Notification of Department of Agriculture
Re: Conditions for Import of Citrus Fruit from Australia
B.E. 2556 (2013)

The Department of Agriculture has completed pest risk analysis for commercial importation of citrus fruit from Australia.

By virtue of the provisions of Section 8 and Section 10 of the Plant Quarantine Act B.E. 2507 (1964) amended by the Plant Quarantine Act (No. 3) B.E. 2551 (2008) with particular provisions that may restrict the right and freedom of any person in which Section 29 together with Section 32, Section 33, Section 41 and Section 43 of the Constitution of the Kingdom of Thailand permits by virtue of the law. The Director-General of Department of Agriculture through the recommendation of the Plant Quarantine Committee, hereby announces the conditions that have to be met in order to import citrus fruit from Australia as follows:

1. This notification shall be called "Notification of Department of Agriculture, Re: Conditions for Import of Citrus Fruit from Australia B.E. 2556 (2013)

2. This notification shall enter into force thirty days after the date of its proclamation in the Government Gazette.

3. The Notification of Department of Agriculture, Re: Conditions for Import of Citrus Fruit from Australia B.E. 2554 (2011) dated 13 June B.E. 2554 (2011) shall be repealed.

4. Plant Species

4.1 The following citrus fruit from outside a fruit fly pest free area are permitted to import to the Kingdom of Thailand;

4.1.1 Sweet orange (*Citrus sinensis*) i.e. Navel and Valencia cultivars

4.1.2 Mandarin (*Citrus reticulata*) i.e. Ellendale and Murcott cultivars

4.1.3 Lemon (*Citrus limon*) i.e. Lisbon cultivar

4.2 The following citrus fruit from a fruit fly pest free area are permitted to import to the Kingdom of Thailand;

4.2.1 Sweet orange (*Citrus sinensis*)
4.2.2 Mandarin (*Citrus reticulata*)
4.2.3 Lemon (*Citrus limon*)
4.2.4 Grapefruit (*Citrus paradisi*)
4.2.5 Pummelo (*Citrus maxima*)
4.2.6 All commercial citrus hybrid cultivars

5. Quarantine Pests of Concern

A list of quarantine pests of current concern to the Kingdom of Thailand for citrus fruit from Australia is given in **Attachment 1**.

6. Responsible Organizations

6.1 Kingdom of Thailand: Department of Agriculture (hereinafter referred to as DOA)

6.2 Australia: Department of Agriculture, Fisheries and Forestry (hereinafter referred to as DAFF)

7. Import Permit

Import permit issued by DOA is required.

8. Means of Conveyance

Citrus fruit must be imported from a port in Australia to a designated port in the Kingdom of Thailand by sea cargo or air cargo.

9. Production Areas

9.1 Citrus fruit must be produced and sourced from DAFF registered commercial orchards in Australia, where the DAFF designated as production areas for export to the Kingdom of Thailand and the DOA has approved prior to export.

9.2 Citrus fruit produced in the following states in Australia is permitted to import to the Kingdom of Thailand.

9.2.1 Citrus fruit from a fruit fly pest free area in New South Wales, South Australia and Victoria.

9.2.2 Citrus fruit from outside a fruit fly pest free area in New South Wales, South Australia, Victoria, Queensland and Western Australia.

10. Requirements for Orchard

10.1 All orchards or blocks in designated production areas involved in the export of citrus fruit to the Kingdom of Thailand must be registered with and monitored by DAFF to ensure that fruit is produced free of quarantine pests. Copies of the registration records must be made available to DOA upon requested. DAFF is required to register export orchards or blocks prior to commencement of exports.

10.2 Growers of registered orchards or blocks must implement good agricultural practice (GAP). This includes maintaining of orchard sanitation and the implementation of integrated pest management or other pest control measures to ensure that quarantine pests of concern to the Kingdom of Thailand are adequately managed.

10.3 DAFF must provide information on the management program undertaken for citrus fruit throughout the growing season when required by DOA.

11. Requirements for Packinghouse or Export Establishment

11.1 All packinghouses and export establishments involved in the export of citrus fruit to the Kingdom of Thailand must be registered with and monitored by DAFF. Copies of the registration records must be made available to DOA upon requested. DAFF is required to register packinghouses and export establishments prior to commencement of exports.

11.2 Packinghouses and export establishments are required to source fruit only from DAFF registered commercial orchards or blocks in designated production areas to facilitate trace back of export fruit. Records of growers supplying fruit for export to the Kingdom of Thailand must be maintained by packinghouses and export establishments and made available to DOA upon request.

11.3 Packinghouses and export establishments are required to have a well documented Standard Operation Procedures (SOP), which describes in detail all processes related to grading, handling and packing of citrus fruit.

11.4 An audit must be conducted by DAFF prior to registration of packinghouses and export establishments and then done at least annually. Packinghouses and export establishments must be responsible for maintaining all documentation.

11.5 Cold treatment or fumigation treatment for pre-shipment disinfestation of quarantine pests must be conducted within the registered packinghouses or registered export establishments.

11.6 Inspection of fruit for freedom from quarantine pests must be done within the registered packinghouses or registered export establishments.

12. Requirements for Quarantine Insect Pests

12.1 Fruit flies

Citrus fruit export to the Kingdom of Thailand must be required one of the following risk management measures for the following fruit flies i.e. halfordia fruit fly (*Bactrocera halfordiae*), Javis fruit fly (*Bactrocera jarvisi*), Krauss's fruit fly (*Bactrocera kraussi*), lesser Queensland fruit fly (*Bactrocera neohumeralis*), mango fruit fly (*Bactrocera frauenfeldi*), Northern Territory fruit fly (*Bactrocera aquilonis*), Queensland fruit fly (*Bactrocera tryoni*) and Mediterranean fruit fly (*Ceratitis capitata*).

12.1.1 Citrus fruit must originate from a fruit fly pest free area.

Or

12.1.2 Citrus fruit from outside a fruit fly pest free area must be subjected to pre-shipment cold disinfestation treatment or in-transit cold disinfestation treatment to eliminate fruit flies.

12.2 Fuller's rose beetle, *Pantomorus cervinus*

Citrus fruit from all production areas other than those in Queensland exported to the Kingdom of Thailand must be required to undergo one of the following risk management measures for Fuller's rose beetle.

12.2.1 Methyl bromide fumigation

Or

12.2.2 In-field control programs monitored by DAFF

13. Requirements for Fruit Fly Pest Free Area

13.1 Fruit fly pest free area must be conformed to requirements specified in International Standard for Phytosanitary Measures (ISPM) No. 26: *Establishment of Pest Free Areas for Fruit Flies (Tephritidae).*

13.2 Area freedom of fruit flies for defined citrus fruit production areas in Australia shall be established based on written submission to the DOA by DAFF. Regulatory controls are to be in place to maintain the integrity of approved fruit fly pest free area, from which citrus fruit for the Kingdom of Thailand is sourced.

The following defined areas in Australia are recognized as a free area for halfordia fruit fly, Javis fruit fly, Krauss's fruit fly, lesser Queensland fruit fly, mango fruit fly, Northern Territory fruit fly, Queensland fruit fly and Mediterranean fruit fly.

13.2.1 State of Tasmania

13.2.2 The Riverina district of New South Wales: It may be defined as the area wholly encompassed by the administrative boundaries of the city of Griffith and the shires of Carrathool, Leeton, Narrandera and Murrumbidgee. This area is subdivided into two portions, the Murrumbidgee Irrigation Area (MIA) and Carrathool Shire.

13.2.3 The Riverland district of South Australia: It may be defined as being wholly encompassed by the county of Hamley and the hundreds (a geographic subdivision of the county) of Bookpurnong, Cadell, Gorden, Holder, Katarapko, Loveday, Markaranka, Moorook, Murtho, Parcoola, Paringa, Pooginook, Pyap, Stuart, Waikerie, Eba, Fisher, Forster, Hay, Murbko, Nildottie, Paisley, Ridley, Skurray and the Parish of Onley in the Shire of Mildura, Victoria.

13.2.4 The Sunraysia district of Victoria and New South Wales: It may be defined as being wholly encompassed by the shires of Wentworth and Balranald in New South Wales and Mildura, Swan Hill, Wakool and Kerang and the city of Swan Hill, City of Mildura, and Borough of Kerang in Victoria.

13.3 Export of fruit from defined free areas will be by area freedom certification, which will obviate the need for disinfestation treatment. Regular monitoring of free areas is to be undertaken for halfordia fruit fly, Javis fruit fly, Krauss's fruit fly, lesser Queensland fruit fly, mango fruit fly, Northern Territory fruit fly, Queensland fruit fly and Mediterranean fruit fly.

13.4 DAFF must inform DOA immediately if any fruit fly outbreak is confirmed in an area, suspend certification of any exports in respect of the free area, and advise DOA of the time-table for reinstatement of area freedom certification of the area concerned.

13.5 DAFF must notify DOA immediately if any other fruit fly species of economic importance other than halfordia fruit fly, Javis fruit fly, Krauss's fruit fly, lesser Queensland fruit fly, mango fruit fly, Northern Territory fruit fly, Queensland fruit fly and Mediterranean fruit fly. DAFF must inform DOA immediately and suspend certification of any exports in respect of the free area, and advise DOA of the time-table for reinstatement of area freedom certification of the area concerned.

14. Requirements for Risk Management Measure for Fruit Fly

14.1 Where citrus fruit are sourced from outside a fruit fly pest free area or where certification of area freedom from fruit flies cannot be provided by DAFF because the area from which citrus fruit is being sourced dose not qualify for area freedom status, or has had that status temporarily suspended, In these cases, it is mandatory that citrus fruit must be subjected to phytosanitary

treatment for fruit flies. The following cold treatment schedules are accepted to disinfest fruit flies of citrus fruit.

14.1.1 Sweet orange i.e. Navel and Valencia cultivars

Innermost fruit pulp temperature	Exposure period (consecutive days)
2 ^{o} C (35.6 ^{o} F) or below	18 days or more
3 ^{o} C (37.4 ^{o} F) or below	20 days or more

14.1.2 Mandarin i.e. Ellendale and Murcott cultivars

Innermost fruit pulp temperature	Exposure period (consecutive days)
2 ^{o} C (35.6 ^{o} F) or below	18 days or more
3 ^{o} C (37.4 ^{o} F) or below	20 days or more

14.1.3 Lemon i.e. Lisbon cultivar

Innermost fruit pulp temperature	Exposure period (consecutive days)
2 ^{o} C (35.6 ^{o} F) or below	16 days or more
3 ^{o} C (37.4 ^{o} F) or below	18 days or more

14.2 Treatment can be performed pre-shipment or in-transit. The in-transit treatment may be carried out partly as a pre-shipment treatment start in Australia and completed in-transit. In the event of a treatment failure, treatment may be completed on arrival.

14.3 Citrus fruit intended for in-transit cold disinfestation treatment must be pre-cooled until innermost fruit pulp temperature at or below the target treatment temperature prior to loading to assure that the fruit is chilled to the proper temperature before the mandatory cold treatment is initiated and fruit temperature must be held continuously.

14.4 Pre-shipment cold disinfestation treatment and in-transit cold disinfestation treatment are assessed on fruit temperature sensors only. Air temperature sensors are not used to assess cold treatment efficacy.

15. Requirements for Risk Management Measure for Fuller's Rose Beetle

Citrus fruit from all approved production areas other than those in Queensland must be required one of the following measures to mitigate the risk of Fuller's rose beetle prior to export to the Kingdom of Thailand.

15.1 Methyl bromide fumigation

15.1.1 The following methyl bromide fumigation schedules are accepted to eliminate Fuller's rose beetle.

Temperature	Dosage rate (gram/cu.m)	Exposure period (hour)
over 21 ^{o} C	32	2
16-21 ^{o} C	40	2
11-15 ^{o} C	48	2
10 ^{o} C	56	2

15.1.2 The loading ratio should not exceed 80 % of the chamber volume. Fruit is not to be fumigated if the citrus pulp temperature is less than 10 ^{o} C.

15.1.3 A fumigation certificate issued by registered fumigation companies must accompany every consignment of citrus fruit exporting to the Kingdom of Thailand.

15.2 In-field control programs

15.2.1 All orchards or blocks in permitted production areas other than in Queensland must be registered with and monitored by DAFF for Fuller's rose beetle.

15.2.2 The growers must comply with control programs for Fuller's rose beetle which are approved by DOA and DAFF.

15.2.3 DAFF must provide DOA thirty days before commencement of each export season a list of orchard or block registration number for the orchard or block registered for in-field control programs for Fuller's rose beetle.

15.2.4 Orchard or block registration number must be inserted in the appropriate sections of the phytosanitary certificate.

16. Requirements for Pre-Shipment Cold Disinfestation Treatment

16.1 Treatment conducted prior to shipment must be supervised by DAFF in a cold disinfestation treatment facility approved by DAFF and DOA. Citrus fruit for export to the Kingdom of Thailand may be treated concurrently with citrus fruit destined for other markets.

16.2 If a consignment is to receive pre-shipment cold disinfestation treatment, DAFF must ensure compliance with conditions specified in **Attachment 2**.

17. Requirements for In-Transit Cold Disinfestation Treatment

17.1 In-transit cold disinfestation treatment refers to cold disinfestation treatment conducted in-transit in shipping containers.

17.2 In-transit cold disinfestation treatment in shipping containers may be commenced on shore and completed in-transit or completed at destination.

17.3 If a consignment is to receive in-transit cold disinfestation treatment, DAFF must ensure compliance with conditions specified in **Attachment 3**. In addition, certificate of calibration for in-transit cold disinfestation treatment specified in **Attachment 4** must accompany with every consignment.

18. Requirements for Methyl Bromide Fumigator

18.1 DAFF must undertake to register fumigation companies that demonstrate to DAFF their capacity to perform effective methyl bromide fumigation in accordance with DAFF protocols. DAFF must provide DOA with a copy of registered fumigation companies and promptly notify DOA of any revisions due to new registrations, amendments to existing registrations or the cancellation or suspension of registrations.

18.2 The registration of fumigation companies must contain the following details:

Name of the fumigation company;
Postal address;
Telephone, facsimile and other contact details;
Names of the owner (s) and managing director;
The states in which the fumigation company conducts fumigations; and
The registration number

18.3 All registered fumigation companies must be audited by DOA and only those approved by DOA are allowed to perform methyl bromide fumigation on citrus export to the Kingdom of Thailand.

18.4 DOA will monitor the performance of approved fumigation companies. In the event that DOA detects an ineffective fumigation, DOA will promptly notify DAFF on the incidence. The DOA reserved the right to suspension of any registered fumigation company until the cause has been clarified and corrective actions have been implemented to the satisfaction of DOA.

19. Requirements for Packing and Labeling

19.1 Packing material may be made of corrugated fiber-board, polystyrene, plastic or wooden crates which can be manufactured either from recycled material or virgin material. Where cartons are used, they must be clean and new.

19.2 Citrus fruit must be packed in a carton which is free from soil, sand and contaminating plant materials e.g. leaves, stem, plant debris or other potential carriers of quarantine pests.

19.3 For citrus fruit to be air freighted, citrus fruit must be packed to meet one of the following requirements.

19.3.1 Citrus fruit within a carton must be either enclosed in a net bag or enclosed fully (wrapped) in netting. The diameter of the hole must not to be more than 1.6 millimeters. Or

19.3.2 Citrus fruit must be consigned in a carton in which, when closed, all air vent holes are sealed with netting. The diameter of the hole must not to be more than 1.6 millimeters. Or

19.3.3 When the cartons of citrus fruit are palletized or otherwise assembled as a bundle, the bundle must be fully enclosed by a net of sealed in plastic. If a net is used, the diameter of the hole must not to be more than 1.6 millimeters.

19.4 For citrus fruit to be sea freighted, fruit shipped in cartons to be consigned by sea container, whether palletized or otherwise bundled, are exempt from the requirements specified in 19.3.

19.5 The package must have necessary information to facilitate traceability. However, it is required that, at least, the following information in English language must be appeared on each package;

- Produce of Australia
- Name of exporting company
- Name of fruit (common name and cultivar name)
- Packinghouse registration number or Export establishment registration number
- Orchard or block registration number

19.6 If citrus fruit is shipped to the Kingdom of Thailand in loose cartons, the following information “EXPORT TO THAILAND” must be appeared on each carton. However, if citrus fruit is shipped to the Kingdom of Thailand on pallets, it is allowable to have the following information “EXPORT TO THAILAND” appearing on each side.

19.7 All consignments of citrus fruit destined to the Kingdom of Thailand using solid wood packing material must comply with ISPM No. 15: *Regulation of Wood Packaging Material in International Trade*.

20. Export Inspection

20.1 The consignment must be visually inspected in accordance with appropriate official procedures and found to be free from any quarantine pest specified in **Attachment 1**.

20.2 In case of quarantine pests as specified in **Attachment 1** are found, the following measures must be undertaken.

20.2.1 If any live fruit flies or Fuller’s rose beetle are found, the consignment must be rejected for export to the Kingdom of Thailand.

20.2.2 If live quarantine pests other than fruit flies or Fuller's rose beetle are detected, the consignment must be exported to the Kingdom of Thailand after disinfection/disinfestations or removing all of the pests.

20.3 The consignment must be undergone an agreed treatments or measures specified in Section 15 and Section 16 to manage the risk of fruit flies and Fuller's rose beetle.

21. Phytosanitary Certification

21.1 A phytosanitary certificate (PC) issued by DAFF is required. The original copy must accompany every consignment to the Kingdom of Thailand and bear the following additional declaration:

"The consignment of citrus fruit was produced and prepared for export in accordance with the conditions for import of fresh citrus fruit from Australia to Thailand"

21.2 Fruit fly pest free area

If the consignment originates from a fruit fly pest free area, the phytosanitary certificate must bear the following additional declaration:

"The consignment of citrus fruit was produced in (name of defined area) which is a pest free area for halfordia fruit fly, Javis fruit fly, Krauss's fruit fly, lesser Queensland fruit fly, mango fruit fly, Northern Territory fruit fly, Queensland fruit fly and Mediterranean fruit fly in Australia."

21.3 Pre-shipment cold disinfestation treatment

If the consignment received pre-shipment cold disinfestation treatment then the cold treatment facility, treatment temperature and period (number of consecutive days) must be inserted in the appropriate sections of the phytosanitary certificate.

21.4 In-transit cold disinfestation treatment

21.4.1 If the consignment is subjected to in-transit cold disinfestation treatment, the phytosanitary certificate must bear the following additional declaration:

"DAFF has supervised the calibration and the placement of fruit sensors into the fruit within the container(s) in accordance with the conditions for import of fresh citrus fruit from Australia into Thailand and cold disinfestation treatment has been initiated"

21.4.2 The original copy of a certificate of calibration for in-transit cold disinfestation treatment specified in **Attachment 4** must accompany with the phytosanitary certificate.

21.5 Methyl bromide fumigation

If the consignment received methyl bromide fumigation to control Fuller's rose beetle, details of fumigation must be inserted in the appropriate sections of the phytosanitary certificate. The original copy of the fumigation certificate must accompany with the phytosanitary certificate.

21.6 In-field control programs

21.6.1 If the consignment is subjected to in-field control programs for Fuller's rose beetle, the phytosanitary certificate must bear the following additional declaration:

"The consignment of citrus fruit was subjected to in-field control programs agreed by DOA and DAFF to control Fuller's rose beetle."

21.6.2 Orchard or block register number must be inserted in the appropriate sections of the phytosanitary certificate.

21.7 The common name and cultivars of the citrus fruit and container and seal numbers (for sea freight) must be recorded on the phytosanitary certificate.

22. Import Inspection

22.1 When the consignments arrive at the point of entry in the Kingdom of Thailand, the import inspection must be conducted after confirming the respective documents accompanying the consignments concerned.

22.2 A representative sample of the consignments will be randomly selected, at the inspector's discretion, and examined to determine if pests are present. If live pests are found, samples will normally be sent for laboratory identification, and the consignments held pending the results.

22.3 For consignments of fruit of less than 1000 units, the sample size is either 450 units or 100% of consignment. For consignments of fruit of greater than or equal to 1000 units, then 600 units are to be sampled.

22.3.1 Selection procedure for consignments consisting of citrus from two or more different cultivars

A representative sample of citrus fruit from each cultivar in a consignment will be randomly selected and the sample size is indicated in 22.3. If non-compliance occurs in any of the cultivars, the entire consignment is considered non-compliance. DOA will inform DAFF on orchard or block registration number.

22.3.2 Selection procedure for consignments consisting of citrus fruit from two or more orchards or blocks

A representative sample of citrus fruit from each orchard or block in a consignment will be randomly selected and the sample size is indicated in 22.3. If non-compliance occurs on one orchard or block, the entire consignment is considered non-compliance. DOA will only inform DAFF on orchard or block registration number which imported citrus fruit is non-compliance.

22.4 In case of quarantine pests of the Kingdom of Thailand concern as stipulate in **Attachment 1** are found during import inspection, the following measures must be taken;

22.4.1 Fruit flies

(1) If any live fruit flies are found, the infested consignment must be either re-exported or destroyed at the importer's expenses. The DOA immediately suspends importation and notify to DAFF of the interception.

(2) DAFF shall immediately investigate the cause of such incidence and propose corrective actions. Suspension of import will be lift when the cause of non-compliance has been clarified and corrective actions have been implemented to the satisfaction of DOA.

22.4.2 Fuller's rose beetle

(1) If any live Fuller's rose beetle is found, the infested consignment must be either re-exported or destroyed at the importer's expenses.

(2) The DOA will immediately notify the DAFF of the non-compliance. Subsequently, DAFF must not certify citrus fruit from infested orchards or blocks to export to the Kingdom of Thailand for the rest of export season.

(3) An in-transit consignment of citrus fruit from orchards or blocks which Fuller's rose beetle were previously intercepted will be refused entry to the Kingdom of Thailand.

22.4.3 If live quarantine pests other than fruit flies or Fuller's rose beetle are found, the consignment must be either destroyed or re-exported or treated with appropriated treatment (if available) at the importer's expenses.

22.5 If any live organism of potential quarantine concern to the Kingdom of Thailand not listed in **Attachment 1** is found, the consignment shall be re-exported, destroyed or treated with appropriated treatment (if available) at the importer's expenses. The DOA reserved the right to temporary suspension of import from the identified pathway until a risk assessment of intercepted organisms is determined.

22.6 If non-compliance incurs three times on a registered orchard, DAFF must not certify citrus fruit from the orchard to export to the Kingdom of Thailand for the rest of export season.

22.9 DOA reserved the right to have fruit re-exported or destroyed at the importer's expenses, if one or more of the following case arises:

22.6.1 Cold disinfestation treatment was unsuccessfully.

22.6.2 Container doors are not completely closed.

22.6.3 Container seal is broken or replaced or does not match the number on the Phytosanitary Certificate.

22.6.4 Orchard or block registration number on packaging does not match the number on the Phytosanitary Certificate.

22.6.5 Temperature sensor extends beyond the fruit or is not located in specified positions or sensor fruit was ruptured;

22.6.6 Packaging labeling is missing or incorrect or incomplete.

23. Audit of Export Procedures

23.1 The export of citrus fruit from Australia to the Kingdom of Thailand shall only initiate after the DOA has already audited export certification procedures. The costs of such audits must be borne by Australia.

23.2 In the event of a suspension of import, DOA may audit export certification procedures in Australia prior to a decision being taken on resumption of import. Where DOA has determined that such audits are necessary, the costs of these audits must be borne by Australia.

Issued on 22 March B.E. 2556 (2013)

Mr. Dumrong Jirasutat

Director-General
Department of Agriculture

- The Government Gazette: Vol. 130, Special Part 49 D, Page 38-51, Date 19 April B.E. 2556 (2013)
- UNOFFICIAL TRANSLATION
- This is an English translation. In case of any difference in meaning between the Thai text and the English translation, the Thai text shall be applied.

Attachment 1

List of Quarantine Pests of Citrus Fruit from Australia
Attached to the Notification of Department of Agriculture
Re: Conditions for Import of Citrus Fruit from Australia B.E. 2556 (2013)

Scientific name	Common name
Insects	
Order Coleoptera	
Family Curculionidae	
Pantomorus cervinus	Fuller's rose beetle
Neomerimnetes sobrinus	citrus fruit weevil
Maleuterpes spinipes	spinelegged citrus weevil
Family Nitidulidae	
Carpophilus humeralis	pineapple sap beetle
Order Diptera	
Family Tephritidae	
Bactrocera aquilonis	Northern Territory fruit fly
Bactrocera frauenfeldi	mango fruit fly
Bactrocera halfordiae	halfordia fruit fly
Bactrocera jarvisi	Jarvis fruit fly
Bactrocera kraussi	Krauss's fruit fly
Bactrocera neohumeralis	lesser Queensland fruit fly
Bactrocera tryoni	Queensland fruit fly
Ceratitis capitata	Mediterranean fruit fly
Order Hemiptera	
Family Aleyrodidae	
Orchamoplatus citri	Australian citrus whitefly
Family Coccidae	
Ceroplastes destructor	white wax scale
Ceroplastes sinensis	hard wax scal
Coccus pseudomagnoliarum	citricola scale
Parthenolecanium corni	European fruit lecanium
Parthenolecanium persicae	peach scale
Pulvinaria polygonata	cottony citrus scale
Family Diaspidae	
Aspidiotus nerii	aucuba scale
Family Pseudococcidae	
Rastrococcus truncatispinus	rastrococcus mealybug
Order Lepidoptera	
Family Pyralidae	
Cryptoblabes adoceta	sorghum head caterpillar
Family Torticidae	
Epiphyas postvittana	light brown apple moth
Isotenes miserana	orange fruit borer
Order Thysanoptera	
Family Thripidae	

Scientific name	Common name
Chaetanaphothrips orchidii	citrus rust thrips
Limothrips cerealium	thrips
Megalurothrips kellyanus	megalurothrips
Scirtothrips albomaculatus	scirtothrips
Mites	
Family Eriophyidae	
Tegolophus australis	brown citrus rust mite
Family Tenuipalpidae	
Brevipalpus lewisi	citrus flat mite
Brevipalpus obovatus	scarlet tea mite
Panonychus ulmi	European red spider mite
Plant pathogens	
Fungi	
Mycosphaerella citri	greasy spot
Phoma glomerata	phoma blight
Phytophthora boehmeriae	ramie leaf spot
Phytophthora citricola	black hop root rot
Phytophthora hiberanalis	brown rot
Septoria citri	septoria spot
Bacteria	
Pseudomonas viridiflava	bacterial leaf blight of tomato

Attachment 2

Requirements for Pre-Shipment Cold Disinfestation Treatment
Attached to the Notification of Department of Agriculture
Re: Conditions for Import of Citrus Fruit from Australia B.E. 2556 (2013)

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1. Requirements for Cold Treatment Facility

1.1 Pre-shipment disinfestation treatment must be only permitted in a cold treatment facility approved by DAFF and DOA. The cost of DOA officer (s) to visit and approve cold treatment facilities must be born by Australia.

1.2 DAFF is responsible for ensuring that cold treatment facilities used by exporters are of a suitable standard, have refrigeration equipment capable of achieving and holding the fruit at the required temperature and must be lockable to ensure the security and integrity of the fruit being treated.

1.3 DAFF must keep a register of cold treatment facilities approved for pre-shipment treatment. This register will include documentation covering;

1.3.1 location and construction plans of all facilities, including owner/operator contact detail,

1.3.2 dimensions of the facilities and room capacity,

1.3.3 type of insulation used in walls, ceiling and floors,

1.3.4 maker, model, type and capacity of the refrigeration condenser and evaporator air circulation,

1.3.5 the temperature range of the equipment, defrost cycle control and specifications and details of any integrated temperature recording equipment.

1.4 DAFF will forward to DOA names and addresses of currently registered cold treatment facilities before the start of each export season.

2. Requirements for Temperature Recording System

DAFF must ensure that temperature recording system, the combination of the cold treatment data recorders and fruit pulp temperature sensors, must meet the following criteria:

2.1 The system must be suitable for cold disinfestation treatment. The accuracy of the system must be within plus or minus 0.3 ^{o} C of the true temperature in the range of minus 3 ^{o} C to plus 3 ^{o} C.

2.2 The system must be capable of automatic operation and able to accommodate a minimum of four fruit temperature sensors.

2.3 The system must be capable of continuous recording of date, time, identification of sensor number, and temperature during all calibrations and for the duration of treatment period.

2.4 The system must be capable of recording all temperature sensors at least once every hourly, with a resolution of 0.1 ^{o} C and storing data until the information can be examined by an authority.

2.5 The system must be capable of producing printout which identifies each sensor, time and the temperature, as well as the identification number of the cold treatment facility.

3. Requirements for Temperature Sensors

3.1 Sensor's type must have an optimal accuracy for the temperature range of this cold treatment.

3.2 Sensors must have an outer sheath diameter of 6.4 millimeters or less. The sensing unit must be located within the first 25 millimeters or less of the sensor's tip. Sensors must be accurate to within plus or minus 0.3 ^{o} C in the range of minus 3 ^{o} C to plus 3 ^{o} C.

3.3 Each sensor must be tagged with a number identical to sensor's number accompanying it readings in the printout produced by the temperature recording system.

4. Calibration of Temperature Sensors

4.1 Calibration of the temperature sensors must be conducted under the supervision of DAFF.

4.2 Calibration must be conducted using a mixture of crushed ice and distilled water in clean insulated container prior to the temperature sensors being placed in fruit.

4.3 Crushed ice must completely fill the container. Enough water should be added to stir the mixture. The percentage of ice is estimated at 80-85 percent while the water fills the air void (15-20 percent).

4.4 The mixture must be thoroughly stirred to ensure the water is completely cooled and good mixing has occurred. At least 10 minutes of adaptation period, is required to reach a steady state of 0 ^{o}C.

4.5 During the calibration, all the temperature sensors and the calibrated thermometer must be immersed in the ice water slurry without touching the

sides or bottom of the container. The mixture must be constantly stirred while testing is being carried out. Only after the readings are stabilized at the lowest constant temperature, the calibration readings can be conducted.

4.6 Two consecutive reading must be recorded for each sensor at the lowest temperature obtainable. There shall be at least a 60 second interval between the two readings for any one sensor; however, the interval should not exceed 5 minutes. The variance between the two readings must not exceed 0.1 ^{o} C.

4.7 Any sensor which reading shows a deviation of more than plus and minus 0.3 º C from the standard 0 º C must be replaced and rejected for further use for cold treatment.

5. Placement of Temperature Sensors

5.1 Placement of temperature sensors and connection of temperature sensors to a data logger must be conducted under the supervision of DAFF.

5.2 Palletized fruit must be loaded into cold room under the supervision of DAFF and may be pre-cooled at the exporter's discretion.

5.3 Records for pre-shipment cold disinfestation treatment are required at least four temperature sensors to monitor fruit pulp temperature in a cool room.

5.4 The temperature sensor used to measure the fruit pulp temperature must be inserted carefully into the center of a test fruit. The test fruit shall be selected from the largest fruit size in the lot. With small fruit, the sensor shall penetrate two or more fruit. The sensor's tip must not be extended beyond the fruit, as well as fruit rupture and opened by sensor insertion, to prevent measuring air temperature instead of fruit pulp temperature. In these cases, the cold treatment is rejected.

5.5 Temperature sensors must be placed in a cool room in the following locations.

5.5.1 A minimum of two sensors at the inlet (return air) and the outlet (supply air) point of air circulation must be used to measure room temperature.

5.5.2 A minimum of four sensors must be used to measure innermost fruit pulp temperature in the following locations.

(a) one at the center of the stack, in the center of the cold room,

(b) one at the corner of the top stack, in the center of the cold room,

(c) one at the center of the stack near the outlet of cold air, and

(d) one at the corner of the top stack near the outlet of cold air

5.6 Data logger records may commence at any time, however the treatment time will be deemed to have begun only after all fruit temperature sensors have attained the nominated treatment temperature.

5.7 Where only the minimum of sensors have been used, and in the event that any fruit probes fails to record a temperature for a period of more than four consecutive hours, the treatment must be declared void and must be started again.

6. Confirmation of Treatment

6.1 The treatment shall be considered to have been successfully completed if the record of treatment indicates that the treatment parameters have been met and re-calibration of the sensors has been passed. Sensors are to be re-calibrated using the procedures in Section 4. Records must be kept for DOA audit.

6.2 If any sensor shows a higher calibration factor at the completion of the treatment than at the initial calibration setting, the recordings from the sensor (s) will be adjusted accordingly. If this adjustment reveals that the nominated treatment schedule is not met, the treatment must be deemed to have failed. There is the option of re-treating this fruit at the discretion of DAFF and the exporter.

6.3 Printouts of temperature records are to be accompanied by suitable data summaries that indicate that the required cold disinfestation treatment of the product has been achieved.

6.4 DAFF must endorse these records and summaries before confirm that the treatment has been successful. These are to be available for DOA audit when required.

6.5 If the required cold disinfestation treatment of the product has not been achieved, the logger may be reconnected and the treatment continued provides that:

6.5.1 DAFF confirms the maintenance of the required conditions as per Section 6.3 or

6.5.2 The elapsed time since treatment cessation and re-commencement is less than 24 hours.

In both cases, data will continue to be collected from the time the logger is reconnected.

7. Loading into Containers

7.1 Containers must be inspected by DAFF before loading to ensure pest freedom and that any vents are covered to prevent the entry of pests unless the vents are closed.

7.2 Fruit should be loaded within an insect proof building or using an insect proof enclosure between the cool room entrance and the container.

8. Sealing of Containers

8.1 After completion of loading, the container door must be closed properly and sealed with a numbered metal seal under DAFF supervision. The seal must be intact until arrival at the port of entry in the Kingdom of Thailand, where the DOA inspectors only are authorized to open it. Containers with a broken seal must be rejected.

8.2 The seal number must be recorded on the phytosanitary certificate.

9. Storage of Fruit If Not Immediately Loaded

Treated fruit not intended for immediate loading may be stored for subsequent shipment provided security conditions are maintained by DAFF:

9.1 If fruit is stored in the treatment room, the room's doors must be sealed.

9.2 If fruit is to transferred to another room for storage, it must be transferred in a secure manner approved by DAFF and the room must contain no other fruit, and

9.3 Subsequent container loading must be performed under the supervision of DAFF in accordance with Section 7.

Attachment 3

Requirements for In-Transit Cold Disinfestation Treatment
Attached to the Notification of Department of Agriculture
Re: Conditions for Import of Citrus Fruit from Australia B.E. 2556 (2013)

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1. Requirements for Containers

1.1 Container's types and series must be suitable for in-transit cold disinfestation treatment.

1.2 Containers must be self refrigerated shipping containers and must be equipped with a recording device. DAFF is responsible for ensuring that containers used by exporters are of a suitable type, and have refrigerator equipment capable of achieving and holding the required temperatures.

2. Requirements for Temperature Recording System

DAFF must ensure that temperature recording system, the combination of the cold treatment data recorders and fruit pulp temperature sensors, must meet the following criteria:

2.1 The system must be suitable for cold disinfestation treatment. The accuracy of the system must be within plus or minus 0.3 ^{o} C of the true temperature in the range of minus 3 ^{o} C to plus 3 ^{o} C.

2.2 The system must be capable of automatic operation and able to accommodate a minimum of three fruit temperature sensors.

2.3 The system must be capable of continuous recording of date, time, sensor number, and temperature during all calibrations and for the duration of treatment period.

2.4 The system must be capable of recording all temperature sensors at least once every hourly, with a resolution of 0.1 ^{o} C and storing data until the information can be examined by a DOA officer.

2.5 The system must be capable of producing printout which identifies each sensor, time and the temperature, as well as the identification number of the recorder and the container.

3. Requirements for Temperature Sensors

3.1 Sensor's type must have an optimal accuracy for the temperature range of this cold treatment.

3.2 Sensors must have an outer sheath diameter of 6.4 millimeters or less. The sensing unit must be located within the first 25 millimeters or less of the sensor's tip. Sensors must be accurate to within plus or minus 0.3 ^{o} C in the range of minus 3 ^{o} C to plus 3 ^{o} C.

3.3 Each sensor must be tagged with a number identical to sensor's number accompanying it readings in the printout produced by the temperature recording system.

4. Calibration of Temperature Sensors

4.1 Calibration of the temperature sensors must be conducted under the supervision of DAFF.

4.2 Calibration must be conducted using a mixture of crushed ice and distilled water in clean insulated container prior to the temperature sensors being placed in fruit.

4.3 Crushed ice must completely fill the container. Enough water should be added to stir the mixture. The percentage of ice is estimated at 80-85 percent while the water fills the air voids (15-20 percent).

4.4 The mixture must be thoroughly stirred to ensure the water is completely cooled and good mixing has occurred. At least 10 minutes of adaptation period, is required to reach a steady state of 0 ºC.

4.5 During the calibration, all the temperature sensors and the calibrated thermometer must be immersed in the ice water slurry without touching the sides or bottom of the container. The mixture must be constantly stirred while testing is being carried out. Only after the readings are stabilized at the lowest constant temperature, the calibration readings can be conducted.

4.6 Two consecutive reading must be recorded for each sensor at the lowest temperature obtainable. There shall be at least a 60 second interval between the two readings for any one sensor; however, the interval should not exceed 5 minutes. The variance between the two readings must not exceed 0.1 ^{o} C.

4.7 Any sensor which reading shows a deviation of more than plus and minus 0.3 º C from the standard 0 º C must be replaced and rejected for further use for cold treatment.

4.8 A "Certificate of calibration for in-transit cold disinfestation treatment in self-refrigerated container" as shown in **Attachment 4** must be prepared for each container by a DAFF officer. The original copy must be attached to the phytosanitary certificate which accompanies the consignment.

5. Placement of Temperature Sensors

5.1 Loading of packed fruit into containers and placement of temperature sensors must be conducted under the supervision of DAFF.

5.2 Containers must be packed in an appropriate manner which ensures that there is even airflow under and around all pallets and loose stacked cartons.

5.3 Records for in-transit cold disinfestation treatment are required at least three temperature sensors to monitor innermost fruit pulp temperature in a container. These sensors must be distributed throughout the fruit in a representative cross section of the container that enables an adequate monitoring of the temperature.

5.4 The temperature sensor used to measure the fruit pulp temperature must be inserted carefully into the center of a test fruit. The test fruit shall be selected from the largest fruit size in the lot. With small fruit, the sensor shall penetrate two or more fruit. The sensor's tip must not be extended beyond the fruit, as well as fruit rupture and opened by sensor insertion, to prevent measuring air temperature instead of fruit pulp temperature. In these cases, the cold treatment is rejected.

5.5 Fruit temperature sensors must be placed in a 6 meter (20 foot) container and a 12 meter (40 foot) container in the following locations, as depicted in **Figure 1**.

5.5.1 Two fruit pulp temperature sensors must be placed in boxes diagonally opposite at the side walls approximately 1 meter from the end of the load for a 6 meter container and approximately 1.5 meters from the end of the load for a 12 meter container.

5.5.2 One fruit pulp temperature sensors must be placed in a box in the center of the container

5.5.3 All three sensors must be placed at mid-height of the stack.

6. Sealing of Containers

6.1 After completion of loading, the container door must be closed properly and sealed with a numbered metal seal under DAFF supervision. The seal must be intact until arrival at the port of entry in the Kingdom of Thailand, where the DOA inspectors only are authorized to open it. Containers with a broken seal must be rejected.

6.2 The seal number must be recorded on the phytosanitary certificate.

7. Confirmation of Treatment

7.1 The in-transit arrangement is for the cold disinfestation treatment to be completed during the voyage between exporting country and the port of discharge in the Kingdom of Thailand. The Shipping Company shall download

the computer records of the cold disinfestation treatment and forward them to officer at port of entry.

7.2 DOA Bangkok Office must verify whether the treatment records meet disinfestation requirements and advise the DOA officer at the port of arrival that, subject to calibration of sensors, the treatment is complete.

7.3 On arrival DOA must check the calibration of the fruit temperature sensors using the method referred to in Section 4 and verify that the treatment records meet disinfestation requirements.

7.4 Re-calibration of the fruit sensors at the completion of the treatment which shows a higher than initial calibration setting, the recordings from the probe(s) will be adjusted accordingly.

7.5 If this adjustment reveals that the nominated treatment schedule was not met, the treatment will be deemed to have failed. The consignment must be re-exported or destroy at the importer's expenses.

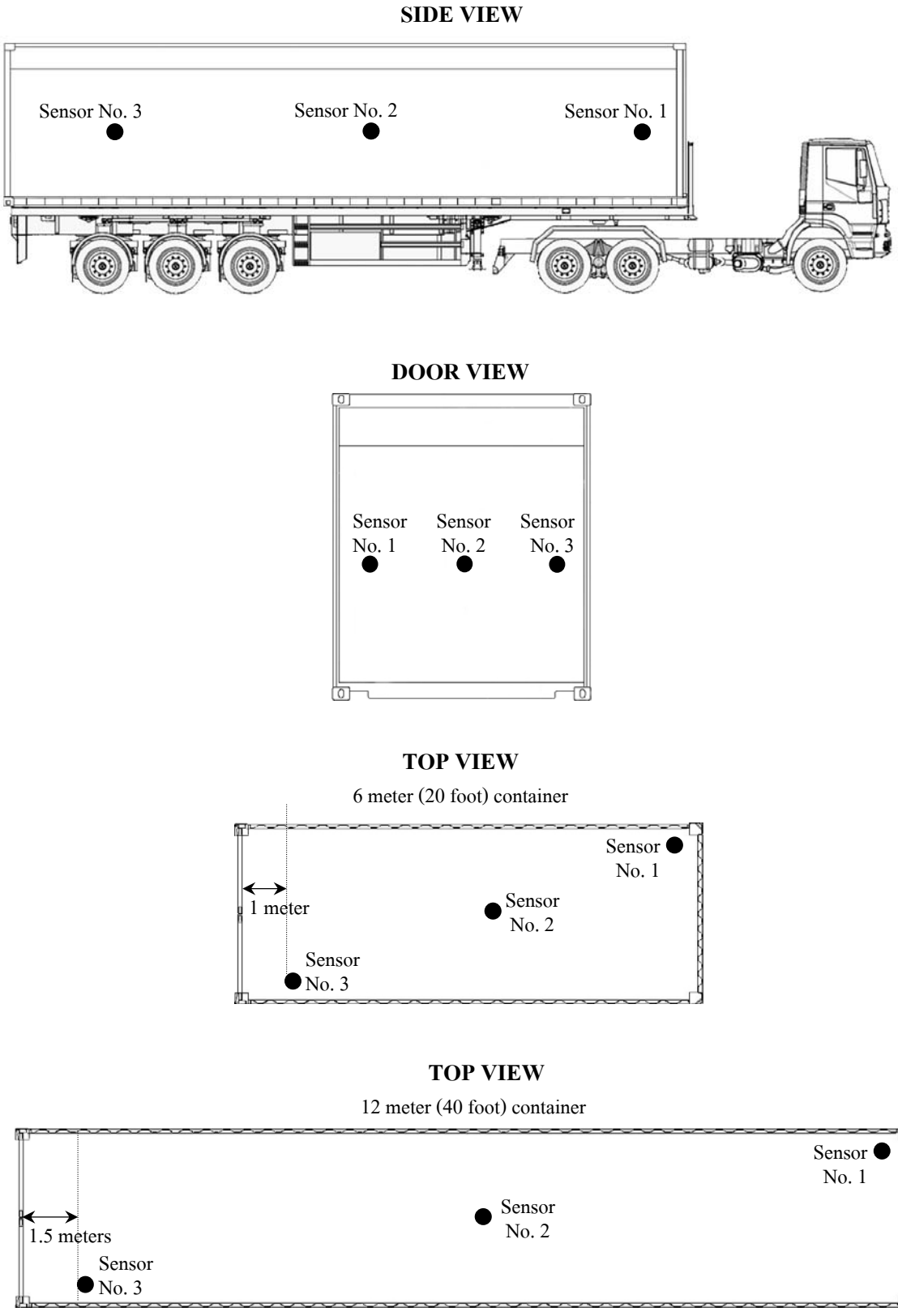

Figure 1. Placement of fruit temperature sensors in a container for in-transit cold disinfestation treatment.

Attachment 4

Certificate of Calibration for In-Transit Cold Disinfestation Treatment
in Self-Refrigerated Container for Thailand
Attached to the Notification of Department of Agriculture
Re: Conditions for Import of Citrus Fruit from Australia B.E. 2556 (2013)

Exporter name: .....

Phytosanitary certificate number: .....

Container number: .....

Seal number: .....

Recorder serial number: .....

Date calibrated (dd/mm/yy): .....

1. Sensor calibration (at 0 ºC):

Sensor Identification	1st Reading	2nd Reading	Correction factor
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....

2. Sensor placement:

Sensor placement	Pulp temperature
1	..... Degrees Celsius
2	..... Degrees Celsius
3	..... Degrees Celsius

3. Container sealed:

Time: ..... Date (dd/mm/yy): .....

.....	.....	.....
Inspector name	Inspector signature	Stamp