



United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine



Risk Management Document

Importation of fresh fruit of Chinese Sand Pear, *Pyrus pyrifolia*, from China, including the special administrative regions of Hong Kong and Macau, into the entire United States, including all territories

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**Plant Health Programs (PHP)
Regulations, Permits and Manuals (RPM)
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This document describes the risk management measures for the importation of fresh fruit of Chinese sand pear, *Pyrus pyrifolia* (Burm. f.) Nakai, from China, including the special administrative regions of Hong Kong and Macau, into the entire United States, including all the Territories. The volume of Chinese Sand Pears to be exported to the United States is estimated to be high (USDA, 2009).

United States Code of Federal Regulations (7 CFR 319.56, the regulations) authorizes importation of fruits and vegetables from foreign countries into the United States.

A qualitative, pathway-initiated risk assessment (PRA), “Importation of fresh fruit of Chinese Sand pear, *Pyrus pyrifolia*, from China, including the special administrative regions of Hong Kong and Macau, into the entire United States, including all the Territories” (USDA, 2009) was developed in support of a request from the People’s Republic of China to export sand pears into the United States. Entry of these commodities into the United States presents a risk of introduction of exotic plant pests. The PRA listed sixteen quarantine pests that may follow the pathway of commercial shipments of Chinese Sand pears. Fourteen of the pests were rated ‘High’ risk, and two were rated ‘Medium’ risk. These pests that may follow the pathway are:

High risk pests

Arthropods

Amphitetranychus viennensis (Zacher) (Acari: Tetranychidae)
Bactrocera dorsalis (Hendel) (Diptera: Tephritidae)
Calepitrimerus neimongolensis Kuang and Geng (Acari: Eriophyidae)
Carposina sasakii Matsumura (Lepidoptera: Carposinidae)
Ceroplastes japonicus Green (Hemiptera: Coccidae)
Ceroplastes rubens Maskell (Hemiptera: Coccidae)
Conogethes punctiferalis (Guenée) (Lepidoptera: Pyralidae)
Grapholita inopinata (Heinrich) (Lepidoptera: Tortricidae)
Phenacoccus pergandei Cockerell (Hemiptera: Pseudococcidae)
Planococcus kraunhiae (Kuwana) (Hemiptera: Pseudococcidae)

Fungi

Alternaria gaisen Nagano (Ascomycetes: Pleosporales)
Guignardia pyricola (Nose) W. Yamamoto (Ascomycetes: Dothideales)
Monilinia fructigena Honey in Whetzel (Ascomycetes: Helotiales)
Venturia nashicola Tanaka and Yamamoto (Ascomycetes: Pleosporales)

Medium risk pests

Acrobasis pyrivorella (Matsumura) (Lepidoptera: Pyralidae)
Aphanostigma iaksuiense (Kishida) (Hemiptera: Phylloxeridae)

According to the USDA guidelines for pathway-initiated pest risk assessments (USDA, 2000), specific phytosanitary measures, supplemental to port-of-arrival inspection, are strongly

recommended for pests given a ‘High’ pest risk potential and specific phytosanitary measures may be necessary for pests given a ‘Medium’ pest risk potential.

Risk Management Measures:

One of the pests listed as a ‘High’ risk pest is the fruit fly, *Bactrocera dorsalis*. This fruit fly is found throughout Southeast Asia including southern China (Koyama 1989, White and Elson-Harris, 1992; Yang *et al.*, 1994). In Asia, *Bactrocera dorsalis*, is not found north of the 33rd parallel (EPPO, 1997). (A risk mitigation document (USDA, 2007), which provided justification on the removal of fruit fly trapping and the cold treatment requirement for importation of Ya pear (*Pyrus bretschneideri*) fruit from China into the United States, also detailed the range of *Bactrocera dorsalis* in China at length.) The current PRA, “Importation of fresh fruit of Chinese Sand pear, *Pyrus pyrifolia*, from China, including the special administrative regions of Hong Kong and Macau, into the entire United States, including all the Territories” (USDA, 2009) includes areas both north and south of the 33rd parallel. Due to the presence of *Bactrocera dorsalis*, south of the 33rd parallel, orchards located below the 33rd parallel that export sand pears to the United States will be required to follow additional mitigation measures as detailed below.

APHIS proposes that sand pears from China must be imported into the United States only under the following conditions:

AREAS NORTH OF 33RD PARALLEL:

1. Sand pear must be grown by growers registered with the national plant protection organization (NPPO) of China in an APHIS-approved export production site.
2. The NPPO of China shall be responsible for ensuring that registered orchards are subject to field sanitation, that growers are aware of quarantine pests, and that control measures are taken for pest control. Details of specific measures will be included in an operational work plan (OWP) approved by NPPO of China and APHIS.
3. All propagative material introduced into a registered production site must be certified free of the quarantine pests for China sand pears by the NPPO of China.
4. All sand pear fruits will be bagged on trees with double layered paper bags when each fruit is no more than 2.5 cm in diameter. The bags must remain intact on the pears through the harvest and during the movement to the packing house.
5. The registered growers shall be responsible for following the phytosanitary measures agreed upon by APHIS and the NPPO of China, including applying pesticides to reduce pest populations.
6. The NPPO of China or official authorized by the NPPO of China must inspect the registered production site for signs of pest infestation and allow APHIS to monitor the inspection. The NPPO of China must provide APHIS with information on pest

detections and pest detection practices, and APHIS must approve the pest detection practices.

7. Upon detection in the production site of *Amphitetranychus viennensis*, *Calepitrimerus neimongolensis*, *Carposina sasakii*, *Ceroplastes rubens*, *Conogethes punctiferalis*, *Grapholita inopinata*, *Phenacoccus pergandei*, *Planococcus kraunhiae*, *Acrobasis pyrivorella*, *Aphanostigma iaksuiense*, *Alternaria gaisen*, *Guignardia pyricola*, *Monilinia fructigena*, or *Venturia nashicola*, the NPPO of China must notify APHIS immediately. APHIS may reject the lot or consignment and may prohibit the importation into the United States of sand pears from the production site.
8. The exportation to the United States of sand pears from the rejected production site may resume in the next growing season if an investigation is conducted and APHIS and the NPPO of China agree that appropriate remedial actions have been taken. If any of these pests are detected in more than one registered production site, APHIS may prohibit the importation into the United States of Sand pears from China until an investigation is conducted and APHIS and the NPPO of China agree that appropriate remedial actions have been taken.
9. All sand pears must be packed in pest exclusionary packing houses that must be registered with NPPO of China. Packing houses must have a tracking system to identify individual orchards for trace back.
10. Packing houses must not pack sand pears for other countries or non-registered production sites while packing sand pears from registered production sites in China that are destined for export to the United States.
11. Details of packing house procedures to be followed will be included in the OWP.
12. The NPPO of China or officials authorized by the NPPO of China must inspect the sand pears at the packinghouses for signs of pest infestations and allow APHIS to monitor the inspections. Upon detection of *Amphitetranychus viennensis*, *Calepitrimerus neimongolensis*, *Carposina sasakii*, *Ceroplastes rubens*, *Conogethes punctiferalis*, *Grapholita inopinata*, *Phenacoccus pergandei*, *Planococcus kraunhiae*, *Acrobasis pyrivorella*, *Aphanostigma iaksuiense*, *Alternaria gaisen*, *Guignardia pyricola*, *Monilinia fructigena*, or *Venturia nashicola*, APHIS may reject the consignment.
13. Each shipping box must be marked with the identity of the packing facility and grower to ensure trace back.
14. Sand pears must be imported as commercial consignments only.
15. Sand pears must be shipped in insect-proof containers and safeguarded during transport to the United States in a manner that will prevent pest infestation.

16. Sand pears must be held in a cold storage facility while awaiting export. If any other fruit from unregistered production sites are stored in the same facility, the sand pears must be isolated from that other fruit.
17. Each consignment of sand pears must be accompanied by a Phytosanitary Certificate (PC) issued by the NPPO of China stating that conditions of this section (Importation conditions for areas north of 38th parallel) have been met, and that the consignment has been inspected and found free of quarantine pests.

AREAS SOUTH OF 33RD PARALLEL:

All mitigation measures listed above will be followed plus the following.

1. All Sand pear production sites and associated areas (registered orchards, registered packing houses and the surrounding areas) must have a pest monitoring system in place for the fruit fly, *Bactrocera dorsalis*. The traps must use methyl eugenol as lure. A minimum of one methyl eugenol trap should be placed in each registered orchard and any villages present at the rate of one trap for each square kilometer. The traps must be serviced once in two weeks.
2. Data consisting of number, location of traps, and trap catches must be made available to APHIS upon request.
3. The NPPO of China will notify APHIS of the detection of any species of economically important fruit flies within 48 hours of detection.
4. The capture of a single fruit fly in a registered orchard will immediately cancel export from that orchard until the source of the infestation is delimited, trap density is increased, pesticide sprays are applied, or other measures acceptable to APHIS are taken to prevent further occurrences.
5. All Sand pears from registered orchards south of the 33rd parallel will undergo cold treatment as per the treatment schedule T107-j prior to export to the United States.

Efficacy of Risk Management Measures:

Most of the arthropods listed as quarantine pests in the PRA (USDA, 2009) also occur on Ya pears (*Pyrus bretschneideri*) and fragrant pears (*Pyrus* sp. nr. *communis*), both of which are currently authorized under the regulations to be exported to the United States from China. A review of pest interceptions at U.S. ports-of-entry for *P. bretschneideri* and *P. sp. nr. communis* from China over the period 2000 to October 29, 2010 (PestID, 2010) that were imported in accordance with the regulations reveals no arthropod of quarantine concern listed in the PRA (USDA, 2009) has been intercepted. This shows the efficacy of current mitigation measures in place for imports of Ya pears and fragrant pears.

The PRA also identifies several phytopathogenic fungi that are likely to follow the pathway on sand pears. One such fungus, *G. pyricola* (Nose) W. Yamamoto (Ascomycetes: Dothideales), has not been identified as a pest of concern for Ya pears or fragrant pears from China. While we do not consider any one mitigation measure to be effective in preventing the introduction of these phytopathogenic fungi to fragrant pears from China, the bagging, inspection, and packinghouse requirements specified above, in conjunction with the possible inspection of the fruits at ports of entry to the United States, is sufficient to address the risk that sand pears infested with such fungi would be imported into the United States. This same complex of measures addresses the risks presented by *Calepitrimerus neimongolensis* Kuang and Geng, another pest which is not considered likely to follow the pathway on Ya pears or fragrant pears from China that are imported into the United States but that might follow the pathway on sand pears from China.

The Oriental fruit fly, *B. dorsalis*, is known to occur in the region south of the 33rd parallel. Regular fruit fly monitoring through methyl eugenol baited traps will reveal the presence of this pest in registered orchards designated for export of sand pears to the United States. Presence of this pest will result in the immediate cancellation of exports from the affected orchard(s).

Summary:

Currently, Ya pears and fragrant pears have been imported into the United States from China without interceptions of arthropods for over 10 years, thus demonstrating the efficacy of existing mitigation measures. As most of the arthropod pests listed as pests of concern on Ya pears and fragrant pears also occur on sand pears, a combination of current measures for imports of Ya pears and fragrant pears will also be efficacious for these pests on sand pear imports.

There are several phytopathogenic fungi that might follow the pathway on sand pears from China. One of these fungi, along with a mite, are not considered likely to follow the pathway on Ya pears or fragrant pears, but might follow the pathway on sand pears. However, several mitigation measures, also drawn from the existing measures for the importation of Ya pears and fragrant pears, will address the risk presented by these pests.

The requirements include registration of orchards and packinghouses with the NPPO of China; sourcing of all propagative material that enters the place of production; inspection for quarantine pests at set intervals by the NPPO of China; bagging of fruit; safeguarding; labeling; and importation in commercial consignments.

These requirements will pertain to imports of pears from orchards in China that are located north of the 33rd parallel, in areas where the fruit fly, *Bactrocera dorsalis*, is not known to occur.

For orchards south of the 33rd parallel, there will be additional requirements: maintenance of a trapping program for fruit fly, and cancellation of exports of sand pears to the United States from any orchard in which fruit fly is detected. The requirement to maintain a fruit fly monitoring program will provide data on the presence or absence of the fruit fly, *Bactrocera dorsalis*. Cancellation of exports from infested orchards will provide the required phytosanitary measure to prevent entry of the fruit fly.

The requirements of a phytosanitary certificate from the NPPO of China will document that the importation is a product of China. A phytosanitary certificate also provides phytosanitary security by requiring the NPPO to conduct inspections for pests.

APHIS has determined that the listed risk management measures, along with the requirement of a phytosanitary certificate, and the port of entry inspection, will mitigate the risk of pest introduction on sand pears from China.

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