



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



Risk Management Document

Importation of Fresh Blueberry fruit (*Vaccinium* spp.) from Uruguay and South Africa into the continental United States

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V 1.4**

**Plant Health Programs (PHP)
Commodity Imports Analyses and Operations (CIAO)
Contact Persons: *Tony Román/Sharon Porsche***

I. Revision of Cold Treatment Schedules

The United States Department of Agriculture (USDA)’s Animal and Plant Health Inspection Service (APHIS) is proposing to amend the treatments T107-a and T107-a-1 to add blueberries to the list of fruits and vegetables that may be cold-treated with these treatments.

Treatment Schedules T100 - Schedules for Fruit, Nuts, and Vegetables
Fruits for Which Cold Treatment Is Authorized

T107-a

Apple, Apricot, Avocado, Cape Gooseberry Cherry, Ethrog, Grape, Grapefruit, Kiwi, Lemon, Loquat, Litchi (Lychee), Nectarine, Orange, Ortanique, Peach, Pear, Persimmon, Plum, Plumcot, Pomegranate, Pummelo, Quince, Sand Pear, Tangerine (includes Clementine)

Pest: *Ceratitis capitata* (Mediterranean fruit fly) and *Ceratitis rosa* (Natal fruit fly)

Treatment: T107-a Cold treatment

Temperature	Exposure Period
34 °F (1.11 °C) or below	14 days
35 °F (1.67 °C) or below	16 days
36 °F (2.22 °C) or below	18 days



Pretreatment conditioning for avocado (heat shock or 100.4 °F (38.0 °C) for 10 to 12 hours) is optional and is the responsibility of the shipper. The pretreatment conditioning, which may improve fruit quality, is described in HortScience 29 (10): 1166-1168, 1994, and 30(5): 1052-1053 (1995)

T107-a-1

Apple, Apricot, Cherry, Grape, Grapefruit, Kiwi, Mandarin, Nectarine, Orange, Peach, Pear, Plum, Pomegranate, Quince, Sweet orange, Tangelo, Tangerine (includes Clementine)

Pest: *Ceratitis capitata* (Mediterranean fruit fly) and species of *Anastrepha* (other than *Anastrepha ludens*)

Treatment: T107-a-1 Cold treatment

Temperature	Exposure Period
34 °F (1.11 °C) or below	15 days
35 °F (1.67 °C) or below	17 days

Background and rationale for the revision

In May 2006, Argentina requested APHIS to allow the use of cold treatment as an alternative treatment to meet the United States’ entry requirements for Argentine blueberries. Until that time, blueberries from Argentina have been allowed into the United States only after fumigation with methyl bromide using the treatment T101-i-1-1. Since blueberries were not included among the commodities that may be cold treated

with an APHIS-approved treatment, APHIS reviewed the available information on blueberries and administratively agreed to allow Argentina to treat their blueberries with T107-a-1 (Fedchock, 2006). The T107-a-1 is an APHIS-approved cold treatment to mitigate risks from fruit flies *Ceratitis capitata* (Wiedemann) and *Anastrepha* spp. other than *A. ludens*.

Upon further review of the more recent data on cold treatment of blueberries (Vaccaro and Bouvet, 2006; Willink *et. al.*, 2007), APHIS concluded that both, T107-a and T107-a-1, are effective cold treatment schedules against the targeted pests in blueberries and that blueberries be added to the list of commodities approved to receive these treatments. The treatment T107-a is effective against Medfly *Ceratitis capitata* and the treatment T107-a-1, against the Medfly and species of *Anastrepha* including the South American fruit fly [*Anastrepha fraterculus* (Wiedemann)]. The South American fruit fly is known to occur in several countries of South America e.g. Argentina and is one of pests of concern for blueberries in the region.

Therefore through this regulatory action, we are proposing to add blueberry to the two treatment schedules T107-a and T107-a-1. In addition to providing an alternative treatment for blueberries, which are currently allowed into the United States from Argentina with methyl bromide fumigation only, this action will facilitate new market access to cold-treated blueberries from Uruguay and South Africa.

II. Uruguay

A. Introduction

In support of a request for market access to import fresh blueberry fruit from Uruguay into the United States, Uruguay's Dirección General de Servicios Agrícolas (DGSA) prepared a pest risk assessment (PRA) as per the *Guidelines for Pathway-Initiated Pest Risk Assessment* (USDA, 2000, v. 5.02). The PRA considered only the highbush blueberries (*Vaccinium corymbosum* L) and the rabbit-eye blueberries (*V. virgatum* Aiton), and identified potential pest risks involved with their importation into the continental United States. The PRA developed by Uruguay was then reviewed and finalized by the Center for Plant Health Science and Technology (CPHST) division of the United States Department of Agriculture (USDA)'s Animal and Plant Health Inspection Service (APHIS). As a result, two pests of quarantine significance were determined as likely to follow the blueberry pathway (USDA, 2007a):

Anastrepha fraterculus (Wiedemann) (Diptera: Tephritidae)

Ceratitis capitata (Wiedemann) (Diptera: Tephritidae)

Both pests are fruit flies and were rated as having high risk potentials. Per the *Guidelines for Pathway-Initiated Pest Risk Assessment*, for pests assigned high risk potentials, phytosanitary measures beyond port of entry inspections are strongly recommended.

This document outlines the phytosanitary measures that APHIS will require if the proposed importation of fresh blueberries from Uruguay into the United States is approved and provides the evidence used by APHIS to conclude that these measures will effectively prevent the introduction of the quarantine pests.

B. Proposed Risk Mitigation Measures

We propose that the highbush and rabbit-eye varieties of blueberries may be imported from Uruguay into the United States only under the following conditions:

- (a) The fruit must be cold treated for Mediterranean fruit fly or Medfly (*Ceratitidis capitata*) and South American fruit fly (*Anastrepha fraterculus*) using APHIS treatment schedule T107-a-1 and *in* accordance with parts 305 and 319 of 7CFR.
- (b) Each shipment of fruit must be accompanied by a phytosanitary certificate issued by the national plant protection organization (NPPO) of Uruguay.
- (c) Only commercial shipments of fresh blueberry fruit (*Vaccinium corymbosum* L. and *Vaccinium virgatum* Aiton) are eligible to enter the United States.

C. Evidence for the Effective Removal of Pests of Concern from the Pathway

Cold treatment T107-a-1 is an APHIS-approved treatment for blueberries against *Ceratitidis capitata* and *Anastrepha* spp. except *A. ludens* (Fedchock, 2006) and has been effectively used to treat fresh blueberries from Argentina for the two pests of concern. No fruit fly has ever been intercepted from cold treated blueberries imported from Argentina since they started to export in September 2006 (USDA, 2007b).

The measures described above, in Section B, would effectively remove pests of concern from the Uruguay's blueberry pathway. The FAO (2002) defines "pathway" as "any means that allows the entry or spread of a pest."

III. South Africa

A. Introduction

In support of a request for market access to import of fresh blueberry fruit (*Vaccinium* spp.) from South Africa into the continental United States, the Center for Plant Health Science and Technology (CPHST) division of the United States Department of Agriculture (USDA)'s Animal and Plant Health Inspection Service (APHIS) prepared a pest risk assessment (PRA) as per the *Guidelines for Pathway-Initiated Pest Risk Assessment* (USDA, 2000, v. 5.02). The PRA identified one quarantine pest that is present in South Africa and likely to follow the blueberry pathway into the continental United States. The pest is Mediterranean fruit fly or Medfly (*Ceratitidis capitata*) which

has been rated as having high risk potential (USDA, 2006).

Per the *Guidelines for Pathway-Initiated Pest Risk Assessment*, for pests assigned high risk potentials, phytosanitary measures beyond port of entry inspections are strongly recommended. This document outlines the phytosanitary measures that APHIS will require if the proposed importation of fresh blueberries from South Africa into the United States is approved, and provides the evidence used by APHIS to conclude that these measures will effectively prevent the introduction of the quarantine pest.

B. Proposed Risk Mitigation Measures

We propose that blueberries from South Africa may be imported into the United States only under the following conditions:

- (a) The fruit must be cold treated for Medfly (*Ceratitis capitata*) using the APHIS treatment schedule T107-a and in accordance with parts 305 and 319 of 7CFR.
- (b) Each shipment of fruit must be accompanied by a phytosanitary certificate issued by the NPPO of the Republic of South Africa.
- (c) Only commercial shipments of fresh blueberry fruit (*Vaccinium* spp.) are eligible to enter the United States.

C. Evidence for the Effective Removal of Pest of Concern from the Pathway

Cold treatments T107-a or T107-a-1 are APHIS approved treatments for blueberries against *Ceratitis capitata* (Fedchock, 2006). T107-a has been effectively used to treat fresh commodities host to the Medfly and a more stringent treatment T107-a-1 has been used to treat blueberries against Medfly and several *Anastrepha* species. No *Anastrepha* species are known to occur in South Africa. No fruit fly has ever been intercepted from cold treated blueberries imported from Argentina since they started to export in September 2006 (USDA, 2007b).

The measures described above in Section B would effectively remove pests of concern from the Uruguayan blueberry pathway. The FAO (2002) defines “pathway” as “any means that allows the entry or spread of a pest.”

IV. Conclusion

Addition of blueberries to the list of commodities that may be cold treated with T107-a or T107-a-1 provides an alternative way of treating blueberries from Argentina and other interested countries to fumigation with methyl bromide. The Risk Management Document concludes that based on the effectiveness of these two cold treatments against the pests of concern, we believe that the phytosanitary measures as described above will result in the effective removal of the quarantine pests associated with the importation of

fresh blueberries from Uruguay and South Africa.

V. Authors

Inder P.S. Gadh, Ph.D.
Senior Risk Manager

Sharon Porsche
Import Specialist

Tony Roman
Import Specialist

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VI. References

- FAO. 2002. International Standards for Phytosanitary Measures. Glossary of Phytosanitary Terms, Publication No. 5. UN-FAO-IPPC, Italy.
- Fedchock, C. 2006. Approval of cold treatment for Argentine blueberries. Phytosanitary Issues Management, Plant Protection and Quarantine, U.S.A.
- USDA. 2000. Guidelines for Pathway-Initiated Pest Risk Assessments. Version 5.02. October 17, 2000.
- USDA. 2006. Qualitative Pathway-Initiated Risk Assessment of the Importation of Blueberry Fruits (*Vaccinium* species) from the Republic of South Africa into the United States. USDA APHIS PPQ, December 2006.
- USDA. 2007a. Importation of fresh highbush and rabbit-eye blueberry (*Vaccinium corymbosum* L & *V. virgatum* Aiton) fruit into the United States from Uruguay, A Pathway-Initiated Risk Assessment. USDA APHIS PPQ, January 2007.
- USDA. 2007b. Pest Interception Database. United States Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine, Riverdale, MD.
- Vaccaro, N. C. and J.P. Bouvet, 2006. Presence of *Ceratitis capitata* (Wied.) and *Anastrepha fraterculus* (Wied.) in blueberries (*Vaccinium* spp) of the Department of Concordia Entre Rios and in the Department of Curuzu Cuatia, Corrientes, Argentina. 7th International Symposium on Fruit Flies of Economic Importance, Salvador, Brazil, 10-15 September, 2006.
- Willink, E., G. Gastaminza, A. Salvatore, M.C. Gramajo, M. Acenolaza, R. Avila and P. Favre. 2007. Quarantine cold treatments for *Ceratitis capitata* and *Anastrepha fraterculus* (Diptera: Tephritidae) for citrus in Argentina: conclusions after 10 years of research [unpublished]. Estacion Experimental Agroindustrial Obispo Colombres (EEAOC), William Cross 3150, 4101, Las Talitas, Tucuman Argentina. 9pp.