Final Document

Government of India
Ministry of Agriculture
(Department of Agriculture & Cooperation)

Directorate of Plant Protection, Quarantine & Storage

N.H.IV., Faridabad-121001

Standard Operating Procedures for Postentry Quarantine Inspection

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Control of Document

1. Document issue and revision

This document issue and revison is controlled by the Dte of Plant Protection, Quarantine & Storage (NPPO), N.H.IV., Faridabad-121001 (Tel: 0129-2413985; fax:2412125; e-mail: ppa@nic.in). As and when a section of this document is revised, the revised section is issued in its entirety together with a revision number, identifying the new issue status and the issue date of each section. The revised sections are automatically issued to each of this document copy holders listed in Section 2 of 'Control of Document':

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2. Document distribution

This document distribution and subsequent revisions distribution are controlled and issued by the Directorate of Plant Protection Quarantine and Storage, Faridabad. This document is issued to all those notified Inspection Authorities (SAUs/ ICAR Institutes), where activities and processes described in this document is undertaken.

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1.1.Scope/Purpose:

This document provides guidance and describes the standard operating procedures for certification of facilities for growing imported plants/plant material including transgenic plant material and other regulated articles such as biological control agents/beneficial organisms and living modified organisms under postentry quarantine and inspecting the same to ensure free from quarantine pests and other regulated non-quarantine pests.

The purpose of this document is to facilitate adoption of standard operating procedures by all the inspection authorities notified by the Ministry of Agriculture (Department of Agriculture & Cooperation)/PQOs (with PEQ responsibilities) for undertaking certification of postentry quarantine inspection facilities as well as conducting postentry quarantine inspection of growing plants and other regulated articles under the supervision of concerned inspection authority/ PQOs (with PEQ responsibilities) in accordance with phytosanitary requirements specified under the Plant Quarantine (Regulation of Import into India) Order, 2003 and amendments issued there under to prevent the introduction and spread of destructive pests that affects plants and other regulated articles such as biological control agents and beneficial organisms.

1.2.Definitions & Terms:

Additional declaration	A statement that is required by an importing country to be entered in Phytosanitary Certificate and which provides specific additional information pertinent to the phytosanitary condition of a consignment.
Biological control agent	A natural enemy, antagonist, competitor or other organism used for pest control
Bulbs & Tubers	A commodity class for dormant underground parts of plant intended for planting (includes corms and rhizomes).
Certificate	An official document which attests to the phytosanitary status of any consignment affected by phytosanitary regulations.
Commodity	A type of plant, plant product, or other article being moved for trade or other purpose.
Compliance procedure	Official procedure used to verify that a consignment complies with stated phytosanitary requirements.
Consignment	A quantity of plants, plant products and/or other regulated articles being moved from one country to another and covered by a single phytosanitary certificate (a consignment may be composed of one or more lots).
Country of origin (of a consignment of plants)	Country where the plants were grown.
Country of origin (of regulated articles other than plants and plant products)	Country where the regulated articles were first exposed to contamination by pests.

Field	A plot of land with defined boundaries within a place of production on which a commodity was grown.
Fumigation	Treatment with a chemical agent that reaches the commodity wholly or primarily in gaseous stage.
Germplasm	Plants intended for use in breeding or conservation programmes
Import Permit	Official document authorizing importation of a commodity or of a biological control agent in accordance with specified phytosanitary requirements.
Inspection	Official visual examination of plants, plant products or other regulated articles to determine if pests are present and/ or to determine compliance with phytosanitary regulations.
Inspector	A trained technical staff assigned with the responsibility of inspection/sampling of consignments of plants/plant products and other regulated articles to ensure free from pests.
IPPC	International Plant Protection Convention, as deposited in 1951 with FAO in Rome and as subsequently amended.
International Standard for Phytosanitary Measures (ISPM)	An international standard adopted by the conference of FAO, the interim commission on phytosanitary measures or the commission on phytosanitary measures established under IPPC.
Inspection authority	Any institute/research organization notified by the Ministry of Agriculture Department of Agriculture & Cooperation), for the purpose of certification of postentry quarantine facilities and conducting of inspection of growing plants and other regulated articles under postentry quarantine.
Isolated condition	A place where imported material is grown
Lot	A number of units of a single commodity, identifiable by its homogeneity of composition, origin etc., forming part of a consignment.
National Plant Protection Organization (NPPO)	Official service established by a government to discharge the functions specified by the IPPC.
Official	Established, authorized or performed by a National Plant Protection Organisation.
Pest	Any species, strain or biotype of plant, or pathogenic agent, injurious to plants or plant products.
Phytosanitary Certificate	Certificate patterned after the model certificates of IPPC.

Phytosanitary certification	Use of phytosanitary procedures leading to the issue of a Phytosanitary Certificate.
Phytosanitary regulation	Official rule to prevent the introduction and/ or spread of quarantine pests or to limit the economic impact of regulated non-quarantine pests including establishment of procedures for phytosanitary certification.
Plants	Living plants and parts thereof, including seeds and germplasm.
Postentry Quarantine (PEQ)	Growing of plants in isolation for any specified period in a glass-house, a facility, area or nursery and /or holding of biological control agents and beneficial organisms under contained facility.
Quarantine Pest	A pest of potential economic importance to the area endangered and not yet present there, or present but not widely distributed and being officially controlled.
Regulated article	Any plant, plant product, storage place, packaging, conveyance container, soil and any other organism, object or material capable of harbouring or spread of pests deemed to require phytosanitary measures, particularly, where international transportation is involved
Regulated non quarantine pest	A non quarantine pest whose presence in plants for planting affects the intended use of those plants with an economically unacceptable impact and which is therefore regulated within the territory of the importing contracting party.
Seeds	Seeds for planting or intended for planting and not for consumption or processing
Treatment	Official procedure for the killing, inactivation, or removal of pests or for rendering pests infertile or for devitalization.
Visual Examination	The physical examination of plants, plant products, or other regulated articles using the unaided eye, lens, stereoscope or microscope to detect pests or contaminants without testing or processing

1.3. References:

Destructive Insects & Pests Act, 1914 and Amendments issued there under
Glossary of Phytosanitary Terms, ISPM 5 (2006), FAO, Rome.
Guidelines for Inspection, ISPM 23 (2005), FAO, Rome.
Import Inspection Manual, PQ-12, (1995), Dte of PPQS, Fardiabad-121001, India
International Plant Protection Convention, 1997, FAO, Rome
Plant Quarantine (Regulation of Import into India) Order, 2003 & Amendments issued there under.

1.3.Requirements:

1.3.1. Legal Authority:

The Import Quarantine Inspection Unit of PQ Division of Dte of PPQS (NPPO) will have legal mandate and administrative authority for control and supervision of postentry inspection activities performed by the Inspection Authorities (State Agricultural Universities/ICAR Institutes) notified by the Ministry of Agriculture (Department of Agriculture & Cooperation) under the Plant Quarantine (Regulation of Import into India) Order, 2003 and amendments issued there under and the Plant Quarantine Officers (with PEQ responsibilities) authorized by the Plant Protection Adviser of Dte of PPQS from time to time. The The Dte of PPQS (NPPO) will have the legal power for its actions and implement safe guards against conflicts of interest and decisions taken by the Inspection Authority in relation to postentry quarantine inspection including approval and certification of PEQ facilities. The Plant Protection Adviser have the legal power to hear the appeal made by the aggrieved importer against the decision taken by the Inspection Authority and call for the records relating to any case pending before the Inspection Authority for the purpose of satisfying itself as to the legality or propriety of any decision passed by that authority and may pass such order in relation thereto, as it thinks fit as per the provisions contained in the above said PQ Order, 2003.

1.4.2. Management Responsibility:

The Dte of PPQS (NPPO) will be overall responsible for:

- ? management of national import quarantine regulatory system that ensures that all the requirements including entryquarantine inspection, certification of PEQ facilities; inspection of plants/plant material and other regulated articles growing under postentry quarantine and their clearance as per the legislative and administrative requirements are met with

- ? Will designate a senior level technical officer with competency to head the Import Quarantine Inspection Unit of PQ Division of Dte of PPQS (NPPO) to closely monitor the activities related to import quarantine inspection including both entryquarantine inspection and postentry quarantine inspection of plants/plant material and other regulated articles.

? identify the duties and line of communication of all personnel involved in entryquarantine inspection and postentry quarantine inspection responsibilities in relation to import

? ensure that adequate trained and skillful personnel and resources are available both with the inspection authorities and /or the PQO entrusted with the responsibility of PEQ for undertaking following functions:

- maintenance of information on current phytosanitary requirements of PEQ inspection;
- production of operational guidelines/procedures/instructions to ensure that the phytosanitary regulation requirements specified under the PQ order are met with;
- inspection and testing of consignments and other regulated articles grown under postentry quarantine;
- identification of organisms found during entry-quarantine inspection/postentry quarantine inspection of consignments and other regulated articles
- Approval and certification of postentry quarantine facilities
- Reporting of PEQ inspection
- Issue PEQ clearance/destruction certificates
- document storage and retrieval
- training
- dissemination of information related to approval and certification of PEQ facilities
- notification of non-compliance with phytosanitary requirements and emergency action.

!.5. Resources:

1.5.1 Trained & Qualified Staff:

The Import Quarantine Regulatory System will have adequate, skilled and trained manpower to efficiently handle the volume of consignments being processed for import inspection including postentry quarantine inspection. The Import Quarantine Inspection Unit of PQ Division of Dte of PPQS (NPPO) will decide the number of technically trained/qualified manpower to be required at each place, and periodically review the requirements of human resources and capacity building and training requirements (operational as well as specialized) in consultation with notified inspection authorities/PQOs (with PEQ responsibilities) and after evaluating their technical capacities and capabilities and infrastructure facilities for performance of entry inspection/postentry quarantine inspection activities.

1.5.2. General Facilities:

The general facilities for the Import Quarantine Inspection Unit of PQ Division of Dte of PPQS (NPPO) will include office space for the head of the unit and the administrative secretariat with telephone, fax, computer with internet facility and a dedicated server for management of national import quarantine inspection (including postentry quarantine inspection) database and related information and communication links with notified inspection authorities/PQOs (with PEQ responsibilities) including on-line reporting.

The general facilities for the notified inspection authorities/ PQOs (with PEQ responsibilities) should include an exclusive office space for the inspection authority/PQO, which is provided with dedicated telephone, fax, computer with internet facility for PEQ activity and general laboratory facilities for entomological/nematological/plant pathological work. In addition should have laboratory facilities especially for virus testing using sero-diagnostic (ELISA/DIBA) /molecular diagnostic (RT-PCR/NASH) protocols. An insect-proof screen house/glass house with double door entry facility is required for carrying out virus indexing.

1.5.3. National Phytosanitary Database:

The Import Quarantine Inspection Unit of PQ Division of Dte of PPQS (NPPO) will provide all the office of the notified inspection authorities with the requisite software and establish links for on-line reporting of activities related to postentry quarantine viz., approval and certification of postentry quarantine facilities; inspection/release of plants/plant material and other regulated articles for growing under post entry quarantine inspection; intimation to DIA; PEQ inspection/release and /or destruction of plants /plant material and other regulated articles, pest - interceptions and all the technical personnel of inspection authorities/PQS (with PEQ responsibilities) will be trained to familiarize with the software application and its use and computerized issuance of certification of PEQ facilities and submission of PEQ inspection reports to the Import Quarantine Inspection Unit of PQ Division of Dte of PPQS (NPPO).

National Phytosanitary Database will contain effective communication links with all the notified inspection authorities and up-to-date data on name, designation, contact address (Mail/telephone/fax/e-mail).

National Phytosanitary Database will also contain the information on regulated pests of concern including their presence and geographical distribution, the biology, detection and diagnostic protocols, identification of the pest and the appropriate phytosanitary action to minimize the risk.

1.5.4. Equipments:

1.5.4.1. Office Equipments:

The offices of notified inspection authorities will have the following essential equipments for PEQ work.

- ? Telephone (dedicated)
- ? Fax
- ? Computer with Internet Facility (broadband connectivity/leased line)
- ? UPS (Inverter)
- ? Printer

1.5.4.2. Inspection Equipments:

- ? Field lense
- ? Pen knife
- ? Secatuer/pruning shears
- ? Camel hair brush/aspirator
- ? Measuring/marking tape
- ? Soil scoop
- ? Specimen vials (shoulder type) (containing 70% alcohol and /or 3% formalin or empty)
- ? Digital Camera
- ? Heavy duty trash bags
- ? Plastic bags (self-sealing type)
- ? Paper bags
- ? Stapler with pins
- ? Marking pens
- ? Labels/Tags
- ? A role of surgical cotton
- ? Paper towels/tissue napkins
- ? Field note book
- ? Thermo cool box with ice pack

1.5.4.2. General Laboratory Equipments:

The inspection authorities should have following equipment for laboratory diagnosis of pests such as insects/mites; nematodes; fungi & bacteria

Entomology

- Insect storage cabinets/mounting boards
- Soft X-ray Scanner & Film Developer
- Steriobinocular microscope fitted with Image grabber

Nematology

- Nematode Extraction Unit
- Fenwick can
- Baerman funnel
- Sieve set
- Steriobinocular microscope
- Compound Binocular Microscope
- Microscope accessories (slides/cover slips; ocular/stage micrometers; camera lucida)

Plant Pathology:

- Laminar flow
- BOD Incubator
- Autoclave
- Hot air oven
- Digital top pan balance
- Analytical Balance
- Hot Plate with Magnetic Stirrer
- pH meter
- Haemocytometer
- Inoculation loop or needle
- UV fluorescent lamp
- Distilled Water Unit
- Deep freezer (-20C)
- Compound trinocular microscope fitted with Photomicrographic Equipment
- Vaccuum cleaner
- A set of laboratory chemicals (for preparation of media/stains/reagents etc.)
- A set of laboratory glassware (beakers, conical flasks, measuring cylinders, pipettes, Petri dishes, test tubes, etc.)

? Microscope accessories (slides/cover slips; ocular/stage micrometers; camera lucida)

1.5.4.3. Special Equipment s for Molecular Diagnosis of Bacteria/Viruses

The following special equipments are required for molecular diagnosis of bacteria and viruses

? Tissue grinder
? Micropipettes (varying volumes)
? Micro plates (for ELISA Test)
? ELISA kit (reader, washer, reagents)
? Nitrocellulose membrane (for DIBA test)
? Immuno-diagnostic reagents (Specific Antisera/Enzymes/substrate/buffers)
? PCR
? PCR Tubes
? Horizontal Gel Electrophoresis Unit with power pack
? Hybridization Oven
? Gel Documentation Unit with printer
? Micro-centrifuge & Effendorf tubes
? Nucleic Acid Chemicals (Specific Primers/TAQ DNA Polymerase/buffers/stains etc)
? Rnase Kit

2.1. Receipt of Application:

2.1.1. The importer or his authorized agent will apply in prescribed format (Annexure-2A) along with attached documents (diagrammatic design of the facility/SOPs) to the concerned Inspection Authority (i.e. SAUs/ICAR Institutes) for certification of PEQ facility for growing imported plants and plant material and other regulated articles under confinement sufficiently in advance of import.

2.1.2. The technical staff attached to the concerned inspection authority will receive the application and issue an acknowledgement slip.

2.2. Verification of Application

2.2.1. The technical staff of concerned Inspection Authority will scruitinize the application and attached documents (diagrammatic design of the facility/SOPs), whether the information provides is correct and complete.

2.2.2. If application is incomplete, he will inform the importer to provide necessary information and correct the deficiencies in the application.

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2.3. Registration of Application:

2.3.1. The technical staff will register the correct and complete application and assign a registration number and record the particulars in a register (Annexure-2B) maintained by the inspection authorities for certification of PEQ facilities and submit the same to the concerned inspection authority.

2.4. Scheduling of site visit:

2.4.1. The inspection authority will draw a schedule of site visit by a team of at least two experts for technical assessment of PEQ facilities established by the importer to ensure that they are established in conformity with the criteria laid down under Section-3 of this document and communicate to the importer concerned..

Annexure-2A:
Application for Certification/Renewal of Postentry Quarantine Inspection Facilities

1. Name/Address of the Applicant (Mailing Address/ Telephone/Fax/Mobile/E-mail):	2. Registration No./Date:
2. Type of facility:	( ) Open field; ( ) glass house; ( ) Screen house; ( ) Polyhouse and ( ) Others:_____ (specify)
3. Location of Facility (Village/Taluk/Mandal/District/State):	
4. Name of Facility Operator & Contact Details (Telephone Number)	
5. No. of Units/ Extent of Facility (Floor Area/ Potting Space)	
6. Type of Plants/Plant Material and /or other Regulated Articles intend to import/Quantity (Nos)/Date by which intend to import & port of entry, where applicable.	
7. Is the application made for the first time for approval & certification? (If the application is made for renewal, please indicate certificate number/date of certification and also attach original copy of certificate issued)	( ) First time: ( ) Renewal
8. A brief description of facility (Enclose the diagrammatic sketch/plan of the facility). Use separate sheet.	
9. Date on which the Facility was established	
10. Any Additions/Modifications carried out to the Existing Facility. If 'Yes' give brief account of additions/modifications.	Yes/No
11. Is the application made by the applicant is rejected/refused for approval & certification at any time? If 'yes' give reasons	Yes/No
12. Whether any standard operating procedures (SOPs) in place for the operation of the facility, including, record keeping pest monitoring & sanitation practices. If 'yes' attach a copy of SOPs)	Yes/No
13. Particulars of trained staff operating the Facility (Name/type of training/jobwork/experience):	
14. Any additional information	

Declaration

I hereby declare that the information furnished above is complete and correct to the best of my knowledge and belief.
Date:_____
Place:_____

_____
(Signature/Name/Stamp of Applicant/Date)

For Office (Accreditation Unit) Use

Check list	Status		Scrutinized by	Action by IA	Applicant Response
Application complete	Yes	No			
Facility plan/diagram	Yes	No			
Facility SOPs	Yes	No			

Final Action Taken:	By: _____ (Signature/Name/Designation of Inspection Authority

Annexure -2B.

Register for Certification of Postentry Quarantine Facilities

Registration Number	**Date**	**Applicant (Name/Address**	**Type of Facility**	**Location** (Place/Taluk/ District/State)	**Extent of facility** (No of units/size/ capacity)	**Type of plant species intend to grow & Quantity**	**Whether certificate issued or rejected**	**Remarks, if any/Sign of IA**

3.1. A team of nominated experts will undertake the site visit for on-spot technical assessment of the facility on scheduled date and time as communicated earlier.

3.2. The technical assessement of the facilities will include physical examination of the facility to verify that the facility meet the criteria laid down under Annexure-3A and also examination of records maintained at the facility, procedures practiced and testing the skill competency of technical staff operating the facility.

3.3. The team of nominated experts, at the end of visit, will prepare an assessment report in the prescribed format separately for open field quarantine facilities (Annexure-3B) and closed quarantine facilities (Annexure-3C) together with the comments/recommendations and corrective actions, if any suggested. The assessment report will be duly signed by the facility owner/operator and the leader of the inspecting team.

3.4. If any corrective actions are required, the inspection authority will communicate the owner of the facility the corrective actions required to be undertaken and the time schedules for corrective action to be implemented.

3.5. The facility will be re-inspected by the same nominated experts after the scheduled time period to verify the corrective actions are undertaken

3.6. If satisfied, the team of experts will recommend the facilities for approval and certification by the inspection Authority

3.7. If required corrective actions are not satisfactorily undertaken, the inspection authority may reject the application for certification of facilities and inform the facility owner as per the format prescribed in Anexure-4B.

Annexure-3A

Criteria for Approval and Certification of Postentry Quarantine Facilities

1. Open Field Quarantine Facilites:

The open field quarantine facilities such as isolated nurseries/growing of crops is confined to germplasm, seed crops, bulbs/tubers of flowers & oilpam nurseries and forest nurseries raised from imported seed/ propagating plant material. The open field quarantine facilities must meet the following requirements for approval and certification

1.1. Location/Isolation:

The field should be distinctly located in an offshore island for maintaining germplasm of plantation crops such as coconut. For annual seed crops/bulbs & tubers etc., of flowers, the facilities should be established in an isolated field, which is distinctly marked, The minimum isolation distance from similar cropped area should be of 500 metres.

1.2. Security of the Facility:

The field should have a barbed wire fencing or similar material with a lockable gate to prevent any unauthorized person trespassing through the area with a clear sign board indicating "Postentry Quarantine Area-Entry is denied without Permission" and watch and ward.

1.3. Soil treatment:

The soil in the field should be appropriately treated either by steam sterilization or fumigation or solarization to render pest-free. The treated soil should be tested especially for freedom from soil-borne parasitic nematodes/fungi before planting.

1.4. Trap crop/barrrier:

The field should be bordered around with high density polythene film up to a height of 10 ft without any openings or gaps and /or raised around with 3-4 rows thick barrier crop such as Daincha & Sesbania to serve as an insect barrier.

1.5. Watering:

The water used for irrigation should be of good quality and appropriately treated to render pest free. The field should be irrigated through a drip irrigation system and or furrow or basin or bed irrigated and no overhead irrigation (sprinkler) system should be used.

1.6. Drainage:

The field should be properly leveled to prevent water logging and with good drainage facility.

1.7. Field sanitation;

The field should be free from weeds and residues of previous crop and proper. Arrangements for disposal of infested/infected plant material

1.8. Documentation:

The facility should have standard operating procedures in place for the operation of facility (including record keeping, pest monitoring and plant protection practices)

1.9. Staff training:

The staff should be adequately trained in field operations, pest monitoring, plant protection practices and record keeping.

2. Closed Quarantine Facilites (Glass house/Screen house/Polyhouse)

The closed quarantine facilities such as glass houses/screen houses/poly houses are required for growing imported high risk ornamental and fruit plant species including tissue culture plants. The facilities established must meet the following criteria for approval and certification.

2.1. Double Door Entry:

The facility should have a double door entry with outer solid door, which is lockable and inner screened door fitted with a door closure to prevent any entry/escape of pests and the entry to the facility should be restricted. The double door entry porch is provided with a foot both and a basin containing disinfectant for hands and foot disinfection

2.2. Flooring:

The facility should have concrete flooring for easy cleaning and washing or soil floors should be covered with impermeable membrane. The drainage holes should be appropriately covered with screen to prevent entry of hitch hiking pests and rat-proof. There should be small water trough around the exterior of the facility to act as ant barrier.

2.3 Structural Design of Facility:

The structural design of the facility may vary depending on the plant species and location of the facility and climatic conditions of the area in which the facility is located, either it is with angular roof or bow shaped roof or ground to ground tunnel house. The structural frame should comprise of tubular columns and angular trusses made of mild galvanized steel for easy maintenance.

2.4. Roof/Wall Cladding:

The facility should have roofs/walls cladded with either poly carbonate or polythene or covered with an insect proof screen or mesh. The all side screened houses should have adequate protection on the top by a sliding roof of polythene film against rain in heavy rain fall areas. In case of poly houses with top side openings the openings should be screened with appropriate size of mesh to prevent entry of hitch hiking pests such as Lepidopteran moths. The maximum height of the house upto the trusses should not be more than 3.5-4 m. However the length/breadth of the house will very upon the requirement. In case of larger houses or modular houses there should .be a clear partition to segregate the plant material.

2.5. Vector-Proofing of facility:

All the vents/openings to the facility should be covered with a screen of 40-60 meshes for linear inch made of good quality material either of stainless steel/phosper bronze or nylon to prevent entry of vectors such as aphids, mealy bugs, thrips & white flies.

2.6. Lighting/Heating/Cooling/Shading Requirements:

The facility should have adequate lighting to facilitate proper growth of the plants. If the facility located in temperate areas, it should have adequate heating with heating ducts are evenly distributed to provide uniform heating, which is thermostatically controlled. The facility should have adequate cooling system either by cool cell pad system/desert cooler and /or a fan coil unit, which is thermostatically controlled. The facility should have either internal/external shade netting arrangements for cutting down excess lighting.

2.7. Watering/Misting;

The facility should have adequate watering facility through automatic drip irrigation for irrigating the beds or potted plants and over head misting facilities for rejuvenation of cuttings/hardening of tissue culture plants.

2.8. Cleaning & washing of pots:

The facility should have a separate area for cleaning/washing/disinfecting pots and other containers used for planting.

2.9. Potting area:

The facility should have separate potting area for filling up of pots with growing media and storing of pots and containers.

2.10. Soil treatment:

The facility should have adequate equipment for sterilization of soil and other organic media, for growing of plants, by vapour heat or by chemical disinfectants. The treated soil should be tested especially for freedom from soil-borne parasitic nematodes/fungi before planting.

2.11. Incinerator:

The facility should have an incinerator for destruction of affected plant material or a separate area for disposal of affected plant material by burning.

2.12. Fixed/Sliding benches

The facility should have either fixed or sliding benches for raising the potted plants above the ground with adequate isle space of ¾-1m for easy movement of men and material.

2.13. Documentation:

The facility should have standard operating procedures in place for the operation of facility (including record keeping, pest monitoring and plant protection practices)

2.14. Staff training:

The staff operating the facility should be adequately trained

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3. Containment Facility:

Special containment facilities required for handling biological control agents and beneficial organisms High level containment facilities such as filteration of air through spore proof filters are required for handling GMO's and transgenic plant material and entry provided with air-curtains and treatment of discharges from the facility .

Annexure -3B.

Technical Assessment Report for Certification of Open Field Quarantine Facility

1. Name of Facility Owner:			2. Application Reg No/Date:
3. Location of Facility (village/Taluk/District/State)			
4:Contact Address (Postal/Telephone Number/Fax/ Mobile/E-mail)			
5. Assessed by			i)_____ (Name & Designation of Expert) ii)_____ (Name & Designation of Expert)
6. Date of Visit			
7. Field Number/Extent of Area			
8. Extent of quarantine area Marked			
9. Name of Plant Species intend to be grown			
10.Details of previous crops grown			
11 Details of Assessment			
Criteria	**Yes**	**No**	**Comments**
Facility is distinctly located in an offshore island and /or isolated from similar/related crop species up to a diameter of 500 to 1000 m			
The field is enclosed around with barbed wire fencing with lockable gate to prevent any unauthorized entry			
The field is bordered around with a high density polythene film up to a height of 10 ft with out any openings or gaps and /or raised around with 3-4 rows thick barrier crop such as Daincha & Sesbania to serve as insect barrier.			
Suitable sign board such as 'Postentry Quarantine Area- No Entry Without Permission' is displayed near the entry gate to prevent tress passes...			
The field is located in a elevated area and properly leveled with adequate drainage conditions			
The water used for irrigating the field is of good quality and appropriately treated to render it pest – free.			
Soil beds are appropriately treated by pasteurization or fumigation to render pest-free			
The field is watered through a drip irrigation system and or furrow or basin or bed irrigated and no overhead irrigation (sprinkler) system used.			
The field is free from weeds and refuse of previous crop, if any			

Security sufficient to prevent unauthorized access			
Documentation Standard operating procedures in place for the operation of the facility (including, record keeping pest monitoring & sanitation practices			
Staff training and competency satisfactory			
Facility Meets the requirements as listed above			
Corrective Action, if any required to be under taken			**/Time schedule**
Facility Owner's signature/Date_____ Inspection Authority's signature/Date: _____			**Corrective Actions have been undertaken & verified:** _____ (Inspection Authority's Signature/Date)

Annexure -3C.

Technical Assessment Report for Certification of Closed Postentry Quarantine Facility (Glasshouse/Screen house/Polyhouse)

1. Name of Facility Owner:	2. Application Reg No/Date:
3. Location of Facility (village/Taluk/District/State)	
4:Contact Address (Postal/Telephone Number/Fax/ Mobile/E-mail)	
5. Assessed by	i)_____ (Name & Designation of Expert) ii)_____ (Name & Designation of Expert)
6. Date of Visit	
7. Type of Closed Quarantine Facility	( ) Glasshouse; ( ) Screenhouse; ( ) Polyhouse
8. No. of Units/ Floor space	
9. Name of Plant Species intend to be grown	

10. Details of Assessment

Criteria	Yes	No	Comments
vector-proof facility			
Adequate double door entrance			
Entrance foot-bath/hand wash basin with disinfectant present			
All the gaps from the external to internal environment are properly sealed			
Appropriate temperature, light and humidity controls exist at the facility			
Proper misting facilities for tissue culture hardening/acclimatization of transplants			
Facility (and all containers) disinfected and free of plants, debris or soil			
Soil-less medium used and pest free and /or treated soil is used.			
Separate facility for potting			
Water used is of good quality and appropriately treated to render pest free			
Sliding and raised benches for growing tissue culture plants			
Soil floors covered with protective membrane			
Security sufficient to prevent unauthorized access			

Documentation Standard operating procedures in place for the operation of the facility (including, record keeping pest monitoring & sanitation practices			
Staff training and competency satisfactory			
Facility Meets the requirements as listed above			

Corrective Action, if any required to be under taken	**Time schedule**
Facility Owner's signature/Date_____ Inspection Authority's signature/Date: _____	**Corrective Actions undertaken & verified:** _____ (Inspection Authority's Signature/Date)

4.1. Preparation of certificate:

4.1.1. The concerned Inspection Authority, after satisfying with the recommendations of inspection team, will prepare a certificate of approval of PEQ facilities as per format prescribed in Annexure-4A.

4.2. Issue of Certificate:

4.2.1. The certificate of approval will be issued in triplicate viz., '**original**' for the facility owner; '**duplicate**' forwarded to the officer-in-charge of concerned plant quarantine station at concerned port through which the plants/plant material and /or other regulated articles are intended to import and the '**triplicate**' is maintained as office copy in the case folder.

4.3. Validity of Certificate:

4.3.1. The validity of certificate will be for a maximum period of six months for open field quarantine facilities for annual seed crops, bulbs/tubers of flowers/forest tree species (with the exception of oil palm which is for 18 months); one year in case of polyhouse/screen (nylon) house facilities and 3 years in the case of glass (polycarbonate)/screen (stainless steel/phosperbronze) house facilities

4.4. Renewal of certification:

4.4.1. The certificates issued for open field quarantine will be further renewed for a maximum period of six months subject to necessary re-inspection of facilities and there after no renewal will be granted.

4.4.2. The certificates issued for closed quarantine facilities such as polyhouses/screen (nylon) houses are renewed annually subject to necessary re-inspection of facilities

4.4.3. The certificates issued for glass (polycarbonate) houses/ screen (stainless steel/phosperbronze) are renewed after every two years but will be subject to annual verification

4.4: Rejection/Cancellation of Certification:

4.4.1. The inspection authority will issue rejection/cancellation of certification of PEQ facilities in the format prescribed in Annexure-4B, if he is satisfied after inspection/verification, that facilities will not meet the criteria laid down in Section-3 of this document or that the facility does not comply with the postentry quarantine regulatory requirements specified under the Plant Quarantine (Regulation of Import into India) Order, 2003 and the amendments issued there under, as the case may be under intimation to the concerned PQO at the designated port through which intend to import/imported and the Dte of PPQS (NPPO).

Annexure -4A

	_____ _____ _____ (Name of the Institute/Organization)	**Certificate No:** **Date of issue:** **Valid up to:**

CERTIFICATE OF APPROVAL OF PEQ FACILITY

In accordance with the provisions of Clause 11 of the Plant Quarantine (Regulation of Import into India) Order, 2003 issued under sub-section (1) of the Section 3 of the Destructive Insects and Pests Act, 1914, and amendments issued there under, I hereby certify that the following facility has been inspected and approved for growing of imported consignment of plants/ planting materials as described below, under postentry quarantine, as per the Standard Operating procedures (SOPs) established by the Dte of PPQS (NPPO) and subject to the following terms and conditions.

Date: _____
Place: _____ _____

(Signature/Name of Inspecting Authority)

(Seal)

1. Name and address of the Importer:	:
2. Location of PEQ facility (Village/ Taluk/District/State):	:
3. Type of facility (Open field/Glasshouse/Screen house/Polyhouse)	:
4. No. of Units & size of each Unit	:
5. Total capacity (No. of propagating Units/ potting space)	:
6. Name of plant species intended to be grown	:

:**Terms & Conditions of certification:**

1. The Original Certificate of Approval shall be displayed in a prominent place at the Facility and a copy of the certificate shall be forwarded to the authorized officer of PQS of concerned port through which the plants/plant material described above are intend to import to facilitate issue of import permit.
2. The Certificate of approval is valid only up to the date indicated unless otherwise renewed.
3. The holder of certificate shall hold valid license issued by the Director of Agriculture of the concerned State
4. The certificate is valid will apply at least one month in advance of the date of expiry for renewal and no certificate will be renewed after its expiry.
5. The certificate of approval granted shall be liable to be withdrawn/cancelled, if the holder of certificate is involved in making false records or not abide by the instructions given by the Inspection Authority during the course of inspection of growing plants under postentry quarantine

Endorsements:

Revalidated/suspended/cancelled on _____ by__ _____

Revalidated/suspended/cancelled on_____by_____

Copy to:

Annexure -4B

To: _____ _____ _____ **(Name/Address of Facility owner)**	**Ref No:_____** **Dated**

Rejection/Cancellation of Certification of PEQ Facilities

It is hereby informed that the PEQ facilities described here under have been inspected by a tem of experts nominated by the undersigned and considered that the same will not meet the criteria laid down for certification under the Standard Operating Procedures (SOPs) established by the Dte of PPQS (NPPO). Therefore your application is rejected for approval of Certification of Postentry quarantine facilities for growing imported plants/plant material and /or other regulated articles due to the reasons given below:

Date:_____
Place:_____ (Signature/Name of Inspection Authority)

2. Location of PEQ facility (Village/ Taluk/District/State):	:
3. Type of facility (Open field/Glasshouse/Screen house/Polyhouse)	:
4. No. of Units & size of each Unit	:
5. Total capacity (No. of propagating Units/ potting space)	:
6. Name of plant species intended to be grown	:

7. Reasons for Rejection/Cancellation of certification:

Copy to:

5.1. Quarantine Inspection/ Release of Plants/Plant material & Regulated Articles at the Port:

5.1.1. The importer will secure an import permit for import of seeds/plants/plant material for propagation sufficiently in advance from PQO at designated port through which intend to import.. The importer and/ or his agent will file an application in the format prescribed under PQ Order, 2003 with the PQO at designated port for import inspection and quarantine clearance of plants/plant material and or other regulated articles along with a copy of import permit, phytosanitary certificate (original), certificate of approval of PEQ facilities, an undertaking for growing imported plants/plant material and/or other regulated articles (Annexure-5A), other relevant documents and pay the necessary PEQ inspection fees, just prior to arrival of consignment at the designated port. The importer and/ or his agent will ensure Custom's forwardal of consignment to the PQ station immediately upon the arrival at the designated port.

5.1.2. The PQO at designated port, immediately up on receipt at quarantine station, will undertake inspection of consignment and after necessary verification of documents accompanied the consignment and after ensuring free from pests will grant provisional release for growing under postentry quarantine in the format prescribed under PQ Order, 2003 and /or destruction of consignment in the event of interception of a quarantine pest, under intimation to Dte of PPQS. If any new organism is intercepted, he will determine the pest status of the organism and take appropriate action as considered necessary in consultation with Dte of PPQS (NPPO) and until such time the consignment will be detained at the cold storage facility at the PQS or at airport.

5.2. Intimation of Inspection Authority:

5.2.1. The PQO at designated port, immediately after granting provisional clearance, will intimate the concerned inspection authority in the format prescribed at Annexure-5B along with a copy of undertaking to grow imported plants/plant material and or other regulated articles (Annexure-5A). He will provide a copy of crop specific pest information (pest description/diagnostic protocol) and post entry quarantine inspection requirements notified from time to time in a prescribed format (Annexure-5C). A list of important plant species, quarantine pests and postentry quarantine requirements are presented at Appendix-I,

5.2.2. The PQO at designated port will issue postentry quarantine tags/labels (Annexure-5D) in two numbers per each individual species/variety imported. These tags will be forwarded to the inspection authority along with intimation letter to facilitate tagging the plants (one on the first plant of specified species/variety and the other on end plant), while growing under post entry quarantine. The tags/labels to be printed in orange green/colour with the relevant information clearly marked on the backside of tag/label and should be laminated or waxed to prevent wet damage. The PEQ tagging of the plants will facilitate easy identification of species/variety and characterization of individual shipments and further distinguish the plants that are held under

postentry quarantine from other plant material. In case of tissue cultures imported for in-vitro multiplication no PEQ tagging is applicable.

Annexure-5A.

To: _____
_____

Undertaking for Growing Plants and Plant Material under Postentry Quarantine under the Supervision of Inspection Authority._____

I/we, M/s_____
give the following undertaking in respect of a consignment of _____ intend to be imported vide Import Permit No._____ dated_____ through _____ and that upon release to grow in an approved postentry quarantine facility under the supervision of notified inspection authority (IA)and or/PQ officer authorized by the Plant Protection Adviser to the Government of India, Dte of PPQS agree to the following terms and conditions:

1. I/we shall grow the entire consignment of Imported plant material (as described above) in an approved postentry quarantine facility/isolated nursery located at the village _____ of taluk _____ of Dist. _____ of _____ State.

2. I/we undertake to intimate the concerned IA/PQO about the date of sowing/planting of seeds/ propagating plant material, percentage of germination, seedling mortality and plant protection measures if any adopted etc., within one month of sowing/planting and thereafter at regular intervals.

3. I/we shall provide all the facilities to IA/PQO for undertaking postentry quarantine inspection of seedlings/plants raised out of imported seed/plant material at the above locality.

4. I/we undertake to maintain the nursery records/registers relating to the receipt of seed/plant material, germination/planting records, plant protection measures undertaken, record of various operations in the nursery and produce the same before inspecting team for necessary scrutiny.

5. I/we agree to undertake necessary plant protection measures as advised by the inspecting team from time to time.

6. I/we undertake not to give/donate/distribute any part of the consignment without the written clearance from the IA/PQO duly authorized by PPA in this behalf.

7. I/we hereby undertake to provide at our cost free transport facility for inspection team during the visit to the nursery/PEQ facility for undertaking inspection of plants/plant material.

8. I/we hereby agree to abide by the decision of inspection authority/PQO to destroy whole or part of consignment or any seedling/plant material, which in his/their opinion found infected/infested or contaminated by a quarantine pest/pathogen, in the manner prescribed by him/them and to further undertake appropriate measures for decontamination of tools and garden equipment, soil etc., thereof on emergency basis.

9. I/we hereby undertake to bear the cost of destruction of affected plant material under the supervision of inspection IA/PQO.

10 I/we agree to maintain basic inspection tools like hand lens, field lens or illuminated magnifier, surgical spirit, dissection box, absorbent cotton, screw caped glass vials, labels etc., for the purpose of carrying out inspection.

11. I/we agree to the condition that no liability lies with IA/PQO towards loss/damage caused to any plant material/destruction of the same in the event of infection/infestation by a quarantine pest/pathogen.

12. I/we agree to the condition that in the event of non-compliance with the terms and condition stated above, I/we forfeit the future claim and right for issue of permit.

Date: _____

_____
Name & Signature Importer/Agent
Place & Address:

N.B.: The Importer/Agent is required to submit the above undertaking in duplicate to PQO at designated port, the duplicate copy which will be forwarded to respective inspection authority (IA) along with intimation letter to IA.

Annexure-5B.

To: _____ _____ _____ **(Name/Address of Inspection Authority/PQO)**	**Ref No:_____** **Date:_____**

Intimation of Release of Consignment of plants/ plant material for growing under postentry quarantine under the supervision of Inspection Authority (IA)/PQO

Sir,

The following consignment of plants/ seeds imported for planting/sowing has been inspected by this office and recommended for release to grow under PEQ facility at _____for a period of _____. The IA/PQO shall inspect the above consignment at the time of sowing/ planting and at periodical intervals and submit the reports of PEQ inspections at the end of final inspection for this office record under intimation to Plant Protection Adviser, Directorate of Plant Protection, Quarantine and Storage, Faridabad.

Date:_____
Place:_____

_____
(Signature/Name of Officer-in-Charge)

1.	Name of Commodity (species/variety)	:
2.	Quantity (Nos. & Weight)	:
3.	Country of Origin	:
4.	Import Permit No. & Date	:
5.	PSC No. & Date	:
6.	Name & Address of Importer	:
7.	Customs Ref. No. & Date	:
8.	Date of Inspection	:
9.	Date of Release	:
10.	Inspection Remarks	:

Copy to:

1. Importer, with instruction that the packages of the consignments shall be opened immediately upon receipt at the site only in the presence of IA/PQO and follow necessary instructions and guidelines from IA/PQO from time to time.
2. Director of Horticulture/ Agriculture for information

Annexure-5C

Post-entry Quarantine Inspection Information Sheet

1. Name of the Plants/Plant Material (Common/Scientific Name):	
2. Country of origin:	

3. Details of Regulated Pests of Concern:

Name of the Pest		Biology of Pest		Diagnostic Protocol
Scientific	**Common**	**Symptoms***	**Morphological Description of Pathogen***	

***Attach photoes, if any. Use extra sheet, if necessary.**

4. Post entry Quarantine Inspection Requirements:

5. Any additional information:

6. Name/Signature/Designation of PQO at designated port:	

Annexure -5D

Postentry Quarantine Tag

WARNING

These plants are held under

POSTENTRY QUARANTINE

Keep the Tag on the Plant. If any of the Plant Die, immediately notify the Inspection Authority/PQO. No Plants or any part of Plant (including dead plants) described on reverse side of this tag should not be removed/disposed/distributed/multiplied without written permission of Inspection Authority/PQO

PQ Refer.No:_____ Date of Import_____

Name of Plant Species/Variety:_____

Quantity (Nos):_____

Origin: _____

Designated Port through, which Imported:_____

6.1. Inspection of Open field cultivated crops :

6.1.1. The annual seed crops grown in open field quarantine under isolated/protected condition will be inspected at least twice. The first inspection will be when the seedlings are about one month old and the second inspection will be when they are at flowering stage. During the first inspection information on seedling mortalities will be recorded as well as any incidence of virus/downy mildew infection should be recorded and the affected plants will be sampled for virus testing and all suspected plants will be rogued out and destroyed by incineration. During the second inspection at flowering stage organ-specific infections such as ergots, bunts and smuts are recorded.

6.1.2. In the case of bulbs/tubers of flowers the initial inspection will be carried out at the time of transplanting in the field to ensure that only healthy bulbs are transplanted and the incidence of bulb rots caused by fungi, bacteria & nematodes should be recorded and the specimens of affected bulbs and soil samples are collected for laboratory testing. The second inspection will be carried out, when the seedlings are about 30 days old to record virus infections and further the samples of affected plants collected for virus testing and all the suspected plants will be rogued out and destroyed.

6.1.3. During crop inspections, the inspection authority should ensure that a minimum isolation distance. of 500 metres are maintained from similar related crop species as specified and a polythene barrier is provided around the crop or barrier crop is raised around up to a height to serve as insect barrier against pest such as aphids, thrips and whiteflies etc., as specified; the pests are monitored in the field by way of sticky traps and necessary sanitary practices..

6.2: Inspection of plants/plant material grown in glass house/screen house

6.2.1. The imported foliage plants are inspected at the time of transplanting into pots inside the glass house/screen house/polyhouse facility to ensure that they are free from insect infestation and visual symptoms for fungal, bacterial and viral infection. If any plants are sowing virus infection they are sampled for immediate virus testing and all suspected plants should be immediately segregated and isolated to prevent virus spread. If the test results are positive, the affected plants will be rogued out and destroyed and the plants will be re-inspected after a fortnight to cull out the virus infections that escaped the attention during the first visit and the final inspection will be carried after 45 days of planting

.

6.2.2. In the case of dormant cuttings/buddings, .the first inspection will be carried one month after budding or transplanting to facilitate rejuvenation of cuttings/buddings and the second inspection will be carried out after 60 days of planting.

6.2.3. In case of fruit plant species, such as citrus, grapes, apple, pear, plums etc., the first inspection will be carried out at the time of transplanting in pots and thereafter all the virus suspected plants will be indexed on a susceptible variety to facilitate virus expression. The indexed plants will be inspected as per the indexing schedules drawn by the inspection authority in consultation with Dte of PPQS (NPPO) and ICAR crop specific research institutes.

. .

6.3. Inspection of tissue culture plants:

6.3.1. The imported mother stock culture grown in-vitro in isolation at the accredited tissue culture laboratory will be inspected by the specified inspection authorities and each and every culture will be tested virus-free as per established protocols before the same is permitted for initiation in to tissue culture production. If any virus infection noticed the entire mother culture will be destroyed by incineration under intimation to Dte of PPQS (NPPO).

6.3.2. If tissue-culture raised plants/ex-washed plants are imported the same will be inspected by the specified institutes notified under PQ Order, at the time of planting in the insect-proof tissue culture hardening facility such as screen house, poly house, and glasshouse, the same is sampled batch-wise and tested virus-free as per established protocols, before the same is permitted for release for initiation into tissue culture production. If any virus infection noticed the entire batch of plants will be destroyed under intimation to Dte of PPQS (NPPO).

6.4. Inspection of other regulated articles:

6.4.1. The imported cultures/organisms of biological control agents and beneficial organisms including GMO's will be held under quarantine at the high level containment facilities established by the authorised institutes in accordance with guidelines established by the Dte of PPQS (NPPO).

6.4.2. If the biological control agents or beneficial organisms are the one, which is already established in the country, the same will be inspected by the technical expert to ensure that they are free from contamination or infestation/infection by natural enemies and other organisms and will be further cultured or reared for at least two consecutive life cycles and subsequently tested free from the same before according release from postentry quarantine.

6.4.3. If the biological control agents or beneficial organisms are introduced newly for the first time, the same will be inspected to ensure free from contamination or infestation/infection by natural enemies/antagonists and further its impact on other organisms and host specificity is evaluated under postentry quarantine conditions before permitting experimental release and which is closely monitored.

6.5. Postentry Quarantine tagging of plants:

6.5.1. The inspection authority at the time of inspection will ensure that the plants grown under post entry quarantine should be placed with PEQ tag one on the first plant of individual species/variety and the second at the end plant of the same species/variety. These tags will be forwarded to the inspection authority by the PQO at the designated port at the time of provisional release of plants for growing under post–entry quarantine and will be removed by the inspection authority, when the plants are released at the end of postentry quarantine inspection.

6.6. Sample forwardal/receipt for laboratory testing:

6.6.1. The sample forwarded for laboratory testing will be appropriately packed in a thermo-cool box with ice pack to prevent any escape of pest, sealed and labeled. The sampling label will provide detailed information viz., Reference Number, Name of the Commodity (Species/Variety), Plant parts sampled, Field/GH or SH or PH Unit No., Sample size, Place of inspection, Date of inspection, Name/Signature of Inspector. The samples will be collected in the presence of facility owner/operator.

6.6.2. The samples on receipt at the office of the inspection authority/PQO (with PEQ responsibility) will be entered in a PEQ inspection register (Annexure-6A). The sample will be divided into two portions and one will be issued to the concerned laboratory for testing and the other portion will be held in a refrigerator or held under cold storage room to prevent spoilage by microbial contamination for future reference until the laboratory testing is completed.

Annexure-6A.

PEQ Inspection Register

Ref. No.	Date (s) of inspection/ sampling	Name of Facility/ Location/ Unit Number	Name of the Commodity (Species/variety)	Plant population grown	Sample size	No of samples drawn	Sampled by	Tests carried out	Tested by	Name of Pest detected (Scientific)	Action taken & signature of IA/PQO

7.1. Laboratory testing by Inspection Authority:

7.1.1. The samples on receipt will be tested by concerned laboratory expert according to internationally established or validated diagnostic protocols, where appropriate. If the test results are proved to be positive for the quarantine pests specified under PQ order, 2003, the same may be brought to the immediate notice of inspection authority.

7.1.2. At the end of laboratory testing the concerned expert will report the test results in prescribed format (Annexure-7A) to the inspection authority

7.1.3. The inspection authority on receipt of test report may verify the test results and the test protocols adopted and pest identifications and enter in the inspection/testing register or order, if necessary, the repetition of test results to confirm the findings.

7.1.4. I f any new organism is intercepted, the identification of the same may got authenticated by a national referral laboratory and its pest status may be evaluated before reporting the same to Dte of PPQS (NPPO)

7.1.5. The inspection authority will adopt sero-diagnostic protocols such as ELISA/DIBA and molecular diagnostic protocols such as RT-PCR and NASH for characterization of virus and bacteria.

7.1.6. It should be ensured that a portion of the sample tested for virus infection will be preserved in deep freezer at -80 C as reference sample with appropriate labeling giving reference number for tracing back the sample to consignment imported.

7.1.7. The concerned expert will exercise appropriate quarantine precautions to avoid contamination, while handling of virus-affected material, preparation of samples and carrying test and disposal of unutilized portion of sample.

7.1.8. If any inoculations of indicator plants required to be performed by the inspection authority to establish biological identity or indexing, the tests should be strictly confined to vector-proof quarantine glass house/screen house/polyhouse facility under isolated and secured condition to prevent any escape or spread of virus and inoculated hosts should be immediately be destroyed by incineration after recording the test results and taking photographs including electron micrographs, if any.

7.2.. Specimen forwardal for identification by referral laboratory

7.2.1. .If the inspection authority/PQOs (with PEQ responsibilities) can not be able to identify the pest or organism detected in imported plants/plant material, he will forward the specimens along with specimen identification request form (Annexure-7B) to the national referral laboratory recognized by the Dte of PPQS (NPPO) under intimation to PQO at designated port and Dte of PPQS (NPPO).

7.2.2.. Insect (belong to the order: Coleoptera, Diptera, Homoptera (except white flies), Hyminoptera, Orthoptera (immature ones), Thysanoptera) and mite (Acarina) specimens collected should be killed by placing in 70% of alcohol in screw-capped vials and labeled. The larvae of Lepidoptera should be killed by placing in boiled water and gradually cooled and later placed in 70% alcohol in screw-capped vials. The adult insects of Lepidoptera, Orthoptera & Homoptera (white flies) will be killed by placing in insect killing bottle containing cyanide or ethyl acetate and pin adult specimens on Styrofoam pinning blocks, which are pinned to the bottom of pinning box. The Homopteran insects such as scales/mealy bugs/psyllids will be killed and preserved along with host material as dry mounts.

7.2.3. The nematode specimens will be extracted from soil, infested plant material using a nematode extraction unit or standard sieving method or Baerman funnel technique as the case may be. The extracted nematodes will be transferred to Syracuse glass and examined under steriobinocular microscope fitted with base illuminator. The plant parasitic nematode specimens (thread-like worms with stylet) will be transferred to a vial containing few ml of water and gently heat killed. The heat killed specimens are placed in a fixative such as 3% formalin (1ml of formaldehyde + 12 ml of water). However cysts of nematode and mature females of *Meloidogyne* spp., are directly transferred to fixative without heating

7.2.4. In case of diseased specimens, the affected plant material will be partially dried and placed in between sheets of stiff absorbent paper to keep the diseased area flat and ensure not folding specimens, while mailing to the identifier or if not permanent slide mounts or cultures of fungi/bacteria isolated from disease specimens will be submitted for identification. However the plants suspected of virus infection, leaves along with branch will be placed in between folds of tissue paper and kept in self sealing plastic bags, which are sealed air-tight to maintain freshness and turgidity of specimen. The sealed bags are in turn placed in side a bubbled package and send it by courier to nearest virus testing laboratory.

Annexure -7A

Laboratory Test Report

1. Test Report No:	2. Date of Reporting
3. Sample Reference Number	4. Date of Reference
5. Name of Laboratory/Organisation	
6. Name of Technical Expert/Contact Number	
7. Host plant species/variety examined	
8. plant parts examined	
9. No of samples tested/size of sample	

10. Details of testing

Type of Test Carried out	Name of pest/organism detected			Description Notes, if any
	Scientific Name	Common name	Taxon	

11. Remarks, if any:

_____

(Signature/Designation of Laboratory Expert)

Anexure-7B

Specimen Forwardal for identification by Referral Laboratory	
1. Collection Number:	2. Date of Collection:
3. Submitting Organisation:	
4. Name/Address of the Sender:	
5. Place of Collection (Name/Address of PEQ Facility/PQ Station/Others):	
6. Reasons for identification:	
Name of the host species (Common/Scientific) & variety on which reported:	
6. Origin of host:	
9. Plant Parts affected:	*[ ] roots; [ ] stems; [ ] leaves; [ ] inflorescence; [ ] fruits; [ ] seeds/nuts [ ] others (_____) ***tick out in appropriate box**
10. Category of pest specimen/organism submitted	*[ ] insects; [ ] mites; [ ] nematodes; [ ] fungi; [ ] bacteria; [ ] virus; [ ] others (_____) ***tick out in appropriate box**
11. Life stage of the pest (Applicable to Insects)	*[ ] egg; [ ] larvae; [ ] pupae; [ ] adult; [ ] nymphs; [ ] juveniles; [ ] cysts; [ ]others (_____) ***tick out in appropriate box**
12. Type of pest specimen/organism submitted	*[ ] preserved specimen; [ ] pinned/card board mounted specimen; [ ] dry specimen with host; [ ] culture; [ ] disease specimen (fresh); [ ] disease specimen (partially dry); [ ] slide mount; [ ] others (_____) ***tick out in appropriate box**
14. Number specimens submitted per each collection:	
15. Signature/stamp/office seal of the Sender with date: _____	
For Identifier Use	
16. Name & Address of Identifier/Referral Laboratory:	
17. Remarks of identifier (condition of receipt of specimens)	
18. Pest Identification (Common/Scientific Name/Taxon):	
19. Description Notes, if any:	
Place: _____ Date: _____ _____ (Signature/Name/Designation of Identifier)	
Note: This form should be prepared in duplicate by the sender and forwarded to the identifier/referral laboratory along with each collection of specimen. The identifier should return the original copy after entering the particulars of the pest identified along with description notes and remarks if any to the sender of the specimen and duplicate copy will be retained by the identifier.	

8.1. Detection of Regulated Pests:

8.1.1. The Inspection Authority/PQO (with PEQ responsibility) on detection of regulated pest will order the destruction of the affected consignment of plants/plant material and /or other regulated articles held under quarantine/grown under postentry quarantine, either whole or a part of plant population, after taking into account the nature of the pest, level of infection/infestation and level of containment of its spread/isolation/segregation..

8.1.2. Where destruction of any plant population is ordered by the Inspection Authority/PQO (with PEQ responsibility), the importer shall destroy the same in the manner as may be directed by the Inspection Authority/PQO (with PEQ responsibility) and under his supervision.

8.1.3. The inspection authority/PQO (with PEQ responsibility) will promptly notify the Dte of PPQS (NPPO) regarding the detection of regulated pest in the imported consignment and the action taken in the format prescribed in Annexure-8A

8.2. Detection of Non-Quarantine Pests:

8.2.1. If the pest detected is considered to be of non-quarantine pest, the inspection authority/PQO will advise necessary plant protection measures to control the pest, before the same is permitted release to the importer or his agent.

8.3. Detection of New Organism:

8.3.1 If any new organism is detected, the inspection authority/PQO will determine the pest status of organism detected and proved to be potential phytosanitary threat, he will order immediate destruction of affected population and promptly notify the Dte of PPQS (NPPO) for further necessary action in the format prescribed in Annexure-8A

8.4. Issue of Release/Destruction Certificate:

8.4.1. The inspection authority/PQO at the end of PEQ inspection will issue a release/destruction certificate (Annexure-8B) to the importer or his agent under intimation to the concerned officer-in-charge of RPQS/NPQS at the designated port through, which the consignment was imported.

Annexure-8A

To: _____ _____ _____ **(Name/Address of Dte of PPQS (NPPO)**	Notifcation No: Date:

Notification of Detection of Regulated Pest (s)/New Pest (s) by Inspection Authority/PQO

This is to notify that the following plants/plant material grown in an approved postentry quarantine facility under our supervision have been inspected/tested and found to be infected/infested by the regulated pest (s)/new pest (s) as described here under and there fore whole/a portion of plant population affected by the regulated pest (s)/new pest (s) has been destroyed by incineration under our supervision:

Date:_____
Place:_____

Seal

_____
(Name/Sig./Stamp of Inspection Authority/PQO)

1. Name of the Plants/Plant material (Species/Variety) inspected:	
2. Number of plant population grown inspected:	
3. Import Ref No./Date:	
4. Country from which it is imported:	
5. Port through which imported:	
5. Name/location of PEQ Facility/Unit:	
6. Name of regulated pest (s)/new pest (s) (common/ scientific name & Taxon) detected:	
7. Date of Inspection/Testing:	
8. Tested according to:	
9. No. of plants affected:	
10. Action taken:	

Copy to:_____
(Name/Address of PQO at designated port through which plant material has been imported)

Annexure-8B.

	_____ _____ _____ (Name/Address of Inspection Authority/PQO	Certificate No. Date

Certificate of *Release and /or Destruction issued by Inspection Authority/PQO

This is to certify that the plants/plant material and other regulated articles described hereunder grown under the approved facility described herewith have been inspected by the undersigned and found free from quarantine pests as specified in the Plant Quarantine (Regulation of Import into India) Order, 2003 and amendments issued there under and therefore granted final clearance *and /or a portion or whole of the plants/plant material and other regulated articles have been destroyed due to reasons given here under.

Date:_____
Place:_____ _____

Seal (Signature/Name/stamp of Inspection Authority/PQO)

Note: * strike out, which ever not applicable.

Name of Commodity (Plant species/Variety)	
Quantity grown (No of units).	
Name/Address of the Importer	
Import Reference No/Date/PQS	
Facility (Name/Location)	
Date of sowing/planting	
Date of final clearance and /or destruction	
Released Quantity (No of units)	
Destroyed Quantity, if any	
Reasons for Destruction	

Copy to: _____
(Name/Address of PQO at designated port)

9. Notification of Non-compliance & Emergency Action:

9.1. The Dte of PPQS (NPPO) on receipt of information regarding the interception of regulated pest in an imported consignment of plants/plant material will promptly notify the exporting country in the format prescribed in Annexure-9A., in accordance with *ISPM No. 13 (2001): Guidelines for the Notification of Non-compliance and Emergency Action, FAO, Rome.*

9.2. The notification will be sent to the IPPC contact point or where contact point has not been identified, to the NPPO of exporting country, unless bilateral arrangements exist which specify to whom the notification should be sent.

9.3. The Dte of PPQS (NPPO) will verify the identification of pest/organism detected in imported consignment of plants/plant material and or other regulated articled during port inspections and or postentry quarantine inspection from the concerned PQO/inspection authority and its authentication, where required, before notifying the NPPO of exporting country and will advise the concerned inspection authority/PQO to retain the evidence such as appropriate specimens or material for a period of one year following notification or until necessary investigation has been carried out.

9.4. The significant instances of non-compliance will include:

- failure to comply with phytosanitary requirements;
- detection of regulated pests (specify)
- failure to comply with documentary requirements
  - ? absence of phytosanitary certificate (PSC)
  - ? uncertified corrections/alternations or erasures in the PSC
  - ? incomplete certification
  - ? fraudulent phytosanitary certificates
- prohibited consignments
- contaminated with soil
- failure of specified treatment as evidenced by interception of live pest
- repeated interception of prohibited consignments/articles in passenger baggages/mails

9.5. The emergency action will be taken on the detection in an imported consignment
- regulated pests not listed as being associated with commodity from the exporting country
- organism posing a potential phytosanitary threat.

Annexure -9A

Notification of Non-Compliance & Emergency Action Taken

1. Import Reference No: _____ Dated:_____ **2. Directorate of Plant Protection, Quarantine & Storage N.H.IV., Faridabad-121001, India**				**3. Export Reference No:_____ Dated: _____** **4. _____** **_____** **(NPPO of Exporting Country)**			
5. Name of the Plants/Plant products (Species/variety)	**6. Quantity (Wt/Nos**	**7. Phytosanitary Certificate or other Ref No/ Date**	**8. Name of Consignee**	**9. Name of Consignor**	**10. Marks, if any**	**11. Date of inspection**	**12. Nature of Non-compliance**
13. Phytosanitary Action Taken:							
14. Signature/Name/Stamp/ of Authorised Signatory with date			**(seal of organization)**	**_____**			

10. Reporting & Monitoring:

10.1. The concerned inspection authority/PQO (with PEQ responsibilities), at the end of PEQ inspection will submit a report in prescribed format (Annexure-10A) to the PQO at the designated port through which the plants/plant material and other regulated articles have been imported under intimation to Dte of PPQS within 7 days after final inspection. He will also forward a copy of postentry quarantine release and /or destruction certificates issued to the importer

10.2. The Dte of PPQS (NPPO) will develop and install appropriate software and establish communication link with concerned inspection authority/PQO (with PEQ responsibility for on-line reporting of post entry quarantine inspection activities and closely monitor the activities of inspection authorities to ensure that PEQ activities are effectively performed and the inspections and certifications timely carried out

Annexure-10 A (Part-I).

(emblem)	_____ _____ _____ (Name of The Inspection Authority (SAU/ICAR Institutes)/PQO	PEQ Rept. No. Date of Reporting:

Postentry Quarantine Inspection Report

1. Name/Address of Importer	
2. Location of PEQ Facility	
3. Imported through (Name of designated port)	
4.PQ Reference No/Date	

5. Particulars of Plant material released for growing under postentry quarantine

Plants/Plant material received for planting		Quantity (Nos) planted	Date of planting	Field No/ GH/SH/ PH Unit No.	6. Origin:
Species	Variety				
(a)					7. Condition on receipt:
(b)					
(c)					8. Any insect pest intercepted:
(d)					
(e)					9. Diseases intercepted
(f)					
(g)					10. Any treatment given:
(h)					
(i)					
(j)					
(k)					
(l)					

10. Any additional Remarks, if any:

_____
(Signature/Name of Inspection Authority/PQO)

:

Annexure-10A (Part-II)

11. Record of PEQ inspections

Species	variety	Nos	First Inspection	Second Inspection	Third inspection	Follow-up	Follow-up
(a)			Date & findings	Date & findings	Date & findings	Date & findings	Date & findings
(b)							
(c)							
(d)							
(e)							
(f)							
(g)							
(h)							
(i)							
(j)							
(k)							
(l)							
Total No of plants/No of plants destroyed, if any							
12. Any plants are sampled for laboratory testing:							
13. Inspected by:							

14. Laboratory testing for pest determination (use additional sheet, if required**)**

Host tested (species/variety	Type of Test Carried out	No of samples examined	Name of pest/organism detected					Description Notes, if any
			Scientific Name	Common name	Taxon	Life stage	Pest status	

15. Action Taken in the event of pest detection:

16. Final Recommendation for release and /or destruction:

Date:_____

_____

(Signature/Name of Inspection Authority/PQO)

N.B:- The report will be prepared in triplicate duly signed by inspection authority and submitted in **original** to the PQO at designated port through which plant material is imported and **duplicate** to the Dte of PPQS, N.H-IV., Faridabad-121001 and triplicate retained as office copy by inspection authority within one week after final inspection.

11.1. Appeal:

11.1. An aggrieved importer may appeal to the Plant Protection Adviser against the decision of the inspection authority regarding the destruction of any plant population within 7 days from the date of communication of the decision giving the grounds of appeal in accordance with provisions of PQ order, 2003.

11.2. The memorandum of appeal should be accompanied by a bank draft in favour of the Plant Protection Adviser and payable at Faridabad, evidencing the payment of fee of Rs. 100/-

11.3. The Plant Protection Adviser of Dte of PPQS (NPPO) immediately upon the receipt of appeal from the aggrieved importer will register the application.

11.4. PPA will review the appeal request, previous reports and will evaluate the appeal's arguments and call for all the relevant records relating to the case from the inspection authority.

11.5. He will schedule a meeting with appellant and the concerned inspection authority/PQO (with PEQ responsibility) after giving them one week notice and chair the meeting along with 2-3 experts.

11.2. Revision:

11.2.1. After hearing the case from both sides and receiving any additional information to counter the arguments, he will close the meeting.

11.2.2. After the meeting he will make a decision on the appeal. based on technical considerations and legal provisions and prepare the proceedings within two weeks after the meeting.

11.2.3. If the decision is in favour of the appellant, he will notify the appellant regarding acceptance of appeal and pass an order against the concerned inspection authority/PQO (with PEQ responsibilities) within one-two days after the preparation of proceedings.

11.2.4. If the decision is not in favour of the appellant he will notify the appellant regarding the rejection of appeal within one-two days after the preparation of proceedings.

12.1. Denotification of Inspection Authority:

The Dte of PPQS (NPPO) may recommend any notified inspection authority to the Ministry of Agriculture (department of Agriculture & Cooperation for denotification and or stringent action against PQO, provided it is satisfied that there are reasonable grounds to believe that concerned inspection authority/PQO involved in issuing fraudulent certificates without verification of PEQ facilities or issued release certificates without conducting any PEQ inspections or not maintained proper records as per SOPs or caused the destruction of healthy plant material without assigning any scientific reasons after verification of necessary records and after constituting enquiry into the incident.

12.2. Action against Importer's violation of PEQ regulations:

12.2.1. The inspection authority/PQO (with PEQ responsibility) will report any importer's violation of postentry quarantine regulations to the Dte of PPQS (NPPO) under intimation to PQO at designated port through which plant material is imported;

12.2.2. The activities, which constitute the importer's violation of postentry quarantine regulations include:

- illegal import of propagating plant material without adhering to quarantine regulations prescribed under PQ Order, 2003 and amendments issued there under

- not abide by the decision of inspection authority/ PQOs (with PEQ responsibilities) to destroy whole or part of consignment or any seedling/plant material, which in his/their opinion found infected/infested or contaminated by a quarantine pest/pathogen, in the manner prescribed by him/them;

- removed or disposed or distributed or transferred or multiplied or sold the plant material, while growing under postentry quarantine, without written permission from the inspection authority;

- caused objection for the entry of notified inspection authority/authorized PQO or their technical experts to the facility for conducting postentry quarantine inspection of imported plants/plant material and taking appropriate samples for laboratory testing;

- improper maintenance of PEQ facility and improper handling of material without observing proper quarantine safeguards resulting in escape and spread of quarantine pests; and,

- improper maintenance of records related to the receipt of seed/plant material at the facility, germination/planting records and records of pest monitoring and plant protection measures undertaken and disposal of plant material;

12.2.3. The Dte of PPQS (NPPO) on receipt of report of importer's violation of PEQ regulations from concerned inspection authority/PQOs (with PEQ responsibilities) will immediately order investigation into the cause of violation and in the first instance will issue an official warning of violation of postentry quarantine regulations to the specified importer and in repeated instances will take stringent action of suspending all future imports by the specified importer.

13.1. Pest monitoring

13.1.1. The facility owner or operator will undertake monitoring of pests at weekly intervals through the hanging of yellow sticky cards at the crop canaphy level for small insects such as aphids, thrips, whiteflies, leaf minors at the rate of one for every 10 sq. m and pheromone traphs at the rate of one for every 100 sq.m area for budworms and record their incidence in a register maintained for this purpose and also appropriate plant protection measures taken for the control of pests.

13.1.2. In the event of any vector population is recorded, he will immediately undertake thorough inspection of the facility to detect any damages to the screen/polythene and the same may got immediately be repaired and any openings got sealed to prevent recurrence.

13.2. Sanitary practices

13.2.1. The technical staff/workers attached to the facility will adopt sanitary practices, while making entry to the facility and ensure disinfection of hands and foot and wear sanitized apron and slippers, while working inside the glass house. The workers should avoid smoking and chewing inside the facility.

13.2.2 The tools used for handling the plants such as scissors/budding knives/secateures will be disinfected with 75% alcohol between plants.

13.2.3. The facility will be cleaned regularly of any soil spillages and all the plant debris will be collected immediately in a trash bag and will be disposed in a manner advised by the inspection authority/PQO.

13.3. Segregation of shipments:

13.3.1. Subsequent shipments of plants and plant material from similar origin will be segregated by at least one metre distance within the same enclosure and labeled

13.3.2. Shipments of plants of different origin will be isolated within the same enclosure by a temporary polythene partition and labeled.

14.1. Document Management:

14.1.1. The notified inspection authorities/PQOs (with PEQ responsibility) will adopt the standard formats prescribed herewith for postentry quarantine inspection and approval and certification of PEQ facilities and follow the Standard Operating Procedures for Postentry Quarantine Inspection established by the Dte of PPQS (NPPO) for harmonization of postentry quarantine inspection activities to meet the phytosanitary regulations issued under PQ order, 2003 and amendments issued there under.

14.1.2. The notified inspection authorities/PQOs (with PEQ responsibility) will maintain a technical folder to receive and file all the technical information received from the Dte of PPQS (NPPO) related to postentry-quarantine inspection and certification of PEQ facilities; list of regulated pests; and crop specific inspection standards, diagnostic/testing protocols etc.

14.1.3. If any changes to the Standard Operating Procedures or revision of document considered necessary, the required changes will be communicated by the notified inspection authorities/PQOs (with PEQ responsibility) to the Dte of PPQS (NPPO) along with technical justification for necessary approval of change and adoption of revision/modification. The notified inspection authorities/PQOs (with PEQ responsibility), however, will not make any changes to the document prescribed herewith or introduce new document without any written approval of Document Approving Authority

14.1.4. As and when any modifications/amendments/revision of documents is brought out, the Dte of PPQS (NPPO) will promptly communicate to all the concerned holders of this document and ensure their replacement. The copy holders should ensure that the obsolete documents are promptly replaced by the revised documents together with revision number to keep it up-to-date. The obsolete documents will be cancelled and filed separately in "obsolete document" folder to prevent confusion or misuse of the document.

14.1.5. The inspection authority/PQO (with PEQ responsibility) will ensure that this document is easily accessible to inspectors/laboratory technicians/technical experts to facilitate compliance with the Standard Operating Procedures for PEQ Inspection.

14.2. Record Control:

14.2.1. The inspection authorities/PQOs (with PEQ responsibility) will maintain all the records of all activities related to postentry quarantine inspection of plants/plant material and /or regulated articles in each folder in respect of each consignment and separately for certification of PEQ facilities by each facility-wise.

14.2.2. Each certification folder should contain the original application received from the facility owner/operator for certification of PEQ facilities and attached documents, communication of deficiencies/schedule of visit, technical assessment report, certificate of approval of PEQ facilities issued and /or rejection/cancellation of certification and renewal of certification and other relevant documents pertaining to the facility.

14.2.3. Each inspection folder should contain intimation letter regarding quarantine release of plants/plant material issued by the PQO at designated port, a copy of undertaking given by the importer or his agent for growing imported plants/plant material under postentry quarantine, a copy of report of results of postentry quarantine inspection, a copy of certificate of final release/destruction issued by the inspection authority/PQOs (with PEQ responsibility), record of pest interceptions, pest identification and authentication and other relevant documents pertaining to the consignment).

14.2.3. Each certification folder should be arranged registration number-wise for easy retrieval. Also the inspection folder should be arranged consignment (reference number)-wise.

14.2.4. The records of pest interception (preserved cultures/specimens/microscopic slides) in imported consignments of plants/plant material grown under postentry quarantine, diagnostic test protocol, pest identification including, photographs, digital images, microphotographs, gel documents etc., and authentication reports.

14.2.5. The records related to certification of facilities will be maintained for a period of at least three to five years and the record of inspection of plants/plant material and/or other regulated articles will be maintained for at least one year and should be able to be retrieved when required. Besides this Facility Certification Register, PEQ inspection register are maintained up to date, serially numbered and duly certified by the inspection authority/PQO (with PEQ responsibility), as the case may be The registers will be retained for a minimum period of one year after their completion for auditing and verification. .

15. Training:

15.1. Dte of PPQS (NPPO) will review with the inspection authority/PQOs (with PEQ responsibility), identify and record the training needs of the technical personnel in undertaking certification of PEQ facilities and inspection of growing plants/plant material under postentry quarantine to meet the phytosanitary regulations issued under the Plant Quarantine (Regulation of Import into India) Order, 2003 and amendments issued there under.

15.2. The Dte of PPQS (NPPO) will identify internal/external training needs after taking into account resources available and prepare training programme and request the concerned recognised institute for organising the external training. Dte of PPQS (NPPO) will develop appropriate training modules through the consultancy of external experts.

15.3. The Dte of PPQS (NPPO) will identify human resources (trainers/training coordinator) and prepare training schedule (Title of Training Work-Shop, Place, Dates (From/To, Trainers & Contact Address of Training Coordinator) for conducting training and budget plan for organizing training workshops.

15.4. The selected place for conducting operational training-workshop should have comfortable room with sitting chairs with tables/desks for 15-20 trainees and the trainers, LCD Projector and screen for power point presentations and computer facility and printer and white board with marker pens and with drinking water facilities and the space is adequately lighted. Also have access to glass (polycarbonate) house/screen house/poly house facilities for growing plants/plant material for conducting operational training in postentry quarantine activities.

15.5. The nominated trainers will organize training workshop on scheduled dates and venue as per the training modules approved by the Dte of PPQS (NPPO).

15.6. All the personnel with legal responsibilities of approval and certification of PEQ facilities and inspection of plants/plant material growing under postentry quarantine, will be given an operational training on all activities related to certification of PEQ facilities and carrying out post entry quarantine inspection of plants and plant material. Those involved in virus diagnosis will be given specialised training in serological and molecular techniques such as ELISA, DIBA, NASH, RT-PCR and C-DNA probes etc., at the Advanced Centre in Plant Virology at IARI, depending on the requirements.

15.7. The operational training will be of minimum of one week duration and is a must for all inspection authorities/PQOs entrusted with operational activity responsibilities (certification of PEQ Facilities/PEQ inspections). However, the specialised training programmes will be of a minimum of 2-4 weeks duration as may be decided by the above recognised institute which is offering the training. The qualified trainees will be issued a training certificate by the Dte of PPQS (NPPO).

16.1. Communication:

16.1.1. The Dte of PPQS (NPPO) will establish appropriate procedures for timely communication to relevant personnel and to the industry concerning changes in:

- phytosanitary regulatory requirements;
- international/national standards for phytosanitary measures
- list of regulated pests
- operational procedures

16.1.2. The Dte of PPQS (NPPO) will:

- liaise with the nominated representatives of NPPO of relevant export contracting party to discuss the phytosanitary requirements/issues;
- establish contact point for the NPPO of exporting country to report cases of non-compliance and emergency action.
- liaise with the relevant Regional Plant Protection Organization and other international organizations to facilitate the harmonization of phytosanitary measures and the dissemination of technical and regulatory information.

16.2. Auditing:

16.2.1. The Dte of PPQS (NPPO) in consultation with Ministry of Agriculture (Department of Agriculture & Cooperation) will establish a panel of technical experts (both internal and external) for auditing of postentry quarantine inspection activities performed by the various notified inspection authorities/PQOs (with PEQ responsibility) to ensure that the standard operating procedures for certification of PEQ facilities and postentry quarantine inspection of imported plants/plant material and /or other regulated articles are followed.

16.2.2. The Dte of PPQS (NPPO) will establish a schedule of audit and nominate at least two experts from the auditing panel for carrying out the technical audit of postentry quarantine inspection activities and intimate the concerned experts one month in advance, to facilitate making travel arrangements under intimation to concerned inspection authority/PQO (with PEQ responsibility). The scheduled audits will be carried out once in every year.

16.2.3. Besides the above, unscheduled audits will be organized at least once in a year at a short notice without intimating the concerned inspection authorities/PQOs (with PEQ responsibility) to ensure compliance with the standard operating procedures for PEQ inspection.

16.2.4. Surveillance audits will be carried out at least once in six months or at such intervals as may be decided by the auditors to ensure corrective actions are taken and preventive measures are implemented subsequent to scheduled audting.

16.2.5. Such audit inspections will involve the verification of records, verification of certification records, inspection and sampling/testing procedures actually practiced inspection of certified facilities and growing plants, verification of action taken on previous audits and virus testing protocols and skill competency of technical personnel attached to inspection authorities and verification of nonconformities with postentry quarantine inspections etc.

16.2.6. At the end of each audit, an audit report in prescribed format (Annxure-14A) will be prepared by the auditors in consultation with concerned inspection authority/PQOs (with PEQ responsibility) and submit to the Dte of PPQS (NPPO). The audit report should indicate the non-conformities observed and corrective/preventive action to be taken and time schedules by which the measures will be implemented to improve the functioning.

16.2.7. The concerned inspection authority/PQOs (with PEQ responsibility) will submit the corrective action/preventive measures taken report (Annexture-14B), which will be reviewed by the auditor at the time of surveillance auditing and reported to the Dte of PPQS (NPPO).

16.2. Review:

16.2.1. The Dte of PPQS (NPPO) will periodically review the effectiveness of all aspects of its export certification system in consultation with all the notified Inspection Authorities/PQOs nominated by the Plant Protection Adviser and implement changes to the system if required. Such review meetings will be held annually to discuss the issues and implement corrective action plans/preventive measures for their recurrence.

16.2.2. The Dte of PPQS (NPPO) will establish a procedure for investigating into non-performing Inspection Authorities and recommend to the Ministry of Agriculture (Department of Agriculture & Cooperation) for de-notification.

Annexture-16A

Audit (Scheduled) Report.

1.	**Name & Address of Inspection Authority/PQO (with PEQ responsibility) audited**		
2.	**Auditees (Name & Designation):** **2.1. Name/Designation of PEQ Expert:** **2.2. Technical staff responsible for the PEQ Activity**		
3.	**Auditing related to the period of**		
4.	**Date (s) of Auditing:**	**From:** **To:**	
5.	**List of Records Audited/Documents verified:**		
6.	**Audited by (Name & Designation):**		
7.	**Details of Auditing reported:**		
7.1	**General Comments:**		
7.2	**Specific non-conformities observed:**		
S. No.	**Type of non-conformity observed**	**Frequency**	**Corrective Action/ preventive measures to be taken**
.			

8.	**(a) Signature/Name Designation of Auditee (Inspection Authority) with date** **_____**	**(b) Signature/Name/Designation of Auditors with date** **1._____2._____**	

Annexure-16B

Audit (Surveillance) Report

1	**Name & Address of Inspection Authority/PQO entrusted with PEQ responsibility:**		
2.	**Date of auditing (surveillance):**		
3.	**Audited by (Name/Designation):**		
4.	**Details of audit (surveillance) carried out:**		
S. No.	**Type of non-conformity/ observation made by previous audit**	**Corrective Action / prevent measures undertaken**	**Remarks of Auditor**
	_____ (Inspection Authority/PQO)	**_____ (Auditor)**	

Appendix-I

List of important plant species/quarantine pests and postentry quarantine requirements

S. No.	Plant species/plant material	Quarantine pests	Postentry quarantine requirements
1.	*Albizia lebbeck* (Acacia) - plants	(a) *Uromycladium tepperianum* (Acacia rust)	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days after planting and third at 45 days after planting. .
2.	*Alstroemeria spp.*(Alstroemeria)	(a) Arabis mosaic virus (hop bare-bine) (b) Freesia mosaic virus (c) Tobacco rattle virus (spraing of potato)	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days after planting and third at 45 days after planting. .
3.	*Anthurium* spp & other aroids (*Dieffenbachia, Caladium, Syngonium, Aglaonema, Spathiphyllum, Monstera, Phylodendron*)-plants	(a) *Xanthomonas axonopodis pv. Dieffenbachiae* (Bacterial blight) (b) Dasheen mosaic virus	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days after planting and third at 45 days after planting. .
4.	*Asparagus officinalis* (Asparagus)-plants)	(a) Phytophthora cryptogea (tomato foot rot) (b) Rhizobium (Agrobacterium) rhizogenes (hairy root) (c) Asparagus virus 1 (d) Asparagus virus 2 (e) Strawberry latent ringspot virus	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days after planting and third at 45 days after planting. .

5.	*Arachis spp* (ground nut)-seeds/vegetative cuttings/plants	(a) *Puccinia arachidis* (rust) (c) *Sphaceloma arachidis* (scab) (d) Peanut mottle virus (e) Peanut stripe virus (f) Peanut stunt virus	Post-entry quarantine for a period of 6 weeks in insect proof polyhouse /mesh house. Two inspections, one when the seedlings are 30 days old and the second at 6th week.
6.	Cacti-plants	(a) *Cactodera cacti* (Cactus cyst nematode) (b) Cactus virus X. & 2 (Carlavirus)	Postentry quarantine for 45-60 days in insect-proof screen house. Two inspections, one at the time of planting and second at 45 days after planting.
7.	*Castanea* spp. (Chestnut)-seeds/plants/ planting material	(a) *Cryphonectria parasitica* (Chestnut blight)-American strain	Post-entry quarantine for a period of one year. First three months in insect proof glass/ poly/ mesh house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals..
8.	*Citrus spp* (Citrus)-rooted/un-rooted cuttings/budwood/plants	(a) *Deuterophoma tracheiphila* (Mal secco) (b) *Spiroplasma citri* (Stubborn or little leaf) (c) *Xanthomonas campestris* pv. *Aurantifolii* (Cancrosis B) (d) Citrus tatter leaf (Capillo virus) (e) Satsuma dwarf virus (f) *Elsinoe australis* (Sweet orange scab) (g) *Sphaceloma fawcetti*i var. *scabiosa* (Tryon's scab) (h) *Radopholus citrophilus* (Citrus burrowing nematode)	Post-entry quarantine for a period of one year. First three months in insect proof glass/ poly/ mesh house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
9.	*Cocos nuciferae* (Coconut) and other Coccoidae-seed nuts/plants	a) Cadang cadang (viroid) *b) Marasmiellus coco philus* (Lethal boll rot) c) *Rhadinaphelenchus cocophilus (palmarum* (Red ring)	Postentry quarantine for one growth cycle. Three months in insect proof mesh house and thereafter remaining period after transplantation in open isolated field. First inspection at the time of planting nuts in poly bag nursery, second inspection at the time of transplanting in the isolated field and third inspection when seedlings are two years old and final inspection when the palms are at flowering stage.

10.	*Coffea* spp. (Coffee) and related species of Rubiaceae – seeds (fresh beans)/ rooted/un-rooted cuttings/plants	(a) *Mycena citricolor* (American leaf spot) (b) *Colletotrichum coffeanum* var. *virulens* (Coffee berry disease) (c) *Gibberella xylariodes* (Tracheomycosis) (d) *Hemeleia coffeicola* (Powdery rust) (e) *Pseudomonas syringae* pv. *garcae* (Haloblight) (f) *Phytomonas leptovasorum* (Phloem necrosis) (g) Coffee ring spot virus	Post entry quarantine for one year period. First three months in glass house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
11.	Dendranthemum spp (Chrysanthemum)-rooted/un-rooted cuttings/plants	(a) *Rhodococcus fascians* (Fasciation) (b) *Aphelenchoides fragariae, A. ritzemabosi* (Foliar nematodes) (c) *Ditylenchus dipsaci* (Stem and bulb nematode) (d) *Puccinia horiana* (White rust) (e) *Didymella ligulicoa, syn. Ascochyta chrysanthemi* (ray blight) (f) Chrysanthemum viruses viz. chlorotic mottle, stunt, vein chlorosis, virus B.	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days after planting and third at 45 days after planting.
12.	*Dhalia* spp (Dahlia)-tubers	(a) Dhalia mosaic virus (cauliflower mosaic virus) (b) Tomato spotted wilt virus	Post-entry quarantine for one growth season in isolated field. A minimum of two inspections, one at 30 days after planting or 4-leaf stage and the second inspection at flowering stage.
13.	*Dianthus* spp (Carnation)-plants	(a) *Burkholderia caryophilli* (Bacterial wilt and stem cracking) (b) *Erwinia chrysanthemi pv. dianthicola* (Slow wilt) (c) *Uromyces dianthi* (Rust) (d) *Sorosporium spaonariae* (Smut) (e) *Peronospora dianthi, P. dianthicola* (Downy mildew) (f) Carnation viruses viz. latent, mottle virus	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days after planting and third at 45 days after planting. .
14.	*Diascorea* spp (Yams)-tubers/plants	(a) *Rhizobacterium* (*Agrobacterium*) *tumefaciens* (crown gall) (b) Yam mosaic virus/ green banding virus	Post-entry quarantine for one growth season. First three months in insect proof glass/poly/mesh house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.

15.	*Elaeis guineensis* (oilpalm)-seeds/seed sprouts/plants	(a) Fusarium oxysporum f.sp. elaeidis (Vascular wilt) (b) *Cercospora elaedis* (Freckle) (c) *Rhadinaphelenchus cocophilus* (Red ring) (d) Lethal bud rot or sudden wilt [Marchites sorpresiva (phytoplasmas)] (e) *Phytomonas staheli* (Fatal wilt or hart rot) (f) Leaf mottle virus (g) Cadang cadang and related viroids	Post-entry quarantine for a period of 10-12 months. First three months in primary nursery and later in secondary nursery in poly bags in isolated area. 2-3 inspections, one at when the seedlings are 30-45 days old and the second at the time of transplanting in secondary nursery and third at when seedlings attain 10 months old.
16.	*Fragaria* spp (strawberry)-rooted/un-rooted cuttings/plants.	a) *Phomopsis obscurens* (Phomopsis blight) b) *Phytophthora fragariae* (Red stele) c) *Phytophthora cactorum* (Crown rot) d) *Xanthomonas fragariae* (Angular leaf spot) e) *Xiphinema americanum* (American dagger nematode) f) *Gnomonia fragariae* (Leaf blotch) g) Straw berry viruses viz., vein banding, crinkle leaf (rhabdovirus), mild yellow edge, latent ring spot (nepovirus), latent C. h) Aster yellows, straw berry green petal, phyllody & yellows (phytoplasmas).	Post-entry quarantine for a period of 9 months. First 30-45 days in insect proof poly/screen house and thereafter transplantation in open isolated field. A minimum of three inspections, first when the seedlings are 30 days old and second inspection after transplanting in isolated field (60 days old) and final inspection, when the plants are at flowering/fruiting stage. .
17.	*Gerbera jamesonii* (Gerbera)-plants	(a) *Phytophthora cryptogea* (tomato foot rot) (b) Tomato spotted wilt virus (c) Tobacco rattle virus	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days after planting and third at 45 days after planting. .
18.	*Gladiolus* spp (Gladioli)-corms.	(a) *Urocystis gladiolicola* (Smut) (b) *Uromyces gladioli & U. transversalis* (Rusts) (c *Fusarium. oxysporum f.sp. gladioli* (Corm rot) (d) *Septoria gladioli* (Hard rot) (e) *Burkholderia marginalis* (Scab & neck rot) (f) *Burkholderia gladioli pv. gladioli* (Base rot)	Post-entry quarantine for one growth season in isolated field. A minimum of two inspections, one at 30 days after planting or 4-leaf stage and the second inspection at flowering stage.
19.	*Hevea* spp. (Rubber)-seed/budwwod	(a) *Microcyclus ulei* (South American leaf blight)	Post-entry quarantine for a period of one year. First three months in glass

			house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
20.	*Heliconia spp*-rhizomes/plants.	(a) *Burkholderia solanacearum* Race 2 (Moko wilt)	Post-entry quarantine for a period of 9-12 months. First three months in insect proof glass/ poly/ mesh house and thereafter remaining period after transplantation in open isolated field. A minimum of 3-4 inspections at quarterly intervals.
21.	*Hibiscus spp* (China rose)-rooted/un-rooted cuttings/ plants	(a) Hibiscus chlorotic ring spot virus	Postentry quarantine for a period of 6 months. First two months under glass house/polyhouse and there after in isolated field. A minimum of 3 inspections, first inspection at the time of planting, if rooted cuttings or 30-45 days after planting in case of un-rooted cuttings, second at the time of transplanting in the isolated field and final inspection at 6 months.
22.	*Humulus* spp (Hops)-rooted/un-rooted cuttings/plants	(a) *Pseudoperonospora humuli* (Downy mildew) (b) *Heterodera humuli* (Hops cyst nematode) (c) Hop latent (viroid)	Postentry quarantine for a period of 6 months. First two months under glass house/polyhouse and there after in isolated field. A minimum of 3 inspections, first inspection at the time of planting, if rooted cuttings or 30-45 days after planting in case of unrooted cuttings, second at the time of transplanting in the isolated field and final inspection at 6 months.
23.	*Hyacinthus spp* (Hyacinthus)-bulbs.	(a) *Xanthomonas hyacinthi* (Bacterial blight or yellow slime) (b) Hyacinth mosaic virus (Poty virus) (c) *Ditylenchus dipsaci* (Stem & bulb nematode)	Postentry quarantine for one growth season. A minimum of two inspections, one at 30 days after planting or 4-leaf stage and the second inspection at flowering stage.

24.	*Hydrangea spp* (hydrangea)-rooted/un-rooted cuttings	(a) *Puccinia glyceriae* (hydrangea rust)	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two inspections, with one at the time of planting and the second after 30 days after planting.
25.	*Ipomaea* spp (sweet potato)-tubers/vine cuttings (rooted/un-rooted)	(a) *Elsinoe batatas* (scab) (b) *Moniliochaetes infuscans* (Scurf) (c) *Plenodomus destruens* (foot rot) (d) *Streptomyces ipomoeae* (soil rot) (e) *Pseudomonas batatae* (Bacteria wilt) (f) Sweet potato viruses (Russet crack; feathery mottle; internal cork; chlorotic leaf spot; vein mosaic; mild mottle and yellow dwarf, vein clearing; chlorotic stunt; Sheffied's virus A and B etc.) (g) Sweet potato witches' broom (*phytoplasmas*)	Post-entry quarantine for one growth season under insect proof glass/screen/poly house. A minimum of three inspections at monthly intervals.
26.	Iris spp. (Iris)-bulbs/rhizomes	(a) *Fusarium oxysporum f.sp. gladioli* (Fusarial rot) (b) *Ditylenchus dipsaci* (Stem and bulb nematode) (c) *Sclerotinia bulborum* (Sclerotinia rot) (d) Iris virus (Potyvirus)	Post-entry quarantine for one growth season. A minimum of two inspections, one at 30 days after planting or 4-leaf stage and the second inspection at flowering stage.
27.	*Juglans* spp. (walnut)-rooted/un-rooted cuttings/plants	(a) *Xanthomonas juglandis* (Bacterial blight) (b) *Erwinia nigrifluens* (Bark canker) (c) *Euitypa armeniacae* (Gummosis)	Postentry quarantine for a period of one year. First three months in insect proof glass/poly house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
28.	*Juniferus* spp (Juniper)-plants	(a) *Gymnosporangium spp* (Apple and pear rusts)-non Asiatic species	Postentry quarantine for a period of one year. First three months in glass/ polyhouse and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
29.	*Lillium* spp (Lilly)-bulbs	(a) *Fusarium oxysporum f.sp. lilii* (Fusarium wilt) (b) *Colletotrichum lilii* (Anthracnose) (c) *Burkholderia gladioli pv. gladioli* (Bacterial leaf spot)	Post-entry quarantine for one growth season. A minimum of two inspections, one at 30 days after

		(d) Lilly viruses (Lilly rosette, Lilly symptom less, tulip breaking and Lilly curl stripe)	planting or 4-leaf stage and the second inspection at flowering stage.
30.	*Limonium* spp. (Limonium/ Statice)-plants	(a) *Phytophthora cryptogea* (tomato foot rot) (b) Limonium yellow vein virus (clover yellow vein virus) (c) tobacco rattle virus (d) Impatiens necrotic spot virus (e) tomato spotted wilt virus	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two inspections, with one at the time of planting and the second after 30 days after planting.
31.	*Manihot esculenta* (Cassava or tapioca)-tubers/cuttings (rooted/ un-rooted)	(a) *Sphaceloma manihoticola* (Super elongation) (b) (*Xanthomonas campestris*.pv. *cassavae* (Bacterial leaf spot) (c) *Xanthomonas campestris* pv. *manihotis* (Cassava bacterial blight) - American strain. (d) Cassava viruses (*viz*. common mosaic, brown streak, leaf vein mosaic, red mottle and yellow vein banding (e) Cassava witches' broom (*phytoplasma*)	Post-entry quarantine for a period of two growth seasons inside insect proof screen house/poly house. A minimum of two inspections in each growth season, one after 30 days of planting and second 60-90 days after planting.
32.	*Morus* spp (mulberry)-cuttings (rooted/un-rooted)	(a) *Pectobacterium rhapontici (*rhubarb crown rot) (b) *Rhizobium rhizogenes* (hairy root) (c) *Xylella fastidiosa* (Pierce's disease of grapevine)	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days after planting and third at 45 days after planting.
33.	*Musa* spp (Abaca, banana, plantain)-rhizomes/suckers	(a) *Burkholderia solanacearum* Race-2 (Moko wilt) (b) *Mycosphaerella fijiensis* var. *difformis* (Black leaf streak) (c) Cameroon marbling (*Phytoplasmas*) (d) *Erwinia chrysanthemi* pv. p*aradisiaca* (Rhizome rot)	Post-entry quarantine for a period of 9-12 months. First three months in insect proof glass/ poly/ mesh house and thereafter remaining period after transplantation in open isolated field. A minimum of 3-4 inspections at quarterly intervals.
34.	*Nandina spp* (Nandina)-plants	(a) Clostero virus (b) Nandina mosaic virus (c) Nandina stem pitting capilovirus	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days

			after planting and third at 45 days after planting.
35.	*Narcissus spp* (Naarcissus)-bulbs	(a) *Fusarium oxysporum f. sp. narcissi* (Basal rot) (b) *Ditylenchus dipsaci* (Stem and bulb nematode) (c) *Botryotinia poly blastis* (Narcissus fire) (d) *Stagnospora curtissi* (Leaf scorch) (e) Narcissus viruses	Post-entry quarantine for one growth season. A minimum of two inspections, one at 30 days after planting or 4-leaf stage and the second inspection at flowering stage.
36.	*Nicotiana* spp (tobacco)-seed/plants	(a) *Peronospora tabacina* (Blue mould) (b) Tobacco rattle virus	Post-entry consignment for one growth season. A minimum of two inspections, one at 30 days after planting or 4-leaf stage and the second inspection at flowering stage.
37.	*Olea spp* (Olive)	(a) Arabis mosaic virus, (b) Cherry leaf roll virus (c) Olive latent ring spot virus (d) Olive partial paralysis virus (e) Olive sickle leaf virus (f) Strawberry latent ring spot virus	Post-entry quarantine for a period of 9-12 months. First three months in insect proof glass/poly/mesh house and thereafter remaining period after transplantation in open isolated field. A minimum of 3-4 inspections at quarterly intervals.
38.	Orchids (*Aranda, Catteleya, Cymbidium, Dendrobium Lawlio-catteleya, Mokara, Odontoglosum, Phalaenopsis, Vanda, Vanila* etc)-plants	(a) *Burkholderia gladioli pv. gladioli*(Bacterial leaf spot) (b) *Erwinia chrysanthemi* (Soft rot) (c) *Phyllostica capitalensis* (Blossom blight) (d) Orchid viruses (Cymbidium mosaic, Vanilla necrosis, Odontoglosum ring spot, orchid fleck etc)	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days after planting and third at 45-60 days after planting. .
39.	Ornamental Palm species: (*Arikuryoba, Borasus,Caryota, Carypha, Chamaeodorea, Chrysalidocorpus, Dictyosperma, Washingtonia, Roystonia, Hyophorbe, Pritchardia, Sabal, Syogrus, Trachycorpus, Vietchia,*	(a) *Acidovorax avenae sub sp. avenae* (Bactrial blight)- For Carypha spp only (b) Mosaic (Poty virus)- For Washingtonia spp only (c) *Rhadinaphelenchus cocophilus* (Red ring nematode) (d) Cadang cadang (viroid)	Post-entry quarantine for a period of 10-12 months. First three months in primary nursery and later in secondary nursery in poly bags in isolated area. 2-3 inspections, one at when the seedlings are 30-45 days old and the second at the time of transplanting in secondary nursery and third at when seedlings attain 10 months old.

	Mascarena)-seeds/plants		
40.	*Pelargonium* spp. (Pelargonium)-rooted/un-rooted cuttings/plants.	(a) *Xanthomonas campestris pv. pellargonii* (Bacterial spot) (b) Pelargonium viruses viz. flower break virus, leaf curl virus, vein clearing virus and zonate spot virus.	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days after planting and third at 45 days after planting. .
41.	*Phoenix dactylifera* (datepalm)-suckers	(a) *Fusarium oysporum f.sp. albedinis* (Bayood) (b) Palm lethal yellowing (Phytoplasmas) (c) *Phymatotrichum omnivorum* (Texas root rot)	Post-entry quarantine for a period of one year.. First three months in insect proof glass/poly/mesh house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
42.	*Pinus* spp (Pine)-seeds/plants	(a) *Cronartium coleosporioides* (Stalactiform blister rust) (b) *C. comandrae* (Comandra blister rust) (c) *C. comptoniae* (sweet fern blister rust) (d) *C. fusiforme* Southern fusiform rust) (e) *Endocronartium harknessii* (Western gall rust) (f) *Mycosphaerella dearnesii*, syn. *Scirrhia acicola* Brown spot needle blight) (g) *Fusarium moniliforme* f.sp. *subglutinans* (seedling die-back and pitch canker). (h) *Lophodermium* spp(Needle cast) (i) *Bursaphelenchus xylophilus* (Pine wood nematode)	Postentry quarantine for a period of one year. First three months in glasshouse and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
43.	Pome Fruits: (Apple, Pear (*Pyrus* spp.) Quince (*Cydonia* spp.) and Nectarine (*Amygdalus* spp))-cuttings (rooted/un-rooted)/plants.	(b) *Erwinia amylovora* (Fire blight) (c) *Rhizobium (Agrobacterium) tumefaciens (*Crown gall) (d) *Rhizobium.. rhizogenes* (Hairy root) (e) *Gymnosporangium spp* (Apple and pear rusts)-non Asiatic species (f) Apple scar skin, apple stem grooving viruses.	Post-entry quarantine for a period of 1-2 years. First three months in glass/ poly house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
44.	*Populus* spp (Poplar)-rooted/un-rooted cuttings/plants	(a) *Hypoxylon mammatum* (Hypoxylon canker) (b) *Melampsora medusae* (Poplar rust) (c) *Mycosphaerella populorum*, syn. *Septoria musiva* (Septoria canker of poplar)	Postentry quarantine for a period of one year. Post-entry quarantine for a period of one year. First three months in insect proof poly house and

		(d) *Euitypa armeniacae* (Gummosis) (e) Poplar mosaic virus	thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
45.	*Prunus* spp (Almond, apricot, cherry, peach, plum, prune)-rooted/un-rooted cuttings/plants	(a) *Rhizobium* (*Agrobacterium*) *tumefaciens* (Crown gall) (b) *Rhizobium* (*Agrobacterium*) *rhizogenes* (Hairy root) (c) *Pseudomonas syringae pv. persicae syn. P. morsprunorum* (Bacterial die back of peach) (d) *Dibotryan morbosum* (Black knot) (e) *Euitypa armeniaceae* (Gummosis) (f) *Monilinia fructicola* (Brown rot)-American strains (g) *Monilinia. laxa* (Blossom blight & fruit rot) (h) *Venturia cerasi, V. carpophila* (Scab) (i) *Blumeriella jaapii* (Cherry leaf spot) (j) Stone fruit viruses viz. Prunus virus S.	Post-entry quarantine for a period of 1 year. First three months in insect proof glass/ poly/ mesh house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
46.	*Quercus* spp (Oak)-plants	(a) *Ceratocystis fagacearum* (Oak wilt) (b) *Phytophthora ramorum* (Ramorum wilt)	Postentry quarantine for a period of one year. First three months in insect proof poly/ mesh house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
47.	*Ribes* spp (Goosberry & Currents)-rooted/un-rooted cuttings/canes/plants	(a) *Sphaerotheca mors-u-vae* (American (gooseberry) mildew) (b) *Microsphaeria grassulariae* (European (gooseberry) mildew) (c) *Pseudopeziza ribis* (Leaf spot (Anthracnose)) (d) *Puccinia pringsheimiana* (Cluster cup rust) (e) *Plowrightia ribesia* (Black pustule) (f) *Botryosphaeria ribris* (Cane blight) (g) Viruses viz., black current reversion, gooseberry vein banding, arabis mosaic, and strawberry latent ring spot.	Post-entry quarantine for a period of 9-12 months. First three months in insect proof glass/ poly/ mesh house and thereafter remaining period after transplantation in open isolated field. A minimum of 3-4 inspections at quarterly intervals.
48.	*Rosa* spp (Rose)-rooted/un-rooted cuttings/budwood/ plants	(a) *Rhizobium (Agrobacterium) tumefaciens* (Crown gall) (b) *Rhizobium (Agrobacterium). rhizogenes* (hairy root) (c) *Coniothyrium wernsdorfiae* (Brand canker) (d) *Cryptosporella umbrina* (Brown canker) (e) *Peronospora sparsa* (Downy mildew) (f) *Phragmidium spp.*(Rust) (g) Rose streak virus (h) Rose wilt virus	Post-entry quarantine for a period of 18 months for plants/rooted cuttings in side insect proof polyhouse. The budded plants will be held for a period of 90 days in insect-proof polyhouse. A minimum of 4 inspections, the first one 30-45 days after planting and the subsequent

			inspections at 4-6 monthly intervals. In case of buddings, the first inspection will be 30-45 days after budding, second at 60 days and third at 90 days after budding.
49.	*Rubus* spp (Raspberry)-rooted/un-rooted cuttings/ plants	(a) *Rhizobium* (*Agrobacterium*) *tumefaciens* (Crown gall) (b) *Rhizobium (Agrobacterium). rhizogenes* (hairy root) (c) *Gymnoconia niten* (rust), (d) *Kuehneola uredinalis*(rust), (e) *Phragmedium bulbosum* (rust), (f), *Phragmedium rubi-idaeli* (rust), (*g*) *Phragmedium. Violacearum* (rust), (h) *Pucciniastrum americanum*(rust) (i) *Peronospora rubi* (Downy mildew) (j) Viruses such as leaf mottle, leaf spot, bushy dwarf, leaf curl, raspberry (black) necrosis, vein chlorosis & yellow dwarf, arabis mosaic and straw berry shoestring.	Post-entry quarantine for a period of 9-12 months. First three months in insect proof glass/ poly/ mesh house and thereafter remaining period after transplantation in open isolated field. A minimum of 3-4 inspections at quarterly intervals.
50.	*Ranunculus* spp. (Ranunculus)-bulbs	(a) *Ditylenchus dipsaci* (brown ring disease of hyacinth) (b) Arabis mosaic virus (hop bare-bine)	Post-entry quarantine for one growth season. A minimum of two inspections, one at 30 days after planting or 4-leaf stage and the second inspection at flowering stage.
51.	*Saccharum* spp (sugarcane)-stem cuttings (sets)	(a) Fiji virus (b) *Xanthomonas vasculorum* (Gummosis) (c) Sugarcane white leaf (*phytoplasmas*) (d) *Peronosclerospora sacchari* (Sugarcane downy mildew) (e) *Pseudomonas rubrisubalbicans* (Mottled stripe)	Post-entry quarantine for a period of one year. First three months in insect proof glass/poly house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
52.	*Senecio* spp. (Senecio)-plants	(a) Arabis mosaic virus (b) Bidens mottle virus (c) Beet western yellow virus (d) Chrysanthemum virus B (e) Tomato spotted wilt virus	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days after planting and third at 45 days after planting. .
53.	*Solanum tuberosum*	(a) *Ditylenchus destructor* (Potato tuber nematode)	Post-entry quarantine for a period of

	(potato) and other tuber bearing *Solanum* species-true seed/tubers	(b) *Ditylenchus dipsaci* (Stem and bulb nematode) (c) *Globodera (Heterodera) rostochiensis* & *Globodera pallida* (Potato cyst nematodes) (d) *Phoma exigua* var. *foveata* (Gangrene) (e) *Synchytrium endobioticum* (Potato wart) (f) *Thecaphora (Angiosorus) solani* (Potato smut) (g) *Clavibacter michiganensis* subsp. s*epedonicus* (Bacterial ring rot) (h) Potato viruses *viz.* Andean potato latent, Andean potato mottle, Arracacha B virus, Potato deforming mosaic, Potato T (capillo virus), Potato yellow dwarf, Potato yellow vein, Potato calico strain of Tobacco ring spot virus, Potato strain of Tobacco streak virus	two growth seasons inside insect proof screen house/poly house. A minimum of two inspections in each growth season, one after 30 days of planting and second 60-90 days after planting.
54.	*Syringa spp* (Lilac)-plants	(a) Arabis mosaic nepovirus (b) Cherry leaf roll virus (berteroa ringspot) (c) Elm mottle virus (d) Lilac ring mottle ilarvirus (e) Lilac mottle carlavirus (f) Lilac ring spot virus	Postentry quarantine for 45-60 days in insect proof polyhouse or mesh house with top covered with polythene sheet for rain protection. Two to three inspections, with one at the time of planting and the second after 30 days after planting and third at 45 days after planting. .
55.	*Theobroma cacao* (cocoa)-seeds (fresh beans)/cuttings (rooted/ un-rooted)/plants	(a) Swollen shoot virus and related strains (b) *Crinipellis (Marasmius) perniciosa* (Witches' broom) (c) *Monilia* (*Moniliopthora) roreri* (Watery pod rot) (d) *Trachysphaera fructigena* (Mealy pod)	Post-entry quarantine for a period of one year. First three months in insect proof glass/ poly/ mesh house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
56.	*Triticum* spp (wheat)-seeds	(a) *Tilletia contraversa* (Dwarf bunt) (b) *Claviceps purpurea* (Ergot) (c) *Pseudomonas atrofaciens* (Spike rot)	Postentry quarantine for one growth season
57.	*Tulipa* spp. (Tulips)-bulbs	(a) *Ditylenchus dipsaci* (Bulb and stem nematode) (b) *Curtobacterium flaccumfaciens pv. oortii* (Yellow pustule & hellfire) (c) Tulipa viruses viz. band breaking, chlorotic blotch, virus x and other seed borne viruses.	Post-entry quarantine for one growth season. A minimum of two inspections, one at 30 days after planting or 4-leaf stage and the second inspection at flowering stage.
58.	*Ulmus* spp (Elm)-	(a) *Ceratocystis ulmi* (Dutch elm disease) - American and	Postentry quarantine for a period of

	seed/plants	European strains (b) Elm mottle virus,	one year. First three months in insect proof glass/ poly/ mesh house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals.
59.	Vaccinium spp (blue/back berry)-rooted/un-rooted cuttings/plants	(a) *Pucciniastrum myrtili* (Leaf rust) (b) *Exobasidium vaccinii* (Red leaf) (c) *Pucciniastrum myrtili* (Leaf rust) (d) *Exobasidium vaccinii* (Red leaf) (e) *Synchytrium vaccinii* (Red gall) (f) *Pucciniastrum goeppertianum* (Witches'broom) (g) Blue berry viruses viz., blue berry mosaic, shoe-string, red (necrotic) ring spot, leaf mottle, peach rosette and tomato ring spot (h) blueberry stunt, witches'broom and cranberry false blossom (phytoplasmas)	Post-entry quarantine for a period of 9-12 months. First three months in insect proof glass/ poly/ mesh house and thereafter remaining period after transplantation in open isolated field. A minimum of 3-4 inspections at quarterly intervals. .
60.	*Vitis* spp (grapevine)-rooted/un-rooted cuttings/ plants	(a) *Phakopsora vitis* (Rust) (b) *Cryptosporella viticola* syn. *Phomopsis viticola* (Dead arm) (c) *Rhizobium* (*Agrobacterium*) *vitis* (Cown gall) (d) *Pantoea agglomerans* (Gummosis) (e) *Rhizobium (Agrobacterium) rhizogene* (Hairy root) (f) *Xylella fastidiosa* (Pierce's disease) (g) *Xylophilus ampelinus* (Bacterial necrosis) (h) Grapevine viruses: Luteovirus, Nepovirus, Closterovirus, Trichovirus, Potyvirus.	Post-entry quarantine for a period of one year. Post-entry quarantine for a period of one year. First three months in insect proof glass/poly house and thereafter remaining period after transplantation in open isolated field. Four inspections at quarterly intervals. .
61.	Zantedeschia spp (Calla lilly)-corms	(a) *Xanthomonas campestris pv. zantedeschiae* (Bacterial leaf spot) (b) Zantadeschia mosaic virus (c) Tomato spotted wilt virus (d) Impatiens necrotic spot virus	Post-entry quarantine for one growth season. A minimum of two inspections, one at 30 days after planting or 4-leaf stage and the second inspection at flowering stage.
62.	Zingiber mioga (Ornamental zinger)-rhizomes	(a) *Xanthomonas campestris pv. zingibericola* (Leaf blight)	Post-entry quarantine for one growth season. A minimum of two inspections, one at 30 days after planting or 4-leaf stage and the second inspection at flowering stage.