



**AGRICULTURE & NATURAL RESOURCES DIVISION
ISLAND OF ST HELENA**

BIOSECURITY

MANUAL OF PHYTOSANITARY INSPECTION PROCEDURES

Revised February 2016

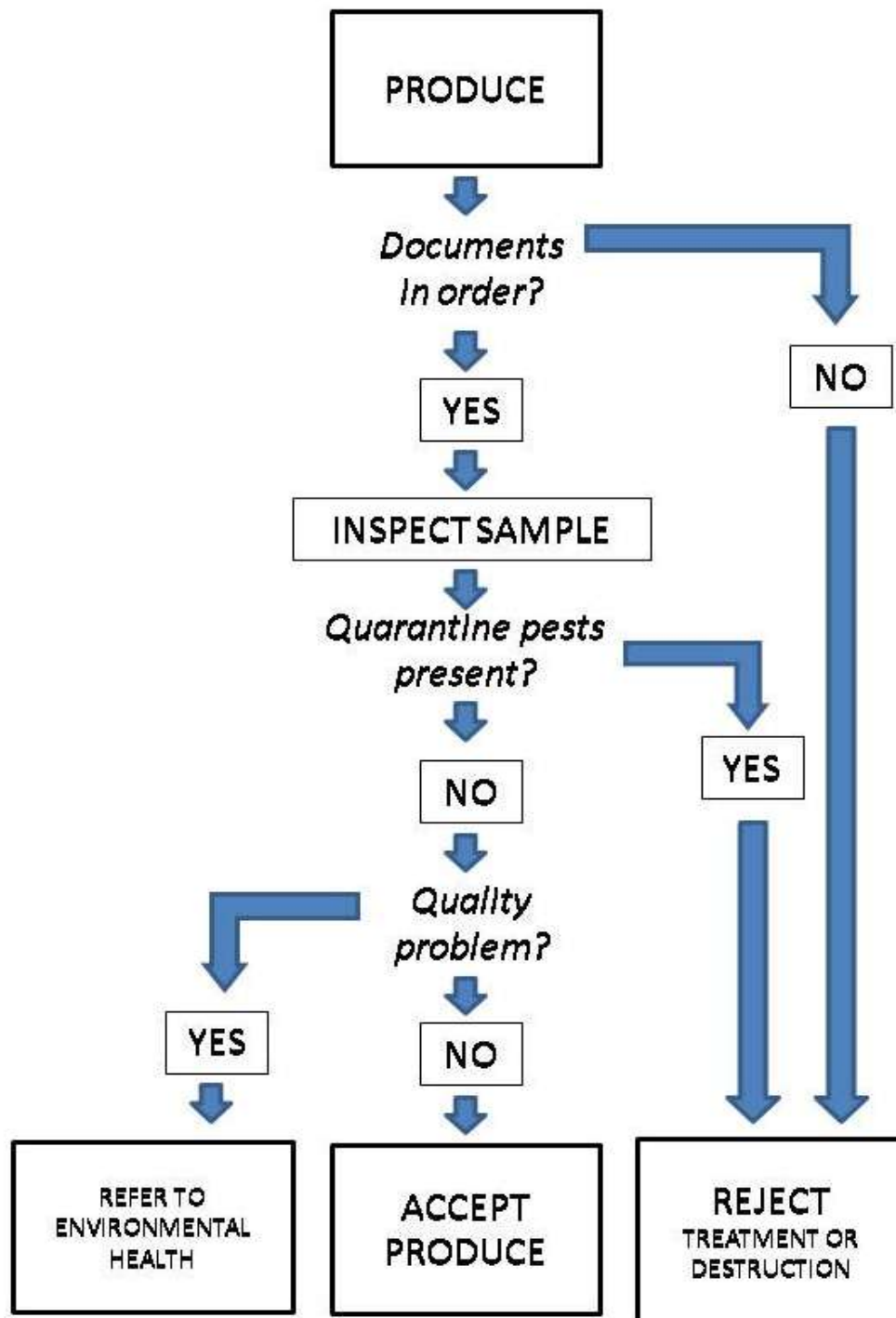


MANUAL OF PHYTOSANITARY INSPECTION PROCEDURES.

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SUMMARY



MANUAL OF PHYTOSANITARY INSPECTION PROCEDURES

Biosecurity is defined as “protection against the risks posed by pests and diseases to the economy, environment and human health, via exclusion, eradication, containment and control.” It includes the prevention of arrival of new species, and early detection and rapid action in response to newly introduced species to prevent their establishment. Actions are directed at reducing the probability of arrival and subsequent establishment through species or pathway led mitigation, with strategies devised for both intentional and unintentional introductions. Phytosanitary inspection procedures are aimed at the first part, preventing the arrival of new species through contamination or infestation of permitted produce or plant material.

The importation of fresh produce is prohibited under the Customs Ordinance 1999, Regulation 3 (First Schedule) of the Customs (Export and Import Control) Regulations 1988 and the Plant Protection Ordinance 1938, amended by Ordinance 19 of 2011. In both Ordinances plant material can only be imported under those conditions imposed by the Head of the Agriculture and Natural Resources Division. The precautionary principle has been adopted and a “white list” approach is used whereby everything is prohibited except the produce on the list, which is permitted under license. Whilst any inspector of produce will ensure that all conditions set are enforced it is his or her overall duty to act in the interest of preserving agriculture on St Helena and its native flora and fauna by preventing further introductions of pests of economic, social or environmental significance.

1. The aim of inspecting imported produce

Plant quarantine is “all activity designed to prevent the introduction or establishment of pests or to ensure their eradication” and as such is fundamental for the development of agriculture in St Helena and protection of the environment. A pest of plants is defined as any organism causing damage or reducing yield, including insects, mites, nematodes, plant pathogens such as fungi, viruses, bacteria and phytoplasm, and weeds. Inspections are directed at two main categories of pests and diseases, quarantine pests and diseases, and regulated non-quarantine pests and diseases.

A quarantine pest is one defined as “a pest of potential national economic importance to the country at risk and not present there, or present but not widely distributed and being actively controlled.” Quarantine pests are regulated in accordance with accepted international principles. Other pests are regulated as part of quality certification schemes, such as disease-free seed.

The aim of inspecting imported produce is to minimise the risk of introducing pests and diseases into the country. For commodities where there are no listed quarantine pests for St Helena no inspection is required.

A list of permitted produce is given in **Annex 1**.

2. Inspection of documents

Three documents are required for the importation of produce intended for human consumption into St Helena: Import Licence, Phytosanitary Certificate and Export Inspection Certificate. For peaches, nectarines and mangoes a fumigation certificate is also required. In addition, germplasm such as seed potatoes or budwood requires certification according to EEC or RSA regulations.

Produce bound for Ascension Island and shipped in the same reefers as St Helena produce has the same documentation requirements, as there is a risk that pests and diseases could be transmitted between lots while in transit.

Failure to provide the appropriate documentation renders the entire lot liable to confiscation and destruction.

Import Licence

The Import Licence must be obtained in advance from the ANRD. Under no conditions will an Import Licence be issued to cover produce landed at St Helena for the intended purpose for which an Import Licence was not obtained prior to import. The Import Licence specifies the type and quantity (where appropriate) of produce which may be imported, the voyage and the conditions under which produce may be imported. It also lists the quarantine pests for which inspection must be made. An Import Licence is shown in **Annex 7A**.

This certificate is required for germplasm.

Phytosanitary Certificate

The Phytosanitary Certificate is an internationally recognised document to certify freedom from injurious pests. It is issued by the official plant protection organisation of the exporting country.

This certificate is required for germplasm.

Where stated by the Phytosanitary Certificate in the part described list of plants, “See Attached List”, an accompanying list must be attached bearing the stamp of the Director of Agriculture indicating an inspection of the list presented.

Where produce has been sourced from outside South Africa the relevant phytosanitary certificate from the country of origin must be included.

A phytosanitary certificate from South Africa is shown in **Annex 7B**.

Export Inspection Certificate

The Export Inspection Certificate is a certificate of export quality issued by the Perishable Products Export Control Board (PPECB) (in the case of exports from Republic of South Africa) and is required by the ANRD for fresh produce.

Note that this certificate is not required for germplasm.

An Export Inspection Certificate from South Africa is shown in **Annex 7C**.

Certification of germplasm

Seed potatoes require certification according to British Seed Potato certification systems in compliance with EC Directive 2002/56/EC and other relevant EC Directives (UK origin) or South Africa Seed Potato Certification Scheme in compliance with Plant Improvement Act 1976 (Act No. 53 of 1976) and other relevant South African Directives (South African origin).

Labels of different colours are specified for each category as shown below.

From the UK:

| Category | National Class | Community Grade | Label Colour |
|-----------|-----------------|-----------------|--------------------------|
| Pre-basic | Pre-Basic TC | Not applicable | White with purple stripe |
| Pre-basic | Pre-basic 1-4 | Not applicable | White with purple stripe |
| Basic | Super Elite 1-3 | EC 2 | White |
| Basic | Elite 1-3 | EC 2 | White |
| Basic | A | EC 3 | White |
| Certified | CC | None | Blue |

From South Africa:

| Class | Label details |
|----------------|--|
| Standard Class | White with a blue vertical band at the right end of the label |
| Class 1 | Green Class 1 classification and specifies generation (G1 to G8) |
| Class Elite | Will bear a Class Elite sticker |
| Generation: | |
| G0 | Gold |
| G1 | Red |
| G2 | Yellow |
| G3 | Purple |
| G4 | Green |
| G5 | White |
| G6 | Pink |
| G7 | Orange |
| G8 | Blue |

Germplasm such as budwood requires certification according to the country of origin.

Certification of fumigation

Peaches, nectarines and mangoes imported from South Africa are considered (from experience) to present a particularly high risk of infestation of quarantine pests, specifically fruit fly species. Quantities exceeding **ten cartons per importer** must be fumigated in the Cape before export by a recognised company/authority for which a certificate of fumigation must accompany the produce.

Note that this requirement is specific to these three fruit types alone.

A fumigation certificate from South Africa is shown in **Annex 7D**.

3. Time and place of inspection

Documentation

It is a condition of import that produce is accompanied by full documentation. If any document is lacking the entire consignment is liable to confiscation. Documentation can be inspected either before or after the produce is inspected. No produce will be released until the inspector is satisfied that the consignment is covered by the relevant documentation.

Produce

Inspections must be carried out at the port of entry and as soon as possible after the arrival of the produce to minimise spoilage.

4. Produce landed by accident

Any medium or low risk produce landed by accident and which is clearly labelled as destined for another port of entry should be returned to the vessel under the supervision of ANRD staff and/or HM Customs staff.

Any high risk produce which is either in a reefer or closed package landed by accident and which is clearly labelled as destined for another port of entry should be returned to the vessel under the supervision of ANRD staff and/or HM Customs staff. In the case of high risk produce in an open carton or container it shall be determined as a prohibited import and shall be treated as such.

Definitions of high, medium and low risk are given below in section 6.

Where produce has been landed for an intended purpose and found to not meet the requirements of import, ie not covered by the required Import Licence and Phytosanitary Certificate and Export Inspection Certificate, it shall be determined as a prohibited import and shall be treated as such.

5. Officers present

Inspections will be carried out by authorised staff from the Biosecurity and Pest Control Sections of the Agriculture and Natural Resources Division (ANRD). A Customs Officer should also be present at the time of inspection to ensure security of the received goods.

6. Sampling strategy

Produce will be inspected at the convenience of the Biosecurity and Customs staff and not necessarily in the presence of the importer.

Samples will be taken from each "lot" of produce. A "lot" is defined as the total amount of any one type of produce which are clearly from the same source. For example, identical boxes of apples bought from the same supplier by different importers are all part of the same lot.

Selection of samples is based on procedures devised by the International Standards For Phytosanitary Measures No. 31. Methodologies for Sampling of Consignments (2009). International Plant Protection Convention, FAO. Produce is categorised as high risk, medium risk or zero risk. Sampling rates are as follows:

- High risk: 99% confidence level, 1% level of detection
- Medium risk: 95% confidence level, 1% level of detection
- Low risk: documentation and quality check; inspection as required

Items selected for inspection will be examined on an inspection table against a white surface under 600 lux lighting. In addition to the inspection sample, a cursory visual inspection will be made of each lot by opening a number of cartons of the remaining lot to verify the impression gained from the sample. If the cursory inspection raises any questions as to the quarantine pests or quality status of the lot, the inspector may increase the sample rate of that produce category, on a temporary or permanent basis.

High risk produce

High risk produce includes:

- Stone fruit (peach, nectarine, plum, apricot, prune, etc)
- Soft citrus: orange, mandarin (clementine, tangerine, nova, tambur, Satsuma, naartje, etc)
- Mango
- Pumpkin and squash (gem squash, butternut)

The sample provides for a 99% chance of detecting a 1% infestation. Sampling rates are given in the table in **Annex 2**.

In addition, lids will be lifted or opened from at least **3 cartons** for each lot for a cursory visual inspection of the contents.

Medium risk produce

Medium risk produce covers all other fruit and vegetables on the list in Annex 1 and includes:

- Aubergine/ brinjal
- Carrot
- Grape
- Hard citrus: lemon, lime, grapefruit, etc
- Kiwi fruit
- Melon
- Pepper (bell pepper, sweet pepper)
- Pome fruit (apple, pear)

The sample provides for a 95% chance of detecting a 1% infestation. Sampling rates are given in the table in **Annex 3**.

For grapes, a sample of **1 box in every 10** will be examined, selecting the boxes at random from the lot. If a lot consists of less than 10 boxes the entire lot will be examined.

In addition, lids will be lifted or opened from at least **3 cartons** for each lot for a cursory visual inspection of the contents.

Low risk produce

Low risk produce includes:

- Onion
- Garlic
- Ginger

There are currently no quarantine pests for onion, garlic and ginger entering St Helena and routine checks are therefore limited to quality aspects and the import documents specified above in Section 2. Inspection of produce will occasionally be carried out, at the discretion of the Biosecurity Officer, using the sampling rates described for medium risk produce, see the sampling rates table in **Annex 3**.

Ware potatoes

A sample of **600 tubers** in total will be examined, selecting the tubers at random from the lot. If the lot consists of less than 1 tonne or 600 tubers the entire lot will be examined.

Seed potatoes

Seed potatoes are of particular concern as the health of the subsequent crop and future yields depend on the health of the seed. Both the UK and South African seed potato certification schemes are considered reliable.

A sample of at least **100 tubers** per tonne will be examined, selecting the tubers at random from the lot. Quantities of less than 1 tonne will be rounded up to the nearest whole tonne.

In addition to the visual examination, at least **50 tubers** per tonne from the lot must be cut at the heel end to determine the presence of Brown Rot/Bacterial Wilt.

7. Inspecting for quarantine pests and diseases

Annex 4 lists the quarantine pests and diseases for St Helena. Inspections are directed towards detecting the presence of these pests and diseases. **Annex 5** gives guidelines for inspection for quarantine pests and **Annex 6** illustrations and identification details of the quarantine pests.

Stone, pome, citrus, grape, and other tropical fruit

Fruit are inspected externally for any signs of infestation by quarantine pests, such as holes of entry or exit of larvae, frasse, or symptoms of disease. Any such signs must be followed up by cutting the fruit to identify the pest or disease concerned. The inspector may make any inspection by means of looking, palpating, cutting, smelling or tasting as he or she sees necessary. Fly larvae must be identified to family and then held for specific identification of the emerged adult.

A single piece of fruit, where certified by all correct documentation, found to contain a quarantine insect pest or mite (specimens alive or dead) renders the entire lot liable to confiscation subject to alternative means of treatment, ie, 100% inspection and removal of infested produce or fumigation (providing this is feasible). These additional treatments will be offered and conducted as an alternative to destruction at a nominal charge to the importer.

Note that peach, nectarine and mango are subject to inspection despite fumigation as the inspection checks the effectiveness of the treatment.

A single fruit found to be infected with a quarantine pathogen renders the entire lot liable to confiscation and destruction. If a disease has been detected in one or some fruit other apparently uninfected fruit may be latent carriers and 100% inspection is not an option.

Other fruit, and vegetables

Other fruit and vegetables are inspected externally for any signs of infestation by quarantine pests, such as holes of entry or exit of larvae, frasse, or symptoms of disease. Any such signs must be followed up by cutting the fruit or vegetable to identify the pest or disease concerned.

Coconut can carry disease which affects all palms but these are only a risk if the coconut is allowed to germinate and grow. To ensure that imported coconut is not allowed to grow all nuts must be decorticated.

A single piece of fruit or vegetable found to contain a quarantine insect pest or mite (specimens alive or dead) renders the entire lot liable to confiscation. The produce can be subject to 100% inspection, removing all infested items, at a nominal labour charge to the importer. The alternative is destruction of the entire lot.

A single fruit or vegetable found to be infected with a quarantine pathogen renders the entire lot liable to confiscation and destruction. If a disease has been detected in one or some fruit other apparently uninfected fruit may be latent carriers and 100% inspection is not an option.

Ware potatoes

All **600 tubers** must be inspected externally for signs of quarantine insect pests and mites. A sample will also be cut at the heel end (if necessary) for signs of brown rot and ring rot to evaluate the risk of these diseases. At least **3 tubers** per pocket will be checked for pathogens under the skin.

A single tuber found to contain a quarantine insect pest or mite (specimens alive or dead) renders the entire lot liable to confiscation. The produce can be subject to 100% inspection, removing all infested items, at a nominal labour charge to the importer. The alternative is destruction of the entire lot.

A single tuber found to be infected with a quarantine pathogen renders the entire lot liable to confiscation and destruction. If a disease has been detected in one or some tubers other apparently uninfected tubers may be latent carriers and 100% inspection is not an option.

Seed potatoes

All **100 tubers** must be inspected externally for signs of quarantine insect pests and mites. **50 tubers** per ton must also cut at the heel end for signs of brown rot and ring rot to evaluate the risk of these diseases. If these cut seed potato are deemed un-saleable by the importer they will be bought from the importer by ANRD at current market prices.

A single tuber found to contain a quarantine insect pest or mite (specimens alive or dead) renders the entire lot liable to confiscation. The produce can be subject to 100% inspection, removing all

infested items, at a nominal labour charge to the importer. The alternative is destruction of the entire lot.

A single tuber found to be infected with a quarantine pathogen renders the entire lot liable to confiscation and destruction. If a disease has been detected in one or some tuber other apparently uninfected tuber may be latent carriers and 100% inspection is not an option.

8. Inspecting for quality

Quality concerns the state of the produce and whether it is considered fit for the purpose for which it is intended. (Examples would be rotten onions or green potatoes.)

Where more than 10% of inspected fruit or tubers in a lot is found to be affected at levels greater than 25% of fruit/tuber surface affected (but is otherwise free from quarantine pests) the entire lot will be referred to HM Customs for advice and if necessary further action from Environmental Health. The Environmental Health will then be responsible for certifying the lot as “unfit for human consumption” or otherwise.

In the case of potatoes infested with potato tuber moth above the threshold of 10% infestation the entire lot will be liable to compulsory treatment by 100% inspection, at charge to the importer.

9. Pallets and packaging

In compliance with International Standards For Phytosanitary Measures No. 15 Regulation of Wood Packaging Material in International Trade (2009) pallets and wooden boxes used in the shipping of fresh produce must be made from de-barked wood.

In the event of interception of wood with bark a notification form will be forwarded to the Deputy Director, Cape Inspection Services. A notification form is shown in [Annex 7E](#).

All cartons, boxes and other containers must be examined, inside and out, for signs of quarantine pests and hitch-hikers such as wasps, caterpillars, ants or other insects.

10. Inspection Report

Every lot of produce inspected will be recorded on an Imported Produce Sample Sheet. These sheets must record accurately quantities of the lots, samples, number of fruit found with defects, in addition to any omissions found in the documentation, noting any problems or omissions in the documentation found. These reports will be kept of file and copies should be made available to any importer on request. An inspection report is shown in [Annex 7F](#).

In the event of an interception of quarantine pests, a Notification of Detection of Quarantine Pests report noting all on the sampling sheets will be forwarded to the Manager, Sea ports, Cape Inspection Services, DAFF. A notification form is shown in [Annex 7E](#).

In the event of referral to Environmental Health for quality issues, the subsequent report and any other details will be forwarded to the Perishable Produce Export Control Board, Pretoria, copied to PPECB Area Manager, Cape Town.

11. Disposal of confiscated produce

Produce confiscated (either for lack of full documentation or due to infestation) must be disposed of as soon as practical in the presence of an official from the customs department. There are at present three options for disposal of produce, depending on the quantities concerned. Small quantities can be disposed of at sea providing no plastic or other non-biodegradable materials is dumped or incinerated in a suitable and adequate furnace, ie the public health incinerator. Larger quantities must be buried in a pit 8 foot deep at the public tip if no other suitable facilities are available.

A Certificate of Retention must be completed and stamped showing the importer, the produce disposed off, the method of destruction and the witnessing Customs Officer. A Certificate of Retention is shown in **Annex 7G**.

If possible infested produce should be isolated from non-infested produce from the moment of identification and labelled as “infested” until disposal. Isolation can take the form of sealing in black bin-liners or physical removal to another building.

12. Acknowledgements

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ANNEX 1. List of fresh produce for human consumption permitted under licence.

| PERMITTED FRESH PRODUCE | |
|---|---------------------|
| Fruit | Vegetables |
| Apple | Asparagus |
| Apricot | Aubergine / Brinjal |
| Avocado | Bean (Green) |
| Blackberry | Beetroot |
| Blackcurrant | Broccoli |
| Blueberry | Brussels Sprout |
| Coconut – husked, fresh or drinking | Butternut |
| Granadilla | Cabbage |
| Grape | Carrot |
| Grapefruit | Celery |
| Guava | Chilli peppers |
| Kiwi | Cucumber |
| Lemon | Garlic |
| Lime | Ginger (Root) |
| Lychee | Kohlrabi |
| Mango | Leek |
| Mandarin | Lettuce |
| Melon – honeydew, musk melon, etc | Mange tout |
| Nectarine | Mushroom |
| Orange | Onion |
| Pawpaw | Parsnip |
| Peach | Peas |
| Pear | Pepper |
| Pineapple | Potato (ware) |
| Plum | Pumpkin |
| Prune | Radish |
| Raspberry | Spinach |
| Redcurrant | Squash |
| Soft citrus – mandarin, satsuma, tangerine, etc | Sweet Corn |
| Strawberry | Sweet Potato |
| Water melon | Tomato |
| | Turnip |

ANNEX 2. Sampling rates for high risk produce

99% confidence of detecting a 1% infestation, adjusted

Number of cartons to be sampled for eg peaches, nectarines, plums, mangoes, oranges,
mandarins (sweet citrus), pumpkin, squash

| Number of cartons | number of fruit per carton | | | | | |
|-------------------|----------------------------|----------|----------|----------|----------|-----------|
| | 10 | 11 to 20 | 25 to 35 | 45 to 55 | 60 to 70 | 80 to 100 |
| 5 | all | all | all | all | all | all |
| 10 | all | all | 8 | 7 | 6 | 5 |
| 15 | 12 | 10 | 10 | 7 | 6 | 5 |
| 20 | 18 | 16 | 11 | 8 | 6 | 5 |
| 25 | 20 | 17 | 11 | 8 | 6 | 5 |
| 30 | 23 | 19 | 12 | 9 | 7 | 5 |
| 40 | 27 | 21 | 12 | 9 | 7 | 5 |
| 50 | 30 | 23 | 13 | 9 | 7 | 5 |
| 60 | 32 | 24 | 13 | 10 | 7 | 5 |
| 70 | 34 | 24 | 14 | 10 | 7 | 5 |
| 80 | 35 | 25 | 14 | 10 | 7 | 5 |
| 90 | 36 | 25 | 14 | 10 | 7 | 5 |
| 100 | 37 | 25 | 14 | 10 | 7 | 6 |
| 125 | 38 | 26 | 14 | 10 | 7 | 6 |
| 150 | 39 | 28 | 15 | 10 | 7 | 6 |
| 200 | 40 | 28 | 15 | 10 | 7 | 6 |
| 250 | 42 | 30 | 15 | 10 | 7 | 6 |
| 300 | 42 | 30 | 15 | 10 | 7 | 6 |
| 350 | 43 | 30 | 15 | 10 | 7 | 6 |
| 400 | 43 | 30 | 15 | 10 | 7 | 6 |
| 450 | 44 | 30 | 15 | 10 | 7 | 6 |
| 500 | 44 | 30 | 15 | 10 | 7 | 6 |

ANNEX 3. Sampling rates for medium risk produce

95% confidence of detecting a 2% infestation (adjusted)

Number of cartons to be sampled for eg apples, pears, carrots, lemons, limes, tomatoes, and peppers

| Number of cartons | number of fruit per carton | | | | | | | | |
|-------------------|----------------------------|---------|----|----|----|----------|----------|------------|------------|
| | 1 | 5 to 10 | 15 | 25 | 35 | 50 to 60 | 70 to 90 | 100 to 140 | 150 to 200 |
| 5 | all | all | 6 | 5 | 5 | 4 | 4 | 4 | 4 |
| 10 | all | all | 6 | 5 | 5 | 4 | 4 | 4 | 4 |
| 15 | 10 | 7 | 6 | 5 | 5 | 4 | 4 | 4 | 4 |
| 20 | 10 | 7 | 6 | 5 | 5 | 4 | 4 | 4 | 4 |
| 25 | 10 | 7 | 6 | 5 | 5 | 4 | 4 | 4 | 4 |
| 30 | 10 | 7 | 7 | 5 | 5 | 4 | 4 | 4 | 4 |
| 35 | 10 | 7 | 7 | 5 | 5 | 4 | 4 | 4 | 4 |
| 40 | 10 | 8 | 7 | 5 | 5 | 4 | 4 | 4 | 4 |
| 45 | 10 | 8 | 7 | 5 | 5 | 4 | 4 | 4 | 4 |
| 50 | 10 | 8 | 8 | 5 | 5 | 4 | 4 | 4 | 4 |
| 60 | 10 | 8 | 8 | 5 | 5 | 4 | 4 | 4 | 4 |
| 70 | 10 | 8 | 8 | 5 | 5 | 4 | 4 | 4 | 4 |
| 80 | 10 | 8 | 8 | 6 | 5 | 4 | 4 | 4 | 4 |
| 90 | 10 | 8 | 8 | 6 | 5 | 4 | 4 | 4 | 4 |
| 100 | 10 | 8 | 8 | 6 | 6 | 4 | 4 | 4 | 4 |
| 125 | 12 | 8 | 8 | 6 | 6 | 4 | 4 | 4 | 4 |
| 150 | 15 | 9 | 8 | 6 | 6 | 4 | 4 | 4 | 4 |
| 200 | 20 | 9 | 8 | 6 | 6 | 4 | 4 | 4 | 4 |

ANNEX 4. Quarantine pests for St Helena.

This list is not comprehensive. Items in **bold type** are quarantine pests presently of priority concern.

| Organism | Common name | Principal crops attacked |
|--|------------------------------|---------------------------------------|
| INSECTS & MITES | | |
| <i>Aleurocanthus woglumi</i> | Citrus whitefly | Citrus, other fruit trees |
| <i>Bactrocera cucumis</i> | Cucumber fruit fly | Cucurbits |
| <i>Bactrocera cucurbitae</i> | Melon fruit fly | Cucurbits |
| <i>Bactrocera dorsalis</i> | Oriental fruit fly | Various |
| <i>Bactrocera zonata</i> | Peach fruit fly | Various |
| <i>Bemisia tabaci</i> | Tobacco whitefly | Vegetables, fruit, ornamentals |
| <i>Ceratitis cosyra</i> | Mango fruit fly | Mango, stone fruit |
| <i>Ceratitis rosa</i> | Natal fruit fly | Stone fruit, citrus |
| <i>Cydia pomonella</i> | Codling moth | Pome fruit, stone fruit |
| <i>Cylas</i> spp. | Sweet potato weevil | Sweet potato |
| <i>Dysmicoccus brevipes</i> | Pineapple mealybug | Pineapple, coffee |
| <i>Eriosoma lanigerum</i> | Woolly aphid | Pome fruit |
| <i>Helicoverpa armigera</i> | American bollworm | Tomato, vegetables, maize |
| <i>Hypothenemus hampei</i> | Coffee berry borer | Coffee |
| <i>Lasioderma serricorne</i> | Cigarette beetle | Stored foodstuffs |
| <i>Maruca testulalis</i> | Beans, peas | Maruca, bean boring caterpillar |
| <i>Ophiomyia phaseoli</i> | Bean fly | Bean |
| <i>Pentalonia nigronervosa</i> | Banana aphid | BBTV vector |
| <i>Phoracantha</i> spp. | Eucalyptus borer | Eucalyptus |
| <i>Pieris brassicae</i> | Cabbage butterfly | Brassicas |
| <i>Pieris rapae</i> | Small white butterfly | Brassicas |
| <i>Diaspidiotus perniciosus</i> | Pernicious scale | Various |
| <i>Selenothrips rubrocinctus</i> | Thrips | Mango |
| <i>Spodoptera exempta</i> | African armyworm | Pastures, maize |
| <i>Spodoptera exigua</i> | Lesser armyworm | Beet, tomato, cotton, various |
| <i>Xylobius</i> spp. & other bark beetles | Ambrosia beetles | Wood – mostly coniferous |
| <i>Zonocerus</i> spp. | Elegant grasshoppers | Many crops |
| VIRUSES | | |
| Apple mosaic virus | Chestnut mosaic | Pome fruit, stone fruit, roses |
| Banana bunchy top virus | Banana bunchy top | Banana |
| Citrus tristeza virus | Citrus tristeza | Citrus |
| Pineapple wilt-associated virus | Pineapple mealybug wilt | Pineapple |
| Prunus necrotic ringspot virus | Almond bud failure | Pome fruit, roses |
| Tomato spotted wilt virus | Tomato spotted wilt | Pineapple, tomato |
| FUNGI | | |
| <i>Diplocarpon rosae</i> | Black spot of roses | Roses |
| <i>Elsinoe australis</i> | Citrus scab | Citrus |
| <i>Elsinoe fawcettii</i> | Citrus scab | Citrus |
| <i>Fusarium oxysporum</i> fsp. <i>cubense</i> RACE 4 | Panama disease | Banana |

| | | |
|---|---|----------------------------------|
| <i>Guignardia citricarpa</i> | Citrus black spot | Citrus |
| <i>Hemileia vastatrix</i> | Coffee rust | Coffee |
| <i>Hemileia coffeicola</i> | Grey coffee rust | Coffee |
| <i>Monilia (Monilinia) fructicola</i> | Brown rot | Stone fruits, pome fruit |
| <i>Peronospora sparsa</i> | Downy mildew | Pome fruit, roses |
| <i>Phragmidium mucronatum</i> | Rust disease | Pome fruit, roses |
| <i>Pseudoperonospora cubensis</i> | Downy mildew | Cucurbits |
| <i>Synchytrium endoboticum</i> | Wart disease | Potato |
| BACTERIA | | |
| <i>Agrobacterium tumefaciens</i> biotype 1, 2 and 3 | Crown gall | Pome fruit, stone fruit, grape |
| <i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i> | Bacterial canker | Tomato |
| <i>Clavibacter michiganensis</i> subsp. <i>sepedonicus</i> | Ring rot | Potato |
| <i>Curtobacterium flaccumfaciens</i> subsp. <i>flaccumfaciens</i> | Bacterial wilt | Bean |
| <i>Dickeya chrysanthemi</i> | Bacterial wilt | Many crops and ornamental plants |
| <i>Gibberella circinata</i> | Pine pitch canker | Pine |
| <i>Liberibacter asiaticus</i>, <i>L. americanus</i> | Huanglongbing | Citrus |
| <i>Pseudomonas solanacearum</i> Race 2 Race 3 | Bacterial wilt | |
| | Moko disease | Banana |
| | Brown rot | Potato |
| <i>Pseudomonas syringae</i> pv. <i>syringae</i> | Bacterial canker (stone and pome fruit) | Pome fruit, stone fruit, various |
| <i>Pseudomonas syringae</i> pv. <i>morsprunorum</i> | Bacterial canker of stone fruit | Stone fruit |
| <i>Xanthomonas axonopodis</i> pv. <i>citri</i> | Citrus bacterial canker | Citrus |
| <i>Xanthomonas arboricola</i> pv. <i>pruni</i> | Black spot of stone fruit | Stone fruit |
| <i>Xanthomonas ampelina</i> | Bacterial blight of grape | grapes |
| NEMATODES | | |
| <i>Ditylenchus destructor</i> | Potato cyst nematode | Potato, gladioli tuber |
| <i>Globodera</i> spp. (except <i>G. capensis</i>) | Cyst nematodes | Potato |
| <i>Meloidogyne</i> spp. | Root knot nematodes | Various |
| WEEDS | | |
| <i>Agartha</i> sp. | Mint flower | |
| <i>Chromolaena odorata</i> | Siam weed | |
| <i>Heliotropium europaeum</i> | European heliotrope | |
| <i>Hypericum perforatum</i> | St John's wort | |
| <i>Rottboellia cochinensis</i> | Itchgrass | |
| <i>Senecio jacobaeae</i> | Ragwort | |

ANNEX 5. Inspection guidelines for quarantine pests.

R. Black, Natural Resources Institute, UK.

| COMMODITY | SPECIFIC PEST/DAMAGE TO INSPECT FOR |
|-------------------|---|
| Pome fruit | Fruit fly stings and larvae Codling moth stings and larvae Brown rot |
| Stone fruit | Fruit fly stings and larvae Codling moth stings and larvae Brown rot Skin spot |
| Citrus fruit | Fruit fly stings and larvae Whitefly Cercospora spot Bacterial canker |
| Table Grape | Fruit fly stings and larvae |
| Mango | Fruit fly stings and larvae Thrip |
| Pineapple | Mealy bugs |
| Vegetables, other | Pumpkin fly stings and larvae Any live insects |
| Ware potato | Soil Nematode pests Brown rot (by cutting) Wart disease |
| Seed potato | Soil Nematode pests Brown rot (by cutting) Wart disease |

ANNEX 6. Identification and details of quarantine pests

See separate folder for illustrations and identification notes for quarantine pests.

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ANNEX 7. Sample licences and forms

- A. Import License
- B. Phytosanitary certificate
- C. Export Inspection Certificate
- D. Fumigation certificate
- E. Notification of Interception of Quarantine Pests
- F. Inspection Report Sheet
- G. Certificate of Retention