# Quarantine Requirements for the Importation of Fresh Indian Jujube Fruits from Taiwan to Korea

1. These measures shall be limited to Indian jujube fruits (*Ziziphus mauritiana*) produced for commercial use in Taiwan.

2. The reverse traceability of export consignments shall be secured by making sure that export orchards, packing houses and cold treatment facilities for the export of Indian jujube to Korea are registered to and managed by the NPPO of Taiwan(hereinafter "APHIA") every year.

2.1 The list of export packing houses, and cold treatment facilities shall be notified to Animal and Plant Quarantine Agency of Republic of Korea (hereinafter referred to as "APQA") by APHIA before the commencement of export every year.

3. APHIA shall manage and supervise that the registered growers for export prevent the presence of Korean quarantine pests by carrying out Integrated Pest Management (IPM).

3.1 In the production areas of Indian jujube fruits for export to Korea, growers shall be managed to induce the decline in population of *Bactrocera dorsalis* by removing infested and dropped fruits.

3.2 Indian jujube fruits for export to Korea shall be grown within net houses

3.3 During the season when the population of *B. dorsalis* increases, MAT (Male annihilation technique) shall be applied to induce the decline in the population at early stage.

3.4 Trap with baits (protein hydrolysate or sugar solution that contains pesticides) shall be installed and trap results shall be recorded and stored.

4. APHIA shall inspect the sanitary condition of export packing houses (including cold treatment facility and storage) every year before the commencement of export and manage and supervise them to satisfy the following requirements:

4.1 Export packing houses (including cold treatment facility and storage) shall be kept clean through regular disinfection and treatment every year.

4.2 Necessary measures to prevent re-infestation of pest shall be taken for export packing houses (including cold treatment facility and storage).

4.3 Indian jujube fruits produced in the orchards not registered shall be prevented from being sorted, mixed and shipped together with other fresh fruits.

4.4 Leaves, stems, dirt and any other debris shall be prevented from being mixed with export consignments.

5. Fresh fruits of Indian jujube for export to Korea shall be cleaned with brushing, water and air blower in the course of sorting.

6. Indian jujube fruits from Taiwan to be exported to Korea shall be treated at/below 1 ℃ in temperature of the central part of the fruit at least for consecutive 12 days in accordance with detailed guidelines on cold treatment in the attached annex 2.

6.1 After quarantine inspection on the Indian jujube fruits treated under cold treatment, APHIA inspector shall issue phytosanitary certificate for the fruits and the following shall be additionally declared in the certificate:

"These Indian jujube fruits were treated under cold treatment at/below 1℃ for 12days."

7. Where it is necessary to transport the fruits treated under cold treatment within Taiwan, they shall be packed in a canton or a pallet, or covered with an insect screen whose hole is sized in 1.6x1.6mm or smaller to prevent re-infestation of pests.

8. APHIA shall verify that the following information is marked on each package for export to Korea, and shall take the following measurers to prevent re-infestation of pests during storage and transportation.

8.1 Name of an orchard (or its registration number), name of a packing house (or its registration number), and labeling of "For KOREA"

8.2 Each box of fresh fruits that pass the inspection shall be sealed with the means by which they were certified by APHIA: tape, sticker or label.

8.3 Ship consignment shall be sealed by APHIA after being loaded to containers.

9. APHIA shall conduct export inspection and issue a phytosanitary certificate for the fresh fruits free from the quarantine pests of Korea listed in the attached annex 1 and for the consignment satisfying the requirements agreed by Korea and Taiwan.

9.1 In inspection unit classified according to the homogeneity of the subject consignment, a fruit inspection shall be carried out on at least 2% of all the packages during export inspection.

9.2 In case that the infection of *B. dorsalis* is suspected, a fruit cut inspection shall be carried out. For the export consignment verified as free from the pest in the inspection, the pest-free status of the consignment should be additionally declared in its phytosanitary certificate. For the consignment where the pest is intercepted, it will fail to pass the inspection, and then its export will be suspended until the cause of the infection is identified.

9.3 Where other quarantine pests are intercepted, the consignment concerned will fail to pass the inspection. Provided that the intercepted pest is sterilized or removed, the consignment may pass the inspection.

9.4 Matters concerning cold treatment, sealing number (in case of ship consignment), the name of a packing house (or its registration number) and the name of cold treatment facility (or its registration number) should be additionally declared in a phytosanitary certificate.

10. Once a consignment arrives at the entry of port, APQA shall check the following matters. Where any abnormality is found during the inspection, a part or all of the consignment concerned shall be discarded and returned.

10.1 Whether to attach a phytosanitary certificate to the consignment, and the adequacy of additional declaration of the certificate: matters concerning cold treatment, sealing number, the name of a packing house (or its registration number) and the name of cold treatment facility (or its registration number).

10.2 Whether to seal every and each package with the means by which it was certified by APHIA (tape, sticker or label).

10.3 whether to seal the container as for ship consignment.

10.4 Whether to mark the name of orchard (or its registration number), the name of a packing house (or its registration number) and “For KOREA” on the packages.

11. APQA shall conduct an import inspection pursuant to Plant Protection Act of Korea.

11.1 Upon the interception of live *B. dorsalis*, the consignment in question shall be discarded and returned, and its export shall be suspended until the cause of infection is identified.

11.2 Where other live quarantine pests and the ones that have not been distributed in Korea are detected, treatment shall be conducted. If there is no treatment method for the intercepted pest, the consignment in question shall be discarded and returned.

11.3 Where any of the quarantine pests listed in the attached annex 1 is frequently intercepted, so that the likelihood of their introduction is very high, pest risk assessment shall be carried out to determine necessary quarantines measures.

12. APQA inspector shall carry out preclearance inspection together with APHIS inspector to check *B. dorsalis* trap, export inspection, the sanitary condition of export orchards and packing houses (including cold treatment facilities and storages), and cold treatment process.

12.1 The preclearance inspection shall be conducted at the official request of APHIA before the commencement of export every year, and all the expenses incurred by the inspection shall be borne by the Taiwanese quarantine authority.

［Annex 1] Quarantine Pests of Fresh Indian Jujube Fruits from Taiwan

Pests

*Anomala cupripes*

***Bactrocera dorsalis****

*Ceroplastes floridensis*

*Eutetranychus orientalis*

*Maconellicoccus hirsutus,*

*Nipaecoccus filamentosus*

*Nipaecoccus viridis*

*Orgyia postica*

*Phenacoccus solenopsis*

*Planococcus minor*

*Stelidota multiguttata*

* Pest subject to special risk management: 1 species

※ If any pest other than the ones listed above is detected, necessary measures shall be taken in accordance with Plant Protection Act.

## [Annex 2] Detailed Guidelines on Cold Treatment on Fresh Indian Jujube Fruits from Taiwan

### 1. Cold Treatment Facility

1.1 Cold treatment facility shall be registered APHIA and kept in clean and good sanitary condition. Sealing or insect screening facility shall be installed in the treatment facility to prevent the entry of pests.

1.2 Cold treatment facility shall be capable of automatically keeping the temperature of the central part of the fruits at/blow 1 ℃.

1.3 Temperature meter and recording devices shall be prepared to check and record the temperature of the treatment room and of the inside of the fruits from outside.

### 2. Temperature Recording Device

2.1 Temperature recording device is an auto temperature recording device, such as strip chart or data logger, that allows frequent temperature checking from outside. All the readings of the temperature sensor shall be recorded, stored and printed out continuously, and identification numbers of the recording devices and cold treatment facility shall be indicated.

2.2 The accuracy of a temperature recording device shall be ±0.3℃. The readings should be recorded at least every 0.5~ 1 hour, and it should not be allowed to randomly manipulate the readings.

### 3. Temperature Sensor

3.1 The accuracy of temperature sensor should be ±0.1℃, and an allowable error range should be less than ±0.3℃.

3.2 Temperature sensor should be calibrated every month and right before annual cold treatment on fresh Indian jujube fruits for export to Korea. The temperature sensor with an error range of ±0.3℃ or more is not allowed to be used.

3.3 A temperature sensor shall be installed under the supervision and monitoring of APHIA inspectors. At least three sensors for fruit pulp temperature, and two for room temperature shall be installed.

3.4 One for measuring fruit pulp temperature should be installed at the center of the cold treatment facility, and other two should be installed an upper and a lower part of the surrounding area respectively. Sensors for measuring the room temperature should be installed at the inlet and outlet of cold air respectively.

3.5 Where fruits in different size are mixed together, the sensor should be inserted into the bigger-sized fruits.

**4. Cold Treatment Result Checking**

4.1 Cold treatment should be commenced from the moment when all the temperature sensors indicate below 1℃ and should last for consecutive 12 days (288 hours) from the start. If it fails to keep temperature below 1℃, the treatment should be restarted from the moment when the temperature goes down below 1℃ and the process should be kept for 12 days again.