Facilitating trade by improving data quality in globally consulted pest information resources

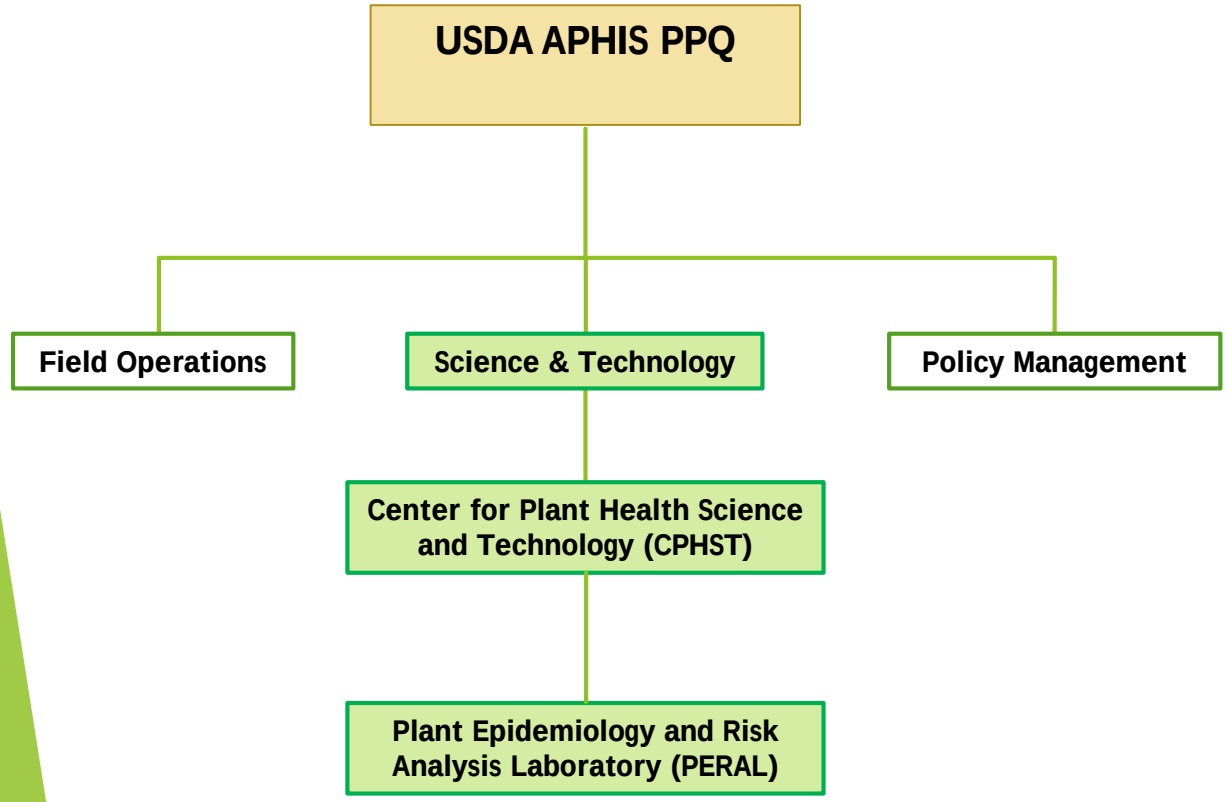
Godshen Pallipparambil[1], Carol Hicks[1], Heather Hartzog[2], & Karl Suiter[1]

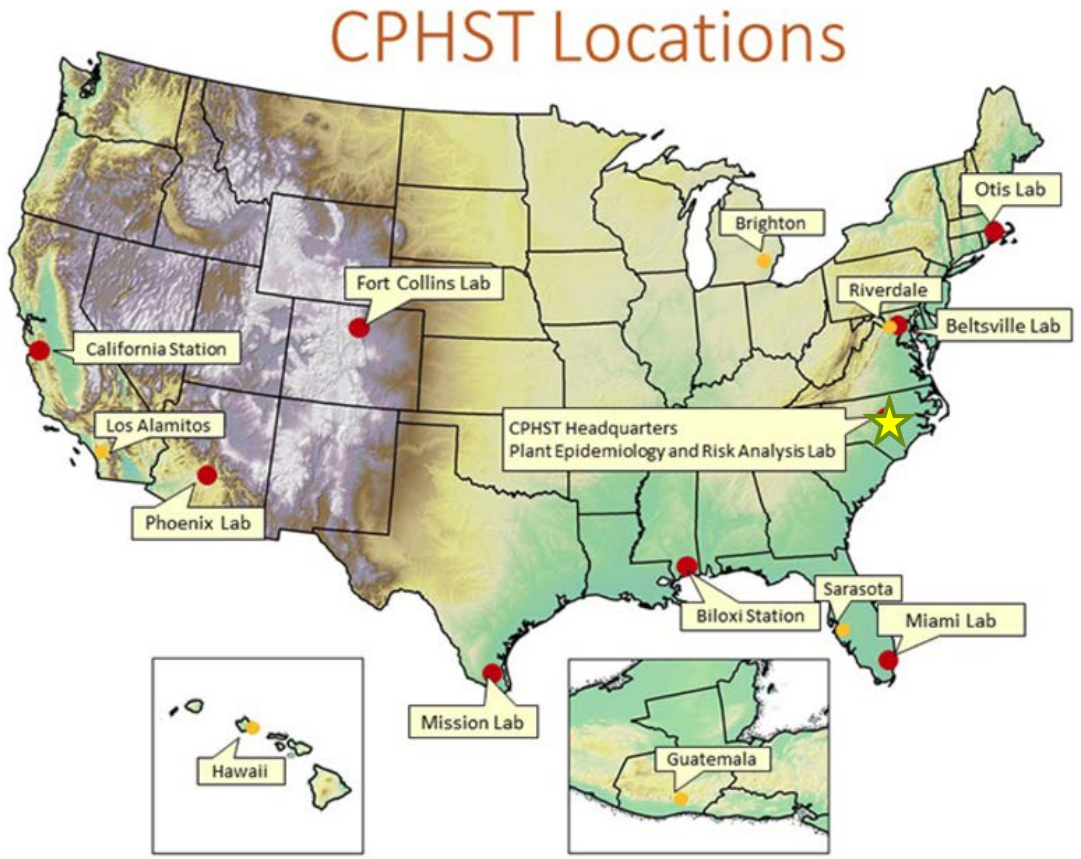
[1] Center for Integrated Pest Management, North Carolina State University, NC, Raleigh, USA;
[2] United States Department of Agriculture, Animal Plant Health Inspection Service, Plant Protection and Quarantine, Center for Plant Health Science and Technology (CPHST), Plant Epidemiology and Risk Analysis Laboratory (PERAL)

Who are we?


CIPM
NC STATE UNIVERSITY
NSF Center for Integrated Pest Management

Who are we?


USDA APHIS PPQ
Field Operations
Science & Technology
Policy Management
Center for Plant Health Science and Technology (CPHST)
Plant Epidemiology and Risk Analysis Laboratory (PERAL)


CPHST Locations
Otis Lab
Brighton
Fort Collins Lab
Riverdale
Beltsville Lab
California Station
CPHST Headquarters
Plant Epidemiology and Risk Analysis Lab
Los Alamitos
Phoenix Lab
Sarasota
Biloxi Station
Miami Lab
Mission Lab
Hawaii
Guatemala

CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

Facilitate U.S. exports of specialty crops

by improving accuracy of global pest data used by importing countries

Specialty crops

- fruits
- dried fruits
- vegetables
- tree nuts
- nursery crops
- floriculture crops
- herbs and spices

Photo: USDA-FAS

CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases

United States requests market access for exporting specialty crops

Potential Trade Partner (importing country)

Assess pest threats to their agriculture

List of U.S. pests

Erroneous pest records can

- Affect trade negotiations
- Delay market access
- Impose phytosanitary measures

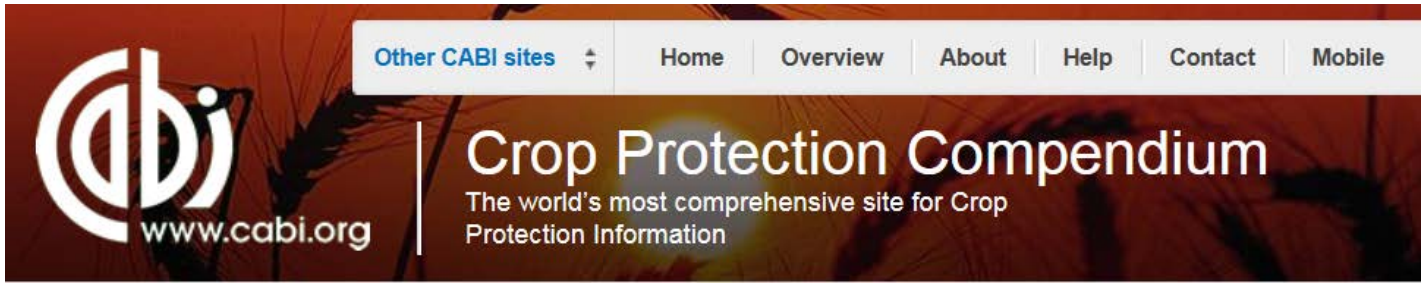
CIPM

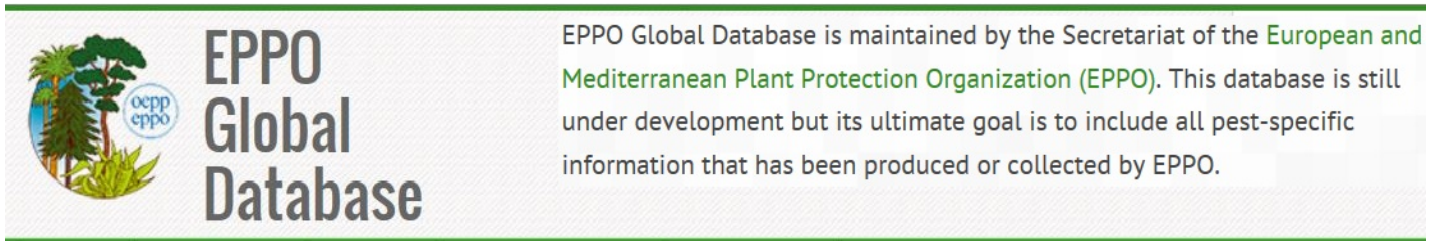
USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases

Arthropod and plant pathogen records





- Distribution
- Pest Biology
- Hosts

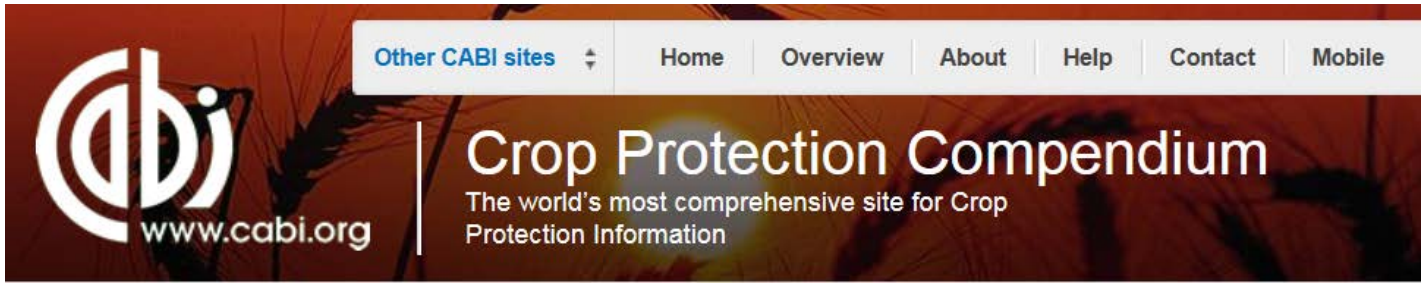
CIPM

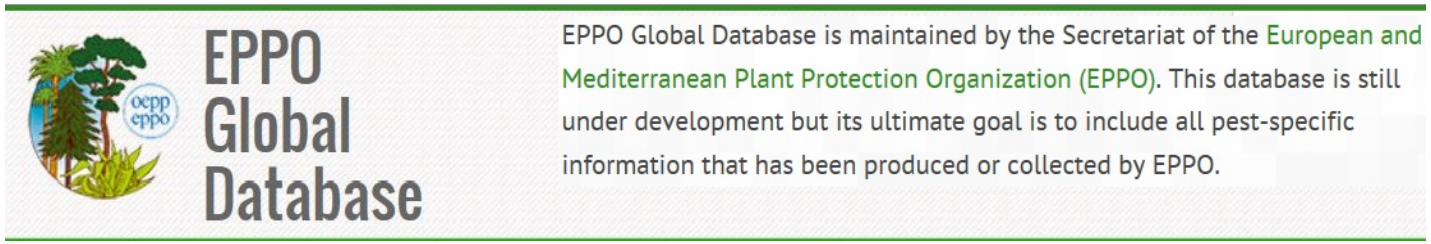
USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases

Arthropod and plant pathogen records





- Distribution
- Pest Biology
- Hosts

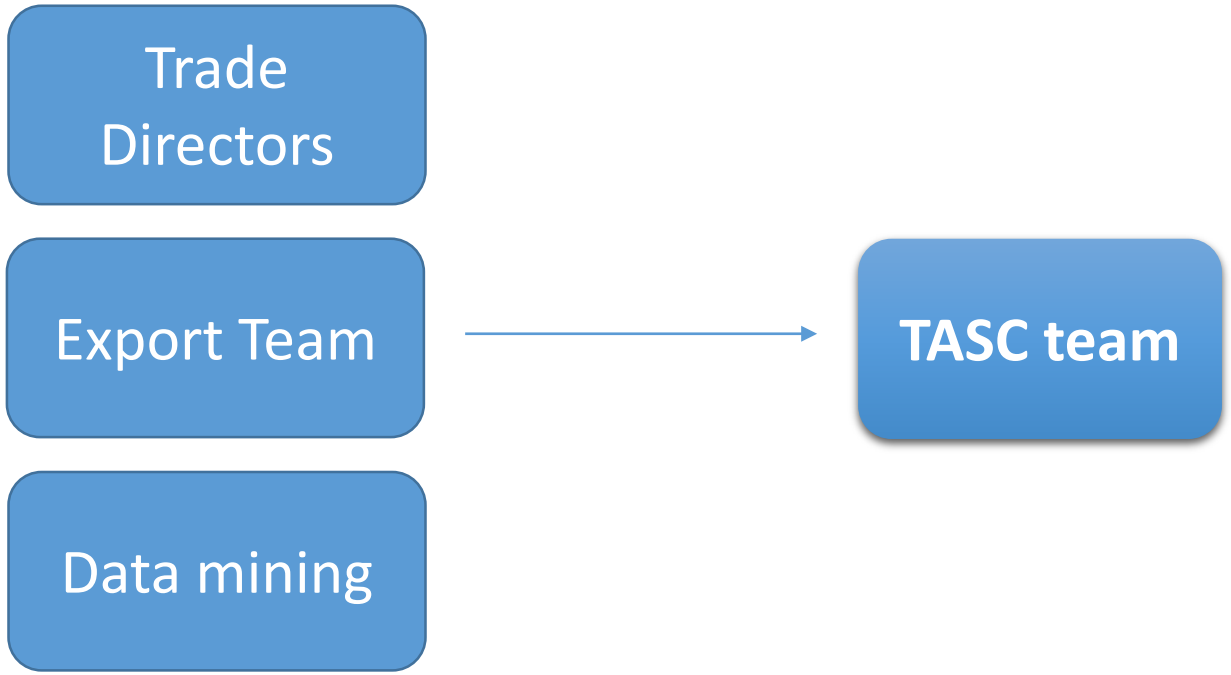
CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases

We receive candidates for analysis from:

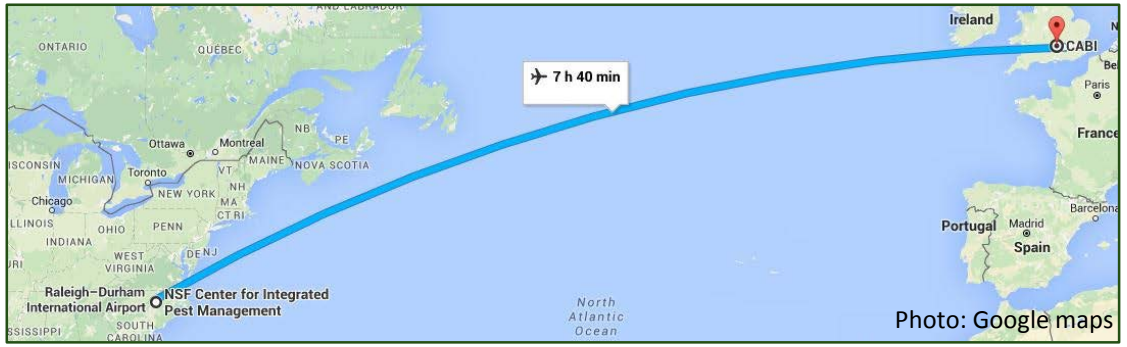


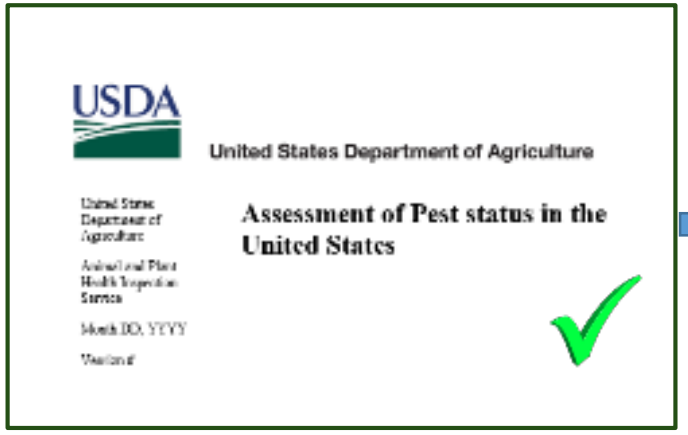
CIPM

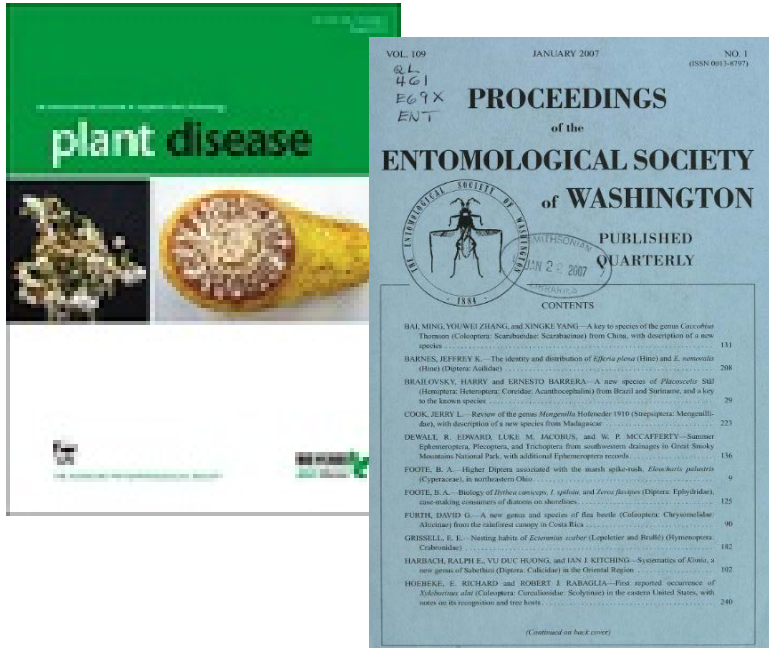
USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases







CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

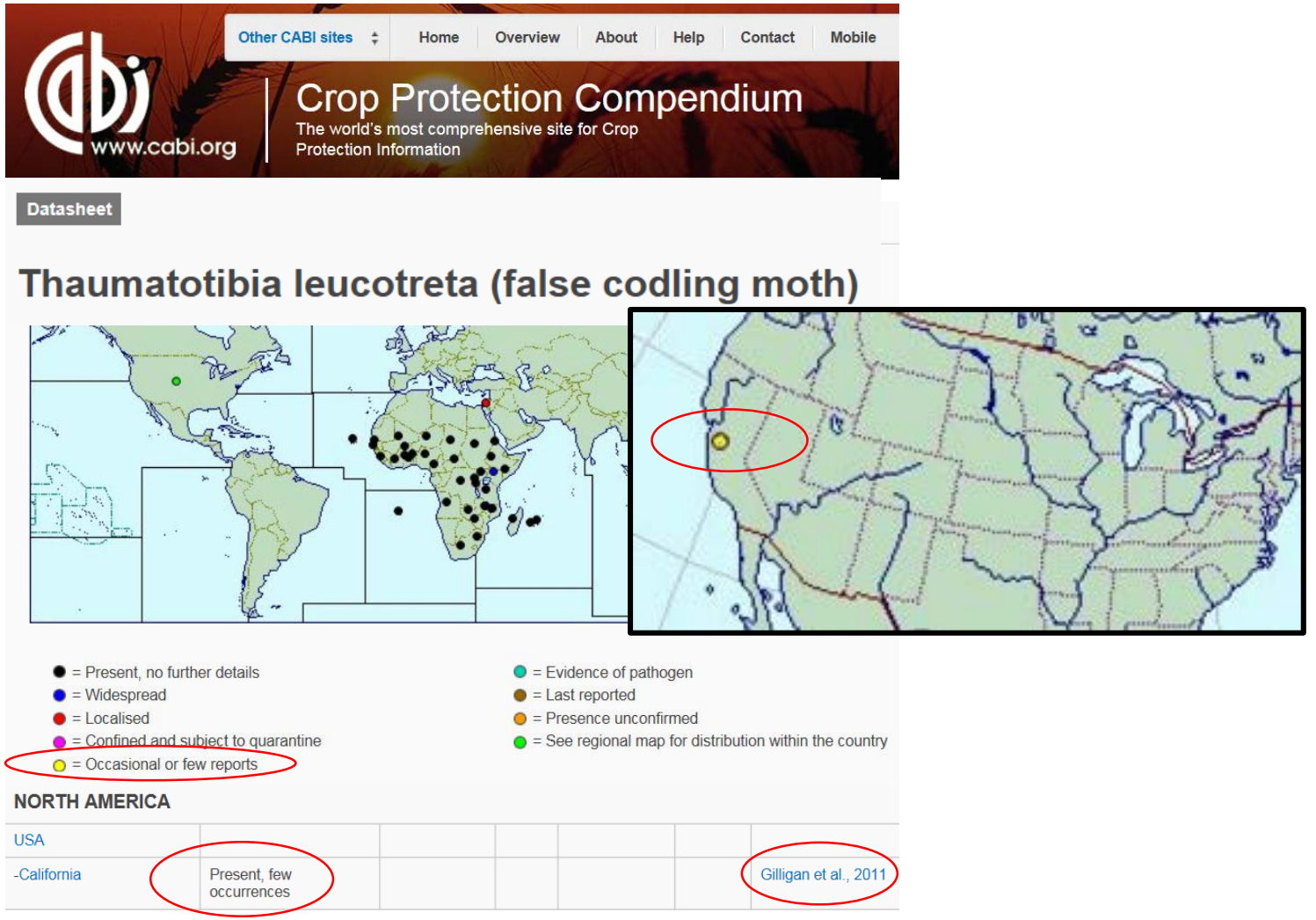
Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases

CABI Error

- **Distribution**
- Hosts
- Pest Biology

Thaumatotibia leucotreta
Photographer:Bugwood



CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases

Thaumatotibia leucotreta
Photographer:Bugwood

PROC. ENTOMOL. SOC. WASH.
113(4), 2011, pp. 426–435

DISCOVERY OF FALSE CODLING MOTH, *THAUMATOTIBIA LEUCOTRETA* (MEYRICK), IN CALIFORNIA (LEPIDOPTERA: TORTRICIDAE)

TODD M. GILLIGAN, MARC E. EPSTEIN, AND KEVIN M. HOFFMAN

Abstract.—The false codling moth, *Thaumatotibia leucotreta* (Meyrick), is one of the most destructive pests of avocado, citrus, and cotton in Africa. On July 24, 2008, a male of this species was identified from a pheromone trap located in Ventura County, California. Although larvae of *T. leucotreta* are frequently intercepted at U.S. ports-of-entry, primarily on bell peppers (*Capsicum* sp.), eggplant (*Solanum melongena*), and clementines (*Citrus* sp.), this represents the first North American record outside of a port or international commercial shipment. Additional individuals have not been recorded from California suggesting that this species is not yet established in the state. We provide descriptions, illustrations, and other information to help in the identification of this species.

CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases

Thaumatotibia leucotreta
Photographer:Bugwood

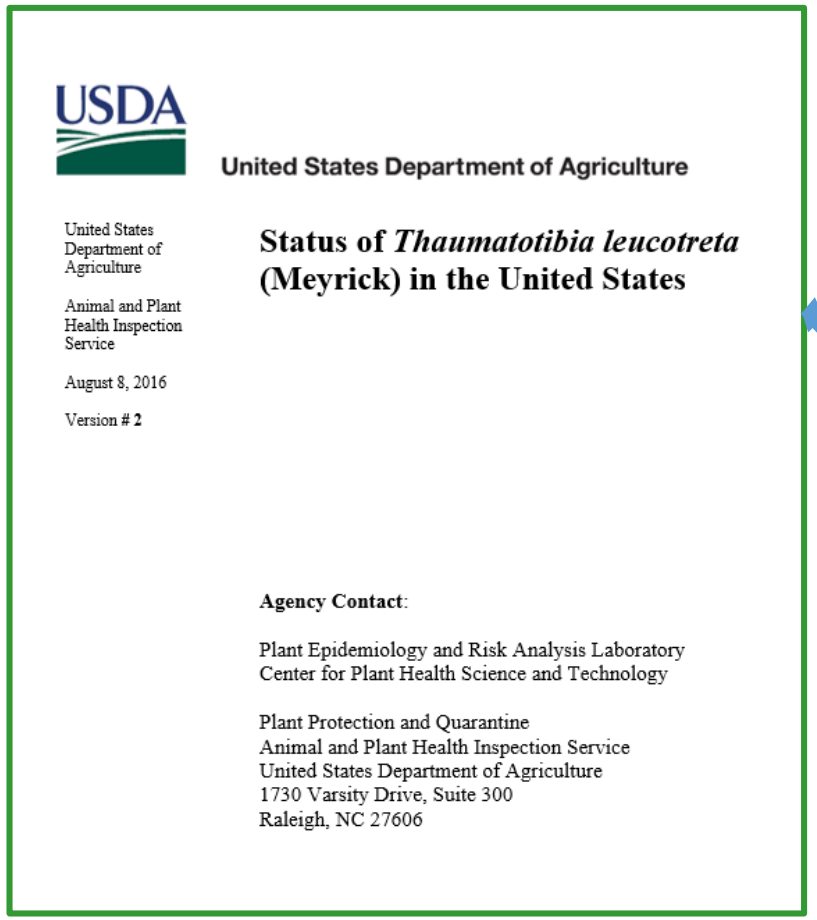
- Specialty crop hosts ?
- Delimitation surveys after detection?
- Ongoing detection surveys?
- Regulated at the ports of entry?

CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases



USDA

United States Department of Agriculture

United States Department of Agriculture

Animal and Plant Health Inspection Service

August 8, 2016

Version # 2

Status of *Thaumatotibia leucotreta* (Meyrick) in the United States

Agency Contact:

Plant Epidemiology and Risk Analysis Laboratory
Center for Plant Health Science and Technology

Plant Protection and Quarantine
Animal and Plant Health Inspection Service
United States Department of Agriculture
1730 Varsity Drive, Suite 300
Raleigh, NC 27606

TASC team

Exports Team (PPQ-S&T)

Subject Matter Experts

CABI

Other databases

CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases

Status of *Thaumatotibia leucotreta* (Meyrick) in the United States

Contact: John H. Bowers, National Survey Coordinator, National Policy Manager, Cooperative Agricultural Pest Survey, USDA, APHIS, PPQ, PHP

In late July 2008, APHIS confirmed the detection of an adult male False Codling Moth (FCM), *Thaumatotibia leucotreta* (Meyrick), from a trap placed near an orange tree in a suburban area of Port Hueneme, Ventura County, California. This was the first and only detection of FCM in the continental United States.

FCM attacks different plant species including pepper, orange, macadamia, guava, peach, pomegranate, cotton, sorghum and maize. Following the detection in 2008, APHIS and the California Department of Food and Agriculture (CDFA) established delimitation survey areas and extensively surveyed throughout the state to determine the extent of this incursion. There were no additional detections of false codling moth in the state during the delimitation surveys and therefore, the 2008 detection was considered an isolated regulatory incident. California and the United States continue to target this pest in state and national survey efforts. For additional information on FCM surveys visit: http://pest.ceris.purdue.edu/map.php?code=ITBUEUA#.

Under IPPC standards, *T. leucotreta* is considered a pest that is **Absent: pest no longer present** in the United States.

PPQ Science & Technology
Harmonization Advisory Group (HAG)

North American Plant Protection Organization's
Phytosanitary Alert System

Home | Emerging Pest Alerts | Official Pest Reports | Archive | Resources Search Search

Official Pest Reports are provided by National Plant Protection Organizations within the NAPPO region. These Pest Reports are intended to comply with the International Plant Protection Convention's Standard on Pest Reporting, endorsed by the Interim Commission on Phytosanitary Measures in March 2002.

Corrected Status of 2008 *Thaumatotibia leucotreta* (False Codling Moth) detection in the United States

Date posted: 09/28/2016

Contact: Deborah L. McPartlan, National Policy Manager, at 301-851-2191

In late July 2008, APHIS confirmed the detection of an adult male False Codling Moth (FCM), *Thaumatotibia leucotreta* (Meyrick), from a trap placed near an orange tree in a suburban area of Port Hueneme, Ventura County, California. This was the first and only detection of FCM in the continental United States. The purpose of this Official Pest Report is to clarify that the current status for *T. leucotreta* is: "Absent: pest no longer present, confirmed by survey" and thereby correct distribution errors in global pest databases.

Other team activities

CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases

- Distribution
- Pest Biology
- Hosts

Dominican Republic bans imports of certain fruit, veg to fight fruit fly

Photograph from USDA

Bactrocera dorsalis
Oriental fruit fly

Photograph from Bugwood

CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases

The measure allows imports of pest-free areas of the State of California, which must be located more than 150 km away from the outbreak areas in the counties of Covina, Los Angeles, and Santa Clara and additional to the phytosanitary certificate, must have an additional statement in which the Government of the United States endorses compliance with these regulations.

Dominican Republic bans imports of certain fruit, veg to fight fruit fly

The Ministry of Agriculture banned imports of fruit and vegetable that host the oriental fruit fly (Bactrocera dorsalis) from the state of Florida and regulated imports from the state of California.

The Ministry of Agriculture took the measure in response to the emergence of several outbreaks in those states and notified the Attache of the US Embassy in the country about it via communication MA-2015-10693 dated October 14.

The oriental fruit fly is considered one the major quarantine pests in the world because of the damage it causes to more than 400 species of fruits and vegetables. It is native to Southeast Asia, but has been present in the island of Hawaii since 1945 and, according to official reports from APHIS/USDA, it was detected in Santa Clara, California on 22 June this year. Likewise, according to the official notification that the APHIS/USDA gave the Dominican Government on October 9, the pest was detected in the Miami Dade County, Florida, on August 26 this year.

Following this official notification, and considering that there have been 165 captures of oriental fruit flies in Miami Dade, including some near the Florida International Airport, the country took the decision to ban the importation of fruits and vegetables from that state that can host the Bactrocera dorsalis, such as pears, strawberries, grapes, apples, citrus, cherries, tomatoes, and peaches, among others.

The measure allows imports of pest-free areas of the State of California, which must be located more than 150 km away from the outbreak areas in the counties of Covina, Los Angeles, and Santa Clara, and, additional to the phytosanitary certificate, must have an additional statement in which the Government of the United States endorses compliance with these regulations.

As part of preventive measures, the Plant Quarantine Service of the Ministry of Agriculture, in coordination with the Directorate General of Customs and Immigration, is carrying out thorough inspections of passengers from the states of California and Florida, in order to avoid the entry of fruits and plants hosting the pest in their luggage.

Source: elnuevodiario.com.do

Publication date: 10/19/2015

CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases

150 km flight distance?

Pest Free Areas

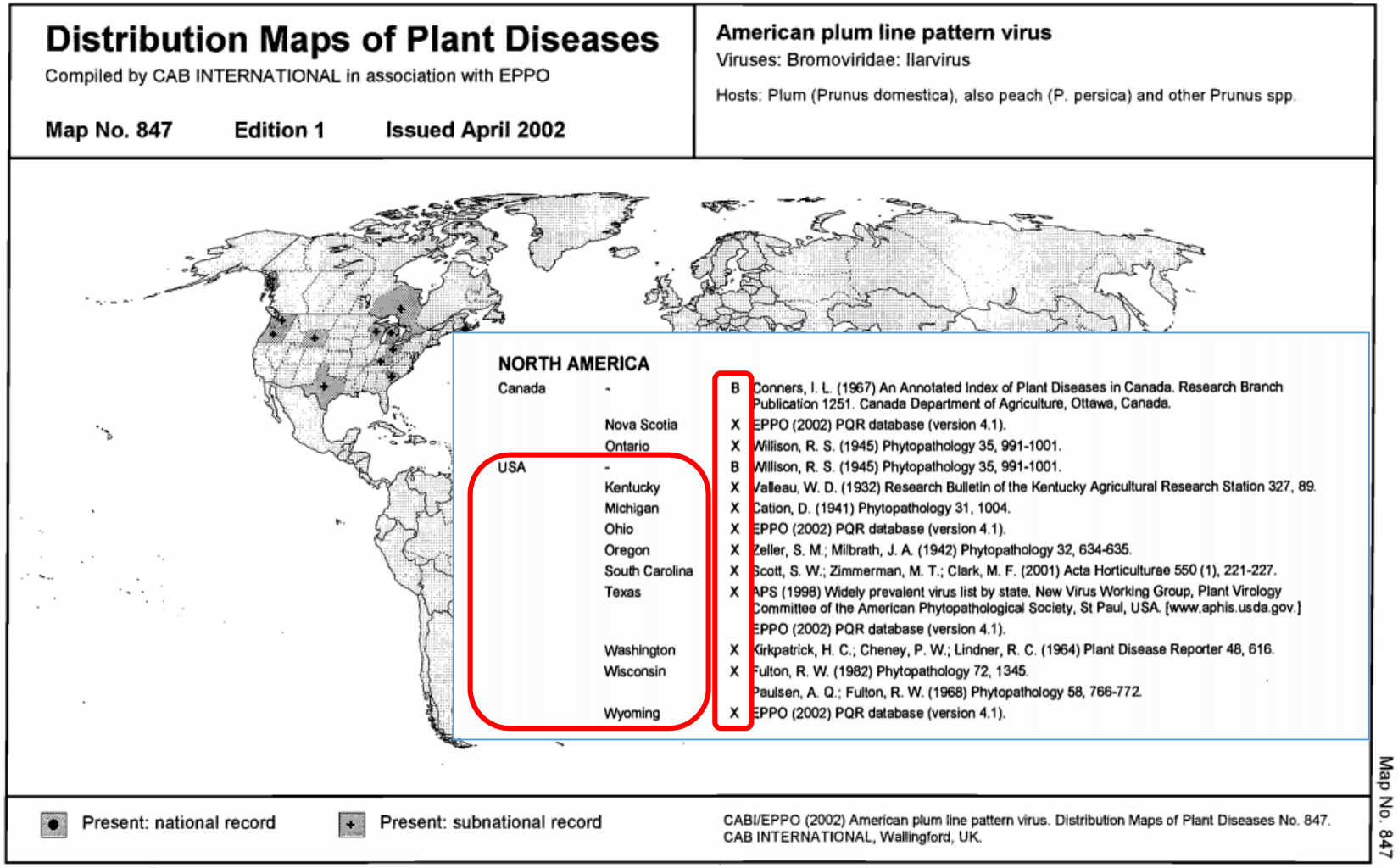
Bactrocera dorsalis - CABI Factsheet states:
"Many *Bactrocera* spp. can fly 50 - 100 km (Fletcher, 1989)."

CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases



Distribution Maps of Plant Diseases

Compiled by CAB INTERNATIONAL in association with EPPO

Map No. 847 **Edition 1** **Issued April 2002**

American plum line pattern virus

Viruses: Bromoviridae: Ilarvirus

Hosts: Plum (Prunus domestica), also peach (P. persica) and other Prunus spp.

NORTH AMERICA

Canada	-	B	Conners, I. L. (1967) An Annotated Index of Plant Diseases in Canada. Research Branch Publication 1251. Canada Department of Agriculture, Ottawa, Canada.
	Nova Scotia	X	EPPO (2002) PQR database (version 4.1).
	Ontario	X	Willison, R. S. (1945) Phytopathology 35, 991-1001.
USA	-	B	Willison, R. S. (1945) Phytopathology 35, 991-1001.
	Kentucky	X	Valleau, W. D. (1932) Research Bulletin of the Kentucky Agricultural Research Station 327, 89.
	Michigan	X	Cation, D. (1941) Phytopathology 31, 1004.
	Ohio	X	EPPO (2002) PQR database (version 4.1).
	Oregon	X	Zeller, S. M.; Milbrath, J. A. (1942) Phytopathology 32, 634-635.
	South Carolina	X	Scott, S. W.; Zimmerman, M. T.; Clark, M. F. (2001) Acta Horticulturae 550 (1), 221-227.
	Texas	X	APS (1998) Widely prevalent virus list by state. New Virus Working Group, Plant Virology Committee of the American Phytopathological Society, St Paul, USA. [www.aphis.usda.gov.]
			EPPO (2002) PQR database (version 4.1).
	Washington	X	Kirkpatrick, H. C.; Cheney, P. W.; Lindner, R. C. (1964) Plant Disease Reporter 48, 616.
	Wisconsin	X	Fulton, R. W. (1982) Phytopathology 72, 1345.
			Paulsen, A. Q.; Fulton, R. W. (1968) Phytopathology 58, 766-772.
	Wyoming	X	EPPO (2002) PQR database (version 4.1).

Present: national record

Present: subnational record

CABI/EPPO (2002) American plum line pattern virus. Distribution Maps of Plant Diseases No. 847. CAB INTERNATIONAL, Wallingford, UK.

Map No. 847

ISSN 0012-396X ©CAB INTERNATIONAL 2002

Proactively validating CABI maps:

> 45 pests/year

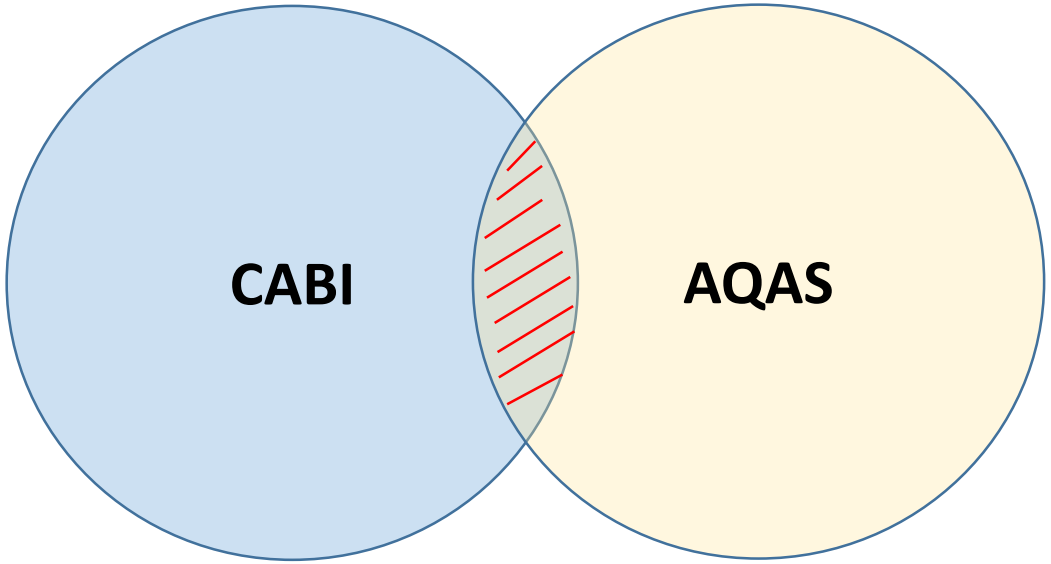
CIPM

USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

U.S. data improvements in globally consulted pest databases

Data mining for additional candidates



Pests listed as present in the United States

Pests that are currently regulated at our ports of entry

CIPM

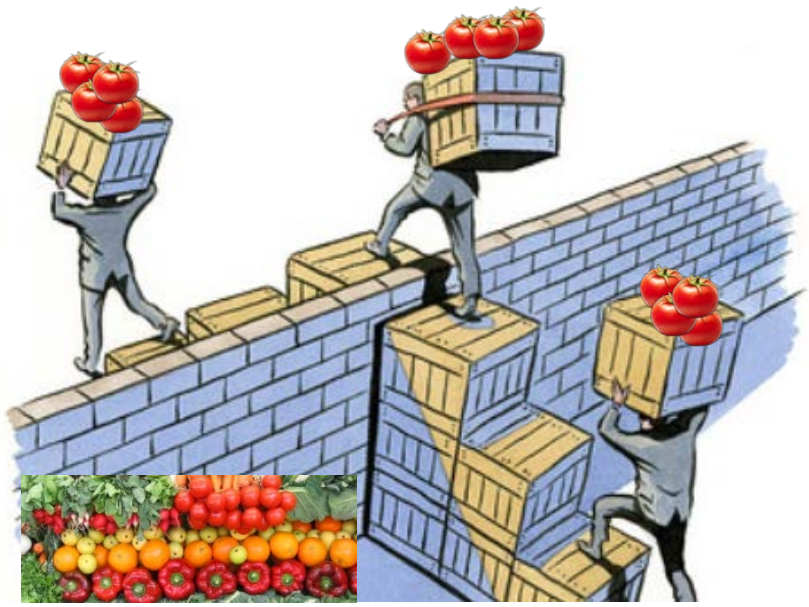
USDA United States Department of Agriculture
Foreign Agricultural Service

Technical Assistance for Specialty Crops (TASC) Project

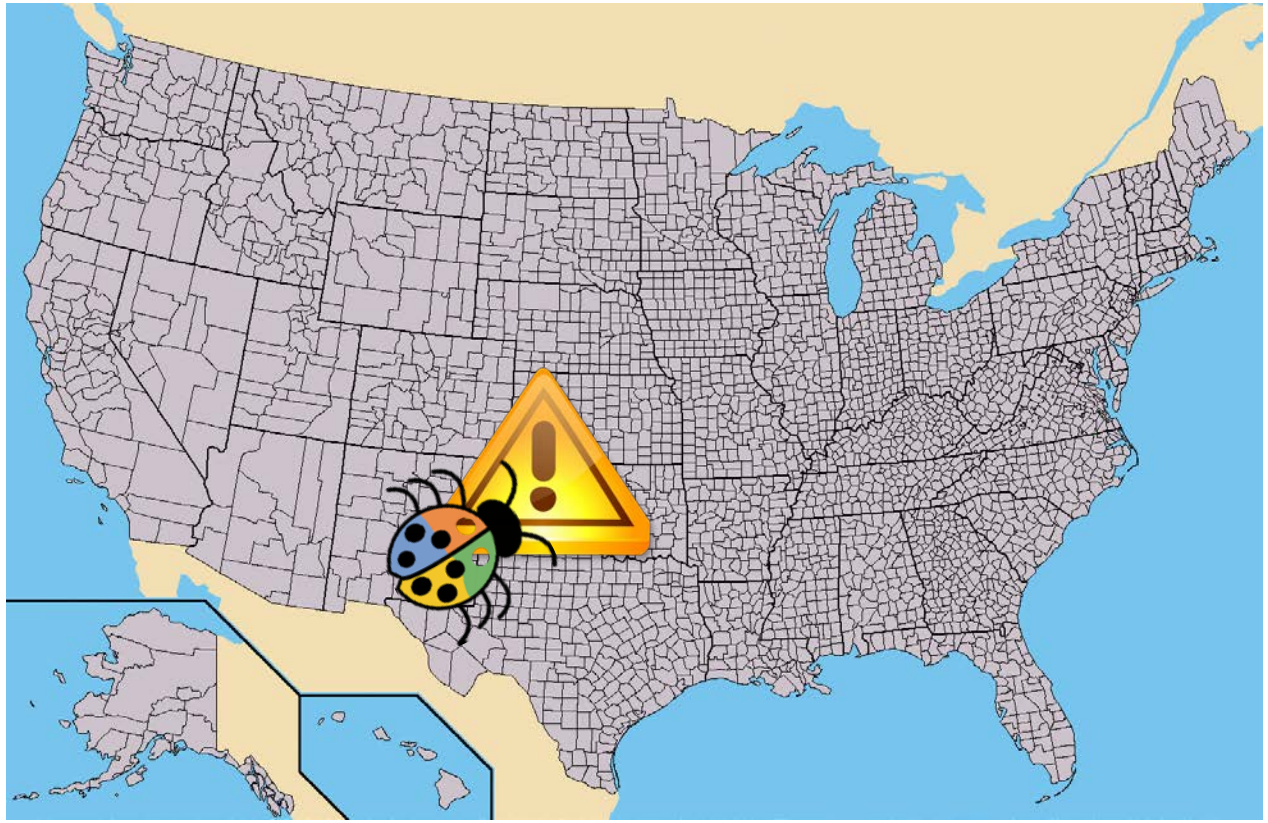
U.S. data improvements in globally consulted pest databases

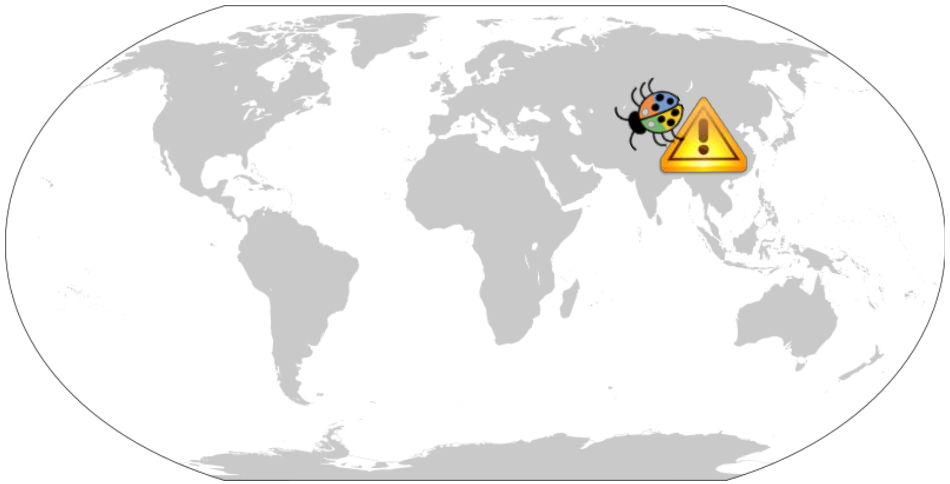
With this project, we aim to overcome trade barriers

- Open, expand and maintain market access for specialty crops
- Remove unwarranted phytosanitary measures
- Aid trade negotiations



Contact us





- Godshen Pallipparambil – godshenrobert@ncsu.edu (grpallip@ncsu.edu)
- Carol Hicks – cbhicks@ncsu.edu
- Heather Hartzog – Heather.M.Hartzog@aphis.usda.gov
- Karl Suiter – karl_suiter@cipm.info