

**WORK PLAN FOR THE
USDA
PRECLEARANCE
INSPECTION AND COLD
TREATMENT OF SOUTH
AFRICAN
DECIDUOUS FRUIT
DESIGNATED FOR EXPORT
TO THE UNITED STATES OF
AMERICA**

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1. DEFINITIONS

1.1 Products to be exported to the United States of America:

Apples	-	<i>Malus spp.</i>
Grapes	-	<i>Vitis vinifera</i>
Nectarines	-	<i>Prunus persica</i>
Peaches	-	<i>Prunus persica</i>
Pears	-	<i>Pyrus communis</i>
Plums	-	<i>Prunus domestica</i>

1.2 Pests and organisms of concern

Appendix 1 lists the program pests.

1.3 Participating organizations:

United States Department of Agriculture - Animal and Plant Health Inspection Services (USDA-APHIS).

South African Department of Agriculture, Agricultural Products Inspection Services and Plant Health (DoA)

Deciduous Fruit Producers Trust (DFPT): The Cooperator

Perishable Product Export Control Board (PPECB): authorized by DoA to perform certain activities

1.4 Co-operative agreement

It is agreed that the DFPT will be responsible for signing the **COOPERATIVE TRUST FUND** agreement, and the DFPT undertakes to pay the costs involved for the USDA-APHIS preclearance inspection by signing an annual financial work plan.

2 USDA REGULATIONS GOVERNING ENTRY OF EXPORTED PRODUCT

2.1 Code of federal regulations

Federal Register No. 319.56 (CFR 7 Part 319.56)

2.2 Conditions of entry

A phytosanitary certificate issued by the South African Department of Agriculture must accompany each shipment of deciduous fruit which has been precleared by the USDA-DoA Preclearance program. South African apples, grapes, nectarines, pears, plums and peaches are subject to product inspection by USDA-APHIS. Each shipment of deciduous fruit will be subject to cold treatment in transit.

All boxes must be marked in plain English with correct and accurate information including the following:

- Name and address of exporter
- Country of origin
- Registered code identifying pack house
- Count: indicating number of fruit in the box, and/or caliber, indicating approximate diameter of fruit

- Net weight in pounds or kilograms
- General description: variety and type of deciduous fruit

All pallets must be accompanied by USDA OFFICIAL "PASSED" stickers on at least two sides

Required documents:

Container Shipment:

- Phytosanitary certificate issued by DoA
- Bill of lading
- PPQ form 203 (Confirmation of inspection)
- Commercial invoice
- Certificate of calibration of temperature recording equipment
- Plan of location of temperature sensors
- Plan of location of containers
- Grower list per container
- Covering letter advising of the vessel, load port, date of sailing and discharge port
- Instructions to Master of M/V
- Precooling certificate (for organic grapes only)

Break Bulk Shipment:

- Phytosanitary certificate issued by DoA
- Bill of lading
- PPQ Form 203 (Confirmation of inspection)
- Commercial invoice
- Certificate of calibration of temperature recording equipment
- Plan of location of temperature sensors
- Grower list by hatch
- Covering letter advising of the vessel, load port, date of sailing and discharge port
- Instructions to Master of M/V
- Precooling certificate (for organic grapes only)

3 RESPONSIBILITIES

3.1 USDA-APHIS

APHIS Pretoria will provide an accounting of funds deposited by the Cooperator at the end of each fiscal year and a final accounting upon termination or expiration of the agreement. Any funds that are not obligated at the conclusion of any fiscal year may be utilized during the ensuing fiscal year in a continuation of the inspection services in the event of renewal of this agreement. Any non-obligated funds remaining in the account, upon termination or expiration of this agreement, shall be returned to the Cooperator.

APHIS will provide adequate personnel to conduct the required inspections.

3.2 Government agency (DoA)

DoA, in cooperation with USDA-APHIS is responsible for all phytosanitary inspections. USDA/DoA will forward all interception data to the USDA-APHIS, Permits and Risk Assessment Support Staff, Riverdale, MD and USDA-APHIS Pretoria, South Africa.

DoA in cooperation with USDA-APHIS will monitor all orchards/vineyards, pack houses and inspection points.

DoA is responsible for monitoring the Good Agricultural Practices (GAP) for organic grapes and for verifying that GAP is followed at each certified vineyard.

DoA is responsible for scheduling all inspections.

DoA is responsible for identification of all insect pests and diseases.

DoA is responsible for developing and maintaining all program records and statistics.

3.3 The Cooperator (DFPT)

The Cooperator shall pay 100% of the cost of the preclearance program.

The Cooperator is responsible for providing logistical support for USDA-APHIS FSN and TDY personnel and for making arrangements for suitable accommodations for the TDY officers.

The Cooperator shall assure that all exporters/producers are aware of and adhere to the provisions of the Work Plan.

3.4 Perishable Products Export Control Board (PPECB)

PPECB is responsible for the selection and monitoring of the biometric sampling and initiation of the cold chain.

PPECB is also responsible for quality inspections and for safeguarding activities in the pack houses.

4 TREATMENT

4.1 Types of treatment required

Apples and pears will be cold treated at 34⁰ F (1.11⁰ C) or below for 14 days. This treatment is efficacious against known fruit fly species in South Africa. USDA-APHIS Treatment T107(a).

Peaches, plums, nectarines and grapes will be cold treated at 31°F (minus 0.55°C) or below for 22 days. This is the treatment currently recognized for *Cryptophlebia leucotreta*. USDA-APHIS Treatment T107(e).

All deciduous fruits are subject to a 72-hour pre-cooling period (see section 6.1.3)

To find the details on treatments on the USDA-APHIS web page - www.aphis.usda.gov/ppq/manuals then download the treatment manual.:

* Make use of the ACROBAT Reader section to download.

4.2 Equipment certification requirement

Vessels and containers to be used will be USDA-APHIS approved and have valid USDA-APHIS certificates of approval. List of USDA-APHIS approved vessels and containers can be found on the following web site www.aphis.usda.gov/ppq/manuals/vessellist-external.html

Calibration of the temperature monitoring devices and temperature recording equipment will be done by USDA-APHIS authorized PPECB personnel according to the agreed USDA-APHIS and PPECB requirements.

4.3 Monitoring

Vessels will be USDA-APHIS registered and will have the minimum number of sensors required to monitor air and fruit temperatures.

USDA-APHIS officers will ensure that all documentation is in order and that container seals have not been broken.

At the Port of Entry, USDA-APHIS will examine and verify the cold treatment data log.

5 SAFEGUARDS

5.1 Pack house procedures

All pack houses must be registered by DoA. DoA and USDA-APHIS will certify all pack houses prior to the beginning of the season.

The pack house manager shall be responsible for assuring that the packing, inspection, working environment, cold storage and storage facilities are sanitary, and free from culls and debris

Pack houses must be equipped with insect traps that are monitored on a regular schedule.

Pack houses must take precautions to exclude insect pests. Such precautions shall include the use of plastic curtains or double doors with air locks on bay doors.

Empty cartons, wooden pallets and packing material must be safeguarded from hitchhiking pests. Areas where cartons are assembled must also be safeguarded from hitchhiking pests.

5.2 Other considerations

Due to the high incidence of insect pest interceptions, such as the snout beetle, *Phyllyctinus callosus*, and the old world bollworm, *Helicoverpa armigera*, detected with grapes from the Republic of South Africa, USDA-APHIS will modify entry requirements on an emergency basis.

6 SPECIAL PROCEDURES FOR GRAPES

6.1 Grapes shipped to the U.S. under the Preclearance Program (organic grapes)

6.1.1 Good Agricultural Practices (GAP)

All growers must comply with the Good Agricultural Practices (GAP) as established by DoA for the following pests: false codling moth (*Cryptophlebia leucotreta=Thaumatotibia*), fruit fly (*Ceratitidis capitata, C. rosa*), banded fruit weevil (*Phlyctinus callosus*), pear leaf roller (*Epichoristodes acerbella*), grapevine mealybug (*Planococcus ficus*), and various hitchhiking pests (*Macchiademus diplopterus, Dysdercus spp., Gonocephalum simplex, Gryllus bimaculatus, Theba pisana, Carbula litigatrix, Ceiracanthium spp.*)

GAP will be reviewed periodically to evaluate the efficacy of the prescribed measures to reduce pest load. Upon agreement between USDA/APHIS/PPQ and DoA, additional measures may be required or existing measures revised.

6.1.2 Inspection

Special inspection procedures are described in section 7.2.5.

6.1.3 Cold treatment

Fruits will be subject to a three-day pre-cooling period to assure that they are chilled to the proper temperature before the mandatory cold treatment is initiated.

6.2 Grapes shipped to the U.S. without preclearance

Grapes can be exported to the United States non-precleared but are subject to mandatory in-transit cold treatment and fumigation with methyl bromide and inspection upon arrival at the Port of Entry.

7 INSPECTION

7.1 General requirements

Fruits in the queue for inspection must be safeguarded.

Fruits for inspection should be as close to room temperature as possible.

No fruits will be inspected in plastic bags.

Minimum consignment size shall be 10 pallets.

USDA/DoA will monitor sampling and safeguarding activities.

High Cube Pallets

High cube pallets are used to reduce unused space at the top of shipping containers. To utilize the unused space, three pallets are broken down and their cartons added to the 20 pallets used to fill a 40-foot container. These 20 oversized pallets must be re-strapped. The few loose cartons remaining from the three broken down pallets must be labeled with USDA "Passed" stickers. The APHIS PPQ Form 203 should indicate the total number of cartons in the consignment.

Fruits submitted for sampling must be boxes identical to those in the rest of the consignment.

7.2 Sampling

7.2.1 Sampling rate

A biometric sampling procedure has been established that provides a 95% confidence level when an infestation level of 4% or higher is present when 6% of the consignment is sampled and inspected.

Incorrect sampling will result in rejection of the consignment.

Sampling protocol:

<u>Consignment size</u>	<u>Biometric sample size</u>
0 to 160 cartons	25 cartons
161 to 800 cartons	50 cartons
More than 800 cartons	75 cartons

The sample cartons should be numbered as each is selected. The number should reflect the sample interval.

If industry is estimating the shipment size, the selected interval may produce either a smaller or larger sample than required. For example:

- A. At the conclusion of the production run too few cartons have been submitted, additional cartons should be selected from the shipment. No more than one sample box should be selected from a pallet. Mark these sample cartons with a double X (eg. **XX**).
 - a. If for instance, the required sample size is 75 cartons, and at the conclusion of the production run only 72 cartons have been selected, three additional cartons must be pulled from three of the pallets to complete the sample. These three cartons should be marked "**XX**" and added to the sample and re-incorporated into their original pallets after inspection.
- B. If during the production run of a consignment of over 800 cartons, the number of sample cartons pulled exceeds the maximum of 75, continue to extract samples using the selected sampling interval until the production run is completed.
 - a. For example, if the required sample size is 75 but 82 cartons are selected, **the entire 82 carton sample will be submitted for inspection**. Only 75 of the cartons will be inspected.

7.2.2 Selection procedure for consignments that are HOMOGENOUS (only one producer, one fruit variety)

- A. Establish the inspection unit (consignment size) eg. 6000 cartons
- B. Divide the inspection unit size by the biometric sample size: $6000/75 = 80$ (this is the sampling interval).
- C. Randomly select a number between 1 and 80, eg. 10. This is the **first carton** to be selected for inspection.
- D. To determine the **second carton**, add the sampling interval (80) to the first carton number (10): $80 + 10 = 90$; 90 is the number of the second carton.
- E. To determine the **third carton**, add the sampling interval (80) to the second carton number (90): $80 + 90 = 170$; 170 is the number of the third carton.
- F. Continue the process until the biometric sample size (in this case 75 cartons) is reached.

7.2.3 Selection procedure for consignments consisting of fruit from two or more different cultivars

A consignment of two or more different cultivars is sampled as a single unit. If a rejection occurs in any of the cultivars, the **entire** consignment is rejected.

7.2.4 Selection procedure for consignments consisting of fruit from two or more producers

The number of pallets presented by any one producer, in relation to the number presented by the other producers contributing to the consignment, determine the number of sample cartons to be drawn from each producer.

Example:

Three producers contribute to a consignment totaling 3,200 cartons. Biometric sample size = 75 cartons

Producer	Inspection Unit Size	Biometric Sample Size
1	10 pallets: 1600 cartons	$1600/3,200 \times 75 = 37.5$ round to 37
2	5 pallets: 800 cartons	$800/3,200 \times 75 = 18.75$ round to 19
3	5 pallets: 800 cartons	$800/3,200 \times 75 = 18.75$ round to 19

37 cartons will be sampled from producer #1, and 19 cartons each from producers #2 and #3.

Procedure:

1. Divide the inspectional unit size (3,200) by the biometric sample size (75): $3,00/75 = 42.66 = 42$ (always round down). This is the sampling interval.
2. Select a number between 1 and 42, eg. 10. This is the **first sample carton**.
3. Add the sampling interval (42) to the first carton number (10) = 52. This is the **second sample carton**.
4. **Third sample carton** = $42 + 52 = 94$
5. Continue until appropriate number of sample cartons are drawn.

An interception from one producer will result in rejection of the entire consignment but the "strike" would be against the offending producer (see 9.3).

7.2.5 Sample selection procedure for organic grapes

A normal biometric sample will be drawn but instead of one carton being pulled, two cartons will be selected. One carton will be reserved for the USDA preclearance inspection and next consecutive carton will be pulled for a separate DoA inspection. For example, if the cartons selected for the biometric sample are 10, 20, 30 etc, then cartons 11, 21, 31, etc will also be pulled.

DoA will inspect the duplicate set at the approved inspection depot. If the sample is rejected, the entire consignment fails and will automatically be eliminated from the program. If the sample passes, then the USDA sample will be sent forward for preclearance inspection.

7.3 Running average

A 21 inspection day running average of interceptions will be kept for each fruit type (apples, nectarines, peaches, pears, plums).

Grapes will be subject to a 14-day running average.

At least 20 consignments must be presented for inspection during the given timeframe.

If the rejection rate reaches 20%, immediate fumigation or cessation of **all** further or future shipments will be implemented. All consignments that have been passed up to that point, whether in storage or in transit, will remain approved for export.

Results can be obtained at the following site: www.nda.agric.za

1. Click on Regulatory and Other Services
2. Click on National Plant Protection Organization
3. Click on Export Programmes
4. Click on USA
5. Click on Running Average

7.4 Location of inspections

7.4.1 Pre-harvest

DoA in conjunction with USDA will monitor the orchards and vineyards during the growing season

DoA will assure that GAP procedures are being implemented.

7.4.2 Post-harvest

Fruit inspections will take place only at inspection points that have been registered and approved by DoA. Criteria for inspection points can be found on the DoA website.

Suitable lighting and inspection tables are required for all inspection points. Inspection tables will have white work surfaces.

7.5 Responsibilities of the USDA-APHIS inspector

The USDA-APHIS inspector will perform all required phytosanitary inspections in cooperation with the DoA inspectors.

The USDA-APHIS inspector will perform safeguarding activities at packhouses and inspection points as necessary and will report any discrepancies or violations to the Area Director.

The USDA-APHIS inspector will verify all required documents before signing the PPQ 203 forms.

The USDA-APHIS inspector will complete the PPQ Daily Report in a timely manner and forward it to the Pretoria Office.

The USDA-APHIS inspector in conjunction with DoA will verify that the cold chain for all deciduous fruits has been properly initiated.

The USDA-APHIS inspector will keep track of all interceptions made during the TDY assignment and forward the required PPQ 309 forms to the Pretoria Office as well as to Riverdale. All pests intercepted during inspections should be forwarded to the host country identifier for identification.

8 SHIPPING REQUIREMENTS

8.1 Safeguards

All fruit will be shipped in conventional refrigerated vessels that are USDA-APHIS approved, or in USDA-APHIS approved containers.

All shipping containers will be free of soil and debris.

Pallets for the U.S.A. will be clearly marked and stored at least 1 m from other fruit at the pack houses.

Precleared fruit will be kept in dedicated storage rooms at the Port facility.

Precleared fruit will be transported either in enclosed trucks or under tarpaulin on flatbed trailers.

All wood packing material will be in compliance with IPPC ISPM 15 requirements.

8.2 Sealing requirements

Hatches and containers will be sealed with standard sealing wire and lead seals. The seals used on hatches of ships will be inscribed with the PPECB cold chain logo. Seals used for containers are inscribed with serial numbers. These seals may only be broken in the presence of a USDA-APHIS officer.

9 VIOLATIONS/CORRECTIVE ACTIONS

9.1 Program violations, first warning (action)

Failure of the producer/exporter/pack house to comply with any of the above provisions will result in DoA implementing corrective actions beginning with verbal discussion with all parties to seek clarification of the issue(s), followed, if necessary, by formal written notification detailing the extent of the violation and the required corrective actions.

Rejection of a consignment presented for inspection will be considered as a first warning action.

9.2 Program violations, second warning (action)

Formal written notification from DoA detailing the extent of the violation and actions required.

Failure to resolve issues identified may lead to suspension.

The second rejection of a consignment will be considered as a second warning action.

9.3 “Three strike” system

Each grower or a designated orchard within a farm, is assigned a production unit code (PUC). A rejected consignment from a PUC is considered a “strike”. A PUC will be suspended for the duration of the season if it incurs three “strikes”

It is the industry’s responsibility to keep track of the strikes and DoA’s responsibility to manage the situation and communicate this information to the USDA-APHIS Area Director.

9.4 Program reinstatement

In order for a suspended producer/exporter/pack house to be reinstated for the next export season, it must provide documentation of the corrective actions taken to DoA. DoA will determine reinstatement based upon compliance with program requirements.

10 REGISTRATION AND IDENTIFICATION OF USA DESTINED ORCHARDS AND VINEYARDS

Only orchards and vineyards of packers approved by USDA/DoA will be eligible.

A spray log will be available for every orchard for the entire season.

Orchards will be identified on cards affixed to the side of each bulk bin of fruit packed from that orchard. Information required on the card include: orchard name and number, cultivar name and date picked.

Appendix I

PESTS AND PATHOGENS AND APPROPRIATE QUARANTINE ACTION

This list has been compiled from literature citations and from interceptions made by PPQ Officers. Interceptions are indicated with an asterisk.

Insects

- Acia lineatifrons* (Cicadellidae) (Vine Leafhopper) – **action required** - virus vector
- Agnocellis puberula* (Pentatomidae) – **action required**
- **Antestia variegata* (Pentatomidae) (a stinkbug) - **action required**
- Antestiopsis orbitalis* (Pentatomidae) - **action required** - apples
- Aphis pomi* (Aphididae) (green apple aphid) - no action - apples
- Bagrada hilaris* (Pentatomidae) (Bagrada bug) - **action required** - grapes
- Bustomus setulosus* (Curculionidae) (vine snout beetle) - no action – grapes
- Calpe emarginata* (Noctuidae) (fruit piercing moth) - **action required** - pears, grapes
- Calpe provocans* (Noctuidae) (fruit piercing moth) - **action required** - pears, apples, grapes
- Carbula marginella* (Grain Stink Bug) – **action required**
- **Carbula litigatrix* (Pentatomidae) (a stinkbug) - **action required**
- **Cenaeus carnifex* (Pyrrhocoridae) (a stainer) - **action required**
- Cerbula marginella* (Pentatomidae) – **action required**
- **Ceratitis capitata* (Tephritidae) (Mediterranean fruit fly) – **cold treatment required** - pears, apples, grapes
- **Ceratitis rosa* (Tephritidae) (Natal fruit fly) - **cold treatment required** – apples, grapes
- Cirphis leucosticha* – **action required**
- **Cletus caffer* (Coreidae) - **action required**
- Cochlicella barbara* (Mollusca) – **action required**
- Coeromorpha atelocera* (Acanthosomatidae) – **action required**
- Crematogaster peringueyi* (Formicidae) (cocktail ant) - **action required** (no action required if worker only) - grapes
- Cryptolarynx vitis* (Curculionidae) (a snoutbeetle) - **action required** – grapes
- Cryptomphalus* (*Helicidae*) (*Helix aspersa*) – **action required for Alabama & Florida**
- Cryptophlebia leucotreta* (= *Thaumatotibia leucotreta*) (Tortricidae) (False Codling Moth) – **action required** -
peaches, nectarines, apples, grapes
- **Cydia pomonella* (Tortricidae) (codling moth) - no action - apples, pears
- Viteus* (*Daktulosphaira*)*vitifoliae* (Phylloxeridae) (grape phylloxera) - no action
- Delottococcus elizabethae* – **action required**
- Diaspidiotus africanus* (Diaspididae) - **action required** - pears, apples
- Dischista cincta* (Scarabeidae) (Flower beetle) - **action required** - grapes
- Dugaria scandulata* (Noctuidae) (fruit piercing moth) - **action required** - pears, apples, grapes
- Dysclerus fasciatus* (Pyrrhocoridae) - **action required**

Ectomyelois ceratoniae (Pyralidae) (a pyralid moth) – **action required** – apples, pears

Epichoristodes acerbella (Tortricidae) (African carnation leafroller) - **action required** - pears, apples, grapes

Eremnus atratus (Curculionidae) (black snoutbeetle) - **action required** - apples, grapes

Eremnus cerealis (Curculionidae) (speckled snoutbeetle, Western Province grain worm) - **action required** – apples, grapes

Eremnus setulosus (Curculionidae) (grey snoutbeetle) - **action required** - grapes

Erisoma lanigerum (Aphididae) (wooly apple aphid) - no action - apples

Eutochia pulla (Tenebrionidae) – **action required**

Gonocephalum simplex* (Tenebrionidae) (dusty surface beetle) - **action required - apples

Gonipterus scutellatus (Curculionidae) - **action required** - apples

Gryllotalpa africana (Gryllotalpidae) (African mole cricket) - **action required** – grapes

Gryllus bimaculatus – **action required**

Gymnelema plebigena (Pscyhididae) (Bagworm) - **action required** - grapes

Haltica indigacea - **action required** - grapes

Helicoverpa armigera (Noctuidae) (old world bollworm) - **action required** – apples, grapes

Heliothrips sylvanus (Thysanoptera) (Guava thrips) - **action required** - grapes

**Hemiberlesia rapax* (Diaspididae) (greedy scale) - no action - pears

Hippotion celerio (Sphingidae) (silver striped hawk moth) - **action required** - grapes

**Iridomyrmex humilis* (Formicidae) (Argentine ant) - no action – grapes

Lema erythrodera (grain slug beetle) – **action required**

Lygaeidae nysuis – **action required**

Lymantria monacha (Lymantridae) - **action required** - pears

Macciademus capensis* (Lygaeidae) (a chinch bug) - **action required - pears

Macchiademus diplopterus* (Lygaeidae) (South African grainbug) - **action required – apples, pears, grapes

Monosteira unicastata (Tingidae) - **action required** - pears

**Nezara viridula* (Pentatomidae) (Southern green stinkbug) - no action - grapes

Nipaecoccus vastator (Pseudococcidae) (Karoo thorn mealybug) - **action required** - grapes

Oulema erythrodera (Chrysomelidae) (grain slug) – **action required**

Oxycarenus exitiosus* (Lygaeidae) (a lygaeid bug) - **action required - apples

Oxycarenus hyalinipennis (Lygaeidae) (dusky cotton stainer) - **action required** – apples, grapes

Pachnoda sinuata (Scarabaeidae) (Flower beetle)- **action required** - grapes

Parlatoria cinerea (Diaspididae) - **action required** - apples

Pantomorus cervinus (Curculionidae) (Fuller's rose beetle) - no action - apples, grapes

Paracoccus burnerae (Pseudococcidae) (a mealybug) – **action required**

Periapion antiquum – **action required**

Periapion untiyruium – **action required**

Phlyctinus callosus* (Curculionidae) (vine snoutbeetle) - **action required - apples, grapes

Plangia graminea (Tettigonidae) (long horned grasshopper) - **action required** - grapes

Planococcus citri (Pseudococcidae) (deciduous mealybug) - no action - grapes

Planococcus ficus (Pseudococcidae) (vine mealybug) - no action – grapes

Pleocoptera lamiata – **action required**

Prietocella (Chochlicella) barbara (Mollusca) – **action required**

Pseudococcus calceolariae (Pseudococcidae) (longtailed mealybug) - no action - apples

Pseudococcus longispinus (Pseudococcidae) (longtailed mealybug) - no action - pears, apples, grapes

Pseudococcus viburni (*obscurus*) (Pseudococcidae) (obscure mealybug) - no action - pears, apples, grapes

Quadraspidotus perniciosus (Diaspididae) (San Jose Scale) - no action – pears, apples

Raglius apicalis* (Lygaeidae) (seed bug) - **action required - grapes

Saissetia oleae (Coccidae) (black scale) - no action – most deciduous fruits

Scolytidae: ipinae: xyleborini - genus near *Xyleborus*, sp. Indet – **action required**

Serrododes partita* (Noctuidae) (a fruit sucking moth) - **action required - pears, apples, grapes

Scirithothrips quranti (Thysanoptera) - **action required**

Sitona discoides (Curculionidae) (Lucerne weevil) - **action required**

Spilosthethus pendurus – **action required**

Spodoptera littoralis (Noctuidae) - **action required** - pears, apples, grapes

Stephanitis pyri (Tingidae) - **action required** – pears

Succinea striata – **action required**

Tanyrrhynchus carinatus (Curculionidae) (buf feeding vine snoutbeetle) - **action required** - grapes

Theretra capensis (Sphingidae) (grapevine hawk moth) – **action required** - grapes

Thrips tabaci (Thysanoptera) (Onion thrips) - no action - grapes

Tortrix capensana (Tortricidae) (apple leafroller) - **action required** - apples

Xiphistes furcicornis* (Membracidae) (a tree hopper) - **action required - grapes

Mites

Bryobia rubrioculus (Tetranychidae) (brown mite) - no action - apples, pears

Eriophyes pyri (Eriophyidae) (pear leaf blister mite) - no action - pears and apples

Eriophyes vitis (Eriophyidae) (grape leaf blister mite) - no action - grapes

Eutetranychus orientalis (Tetranychidae) (Oriental red mite) - **action required** – pears, grapes

Panonychus ulmi (Tetranychidae) (European red mite) - no action - apples, pears

Tetranychus cinnabarinus (Tetranychidae) (two-spotted mite) - no action - deciduous fruits

Tetranychus urticae (Tetranychidae) (two-spotted spider mite) - no action - grapes

Pathogens

Alternaria alternate (alternaria rot) - no action - apples

Aspergillus niger (black storage rot) - no action - grapes

Aureobasidium pullulans (lead leafspot) - no action - grapes

Bjerkandera adusta (stem rot) - no action - grapes

Botryosphaeria obtuse (black rot) - no action – apples, pears

Botryosphaeria ribis (cane blight) - no action - grapes

Botrytis cinerea (storage rot, gray mold) - no action – apples, grapes

Chondrostereum purpureum (silver leaf, heart rot) - no action - pears
Cladosporium baccae (cladosporium rot) - no action - grapes
Colletotrichum gloeosporioides (ripe rot, bitter rot of fruit) - no action – apples, pears
Coniothecium chomatosporum (paper bark, fruit cracking) - no action –apples, pears
Coniothyrium fuckelii (*Leptosphaeria coniothyrium*) (branch canker) - no action - apples
Cryptosporiopsis corticola (bark canke)" - no action - apples
Cytospora leucostoma (*Valsa leucostoma*) (twigs canker dieback) - no action - apples
Entomosporium mespili (leaf blight, fruit spot) - no action - pears
Erythriscium salmonicolor (pink disease) - no action - apples
Eutypa armeniaca (*Eutypa* dieback) - no action – apples, grapes
Gloeodes plomigena (sooty blotch) - no action - apples, grapes, pears
Macrophoma flaccida (*Guignardia baccae* - perfect stage) (*Execoriosis*) – **action required** - grapes
Mycosphaerella pyri (septoria leafspot) - no action - pears
Nectria gallegina (apple canker, storage rot) - no action – apples, pears
Penicillium cyclopium (penicillium rot) - no action - grapes
Penicillium elongatum (penicillium rot) - no action - grapes
Penicillium expansum (blue mold rot) - no action - grapes
Phomopsis viticola (dead arm) - no action - grapes
Phylctaea vagabunda (bitter rot) - no action – apples, pears
Phytophthora cactorum (crown and root rot) - no action - grapes
Phytophthora cinnamomi (root and crown rot) - no action - grapes
Plasmopara viticola (downy mildew) - no action - grapes
Podosphaera leucotricha (powdery mildew) - no action - apples
Rhizopus stolonifer (rhizopus rot) - no action - grapes
Rosellinia necatrix (white root rot) - no action - apples, grapes, pears
Schizophyllum commune (trunk rot) - no action - apples, grapes
Schizothyrium pomi ("fly speck" on fruit) - no action - apples
Sclerotium rolfsii (*Corticium rolfsii*) (sclerotium disease) - no action - apples
Sphaceloma ampelinum (anthracnose) - no action - grapes
Uncinula tuckeri (*Oidium necator*) (powdery mildew) - no action - grapes
Venturia inaequalis (scab) - no action - apples
Venturia pyrina (scab) - no action - apples

Mollusks

Helix aspersa* (Helicidae) (brown garden snail) - **no action unless destined to Florida - apples, grapes
 **Oxychilus cellarius* (Zonitidae) - no action - apples
Theba pisana (Helicidae) (white garden snail) - **action required**