forest;
- The representative of FOFIFA;
- The representative of agronomic training and education;
- The representative of seed companies
- The representative of farmers;
- The representative of food industry.

4. PHYTOSANITARY MEASURES

4.1. Background information

This Direction of Plant Protection has three services:

- Phytosanitary surveillance Service in charge of the detection of pets;
- Quarantine Service and Phytosanitary inspection in charge of the control seed importation and exportation;
- Phytosanitary Service conducting research to fight against diseases.

Most of the infrastructure is old and not any more functional. There is no plan to replace the current staff by a younger generation.

4.2. Phytosanitary measure including the overall process and quarantine pest list

The objectives of the phytosanitary measures are:

- Plants and plant products are not prohibited;
- Plants and plant products fulfill the requirements of the regulations.

The agent in charge of phytosanitary control gathers all the elements, which allow him/her to conduct the phytosanitary inspection. She/he lists the requirements, which can be verified such as the additional declaration in the documents, or verifiable technical requirements (absence of leaf, flowers, fruits, and peduncle). The following questions are considered:
- Is the crop (origin, type and category) known as risky?
- What are the requirements to be applied to the imported plants?
- What are the pests, which could be present in the imported plants?
- On which sample the visual inspection must be done?
- What kind of observation must be done?
- Should a systematic sampling be done?
- Which laboratory should receive the sample?

Procedure:

Step 1: Preparation of the inspection

For a good organization of the control, the operator must notify the arrival of merchandises to be inspected 24 hours before its introduction.
The quarantine service or the phytosanitary control post registers the application and assigns it to an agent in charge of the phytosanitary control.

Step 2: Documentary Control

The agent in charge of the phytosanitary control undertakes the documentary control. If the control is conform, the agent evaluates the opportunity of phytosanitary transit to the agreed place of destination for the physical control. If the control proves non-conformity, the agent passes directly to the step 6 bis.

Step 3: Evaluation of the feasibility of a transit

Step 4: Control of identity:

The control of identity is done in the application for phytosanitary inspection.

Step 5: Phytosanitary control

If the control shows conformity, the agent goes to the step 6.
If the control proves a non-conformity, one goes to the stage 6 bis.
If there is a “plant quarantine crop”, the agent ensures that it is sent to the Quarantine Service.

Step 6: Giving the inspection report to the operator

The agent concludes the “delivery to the owner”

Step 6 bis: Delivery of the inspection report to the operator.

The agent explains in the inspection report the case of non-conformity:

- Documentary non-conformity;
- Non-conformity of identity;
- Non-conformity to the phytosanitary requirements
  If the detected pest has not been listed by the regulations, but it is susceptible to have a potential phytosanitary risk,
- It must be sent to quarantine service;
- The dissemination must be avoided

In case of reinforced control:
- The sending must be kept in the custom while waiting for the result of analysis;
- Information of the operator of the consignment

4.3. Future plan of the country for phytosanitary measures
The capacity building for the human resources and the reinforcement of the equipment are crucial.

5. PLANT VARIETY PROTECTION

The OMAPI is responsible for patent for industrial invention. This office does not handle plant variety protection. Though it is important for the plant breeding activities in Madagascar, there is no law for plant variety protection. There is a regional draft law for SADC of which Madagascar is member but it is not applied in the country.

The contact addresses of OMAPI are below:

Office Magache de la Propriété Industrielle
Bâtiment de la Direction de l'Artisanat
General Manager : M. ANDRIANIRINAZAKA Jocelyn
Rue Agostinho Neto Cité 67 ha Sud.
B.P. : 8237 Antananarivo 101 Madagascar.
Phone : (261 20) 22 335 02/ 22 335 06
Fax : (261 20) 22 659 79.
E-mail : omapi@moov.mg.
Site web: http://www.omapi.mg

6. SEED IMPORT AND SEED EXPORT DOCUMENTATION AND PROCEDURES

6.1. Background information
The Plant Quarantine Service (SQIF) is responsible for plant importation and exportation including seeds. Like in each country in the world, all the seed lots imported to Madagascar have to undergo a control at the Board by the Quarantine Service to make sure that no pests are present to avoid their possible propagation. Madagascar has a quarantine pest list. The contact address of SWIF are below:

Plant Quarantine Service (SQIF)
Nanisana Antananarivo
E-mail: chef_squif.dpv@agriculture.gov.mg
Chief: RAOELIVOLOLONA Arlette Olga
Phone: 034 05 610 70
The infrastructure for this service is old and the capacity is very limited to handle significant amount of seeds.
6.2. Seed import and export procedures

Seed importation and exportation follow the general rules for external trade in Madagascar. There must be a preliminary declaration submitted to Official Control and Certification Service.

1. The importer or the exporter of conventional seed has to submit the following information about the seed lot:

- Company Name;
- Name and address of the suppliers or the receivers;
- Species and variety in accordance with COV.
- Category and generation;
- Lot number;
- Declared weight of lot;
- Number of packages;
- Unit weight of package;
- Label number in specifying first and last numbers;
- Chemical treatments used with name of active matter.

2. The importation and exportation of non-conventional seeds is governed by the prevailing text.

Phytosanitary Certificate:

All seed lots imported or exported are accompanied by a phytosanitary certificate delivered by National Plant Protection Organization.

Control for the importation:

The importation of plant contaminated by quarantine pests is prohibited. For phytosanitary reason, the importation of plant may be preliminarily authorized or totally prohibited. The regulations stipulate that any moral or physical person who would like to import plants must:

- Have the Plant Import Permit from the Quarantine Service;
- Hold a phytosanitary Certificate of Origin or a phytosanitary certificate of re-exportation according to the international model and mentioning any necessary required additional declarations;
- Submit products to phytosanitary control on arrival;
- Respect the requirements by the Quarantine Services

Control to the exportation:

The agent of Quarantine Services undertakes the control and decides on the necessary measures. Any moral or physical person who would like to import must obtain a phytosanitary certificate from the Quarantine Service.
Based on the health status of the plant to be exported, the Quarantine Service may refuse to deliver the certificate or grant it after possible treatment. The exportation of some endangered plants may be prohibited or requires a preliminary authorization.

7. **MEMBERSHIP TO INTERNATIONAL ORGANIZATION**
    Madagascar is member of the following regional and international organizations: SADC, COMESA, World Trade Organization (WTO), International Convention for Plant Protection (ICPP), Cartagena Protocol, International Phytosanitary Council (ICP),

8. **LIST OF FORMS**
FORM 1: PLANT IMPORT PERMIT

REPOBLIK'IN' MADAGASIKARA
Tanindrazana – Fahafahana – Fandrosoana

——
MINISTERE DE L'AGRICULTURE, DE L'ELEVAGE ET DE LA PECHÉ

——
PERMIS D'IMPORTATION
DE PRODUITS SOUMIS À LA REGLEMENTATION PHYTOSANITAIRE
PLANT IMPORT PERMIT

N°______________________/ MG

Conformément aux dispositions de la loi phytosanitaire n° 86-017 du 3 novembre 1986 fixant les conditions phytosanitaires
d'importation à Madagascar.

In accordance with the November 3rd 1986 phytosanitary act n° 86-017 determining the phytosanitary conditions of
importation in Madagascar.

NOM ET ADRESSE DE L'IMPORTATEUR :
NAME AND ADDRESS OF IMPORTER :
M_____________________________________________________________________________

Permission is hereby granted to Mr
Est autorisé à importer par le bureau de douane
to import through the Customs office of

dans un délai de six mois suivant la date de signature du présent permis, les marchandises suivantes :
within six months from the date of signature of the present permit the following items:

NATURE ET DESCRIPTION DE LA MARCHANDISE :
NAME AND DESCRIPTION OF THE ITEMS :
_________________________________________________________________________________________________________
_________________________________________________________________________________________________________
_________________________________________________________________________________________________________

PAYS ET LIEU D'ORIGINE
COUNTRY AND PLACE OF ORIGIN
ADRESSE COMPLETE DU FOURNISSEUR :
FULL ADDRESS OF SUPPLIER :

DANS LES CONDITIONS SUIVANTES :
SUBJECT TO THE FOLLOWING CONDITIONS :

Fait à Antananarivo, le ____________________________    Le Chef du Service de la
Quarantaine
(Date) et de l’Inspection

SPECIMEN
FORM 2: OMAPI FORM

REPOBLIKAN’I MADAGASIKARA
Tanindrazana-Fahafahana-Fandrosoana

MAKAPAY

MALAGASY OFFICE OF PATENT RIGHTS

TEI: 22 335 06 / 22 335 02
Fax: 22 659 79

REQUEST FOR:
- LETTERS PATENT (°)
- ADDITION CERTIFICATE

Reserved part to the Office (for the deposit)

Date of reception: Hour: Class (es):
Serial number:
Title type requested: Stamp Signature and name of the responsible:
Letters patent
Addition Certificate

1. Request
The undersigned request that this inquiry must be treated in accordance with law n°89-019 dated 31 July 1989 and its decree of application n°92-993 dated 02 December 1992

2. Inquiry type
National inquiry
International inquiry
Classic way
PCT Way:
- International depositing date:
- International depositing number:
- International publication number:
3. **Invention title**

4. **Asker**

   . Surname and Name (or Company name):
   
   . Trade Register: Stat.: Fiscal Identification Number:
   
   . Address:
   
   . Tel: E-mail: Fax:
   
   . Nationality: Residence:

5. **Inventor**

   The applicant is also the author of the invention:
   
   The applicant isn’t the author of the invention:
   
   . Name & Surname:
   
   . Address:
   
   . Tel: E-mail: Fax:
   
   . Nationality: Residence:

6. **Representative in Patent rights, in case of need**

   . Name & Surname (or Company Name):
   
   . Address:
   
   . Tel: E-mail: Fax:

7. **Priorities claiming, in case of need**

<table>
<thead>
<tr>
<th>Country</th>
<th>Deposit date</th>
<th>Deposit Number</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>..........</td>
<td>................</td>
<td>..........</td>
<td>................</td>
</tr>
<tr>
<td>..........</td>
<td>................</td>
<td>..........</td>
<td>................</td>
</tr>
<tr>
<td>..........</td>
<td>................</td>
<td>..........</td>
<td>................</td>
</tr>
<tr>
<td>..........</td>
<td>................</td>
<td>..........</td>
<td>................</td>
</tr>
</tbody>
</table>

8. **If the inquiry goes to a delivery of an addition certificate**

   . Leading patent Number:
   
   . Date of delivery of the leading patent:
   
   . Holder name:

9. **Symbol of International classification of patent**

10. **Specification of taxation**

    . Deposit tax: .......... 
    
    . Additional tax of description: .......... 
    
    . Priority claiming tax: .......... 
    
    . Length tax of claiming (from the tenth): .......... 
    
    . Registration and publication taxes: .......... 
    
    . Payment: ..........
11. **Other indications**

Place and date:  
Signature of the holder or  
The representative

**Note:**

According to the 26.3) section of the ordonnance n°89019 dated 31 July 1989, letters patent or certificates of the author of invention, in case of need, addition certificates are delivered at asker’s risk and without guarantee of the Government, either of the reality of the new invention, either of the faithful or the accuracy of the description.

**Enclosures**

- supplementary duplicate of this inquiry
- Description of the invention in triplicate
- .............drawing in triplicate
- .............claiming in triplicate
- Epitome in triplicate
- Ability of the representative
- Copy of the precedent inquiry(ies), in case of priority claiming
- Translation of the request in French or Malagasy
- Legalised authorisation of the depositing or of its assignee qualifying the depositing of this inquiry to avail oneself of the prioritie(s)
- Supporting document of the payment of taxes
- Others (specify):

**Reserved part to the Office (for registration)**

---

Delivered title type:

- Letters patent
- Addition certificate

Delivered on:  
Class:

N°:  
Expiration:

Signature and name of the responsible:  
Stamp:

**NOTE:**

(1): Request in triplicate to OMAPI BP 8237 ANANTANARIVO 101

(2): Cross out the useless mentions
FORM 3: APPLICATION FOR PRELIMINARY IMPORT PERMIT

APPLICATION FOR IMPORT PRELIMINARY PERMIT

I, the undersigned, ………………………………………………………………………………………………………………………………………….

Have the honor to ask for the authorization to import plant materials described below:

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>VARIETIES</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Area and country of origin:

- Name and address of the supplier:

- Point of entry in Madagascar:

- Means of transportation:

- Expected date of arrival:

- Expected Use:

- Particular reasons justifying the importation:

    Date

    Signature
FORM 4: FORM FOR ACCEPTANCE/COMMITMENT

ACCEPTANCE/COMMITMENT LETTER

I commit myself for the plants indicated below (Nature of the plant, botanical Name, Quantity/variety, etc) to import on (date) ................................ coming from ..................................

Full address of the supplier:
…………………………………………………………………………………………………………………………………………………….

under the Import Permit N° ...................... Dated .........................................

To submit to the following phytosanitary measures:

1/ To inform the Quarantine Service (QS) or the phytosanitary control being at the entrance point in the Custom's area, of the arrival of the sending;

2/ To present to the phytosanitary control on arrival the totality of imported plants/materials, accompanied by necessary phytosanitary parts (import permit and phytosanitary Certificate issued by the Service of the Protection of Plants of the country of origin);

3/ To organize inspections to the fields (place of plantation or sowing: .............................................) for the agents of the QS during the cycle of the vegetation: TWO visits at least during the first cycle, and at the convenient period to be able to detect the symptoms or anomalies to plants

4/ To sow plants/materials imported in pieces found apparently healthy and clean, far from the sources of contamination of harmful organism, then to maintain these pieces in a satisfactory plant health state by taking all medical measurements necessary, and to announce the QS of all appearances of symptoms or anomalies to the plants

5/ to carry out all plant health measurements ordered by the agents of the QS in charge of control, in order to limit the damage and to destroy the harmful organism

6/ to warn the Service in case of detection of the destroyers or pathological symptoms on these plants

7/ to pay all expenses caused by these plant health controls and inspections, in particular the transport and the accommodation of the agents of the Service

Date .............................................

(Signature)
FORM 5: INSPECTION AND INTERCEPTION REPORT

INSPECTION AND INTERCEPTION REPORT
The plants and/or crop products described below were inspected at the importation (Customs house) Of
............................ dated ................................ by ...........................................................................................

DESCRIPTION OF the EXPORTER
Exporter:
Consignee:
Nature and Quantity:
Marks parcel
Origin
Plant health Paper:  - Import Permit N°.................... dated ................................
                  - Plant health Certificate N° ..................... dated ................................

OFFICIAL OBSERVATION
They are:
☐ Found apparently healthy and in conformity with the current plant health regulation
☐ Returned to the National Station of Plant Quarantine, NANISANA Antananarivo, for ...............  
☐ Intercepted for the following reasons:
  • Produces contaminated by ................................
  • Produces whose importation is prohibited
  • Out-of- phytosanitary paper: import permit,
  • Phytosanitary paper: unacceptable (reasons)
  • Other reasons: ........................................................................................................

MEASUREMENTS
We, undersigned............................................ decided:
  • To give to the
  • To sort the lot
  • To order the treatment by means of...
  • To order repression towards the exporting country, to carry out ...........................................
  • To order the destruction, to carry out .................... dated ..........................................
  • Other measurements: ....................................................................................................

Signature of parties
Signature and Stamp of the Agent in charge of Plant health Control,
FORM 6: ENTRY NOTIFICATION FORMAT AND APPLICATION FOR INSPECTION

IMPORT PERMIT N°

IMPORTER NAME AND ADDRESS

NATURE OF THE SENDING

QUANTITY VOLUME / WEIGHTS

PARCELS

MEANS OF TRANSPORTATION

TREATMENT WHILE TRANSPORTATION

PLACE & ORIGIN COUNTRY

FLAG & LOADING POINT

DATE & PLACE OF DEPARTURE

DATE OF ARRIVAL

DATE OF INSPECTION

SIGNATURE OF THE APPLICANT / DATE

OFFICIAL USE:

INSPECTION DATE:

APPOINTED AGENT

ONPV SIGNATURE
## FORM 7: INSPECTION REPORT FORMAT

<table>
<thead>
<tr>
<th>IMPORT PERMIT N°</th>
<th>DATE &amp; PLACE OF INSPECTION</th>
<th>ENTRY POINT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMPORTER NAME &amp; ADDRESS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SENDING (NAME &amp; TYPE)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>QUANTITY / VOLUME</th>
<th>SEED CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KIND OF PARCELS</th>
<th>PACKAGING CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONFORMITY OF DOCUMENTATION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INSPECTION RESULTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MEASUREMENTS TO BE CARRIED OUT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAMPLES N°</th>
<th>SEED NOUN</th>
<th>QUANTITY</th>
<th>WEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ONPV SIGNATURE</th>
<th>IMPORTER SIGNATURE</th>
<th>CUSTOMS SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PLACE &amp; DATE</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FORM 8: APPLICATION FOR ISSUANCE OF PHYTOSANITARY CERTIFICATE

QUARANTINE SERVICE

I, the undersigned,
Name, surname, Company name, full address

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………
FORM 9: PHYTOSANITARY CERTIFICATE MODEL

PHYTOSANITARY CERTIFICATE

Name and address of exporter:

PHYTOSANITARY CERTIFICATE N°…………………………………………………………………MAG

Declared name and address of consignee:

Plant Protection Organization of Madagascar to plant Protection Organizations of:

Place of origin:

Declared means of conveyance:

Declared point of entry:

Distinguishing marks; number and description of packages; name of produce:

Quantity declared

This is to certify that the plants or plant products described above have been inspected according to appropriate procedures, and are considered to be free from quarantine pests and practically free from other injurious pests; and that they are considered to conform with the current phytosanitary regulations of the importing country.

Additional declaration

DISINFESTATION AND/OR DISINFECTION TREATMENT

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Place of issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical (active ingredient)</td>
<td>Date</td>
</tr>
<tr>
<td>Concentration</td>
<td>Date</td>
</tr>
<tr>
<td>Date</td>
<td>Name &amp; signature of authorized officer</td>
</tr>
</tbody>
</table>

Additional information
## 9. ANNEXES

### Annex1: List of members of AMPROSEM

<table>
<thead>
<tr>
<th>No</th>
<th>Company</th>
<th>Contact Person</th>
<th>Telephone</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ANDRI-KO</td>
<td>ANDRIAMASINORO</td>
<td>034 01 418 02</td>
<td><a href="mailto:laingontsoa@yahoo.fr">laingontsoa@yahoo.fr</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Laingontsoa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>CASTELLS M/CAR</td>
<td>RABARISON Roland</td>
<td>034 06 405 67</td>
<td><a href="mailto:rabharlys@yahoo.com">rabharlys@yahoo.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Harlys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>VALYAGRI</td>
<td>RABENASOLO Mbosa</td>
<td>034 01 266 91</td>
<td><a href="mailto:valyagri@yahoo.fr">valyagri@yahoo.fr</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>FO.FI.FA.</td>
<td>RABENATOANDRO Yvonne</td>
<td>033 11 017 45</td>
<td><a href="mailto:vds@fofifa.mg">vds@fofifa.mg</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>SNGF</td>
<td>RAFIPOARIJAONA H.</td>
<td>020 22 402 85, 033</td>
<td><a href="mailto:silonagf@moov.mg">silonagf@moov.mg</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14 686 13</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>SEMENCE DOM</td>
<td>RAHERISON Jean</td>
<td>032 46 716 23, 033</td>
<td><a href="mailto:isabelleraha@semana.mg">isabelleraha@semana.mg</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dominique</td>
<td>11 690 92</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>SEMANA</td>
<td>RAHETISVOLOLONA Isabelle</td>
<td>032 40 091 20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>FO.FI.FA.</td>
<td>RAKOTONJANAHARY Xavier</td>
<td>033 12 060 08</td>
<td><a href="mailto:r_xavier@moov.mg">r_xavier@moov.mg</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>VALY PROD SEM</td>
<td>RASATA Liva</td>
<td>032 07 116 69</td>
<td><a href="mailto:valyprodsem@hotmail.fr">valyprodsem@hotmail.fr</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Sté ICS - ITA</td>
<td>RASEDY RAJOANA</td>
<td>020 22 248 44</td>
<td><a href="mailto:itagroup@moov.mg">itagroup@moov.mg</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Michèle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>SCAA Anosiboribory</td>
<td>RATSIMBAHARISON Alain</td>
<td>032 02 050 89</td>
<td><a href="mailto:ratsimbaharison_alain@yahoo.fr">ratsimbaharison_alain@yahoo.fr</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:sCAA@moov.mg">sCAA@moov.mg</a></td>
</tr>
<tr>
<td>12</td>
<td>ONG HAINGONALA</td>
<td>TOKIJAONA Sitrakatelia Onjalalao</td>
<td>032 48 240 56</td>
<td><a href="mailto:stokijaona@yahoo.fr">stokijaona@yahoo.fr</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Bas Mangoky</td>
<td>TOVONERA Honoré</td>
<td>032 04 857 19</td>
<td><a href="mailto:projetbasmangoky@yahoo.fr">projetbasmangoky@yahoo.fr</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Antoine</td>
<td></td>
<td><a href="mailto:tovonera@gmail.com">tovonera@gmail.com</a></td>
</tr>
<tr>
<td>14</td>
<td>OFMATA</td>
<td>RANDRIANATSIMBAZAFY Eddy</td>
<td>020 22 623 25</td>
<td><a href="mailto:ofmata@moov.mg">ofmata@moov.mg</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Annex 1: Statistics on seed production

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>t</td>
<td>1240</td>
<td>1450</td>
<td>2321</td>
<td>2247</td>
<td>2300</td>
<td>1700</td>
<td>1400</td>
<td>2250</td>
<td>2400</td>
<td>2160</td>
<td>2050</td>
<td>2200</td>
<td>2100</td>
</tr>
<tr>
<td>Maize</td>
<td>t</td>
<td>37</td>
<td>203</td>
<td>261</td>
<td>113</td>
<td>80</td>
<td>122</td>
<td>153</td>
<td>110</td>
<td>156</td>
<td>210</td>
<td>198</td>
<td>230</td>
<td>180</td>
</tr>
<tr>
<td>Vegetable</td>
<td>t</td>
<td>3.7</td>
<td>3.5</td>
<td>3.7</td>
<td>2.2</td>
<td>5.8</td>
<td>4.3</td>
<td>5.2</td>
<td>7.5</td>
<td>8.2</td>
<td>9.6</td>
<td>10.5</td>
<td>11.2</td>
<td>9.6</td>
</tr>
<tr>
<td>Nut</td>
<td>t</td>
<td>Not av.</td>
<td>Not av.</td>
<td>22</td>
<td>12</td>
<td>45</td>
<td>62</td>
<td>86</td>
<td>94</td>
<td>81</td>
<td>92</td>
<td>73</td>
<td>96</td>
<td>80</td>
</tr>
<tr>
<td>Beans</td>
<td>t</td>
<td>20</td>
<td>20</td>
<td>3</td>
<td>2.5</td>
<td>25</td>
<td>23</td>
<td>35</td>
<td>38</td>
<td>40</td>
<td>36</td>
<td>27</td>
<td>29</td>
<td>32</td>
</tr>
<tr>
<td>Soya</td>
<td>t</td>
<td>Not av.</td>
<td>Not av.</td>
<td>41</td>
<td>34.5</td>
<td>16</td>
<td>29</td>
<td>25</td>
<td>22</td>
<td>23</td>
<td>27</td>
<td>15</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>Pea</td>
<td>t</td>
<td>Not av.</td>
<td>Not av.</td>
<td>72</td>
<td>Not av.</td>
<td>65</td>
<td>68</td>
<td>51</td>
<td>59</td>
<td>63</td>
<td>62</td>
<td>48</td>
<td>56</td>
<td>65</td>
</tr>
<tr>
<td>Plants fruit</td>
<td>Nb.</td>
<td>26 700</td>
<td>35 000</td>
<td>37 500</td>
<td>26 100</td>
<td>25 000</td>
<td>26 500</td>
<td>46 600</td>
<td>47 900</td>
<td>29 400</td>
<td>33 530</td>
<td>28 670</td>
<td>43 600</td>
<td>46 120</td>
</tr>
</tbody>
</table>
## Annex 3: Statistics on seed importation

<table>
<thead>
<tr>
<th>Crop/Year</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorghum</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>141kg</td>
<td>1kg</td>
</tr>
<tr>
<td>Small maize</td>
<td>4kg</td>
<td>50kg</td>
<td>75kg</td>
<td>0</td>
<td>0</td>
<td>7,214kg</td>
<td>35kg</td>
</tr>
<tr>
<td>Irrigate rice</td>
<td>0</td>
<td>0</td>
<td>125g</td>
<td>78kg</td>
<td>1,6kg</td>
<td>0</td>
<td>36t</td>
</tr>
<tr>
<td>Hybrid rice</td>
<td>0</td>
<td>100g</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,5kg</td>
<td>0</td>
</tr>
<tr>
<td>Wheat</td>
<td>16t</td>
<td>3t</td>
<td>4t</td>
<td>130kg</td>
<td>0</td>
<td>0</td>
<td>800kg</td>
</tr>
<tr>
<td>Beans</td>
<td>12,98t</td>
<td>451kg</td>
<td>19 258kg</td>
<td>149kg</td>
<td>1,59t</td>
<td>3kg</td>
<td>1,4t</td>
</tr>
<tr>
<td>Soya</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100 000sq</td>
<td>0</td>
<td>900g</td>
</tr>
<tr>
<td>Sunflower</td>
<td>0</td>
<td>5g</td>
<td>0</td>
<td>0</td>
<td>774kg</td>
<td>0</td>
<td>1t</td>
</tr>
<tr>
<td>Rhodes</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2 010kg</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Green beans</td>
<td>0</td>
<td>0</td>
<td>2,2</td>
<td>938kg</td>
<td>3,84t</td>
<td>0</td>
<td>15kg</td>
</tr>
<tr>
<td>Cabbage of china</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>140kg</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>White cabbage</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10kg</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Peas</td>
<td>300kg</td>
<td>500kg</td>
<td>98kg</td>
<td>600kg</td>
<td>250kg</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Vegetables</td>
<td>2 968kg</td>
<td>878kg</td>
<td>7kg</td>
<td>25kg</td>
<td>488kg</td>
<td>3 897kg</td>
<td>289kg</td>
</tr>
<tr>
<td>Beet</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100kg</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cabbage</td>
<td>0</td>
<td>0</td>
<td>1kg</td>
<td>0,5kg</td>
<td>0</td>
<td>0</td>
<td>21g</td>
</tr>
<tr>
<td>Onion</td>
<td>0</td>
<td>130g</td>
<td>247kg</td>
<td>50kg</td>
<td>10 270 000 sq</td>
<td>0</td>
<td>110gr</td>
</tr>
<tr>
<td>Cynodon</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>650kg</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Agrostis</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>120kg</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>60kg</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Leek</td>
<td>0</td>
<td>0</td>
<td>823kg</td>
<td>79kg</td>
<td>800kg</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Carrot</td>
<td>0</td>
<td>0</td>
<td>2kg</td>
<td>0</td>
<td>25 000 sq</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Melon</td>
<td>0</td>
<td>0,2kg</td>
<td>0</td>
<td>0</td>
<td>0,3kg</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Potatoes</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>102kg</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pepper</td>
<td>0</td>
<td>0</td>
<td>150kg</td>
<td>0</td>
<td>50g</td>
<td>0</td>
<td>100g</td>
</tr>
<tr>
<td>Ornamental plant</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1 093 Pl</td>
<td>0</td>
</tr>
<tr>
<td>Anthodium</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>80 pl</td>
<td>0</td>
</tr>
<tr>
<td>Vineyard</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>400 pl</td>
<td>0</td>
</tr>
<tr>
<td>Fruit plant</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>250pl</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Crop</td>
<td>Year</td>
<td>2007</td>
<td>2008</td>
<td>2009</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>------</td>
<td>--------</td>
<td>--------</td>
<td>-------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td></td>
<td>100kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peanut</td>
<td></td>
<td>2 248t</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chili</td>
<td></td>
<td>71kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onion</td>
<td></td>
<td>1.25kg</td>
<td>1.5kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetable</td>
<td></td>
<td>1 242t</td>
<td>2.6t</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lentil</td>
<td></td>
<td>8.75t</td>
<td>121.5t</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butter bean</td>
<td></td>
<td>2 113t</td>
<td>5 378t</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black eyes</td>
<td></td>
<td>3 801t</td>
<td>66.25t</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maize</td>
<td></td>
<td></td>
<td>577.33t</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beans</td>
<td></td>
<td>625.3t</td>
<td>644.3t</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potatoes</td>
<td></td>
<td>30kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest seed</td>
<td></td>
<td>3.5kg</td>
<td>1.2kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Annex 5: LIST OF QUARANTINE PEST LIST

A- Insect Pest list (Scientific name)
Acrocercorps syngramma
Aleurocanthus spiniferus
Aleurocanthus woglumi
Amauromyza maculosa
Anarsia lineatella
Anastrepha fraterculus
Anastrepha ludens
Anastrepha obliqua
Anastrepha suspensa
Anoplophora chinensis
Anoplophora malasiaca
Anthonomus grandis
Anthonomus signatus
Bactrocera cucurbitae
Bactrocera dorsalis
Bactrocera minax
Bactrocera musae
Bactrocera tryoni
Bactrocera tsuneonis
Bactrocera zonata
Blitopertha orientalis
Carposina niponensis
Cacoecimorpha pronubana
Ceratitis capitata
Ceratitis cosyra
Ceratitis quinaria
Ceratitis rosa
Chelaria haligramma
Chilo suppressalis
Conotrachelus nenuphar
Ctenarytaina eucalypti
Dacus oleae
Diatraea saccharalis
Distantiella theobroma
Eotetranychus lewisi
Eotetranychus orientalis
Epichoristodes acerbella
Epochra canadensis
Euphranta japonica
Euproctis scintillens
Frankliniella occidentalis
Graphognatus leucoloma
Helopeltis bergrothri
Helicoverpa zea
Heteropsylla cubana
Hyphantria cunea
Hypothenemus hampei
Indarbela tetraonis
Leptinotarsa decemlineata
Liriomyza bryoniae
Liriomyza huidobrensis
Liriomyza sativae
Listronotus bonariensis
Margarodes prieskaensis
Margarodes vitis
Margarodes vredendulensis
Monolepta orientalis
Mononychellus tanajoa
Myndus crudus
Parabemisia myricae
Pentalonia nigronervosa
Phenacoccus manihoti
Phoracanta semipunctata
Phyllocnistis citrella
Plocaederus ferrugineus
Popillia japonica
Prostephanus truncatus
Quadraspiddiotus perniciosus
Retithrips syriacus
Rhagoletis cerasi
Rhagoletis cingulata
Rhagoletis completa
Rhagoletis fausta
Rhagoletis indifferens
Rhagoletis mendax
Rhagoletis pomonella
Rhagoletis ribicola
Rhipiphorothrips cruebtatus
Rhynchophorus ferrugineus
Rhynchophorus palmarum
Rhynchophorus phoenicis
Rhynchothrips raoensis
Sahlbergella singularis
Scirtothrips aurantii
Scirtothrips citri
Scirtothrips dorsalis
Scyphophorus interstitialis
Selenothrips rubrocinctus
Sima allaborens
Spodoptera eridania
Spodoptera frugiperda
Spodoptera litura
Sternochetus frigidus
Thrips palmi
Trirhithromyia cyanescens
Unaspis citri

**B- Bacteria pest list (Scientific name)**

- Clavibacter michigenensis susp.insidiosus
- Curtobacterium flaccumfaciens pv flaccumfaciens
- Erwinia amylovora
- Erwinia chrysanthemi f sp dianthi
- Erwinia stewartii
- Pseudomonas caryophylli
- Pseudomonas savastanoi pv. glycinea
- Pseudomonas syringae pv tomato
- Pseudomonas syringae pv. persicae
- Pseudomonas syringae pv. pisi
- Pseudomonas syringae pv. tabaci
- Spiroplasma citri
- Streptomyces ipomoeae
- Xanthomonas arboricola pv. pruni
  - Xanthomonas campestris pv. dieffenbachiae
- Xanthomonas campestris pv. holcicola
- Xanthomonas campestris pv. translucens
- Xanthomonas fragariae
- Xanthomonas oryzae pv. oryzae
Xylella fastidiosa
Xylophilus ampelinus

C- **Fungi Pest list (Scientific name)**

- Apiosporina morbosa
- Crinipellis perniciosa
- Cronartium coleosporioides
- Cronartium comandrae
- Cronartium comptoniae
- Cronartium fusiforme
- Cronartium himalayense
- Cronartium kamtschaticum
- Cronartium quercuum
- Cronartium ribicola
- Cryphonectria parasitica
- Deuterophoma tracheiphila
- Diaporthe phaseolorum var. caulivora
- Diaporthe vaccinii
- Diplodia eugenioides
- Elsinoe australis
- Endocronartium harknessii
- Endothia eugeniae
- Eutypa armeniacae
- Exobasidium vexans
- Fusarium oxysporum f.sp. elaeidis
- Gibberella xylarioides
- Guignardia bidwellii
- Guignardia citricarpa
- Gymnosporangium asiaticum
- Gymnosporangium clavipes
Gymnosporangium globosum
Gymnosporangium juniperi-virginianae
Gymnosporangium shiraianum
Gymnosporangium yamadae
Leptopharsa heveae
Monilinia fructicola
Monilinia fructigena
Mycena citricolor
Mycrocyclus ulei
Oidium heveae
Perenospora manshurica
Peronosclerospora maydis
Peronosclerospora philippinensis
Peronosclerospora sacchari
Peronosclerospora sorghi
Peronospora tabacina
Phialophora cinerescens
Phialophora gregata
Phoma andina
Phoma exigua var. foveata
Phomopsis sclerotiorides
Phomopsis viticola
Phylllosticta solitaria
Phymatotrichopsis omnivora
Physopella ampelopsidis
Phytomonas staheli
Phytophthora cinnamomi
Phytophthora colocasiae
Phytophthora fragariae var. fragariae
Phytophthora fragariae var. rubi
Phytophthora magasperma f.sp. glycinea
Plasmopara halstedii
Puccinia pittieriana
Puccinia psidii
Sclerophthora macrospora
Sclerospora spontanea
Sphaceloma arachidis
Sphacelotheca cruenta
Stenocarpella macrospora
Stenocarpella maydis
Synchytrium endobioticum
Tilletia barclayana
Tilletia controversa
Tilletia indica
Tolyposporium ehrenbergii
Urocystis agropyri
Venturia nashicola

D- **Mycoplasm Pest list (Scientific name)**

Apricot chlorotic leaf roll MLO
Apple proliferation MLO
Cassava witches' broom MLO
Grapevine flavescence dorée MLO
Lime witches' broom MLO
Palm lethal yellowing MLO
Papaya bunchy top MLO
Peach rosette MLO
Peach X disease MLO
Peach yellows MLO
Pear decline MLO
Potato purple top wilt MLO
Potato stolbur MLO
Potato witches' broom MLO
Strawberry witches' broom MLO
Sugarcane grassy stunt MLO
Sugarcane white leaf MLO
Sweet potato little leaf MLO

E- Virus Pest list (Scientific name)
Alfalfa dwarf disease
Andean potato latent tymovirus
Andean potato mottle comovirus
Arracacha B virus oca strain
Avocado sun blotch viroid
Banana bract mosaic disease
Banana bunchy top luteovirus
Banana streak virus
Barley stripe mosaic hordeivirus
Beet curly top geminivirus
Blueberry leaf mottle nepovirus
Cacao swollen shoot badnavirus
Carnation etched ring caulimovirus
Carnation necrotic fleck closterovirus
Carnation ringspot dianthovirus
Cassava brown streak carlavirus
Cherry leaf roll nepovirus
Cherry little cherry disease
Cherry rasp leaf nepovirus
Citrus blight disease
Citrus impietratura disease
Citrus leaf rugose ilarvirus
Citrus leprosis disease
Citrus Psorosis disease
Citrus ringspot disease
Citrus tatter leaf capillovirus
Citrus tristeza closterovirus
Citrus vein enation disease
Coconut Cadang-Cadang viroid
Coconut wilt disease
Cowpea mild mottle carlaviruses
Eggplant mosaic virus
Eucalyptus leaf chlorosis disease
Grapevine chrome mosaic nepovirus
Grapevine fanleaf nepovirus
Impatiens necrotic spot tospovirus
Papaya mosaic potexvirus
Papaya ringspot potyvirus
Peach latent mosaic viroid
Peanut clump furovirus
Peanut mottle potyvirus
Peanut stripe potyvirus
Peanut stunt cucumovirus
Plum pox potyvirus
Potato spindle tuber viroid
Potato T capillovirus
Potato yellow dwarf rhabdovirus
Prunus necrotic ringspot virus
Raspberry leaf curl virus
Raspberry ringspot nepovirus
Satsuma dwarf nepovirus
Strawberry crinkle rhabdovirus
Strawberry latent C disease
Strawberry vein banding caulimovirus
Sugarcane bacilliform virus
Sugarcane Fiji disease fijivirus
Sweet potato feathery mottle potyvirus
Sweet potato mild mottle potyvirus
Tea phloem necrosis disease
Tobacco ringspot nepovirus
Tomato black ring nepovirus
Tomato ringspot nepovirus
Tomato spotted wilt tospovirus
Yam mosaic potyvirus

**F- Nematode Pest list (Scientific name)**

Anguina tritici
Aphelenchoides fragariae
Ditylenchus destructor
Globodera pallida
Globodera rostochiensis
Heterodea glycines
Heterodera schachtii
Radopholus citrophilus
Rhadinaphelenchus cocophilus
Tylenchulus semipenetrans