

**FINAL FAO/IAEA RESEARCH CO-ORDINATION MEETING ON**

**"RESOLUTION OF CRYPTIC SPECIES COMPLEXES OF TEPHRITID PESTS TO  
OVERCOME CONSTRAINTS TO SIT APPLICATION AND INTERNATIONAL  
TRADE"**

**1 – 5 June 2015**

**CIRAD - UMR "Peuplements Végétaux et Bio-agresseurs en Milieu Tropical**

**Hotel Sud, Tampon, La Réunion- FRANCE**

<b>MONDAY, 1 JUNE 2015</b>	
08:30 - 09:00	<b>Bernard Reynaud, Unit Director and Daniel Barthelemy, Director of BIOS department of CIRAD.</b> Opening and welcome statements. <b>Hélène Delatte, Gary Steck.</b> Dedication of RCM to Serge Quilici and Peter Teal.
09:00 - 09:15	<b>Hélène Delatte, Jorge Hendrichs.</b> Goals of the meeting, review of agenda, administrative and other issues.
<b>SESSION I: Chairperson: Gary Steck</b>	
09:15 - 09:45	<b><u>Maud Charlery de la Masselière</u>, Serge Quilici, Pierre-François Duyck.</b> Host specialization in Tephritidae fruit flies in La Réunion: preference – performance – host phylogeny relationships.
09:45 - 10:15	<b><u>Maulid Mwatawala</u>, Abdul Kudra, Abdalla Mkiga, Editha Godfrey, Jeremiah Sigalla, Massimilano Virgilio, Marc De Meyer.</b> Preference of <i>Bactrocera cucurbitae</i> Coquillett for three commercial fruit vegetable hosts in natural and semi natural conditions.
10:15 - 10:45	<b><u>Suksom Chinvinijkul</u>, Sunyane Srikachar, Phatchara Kumjing, Weera Kimjong, Weerawan Sukamnouyporn, Nongon Polchaimat, Mark K. Schutze.</b> Mating compatibility among and within <i>Bactrocera dorsalis</i> complex from north and south of Thailand.
<b>10:45 - 11:00 BREAK</b>	
11:00 - 11:30	<b><u>Iara Sordi Joachim-Bravo</u>, Raul Laumann, Alzira Kelly Passos Roriz, Inajara Vianna Gomes Lima, Clarissa Petitinga, Beatriz Jordão Paranhos, Jair Virgínio.</b> Analysis of sexual compatibility among <i>Anastrepha fraterculus</i> populations from Brazil: pre and post-zygotic isolation tests between two Brazilians morphotypes.
11:30 - 12:00	<b><u>MK. Schutze</u>, T. Dammalage, A. Jessup, MJB. Vreysen, V. Wornoayporn, <u>AR. Clarke</u>.</b> Effects of laboratory colonization on <i>Bactrocera dorsalis</i> (Diptera: Tephritidae) mating behaviour: ‘what a difference a year makes’.

12:00 - 12:30	<b>Chrysantus M. Tanga, Sunday Ekesi, <u>Fathiya M. Khamis</u>, Henri Tonnang, Samira A. Mohamed.</b> Temperature tolerance, predictive models and mating compatibility studies among two populations of <i>Ceratitis rosa</i> .
<b>12:30 - 13:30 LUNCH</b>	
<b>SESSION II: Chairperson: Fathiya Khamis</b>	
13:30 - 14:00	<b><u>Maulid Mwatawala</u>, Massimiliano Virgilio, Jane Joseph, Marc De Meyer.</b> <i>Ceratitis rosa</i> along an altitudinal transect in Central Tanzania: niche partitioning among the two Natal fruit fly morphotypes and other <i>Ceratitis</i> pest species.
14:00 - 14:30	<b>M. Laura Juárez, Francisco Devescovi, Radka Břízová, Guillermo Bachmann, Diego F. Segura, Blanka Kalinová, Patricia Fernández, M. Josefina Ruiz, Jianquan Yang, Peter Teal, Carlos Caceres, Marc Vreysen, <u>M. Teresa Vera</u>.</b> Female attraction towards male sexual pheromone in <i>Anastrepha fraterculus</i> .
14:30 - 15:00	<b>Lucie Vaníčková, Adriana de Lima Mendonça, Nathaly Costa de Aquino, Luana Lima Ferraira, Raphael Farias Tavares, Carlos Eduardo da Silva, Antonio Pompeiano, Paulo Milet-Pinheiro, Radka Břízová, Blanka Kalinová, Michal Hoskovec, Aleš Tomčala, Zuzana Ježková, Mária Faťarová, Beatriz Aguiar Jordão Paranhos, Vanessa Dias, Iara Sordi Joachim-Bravo, Vicente Hernández-Ortiz, Nelson A. Canal, Sunday Ekesi, Massimiliano Virgilio, Marc de Meyer, Aleš Svatoš, Johannes Kroiss, Martin Kaltenpoth, <u>Ruth Rufino do Nascimento</u>.</b> Chemical ecology of genera <i>Anastrepha</i> and <i>Ceratitis</i> (Diptera: Tephritidae).
15:00 - 15:30	<b><u>Keng-Hong Tan</u>, Alvin Kah-Wei Hee, Suk-Ling Wee, Ihsan-ul-Haq, Carlos Cacéres, Jorge Hendrichs, Hajime Ono, Ritsuo Nishida.</b> Rectal gland volatiles and phylogenetic relationships of pest sibling species within the <i>Bactrocera dorsalis</i> complex - Incipient species.
<b>15:30 - 15:45 BREAK</b>	
15:45 - 16:15	<b><u>Suk-Ling Wee</u>, Alvin Kah-Wei Hee, Keng-Hong Tan.</b> Emission of male sex pheromone by four cryptic species, <i>Bactrocera dorsalis</i> , <i>B. invadens</i> , <i>B. papayae</i> and <i>B. philippinensis</i> , following Methyl Eugenol consumption.
16:15 - 16:45	<b><u>Radka Břízová</u>, Blanka Kalinová, Michal Hoskovec, Jarmila Titzenthalerová.</b> Analysis of cuticular hydrocarbon composition in <i>Bactrocera dorsalis</i> complex.
16:45 - 17:15	<b><u>Blanka Kalinová</u>, Radka Břízová, Maria Faťarová, Lucie Vaníčková, Marc de Meyer, Sunday Ekesi.</b> Pheromone communication in <i>Ceratitis</i> FAR complex.

## TUESDAY, 2 JUNE 2015

08:30 - 08:45 **Hélène Delatte, Jorge Hendrichs.** Announcements, adjustments to the agenda, administrative and other issues.

### SESSION III: Chairperson: Teresa Vera

08:45 - 09:15 **Gary J. Steck, Sunday Ekesi.** Third instar larvae of *Ceratitidis FAR* complex and *C. capitata* (Diptera: Tephritidae).

09:15 - 09:45 **Nelson A. Canal, Maria del Rosario Castañeda, David F. Gómez, Claudia M. Flórez, Francisco J. Nuñez, Yenifer Campo.** Tools for studies on taxonomy and systematics of the *Anastrepha fraterculus* complex: Third instar larvae and karyotypes.

09:45 - 10:15 **Vicente Hernández-Ortiz, Juan O. Tigrero, Nelson A. Canal.** Use of wing shape for delimitation of cryptic species of the *Anastrepha fraterculus* complex in Mesoamerica and Andean countries.

10:15 - 10:45 **Massimiliano Virgilio, Joannes Van Cann, Kurt Jordaens, Marc De Meyer.** Wing morphometrics as a possible tool for the diagnosis of the *Ceratitidis fasciventris*, *C. anonae*, *C. rosa* complex (Diptera: Tephritidae).

### 10:45 - 11:00 BREAK

11:00 - 11:30 **M. De Meyer, H. Delatte, M. Mwatawala, S. Quilici, J.-F. Vayssières, M. Virgilio.** A review of the current knowledge on *Zeugodacus cucurbitae* (Diptera: Tephritidae) in Africa.

11:30 - 12:00 **H. Delatte, V. Ravigné, M. De Meyer, M. Virgilio.** Routes of introduction and spread of *Zeugodacus cucurbitae* (Diptera: Tephritidae) in Africa.

12:00 - 12:30 **A. Augustinos, E. Drosopoulou, A. Gariou-Papalexiou, C. Cáceres-Barrios, K. Bourtzis, P. Mavragani-Tsipidou, A. Zacharopoulou.** Different speciation paths and multidisciplinary approaches to provide insight in tephritidae species complexes: a case study from the *B. dorsalis* complex.

### 12:30 - 13:30 LUNCH

### SESSION IV: Chairperson: Vicente Hernández-Ortiz

13:30 - 14:00 **Elena Drosopoulou, A. Augustinos, A. Gariou-Papalexiou, C. Cáceres-Barrios, K. Bourtzis, P. Mavragani-Tsipidou, A. Zacharopoulou.** Contribution of cytogenetics to taxa discrimination within species complexes toward SIT applications: the example of the *Bactrocera dorsalis* and results on the *Ceratitidis FAR* and *Anastrepha fraterculus* complexes.

14:00 - 14:30	<b>Janisete G. Silva, Katia M. Lima, Joseane F. Passos, Norman B. Barr, Raul Ruíz-Arce, Gary J. Steck, Bruce A. McPheron, Roberto A. Zucchi, Keiko Uramoto, Vicente Hernandez-Ortiz, Anna Malacrida, Giuliano Gasperi, Mosè Manni, Silvia Beatriz Lanzavecchia, Marianela Juri, Claudia Conti, Jorge Cladera, Iara Joachim-Bravo, Teresa Vera.</b> Use of mtDNA and nuclear markers to delimit and diagnose Brazilian species within the <i>Anastrepha fraterculus</i> complex.
14:30 - 15:00	<b>Bruce D. Sutton, G. J. Steck, A. L. Norrbom, E. Rodriguez, P. Srivastava, N. Nolzaco Alvarado, F. Colque, E. Yábar Landa, J. J. Lagrava Sánchez, E. Quisberth, E. Arevalo, P. A. Rodriguez Clavijo, J. Alvarez Baca, T. Guevara Zapata, P. Ponce.</b> Nuclear ribosomal internal transcribed spacer 1 (ITS1) variation in the <i>Anastrepha fraterculus</i> cryptic species complex (Diptera: Tephritidae) of the Andean region.
15:00 - 15:30	<b>Anna R Malacrida, Mosè Manni, Kátia Manuela Lima, Nidchaya Aketarawong, Carmela R Guglielmino, Silvia B. Lanzavecchia, Marianela Juri, Teresa Vera, Fatihja Khamis, Sunday Ekesi, Francesca Scolari, Ludvik Gomulski, Janisete Gomes Silva, Giuliano Gasperi.</b> Development and use of population genotype databases for species resolution within <i>Anastrepha fraterculus</i> and <i>Bactrocera dorsalis</i> .
<b>15:30 - 15:45 BREAK</b>	
15:45 - 16:15	<b>Nidchaya Aketarawong, Siriwan Isasawin, Puchapat Sojikul, Sittiwat Lertsiri, Anna R. Malacrida, Giuliano Gasperi, Sujinda Thanaphum.</b> Summary of studies on <i>Bactrocera dorsalis</i> and <i>B. carambolae</i> for improving SIT and international trades.
16:15 - 16:45	<b>Qinge Ji, Yinggang Du, Jianquan Yang, Lei Lu, Bing Xiong, Yantao Guo, Jiahua Chen.</b> Crosses and reciprocal crosses of <i>Bactrocera dorsalis</i> (Hendel) (Diptera, Tephritidae) from nine different regions of China.
16:45 - 17:15	<b>General Discussion and organizing into Working Groups</b>

## WEDNESDAY, 3 JUNE 2015

### SESSION V: Chairpersons Jorge Hendrichs and Group Leaders

08:30 - 10:30	<b>Working Groups.</b> Review of achievements based on original coordinated research plans and drafting of results and scientific/technical conclusions for the different genera, approaches and techniques.
<b>10:30 - 10:45 BREAK</b>	
10:30 - 12:30	<b>Working Groups – continued</b>

<b>12:30 - 13:30 LUNCH</b>	
13:30 - 15:30	<b>Working Groups</b> – Preparing lists of all publications made during the last six years in conjunction with the CRP.
<b>15:30 - 15:45 BREAK</b>	
15:45 - 17:30	<b>Working Groups</b> – Drafting of final CRP evaluation.
<b>THURSDAY, 4 JUNE 2015</b>	
<b>SESSION VI: Chairpersons Jorge Hendrichs and Group Leaders</b>	
08:30 - 10:30	<b>General Discussion</b> – CRP impact and relevance, and factors which adversely affected the effectiveness of the CRP.
<b>10:30 - 10:45 BREAK</b>	
10:45 - 12:30	<b>General Discussion</b> – Recommendations on follow-up is needed by research groups to resolve loose ends and in general 'what is next'?
<b>12:30 - 13:30 LUNCH</b>	
13:30 - 15:30	<b>General Discussion</b> – Review of status of preparation of final CRP publication in Special Issue in ZooKeys.
<b>15:30 - 15:45 BREAK</b>	
15:45 - 17:00	<b>Working Groups</b> – Editing of manuscripts for Special Issue in ZooKeys.
18:00 - 21:00	<b>Social Event</b> – Dîner chez Hélène
<b>FRIDAY, 5 JUNE 2015</b>	
08:30 - 12:30	<b>Field Visit</b>
<b>12:30 - 14:00 LUNCH</b>	
14:00 - 16:30	<b>Visit to CIRAD Laboratory</b>