

Mexico-US Citrus Summit

February 5-6, 2018

San Diego

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Science and Technology
Plant Protection and Quarantine



Mexico – US Citrus Summit

Background

- Extensive land border between Mexico and United States
- Share many of the same pest pressures
- Long history of collaborating

Purpose

- ✓ Exchange information
 - ✓ HLB, Leprosis, Citrus Canker
 - ✓ Focus on HLB
- ✓ Share specifics on how pests are being managed
- ✓ Explore options to cooperate both on research and operational activities

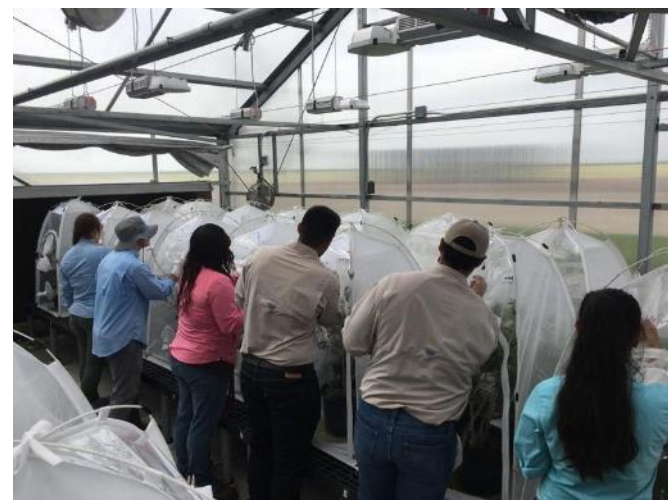
Areas for collaboration and harmonization

- Biological control for ACP
- Survey, modelling and control for HLB and Citrus Leprosis
- Diagnostics for HLB, Citrus Leprosis and others



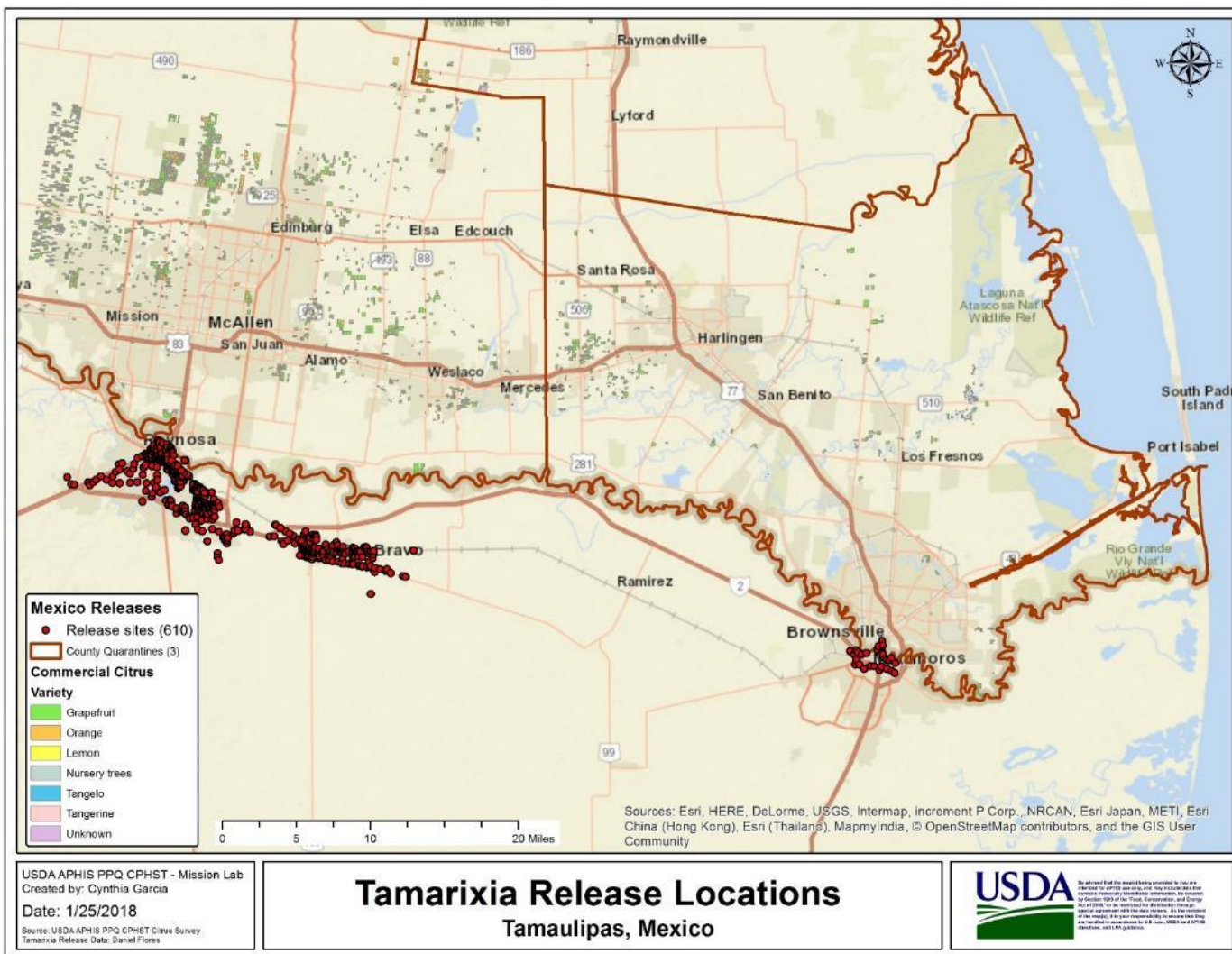
Numbers PRODUCED BY PPQ for RELEASE In Mexico

Year	Tamaulipas	Baja California	TOTALS
FY 2013	179,685		179,685
FY 2014	307,555	94,540	402,095
FY 2015	82,075	337,937	420,012
FY 2016	233,800	619,050	852,850
FY 2017	349,200	534,464	883,664
FY 2018	446,000	440,000	886,000
TOTALS	1,598,315	2,025,991	3,624,306

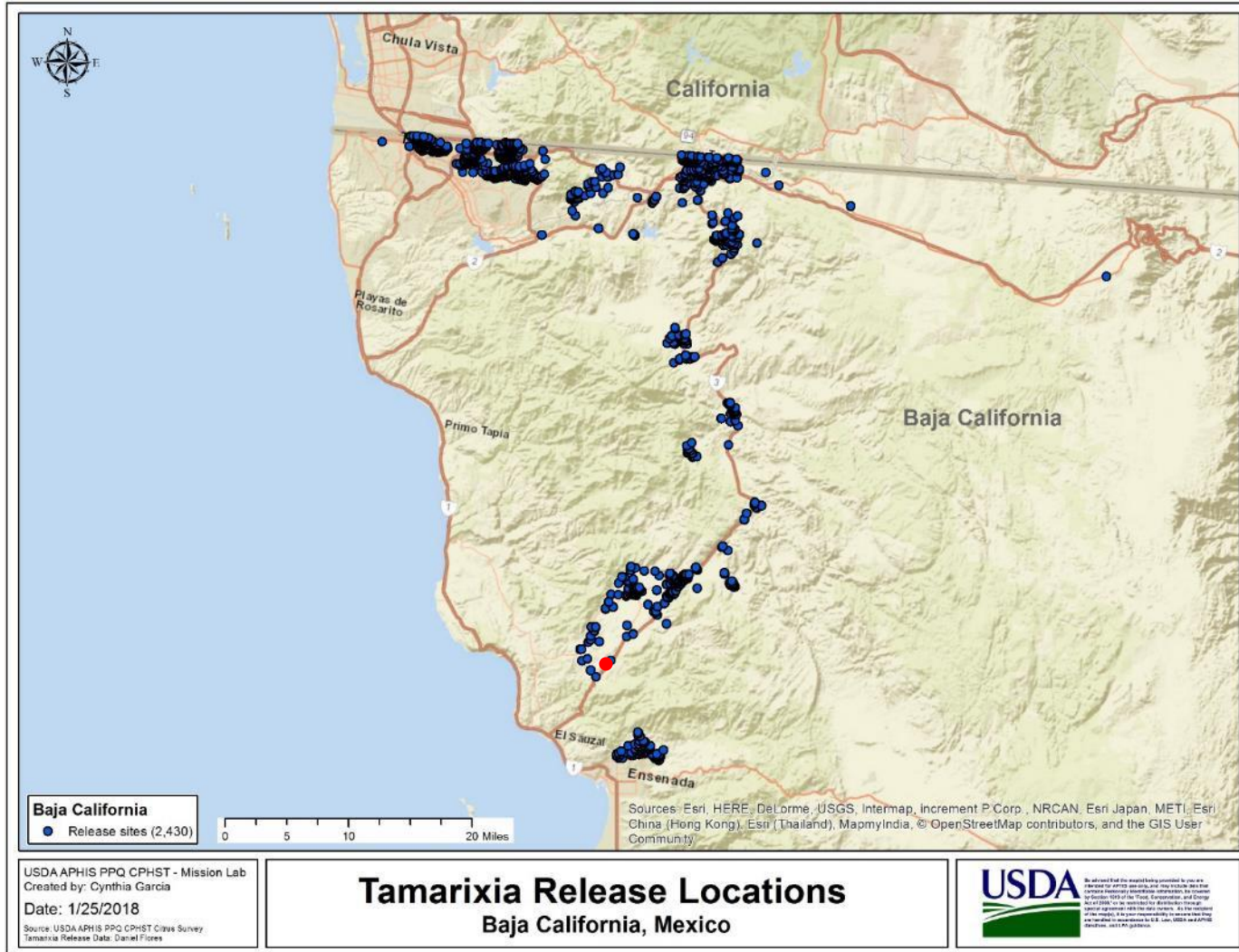


Slide courtesy of Dan Flores, ST-Mission TX Lab

Tamaulipas



Baja California



Slide courtesy of Dan Flores, ST-Mission TX Lab

USDA CiLV/*Brevipalpus* Visit to Mexico

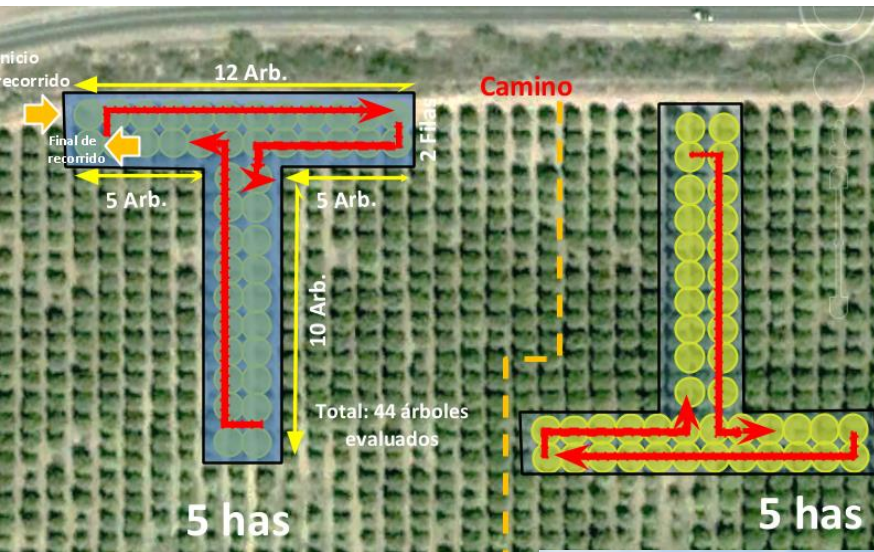


USDA APHIS PPQ CPHST - Mission Lab
 Created by: David Bartels and Cynthia Garcia
 Date: 8/26/2016
 Source: USDA APHIS PPQ CPHST Mission Laboratory

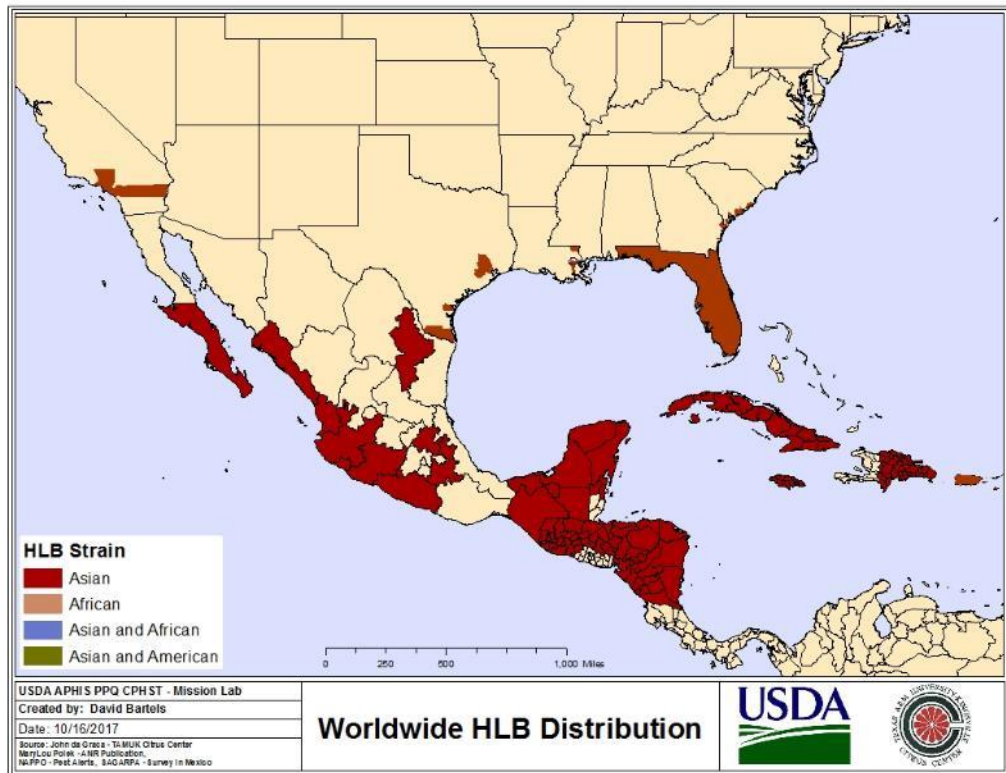
**Collection Sites
 in Mexico and Colombia**



Leprosis Surveillance and control



HLB - Collaboration

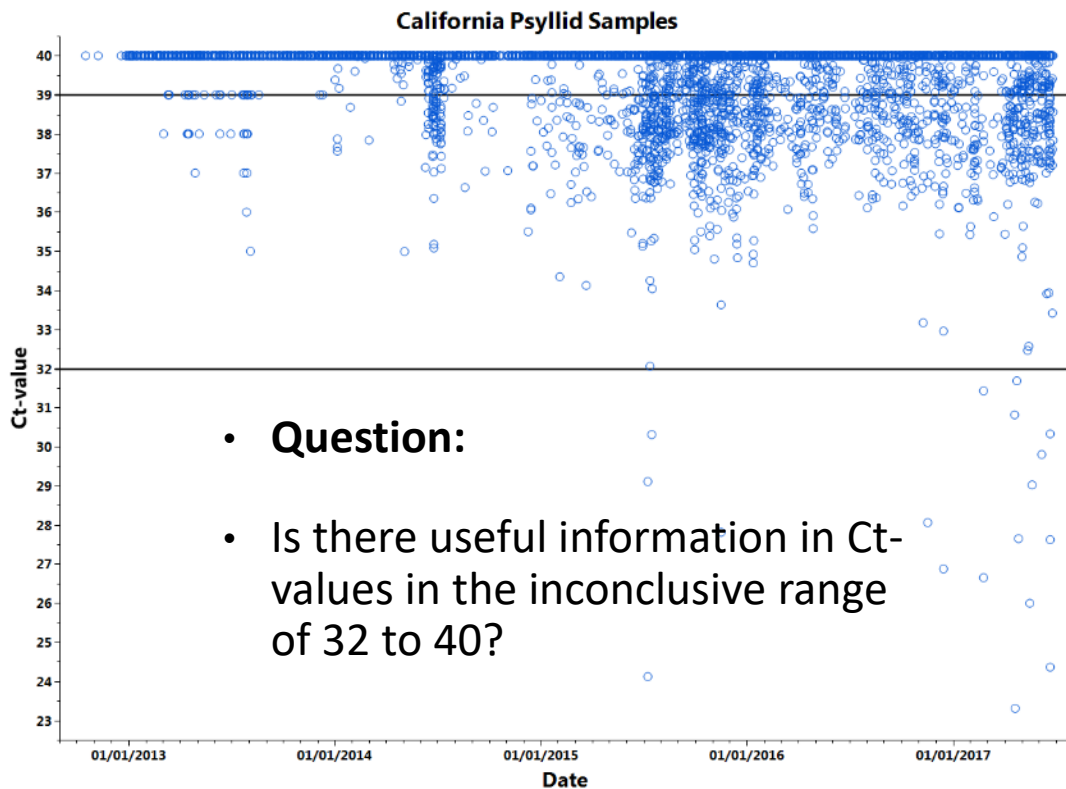


Diagnostics –
 Mexico Diagnostic
 Scientist visit to
 Beltsville Laboratory
 to learn more about
 lab’s work on HLB
 diagnostics

Survey....
*Can we exchange
 information to
 support modelling
 spread?*

HLB – Diagnostics

(Finding the needle in the haystack) – Currently 250,000 samples



- **Question:**
- Is there useful information in Ct-values in the inconclusive range of 32 to 40?

Negative **99.506%**

Inconclusive Range **0.487%**

Regulatory Positive **0.007%**

Potential Cooperation: Spatial Pattern Analysis

- Hypothesis: If Ct-values above threshold are a result of random noise or errors, these samples should have a random spatial distribution
- **Objective:** Analyze the spatial pattern of inconclusive samples
 - Is there an underlying biological process?
- **Needs:** Harmonized diagnostic method and survey data
- **Results: validated spread model** to accurately predict where HLB is likely to occur





THANK YOU!

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