Invasive Ambrosia Beetle Conference *The Situation in California* August 12 - 14, 2012

Meeting sponsored by: The Hofshi Foundation University of California, Riverside UC Center for Invasive Pest Research The Huntington Botanical Gardens The Los Angeles Arboretum

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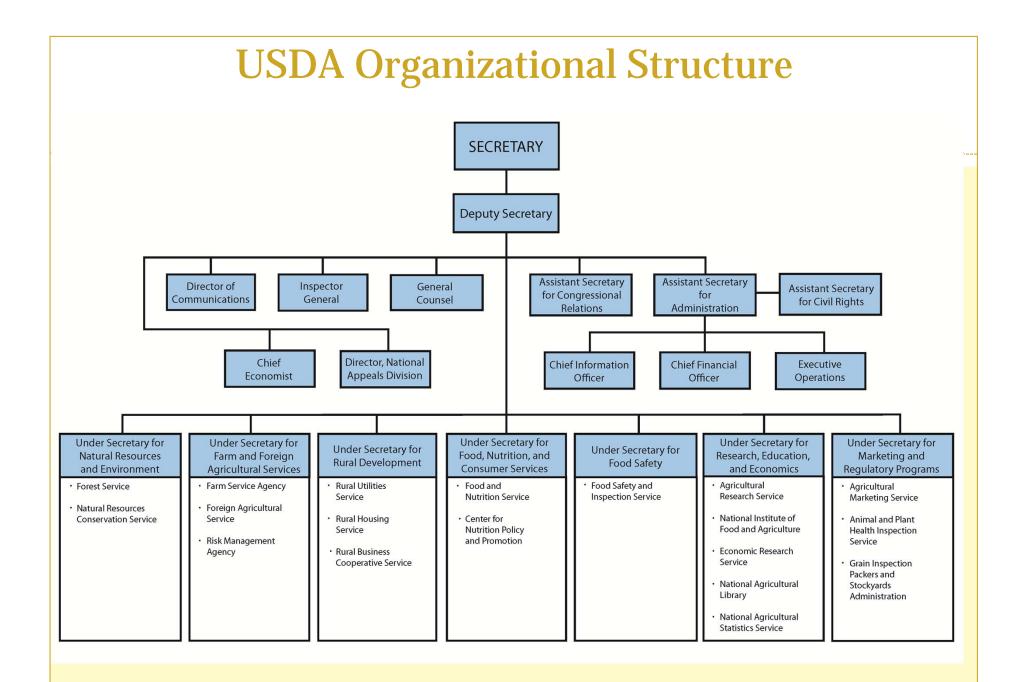
Session 6 Invasion Epidemiology

Stopping the Spread of Invasive Species

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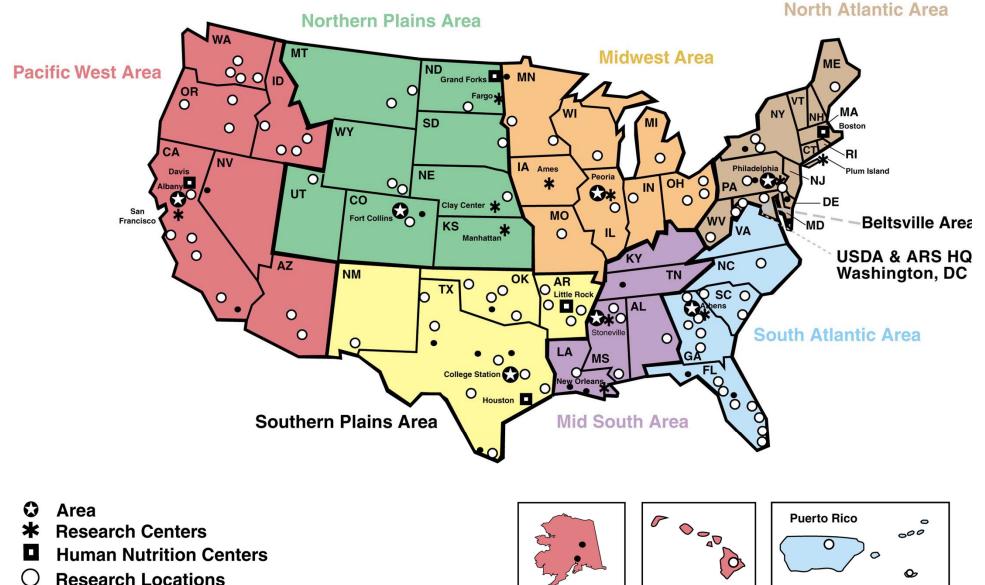




Agricultural Research Service Area Organization



U.S. Virgin Islands



Alaska

Hawaii

Research Worksites

Overseas Biological Control Labs



South American BCL Buenos Aires, Argentina

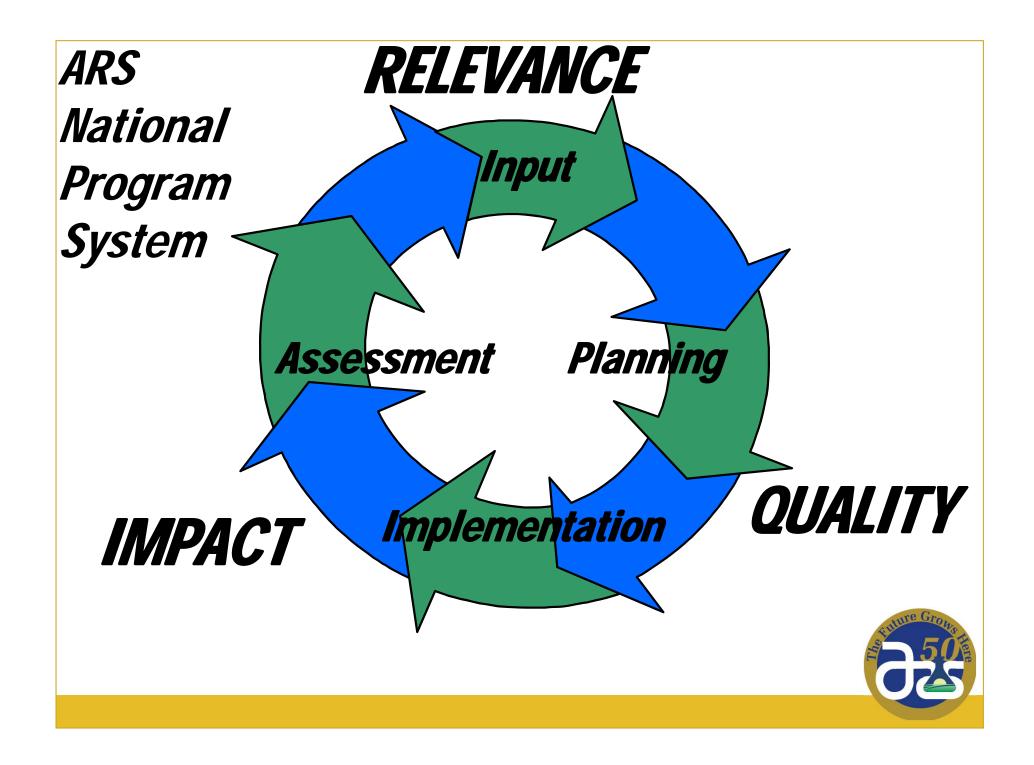


European BCL Montpellier, France



Australian BCL Brisbane Australia

Sino-American BCL Beijing China



How do we learn about emerging pathogens?

Formal

- •Routine surveys
- National Plant Diagnostic Network (NPDN)
- American Phytopathological Society
 Committee on Emerging Pathogens
- Informal

Example: ARS research on Laurel Wilt

- 1. Rescue avocado germplasm in ARS collections
- 2. Control vector
- 3. Long-term strategies

1. Rescue germplasm

- 343 avocado accessions from broad genetic background in ARS collection in Miami, FL
- Established rootstock in quarantine ;Ft. Detrick, MD
- 140 scions grafted onto rootstock and observed in quarantine; being transferred to ARS in Hilo, HI
- Additional scions have been grafted
- Will likely take 4 years to transfer collection
- Collection treated with Alamo
- May 2012- Laurel wilt found in Miami-Dade County

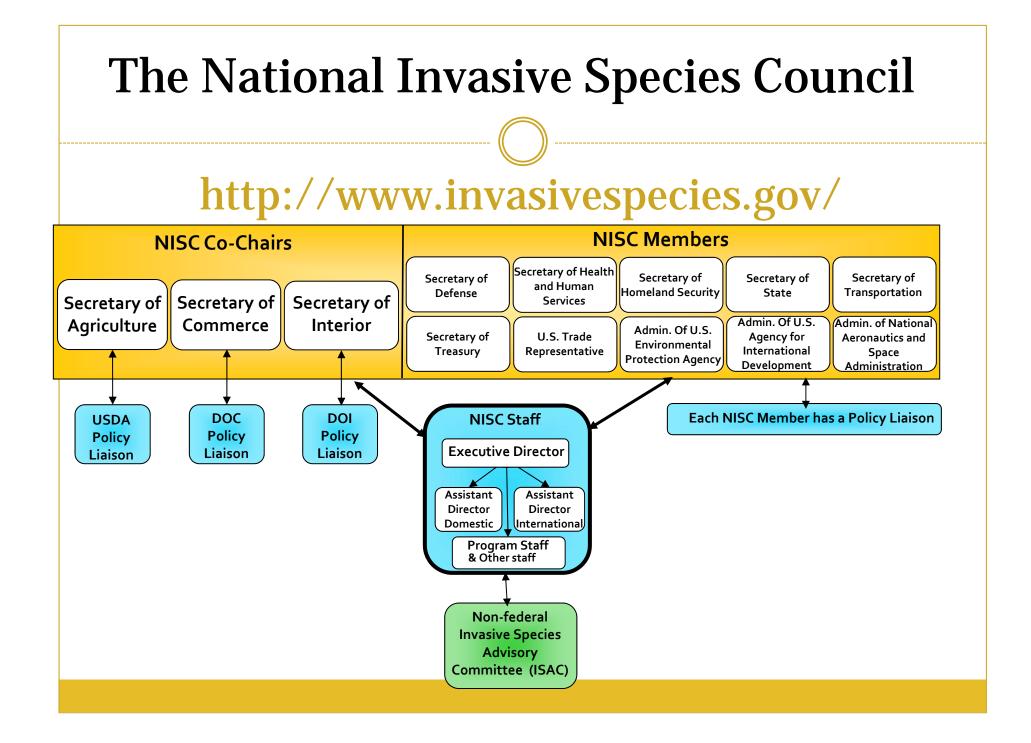
2. Control vector

- Evaluation of host tree volatiles in collaboration with the University of Florida; goal to develop trap and kill station
- Developing a monitoring program in collaboration with the University of Florida

3. Long-term solutions (resistant germplasm)

Screening diverse avocado germplasm; in collaboration with University of Florida

- Planted 38 half-sib families in Ft. Pierce; will inoculate when large enough; in collaboration with University of Florida
- Leveraged USDA, ARS funds with UF matching funds to support a PhD student (SNP chip evaluations, develop tools for rapid evaluation of germplasm)



National Invasive Species Council Management Plan

- Prevention
- Rapid detection & early response
- Control/management
- Research
- Restoration
- Education & public awareness

USDA activities

•Coordination of federally-funded research through the USDA Invasive Species Coordinating Committee (ISCC)

•USDA, ARS, OPMP IMP Coordinating Committee (8 agencies in USDA; 3 DOI agencies; DOS; DHHS; DHUD; DOD; EPA; GSA; SI)

USDA, ARS involvement in ISCC

• Aquatic nuisance species task force (ANSTF)

- Federal interagency committee for the management of noxious and exotic weeds (FICMNEW)
- Invasive terrestrial animals and pathogens (ITAP)

ITAP Mission

- Federal
- Technical Communication and Coordination
- Vertebrates, Invertebrates, Pathogens (of plants and animals)
- Organized by Pest Taxon or Ecosystem





Agency Representation

- 14 Invertebrate Specialists
 - 9 Vertebrate Specialists
 - **5 Plant Disease Specialists**
 - 8 Animal Disease Specialists
 - **5 Weed Specialists**
 - 3 IPM
 - 4 Systematics
 - 3 Economics/Sociology
 - **3 Informatics**
 - 7 General Program Responsibility

ITAP Meeting on Biocontrol of Invasive Species

- Biocontrol entomologists, plant pathologists, and weed scientists met with regulatory agencies to discuss regulations for biocontrol agents
- Entomologists and weed scientists concerned with importation and release; Agents somewhat invasive
- Plant pathologists concerned with release; Agents primarily excluders

THANK YOU !