

Importation of
Cherimoya fruit (*Annona cherimola*)
from New Zealand
into the United States

A Qualitative, Pathway-Initiated Pest Risk Assessment

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A. Introduction

This pest risk assessment was prepared by the Animal and Plant Health Inspection Service (APHIS) of the United States Department of Agriculture (USDA) to examine plant pest risks associated with the importation into the United States of fresh *Annona cherimola* (cherimoya) fruit grown in New Zealand. This is a qualitative pest risk assessment; that is, estimates of risk are expressed in qualitative terms such as high or low as opposed to numerical terms such as probabilities or frequencies.

International plant protection organizations (e.g., North American Plant Protection Organization (NAPPO), International Plant Protection Convention (IPPC) of the United Nations Food and Agriculture Organization (FAO)) provide guidance for conducting pest risk analyses. The methods we used to initiate, conduct, and report this pest risk assessment are consistent with guidelines provided by NAPPO, IPPC and FAO. Our use of biological and phytosanitary terms (e.g., introduction, quarantine pest) conforms with the *NAPPO Compendium of Phytosanitary Terms* (Hopper, 1996) and the *Definitions and Abbreviations* (Introduction Section) in *International Standards for Phytosanitary Measures, Section 1—Import Regulations: Guidelines for Pest Risk Analysis* (FAO 1996).

Pest risk assessment is one component of an overall pest risk analysis. The *Guidelines for Pest Risk Analysis* provided by FAO (1996) describe three stages in pest risk analysis. This document satisfies the requirements of FAO Stages 1 (initiation) and 2 (risk assessment).

The Food and Agriculture Organization (FAO, 1996) defines "pest risk assessment" as "Determination of whether a pest is a quarantine pest and evaluation of its introduction potential." "A quarantine pest" is defined as "A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled." (FAO, 1996; Hopper, 1996). Thus, pest risk assessments should consider both the likelihood and consequences of introduction of quarantine pests. Both issues are addressed in this pest risk assessment.

This document presents the findings of our qualitative plant pest risk assessment. We have not described in detail our assessment methods or the criteria we used to rate the various risk elements. Details of our methodology and rating criteria can be found in our "template" document: *Pathway-Initiated Pest Risk Assessment: Guidelines for Qualitative Assessments, version 4.0* (USDA, 1995). To obtain a copy of this document, contact the individuals named on the front of this pest risk assessment.

B. Risk Assessment

1. Initiating Event: Proposed Action

This pest risk assessment is commodity-based, and therefore "pathway-initiated"; we initiated the assessment in response to the request for USDA authorization to allow imports of a particular commodity presenting a potential plant pest risk. In this case, the importation into the United States of fresh *Annona* spp. grown in New Zealand is a potential pathway for introduction of plant pests. Regulatory authority for the importation of fruits and vegetables from foreign sources into the United States is found in 7 CFR §319.56.

2. Assessment of weediness Potential of *Annona* sp.

The results of the weediness screening for *Annona* spp. (Table 1) did not prompt a pest-initiated risk assessment.

Table 1: Process for Determining Weediness Potential of Commodity	
Commodity: <i>Annona cherimola</i> P. Mill. (Annonaceae)	
Phase 1: <i>Annona cherimola</i> P. Mill. grows in Puerto Rico.	
Phase 2: Is the species listed in:	
<u>NO</u>	<i>Geographical Atlas of World Weeds</i> (Holm <i>et al.</i> , 1979)
<u>NO</u>	World's Worst Weeds (Holm <i>et al.</i> , 1977)
<u>NO</u>	<i>Report of the Technical Committee to Evaluate Noxious Weeds; Exotic Weeds for Federal Noxious Weed Act</i> (Gunn & Ritchie, 1982)
<u>NO</u>	<i>Economically Important Foreign Weeds</i> (Reed, 1977)
<u>NO</u>	Weed Science Society of America list (WSSA, 1989)
<u>NO</u>	Is there any literature reference indicating weediness (<i>e.g.</i> , <i>AGRICOLA</i> , <i>CAB</i> , <i>Biological Abstracts</i> , <i>AGRIS</i> ; search on "species name" combined with "weed").
Phase 3: Conclusion: Proceed with the pest risk assessment.	

3. Previous Risk Assessments, Current Status and Pest Interceptions

Decision History for *Annona* spp. from New Zealand

1984 - *Annona cherimola* from New Zealand was approved entry through all ports.

Pest Interceptions on *Annona* spp. from New Zealand FY 85-95

<u>PEST</u>	<u>HOST</u>
Pseudococcidae sp.	<i>Annona cherimola</i> (fruit)
Thripidae sp.	<i>Annona cherimola</i> (fruit)

4. Pest List: Pests Associated with *Annona* spp. in New Zealand.

Table 2: Pests Associated with <i>Annona</i> spp. from New Zealand			
ARTHROPODA			
Pest	Distribution ₁	Comments ₂	References
<i>Bactrocera papayae</i> (Drew & Hancock) Diptera: Tephritidae	NZ*	m, n	MAFRA, 5\1996; Hong, 1985
<i>Bactrocera tryoni</i> (Froggatt) Diptera: Tephritidae	NZ*	m, n	MAFRA, 5\1996; EPPO Database, 1996
<i>Ceratitis capitata</i> (Wiedemann) Diptera: Tephritidae	NZ*	m, n	EPPO, 1996; MAFRA, 6\1996; White and Elson- Harris, 1992
Pseudococcidae sp.	NZ, US	c	PPQ Interception
<i>Parasaissetia nigra</i> (Neinter) Homoptera: Coccidea	NZ, US	c	EPPO database, 1996; Hill, 1983; USDA, 1996
Thripidae sp.	NZ, US	n	PPQ Interception; USDA, 1996
<i>Unaspis citri</i> (Comstock) Homoptera: Diaspididae	NZ, US	c, j	EPPO Database 1996; Jeppson, 1989; USDA, 1996

¹ Geographical codes: NZ- New Zealand, NZ*- New Zealand: The presence of these pests are the result of trapping surveys conducted in 1996. Although the pests are present in New Zealand they have not been reported as infesting this commodity and are not considered to be established, US- United States

² Comments:

- c - Listed in the USDA catalogue of intercepted pests as non-actionable.
- j - Armored scale insect: no quarantine action on fruit for consumption because "...armored scales in general have a low probability of establishment from shipments of commercial fruit" (ARS, 1985).
- m - The pest occurs within the PRA area and has been reported to attack the specified host species in other geographic regions; but has not been reported to attack the specified host in the PRA area.
- n - Listed in the USDA catalogue of intercepted pests as actionable.

5. List of Quarantine Pests

Table 3: Quarantine Pests
<i>Bactrocera tryoni</i> (Froggatt) Diptera: Tephritidae
<i>Bactrocera papayae</i> (Drew & Hancock) Diptera: Tephritidae
<i>Ceratitidis capitata</i> (Weidemann) Diptera: Tephritidae

6. Quarantine Pests Likely to Follow Pathway

From the previous lists (Tables 2 and 3), there are no pests that are likely to travel with these commodities.

7. Phytosanitary Measures

Should additional pests, not identified in this Risk Assessment, be intercepted, appropriate quarantine action will be taken. Additionally, should there be a change in the quarantine status of any pest, this Risk Assessment will be amended to reflect that change.

C. Literature Cited

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