

LOCUST RABAT
BIOTECHNOLOGY FOR LOCUST CONTROL
(A Frank F. Richards Symposium topic)
The Golden Tulip Farah Hotel
Rabat, Morocco
1-3 July 2008

[Dual translation English and French]

[APRIL 2008 DRAFT]

Monday 30 June 2008: Travel Day

Monday evening, 30 June. informal welcome reception. Very Short Speech of welcome from the host country and sponsors of the meeting; regional officials and organizing committee; introductions and instructions for the meeting. Announcements concerning side trips in Morocco and opportunity to sign up on site for trips. Instructions for attendees to access e-mail either in hotel or at conference meeting site during the meeting. .

In charge of introductions and unofficial host: Dr. Abderrahmane Hilali, Rabat, Morocco

Tuesday, 1 July

Introduction of the locust problem and introduction to organizations responsible for locust control; logistics of locust control; global officials describing world support for locust problems and organizations involved. This to be followed by invited talks on locust biology, physiology and ecology by noted world experts.

8:30 am Introductions and welcome (**Dr. Hilali**), 10 minutes.

8:40 am Official from Morocco to give welcome comments, 10 minutes.

Moderator: **Dr. Candido Santiago Alvares**, University of Cordoba (5 minutes).

8:50 am **Plenary Lecture** Biology of Desert Locust, **Steve Simpson**, (35 minutes).

9:30 am **Plenary Lecture** Strategy and logistics: Desert locust control, **Michel LeCoq**, (25 minutes).

9:55 am Discussion leading to Coffee Break.

BREAK

10:10 am coffee and refreshments and chance to visit (20 minutes).

10:30 am Reconvene. Moderator: **Yene Belayneh**, USAID, Africa locust program.

10:35 am **Scoping Lectures** Desert locust operations.

Desert Locust: Monitoring, Early Warning and Forecasting, **Keith Cressman**, FAO, Rome

EMPRES System Programme strengthening national services, **Thami Benhalima**, FAO Regional Officer, Algiers

Practical aspects of field control, Bob Aston (UK), Peter Spurgin (APLC).

Environmental issues and pesticides, Harold van der Valk (Netherlands).
Impact of climate change, David Pedgley (retired) locust meteorologist.
International support of locust operations, **Harry Bottenberg**, Agriculture
Development Advisor, USAID/West Africa, Accra, Ghana.
IAEA aspects, **Rebecca Hood**, IAEA representative.

[This 90 minute session is critical to set the stage for the sweep of the locust problem]

Discussion

LUNCH

1:25 pm Reconvene. Moderator: **Stefan Jaronski**
World locust perspective [20- min talks for information exchange]
David Hunter, Australian Plague Locust Commission
Long Zhang Beijing Agricultural University. Chinese locust situation and research
Dr. Said Ghaout, Morocco locust programs, Morocco.
Badji Kemo Senegal perspective

Discussion.

BREAK

Coffee and Tea.

Reconvene 3:10 pm. Moderator: **Steve Simpson**, University of Sydney, Australia.
3:15 pm **Plenary Lecture**: Biotechnology of Metarhizium **Ray St Leger** (25 min).
3:45 pm Lecture on microbial control of locusts Keith Charnley (25 min)
Metarhizium Research Results (Organized by Stefan Jaronski).
Don Mullins (or Larry Vaughn) Virginia Tech University, stability of Metarhizium.
Chris Wozniak Comments on Regulatory Aspects of recombinant Metarhizium.

An economic perspective? [Felicia Wu, University of Pittsburg]

General Discussion.

DINNER

Evening Reception to encourage interactions (Informal speaker possible or perhaps meet
at one of the locust staging areas in Rabat).

Evening Meetings of special interest subgroups:
Metarhizium
Biotechnology regulation and WHITE PAPER
Microbiology
Agency meetings

Wednesday 2 July 2008

Moderator: **Kostas Bourtzis**, University of Ioannina, Greece.

8:15 – 8:45 am **Gregory Sword**, Genome project on locust behavior (25 minutes).

8:45 – 9:15 am **Gert Simonet** Novel molecular strategies to study locust physiology.

9:15 – 9:45 am **Baldwyn Torto**, IPICE Chemical ecology.

9:45 – 10:15 am **Long Zhang**, Locust chemoreceptors and control strategies.

BREAK

10:15-10:30 am Coffee and Tea

10:30 am Reconvene. Moderator: **Scott O'Neill**, Queensland University, Australia.

10:35 – 11:05 am **Addelaziz Heddi** Symbiosis and possible locust control.

11:05 – 11:35 am **Daniele Daffonchio** Symbiosis, pest and disease control.

11:35 – 12:05 am **Kostas Bourtzis** Symbiosis projects in European Union

LUNCH

12:05 – 1:25 pm Lunch break

1:30 pm Reconvene. Moderator: **Abdelaziz Heddi**, INRA/INSA, Villeurbanne, France

1:35 – 2:05 **Plenary Lecture** *Wolbachia* and symbiotic topics, **Scott O'Neill**

2:05 – 2:35 Plant-insect-microbe interactions. [Adi Behar], (The Hebrew University of Jerusalem)

2:35 – 3:05 **Angray Kang** Immunology for anti-disease agents.

Discussion.

Afternoon **BREAK**

3:05 – 3:20 pm Coffee and Tea

3:20 reconvene Moderator: **Bob Rose**

3:25 – 3:50 pm **Chris Wozniak** Biotechnology applications and regulatory actions.
Question and Comment period 20 minutes.

Half Afternoon program, Regulatory issues associated with biotechnology applied to locust control. (Bob Rose; Chris Wozniak; Ian Coleman, Australia; Laury McCulloch, Australian Plague Locust Commission; CABI Regulatory Affairs Officer).

Presentation of research teams

One hour on Biotechnology as applied to pests and diseases; the formation of research teams to include locust field operators, research laboratories and regulatory aspects.

Banquet dinner hosted by Moroccan government.

Half Afternoon program,

Banquet Wednesday evening. Possibly a major locust speaker.

Thursday, 3 July, flex day. Morning bus excursion to Roman ruins of Volubilis in north Morocco (half day with lunch then shopping the Rabat afterwards). Or special arranged guided excursions to Marrakesch or the Atlas Mountains (two days).

Thursday, evening, 3 July, executive summary of findings by the organizers; discussion of Daegu Protocol applied to biotechnology for Desert Locust control. Operational plans connecting researchers with field operations for field trials. Participants: interested researchers, field officers, world locust agency representatives including FAO (key), IAEA, US-AID, German, French, Spanish, UK, Canada interests.

Friday, July 4, travel day coordinated with attendance at the Entomology Congress in Durban, 6-11 July 2008.

Speakers Guidelines: Assume some attendees are not familiar with locusts or molecular biology; all speakers are requested to prepare comments for a general audience. All speakers are requested to provide an abstract of their presentation. The abstracts will be posted on the website: <http://biopesticide.ucr.edu>, locust page.