

**PROTOCOL OF PHYTOSANITARY REQUIREMENTS FOR THE EXPORT OF  
FRESH BLUEBERRY FRUIT FROM U.S.A. TO CHINA  
BETWEEN DEPARTMENT OF AGRICULTURE OF THE UNITED STATES OF  
AMERICA AND GENERAL ADMINISTRATION OF CUSTOMS OF THE  
PEOPLE'S REPUBLIC OF CHINA**

In order to safely export fresh blueberry fruit from the United States of America to the People's Republic of China, Department of Agriculture of the United States America (hereinafter referred to as "USDA") and General Administration of Customs of the People's Republic of China (hereinafter referred to as "GACC"), on the basis of pest risk analysis, exchanged views and reached consensus as follows:

**Article 1 General Provisions**

Fresh blueberry (*Vaccinium corymbosum*, *V. virgatum*, and hybrids of those species) fruit from the United States to be exported to China should comply with Chinese related laws and regulations, meet the phytosanitary requirements of the provisions of this Protocol, and not carry quarantine pests of concern to China (See Appendix 1).

Fresh blueberries for export to China shall be produced from the States of California, Florida, Georgia, Indiana, Louisiana, Michigan, Mississippi, New Jersey, North Carolina, Oregon and Washington in the United States.

Commercial consignments only may be exported to China.

If any other pests are newly detected (in blueberry growing areas or at entry ports in China) and have not been assessed by GACC, then pest identification shall be conducted, and USDA shall inform GACC as soon as possible for the first case, so that GACC may determine if they are quarantine pests and adopt proper quarantine measures if required.

**Article 2 Registration**

USDA will ensure that a system is in place to enable traceability back to the supplying orchard (growing lot) and packing house, whenever any product is detected as non-compliant with the requirements.

The blueberries shall come from packing houses registered and approved by USDA. After review and approval, GACC will publish the list on its official website. Registered packing houses will have a system in place to ensure that all fruits can be traced to the supplying orchard. The list of registered orchards must be on file with the packing house and available for review by USDA and GACC during site visits.

Prior to the beginning of each export season, USDA shall provide GACC with a list of packing houses or shippers (if applicable) approved to export U.S. blueberries to China.

### **Article 3 Orchard Management**

Under the supervision of USDA or USDA-authorized personnel, effective monitoring, precautionary and Integrated Pest Management (IPM) measures shall be taken in blueberry production orchards to avoid or minimize the occurrence of the quarantine pests of concern to China, and to maintain good phytosanitary conditions in the designated production region. Required risk mitigation measures are found in Appendix 2.

Upon request in the event of a non-compliance or during an on-site visit, USDA shall provide GACC with the relevant procedures and results of above-mentioned pest monitoring and IPM program. Growers must follow standard pest control guidelines in orchards based on the federal or state cooperative agricultural extension service's IPM guidelines. These guidelines shall be made available to GACC upon request.

Records must be kept for a minimum of one year, or through the end of the next export season, for tracing shipments of blueberries to their growing orchards, including pests of quarantine significance and the corresponding mitigation measures. Upon GACC request, USDA will provide records to GACC.

### **Article 4 Packaging**

The processing, packing, storage, and transportation of blueberries shall be subject to monitoring by USDA or the USDA-authorized regulatory cooperator.

Before packing, the blueberries shall be culled and sorted to insure that the fruits are free of insects, mites, decayed fruits, leaves, twigs, roots, and soil.

The packaging for blueberries shall be clean and unused and meet the Chinese phytosanitary requirements.

All consignments of blueberries for export to China will be handled and safeguarded after packing in a manner that will prevent infestation of the shipment by pests of concern and will be segregated from those destined for other markets.

If wood packaging material is used, it must comply with International Standards for Phytosanitary Measures No. 15 (ISPM 15).

All packages must be labeled in English with the orchard's registered number (also known as the grower lot number), and the name of the packing house or shipper. Likewise, the



typeface “输往中华人民共和国” (Exported to the People’s Republic of China)” in English or Chinese shall be noted on every pallet of blueberries. If pallets are not used, the typeface “输往中华人民共和国” (Exported to the People’s Republic of China) in English or Chinese shall be affixed to each individual packaging.

Containers in which fruit is loaded for export to China must keep their cleanliness at the time of loading. This activity must be recorded by the shipper for USDA verification.

#### **Article 5 Inspection Prior to Export**

Prior to export, USDA or USDA-authorized regulatory cooperators must sample 2% of the total number of cases from each consignment and inspect 100% of the sampled fruits. All suspect fruit will be cut from the 2% sample.

If no phytosanitary problems are found and inspection results justify the reduction during the first year, the level of export inspection will be reduced to 1%.

If any live quarantine pest of concern to China is detected during the export inspection, the whole consignment shall not be exported to China. If live quarantine pests are detected twice in a single shipping season from the same orchard (growing lot) or packing house, the orchard (growing lot) or packing house will be suspended, subject to investigation by USDA.

On completion of quarantine inspection, USDA or USDA-authorized regulatory cooperators shall issue a phytosanitary certificate. The phytosanitary certificate shall indicate the name of the packing house or shipper and the grower lot number, and shall indicate that: “This consignment of blueberry fruit complies with *Protocol of Phytosanitary Requirements for the Export of Fresh Blueberry Fruit from U.S.A. to China*, and is free from any quarantine pests of concern to China.”

#### **Article 6 Entry Inspection and Quarantine**

Shipments of blueberries may be exported to China by air freight or ocean vessel.

Blueberries to be exported to China will be allowed to enter through any ports designated by GACC for importing fresh fruits.

When the blueberries arrive at the entry port, China Customs will examine relevant documents and labels, and conduct quarantine inspection.

If blueberries originating from unapproved packing houses or shippers are found, the shipment will not be allowed entry.

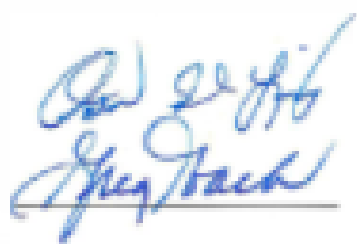
If any live quarantine pest listed in Appendix 1 is found, GACC will follow the Fruit MOU (Memorandum of Understanding Regarding the Procedures for On-Arrival Interceptions of Quarantine Pests in Fresh Fruit) signed in 2012 by the both sides.

#### **Article 7 Retrospective Review**

In the event of problems (such as repeat detections of quarantine pests on arrival) or significant changes in pest status, GACC will make a further risk assessment and consult with USDA to adjust the quarantine pest list and related phytosanitary measures. At same time, GACC may send quarantine officers to the relevant state, with assistance from USDA, for a site visit to investigate orchard pest monitoring and control, packaging management, and pre-export inspection and/or overall implementation of this Protocol.

The cost (including transportation and accommodation expenses) of the Chinese officers and/or experts' travel to conduct the project evaluation and site visits in the United States mentioned above will be borne by the United States.

This protocol will take effect on the date of signing in Chinese and English languages, in duplicated copies. Both the Chinese and English versions are equal in validity. Should there be any interpretation discrepancies, it will be settled through negotiation. This protocol is valid for two years. If neither side proposes to revise or terminate two months prior to the valid date, its validity automatically extends indefinitely.



**Representative of  
Department of Agriculture  
Of the United States of America**

Date: 05-06-2020



**Representative of  
General Administration of Customs  
of the People's Republic of China**

Date: 2020.5.6

## Appendix 1

### List of quarantine pests of concern to China

1. *Acrobasis vaccinii*
2. *Conotrachelus nenuphar*
3. *Grapholita packardi*
4. *Lepidosaphes ulmi*
5. *Rhagoletis mendax*
6. *Diaporthe vaccinii*
7. *Godronia cassandrae*
8. *Pestalotia vaccinii*
9. *Monilinia vaccinii-corymbosi*



## Appendix 2

### Required risk mitigation measures for quarantine pests of concern to China

#### 1. Pre-harvest Pest Management

Under the supervision of USDA or USDA-authorized personnel, blueberries intended for export to China must be grown in orchards that are managed in accordance with integrated pest management (IPM) guidelines, as prescribed by the federal or state cooperative agricultural extension service, to ensure that quarantine pests of concern to China (Appendix 1) are adequately controlled.

IPM guidelines for blueberry orchards generally recommend monitoring for the presence of pests to determine the need to apply insecticidal or fungicidal controls. Monitoring may include the use of pheromone trapping to detect adults if an effective trap is available, or more typically involves regular visual scouting of the production orchard to detect the presence of pests, or symptoms of pests such as feeding damage or disease symptoms. Monitoring in orchards producing blueberries for export to China will be conducted by a licensed pest control consultant (PCC), or by a trained person under the supervision of a licensed PCC.

- a. *Acrobasis vaccinii* (cranberry fruitworm) and *Grapholita packardii* (cherry fruitworm)

Insecticidal controls should be applied for those pests when present. Monitoring may be conducted using pheromone trapping to detect adults, or visual scouting to detect the presence of eggs and/or larvae. Alternatively, growers may choose to apply insecticides as a precaution, based upon the relevant phenology model.

- b. *Conotrachelus nenuphar* (plum curculio)

The application of an insecticidal control is recommended if feeding damage is detected or if fields have a history of plum curculio infestation.

- c. *Rhagoletis mendax* (blueberry maggot)

Blueberries originating from states other than California, Oregon, and Washington shall be grown in orchards that have been managed to control *Rhagoletis mendax* in accordance with IPM guidelines.

- d. *Lepidosaphes ulmi*

Regular pruning is recommended as a typically effective measure for controlling the scale insects. But if needed, the application of a dormant season oil or an insecticide targeting the crawler stage is recommended.

e. *Diaporthe vaccinii*, *Godronia cassandrae* and *Pestalotia vaccinii*

Monitoring for disease symptoms of *Diaporthe vaccinii*, *Godronia cassandrae* and *Pestalotia vaccinii* will be conducted at the blueberry orchards where these pests occurred. And the use of a combination of cultural controls and the application of appropriately timed application of fungicides are recommended, when necessary.

f. *Monilinia vaccinii-corymbosi* (mummy berry disease)

Monitoring for symptoms of the disease will be conducted during the late winter/early spring. The application of an effective fungicide is recommended if any symptoms of mummy berry are detected. Alternatively, the application of a protective fungicide is recommended to prevent primary infection. Fungicides used at leaf emergence prevent primary (leaf shoot) infection; fungicides during bloom prevent secondary (flower) infection.

Growers must maintain records of pest management, monitoring, and control activities undertaken in orchards throughout the growing season. Details of the pest control programs must be provided to GACC, on request, in case of a non-compliance.

All fresh blueberry fruit for export to China will be hand harvested. Only fruits that are free of signs of insect infestation or disease infection will be harvested.

## 2. Post-harvest Pest Management

The following conditions will be applied risk management of quarantine pests at the post-harvest stage:

- a. A sample of blueberry fruit, taken from each grower lot upon delivery to the packing house, will be subjected to an approved fruit extraction method to confirm freedom from *Acrobasis vaccinii* and *Grapholita packardii*
  - (a) Each sample will consist of a minimum of 1 liter of fruit.
  - (b) The samples will be tested for the presence of larvae using either a brown sugar or salt water solution. The solutions will be prepared according to the following examples:
    - Sugar solution: 3.5 kg of brown sugar is dissolved in 20 liters of water; the resulting solution should have a brix reading of at least 15.
    - Salt solution: 1 liter of salt is dissolved in 16 liters of water.
  - (c) The sample of fruit will be placed into a container large enough that fruit is in a single layer on the bottom. Fruit may be gently crushed.
  - (d) The solution will be added to cover fruit by at least 1 cm.
  - (e) The solution will be carefully inspected for larvae by trained packing facility staff (subject to oversight/monitoring by USDA or USDA authorized regulatory officials).



- (f) If larvae are present, they will begin to emerge immediately, and most will have exited the fruit within 15 minutes.
  - (g) Any larvae detected will be collected and identified by an USDA authorized regulatory official.
- b. If any live larva of *Acrobasis vaccinia* or *Grapholita packardi* is detected as a result of the fruit extraction, fruit from that lot will not be eligible to pack for export to China.
  - c. Fruits that will be exported in accordance with *Section 3: Pointed Formulation Management Measures; 3.2 Phytosanitary Treatment: Fumigation Treatment*, shall not be subjected to the fruit extraction method (a-b above).
  - d. At the beginning of the packing process, fruits will be subjected to high pressure air cleaning to remove leaves, debris, and small or shriveled fruit.
  - e. Fruits will be sorted during packing, using electronic sorters and hand sorting, to remove all deformed or damaged fruits.
  - f. Fruits in each consignment will be subjected to appropriate sampling and phytosanitary inspection, including the cutting and internal inspection of suspect fruits, to ensure that the consignments are free of quarantine pests of concern to China (Appendix 1).

### **3. Pointed Formulation Management Measures**

#### **3.1 Pest Free Area**

Blueberries originating from the states of California, Oregon, and Washington will be certified as having been produced in pest free areas for *Contrachelus nenuphar* and *Rhagoletis mendax*. If *Contrachelus nenuphar* or *Rhagoletis mendax* is found in any of the pest free areas, the free production status of the producing area shall be cancelled, and trapping, investigation, and comprehensive prevention and control shall be strengthened. The conditions for the re-acquisition of pest free area status will be met once no pests are found during continuous monitoring and investigation for 12 months. Relevant monitoring data shall be provided to GACC upon request.

#### **3.2 Phytosanitary Treatment: Fumigation Treatment**

Blueberries originating from states other than California, Oregon, and Washington must be fumigated with methyl bromide at atmospheric pressure by one of the following schedules.

- a. 32 g/m<sup>3</sup> (2 lbs./1,000 ft.<sup>3</sup>) for 2 hours at 27.7°C (82°F) or above; or



- b. 32 g/m<sup>3</sup> (2 lbs./1,000 ft.<sup>3</sup>) for 2.5 hours at 22.2°C - 27.2°C (72°F-81°F); or
- c. 32 g/m<sup>3</sup> (2 lbs./1,000 ft.<sup>3</sup>) for 3 hours at 16.6°C - 21.6°C (62°F-71°F); or
- d. 32 g/m<sup>3</sup> (2 lbs./1,000 ft.<sup>3</sup>) for 3.5 hours at 10°C - 16.1°C (50°F-61°F).

The fumigation shall be done by applicators who are registered or certified in fumigation pest control in the state of origin.

Each fumigation shall be monitored and supervised by USDA or USDA authorized personnel.

### 3.3 Treatment Equivalency

In accordance with IPPC standards of equivalency, GACC and USDA agree to consider and amend this protocol with additional efficacious and verified phytosanitary systems, including a systems approach or any other phytosanitary treatments, to replace fumigation.