



Animal and Plant
Quarantine Agency

177 Hyeoksil 8-ro, Gimcheon-si, Gyeongsangbuk-do,
Republic of Korea / www.qia.go.kr

T. 82 54 912 0634 F. 82 54 912 0635

3 February, 2021

Mr. Jaime Cardenas Lopez
Subgerente de Proteccion Vegetal
Instituto Colombiano Agropecuario (ICA)
Colombia

Dear Mr. Jaime Cardenas Lopez,

This letter is in relation to your letter (No. 20212100889) dated 1 February 2021 regarding the final version of plant quarantine import requirements for fresh yellow pitahaya fruits from Colombia.

As a result of the review of the final version attached in your letter, Animal and Plant Quarantine Agency allows the publication of the final version of the document.

I look forward to our continued cooperation and relationship on plant quarantine issues.

Sincerely yours,

Jung Bin KIM
Director, Export management Division
Department of Plant Quarantine
Animal and Plant Quarantine Agency (APQA)

Cc.: The Embassy of Colombia in the Republic of Korea



농림축산검역본부

Versión final

Revised import requirements for fresh yellow pitahaya from Colombia

[Attachment]

Revised import requirements for fresh yellow pitahaya from Colombia

1. Areas and Plant of Application

Fresh yellow pitahaya (*Selenicereus megalanthus*) commercially produced in Colombia

2. Means of Conveyance

Air cargo or ship cargo (except hand luggage carried by passenger or post cargoes)

3. Registration of Export Orchards, Packinghouses, Vapor Heat Treatment Facilities

- A. Orchards producing fresh yellow pitahaya for export to Korea, Packinghouses that sort and pack fresh yellow pitahaya for export to Korea and Vapor Heat Treatment Facilities shall register with the NPPO of Colombia (hereinafter referred to as “ICA”) each year.
- B. ICA must inform the National Plant Quarantine Service of Korea (hereinafter referred to as “APQA”), the list of registered orchards, packinghouses and vapor heat treatment facilities before every year before October.

4. Sorting fruits

- A. ICA shall check phytosanitary conditions of packinghouses that sort and pack fresh yellow pitahaya for export to Korea and properly educate workers for sorting fruits before every year.
- B. Packinghouses for export to Korea shall be regularly disinfected to control pests and equipped with insect-proof facilities to prevent infestation from outside pests.
- C. Yellow pitahaya for export must be cleaned with compressed air, brush and water during sorting process and soaked in water solution with 1% Citric acid for 5 minutes. Sorted fruits must have no quarantine pests of Annex 1.
- D. ICA shall oversee, when sorting fresh fruits, to ensure that contaminants including leaves, stems and soil are removed.
- E. The fresh yellow pitahaya for export to Korea shall be sorted and packed only in packinghouses registered with ICA. When sorting fresh yellow pitahaya for export to Korea, it must be ensured that yellow pitahaya produced from unregistered orchards or

fresh fruits of other kinds are not sorted together.

5. Vapor Heat Treatment

- A. ICA shall regularly inspect registered vapor heat treatment facilities.
- B. The vapor heat treatment shall be conducted on each consignment at the registered facilities in attendance of plant quarantine inspector of Colombia.
- C. The vapor heat treatment must be conducted by raising the fruit core temperature up to 46°C or higher and applying treatment for 20 minutes. (relative humidity over 95%)
- D. Other details of vapor heat treatment shall be comply with the Guidelines for Vapor Heat Treatment in Annex 2.
- E. Packing houses shall keep VHT related documents (temperature record, chamber test, cold spot test) per VHT case.

6. Packing and Labeling

- A. The packinghouses for fresh yellow pitahaya which have been treated shall be equipped with insect-proof facilities.
- B. Yellow pitahaya fruits that have been approved by the export inspection shall be sealed in each packing cartons using the methods (including sticky tape, sticker or label) approved by ICA.
- C. On the outside the export packing cartons or pallets of palletized cargo shall be labeled “For Korea” and “registration numbers of orchards and packinghouses”.
- D. In case there are any ventilation holes on packing cartons, they shall be covered with a net mesh of no more than 1.6mm in diameter.
- E. ICA shall take appropriate measures for export consignments that have been packed in order to prevent re-infestation from the pest during the storage or conveyance.

7. On-site survey

- A. APQA shall conduct on-site survey to verify the overall implementation in these requirements every October.
- B. ICA shall invite an APQA inspector 30 days before commencement of on-site survey through the official letter including survey schedule.
- C. An APQA inspector dispatched to Colombia may request necessary records and

information to ICA to conduct on-site survey, and ICA shall provide them to APQA inspector.

- D. An APQA inspector dispatched to Colombia may request to the ICA correction or exclusion of export orchards or packing houses or vapor heat treatment facilities which are non-complied with the requirements from the export to Korea.
- E. All costs pertaining to the on-site survey by APQA inspector shall be paid by the Colombian side in accordance with the schedule for overseas travel cost of Korea. Colombian side shall provide means of transportation and a Korean-Spanish interpreter to conduct on-site survey.
- F. In case of a violation of the import requirements is found during implementation of this import requirements, APQA may take necessary measures including resuming pre-clearance inspection.
- G. If APQA decides to take necessary measures, it shall notify the ICA through an official letter.

8. Export Inspection and Certification

- A. The export inspection shall be carried out on 2% sample by the Colombian plant quarantine inspector.
- B. For consignments uninfected with Korean quarantine pests (Annex 1) and passed by the export inspection, ICA shall issue a phytosanitary certificate which includes additional declaration specified as in the below:
 - (1) “This consignment complies with the agreed import requirements.”
 - (2) The registration number of the orchard and packinghouse; and the name of the vapor heat treatment facility, treated date, temperature and duration.
 - (3) In case of a ship cargo, ICA shall seal the container and indicate the seal number.
- C. Consignments that were passed by the export inspection shall be managed separately from that were rejected or that were not inspected in order to prevent cross contamination of pests.

9. Import Inspection

- A. Upon arrival of consignments, APQA plant quarantine officers shall check the following points. If the consignment has problems in the following points, all or parts of the consignment shall be destroyed or returned.
 - 1) The phytosanitary certificate with additional declaration.
 - 2) The label “For Korea” and “registration numbers of orchards and packinghouses” on the outside the export packing cartons or pallets of palletized cargo.
 - 3) The condition of the sealed packing cartons and sea containers.
- B. If there are no problems found specified in the above, import inspection and lab test shall be conducted in accordance with Plant Protection Acts of Korea.
- C. In case a live fruit fly is found during the import inspection, the consignment shall be destroyed or returned, and the importation shall be suspended until the cause is identified and remedial measures are implemented.
- D. In case a live quarantine pest is detected during the import inspection, the consignment shall be treated and if there are no treatments available, it will be destroyed or returned.
- E. In case a new unassessed pest is intercepted or Korea's quarantine pest (Annex 1) is continuously intercepted, pest risk assessment shall be conducted and necessary measures can be determined based on the result of assessment.

ANNEX 1: Quarantine Pests of Fresh Yellow Pitahaya From Colombia

● Pathogens:

Alternaria sp.

Cephalosporium sp.

Colletotrichum sp.

Erwinia sp.

Fusarium chlamydosporum

Fusarium redolens(=*F. oxysporum* var. *redolens*)

Fusarium sp.

Gliocladium sp.

Hendersonia sp.

Nigrospora sp.

Sclerotinia sp.

● Pests:

Anastrepha fraterculus

Anastrepha sp.

Ceratitis capitata

Milax gagates

Stenoma sp.

※ In case a new pest not on this list or a unassessed pest is intercepted, pest risk assessment shall be conducted and necessary measures can be determined based on the result of assessment.

ANNEXE 2: Guidelines for Vapor Heat Treatment

1. Procedure and process of VHT

- After the fruit core temperature reached 46°C, it shall be treated for more than 20 minutes and the relative humidity in the chamber shall be maintained at 95% during the treatment.
- The overall VHT time is 2 hours and 30 minutes.
- After the vapor heat treatment, the fruits are be cooled by water and dried by air.

2. Standards for checking VHT facilities

- Through the visual and physical inspection of all facilities, inspectors should check whether the facilities meet the requirements to prevent re-infection of fruits as well as other aspects that may affect the result of the treatment.
- The VHT chamber, circulation fan and heaters shall be cleaned and inspected every week.
- The temperature and humidity sensors shall be checked and calibrated every month.

3. Standards for sensor calibration test

- All sensors shall be calibrated before the use and every month by dipping them in a standard water bath where a standard thermometer and hygrometer are installed.
- The allowed correction factor of $\pm 0.3^{\circ}\text{C}$ shall be applied to all sensors. If the correction factor is over $\pm 0.3^{\circ}\text{C}$, the all sensors shall not be used.
- The result of the temperature measurement shall be printed out more than 3 times every 5 minutes.

4. Standards for VHT chamber test

- The VHT chamber test must be conducted at the commencement of each season and additional test may be carried out if necessary.
- Load empty crates to the maximum capacity inside the chamber.
- Place the temperature sensor at the center of each crate placed close to the vapor heat outlet.

- The chamber should be heated to the temperature of 46°C or higher and stabilized for more than 1 hour.
- Monitor the temperature of all sensors and check whether they conform to the fluctuation tolerance of $\pm 0.3^{\circ}\text{C}$.
- The time required to reach the temperature of 46°C shall not exceed 1 hour for all sensors.
- The temperature measurement shall be printed every 5 minutes.

5. Cold spot test

- The test shall be conducted at the beginning of every export season or if deemed necessary.
- Load the fruits to the maximum capacity inside the chamber.
- Pick the largest and heaviest fruit for the temperature test and put it in each pallet.
- The test fruit shall be hard, and their weight must be within the same range.
- Place the temperature sensor in the crate located at the top, middle and bottom of each pallet.
- Apply the vapor heat treatment in the same manner as it is done in the actual fruit export. (The treated volume may be exported after the test.)
- The spot which reached the temperature of 46°C last shall be determined as the cold spot.
- According to the test result, the location of temperature sensor shall be determined

6. Installation of thermometer and hygrometer

- In order to frequently check the temperature and humidity inside the VHT chamber and temperature of the core of fresh fruits located at the top, middle and bottom of the loaded fruits (including the cold spot) in the outside of chamber, automatic temperature and humidity recording equipment shall be installed. (if necessary, the record shall be printed.)
- Install the temperature sensors at more than 3 of the cores of fresh fruits and more than 2 locations of each VHT chamber. (At least more than 1 temperature sensor shall be installed at the cold spot identified through the cold spot test.)

- In order to ensure recording of fruit core temperatures, insert a sensor. (If necessary, connect some fruits.)

7. Prevention of fruit re-infection after VHT

- All doors and openings to the chamber, packing houses and storage facilities shall be installed with proper insect-proof facilities.
- Fruits that are VHT applied shall be separated from fresh fruits, and fruits that are not VHT applied shall not come into contact with fruits that are VHT applied.
- Fruits that are packed shall be covered with an insect proof net.
- Fruits that are treated shall be loaded to a clean container or truck for transportation.

8. Standards for treatment rejection

- In case the fruit core temperature is not raised to 46°C and last for 20 minutes during the treatment, or in case the humidity is not maintained at 95%.
- In case a live fruit fly is detected after VHT.
- In case a small sized fruit is used as the test sample among fruits mixed with different sizes.
- In case the temperature sensor is not inserted in the testing sample.
- In case there are factors that affected the result of the treatment.