



CARIBBEAN AGRICULTURAL HEALTH AND FOOD SAFETY AGENCY

# CAPACITY BUILDING ACTIVITIES

## CAHFSA

### PLANT HEALTH DIVISION

2017 IPPC Regional Workshop for the Caribbean  
Sept. 13-15: Barbados



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# Mandate

- To safeguard the Region's agriculture and natural resources from the introduction and spread of plant pests while facilitating safe trade of agricultural products among Member States.



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# AREAS OF FOCUS



- Standards and Implementation
- Capacity building
- Rapid Response and Safeguarding Mechanism
- Information exchange
- International and Regional cooperation

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# LEGISLATION AND STANDARDS



**Adopt regionally consistent plant health legislation, regulations and approaches within the legislative framework of each Member State.**

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# Standards

## Completed

Guideline for **PRA** for imported plant and plant products

Guidelines for preparing a **market access** proposal

## In Progress

Guideline for movement of **aggregate**

Protocol for the movement of plant germplasm



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# Annotated Templates

- Draft CARICOM regional phytosanitary standards (CARPS)
- Draft specification for CARPS
- Submitting comments on draft documents
- Responding to MS comments on draft documents

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# CAPACITY BUILDING



Improve the regions plant health capacity  
and capability

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# Trainings

- **PRA trainings** (CAHFSA, USDA-APHIS-IS, OECS, 10<sup>th</sup> EDF SPS project )
  - Antigua and Barbuda
  - Dominica
  - Jamaica
  - St Lucia
  - St Vincent and the Grenadines
  - Trinidad and Tobago

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# Trainings

- **Pest Prioritization** (UWI, CAHFSA OECS, USDA-APHIS-IS)
  - Antigua and Barbuda
  - St Lucia
  - St Vincent and the Grenadines

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# Trainings cont.

- Regional Plant Quarantine Training: UWI (CAHFSA, CPHD, IICA, FAO, OECS, USDA-APHIS, and MOA BAR, JAM, TT,)
- Regional plant pest identification training: Virology (CAHFSA, CPHD, MICA, USDA-APHIS-IS)

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# Training materials

- PRA training resources
  - PowerPoint presentations
  - workbook with case studies/exercise
  - Administrative forms/documents
  
- Plant Pest Surveillance Manual

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# Phytosanitary Resources

- Manuals
- Fact sheets
- Diagnostic protocols

(IPPC, IICA, FAO)

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# Rapid Response Mechanism and Safeguarding



Improve the Region's ability to prepare for and respond to, pest incursions

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# Regionally Regulated Pests

- **Voucher specimen** collection
- **Database** with links to technical information (diagnostic and survey protocols, fact sheets etc.)



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- *Ceratitis capitata* (Medfly)
- *Tuta absoluta* (tomato leaf miner)
- *Rhynchophorus ferrugineus* (red palm weevil)
- *Anoplophora glabripennis* (Asian long horn beetle)
- *Leptinotarsus decimlineata* (Colorado potato beetle)
- *Trogoderma granarium* (Khapra beetle)
- *Tetranychus evansi* (Tomato red spider mite)
- *Ditylenchus dipsaci* (stem and bulb nematode)
- *Globodera rostochiensis* (Golden nematode)
- *Helicoverpa armigera* (Old World bollworm)



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# Priority pests

- National and regional lists
- Collate Lists from MS
- Regulated pest database
- Technical resources



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# Regional priority pest list 2014

| Rank | Priority Pests   |
|------|--|
| 10   | <b><i>Ceratitis capitata</i> (Mediterranean Fruit Fly)</b> |
| 9    | <b><i>Bactrocera carambolae</i> (Carambola Fruit Fly)</b>  |
| 8    | <b><i>Ralstonia solanaeacearum</i> (Races 2&amp; 3)</b>    |
| 7    | <b><i>Fusarium oxysporum f.sp. cubens</i> Race 4</b>       |
| 6    | <b><i>Tuta absoluta</i> (Tomato Leaf Miner)</b>            |
| 5    | <b><i>Rhychophorus ferrugineus</i> (Red Palm Weevil)</b>   |
| 4    | <b><i>Moniliophthora roreri</i> (Cocoa Frosty Pod)</b>     |
| 3    | <b>Citrus canker</b>                                       |
| 2    | <b>Citrus leprosis virus</b>                               |
| 1    | <b><i>Mononychellus tanajoa</i> (Cassava Mite)</b>         |

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| SCIENTIFIC NAME                 | COMMON NAME              | TYPE        | COUNTRY                       |
|---------------------------------|--------------------------|-------------|-------------------------------|
| <i>Achatina fulcia</i>          | Giant African Snail      | Mollusc     | A&B, GRE, JAM, SVG,           |
| <i>Ceratitis capitata</i>       | Mediterranean Fruit Fly  | Insect      | A&B, DOM, GRE, JAM, SLC, SVG, |
| Coconut lethal yellowing        | Coconut lethal yellowing | Phytoplasma | A&B, DOM,GRE, SLC, SVG        |
| <i>Cylas formicarius</i>        | Sweet Potato Weevil      | Insect      | GRE, DOM, SKN, SLC            |
| <i>Huanglongbing HLB)</i>       | Citrus Greening Disease  |             | DOM, A&B, SLC, SVG            |
| <i>Moniliophthora roreri</i>    | Monilia Pod Rot of Cocoa | Fungus      | GRE, DOM, SVG                 |
| <i>Mycosphaerella fijiensis</i> | Black Sigatoka           | Fungus      | DOM, SLC, SVG                 |
| <i>Rhychophorus ferrugineus</i> | Red palm Weevil          | Insect      | DOM, St. Kitts, A&B, SLC, SVG |
|                                 |                          |             |                               |





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| Priority pest   | Priority ranking |
|---|------------------|
| <b><i>Citrus leprosis virus</i></b><br><b>("Citrus leprosis")</b>         | High             |
| <b><i>Moniliophthora roreri</i></b><br><b>("frosty pod rot of cocoa")</b> | Low              |
| <b><i>Mononychellus tanajoa</i></b><br><b>("cassava green mite")</b>      | High             |



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# Technical Information packages

## FACT SHEET

CARICOM REGULATED PESTS

**Annona seed wasp**  
***BEPHRATELLOIDES CUBENSIS* (ASHMEAD),**  
 HYMENOPTERA: EURYTOMIDAE

**INTRODUCTION**




One pest of *Annona* sp that has the potential to become a serious problem is the Annona seed wasp, *Beprateiloides cubensis*. In 1932 the wasp was reported from Jamaica as *Brephata cubensis* and affecting *Annona muricata* (sour-sop) and *A. reticulata* (custard apple) (Kjisiuk and Cooley 1932). It is now known to also affect *A. squamosa* (sweet-sop), a popular fruit sold on the local market.

**DESCRIPTION**

The adult female seed borer is 0.5cm –0.8 cm long and reddish-brown to light brown in colour. There is a dusty patch on each wing. The body is longer than the head and thorax combined, its base forming a hump that tapers into an upward curve at the tip (Fig 2). The tip of the abdomen possesses a long ovipositor. The larvae are white to cream coloured, legless, c-shaped and swollen near the center. The body tapers to points at the ends (Fig. 3). Eggs are ovoid with a short filament at one end and a long filament that extends out of the ovipositor puncture at the other end.

**BIOLOGY**

*Beprateiloides cubensis* is distinguished by its almost absence of males. Although sexual reproduction occurs, populations consist mainly




## FACT SHEET

CARICOM REGULATED PESTS

of females producing females by non-sexual reproduction. Females are observed to oviposit during the hottest times of the days. Eggs are oviposited within developing seeds when fruits are approximately 1-5 cm in diameter. Although many eggs are laid within a seed, only one mature larva develops. Incubation of eggs lasts 12-14 days. The larval stage lasts 42-55 days and pupal stage lasts 14-21 days. The adult female life span ranges between 1 and 11 days and the life cycle duration of the wasp ranges from 66 to 87 days (Mau and Kessing 1991).

**DAMAGE**

The Annona seed wasp causes injury by the feeding of the larvae on the seeds as well as the tunnel formed by the adults when they emerge from the fruit. In the green fruit, a callus forms around these emergence tunnels, allowing them to remain open and becoming a permanent injury. An associated fungus mummifies the partially grown fruits on the tree (Fig1).

**MANAGEMENT**

Management options for the control of the Annona seed wasp have not been explored in Jamaica but reports from Hawaii suggests that field sanitation is the best method of managing the wasp. Infested fruits must be removed from the fields as they serve as a source of re-infestation during the next fruiting season (Mau and Kessing 1991). Another control measure involves the bagging of individual fruits when they are 1-1/2 to 2 inches in diameter.



**REFERENCE:**

Kjisiuk, M. and C.E. Cooley 1932. Report on the fruit fly, *suoyca* in the British West Indies.

Mau, R and J. Kissing 1991. *Beprateiloides cubensis* (Ashmead). Crop Knowledge Master. [www.extento.hawaii.edu](http://www.extento.hawaii.edu) Accessed January 30, 2004.



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# INFORMATION EXCHANGE AND DISSEMINATION



*Adopt systems and mechanisms for the efficient and effective distribution, communication and uptake of plant health information*

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# CAHFSA website

The screenshot shows the top section of the CAHFSA website. On the left is the CARICOM logo (a blue 'C' and 'E' in a square) and the text 'AN INSTITUTION OF THE CARIBBEAN COMMUNITY'. To its right is the CAHFSA logo, which consists of a cluster of green and blue dots forming a circular shape, with the text 'CAHFSA' in large blue letters and 'CARIBBEAN AGRICULTURAL HEALTH & FOOD SAFETY AGENCY' in smaller blue letters below it. On the right side of the header, there are social media icons for Twitter and Facebook, followed by the text 'Databases Login Sitemap Contact Us'. Below this is a search bar with the placeholder text 'Search ...' and a green magnifying glass icon. A horizontal navigation menu is located below the search bar, containing the following items: 'About us', 'Animal Health', 'Plant Health', 'Food Safety', 'SPS Standards', 'Media', 'SPS Information Portal', and 'Registered Pesticides'. The main content area below the navigation menu features a large photograph of a man in a white shirt examining a palm leaf in a field. The text 'Pest Surveillance' is overlaid in the bottom left corner of this image. Navigation arrows are visible on the left and right sides of the image.

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|   |                        |                            |  |          |                         |  |    |
|---|------------------------|----------------------------|--|----------|-------------------------|--|----|
|  | Carol Thomas           | Sanitary and Phytosanitary | Agricultural Health and Food Safety Specialist | Jamaica  | IICA                    | International Agricultural Health and Food Safety specialist | Bs |
|  | Elise Alleyne          | Pest Identification        | Entomologists                                  | Barbados | Retired                 |  | Pr |
|  | Karen Barrett-Christie | Entomologists              |  | Jamaica  | MOAF/PQ                 | Entomologist/Identifier                                      | M  |
|  | Lennox Chandler        | Entomologists              |  | Barbados | Ministry of Agriculture | Chief Agricultural officer                                   | M  |
|  | Dionne Clarke-Harris   | Entomologists              |  | Jamaica  | CARDI                   | Entomologist   |    |

PRAs  
Regionally regulated pests  
Plant health practitioners  
Regional trade issues

**Web based databases**



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<https://database.cahfsa.org/risk-assessment/plant-health/pathway-initiated-pra>

<https://database.cahfsa.org/regulated-pests>

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# Regional and International Collaboration



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# Regional Collaboration

- CPHD
  - Plant health related activities
  - Formation of the Caribbean RPPO
- FAO:
  - Regional Project : *Strengthening institutional and technical capacity of agricultural services in three countries of the OECS*
    - Dominica, Grenada, St Kitts and Nevis

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# Regional Collaboration

- **OECS:**
  - Training activities
  - Guidance documents
  - MIA lethal yellowing
  
- **UWI**
  - Regional Plant Quarantine Training
  - Pest management

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# Regional Collaboration

- USDA-APHIS-IS/GCSI:
- CABI
- IICA

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# International Collaboration

- **IPPC**

- Regional workshop
- PCE
- RPPO activities



- **IAEA**

## **IAEA Technical Cooperation (TC)**

**Food Security** through best-fit soil and nutrient management using of **isotopic** techniques that enhance sustainable agriculture



**IAEA**

International Atomic Energy Agency

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# Dispute mediation

- Bilateral discussions
- Technical briefs
- Draft mechanism



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