

BASELINE STUDY FOR THE SEED SECTOR OF MADAGASCAR

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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 for 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

Body in charge: Control Official Service (SOC)
The Department head: Mrs. RANDRIAMILANDY ketamalala
Address: Nanisana Antananarivo
E-mail: ketamalala@yahoo.com
Telephone: 034 06 036 62

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 pests;
- 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.

Body in charge: Direction of Plant Protection in Nanisana Antananarivo.

E-mail: dir.dpv@agriculture.gov.mg

BP: 1042, Antananarivo -101

Responsible: RANDRIAMAMPIANINA Jean Armand

Phone: 034 05 610 12

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:

Step1: 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.

Step3: Evaluation of the feasibility of a transit

Step4: Control of identity :

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

Step5: 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 6bis.

If there is a “plant quarantine crop”, the agent ensures that it is sent to the Quarantine Service.

Step6: Giving the inspection report to the operator

The agent concludes the “delivery to the owner”

Step 6bis: 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

REOBLIKAN'I MADAGASIKARA
Tanindrazana – Fahafahana – Fandrosoana

MINISTERE DE L' AGRICULTURE, DE L' ELEVAGE ET DE LA PECHE

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 determinig 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 de _____

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 MARCHANDE :

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 _____
Quarantaine

(Date)

*Le Chef du Service de la
et de l'Inspection*

FORM 2: OMAPI FORM

REPOBLIKAN'I MADAGASIKARA
Tanindrazana-Fahafahana-Fandrosoana

OMAPI

MALAGASY OFFICE OF PATENT RIGHTS

TEL:22 335 06 / 22 335 02

Fax:22 659 79

REQUEST FOR :

- **LETTERS PATENT (2)**
- **ADDITION CERTIFICATE**

Reserved part to the Office (for the deposit)		
<hr/>		
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:

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 inquirie(s), 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 priorite(s)
Supporting document of the paiement 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 ANTANANARIVO 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:

SPECIES	VARIETIES	QUANTITY

- 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

IMPORT PERMIT N°	DATE & PLACE OF INSPECTION	ENTRY POINT	
IMPORTER NAME & ADDRESS			
SENDING (NAME & TYPE)			
QUANTITY / VOLUME	SEED CONDITIONS		
KIND OF PARCELS	PACKAGING CONDITIONS		
CONFORMITY OF DOCUMENTATION			
INSPECTION RESULTS			
MEASUREMENTS TO BE CARRIED OUT			
SAMPLES N°	SEED NOUN	QUANTITY	WEIGHTS
ONPV SIGNATURE	IMPORTER SIGNATURE	CUSTOMS SIGNATURE	
PLACE & DATE			

FORM 8: APPLICATION FOR ISSUANCE OF PHYTOSANITARY CERTIFICATE

QUARANTINE SERVICE

I, the undersigned,

Name, surname, Company name, full address

.....
.....
.....

Ask the phytosanitary inspection of the sending described below to obtain phytosanitary certificate according with phytosanitary regulation.

Expedito name & address:

Consignee name & address

Entry point declared

Place of origin

DESCRIPTION OF THE SENDING

Nature, mark and quantity of parcels: Declared quantity

Noun of the produce or the sending

Kind and variety (botanical noun)

Exportation point

Expected date for exportation

Enclosures :

- Import Permit
- Others

Date

Signature

Register N°

Phytosanitary Inspection

Laboratory analysis

Phytosanitary treatments

Particularly exigencies

Other phytosanitary measurements

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

Treatment	Place of issue
Chemical (active ingredient)	Date
Concentration	Name & signature of authorized officer
Date	

Additional information

9. ANNEXES

Annex1: List of members of AMPROSEM

N°	Company	Contact Person	Telephone	E-mail
1	ANDRI-KO	ANDRIAMASINORO Laingontsoa	034 01 418 02	laingontsoa@yahoo.fr
2	CASTELLS M/CAR	RABARISON Roland Harlys	034 06 405 67	rabharlys@yahoo.com
3	VALYAGRI	RABENASOLO Mbosa	034 01 266 91	valyagri@yahoo.fr
4	FO.FI.FA.	RABENATOANDRO Yvonne	033 11 017 45	yds@fofifa.mg
5	SNGF	RAFILIPOARIJAONA H.	020 22 402 85 033 14 686 13	silonagf@moov.mg
6	SEMENCE DOM	RAHERISON Jean Dominique	032 46 716 23 033 11 690 92	
7	SEMANA	RAHETISVOLOLONA Isabelle	032 40 091 20	isabellerahe@semana.mg
8	FO.FI.FA.	RAKOTONJANAHARY Xavier	033 12 060 08	r.xavier@moov.mg
9	VALY PROD SEM	RASATA Liva	032 07 116 69	valyprodsem@hotmail.fr
10	Sté ICS - ITA	RASEDY RAJAONA Michèle	020 22 248 44	itagroup@moov.mg
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Annex 1: Statistics on seed production

	Unit	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Rice	t	1 240	1 450	2 321	2 247	2 300	1 700	1 400	2 250	2 400	2 160	2050	2200	2 100
Maize	t	37	203	261	113	80	122	153	110	156	210	198	230	180
Vegetable	t	3,7	3,5	3,7	2,2	5,8	4,3	5,2	7,5	8,2	9,6	10,5	11,2	9,6
Nut	t	Not av.	Not av.	22	12	45	62	86	94	81	92	73	96	80
Beans	t	20	20	3	2,5	25	23	35	38	40	36	27	29	32
Soya	t	Not av.	Not av.	41	34,5	16	29	25	22	23	27	15	18	25
Pea	t	Not av.	Not av.	72	Not av.	65	68	51	59	63	62	48	56	65
Plants flower	Nb.	32 750	33 000	22 500	50 202	Not av.	Not av.	Not av.	Not av.	Not av.	Not av.	Not av.	Not av.	Not av.
Plants fruit	Nb.	26 700	35 000	37 500	26 100	25 000	26 500	46 600	47 900	29 400	33 530	28 670	43 600	46 120

Annex 3: Statistics on seed importation

Crop/Year	2003	2004	2005	2006	2007	2008	2009
Sorghum	0	0	0	0	0	141kg	1kg
Small maize	4kg	50kg	75kg	0	0	7 214kg	35kg
Irrigate rice	0	0	125g	78kg	1,6kg	0	36t
Hybrid rice	0	100g	0	0	0	1,5kg	0
Wheat	16t	3t	4t	130kg	0	0	800kg
Beans	12,98t	451kg	19 258kg	149kg	1,59t	3kg	1,4t
Soya	0	0	0	0	100 000sq	0	900g
Sunflower	0	5g	0	0	774kg	0	1t
Rhodes	0	0	0	0	0	2 010kg	0
Green beans	0	0	2,2	938kg	3,84t	0	15kg
Cabbage of china	0	0	0	0	140kg	0	0
White cabbage	0	0	0	0	10kg	0	0
Peas	300kg	500kg	98kg	600kg	250kg	0	0
Vegetables	2 968kg	878kg	7kg	25kg	488kg	3 897kg	289kg
Beet	0	0	0	0	100kg	0	0
Cabbage	0	0	1kg	0,5kg	0	0	21g
Onion	0	130g	247kg	50kg	10 270 000 sq	0	110gr
Cynodon	0	0	0	0	0	650kg	0
Agrostis	0	0	0	0	0	120kg	0
Tomatoes	0	0	0	0	60kg	0	0
Leek	0	0	823kg	79kg	800kg	0	0
Carrot	0	0	2kg	0	25 000 sq	0	0
Melon	0	0,2kg	0	0	0,3kg	0	0
Potatoes	0	0	0	0	0	102kg	0
Pepper	0	0	150kg	0	50g	0	100g
Ornamental plant	0	0	0	0	0	0	1 093 Pl
Anthodium	0	0	0	0	0	0	80 pl
Vineyard	0	0	0	0	0	400 pl	0
Fruit plant	0	0	0	0	250pl	0	0

Apple tree	0	0	0	0	0	5pl	0
Kiwi	0	0	0	0	0	2pl	0
Various squall	0	0	0	0	14 336kg	0	0
Jatropha	0	0	0	0	0	1 402kg	0
Cotton	0	0	0	0	0	275 000kg	0
Eucalyptus	0	0	0	0	300g	275kg	0
Kenaf	0	0	0	0	650kg	0	0
Oats	0	0	0	0	0	1,5kg	0
Trifulium	0	0	0	0	1kg	0	0
Rose	0	0	0	0	250pl	0	0
Orchid	0	0	0	0	70pl	42pl	0
Seed forest	0	0	0	0	0	18bag	0
Gherkin	0	73kg	7kg	0	0	0	0
Almond squall	0	0	0	0	0	100kg	0

Annex 4: Statistics on seed exportation

Crop/ Year	2007	2008	2009
Rice	100kg		
Peanut		2 248t	
Chili	71kg		
Onion	1.25kg	1.5kg	
Vegetable	1 242t	2.6t	
Lentil	8.75t	121.5t	
Butter bean	2 113t	5 378t	
Black eyes	3 801t	66.25t	
Maize		577.33t	
Beans	625.3t	644.3t	
Potatoes		30kg	
Forest seed	3.5kg	1.2kg	

Annex 5: LIST OF QUARANTINE PEST LIST

A- Insect Pest list (Scientific name)

Acrocercops syngamma

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

Cacoecimorpha pronubana

Carposina niponensis

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
Graphognathus 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
Quadraspidotus 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 pernicioso

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. *elaedis*

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 sclerotioides
Phomopsis viticola
Phyllosticta 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 carlavirus
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