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| **Manual Number .....** | **Location: .....** |

**MINISTRY OF AGRICULTURE, SAMOA**


# OPERATIONS MANUAL

## APPENDICES

[Where to find general, useful information. There is no operational information in here.]

# AMENDMENT REGISTER – APPENDICES

| AMENDMENT NUMBER | DATE OF INSERTION | SECTION / PAGE | SUBJECT and COMMENTS |
|---|---|---|---|
| 03/01A | 01/11/03 | 3:1 – 3:2 | Addition of contact details. |
| 03/02A | 01/11/03 | 16:2 | Addition of thicknesses of timber for heat treatments |
| 03/03A | 11/11/03 | 14:2 | Addition of common usage rates for methyl bromide |
| 03/04A | 1/12/03 | ALL | Issue of Version 2 |
| 04/01A | 04/07/04 | 18:1 – 18:5 | Addition of Chapter 18 Explanatory notes for using the Phytosanitary Certificate |
| 04/02A | 04/07/04 | 2:1 | New Phytosanitary Certificate |
| 04/02 | 01/10/04 | All | Issue of Version 3 |
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# CONTENTS

**CONTENTS**

# 1.0 GLOSSARY

**NOTE**: Many of the terms described in this glossary are specific to this manual. However, with the increasing international agreement on the standardisation of terms the most up to date terms and definitions with specific meaning to plant quarantine personnel worldwide have been included.

The author is indebted to Dr R. Ikin, formerly of the Australian Quarantine and Inspection Service and Inaugural Chairman of the Pacific Plant Protection Organisation for making available a copy of the phytosanitary terms which have been agreed up to the time of printing.

**References**

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*Requirements for the Establishment of Pest Free Areas*, 1996. ISPM Pub. No. 4, FAO, Rome.
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| **A1 Pest** (for an area) | A Quarantine pest not present in that area (CEPM, 1996) |
| **A2 Pest** (for an area) | A Quarantine pest present in that area but not widely distributed there and being officially controlled(CEPM, 1996) |
| **Acceptance level** | The largest number of units within a sample that may be infested or contaminated with regulated pests without the application of phytosanitary measures against the lot from which the sample was taken (CEPM, 1997) |
| **Additional declaration** | A statement that is required by an importing country to be entered on a phytosanitary certificate and which provides specific additional information pertinent to the phytosanitary condition of a consignment. |
| **Aerosol can** | Pressurised can, usually containing 2% d- phenothrin which discharges at 1g/second. Used for disinsecting aircraft and the general control of soft-bodied flying insects. |
| **Air container** | A container designed for the transport of goods within aircraft holds. |
| **Amnesty bin** | A container provided for sea and air passengers to voluntarily dispose of undeclared quarantinable items. |
| **Area** | An officially defined country, part of a country or all or parts of several countries [revised, 1995] |
| **Area endangered** | See **Endangered area** |
| **Area of low pest prevalence** | Area, whether all of a country, part of a country, or all or parts of several countries, as identified by the competent authorities, in which a specific pest occurs at low levels and which is subject to effective surveillance, control or eradication measures (new CEPM, 1997) |

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| **AWB** | Air waybill |
| **Beef jerky** | Dried and seasoned beef, usually from USA or Australia. |
| **Biltong** | Strips of lean meat dried in the open air in South Africa. |
| **Biological product** | Any scientific preparation derived from animals. |
| **Buffer zone** | An area in the specific pest does not occur or is officially controlled, that either encloses or is adjacent to an infested area, an infested place of production, or a pest free area or a pest free place of production, and in which phytosanitary measures are taken to prevent spread of the pest (CEPM, 1997) |
| **Bulbs and tubers** | Dormant underground organs of plants intended for planting |
| **Catered** | Aircraft is supplied with food and beverages. |
| **Certificate** | An official document which attests to the phytosanitary status of any consignment affected by phytosanitary regulations |
| **Chilly bin** | An insulated container. Also known as a "cooler" or "Esky". |
| **Chlorosis** | Yellowing of leaves. |
| **Clearance** (of a consignment) | Verification of compliance with phytosanitary regulations [new, 1995] |
| **Commodity** | A type of plant, plant product, or other regulated article being moved for trade or other purpose |
| **Commodity class** | A category of similar commodities that can be considered together in phytosanitary regulations |
| **Commodity pest list** | A list of pests occurring in an area which may be associated with a specific commodity (CEPM, 1996) |
| **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) |
| **Consolidation** | A cargo consignment made up of a number of smaller consignments. |
| **Containment** | The application of phytosanitary measures in and around an infested area to prevent spread of a pest [new, 1995] |
| **Contaminant** | An undesirable impurity. |
| **Contaminating pest** | A pest that is accidentally associated with and carried by a commodity or other article being moved from one area to another and, in the case of plants and plant products, does not infest those plants or plant products (CEPM, 1996) |
| **Contamination** | Presence in a commodity, storage place, conveyance, or container, of pests or other regulated article, not constituting an infestation (CEPM, 1997) |

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| **Control** (of a pest) | Suppression, containment or eradication of a pest population [new, 1995] |
| **Controlled area** | A regulated area which an NAPO has determined to be a minimum area necessary to prevent the spread of a pest from a quarantine area (CEPM, 1996) |
| **Country of origin** | Of a consignment of plants, country where the plants were grown; of a consignment of plant products, country where the plants from which the plant products are derived were grown; of other regulated articles were first exposed to contamination by pests (FAO, 1990; modified by CEPM, 1996) |
| **Country of re-export** | Country into which a consignment of plants, plant products or other regulated articles has been imported, and was stored, split up, had its packaging changed or was otherwise exposed to contamination by pests, prior to export to a third country (FAO, 1990; modified by CEPM, 1996) |
| **Country of transit** | Country through which a consignment of plants, plant products or other regulated articles passes, and without being stored, split up, or having its packaging changed, without being exposed to contamination by pests in that country (FAO, 1990; modified by CEPM, 1996) |
| **Courier** | A person who carries urgent items as part of his baggage. |
| **Crew Search list** | List of crew members and their declared items. Required by customs for all ships and aircraft and is available to quarantine officers for screening |
| **Critical Quarantine Pest** | A particularly important quarantine pest. This term has special meaning within New Zealand Bilateral Quarantine Agreements. |
| **Cut flowers and branches** | Fresh parts of plants intended for decorative use and not for planting |
| **Cyst** | Minute, round resting stage of nematodes. |
| **Debarking** | Removal of bark from round wood (debarking does not necessarily make the wood bark-free) |
| **Delimiting survey** | Survey conducted to establish the boundaries of an area considered to be infested by or free from a pest |
| **Detection survey** | Survey conducted in an area to determine if pests are present [revised, 1995] |
| **Detention** | Keeping a consignment in official custody or confinement for phytosanitary reasons [revised, 1995] |
| **Devitalisation** | A treatment which is applied to nursery to cut flowers to prevent propagation. Devitalisation treatments may also be applied to seeds to prevent germination. |
| **Disinsection** | Treatment with an insecticide to kill insects. |
| **Dunnage** | Wood used to wedge or support cargo |
| **Endangered area** | An area where ecological factors favour the establishment of a pest whose presence in the area will result in economically important loss [new, 1995] |

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| **Entry** (of a consignment) | Movement through a point of entry into an area [new, 1995] |
| **Entry** (of a pest) | Movement of a pest into an area where it is not yet present, or present but not widely distributed and being officially controlled [new, 1995] |
| **Equivalence** | The situation of phytosanitary measures which are not identical but have the same effect [new, 1995] |
| **Eradication** | Application of phytosanitary measures to eliminate a pest from an area [revised, 1995; formerly Eradicate] |
| **ERP** | Emergency Response Procedures. |
| **Establishment** | Perpetuation, for the foreseeable future, of a pest within an area after entry [revised, 1995; formerly Established] |
| **ETA** | Estimated Time of Arrival of a ship or aircraft. |
| **FCL container** | A container which contains goods for one importer, and approval may be given for it to be de-vanned (unpacked) at importers premises. |
| **Field** | Plot of land with defined boundaries within a place of production on which a commodity is grown |
| **Field inspection** | Inspection of plants during the growing season (FAO, 1990; modified by CEPM, 1996) |
| **Find free** | To inspect a consignment, field or place of production and consider it to be free from a specific pest |
| **Frass** | Dust and droppings from chewing/boring insects. |
| **Free from** | Of a consignment, field or place of production, without pests (or a specific pest) in numbers or quantities that can be detected by the application of phytosanitary procedures [revised, 1995] |
| **Fresh** | Living; not dried, deep-frozen or otherwise conserved |
| **Fruits and vegetables** | Fresh parts of plants intended for consumption or processing |
| **Fruit fly strike/sting** | A mark left on the surface of a fruit by a fruit fly during egg laying. |
| **Fumigation** | Treatment with a chemical agent that reaches the commodity wholly or primarily in a gaseous state [revised, 1995] |
| **Galls** | Abnormal swellings on roots, stems or leaves of plants - usually caused by insects or mites or nematodes. |
| **Germplasm** | Plants intended for use in breeding or conservation programmes |
| **Grain** | Seeds intended for processing or consumption and not for planting (see Seeds) |
| **Growing medium** | Any material in which plant roots are growing or intended for that purpose |
| **Growing season** | Period of the year when plants will actively grow in an area |
| **Growing season** | See **Field inspection** |

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| **inspection** | |
| **Harmonised phytosanitary** | Phytosanitary measures established by contracting parties based on international standards (new CEPM, 1997) |
| **Harmonization** | The establishment, recognition and application by different countries of phytosanitary measures based on common standards [new, 1995; definition based on the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures] |
| **Herbarium Specimens** | Plants or pieces of plant which have been pressed and dried for a collection. |
| **Hermetically sealed can** | An airtight container in which food has been cooked and vacuum sealed. These should not require refrigeration. |
| **Hitchhiker pest** | See **Contaminating Pest** |
| **Host pest list** | A list of pests that infest a plant species (CEPM, 1996) |
| **Host range** | Species of plants capable, under natural conditions, of sustaining a specific pest |
| **Immediate vicinity** | Fields adjacent to a field, or places of production adjacent to a place of production |
| **Import permit** | Official document authorizing importation of a commodity in accordance with specified phytosanitary requirements [revised, 1995] |
| **Incursion** | The occurrence of an isolated population of a pest in an area where it may survive into the immediate future but is not expected to establish (CEPM, 1997) |
| **Infestation** (of a commodity) | Presence in a commodity of an organism that is a pest of the plant or plant product concerned (CEPM, 1997) |
| **Infected** | Affected by a disease. |
| **Infested** | Containing live pests. |
| **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 [revised, 1995; formerly Inspect] |
| **Inspection technique** | A set of specific actions, processes, or procedures used consistently in inspection for the detection of pests (CEPM, 1997) |
| **Inspector** | Person authorized by a National Plant Protection Organization to discharge its functions |
| **Interception** (of a consignment) | The refusal or controlled entry of an imported consignment due to failure to comply with phytosanitary regulations [revised, 1995] |
| **Interception** (of a pest) | Detection of a pest during inspection or testing of an imported consignment (FAO, 1990; modified by CEPM, 1996) |

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| **Intermediate quarantine** | Quarantine in a country other than the country of origin or destination (CEPM, 1996) |
| **International standards for phytosanitary measures** | An international standard developed under the auspices of the Secretariat of the IPPC in cooperation with the RPPOs, and endorsed by the procedures of FAO (CEPM, 1996) |
| **Introduction** | Entry of a pest resulting in its establishment [revised, 1995] |
| **IPPC** | Abbreviation for the International Plant Protection Convention, as deposited in 1951 with FAO in Rome and as subsequently amended |
| **ISPM** | Abbreviation for international standard for phytosanitary measures (CEPM, 1996) |
| **LCL Container** | A container which contains goods for more than one importer, normally de-vanned (unpacked) on the wharf. |
| **Leaf mine** | A track in a leaf left by the feeding of the larva of a leaf mining insect. |
| **Lot** | A number of units of a single commodity, identifiable by its homogeneity of composition, origin, etc., forming part of a consignment |
| **"Maggy Lamp"** | A large magnifying glass with a built-in light source, used for close inspection of anything. |
| **Maximum allowable prevalence (MAP)** | The level off infestation or contamination that is the threshold above which phytosanitary actions based on inspection are applied (CEPM, 1997) |
| **Moon cake** | Chinese cake containing egg yolks. |
| **Monitoring** | An official ongoing process to verify phytosanitary situations (CEPM, 1996) |
| **Monitoring survey** | Ongoing survey to verify the characteristics of a pest population [new, 1995] |
| **National Plant Protection Organization** | Official service established by a government to discharge the functions specified by the IPPC [formerly Plant Protection Organization (National)] |
| **Nematode** | A microscopic worm-like pest, sometimes known as an eel-worm. |
| **Non-actionable occurrence** | Detection of pest in an area as an individual occurrence, not expected to survive (CEPM, 1997) |
| **Non-quarantine pest** | Pest that is not a quarantine pest for an area [new, 1995] |
| **NPPO** | Abbreviation for National Plant Protection Organization |
| **Nursery stock** | Propagative material of any kind of plant. Does not include seed or any vegetable or fruit for consumption. |
| **Occurrence** | The presence in an area of a pest officially reported to be indigenous or introduced and/or not officially reported to have been eradicated [revised, 1995; formerly Occur] |

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| **Off chocks/Chocks away** | Disinsection carried out by airline cabin crew at disinsection time of departure of the aircraft. |
| **Official** | Established, authorized or performed by a National Plant Protection Organization |
| **Outbreak** | An isolated pest population, recently detected and expected to survive for the immediate future [new, 1995] |
| **Overhead locker** | A compartment, situated in the ceiling of an aircraft cabin, provided to hold passengers hand luggage. They are usually completely enclosed but on some aircraft they have netting tops. |
| **Pathway** | Any means that allows the entry or spread of a pest [revised, 1995] |
| **Pax** | Passengers. |
| **PEQ** | Post Entry Quarantine. |
| **Pest** | Any species, strain or biotype of plant, animal, or pathogenic agent, injurious to plants or plant products [revised, 1995; definition subject to formal amendment of IPPC] |
| **Pest free area** | An area in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained [new, 1995] |
| **Pest free place of production** | Place of production in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained for a defined period (CEPM, 1997) |
| **Pest record** | A document providing information concerning the presence/absence of a specific pest at a particular location at a certain time, within an area (usually a country) under described circumstances (CEPM, 1997) |
| **Pest risk analysis** | The process of evaluating biological or other scientific and economic evidence to determine whether a pest should be regulated and the strength of any phytosanitary measures to be taken against it (amended CEPM, 1997) |
| **Pest risk assessment** | Determination of whether a pest is a quarantine pest and evaluation of its introduction potential [new, 1995] |
| **Pest risk management** | The decision-making process of reducing the risk of introduction of a quarantine pest [new, 1995] |
| **Pest status** (of an area) | Present situation and phytosanitary significance of a pest in an area, as determined by expert judgement on the basis of current and historical pest records and other information (CEPM, 1997) |
| **Phytosanitary** | Pertaining to plant quarantine |
| **Phytosanitary certificate** | Certificate patterned after the model certificates of the IPPC |
| **Phytosanitary certification** | Use of phytosanitary procedures leading to the issue of a phytosanitary certificate. |

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| **Phytosanitary legislation** | Basic laws granting legal authority to a National Plant Protection Organization from which phytosanitary regulations may be drafted [revised, 1995] |
| **Phytosanitary measure** | Any legislation, regulation or official procedure having the purpose to prevent the introduction and/or spread of pests (amended CEPM, 1997) |
| **Phytosanitary procedure** | Any officially prescribed method for performing inspections, tests, surveys or treatments in connection with plant quarantine [formerly Quarantine procedure] |
| **Phytosanitary regulation** | Official rule to prevent the introduction and/or spread of quarantine pests, by regulating the production, movement or existence of commodities or other articles, or the normal activity of persons, and by establishing schemes for phytosanitary certification [revised, 1995] |
| **Place of production** | Any premises or collection of fields operated as a single production or farming unit |
| **Plant debris** | Parts of plants such as leaves, seeds, and stems. |
| **Plant pest** | See **Pest** |
| **Plant products** | Unmanufactured material of plant origin (including grain) and those manufactured products that, by their nature or that of their processing, may create a risk for the introduction and spread of pests (amended CEPM, 1997) |
| **Plant protection organization** | See **National Plant Protection Organization** and **Regional Plant Protection Organization** |
| **Plant quarantine** | All activities designed to prevent the introduction and/or spread of quarantine pests or to ensure their official control [revised, 1995] |
| **Planting** (including replanting) | Any operations for the placing of plants in a growing medium to ensure their subsequent growth, reproduction or propagation |
| **Plants** | Living plants and parts thereof, including seeds and germplasm (amended CEPM, 1997) |
| **Plants for planting** | Plants intended to remain planted, to be planted or replanted |
| **Plants in tissue culture** | Plants in a clear aseptic medium in a closed transparent container |
| **Point of entry** | Airport, seaport or land border point officially designated for the importation of consignments, and/or entrance of passengers [new, 1995] |
| **Post-entry quarantine** | Quarantine applied to a consignment after entry [new, 1995] |
| **Pork floss** | Shredded and fried pork meat - an Asian delicacy. |
| **PPPO** | Pacific Plant Protection Organisation |
| **PRA** | Abbreviation for pest risk analysis [new, 1995] |

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| **PRA area** | Area in relation to which a pest risk analysis is conducted [new, 1995] |
| **Practically free** | Of a consignment, field or place of production, without pests (or a specific pest) in numbers or quantities in excess of those that can be expected to result from, and be consistent with, good culturing and handling practices employed in the production and marketing of the commodity [revised, 1995] |
| **Preclearance** | Phytosanitary certification and/or clearance in the country of origin, performed by or under the regular supervision of the National Plant Protection Organization of the country of destination [revised, 1995] |
| **Prohibition** | A phytosanitary regulation forbidding the importation or movement of specified pests or commodities [revised, 1995] |
| **Propagative material** | See **Plants for planting** |
| **PTL** | Permit To Land. |
| **Quality pest** | A non-quarantine pest for an importing country whose presence in a consignment of plants or plant products has economic importance in so fas as it affects the grade, marketability or ultimate use of the consignment, and which may be subject to control under relevant quality regulations (CEPM, 1996) |
| **Quarantinable item** | Anything which requires an action by a quarantine officer. |
| **Quarantine** | Official confinement of plants or plant products subject to phytosanitary regulations for observation and research or for further inspection, testing and/or treatment [revised, 1995] |
| **Quarantine area** | An area within which a quarantine pest is present and is being officially controlled [revised, 1995] |
| **Quarantine pest** | A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled [revised, 1995; definition subject to formal amendment of IPPC] |
| **Quarantine procedure** | See **Phytosanitary procedure** |
| **Quarantine station** | Official station for holding plants or plant products in quarantine [revised, 1995; formerly Quarantine station or facility] |
| **R/D** | Re-ship or destroy. |
| **Random sample** | A portion of a consignment selected to accurately represent the whole consignment. |
| **Reefer container** | This is a refrigerated container usually used for frozen goods such as meat or chicken; or chilled goods such as fresh fruit and vegetables. |
| **Refusal** | Forbidding entry of a consignment or other regulated article when it fails to comply with phytosanitary regulations [revised, 1995] |
| **Region** | The combined territories of the member countries of a Regional Plant Protection Organization |

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| **Regional Plant Protection Organization** | Intergovernmental organization with the functions laid down by Article VIII of the IPPC [formerly Plant Protection Organization (Regional)] |
| **Regulated area** | An area into which, within which, and/or from which plants, plant products and other regulated articles are subjected to phytosanitary measures in order to prevent the introduction and/or spread of quarantine pests (CEPM, 1996) |
| **Regulated article** | Any plant, plant product, storage place, packaging, conveyance, container, soil or any other organism, object or material capable of harbouring or spreading pests, deemed to require phytosanitary measures, particularly where international transportation is involved (amended CEPM, 1997) |
| **Regulated non-quarantine pest** | A non-quarantine pest whose presence in plants 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 (new CEPM, 1997) |
| **Regulated pest** | Quarantine pest or a regulated non-quarantine pest (new CEPM, 1997) |
| **Release** (of a consignment) | Authorization for entry after clearance [new, 1995] |
| **Replanting** | See **Planting** |
| **Residual disinsection** | The application of an insecticidal film to the interior surfaces of an aircraft. The insecticide is permethrin, and when applied in accordance with WHO recommendations is effective for 8 weeks. |
| **Restriction** | A phytosanitary regulation allowing the importation or movement of specified commodities subject to certain requirements (CEPM, 1996) |
| **Round wood** | Wood not sawn longitudinally, carrying its natural rounded surface, with or without bark |
| **RPPO** | Abbreviation for Regional Plant Protection Organization |
| **Sample method** | The sum of sampling components, including the nomination of a MAP, identification of a sample unit, selection of a sample design, and description of an inspection technique (CEPM, 1997) |
| **Sample unit** | A constant, definite, identifiable quantity of the commodity composing a sample to be inspected (CEPM, 1997) |
| **Sampling** (for detection) | Process of selecting representative units of a lot as a means of inspecting for the presence of regulated pests (CEPM, 1997) |
| **Sawn wood** | Wood sawn longitudinally, with or without its natural rounded surface, with or without bark |
| **Seeds** | Seeds for planting, not for consumption or processing (see **Grain**) |
| **Silvering** | Unusual shiny surface on a leaf caused by the feeding activities of thrips. |
| **Sooty mould** | A black superficial fungal growth. When found this indicates the presence of honey dew producing insects such as aphids and scales. |

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| **Spread** | Expansion of the geographical distribution of a pest within an area [new, 1995] |
| **Standard** | Document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context [new, 1995; ISO/IEC GUIDE 2:1991 definition] |
| **Stickering** | Consists of the placement of pieces of timber across and through bundles of sawn timber to allow the penetration and circulation of gas during fumigation. Timber planks should not be stacked more than 200mm high after which a layer of small dimension timber (50mm X 10mm) should be laid crossways to the direction of the stack. |
| **Stored product** | Unmanufactured plant product intended for consumption or processing, stored in a dried form (this includes in particular grain and dried fruits and vegetables) |
| **Suppression** | The application of phytosanitary measures in an infested area to reduce pest populations and thereby limit spread [new, 1995] |
| **Surveillance** | An official process which collects and records data on pest occurrence or absence by survey, monitoring or other procedures (CEPM, 1996) |
| **Survey** | An official procedure conducted to determine over a defined period of time to determine the characteristics of a pest population or to determine which species occur in an area (FAO, 1990; CEPM, 1996) |
| **Tailgate** (inspection) | Verification of documentation by viewing the contents of a container from the open doors. It provides the opportunity to inspect for the presence of timber dunnage, including pallets, straw packing and the goods themselves. It may also be used to determine whether a container is suitably packed for successful fumigation. |
| **Technically justified** | Justified on the basis of conclusions reached by using an appropriate pest risk analysis or, where applicable, another comparable examination and evaluation of available scientific information (new CEPM, 1997) |
| **Terminating flight** | A flight from which ALL food, garbage and trash is to be removed. |
| **Test** | Official examination, other than visual, to determine if pests are present or to identify pests |
| **Tissue culture** | See **Plants in tissue culture** |
| **Top of Descent Disinsection** | Spraying carried out by airline crew when the aircraft begins to descend. |
| **Transit** | See **Country of transit** |
| **Transit flight** | A flight which stops temporarily at an airport while on a flight from one country to another. |
| **Transparency** | The principle of making available, at the international level, phytosanitary measures and their rationale [new, 1995] |

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| **Treatment** | Officially authorized procedure for the killing, removal or rendering infertile of pests [revised, 1995] |
| **VIP** | Very Important Person. Includes: diplomats, politicians, guests of government and royalty. |
| **Webbing** | Minute threads made by certain insects, rather like spider webbing. Can indicate the presence of some stored products pests. |
| **Wood** | Round wood, sawn wood, wood chips or dunnage, with or without bark |

# 2.0 QUARANTINE FORMS

P.O. Box 1874
Apia
Samoa
Tel: (685) 22561
(685) 22562
(685) 22563
(685) 22564
Fax: (685) 22561

**Nº.**

Our ref:
Your ref:

PLEASE ADDRESS ALL CORRESPONDENCE TO THE CEO

**Government of Samoa**

**MINISTRY OF AGRICULTURE**
**QUARANTINE DIVISION**

# SEIZURE OF QUARANTINE MATERIALS

*To*.....
*person having possession of Quarantine materials withheld by Quarantine Division*

***Quarantine materials:***

.....

***Arrived at***

.....

| *Description* | *Quantity* | *Marks* | *Seizure Marks* |
|---|---|---|---|
| ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | ..... |

Port of ..... Signature : .....
*Quarantine Officer.*

For Office use only

The Quarantine materials described above were **examined**

by : ..... On .....

Result of examination : .....

.....

Appropriate Action Taken: **(Reshipped, Destroyed, Treated and Released.)**

.....

Date : ..... Signature : ..... Signature : .....
for: **CEO of Agriculture** **Importer**

FORM 7

**GOVERNMENT OF SAMOA**

**MINISTRY OF AGRICULTURE**

**APPLICATION FOR A PERMIT TO IMPORT PLANTS/PLANT MATERIAL/GOODS**

FULL NAME OF APPLICANT

.....
.....

RESIDENTIAL ADDRESS OF APPLICANT

.....
.....

POSTAL ADDRESS OF APPLICANT (If same as Residential Address print "AS ABOVE")

.....
.....

NAME AND QUANTITY OF PLANTS/PLANT MATERIAL PROPOSED TO BE IMPORTED
(Use scientific names if known)

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

SOURCE (Full Name and Address of Supplier, including Country of Origin)

.....
.....

PORT OF ENTRY .....

PROPOSED DATE OF ARRIVAL .....

METHOD OF IMPORTATION (Sea, Air, Mail) .....

..... .....
Signature (Applicant) Date

Form 8 No. .....

GOVERNMENT OF SAMOA

**MINISTRY OF AGRICULTURE**
**PERMIT TO IMPORT PLANTS/PLANT MATERIAL/GOODS**

IMPORTER .....
ADDRESS .....

is hereby permitted to import the following plants/plant material/goods from the country stated, subject to the condition/s stated hereon:

| Particulars | Country of Origin |
|---|---|
| | |

## Conditions of Import

*This Permit remains valid for a period of ..... months from the date of issue.*

1. The approved port of entry into Samoa shall be .....

2. Where plants/plant material/goods are packaged they must be packed in clean containers not previously used for any purpose and must not be packed in hay, straw, chaff, soil, forest litter, or any decomposing material.

3. Plants/plant material/goods are subject to inspection on arrival and must be found to be free of plant pests, soil or other plant material not listed on the Permit. Plants/plant material/goods may be subject to treatment, if necessary.

4. For live plants, fruits, vegetables and seeds the importation must be accompanied by a Phytosanitary Certificate issued by the Plant Protection Organisation of the country where the plants/fruits/vegetables/seeds were grown, which shall certify:

   (i) that the plants/fruits/vegetables/seeds have been inspected and are considered to be free from quarantine pests, and practically free from other injurious pests; and

   (ii) provide details of any disinfestation/disinfection treatment including Date, Chemical, Concentration, Duration, Temperature and any additional information, as appropriate, and

   (iii) the following Additional Declaration/Requirements.

..... .....
for CEO of Agriculture Date

Official Stamp

PHYTOSANITARY CERTIFICATE

| | |
|---|---|
| **Name and address of exporter:** | **No.** |
| | Government of Samoa<br>MINISTRY OF AGRICULTURE<br>QUARANTINE<br>Protecting Samoa's Natural Heritage<br>*Puipui Samoa*<br>Produce Export Ordinance 1961<br>**PHYTOSANITARY CERTIFICATE** |
| **Declared name and address of consignee:** | **Import Permit No.** / **Declared point of entry** |
| | **Place of origin** / **Country of final destination** |
| **Declared means of conveyance:** | **To: The Plant Protection Organisation of** |

| Distinguishing marks and container nos. | No. and description of packages | Name of produce / Quantity declared | Botanical name of plants | Commodity code |
|---|---|---|---|---|
| | | | | |

| **Total no. of packages:** | **Total weight:** |
|---|---|
| | |

This is to certify that the plants, plant products or other regulated articles described herein have been inspected and/or tested according to appropriate official procedures and are considered to be free from the quarantine pests specified by the importing contracting party and to conform with the current phytosanitary requirements of the importing contracting party, including those for regulated non-quarantine pests.

No financial liability with respect to this certificate shall attach to Samoa Ministry of Agriculture or to any of its officers or representatives.

**DISINFECTION AND/OR TREATMENT**

| Date | Treatment | Chemical (active ingredient) | Concentration |
|---|---|---|---|
| Duration and Temperature | Additional information | | |

**Additional Declaration:**

| | |
|---|---|
| **Name of Authorised Officer:** | **Inspection date:** |
| **Place of issue:** | |
| **Signature:** | |

**Stamp**

**FORM 2** No …….

[COAT OF ARMS]

**GOVERNMENT OF SAMOA**

MINISTRY OF AGRICULTURE

**QUARANTINE INTERCEPTION REPORT**

The goods listed below have been detained for the following reason:

☐ Prohibited ☐ Import Permit required ☐ Quarantine Entry required

☐ Treatment required (Specify).....

☐ Other Action (Specify).....

Name and Address of Owner/Importer of Goods

.....

.....

Description and Quantity of Goods

.....

.....

Flight No/Voyage No/Mail ..... Date of Arrival .....

..... .....

Signature (QuarantineOfficer) Date Official Stamp

Except where goods are to be held pending destruction or re-export please contact the Quarantine Office at ……. on ……. (tel) to determine any fees due and how and where you may obtain your goods.
**IF YOU FAIL TO CONTACT THE QUARANTINE OFFICE WITHIN 30 DAYS THE GOODS WILL BE DESTROYED**

---

**OWNER/IMPORTER INSTRUCTION/DECLARATION**

I, ..... being the owner/importer of the above goods agree:

(i) to the destruction of the goods; or
(ii) to lodge an Application for an Import Permit for the goods; or
(iii) to present a valid Import Permit for the goods; or
(iv) to re-export the goods at my own expense; and
(v) to pay for any quarantine action concerning the destruction/treatment/re-export or other action associated with the safe entry or disposal of these goods, as the case may be.

Further, I accept that every care will be taken in the application of any treatment but no responsibility can be taken for any damage that may result.

..... .....

Signature (Owner/Importer) Date

**FORM 3** No …….

[COAT OF ARMS]

**GOVERNMENT OF SAMOA**

MINISTRY OF AGRICULTURE

**QUARANTINE RELEASE CERTIFICATE**

TO:

Name and Address of Owner/Importer of Goods

.....
.....

This is to certify that the goods listed below which arrived on the ship/aircraft ..... on ..... (Date) have been inspected/treated/fumigated and may be collected on payment of the prescribed quarantine fees

Inspected on (Date)
.....

Treated/Fumigated with (Chemical/Concentration/Duration/Temperature)
.....

Description and Quantity of Goods
.....
.....

Fees Payable: .....

..... .....
Signature (Quarantine Officer) Date Official Stamp

**FORM 4** No …….

[COAT OF ARMS]

**GOVERNMENT OF SAMOA**

MINISTRY OF AGRICULTURE

**QUARANTINE DESTRUCTION/RE-EXPORT NOTICE**

This is to advise you that the goods listed below are being held for destruction/re-export for the following reason:

☐ Prohibited ☐ No Import Permit ☐ No Treatment available

☐ Other Reason (Specify).....

Name and Address of Owner/Importer of Goods

.....

.....

Description and Quantity of Goods

.....

.....

Port of Entry

.....

Flight No/Voyage No/Mail ..... Date of Arrival .....

The Above Goods are to be Re-exported by: (Date).....

..... ..... ……\…\……..

Signature (Inspector) Printed name Date

Official Stamp

---

(Office use only)

Your order is sought for:

☐ Destruction of the above goods believed to be valued in excess of SAT$200; or

..... .....

Signature (Inspector) Date

I order:

☐ Destruction of the above goods believed to be valued in excess of SAT$200; or

..... .....

Signature (CEO of Agriculture) Date

**GENERAL CONDITIONS OF PERMIT TO IMPORT LIVE ANIMALS**

1. Every permit for the importation of live animals, including embryos and ova, shall be subject to the following conditions in addition to the relevant provisions of the Animals Ordinance 1960:

(a) the time and date of embarkation, the estimated time and date of arrival in Samoa and the airline/flight number or ship/voyage number shall be advised to the Assistant Chief Executive Officer Quarantine Division (ACEOQD) at the earliest possible time and no later than one working day before embarkation of the animals for Samoa;

(b) all animals shall be consigned to Samoa as manifested cargo unless specific provision has been made in the import permit otherwise;

(c) the facilities for the transport of animals shall comply with the Recommendations for Transport of Live Animals of the O.I.E. and the International Air Transport Association Live Animal Regulations, as appropriate, and with any other code of practice for the welfare of animals in transit from time to time recognised in Samoa;

(d) all importations of animals are to be accompanied by-

(i) the import permit issued for that importation;

(ii) a declaration signed by the owner or exporter of the animals providing such information and guarantees as may be required regarding the identification, history and origin of the animals;

(iii) an international animal health certificate signed and stamped by an official veterinary officer of the exporting country certifying the state of good health of the animals and giving particulars, where applicable of the biological tests to which the animals have been subjected, the vaccinations carried out on the animals which are the subject of the certificate and any measures taken to prevent the spread of disease;

(e) unless special provision has been made in the import permit otherwise all animals shall be transported directly without trans-shipment, off-loading or contact with animals not the subject of the same import permit or animals not of equivalent certified health status from the port of departure to the port of arrival in Samoa;

(f) the death, loss or sickness of any animals during the voyage shall be notified to an Inspector immediately on arrival in Samoa by the person in charge of the vessel or aircraft;

(g) all food stuffs, litter, manure, straw or bedding and packing material, crates, containers or any other related articles shall be off-loaded only on the instructions of an Inspector, who may order their cleaning, disinfection, destruction, incineration or other means of disposal;

(h) all animals and documents shall be inspected on arrival by a veterinary officer, except that in the case of animals imported under general or multiple import permits, a veterinary officer may delegate such inspections to an Inspector;

(i) no animal shall be released from quarantine unless the veterinary officer, or his delegate in the case of animals imported under general or multiple permits, is satisfied that the import is in accordance with the provisions of the Animals Ordinance 1960and any Regulations made thereunder, that all conditions of the import permit have been met up to the time of arrival in Samoa and that any tests, treatments or period of detention in quarantine have been completed to the satisfaction of a veterinary officer;

(j) the import permit shall not be transferable;

(k) the import permit may be cancelled or amended at any time after issue and before arrival of the animals concerned in Samoa should the animal health or quarantine status of the country of origin change or be reported to have changed in the meantime; and

(l) all costs and expenses of, and attendant upon, any importation including any documentation, tests, inspections, treatments, detention in quarantine, destruction or re-export, or of any other procedure or action taken or brought about under the provisions of the Animals Ordinance 1960 or any Regulation made thereunder shall be borne by the importer and no compensation shall be payable by the Crown for any loss or reduction in value caused by such action;

2. In the case of any O.I.E. List A or List B disease or for any communicable disease which is considered to be of socio-economic or public health importance or is significant in the international trade of livestock and livestock products or for any communicable diseases with important socio-economic or sanitary influence at the national level and which affects live animals and for which export health certification conditions have not been prescribed in these Regulations: either:

(i) that the exporting country is free from such disease and that no case of such disease was officially reported during the six months immediately preceding the importation of the animals concerned, or:

(ii) where the exporting country is not free from any such disease referred to in the preceding sub-paragraph and export health certification conditions have not been prescribed in the Animals Ordinance 1960, the ACEOQD shall attach such conditions to the import permit as will be, in his opinion, sufficient safeguard against the introduction of such disease. Such conditions shall not be less than those recommended in the International Animal Health Code of the O.I.E.

## GENERAL CONDITIONS OF PERMIT TO IMPORT ANIMAL PRODUCTS AND RELATED ARTICLES

1. For the importation of animal products and related articles generally:

(a) unless accompanied by a passenger, all animal products and related articles shall be consigned to Samoa as manifested cargo unless specific provision has been made in the import permit otherwise;

(b) unless accompanied by a passenger, all importations of animal products and related articles are to be accompanied by -

(i) the **import permit** issued for that importation; and

(ii) an **international health certificate** signed and stamped by an official veterinary officer of the exporting country certifying the state of good health of the animal products and related articles and giving particulars where applicable of any measures taken to prevent the spread of disease;

(c) all animal products and related articles shall be inspected on arrival by an Inspector;

(d) only when the Inspector is satisfied, following the inspection prescribed in (c) above, that the import is in accordance with the provisions of the Animals Ordinance 1960 or of any Regulations made under it, that all conditions of the import permit have been met up to the time of importation and that no period of quarantine detention, treatments or tests are required shall a Quarantine Release be issued;

(e) unless a Quarantine Release is issued according to the provisions of (d) above, all animal products and related articles will be detained under quarantine control until further notice and be subjected to any test, treatment, disinfection or fumigation required;

(f) if animal products and related articles are imported or introduced into Samoa in contravention of the provisions of the Animals Ordinance 1960, of any Regulation made thereunder, or of any conditions of the import permit, a veterinary officer may order the goods to be seized, destroyed, disposed of or re-exported at the owner's expense;

(g) any import permit granted may be cancelled or amended at any time after issue and before arrival of the animal products and related articles in Samoa should the animal health and/or quarantine status of the country of origin change or be reported to have changed in the meantime;

(h) all costs and expenses of and attendant upon any importation including any documentation, tests, inspections, treatments, detention in quarantine, destructions or re-export, or of any other procedure or action taken or brought about under the provisions of the Animals Ordinance 1960 or any Regulation made thereunder, shall be borne by the importer and no compensation shall be payable for any loss or reduction in value caused by such action.

2. The importation of non-commercial consignments of food products of animal origin as accompanied passengers' baggage are subject to the following conditions:

(a) unless otherwise varied by the issue of a general import permit under the Animals Ordinance 1960 and subject to any exemption issued an import permit shall be required for all food products of animal origin imported by a passenger;

(b) food products of animal origin imported by a passenger shall be admitted without an International Health Certificate where they comply with the conditions of import in all other respects;

(c) all food products of animal origin imported by a passenger must be commercially produced, packaged and sealed, and must be labelled in English by the manufacturer clearly stating the name of the packer or manufacturer, the contents, the quantity and country of origin; and

(d) under the provisions of this Regulation the total quantity of food products of animal origin which may be imported by a passenger on any single occasion shall not exceed 10 kg per adult passenger.

QUARANTINE
Protecting Samoa's Natural Heritage
*Puipui Samoa*

Government of Samoa

**No .....**

**MINISTRY OF AGRICULTURE**
**SAMOA QUARANTINE SERVICE**
Quarantine (Biosecurity) Act

## QUARANTINE AGREEMENT – ANIMALS ON VESSELS

I hereby declare that I am the person-in-charge [hereinafter called the "Master"] of the vessel …….. which is at present within the Territorial waters of Samoa and which is expected to remain in such waters for until …….[insert date].

On board the said vessel I have the following animal/s: [Describe each animal]

.....

.....

.....

I acknowledge that I am bound to the Government of Samoa to meet all costs of restitution if I fail to fulfil the following conditions to which I agree:

1. I shall not allow the animal/s listed above to leave the said vessel but shall keep it/them on board in such secure manner as may be approved by a quarantine officer.
2. I shall not allow any dog or other animal to go or be taken on board or to come into contact with any animal on the said vessel which is the subject of this agreement.
3. I have been informed and am aware that any contravention of this agreement or any failure to fully abide by any instruction of a Quarantine Officer in relation to the animal/s listed above may cause such animal to be seized and destroyed and without prejudice to any liability under this agreement.
4. It is further agreed, that the above mentioned agreement will be void if within the period during which the said vessel is in the Territorial waters of the Samoa there is full compliance with the Quarantine (Biosecurity) Act and any instructions given by a Quarantine Officer.

Dated at …….. this …….. day of …….20….

Signature of the Master …….

Signed in the presence of ……(Quarantine Officer)

……..[Printed Name]

Official stamp

**FORM 10** No …….

[COAT OF ARMS]

**GOVERNMENT OF SAMOA**

**MINISTRY OF AGRICULTURE**
Animals Ordinance 1960
**GENERAL IMPORT PERMIT FOR ANIMAL PRODUCTS**

The animal products or goods which contain animal products in their manufacture or constitution and which are listed below are hereby permitted to be imported into Samoa subject to the following conditions or limitations or restrictions:

| Description of Goods /Brand Name | Country of Origin or Source | Other Restrictions/Limitations |
|---|---|---|
| | | |

By Order,

.....
CEO of Agriculture

Date ……. Official Stamp

# 3.0 NOTICE TO MASTERS

**NOTICE TO MASTERS**

TO MASTERS OF OVERSEAS SHIPS, ITINERANT VESSELS AND YACHTS

**RESTRICTIONS WHILE IN SAMOAN TERRITORIAL WATERS**

1. To protect Samoa from the introduction of serious animal and plant diseases you must comply with various restrictions while your vessel is in Samoan territorial waters.

2. RESPONSIBILITY. The Vessel's Master is responsible for ensuring that all the requirements are complied with.

3. FRUIT, VEGETABLES, PLANT PRODUCTS, AND FOOD of any kind must not be landed in Samoa without the formal authority of an Agricultural Quarantine Officer. This includes ship's stores and any food and plant products belonging to crew members. Should it be necessary to land ship's stores temporarily, owing to refit, etc., the prior permission of the Ministry of Agriculture must be obtained.

4. POT PLANTS must not be landed in Samoa under any circumstances.

5. MEAT and ANIMAL PRODUCTS of any description are not to come ashore from your vessel unless specifically approved by an Agricultural Quarantine Officer. Ship's meat must not be used by crew members for fishing, neither from the wharf nor from the vessel.

6. EGGS and EGG GRATES must not be landed in Samoa unless they are part of approved cargo destined for import to Samoa.

7. SHIP'S PETS. If there are any ship's pets (including birds, reptiles, fish), they must be securely confined on the vessel in a manner and place approved by a Quarantine Officer. Pets must not be accessible to visitors, cargo workers, or other workers. Should a pet become sick, please contact the Ministry of Agriculture, Quarantine Division in the port of entry. Contact 20924 during working hours. If a ship's pet dies while in Country waters, the carcass is to be given to an Agricultural Quarantine Officer for disposal. Any pets obtained in Samoa must be added to the list of pets on board. Animals taken on board by visitors or which wander on board will not be allowed ashore unless in the custody of an Agricultural Quarantine Officer.

8. You are required to:

   (a) provide a list of all meats including poultry, ham, bacon, sausage, salami, lard, etc. Details required are the types of meat, quantities, countries of origin and countries and ports where loaded.

   (b) accurately enter and describe all animals on board on the Master's Certificate. These shall include all birds, live fish, reptiles, mammals and other animal species.

9. Ship's garbage containers must be securely fitted with lids. All lids must be fastened at all times. All garbage must be in containers and not allowed to be dropped overboard.

10. CARS, MOTORCYCLES, BICYCLES and SPORTING EQUIPMENT owned by crew members which are to be used in Samoa, must be cleaned to the satisfaction of an Agricultural Quarantine Officer before being allowed ashore.

11. SAMOA QUARANTINE SERVICE contact information is as follows:

Office: Ministry of Agriculture
Quarantine Division,
Mata'utu Wharf
Apia
Telephone (office hours): 20924

## 4.0 ANNOUNCEMENT TO SHIP'S PASSENGERS

***"The following is an important message to all transit passengers from the Samoa Quarantine Service. It is strictly prohibited to take ashore any food, fruit, meat, flowers, cut or packed lunches, plants and animals from this ship. Severe penalties exist for breaches of quarantine laws. Your co-operation will be greatly appreciated."***

If any passengers are leaving the vessel, add the following:

***"Passengers finally landing are required to complete a quarantine declaration which ia available from the Purser or a Quarantine Officer. Thank you for your cooperation."***

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# 5.0 CONDITIONS FOR THE CLEARANCE OF MEAT AND OTHER ANIMAL PRODUCTS IMPORTED WITH AIR PASSENGERS, SEA PASSENGERS, SHIP'S CREW OR ON YACHTS

The maximum quantity of meat products that may be imported as passenger's baggage AND for personal use must not exceed 10 kilograms[#]. All consignments greater than 10kg **MUST** comply with the conditions of importation for commercial consignments. In general, this requires that the importer obtain an Import Permit prior to importation and that the commodity be accompanied by an International Health Certificate with appropriate endorsement/s.

**TABLE 1 Conditions for Clearance of Animal Products into Samoa**

| COMMODITY | REQUIREMENTS | ORIGIN |
|---|---|---|
| **BEEF/VENISON/BUFFALO** Sausage, luncheon, saveloy, meat, hot dogs, frankfurts, pies | Cooked, Uncooked (including frozen, smoked, salted, dried and chilled) | Australia, New Zealand, United States of America, Vanuatu |
| **POULTRY:** (including Turkey, Duck, Chicken, Ostrich) Carcasses, pieces, sausage, luncheon meat, frankfurts, offal | Cooked, Uncooked (including frozen, smoked, dried and chilled) | Australia, New Zealand, United States of America |
| **PIG MEATS:** Ham, sausage, bacon, saveloy, luncheon meat, hot dogs, pies, salami, frankfurts | Frozen, cooked | Australia, New Zealand, United States of America |
| | Chilled ONLY | Australia, New Zealand, |
| **SHEEP AND GOAT MEATS:** Mutton, lamb, | Cooked, Uncooked (including frozen, smoked, salted, dried and chilled) | Australia, New Zealand, |
| **SHEEP Offal** | Must be frozen and/or cooked | Australia, New Zealand, United States of America |
| **CHICKEN EGGS** | Unfertilised and clean. Commercially packaged | Australia, New Zealand, United States of America |
| **MILK PRODUCTS:** Yoghurt, cheese, milk, ice cream, UHT products | Commercially packed | Australia, New Zealand, United States of America |

# In the case of yachts Quarantine Officers may exercise some discretion and permit larger quantities of meat which can be proven beyond reasonable doubt to be from an approved source.

**Other Meat Products NOT Listed above:**

All other meat products **MUST** be seized and referred to the Senior Officer on duty. In the case of yachts with significant quantities of meat not approved on the above list the meat is to be bonded on board and further instructions sought from a Senior Officer or the Veterinary Officer, Livestock Division, Avele.

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# 6.0 LIST OF PROHIBITED PLANTS FOR SAMOA

| | |
|---|---|
| ♦ | All Alocasia and Colocasia plant species or related plants except as tissue culture under special permit for research purposes |
| ♦ | All cacao plants and parts thereof from areas where Witch's Broom Disease (*Morasmium fernicious*) or Swollen Shoot Virus occur |
| ♦ | All citrus and related plants or parts thereof except from area known to be free from Citrus canker (*Xanthomonas citri*) |
| ♦ | All coconut plants and parts thereof |
| ♦ | All coffee plants from areas where coffee bean borer (*Stephenderes coffea*) exists or where Blackwood disease (*Thielaviopsis neocaledoniai*) is known to occur |
| ♦ | Fresh fruit, susceptible vegetables and seeds covered with pulp from areas where harmful fruit fly species are known to exist |
| ♦ | No hay, chaff, grain husks or leaves shall be imported into the Territory as packing or bedding material and all other packing or bedding material shall be subject to fumigation on arrival at the expense of the importer |
| ♦ | All pineapples and related plants from Fiji and areas other than those embraced by SPC |
| ♦ | Plants carrying any form of fungus, bacterium or virus or any living stage of any invertebrate animal which may directly or indirectly injure or cause an unhealthy condition in any plant. |
| ♦ | All plants of the genus Musa (Bananas and related plants) from areas where Panama Disease (*Fusarium oxisporum var. cubense*) or Bunchytop Virus Disease occur |
| ♦ | All rice plants and parts thereof except milled rice for human consumption |
| ♦ | All rubber plants (*Hevea spp*.) and parts thereof from areas where the American leaf disease (*Dothidella ulei*) occurs, and from other areas only in the form of seed or budwood |
| ♦ | Soil, sand, clay or earth |
| ♦ | All sugar cane plants or parts thereof |
| ♦ | All yam, cassava or any root crop or vegetable where it is considered by the Director that the introduction may introduce a disease/pest likely to cause injury to plants or economic potential in Samoa |

**Reference:** *Plant Importation Instructions 1984*

Persons who import plants without a valid import permit and who are given the option of lodging an application for a permit must be told that no action will be taken to deal with their plants until the application is determined.

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# 7.0 CONDITIONS FOR THE CLEARANCE OF FRUITS, VEGETABLES AND MISCELLANEOUS PLANT ITEMS IMPORTED BY AIR AND SEA PASSENGERS, SHIP'S CREW AND ON YACHTS.

These conditions apply to consignments for personal use. Except where otherwise indicated the maximum quantity permitted per person is 20kg#. Larger consignments are to be regarded as commercial consignments and subject to the importer holding a valid Import Permit and the consignment being accompanied by a Phytosanitary Certificate with appropriate endorsements.

All fruits and vegetables which do not appear on the list are to be seized for destruction.

| COMMODITY | REQUIREMENTS | ACTION |
|---|---|---|
| Apples, Pears, Citrus fruits, Kiwifruit, Tomatoes, Grapes | Entry from NZ only | Inspect for pests. Release if free. |
| Bananas, Beans, Coconut, Garlic, Ginger, Mango, Papaya, Pineapple, Root crops, Sweet potato, | N.A. | Destroy |
| Carrots, Parsnip, Swede, Turnip | N.A. | Destroy* |
| Dried plant material including flowers | Entry allowed if free from pests and seeds | Inspect for seeds and pests. Release if free. |
| Frozen, dried or preserved fruits and vegetables | Entry allowed | Release |
| Leafy vegetables (Cabbage, Lettuce, Cauliflower etc.) | Clean | Inspect for pests, soil. Release if free and clean. |
| Onion | N.A. | Destroy** |
| Popping corn | N.A. | Destroy |
| Potatoes | Clean. Entry from NZ. | Destroy.*** |
| Sugar cane | N.A. | Destroy |

* May be admitted if accompanied by a suitably endorsed Phytosanitary Certificate. ("Grown in an area free from Carrot rust fly [*Psila rosae*]"

** May be admitted if accompanied by a suitably endorsed Phytosanitary Certificate. ("Free from White Rot (*Sclerotium cepivorum*) and Neck rot (*Botrytis* spp) and grown in an area free from Onion smut (*Urocystis cepulae*)".

*** Larger quantities may be admitted if accompanied by a suitably endorsed Phytosanitary Certificate. (Grown in an area free from Potato Cyst Nematode [*Globodera rostochiensis*] and Black Wart. Potatoes inspected and found free from Potato Tuber Moth"

OR, alternatively:

"Grown in accordance with the Potato Export Certification Scheme"

# In the case of yachts, Quarantine Officers may exercise some discretion and permit larger quantities of fruit and vegetables which can be established beyond reasonable doubt to be from an approved source.

N.A.NOT ADMITTED

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# 8.0 QUARANTINE AUTHORITIES IN THE PACIFIC

### American Samoa

Mr Senetenari Porotesano
Chief Quarantine Officer
Plant and Animal Quarantine Services
Department of Agriculture
P.O. Box 930
PAGO PAGO, American Samoa 96799

Tel: (+684) 699-1497/9272
Tlx: SB 501
Fax: (+684) 699-4031

Ms Elisapeta S Toleafoa
Senior Quarantine Officer
Department of Agriculture
Plant and Animal Quarantine Services
P O Box 930
PAGO PAGO 96799

Tel: (684) 699 9119
Fax: (684) 699 4031
Tlx: SB 501

### Australia

Principal Science Investigator
Australian Q'tine & Inspection Service
Dept of Agriculture, Fisheries & Forestry
CANBERRA, ACT 2601, Australia

Tel: (+61) 26-272 5250
Tlx: AA 62494
Fax: (+61) 26-288 3185

### Cook Islands

Dr Matairangi Purea
Director Research
Ministry of Agriculture
Totokoitu Research Station
P O Box 96
RAROTONGA

Tel: (682) 28720
Fax: (682) 29719

Mr Poona Samuel
Chief Quarantine Officer
Ministry of Agriculture
P O Box 96
RAROTONGA, COOK ISLANDS

Tel: (682) 28711
Fax: (682) 21881
E-mail: cimoa@oyster.net.ck

### Federated States of Micronesia

Mr James Gilmar
Director Department of Resources and Development
P O Box 336
Colonia
YAP 96943

Tel: (691) 350 2182
Fax: (691) 350 2571

Mr Nena Nena
Administrator
Division of Agriculture
Department of Resources and Development
P O Box PS-12
Palikir
POHNPEI, FEDERATED STATES OF MICRONESIA

Tel: (691) 320 2697
Fax: (691) 320 5854
E-mail:

## Fiji

Mr J Kumar
Director Research
Koronivia Research Station
P O Box 77
NAUSORI, FIJI

Tel: (679) 477044
Fax: (679) 400262
E-mail:

Mr Aisea Waqa
Chief Agricultural Quarantine Officer
Ministry of Agriculture, Fisheries & Forests
Private Mail Bag
Raiwaqa
SUVA, Fiji

Tel: (679) 312512
Fax: (679) 305043/302478
E-mail:

Mr Rajesh Chand
Senior Agricultural Quarantine Officer
Ministry of Agriculture, Fisheries & Forests
Quarantine Section
P O Box 358
SUVA, FIJI

Tel: (679) 312512
Fax: (679) 305043
E-mail:

## French Polynesia

Mr Djeen Cheou
Chef
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**SEE ALSO APPENDIX 11 FOR CONTACT NUMBERS FOR OTHER PLANT HEALTH ORGANISATIONS**

# 9.0 INSECT IDENTIFICATION GUIDE BASED ON TIMBER DAMAGE

The following key may be useful for classifying insect types using the information gained from looking at the damage which has been caused to the timber.

To use the key as a quick guide you should first read A and A1.

If the damage you are trying to categorise does not look like the description given then move to A 2. If these descriptions do not fit you should move to B 1 or B 2. If the description fits follow the sub-sections i), ii) or ii) to identify the probable cause.

A. Insects in this category are initially categorised on the basis that they all excavate galleries. Eventually they may remove almost everything except a thin exterior veneer:

1. If there are few (if any) exterior signs of damage and:

   i) Clean gallery walls but many faecal pellets of even size - **Drywood Termites**.

   ii) Gallery walls are plastered with mud, mud covered runways, no faecal pellets - **Subterranean Termites**.

   iii) There are ants in excavated galleries - **Carpenter Ants**.

2. If there are emergence and/or oviposition holes. Tunnels circular or nearly so and;

   i) The galleries are loosely filled with fine boredust - **Powder Post** and some **Auger beetles**. (*Lyctidae* and some *Bostrychidae*).

   ii) Galleries are loosely filled with a mixture of pellets and wood fragments - **Furniture beetles** and **Deathwatch beetles** (*Anobiidae*).

   iii) Galleries are tightly packed with bore dust often containing wood fragments and,

   Tunnels circular or nearly so - **Auger beetles** (*Bostrychidae*)

   Tunnels flattened elliptical - **Longicorns** (*Cerambycidae*)

Key continued on next page.

**INSECT IDENTIFICATION GUIDE continued.....**

B. Insects in this category are characterised initially by the fact that they construct single tunnels.

**They all attack trees and green timber (i.e. unseasoned timber).**

1 If the tunnel walls are stained; tunnels are free of frass and wood carvings; tunnels usually straight or gently curved and:

i) The tunnels often have side branches - **Ambrosia beetles** (*Platypodinae* and *Scolytinae*).

ii) The tunnels do not have side branches - **Wood Wasp** (*Siricidae*).

2 If there is no staining on tunnel walls; tunnels usually straight or gently curved and:

i) Tunnels are flattened, elliptical and packed with frass - **Jewel beetles** (*Buprestidae*)

ii) Tunnels are slightly flattened, elliptical and packed with frass - **Longicorn beetles** (*Cerambycidae*)

iii) Neither i) nor ii) then there may be low populations of **Powder Post beetles**, **Furniture beetles** and **Deathwatch beetles**, **Auger beetles** or **Longicorn beetles**.

# 10.0 SPECIMEN REPORT FORM

Government of Samoa
**Ministry of Agriculture**

QUARANTINE
Protecting Samoa's Natural Heritage
*Puipui Samoa*

Plants Act 1984

**SPECIMEN REPORT FORM**

**To the Plant Pathologist/Entomologist.**
The attached specimen is a Quarantine interception and is submitted for your attention :
This form should be dealt with as : EMERGENCY/URGENT/ROUTINE.

Interception No ..... Date .....

Inspector .....

Description of pest/disease
.....
.....

Intercepted on (Commodity) .....
Description of damage (if any)
.....
.....

Country of Origin .....

Importer/Carrier .....

Interception port or airport .....

Phytosanitary Certificate Number (if any) .....

Where found -

Baggage/Cargo/Mail/Stores/Aircraft cabin/Other *

If other please indicate area .....

Action taken with consignment :
.....

Extent of infestation : .....

**IDENTIFICATION** : .....
Recommended Action
.....
.....

Identifier's name :..... Signed : .....

***[The specimen may be retained for reference provided that it does not constitute a quarantine risk]***

Return this form and specimen to : .....

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# 11.0 SOURCES OF QUARANTINE INFORMATION FOR THE PACIFIC

## PACIFIC PLANT PROTECTION ORGANISATION

The Pacific Plant Protection Organisation (PPPO) was set up by resolution of the 1995 SPC Conference as an independent Regional Plant Protection Organisation under Article III of the International Plant Protection Convention (IPPC). All members of the SPC are members of the PPPO.

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# 12.0 QUARANTINE LEGISLATION IN SAMOA

### *Animal Quarantine*

The Quarantine (Biosecurity) Act? (proposed for December 2004)

The Animals Ordinance 1960

Animal Disease Prevention Regulation 1968

Poultry Products Notice, 1965 (issued under the Importation of Infected Goods Ordinance 1920)

### *Plant Quarantine*

The Quarantine (Biosecurity) Act? (proposed for December 2004)

The Plants Act 1984

Plant and Soil Importation (Disease Control) (Steam Cleaning of Imported Items) Regulations 1999.

The Plants and Soil Importation (Diseae Control) Ordinance 1950

The Plants and Soil Importation (Diseae Control) Amendment Regulations 1983

The Plant Importation Instructions 1984

### *Produce Exports*

The Export Control Act? (proposed for December 2004)

The Produce Export Ordinance 1961, No 10

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# 13.0 IMPORT CONDITIONS FOR COMMERCIAL CONSIGNMENTS OF MEATS AND OTHER ANIMAL PRODUCTS

## Animal Products Permitted Without Import Permits or Health Certificates

| Commodity/Product | Conditions | Origin |
|---|---|---|
| Canned meat | Cooked | All sources |
| Hermetically sealed meat | Cooked | All sources |
| Fish products | Nil | All sources |
| Milk powder | Nil | All sources except FMD countries |
| Tanned leather | Nil | All sources |
| Noodles containing egg | Nil | All sources |
| New clothing, footwear. Processed feather, fleece and hair goods | Nil | All sources |
| Meat and bone meals | Cooked | Australia and South Pacific except Papua New Guinea |

## Animal Products Permitted Only with an International Health Certificate

| Commodity/Product | Conditions | Origin |
|---|---|---|
| Beef, Venison or Buffalo meat. (Includes salted or smoked meats) | Frozen or cooked OK.<br>Chilled OK ONLY if certified free of Cysticercosis (Beef Measles) | Any export abattoir in Australia, New Zealand, USA or Vanuatu |
| Mutton (including salted or smoked) | Meat OK. Other organs (offal) must be frozen or cooked. | Any export abattoir in Australia, New Zealand or USA |
| Poultry meats including chicken, duck, goose, turkey and ostrich. | Establishment certified free of Newcastle disease and Virulent Avian Influenza | Any export abattoir in Australia, New Zealand or USA |
| Pork (including salted or smoked) | Frozen or Cooked | Any export abattoir in Australia, New Zealand or USA |
| | Chilled | Any export abattoir in Australia or New Zealand |
| | Chilled AND certified free from cysticercosis | Any export abattoir in Australia, New Zealand or USA |
| Hog casings | Salted | All sources |
| Chicken eggs | Unfertilised, commercially packaged, free of faecal matter and soil | Australia, New Zealand or USA |
| Commercially processed sausages/franks/salamis | Cooked | Australia, New Zealand, Fiji or USA |
| Kangaroo meat | Nil | Any export abattoir in Australia |
| Crocodile meat | Nil | Any export abattoir in Australia |

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# 14.0 METHYL BROMIDE FUMIGATION

Methyl bromide (Mbr) has been used as a fumigant for more than 70 years. It can be used successfully on soil, timber, foodstuffs, seeds, plants, fruit and vegetables. It is commonly used by many countries for quarantine purposes because of its high toxicity to a wide range of insects, its good penetrating ability and its speed of action.

Mbr is non-flammable and non-explosive under ordinary circumstances and may be used without any special precautions against fire.

Residues of Mbr in foodstuffs following fumigation are not likely as the greater part of it is desorbed and diffuses away fairly quickly. Inorganic bromide residues due to chemical reaction are more likely in products with high oil content such as nuts. Mbr is known to react with materials containing sulphur to produce objectionable odours which may persist even after prolonged aeration.

## 1. PROPERTIES OF METHYL BROMIDE

**Odour**: Nil at low concentrations, strong musty or sickly sweet at high concentrations

**Chemical formula**: $CH_3Br$

**Boiling Point**: $3.6^0C$

**Freezing Point**:$-93^0C$

**Molecular Weight**: 94.94

**Specific Gravity**: gas (air = 1) 3.27 at $0^0C$
liquid (water =1) 1.732 at $0^0C$

**Latent Heat of Vaporisation**: 61.52 cal/g

**Flammability Limits:** in Air: Non-flammable

**Gas Analysis:** Thermal conductivity meters (Fumiscope) widely used.

Field use the interference refractometer "Riken" or electronic Riken Gas Monitor.

**Leak Detection**: Halide lamp or detector tubes.

**Toxicity**: Methyl bromide has caused a number of deaths throughout the world. Symptoms of poisoning may be delayed for several hours after exposure. There is no specific antidote. Methyl bromide can cause:

- burns to the skin from contact of liquid form
- massive accumulation of fluid in the lungs from inhalation of high concentrations of gas
- damage to brain, nerves and possibly kidneys

Splashes on the bare skin usually evaporate quickly but may be delayed by clothing or gloves. The liquid can cause severe blistering if left in contact with the skin.

The effects of exposure depend on the concentration and on the period and frequency of exposure. The threshold limit is 5ppm for an 8 hour day, 40 hour working week. Poisoning has been reported as low as 35ppm. It is not until one is exposed to a level of about 10,000ppm (approx 40g/$m^3$) that a person can detect the gas by smell and irritation to the nose and eyes. A few minutes exposure at this level may cause headache, soreness of eyes, loss of appetite, and abdominal pain. These symptoms may persist for a few days. Numbness of feet and sensory disturbances to the legs may persist for months. Exposure for a longer period could cause death within 48 hours due to massive fluid build up in the lungs.

Someone exposed to lower levels may not receive warning signs and exposure then may be prolonged. Within a short time the person may feel unwell, suffer headache, smarting of the eyes, and nausea. More serious effects due to damage to the nervous system can appear between a few hours and day or so. They consist initially of difficulty in focusing the eyes, incoherent speech and staggering gait suggesting drunkenness.

There may be weakness of the limbs, especially the legs. If followed by fits and unconsciousness the prospect of recovery is bad. If the victim survives it may be months or years before recovery and during this time, loss of memory, insomnia, weakness and tremors may occur, and even insanity may result.

## 2. SAFETY PRECAUTIONS

An efficient means of respiratory protection must be used by all operators likely to be exposed to the gas during a fumigation.

A self-contained positive pressure breathing apparatus provides the best protection for the operator. Canister respirators are satisfactory in atmospheres not deficient in oxygen and where the concentration of methyl bromide does not exceed 0.5 percent (Approx 19g/$m^3$)

Respirators should be of the full facepiece type.

Skin protection should include a boiler suit buttoned at wrist and throat. Gloves, if worn, must be impervious to Mbr.

## 3. SOME COMMON RATES FOR USE OF METHYL BROMIDE

**Timber and wood packing**
48g/$m^3$ per 24 hours at 21$^o$C or above.

**Cut flowers, fruit and vegetables (except garlic)**
32g/$m^3$ per 2 hours at 21$^o$C or above.

**Garlic**
48g/$m^3$ for 3 hours at 15$^o$C or above.

**Goods/containers infested with Giant African snail/other snails**
128g/$m^3$ for 24 hours at 21$^o$C or above.

**Goods infested with Khapra beetle**
80g/$m^3$ for 48 hours at 21$^o$C or above.

## 4. SHEET FUMIGATION USING METHYL BROMIDE

**The Fumigant**

Methyl bromide (Mbr) is a colourless and odourless gas and is dangerous to humans at high concentrations, so improper handling can have serious consequences. Supervision and care in its use is necessary at all times.

Mbr is supplied as a heavy liquid under pressure. It vaporises at $4^0$C or above. In practice, hot water vaporisers and circulating fans are used to increase diffusion and penetration of the gas.

**Materials and Equipment**

**(a) Fumigation Sheet**

A gas impervious material 0.2 mm in thickness of vinyl, rubber coated nylon or polyethylene is used. The sheet must be in good repair and all visible holes patched using similar gas-proof material bonded with a contact cement. Temporary patches may be applied using book binding tape or duct tape.

**(b) Loose Sand**

This many be used to seal the edges of sheet to the gas-proof base of concrete or bitumen. Sand snakes may be used alone or in combination with loose sand. These may consist of large diameter fire hose or other material sewn to form a tube of around 75mm or more in diameter. These are filled with sand and the ends sealed. The sand snakes should not be filled to the point where they are no longer flexible.

**(c) Hessian Bagging, Used Carpet, Used Tyres etc**

Hessian bagging, old carpet or used motor vehicle tyres can be used wherever there are sharp edges on materials that you are fumigating. These materals will prevent tearing and damage to the sheet. If you use old tyres they should be kept in a dry place after use to ensure that they do not get wet and provide a breeding place for some species of mosquitoes.

**(d) Adhesive Tape**

Various types of tape is used to mend or reinforce sheet. It may also be used on monitoring tubes to label where the tubes are located in the stack. Sheets may be repaired using book binding tape or patches cut from scrap fumigation sheet. These must be glued to the sheet using a contact adhesive. Do not use ordinary “sticky tape” as this will not adhere to the sheet if it gets wet.

**(e) Fans**

To circulate and mix Mbr with the air. These may be special heavy duty fans or they may be standard domestic-type fans. The important thing is that they are available to use to mix the gas/air mixture under the sheet.

**(f) Gas Monitoring Tubes**

Clear vinyl plastic tubes (commonly 6.0mm internal diameter/ 9.00mm external)) used to draw samples from under the enclosure to be attached to the Riken. The number of monitoring tubes used will depend on the size of the fumigation.

**(g) Gas Supply Line**

To carry gas from cylinder to the enclosure. The first section is in copper pipe and should include a coiled section for immersion in hot water to assist vaporisation. The remainder is usually in flexible clear vinyl as for gas monitoring tubes. The tube must be long enough to reach top centre of site. Although methyl bromide turns to a gas at 4°C it is in liquid form in the cylinder and in the measuring device.

**(h) Gas Vapouriser**

This consists of a coiled copper tube which is inserted into a container of hot water. The coil is fitted into the gas supply line to ensure that the liquid methyl bromide from the cylinder enters the stack in a gaseous form. This will ensure that there will be no damage casued due to methyl bromide liquid.

**(i) Scales**

Platform scales or clock faced spring balance scales may be used to weigh the gas cylinder and determine the amount of gas used. Gas may also be metered out and measured in liquid form using a special 1kg methyl bromide measuring cylinder which is fitted directly to a gas cylinder for the purpose.

**(k) Electricity Supply**

You will need an electric lead from the electricity supply and may need additional leads to connect fans especialliy if you are fumigating several containers using separate sheets or if you are conducting an in-container fumigation.

**(l) Tape Measure**

This is used to measure the dimensions of the enclosure to determine the weight of fumigant to use. This is not generally necessary for container fumigatins as you will generally already know their volume. However, if you are fumigating an irregularly shaped item such as a stack of timber, a boat or some other combination of goods you will need a tape measure to determine the volume under the sheet.

**(m) Respirator (Gas Mask)**

Necessary safety equipment to be worn when checking equipment and stack for leaks and for checking for gas freedom following exhausting of the gas.

**(n) Halide Lamp**

To check for gas leaks in gas lines, fumigation sheets and fumigation chambers.

**(o) Riken Interferometer or Riken Electronic Gas Monitor**

Used to monitor gas concentration Range 0 - 100g/$m^3$

## 4. SELECTION OF FUMIGATION SITE

**Protection from Elements.**

Choose a well ventilated and protected area. Strong winds can affect results. Good ventilation is necessary when releasing the gas.

**An Impervious Surface.**

An asphalt or concrete surface is preferred. A wooden or other porous surface should be covered with plastic or asphalt sheets.

**Non Work Area.**

Select an area free of people and vehicle movements.
Rope off the area and put up warning signs.

## 5. LOADING

Ideally, the load should not exceed 2/3 volume of the enclosed space. The sheet should be 60 cm above the stack and 30 cm past each end. This is not always practical and most sheets will simply closely cover the items being fumigated.

Gas circulation is assisted if goods are loaded on pallets. Leave 5 cm space around each pallet load. If no pallets are used leave 5 cm gaps every 2-3 metres of load height.

## 6. GAS PENETRATION AND DISTRIBUTION

A properly arranged load assists gas circulation.

Finely milled products such as soy bean meal or flour should not be stacked greater than 1.5 m in height or width as penetration may be very slow. Non-permeable materials should be removed or slashed and opened near the bottom as gas diffuses downwards.

Place one fan on the floor facing the load. When two fans are used the second is placed on top at the other end to blow back over the load.

The gas supply line should be placed in such a way that it delivers the Mbr directly into the air stream above the load. Extra long loads need extra fans and more delivery points.

Monitoring tubes should be arranged to draw samples from top, centre and bottom of load.

## 7. SHEETING

Cover corners and other places likely to cause damage to the sheet with hessian, carpet or tyres. Take measurements of stack to calculate the volume. If the use of the sheeting changes the volume to any extent, remeasure after sheeting. Take care to avoid snagging or tearing of the sheet. The sheet should lap the floor by 45 cm to provide for sealing of the perimeter.

## 8. SEALING THE SHEET

Allow a small space on all sides of stack for gas circulation.

Place loose sand or sand snakes around the perimeter of the sheet. The corners need special care because of the extra material that gathers there. Pay attention where the gas supply line, monitoring tubes and electrical cables extend from under the sheet. Do a final check for holes or openings and repair these before any gas is introduced

## 9. DOSAGE DETERMINATION

Length x width x height in metres = Volume $m^3$

Volume $m^3$ x dose $g/m^3$ = Dosage.

If the stack under fumigation is irregularly shaped imagine that it is comprised of a number of shapes such as squares and rectangles. Calcuate each one separately and add up the total volume of all the separate shapes.

## 10. INTRODUCING THE FUMIGANT

Switch on fans and circulate air for several minutes.

Check gas line coil is submerged in hot water.

Gas cylinder with lines attached should be placed on scale and gross weight recorded. (Alternatively, the gas may be measured as a liquid using a dispenser on the top of the cylinder of methyl bromide.)

Make a final check of safety equipment, connections on gas supply, area free of workers, signs up.

Turn on gas slightly and check for leaks with halide lamp or soapy water. If OK, release gas at around 1.0 to 2.0 kg a minute. The gas introduction tube should feel hot to the touch showing good vaporisation. The gas introduction continues until the calculated amount has been released.

After 30 minutes the Riken should be used to determine the distribution and penetration pattern of the gas.

The fans should be turned off when even distribution of gas is obtained. This will avoid excessive gas leakage. During gas introduction and occasionally thereafter check along the edges of the sheet with the halide lamp using a mask initially and while ever warranted.

## 11. AERATION

After fumigation the gas must be released and the stack aerated. If suction fans are not used and the gas is to be released by lifting the sheet, this should be done with caution. Wearing a respirator, lift a corner away from the wind so the gas disperses away from the stack. After about 5 minutes lift a corner into the wind. Allow another 10 minutes before lifting the sheet further.

The time for aeration will depend on the commodity. Test with the halide lamp if any doubt exists. A minimum of 1/2 hour should be allowed for aeration.

# 15.0 PEST RISK ANALYSIS

## 1. TECHNICAL JUSTIFICATION OF QUARANTINE -

Adapted from a paper prepared by Dr R Ikin[1]
With the adoption of the General Agreement on Tariffs and Trade (GATT) Uruguay Round of negotiations in 1993 a fundamental change occurred in the discipline of plant quarantine and its administration. The prime purpose of the GATT negotiations was the reduction of tariff barriers. In recognition that technical barriers to trade may be erected where others had been removed the GATT included an agreement on Sanitary and Phytosanitary matters (The SPS Agreement) (GATT,1994).

The drawing up of import restrictions in the context of liberalisation of trade has led to quarantine considerations becoming of major significance. National Plant Protection Organisations (NPPOs) must be able to show alignment with international standards i.e. they need to have documented national standards (Hedley, 1996). Essentially, the SPS agreement recognised that technically formulated restrictions on the movement of commodities were justified, but that the systems should operate within a set of standards. A country which formulated import restrictions according to these standards would not be challenged under the GATT (now the World Trade Organisation (WTO)).

GATT recognised that it did not have the technical expertise to set plant quarantine standards and indicated that the International Plant Protection Convention (IPPC) should be the body to set international standards in relation to phytosanitary matters. Since 1992 the IPPC Secretariat located within the Plant Protection Service, FAO Rome has administered a standard setting procedure based on a system of Technical Working Groups, consultation with regional plant protection organisations, government consultation and final international adoption through the FAO Conference system.

The first international standard established under this process was *the Principles of plant quarantine as related to international trade*, which outlined fundamental issues dealing with plant quarantine to ensure that future policies and procedures recognised the technical basis of decision making in accordance with the SPS agreement and the IPPC (FAO, 1995). In all there are 16 principles. Most of these principles are self evident to those who have been involved in plant quarantine for any length of time, but the acceptance of certain of them have been fundamental paradigm shifts for some countries.

In accepting the principle of **managed risk**, i.e. that some risk always exists**,** countries will no longer be able to consider that absolute prohibitions in regulations mean that risk is totally eliminated (nil-risk policy). As a consequence the process of **pest risk analysis (PRA)** where risk is assessed and then managed becomes a cornerstone of decision making in plant quarantine. Similarly, acceptance of the principle of **transparency** means that countries must make the technical reasons for their decisions available to others, so that they can no longer impose unreasonable conditions without challenge. This includes the presence or absence of diseases of quarantine concern. The principle of **non discrimination** has impact because this should ensure that commodity import conditions imposed on countries of equivalent phytosanitary risk must be identical or equivalent. **Equivalence** in terms of phytosanitary conditions means that the procedure may not be identical but has the same effect.

The first phase of any challenge to a country's quarantine position would be an examination of whether a valid PRA process was undertaken. The SPS Agreement Section 1, Article 5 states "Members (of WTO) shall ensure that their sanitary and phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life, taking into account of the risk assessment techniques developed by the relevant international organisation".

[1]Head, Pest Risk Analysis Section, Plant Quarantine Policy Branch,
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*Guidelines for the conduct of Pest Risk Analysis* was the second standard to be given international endorsement through the FAO process in 1995 (FAO, 1996b). Even before the acceptance of this guideline many countries, were using the draft guidelines to undertake fully documented analyses of commodities for import and assessment of specific pest risks. A schematic representation of the process of PRA is given in the Figure 1.

There are three phases of the PRA process described in the guideline. Stage 1, *Pest Risk Initiation* is the process where the pest is either identified as having the potential to be in the pathway on a particular commodity, or alternatively where a pest is newly recorded in a production area, being a pest to be considered for the first time in already ongoing trade.

The second stage, *Pest Risk Assessment,* determines if the pest is of quarantine importance by considering the specific requirements of the IPPC definition. The flow diagram described in Figure 2 can be used as a guide to evaluating the status of pests. The current International Plant Protection Convention definition of a quarantine pest is - **A pest of potential economic importance to the area endangered thereby and not yet present, or present and not widely distributed and being officially controlled.** If the pest does not satisfy all the conditions of the definition it is removed from the analysis process. At the end of this phase the quarantinable pests of the commodity have been identified and it is these pests which now have to be subjected to management options. Pests may be quarantinable for one part of a plant but not another depending on whether they are in the pathway e.g. Non-seedborne diseases are eliminated when seed is the mode of transfer of germplasm, but not when vegetative material is used.

The third and final stage of the process, *Pest Risk Management,* explores the types of operational activities that are needed to reduce the risk of the quarantine pests to an acceptable level (Figure 3). Depending on the level of risk the conditions could range from a total prohibition to permitting entry subject to visual inspection and certification. The principle of **minimal impact** should be uppermost in the minds of those determining the level of operational security. Finally the technical process of PRA and its conclusions should be published in support of the principle of **transparency**.

An example of the application of pest risk analysis techniques to a problem is given immediately after Figure 3.

**Figure 1: Pest Risk Analysis -** *Initiating the process*

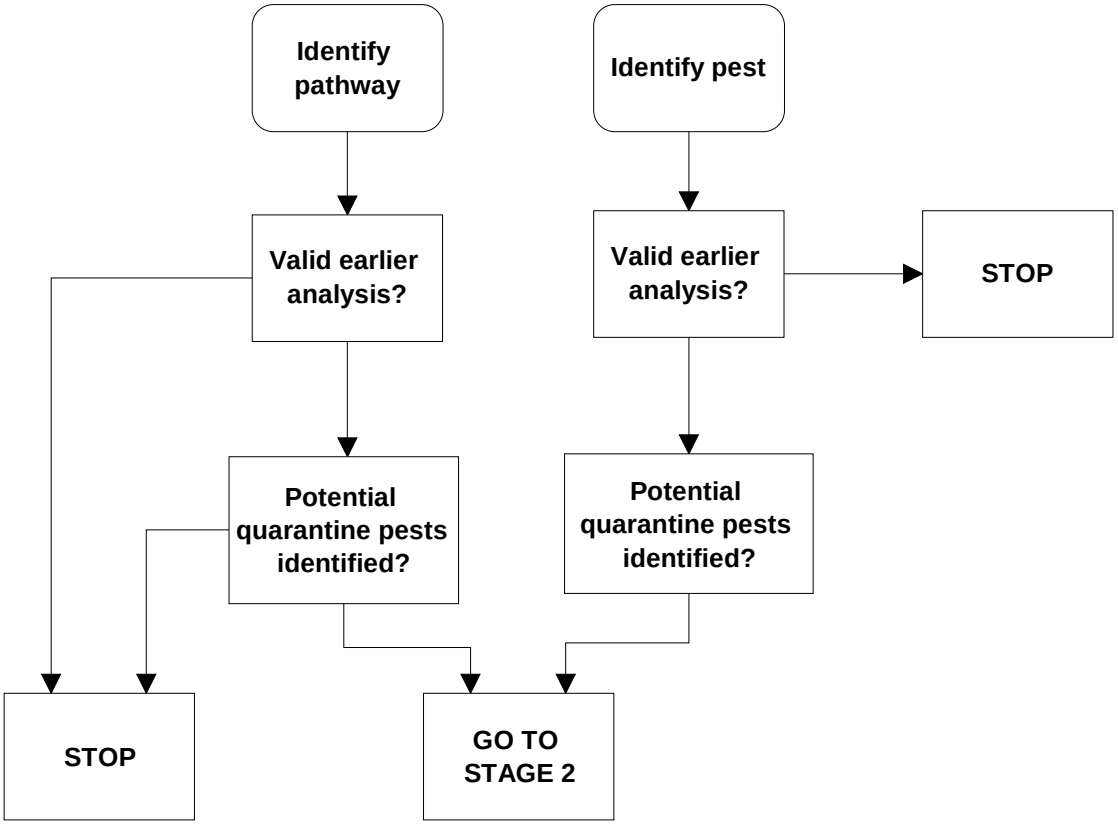


**Figure 2: Pest Risk Analysis -** *Pest risk assessment*

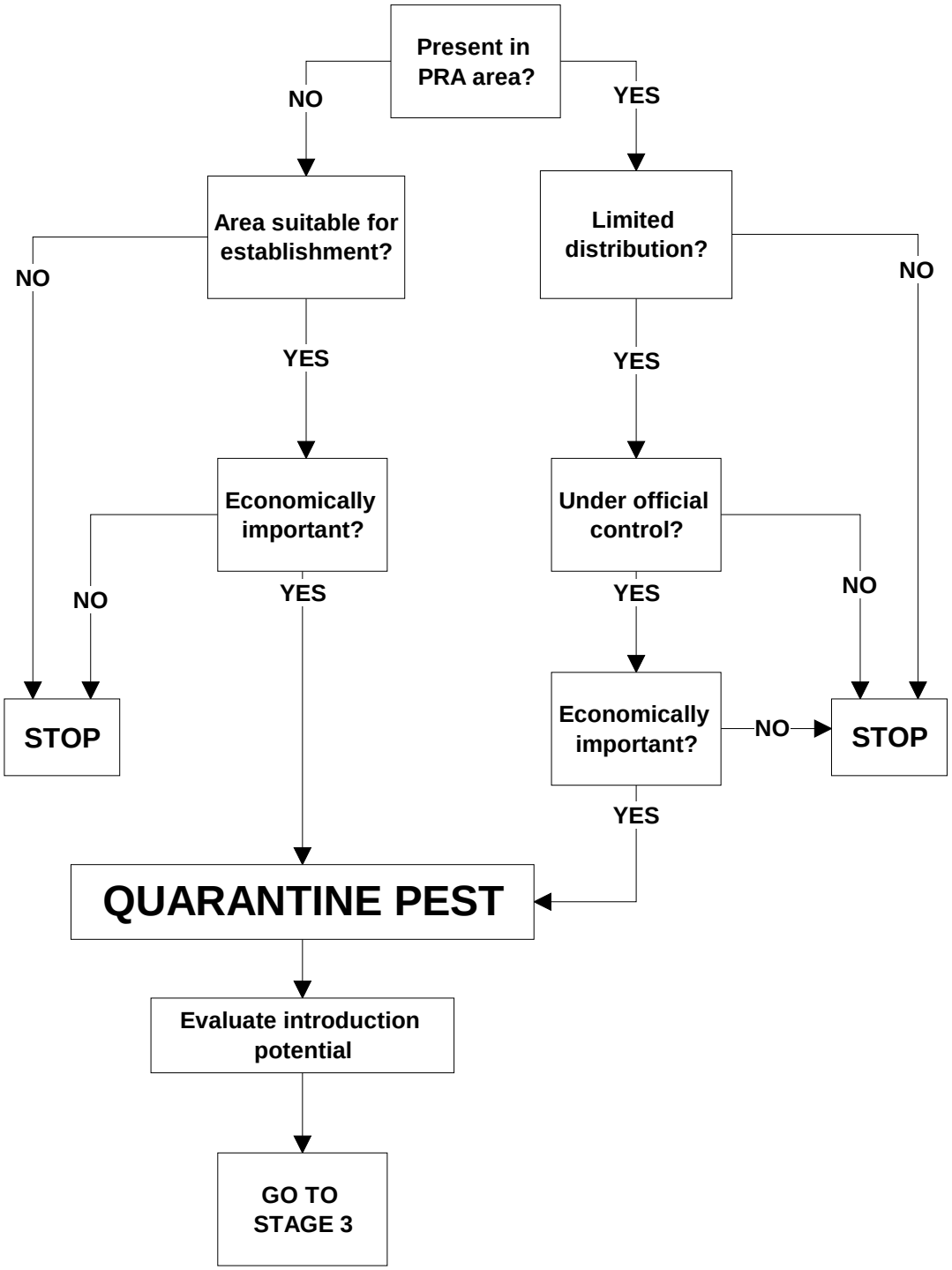
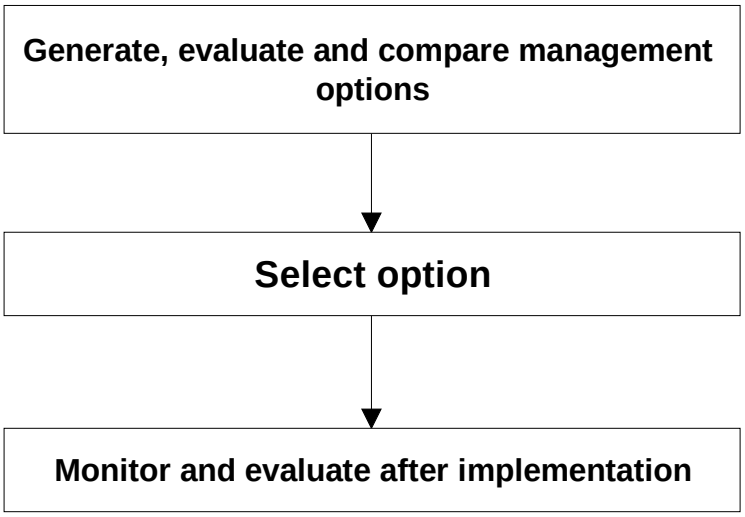


**Figure 3: Pest Risk Analysis -** *Pest risk management*




## 2. AN EXAMPLE OF THE APPLICATION OF PRA

### 2.1 Pra on the exchange of coconut germplasm material.

In the case of the identification of viroid like sequences in coconut the determination of the quarantine status of the pest is complicated because of the lack of information at key points of the process. Nevertheless a pest risk analysis can be undertaken for the movement of material as vegetative planting material or seednuts on the following basis.

The following information is known, see Hanold and Randles (1991).

- **Cadang-cadang** (CCCVd) infects coconut trees and has a major economic impact on coconut production;

- CCCVd occurs in the Philippines but not elsewhere. It is known to be present in pollen but is not proven to be seedborne.

- **Cadang-cadang viroid -related** (CCVR) particles have been found infecting coconuts and other related palm species, the economic impact of the disorder is not known, particularly the effect on yield, (but the impact is assumed to be slight as there have been no specific diseases described for conditions); the distribution of the disorder is not fully known but is assumed to be widespread throughout all the south-west Pacific region. It is not known to be seedborne. Koch's postulates have not determined causality between the particles and symptoms.

Key questions from the schema used in the FAO PRA guideline (Figure 1) can be utilised to decide on the status and the management options for dealing with the risk of the importation of coconut material from the Philippines to other areas of the South West Pacific.

| PRA question | CCCVd | CCVR |
|---|---|---|
| **PRELIMINARY ANALYSIS** | | |
| Is the organism a pest? | Y | ? |
| Have Koch's postulates been completed? | Y | ? |
| | | |
| **PATHWAY ANALYSIS** | | |
| Is the organism in the country of export? | Y | ? |
| Is the organism in the country of import? | No | ? |
| If Yes is it under official control ? | | ?N |
| Has it the potential to enter via a pathway? | | |
| - on plants | Y | ? |
| - on seed | | |
| .. is it seedborne? | ? | ? |
| - on pollen | Y? | ? |
| Has it the potential to establish? | | |
| - on plants | Y | ? |
| Has it the potential to spread ? | Y | ? |
| | | |
| **ECONOMIC ANALYSIS** | | |
| Is it a pest of economic importance to the endangered area ? (Information extrapolated from effect in infested area) | Y | ? |
| | | |
| **IS IT QUARANTINABLE** | | |
| - in plants | Y | N |
| - in seed | ? | N |
| - in pollen | Y | N |
| | | |

Y = Yes N= No ?= information not available

**Conclusion**

Classical cadang-cadang disease of coconuts as described from the Philippines is readily identified as a quarantine pest of coconut germplasm moved as plants and possibly pollen because it clearly satisfies all the criteria required of the PRA process to identify quarantine pests. The management options that could be considered as applicable in Phase 3 to address this risk could be sourcing from indexed plants or indexing plants during a period of growth in post entry quarantine. Sources of pollen should be treated in the same way.

The determination of the status of the CCVR is more problematic as clear information on the occurrence and distribution of the pest (if it is a pest) is not available. On the one hand if the sequences are so widespread then they cannot be considered as quarantinable in the countries in which they occur because the necessary criterion of official control of a pest of limited distribution cannot be applied. On the economic side the lack of information on the clear association between the detection of the sequences, the expression of symptoms and economic loss would suggest the classification as a quarantinable as being tenuous. Only when more information on these aspects is obtained can a clear position be determined, but the imposition of restrictions based on the speculation that sequences may combine to form an association of economic importance is not currently tenable. This argument I believe has never been used to justify a quarantine restriction in the past. The use of the precautionary principle is valid when some data is lacking in the PRA process. If data is generally lacking to determine the effect of the sequences on plants and relate this to a detectable and measurable economic effect on the plant (crop) then the principle is that the disorder cannot be considered as being of

quarantine concern. Besides, coconuts have unrestricted spread throughout the Asia and Pacific islands for centuries on the tides and currents between countries, so the capacity to recombine has been, and always will be present. The key issue to solve at the moment is to prove if cadang-cadang is seedborne, the level of seed transmission and to map its distribution globally.

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# 16.0 TREATMENTS FOR TIMBER

## 1. FUMIGATION

Only two fumigants are approved for the treatment of timber products, regardless of the form in which they are imported. These are Methyl Bromide and Sulphuryl Fluoride at the rates shown below.

Treatment with either fumigant will only be effective on the day of treatment and provides little or no protection against re-infestation. Accordingly, where treatments are carried out overseas Quarantine Officers shall only accept certificates which show that less than 21 days has passed between treatment and shipping. (If containerised, this period may be extended where it can be shown that the treated timber was packed in a container within 21 days of the treatment.)

1.1 Methyl Bromide

1.1.1 Methyl bromide (atmospheric condition) at 48g/$m^3$ per 24 hours at 21$^o$C or above.

For every 5$^o$C the temperature is below 21$^o$C the concentration of methyl bromide should be raised by 8g/$m^3$ e.g. at temperatures between 16$^o$ - 20$^o$C the concentration of methyl bromide should be increased to 56g/$m^3$.

1.1.2 Methyl bromide (660 mm vacuum)

64g/$m^3$ for 4 hours at 21$^o$C or above; or
64g/$m^3$ for 5 hours at 4$^o$ - 20$^o$C.

1.2 Sulphuryl Fluoride (Vikane®)* (select ambient temperature range)

80g/$m^3$ for 32 hours at 4.5$^o$ - 9.5$^o$C; or
104g/$m^3$ for 24 hours at 4.5$^o$ - 9.5$^o$C; or
80g/$m^3$ for 24 hours at 10$^o$ - 15$^o$C; or
64g/$m^3$ for 24 hours at 15.5$^o$C; or
64g/$m^3$ for 16 hours at 21$^o$ and above

* (Vikane®, Dow Chemical Company), Registered trade name by Dow Chemical Company.

# 2. HEAT TREATMENT

2.1 Timber is to be heated to at least 74°C and held at this temperature for a period which is determined by the thickness of the timber as set out in Table 1 below:

**TABLE 1: Hours at 74 °C for various thicknesses of timber**

| Maximum thickness* (mm) | Time (in hours) |
|---|---|
| 25 | 4 |
| 50 | 6 |
| 75 | 8 |
| 100 | 10 |
| 15 | 14 |
| 200 | 18 |
| 250 | 22 |
| 300 | 26 |

****** NOTE ******
**"Maximum thickness" – when the timber is stacked, the "thickness" shall be the distance between spaces, regardless of the actual thickness of the boards in the stack.**

2.2 Kiln drying: The timber must be certified as having been kiln dried by a standard kiln drying procedure to a maximum moisture content of 14%. Temperature and time must be at least equal to those shown in Table 1 above.

# 3. PERMANENT TIMBER TREATMENTS

The preservatives which have been approved for treating timber for use in cargo containers and timber packaging may be classified as water-borne formulations, and non water-borne preservatives.

## 3.1 WATER BORNE PRESERVATIVES

3.1.1 Currently approved Copper-Chromium-Arsenic Salts (CCA) Formulations

| **Preservative** | **Minimum Preservative retention in the Penetration Zone** |
|---|---|
| | % mass/mass based upon the oven dried mass of the treated wood |
| Ascu A | 0.32 |
| Bicurith C | 0.32 |
| Boliden K 33 | 0.32 |
| Celbronze PT | 0.32 |
| Celcure A | 0.32 |
| Celcure A (oxide) | 0.32 |
| Celcure AN | 0.32 |
| Celcure A(P) | 0.32 |
| Celcure (A) Paste | 0.32 |
| Celcure C | 0.32 |
| Celcure C72 | 0.32 |
| Celcure K33 | 0.32 |
| Chemicca Impretect C | 0.32 |

| | |
|---|---|
| Chemicca Impretect C Oxide | 0.32 |
| Chemonite | 0.32 |
| Copas LC/A | 0.32 |
| Cryptogil C | 0.32 |
| Cryptogil CP | 0.32 |
| Cryptogil CO | 0.32 |
| Cryptogil COP | 0.32 |
| Cryptogil COP2 | 0.32 |
| Duralin K33 | 0.32 |
| Fujisolute | 0.32 |
| Fujisolute CCA type B | 0.32 |
| Greenwood | 0.32 |
| Impretect C | 0.32 |
| Injecta CCA-C | 0.32 |
| Injecta K33 | 0.32 |
| Injecta K33-C | 0.32 |
| Injecta Osmose K33-C | 0.32 |
| Kemira K33 type B | 0.32 |
| Kemira K33 type C | 0.32 |
| Kemwood K33 type B | 0.32 |
| Kemwood K33 type C | 0.32 |
| Lahontuho K33 | 0.32 |
| Laporte CCA type 1 | 0.32 |
| Laporte CCA type 2 | 0.32 |
| Laporte CCA type C | 0.32 |
| Malenit CCA | 0.32 |
| Mekure T1 | 0.32 |
| Mekure T2 | 0.32 |
| Neo Malenit | 0.32 |
| Nissan CCA | 0.32 |
| Nissan CCA type C | 0.32 |
| Osmosalts | 0.32 |
| Osmose CCA Oxide | 0.32 |
| Osmose K33 | 0.32 |
| Osmose K33 type C | 0.32 |
| Oxcel | 0.32 |
| Pentagreen | 0.32 |
| Permawood type B | 0.32 |
| Permawood type C | 0.32 |
| Permawood CCA | 0.32 |
| Permawood CF | 0.32 |
| Quantum CCA – 60% | 0.32 |
| Quantum CCA Oxide | 0.32 |
| Rentokil CCA type C | 0.32 |
| Rentokil K33 | 0.32 |
| Sarmix 3 | 0.32 |
| Sarmix Oxcel | 0.32 |
| Sarmix Oxcel C | 0.32 |
| Sarmix Oxcel C-680 | 0.32 |
| Supa Timber PM | 0.32 |
| Superwolmanzout- CO | 0.32 |
| Tanalith C | 0.32 |
| Tanalith CA | 0.32 |
| Tanalith CO | 0.32 |

| | |
|---|---|
| Tanalith CCA Oxide C | 0.32 |
| Tanalith CP | 0.32 |
| Tanalith K33 | 0.32 |
| Tanalith NCA | 0.32 |
| Tanalith Oxide CO | 0.32 |
| Tanalith Oxide C | 0.32 |
| Tanalith Oxide C 3310 | 0.32 |
| Tanalith U | 0.32 |
| Timpro CCA type 1 | 0.32 |
| Toyosol type 1 | 0.32 |
| Toyosol type 3 | 0.32 |
| Treatim CCA | 0.32 |
| Wolman CCA | 0.32 |
| Wolman CCA - B | 0.32 |
| Wolman CCA - C | 0.32 |
| Wolman CCA type O | 0.32 |
| Wolman CCA type S | 0.32 |
| Wolmanzout CO | 0.32 |
| Woodlast | 0.32 |
| Yoneda | 0.32 |

**Note 1.** Basilit C, Basilit CCA type A, Basilit UA, Basilit CCA type B and Basilit UA No. 132 are no longer manufactured. However containers whose timber components were previously treated with these products will be accepted without inspection in Australian ports, provided all other conditions are complied with.

3.1.2 Copper Chromium Fluorine (CCF)

The minimum concentration of copper, chromium and fluorine in the zone required to be penetrated shall be 0.56% mass/mass (elemental copper + elemental chromium + elemental fluorine) based on the oven dried mass of the treated wood.

Preservatives of this type shall be formulated from either salts or oxides of bivalent copper and hexavalent chromium. In the CCF formulated preservative and the solution used to treat the timber, the ratio of these active elements shall fall within the limits:

Copper: 30% minimum, Chromium 50% minimum, Fluorine 5% minimum.

Currently approved CCF type preservatives are presented in the table below.

***Currently approved CCF preservatives***

| **Preservative** | **Total active elements (TAE)** | | | **Minimum TAE Retention in the Penetration Zone % mass/mass** |
|---|---|---|---|---|
| | **Copper** | **Chromium** | **Fluorine** | |
| **Korasit CKF** | **30% minimum** | **50% minimum** | **5% minimum** | **0.56** |

3.1.3 Ammoniacal Copper Quaternary 2100 (ACQ 2100) Preservatives

Currently approved ACQ2100 type preservatives are presented in the table below.

***Copper + DDAC, Quaternary Preservatives***

| Preservative | Copper | Quaternary Ammonium Compound | Minimum Preservative Retention in the Penetration Zone % mass/mass |
|---|---|---|---|
| Copper +DDAC (Laporte ACQ 2100, Acq Type D, Korasit KS, *Lignosan* G) | 57-66% | 33-44% | 0.350 |
| Copper + BAC (ACQ97, Mitrex ACQ) | 45-66% | 33-54% | 0.350 |

3.1.4 Boron and Alkyl Ammonium Preservatives

These preservatives are a mixture of boric acid and dialkylmethylammonium chloride (DDAC) and are approved for their DDAC content and not the borate component (which has not been shown to be equivalent to Hazard level 2 as per Australian Standard AS1604).

***Boron + DDAC Preservatives***

| Preservative | Boron | Alkyl Ammonium Compound | Minimum Preservative Retention in the Penetration Zone % mass/mass |
|---|---|---|---|
| Celbor P | 13.6% | 44% | 1.56 |

3.1.5 Copper Azole Preservatives

Currently approved copper azole preservatives are presented in the table below.

***Copper Azole Preservatives***

| Preservative | Minimum Preservative Retention in the Penetration Zone %mass/mass | Minimum retention charge $Kg/m^3$ | Minimum retention charge $lb/ft^3$ |
|---|---|---|---|
| Tanalith E | 0.27 | 1.35 (Softwood)<br>2.7 (Hardwood) | 0.075 (Softwood)<br>0.155 (Hardwood) |
| Tanalith CY | 0.38 | 1.42 (Softwood)<br>3.75 (Hardwood) | 0.079 (Softwood)<br>0.215 (Hardwood) |

These are minimum charge loadings of commercial preservatives based on treated wood volume.

3.1.6 Cu-HDO and Boric Acid Preservative

Currently approved Cu-HDO and boric acid preservatives are presented in the table below.

| Preservative | Minimum Preservative Retention in the Penetration Zone %mass/mass |
|---|---|
| Wolmanit CX-8 | 2.05 |
| Wolmanit CX-10 | 1.64 |
| Adolit KDA | 1.64 |

***Copper, Boron acid and Polymeric biocide preservatives***

These preservatives are a mixture of copper compounds, boric acid and polymeric biocides. These active ingredients combine synergistically to give both insecticidal and fungicidal efficacy.

| Preservative | Copper | Boron | Polymeric biocide | Minimum Preservative Retention in the Penetration Zone % mass/mass |
|---|---|---|---|---|
| Copper + Boron + polymer betaine (Impralit KDS) | 41% | 33% | 26% | 1.2 |

## 3.2. OTHER THAN WATER - BORNE PRESERVATIVES

3.2.1. Permethrin

The **minimum** concentration of this type of preservative in the zone required to be penetrated shall be **0.020% mass/mass (permethrin)** based on the oven dried mass of the wood or a minimum retention of 0.12kg/$m^3$. This shall be deemed to be the minimum legal requirement.

Currently approved preservatives containing permethrin are shown in the table below.

***Permethrin Preservatives***

| | |
|---|---|
| Agro Plus | Protim LCWR |
| Arbezol Spezial | Vacsol N |
| Celpruf P | Vacsol N WR |
| Gorvivac 050 | Vacsol NA WR |
| Kemvac B41 | Vacsol NA wrl |
| Organotect | Vacsol QP |
| Protim AQ | Vacsol T |
| Protim Timberlife H3 | Xylamon DVIL 313 |
| Protim Trussguard H2 | Xylosan forte |
| Protim 235WR | Supa Timber PM |

3.2.2. Deltamethrin

The **minimum** concentration of this type of preservative in the zone required to be penetrated shall be **0.0020% mass/mass (deltamethrin)** based on the oven dried mass of the wood or a minimum retention of 0.03kg/$m^3$. This shall be deemed to be the minimum legal requirement. Formulation names for preservatives containing the active ingredient deltamethrin are not listed.

3.2.3. Cypermethrin

The minimum preservatives retention of the preservative in the zone required to be penetrated shall be 0.030% mass/mass (cypermethrin) based on oven dried mass of the wood. This shall be deemed to be the minimum legal requirement.

| Preservative | Minimum Preservative Retention in the Penetration Zone % mass/mass |
|---|---|
| Celpruf Z | 0.03 |
| *Basilit CIS* | *0.03 (retention 2.0 kg/m$^3$)* |

3.2.4. Fenvalerate

A preservative which in addition to achieving adequate penetration has a minimum retention of 0.18 kg/m$^3$ fenvalerate*. **(The efficacy data associated with this chemical is being assessed to determine whether or not it will be phased out )**.

The minimum charge loading of commercial preservatives based on treated wood volume.

3.2.5. TBTO (Tributyltin oxide)

A preservative which in addition to achieving adequate penetration has a minimum retention of 4.8kg/m$^3$ tributyltin oxide*. **(THIS IS A FUNGICIDE ONLY – it is not to be accepted without an insecticide)**.

The minimum charge loading of commercial preservatives based on treated wood volume.

3.2.6. Sumithion (Fenitrothion)

A preservative which in addition to achieving adequate penetration has a minimum retention of 0.42 kg/m$^3$ fenitrothion*. The following commercial formulation at a minimum charge retention indicated in brackets has been approved: Koshiace B (2.0 kg/m$^3$)* . **(The efficacy data associated with this chemical is being assessed to determine whether or not it will be phased out)**.

* The minimum charge loading of commercial preservatives based on treated wood volume.

3.2.7 Chlorfenapyr

Currently approved preservatives containing Chlorfenapyr for use in solid timber are shown in the following Table:

| Preservative | Minimum Retention Charge kg/m$^3$ * | Minimum Retention Charge % mass/mass * |
|---|---|---|
| Meganium 2000 ST | 0.024 kg/m$^3$ | 0.005 %mass/mass |

3.2.8 Bifenthrin

Currently approved preservatives containing Bifenthrin for use in solid timber are shown in the following Table:

| Preservative | Minimum Retention Charge kg/$m^3$ | Minimum Retention Charge % mass/mass |
|---|---|---|
| Bistar (10% Bifenthrin) | 0.020 kg/$m^3$ | % 0.0047 % mass/mass |

## 3.3 PRESERVATIVE FOR TREATING PLYWOOD AND PARTICLE BOARD

3.3.1 Glue-line treatments of plywood

Various proprietary preservatives which contain both insecticides and fungicides are available for use in glue-lines. Some fungicides which could be used in wood preservatives may be unsuitable for use in containers because of their tendency to produce odours and cause taint in absorptive materials. Container owners are therefore advised to determine the suitability of preservatives for treating plywood components of containers.

The insecticides listed below are approved for use as glue-line treatments provided no veneer in the plywood sheet is more than 2.5mm thick.

3.3.2 Phoxim®

A preservative which achieves in addition to adequate penetration, a retention rate of 0.70 kg/$m^3$ Phoxim* in the veneer.

Currently approved preservatives containing phoxim are shown in the following Table:

| Preservative | Minimum Retention Charge * Kg/$m^3$ | Minimum Retention Charge *lb/$ft^3$ |
|---|---|---|
| Basileum SI-84 | 3.5 | 0.21 |
| Basileum SI-84 EC | 1.1 | 0.07 |
| Foximer | 0.70kg/$m^3$ (Phoxim) | 0.05 (Phoxim) |
| Protecta C-97 | 3.5 | 0.21 |
| Radaleum-20 | 3.5 | 0.21 |
| Radaleum-40 | 1.75 | 0.11 |
| Radaleum-60 | | 1.17 |
| Supraleum 200 OC | 3.5 | 0.21 |
| Supraleum 600 EC | 1.1 | 0.07 |
| Tailileum-100 | 3.61 | 0.22 |

*These are minimum charge loadings of commercial preservatives based on treated wood volume. (AQIS is in the process of assessing the efficacy data associated with this chemical to determine whether or not it will be phased out.)

3.3.3 Chlorfenapyr

Currently approved preservatives containing Chlorfenapyr are shown in the following Table:

| Preservative | Maximum Veneer Thickness | Minimum Retention of Active Ingredient kg/m$^3$ * | Minimum Retention of Active Ingredient %m/m * |
|---|---|---|---|
| Meganium 2000 | 1.8mm | **0.070 kg/m3** | **0.014%m/m** |
| Wolsit T-20 | 1.8mm | **0.070 kg/m3** | **0.014%m/m** |

- **Note**: Meganium 2000 is only approved as a glue line treatment provided no veneer in the plywood sheet is more than 1.8 thick. Certificates must state the veneer thickness.

3.3.4 Imidacloprid

Currently approved preservatives containing Imidacloprid for use in plywood are shown in the following Table:

| Preservative | Maximum Veneer Thickness | Minimum Retention of Active Ingredient kg/m$^3$ | Minimum Retention of Active Ingredient %m/m |
|---|---|---|---|
| Supraleum 150 | 1.8mm | 0.150 kg/m$^3$ | 0.02 %m/m |
| **Supraleum 75/OPP** | **1.6mm** | **0.075 kg/m$^3$** | **0.01 %m/m** |

**Efficacy tests were conducted on Keruing (*Dipterocarpus spp.*) and European Beech (*Fagus sylvatica*) plywood using ply thickness of 1.6mm and 1.7mm respectively.**

3.3.5 Bifenthrin

Currently approved preservatives containing Bifenthrin for use in plywood are shown in the following Table:

| Preservative | Maximum Veneer Thickness | Minimum Retention of Active Ingredient Kg/m$^3$ | Minimum Retention of Active Ingredient %m/m |
|---|---|---|---|
| Bistar **(10% Bifenthrin)** | 2.5 mm | 0.050 kg/m$^3$ | 0.012 % m/m |

## 3.4 VENEER TREATMENTS APPLIED BEFORE FORMING THE PLYWOOD SHEET.

Plywood (or other laminated veneer product) formed from veneers treated with CCA, ACQ 2100, Tanalith E, permethrin, deltamethrin or cypermethrin containing formulations would be acceptable, provided the minimum retention specified for the zone required to be penetrated for each preservative is achieved, and the effectiveness of the preservative was not affected by the processing.

## 3.5. GLUE TREATMENTS FOR PARTICLE AND OTHER COMPOSITE BOARD PRODUCTS.

The insecticides listed below are approved for the use as glue-line treatments for particle and other composite board products.

### 3.5.1. Phoxim®

A preservative which achieves in addition to adequate penetration , a retention rate of 0.70 kg/$m^3$ Phoxim* in the veneer. Currently approved preservatives containing Phoxim are shown in the following Table:

| **Preservative** | **Minimum Retention Charge *Kg/$m^3$** | **Minimum Retention Charge *1b/$ft^3$** |
|---|---|---|
| Basileum SI-84 | 3.5 | 0.21 |
| Basileum SI-84 EC | 1.1 | 0.07 |
| Foximer | 0.70kg/$m^3$ (Phoxim) | 0.05 (Phoxim) |
| Protecta C-97 | 3.5 | 0.21 |
| Radaleum-20 | 3.5 | 0.21 |
| Radaleum-40 | 1.75 | 0.11 |
| Radaleum-60 | 1.17 | 0.07 |
| Supraleum 200 OC | 3.5 | 0.21 |
| Supraleum 600 EC | 1.1 | 0.07 |
| Tailileum-100 | 3.61 | 0.22 |

*****These are minimum charge loadings of commercial preservatives based on treated wood volume. (AQIS is in the process of assessing the efficacy data associated with this chemical to determine whether or not it will be phased out.)

### 3.5.2 Chlorfenapyr

Currently approved preservatives containing Chlorfenapyr for use in solid timber are shown in the following Table:

| **Preservative** | **Maximum Veneer Thickness** | **Minimum Retention Charge kg/$m^3$ *** | **Minimum Retention Charge %m/m *** |
|---|---|---|---|
| Meganium 2000 | 1.8mm | 0.350 kg/$m^3$ | 0.07 %m/m |
| Wolsit T-20 | 1.8mm | 0.350 kg/$m^3$ | 0.07%m/m |

- **Note**: Meganium 2000 is only approved as a glue line treatment provided no veneer in the plywood sheet is more than 1.8 thick. Certificates must state the veneer thickness.

# 17.0 WEBSITES OF USE FOR PEST RISK ANALYSIS

## 1. PEST RISK ANALYSIS WEBSITES

To assist officers to carry out the process of pest risk analysis there is a degree of technical information available on the Internet.

The following is a list of useful websites.

http://pppis.fao.org/

http://www.ars-grin.gov/npgs/tax/index.html

http://biology.anu.edu.au/Groups/MES/vide/

http://www.rbgkew.org.uk/web.dbs/webdbsintro.html

http://www.bishop.hawaii.org./bishop/ento/aocat/

http://ifs.plants.ox.ac.uk/wwd/wwd.htm

http://www.cabi.org/

http://fao.org/

http://www.landcare.cri.nz/

http://www.hort.cri.nz/

http://www.hear.org/AlienSpeciesInHawaii/articles

http://www.new-agri.co.uk

http://www.usda.gov/agency/fsis/fieldoff.htm

http://202.0.157.4

http://202.0.159.253

http://www.dpie.gov.au/aqis/homepage/imadvice/implant/wrmanu.html

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# 18.0 EXPLANATORY NOTES FOR USING THE PHYTOSANITARY CERTIFICATE

## 1.1 GENERAL INFORMATION

1.1.1 A Phytosanitary Certificate, referred to as a "Phyto" or an "IPC" (for *International Phytosanitary Certificate*) or "PC" is a document issued by the plant health authority in the exporting country certifying that the product meets the requirements of the quarantine authority of the importing country.

1.1.2 Important information in the document includes:

- Exporter's name
- Importer's name
- Quantity of product.
- Botanical names of commodities listed.
- Treatment carried out. (if any)
- Endorsements (Additional Declaration).

1.1.3 When ***treatments*** are endorsed on the IPC it is essential that details are exactly as required by the importing country. The treatment must have been carried out exactly as endorsed.

1.1.4 When endorsing that pests/diseases do not exist in Samoa, you must make sure that the statement is accurate. To ensure accuracy you must first contact the Senior Officer (Technical and Policy) MoA Quarantine Division and if he/she is unavailable you will need to contact the Head of Crops Division at Nu'u Horticultural Research Farm and request the appropriate information.

1.1.5 Inspection standards must be first class - at least to the level of the quarantine authority in the importing country.

1.1.6 The IPC must be typed or printed neatly in block letters.

1.1.7 Blank spaces, particularly in the Additional Information and Additional Declaration sections, should have a diagonal line marked through to cancel them.

1.1.8 Official Government stamps must be put on neatly.

1.1.9 The consignment must, when inspected in the importing country, be as the IPC says - "free from quarantine pests and practically free of injurious pests". The endorsements and treatment details must comply with the importing country's Import Permit or regulations (if known).

1.1.10 If no Import Permit is available clearly endorse the Certificate 'NOT SIGHTED' in the space where the Import Permit number is to be shown.

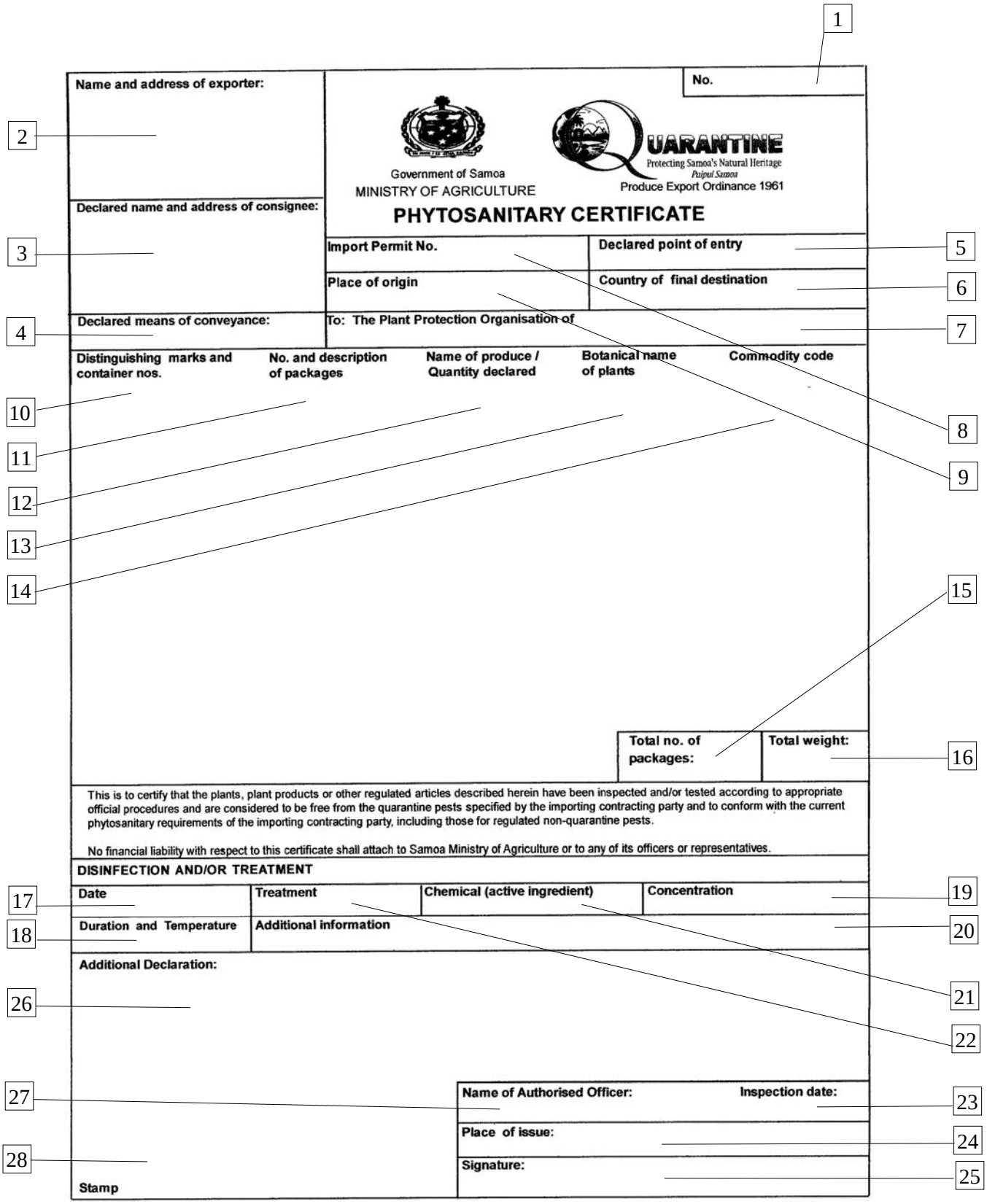
1.1.11 Phytosanitary Certificates should be issued without alteration or erasure. If details have to be changed a new IPC should be issued. Many countries will refuse to accept altered certificates. This can add significantly to importer/exporter's costs if you charge for each certificate issued.

1.1.12 The procedure for completing a Phytosanitary Certificate is described in the following notes:

The following numbers refer to the numbers printed on the Phytosanitary Certificate shown on the following page.

1. Every certificate must have a separate number. This number must be unique. Samoan Phytosanitary Certificates come with pre-printed numbers.
2. Exporter's name and address.
3. The name of the importer as stated (declared) by the exporter; if the importer carries the goods in his/her baggage, show 'Self' followed by the name of the country to which the products are being exported.
4. Enter the Name of the vessel and Voyage number if the produce is being consigned by sea. The voyage number is usually shown in the form 'V' followed by a number.
5. The Declared Point of Entry is the place where the goods will enter the country shown in Box 6. For NEW ZEALAND this will normally be AUCKLAND.
6. Print the name of the country to which the produce is being sent. This will most often be NEW ZEALAND, AUSTRALIA or USA.
7. This box indicates the name of the COUNTRY to which the certificate is being addressed. In most cases this will be the same as the country printed in Box 6. Print the country name only. **DO NOT** print the name of the city to which the goods are being sent.
8. The number shown on the Import Permit (if an Import Permit is presented by the exporter)
9. The place of origin of the produce. In most cases this will be SAMOA, however if an exporter was exporting produce which had previously been imported from another country the name of the originating country would be printed in this area.
10. Show shipping marks, e.g. For sea containers list the container number; for crated goods by sea indicate any distinguishing marks; list the air waybill number or exporter's brand for air consignments; and for private consignments by sea or air, show "as addressed".
11. Print the number of each type of package and a description of its type. Examples of "types" include drums, bags, cartons and boxes.
12. The common name of the produce as used in international commercial trade, and the quantity as declared by the exporter.
13. Botanical name – to be used for plants, seeds, fruits and vegetables.
14. Harmonised tariff code. This is an international code for describing the type of produce covered by the certificate. Authorised Officers will be issued with the most commonly used codes.
15. The total number of packages covered by the Certificate.
16. The total net weight (mass) of the produce in kilograms or pounds.
17. The date or dates the treatment was carried out.
18. Duration - the time of treatment, e.g. 2 hours for fumigation, 5 minutes for dipping, etc. The temperature shown should be of the fruit pulp/flesh temperature, and not of the air or fumigation chamber.

**Figure 1a: An International Phytosanitary Certificate as issued in Samoa**



19. Concentration of chemical used, i.e., active ingredient per litre of water or grams of fumigant per cubic metre, etc.

20. This part is for Additional Information concerning the treatment. It is NOT to be used for Additional Declarations.

21. The type of chemical used (if any); state the active ingredient, and not the commercial brand name.

22. The type of treatment, e.g. fumigation, dipping, HTFA.

23. The date of the inspection carried out by the officer whose name appears in the space referred to by Box 27.

24. The place at which the Certificate is issued. e.g. MATA'UTU WHARF, UPOLU or FALEOLO AIRPORT, UPOLU

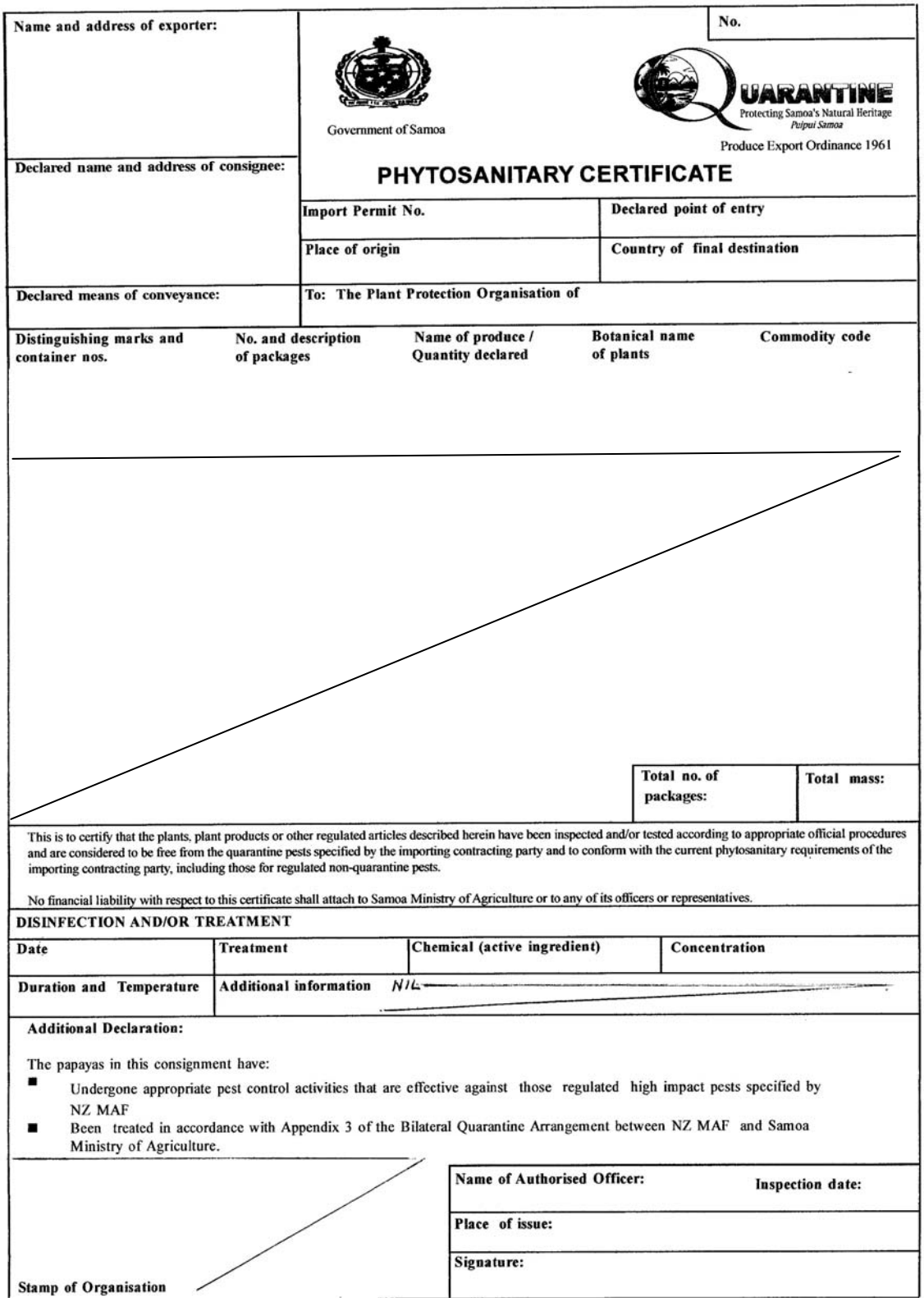
25. The usual signature of the officer whose name appears in Box 27.

26. This part is for additional declarations (endorsements); The Certificate provides space for most declarations known to be required by countries which regularly receive produce from Samoa. If this section is not used print the word "NIL". Draw a horizontal line underneath it making sure that you cover the full width of the box. From the right hand end of this box draw a line diagonally down to the bottom left of the box as shown in Figure 1 on the last page. This ensures that no declarations can be added after the Certificate is completed

27. Print the name of the inspecting officer here.

28. Neatly place the stamp of Samoa Quarantine Service here.

**Figure 1b: An IPC showing how to strike out sections that are not used.**



| | |
|---|---|
| **Name and address of exporter:** | **No.** |
| | Government of Samoa<br>QUARANTINE<br>Protecting Samoa's Natural Heritage<br>*Puipui Samoa*<br>Produce Export Ordinance 1961 |
| **Declared name and address of consignee:** | **PHYTOSANITARY CERTIFICATE** |
| | **Import Permit No.** / **Declared point of entry** |
| | **Place of origin** / **Country of final destination** |
| **Declared means of conveyance:** | **To: The Plant Protection Organisation of** |

| **Distinguishing marks and container nos.** | **No. and description of packages** | **Name of produce / Quantity declared** | **Botanical name of plants** | **Commodity code** |
|---|---|---|---|---|
| | | | | |

| **Total no. of packages:** | **Total mass:** |
|---|---|
| | |

This is to certify that the plants, plant products or other regulated articles described herein have been inspected and/or tested according to appropriate official procedures and are considered to be free from the quarantine pests specified by the importing contracting party and to conform with the current phytosanitary requirements of the importing contracting party, including those for regulated non-quarantine pests.

No financial liability with respect to this certificate shall attach to Samoa Ministry of Agriculture or to any of its officers or representatives.

**DISINFECTION AND/OR TREATMENT**

| **Date** | **Treatment** | **Chemical (active ingredient)** | **Concentration** |
|---|---|---|---|
| **Duration and Temperature** | **Additional information** N/L | | |

**Additional Declaration:**

The papayas in this consignment have:

- Undergone appropriate pest control activities that are effective against those regulated high impact pests specified by NZ MAF
- Been treated in accordance with Appendix 3 of the Bilateral Quarantine Arrangement between NZ MAF and Samoa Ministry of Agriculture.

| | |
|---|---|
| **Stamp of Organisation** | **Name of Authorised Officer:** **Inspection date:** |
| | **Place of issue:** |
| | **Signature:** |