

# *Accomplishments since the First Symposium on Invasive Species in Grenada, 2003*

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**Waldemar Klassen**

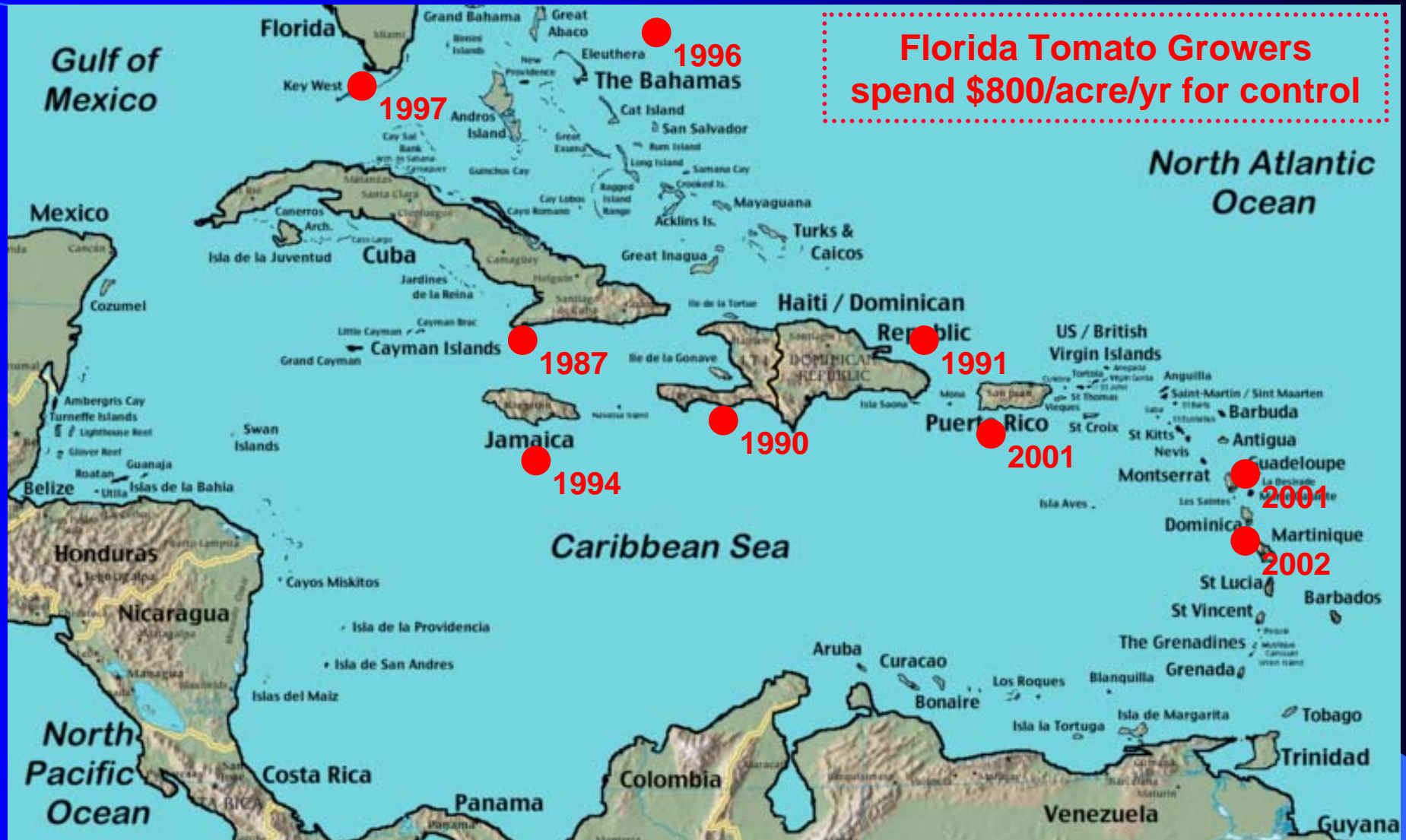
*Professor Emeritus, University of Florida,*

**Edward A. "Gilly" Evans**

*Associate Professor, University of Florida*

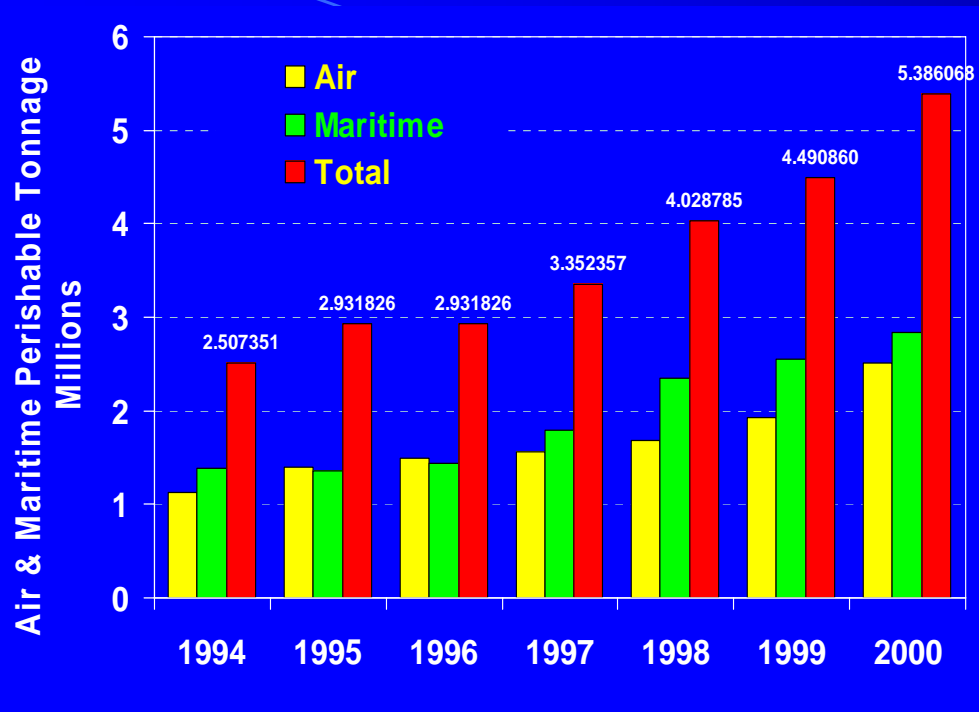


## Spread of Tomato Yellow Leaf Curl Virus in the Caribbean Region



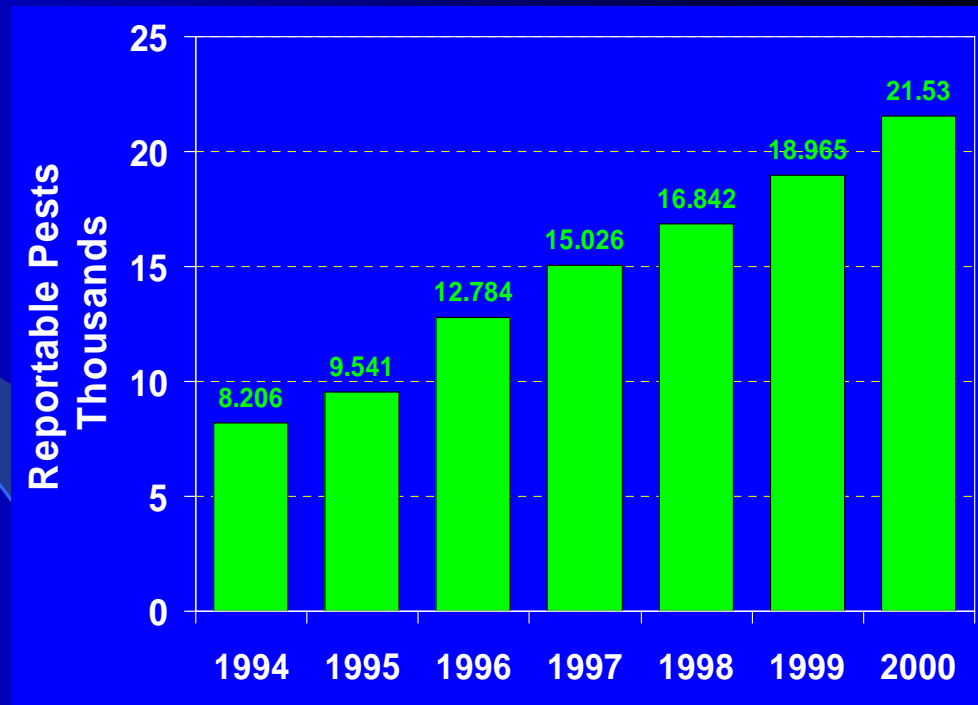
Florida Tomato Growers  
spend \$800/acre/yr for control

## Imports of perishable products into FL



Tonnage of perishable products imported into Florida as air and maritime cargo. Source: Book of International Trade, U.S. Department of Commerce.

## Interception of quarantine pests in FL

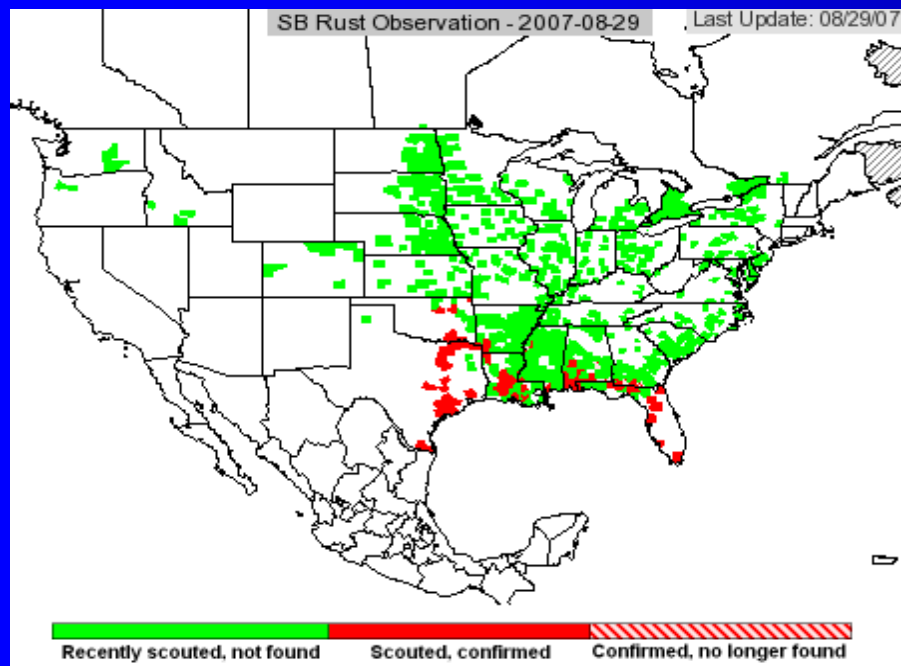


Interception of quarantine significant pests at all Ports of Entry in Florida. Source: Klassen et al. (2002)

**Note the doubling of interceptions in 5-6 years in parallel with the growth in trade in perishable commodities.**

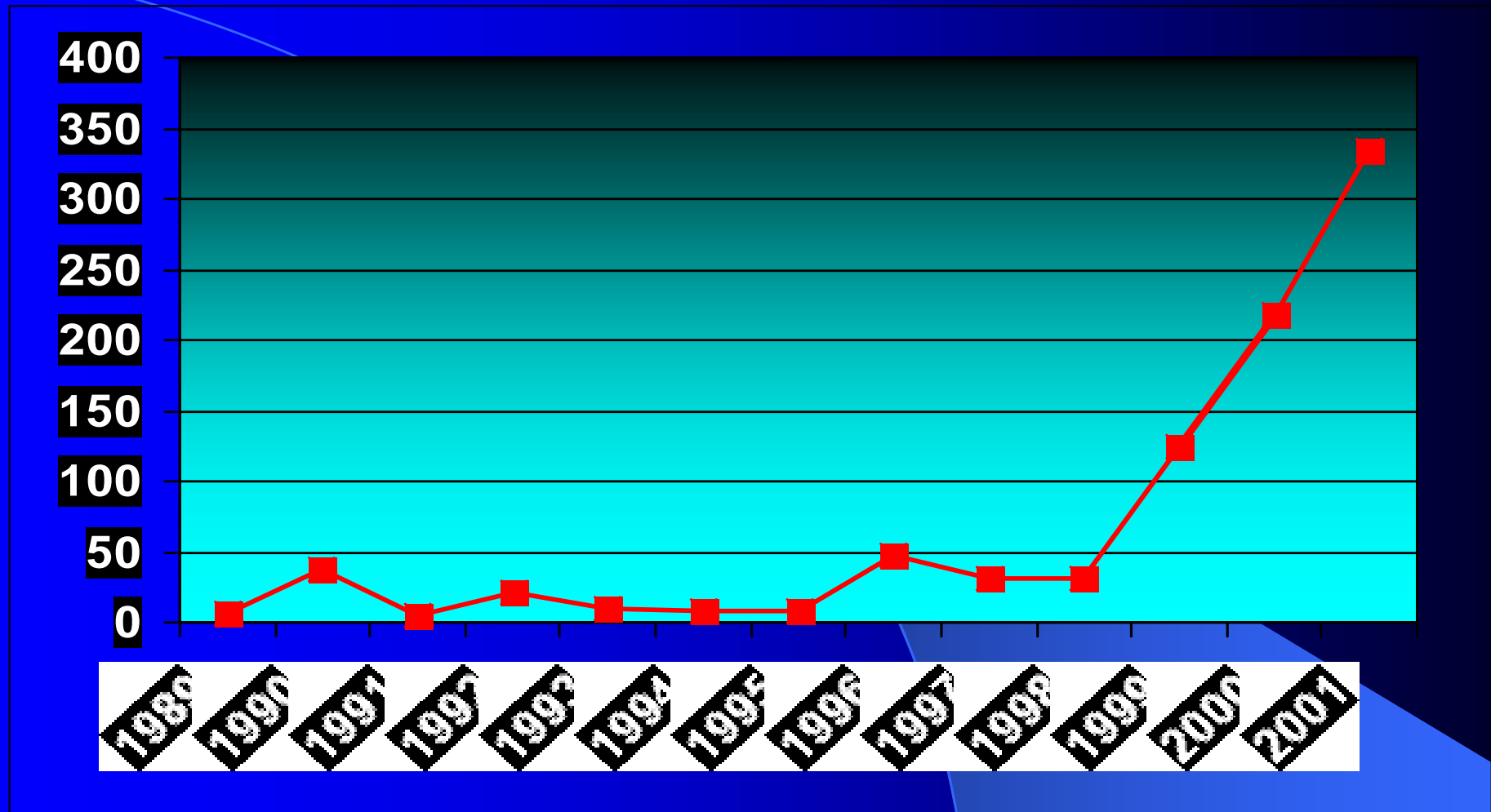
## Asian Soybean Rust

- ❑ Not all invasives are introduced by trade
- ❑ Soybean rust introduced by Hurricane Ivan in September, 2004



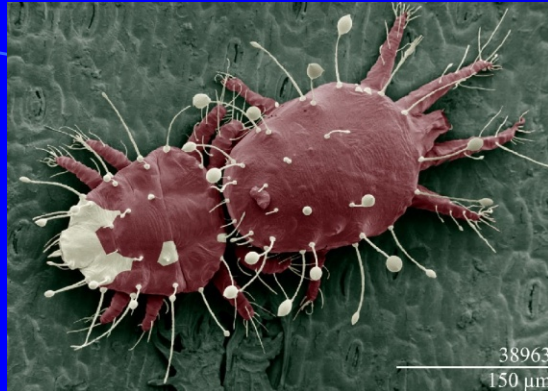
- ❑ Note coordinated monitoring by SPDN and NPDP

## USDA-APHIS Emergency Program Spending



USDA-APHIS Emergency Program Spending, 1989-2001 (US\$ millions)

Source: E. A. Evans, 2004. Workshop Proceedings.



## Invasive Species . . . . .

### *Challenges for the Caribbean . . . . .*

- Geographical borders
- Variation in governments
- Variation in language
- Limited capability of some countries/ territories in plant and animal protection
- No functioning regional plant protection organization

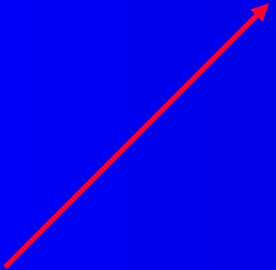


## **Key:** Early Detection, Rapid Response

-  Detection
-  Exclusion
-  Eradication
-  Control
-  Management



**Leads  
To  
Rapid  
Response**



No country can accomplish all on their own  
Regional approach is needed – surveillance  
and information

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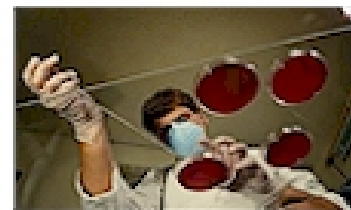
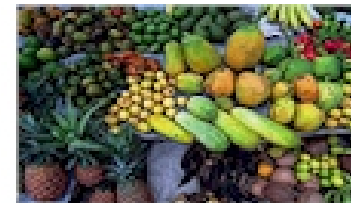


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● Pacific Basin Administrative Group



University of Hawaii  
University of Guam



W. Klassen (chair). 1999. Mitigating the effects of exotic pests on trade and agriculture, Part A. The Caribbean. Proceedings of T-STAR Workshop, Homestead, Florida, June 16-18, 1999



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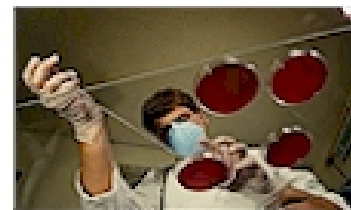
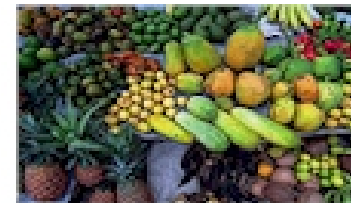


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Muniappan & Campbell (chair). 2001. Mitigating the effects of exotic pests on trade and agriculture, Part B. The Pacific. Micronesia, Suppl. 6; Invasive Species and Their Management.

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- Increased funding allocated for T-STAR program.
- Enhanced funding related to invasive species.
- Administration of T-STAR-C and T-STAR-P made an effort to link Caribbean & Pacific through joint programs.
- Linkage designed to leverage a larger opportunity
- Focus on policy issues

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- Led to first T-STAR Invasive Species Symposium at CFCS meeting in Grenada, 2003.

## ***Complimentary & Collaborating Activities***

- CABI report survey on invasive species led by Moses Kairo. Led to GEF/CABI project.
- CARIPestNet – EU/CABI nonintegrated pest network
- CIRAD CARIBVet and plant pest risk assessment
- Caribbean Pest Network led by FAO and Gene Pollard
- Caribbean Safeguarding Initiative led by USDA APHIS
- Offshore Pest Information System – USDA APHIS
- GEF/CABI Project “Mitigating the Threat of Invasive Alien Species in the Insular Caribbean”

## *Caribbean Food Crops Society Meeting*

*2003, Grenada*

*“Challenges and Opportunities in Protecting the Caribbean, Latin America and the United States From Invasive Species”*

*Four major outcomes . . . . .*

- Engagement of Caribbean institutions, especially noted by Ambassador Byron Blake, CARICOM, Gene Pollard, FAO and Arlington Chesney, IICA*
- Formation of “Caribbean Invasive Species Working Group”*

## *Caribbean Food Crops Society Meeting*

*2003, Grenada*

*“Challenges and Opportunities in Protecting the Caribbean, Latin America and the United States From Invasive Species”*

*Four major outcomes . . . . .*

- Work began on “Caribbean Regional Invasive Species Intervention Strategy (CRISIS)”*
- Work began on identifying technical components of regional safeguarding*

## ***Caribbean Regional Invasive Species Intervention Strategy (CRISIS)***

- Develop harmonized policies and regional cooperative frameworks
- Prevent the introduction of new invasive species
- Reduce the impact and spread of established invasive species
- Develop and maintain an information network
- Build management and research capacity

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## Caribbean Invasive Species Working Group (CISWG)



University of Florida



IICA



CABI



Florida A&M University



USDA/APHIS



FAO



PAHO

Ministries of Agriculture

- CARICOM
- French government



CARDI



CIRAD



University of West Indies



Ministry of Agriculture  
Costa Rica



CARICOM Secretariat



IDIAF



University of Puerto Rico  
Rico



## *Caribbean Invasive Species Working Group*

*2004, Trinidad*

### *“Facilitating Safer US-Caribbean Trade: Invasive Species Issues”*

*Major outcomes . . . . .*

- *“Caribbean Regional Invasive Species Intervention Strategy (CRISIS)” completed*
- *Identified CAHFSA as lead agency for safeguarding, linked to other Caribbean and regional entities*
- *Identified the key technical components for a regional safeguarding system*



## *Caribbean Invasive Species Working Group*

*2004, Trinidad*

### *“Facilitating Safer US-Caribbean Trade: Invasive Species Issues”*

*Major outcomes following meeting . . . . .*

- *CISWG and CRISIS recognized and accepted by:*

*CARICOM - Council for Trade and Economic  
Development (COTED)*

*Governments of France, Costa Rica, Dominican  
Republic, United States*

## *Caribbean Food Crops Society Meeting*

*2005, Guadeloupe*

*“Embedding a Caribbean Invasive Species Safeguarding Strategy Within a Regional Integration Framework: Institutional and Technical Issues”*

*Major outcomes . . . . .*

- *Initiated development of proposal “Caribbean Invasive Species Surveillance and Information Program (CISSIP)”*

## ***Caribbean Invasive Species Surveillance and Information Program (CISSIP)***

- ***Caribbean Regional Diagnostic Network (CRDN) – network of distance diagnosis laboratories throughout the Greater Caribbean. Now: Caribbean Plant Diagnostic Network (CPDN)***
- ***Invasive Species Information System***
- ***Pest Survey & Inspection***
- ***Public Awareness - Public Education Program (PEP)***

***CISSIP Meeting – April 2006***  
***CISWG Meeting – November 2006***

***Trinidad***

*Major outcomes . . . . .*

- o Attended by Caribbean country/territory ministries dealing with invasive species.*
- o Description / discussion of CISSIP*
- o Country/territory presentations of capacity and needs*
- o Strategies for seeking funding & implementation of CISSIP – CARICOM Agriculture Donor's Conference (June 2007).*

***CISSIP Meeting – April 2006***  
***CISWG Meeting – November 2006***

***Trinidad***

***Major outcomes . . . . .***

- ***CISWG Caribbean Pathway Analysis. Led by USDA/APHIS***
  - ✓ ***Characterization of tourism/movement of people in the Caribbean***
  - ✓ ***Characterization of trade in the Caribbean***
  - ✓ ***Natural spread of pests in the Caribbean***
  - ✓ ***Quantitative analysis of risk posed by airline passengers***

## *Caribbean Food Crops Society Meeting*

*2006, Puerto Rico*

*“ Operationalizing CRISIS as a Regional Invasive Species  
Safeguarding Model: Exploring Multiple Platform Initiatives”*

*Major outcomes . . . . .*

- *Roger Clarke, Minister of Agriculture Jamaica discussed  
The Jagdeo Initiative “A Framework for Repositioning  
Caribbean Agriculture”*
  - ✓ *Need for regional safeguarding mechanism to  
address the threat of invasive species.*

## *Caribbean Invasive Species Working Group*

*2007, Trinidad*

*Major outcomes . . . . .*

- *Approved the formation of the **Caribbean Plant Health Directors Forum***
  - ✓ *Leadership provided by CARICOM, USDA-APHIS, CABI, CIRAD, FAO & IICA.*
  - ✓ *Development of workgroups surrounding specific pests.*

## ***Caribbean Food Crops Society Meeting***

***2008, Miami Beach FL***

### ***“The Role of the Caribbean Invasive Species Surveillance and Information Program (CISSIP) in the Regional Agriculture Repositioning Strategy”***

*Major outcomes . . . . .*

- *Implementation of CISSIP in its component parts*
  - ✓ *Caribbean Plant Diagnostic Network*
- *First report from Caribbean Plant Health Directors Forum*



## ***Caribbean Plant Health Directors Forum***

- Discharge responsibilities for coordinated regional safeguarding typically carried out by Regional Plant Protection Organizations.
- Establishment of effective national phytosanitary systems
- Working Groups established
  - ✓ Red palm mite
  - ✓ Giant African snail
  - ✓ Fruit flies
  - ✓ Palm pest complex
  - ✓ Banana streak virus
  - ✓ Emergency response

## *Caribbean Food Crops Society Meeting*

*2009, St. Kitts*

### *“Invasive Species Safeguarding: Imperative for Caribbean Regional Agricultural Diversification and Food Security”*

*Major outcomes . . . . .*

- *Increasing focus on food security and agricultural diversity places greater risk of import and export of invasives.*
- *Agricultural policy*
  - Legislative framework*
  - Plant and animal health and food safety systems*
  - Human & financial resources & infrastructure*

**2010**

*Major outcomes . . . . .*

- *Approval and implementation of **Caribbean Agriculture Health & Food Safety Agency (CAH FSA)***

## *Accomplishments since the First Symposium on Invasive Species in Grenada, 2003*

*Many significant accomplishments . . . . .*

*. . . . . Much work remains*

- *Focus on policy has brought awareness to the significant threat of invasive species.*
  - ✓ *Coordination of regional organizations*
  - ✓ *Allows science to be implemented*

## *Accomplishments since the First Symposium on Invasive Species in Grenada, 2003*

*Many significant accomplishments . . . . .*

*. . . . . Much work remains*

- *Regional mechanism has been developed*
  - ✓ *CRISIS, CISWG, CISSIP, CPHDF*
- *Commitment, support and funding must now come forward*
  - ✓ *CAHFSA is now in a position to provide leadership*