Research on sustainable management of crop health at INRA

Olivier Le Gall, Xavier Reboud

Future IPM in Europe

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BOOK OF ABSTRACTS

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Program | Plenary session - March 19

Plenary sessions – Sala 1000*	
9.00 9.15	**Welcome and opening** - Ilaria Pertot, Claudio Ioriatti and Manfred Wolf
9.15 9.30	**Pesticide Use-and-risk Reduction in European farming systems with Integrated Pest Management; an EU project** - Françoise Lescourret
9.30 10.15	**The EU strategy for sustainable use of pesticides and the promotion of integrated pest management (IPM)** - Patrizia Pitton
10.15 11.00	**IPM - an old concept full of innovation** -Franz Bigler
11.00 11.30	**Coffee break**
11.30 12.15	**Optimization of spraying techniques to reduce impact of pesticides-** Jan van de Zande
12.15 13.00	**Design cropping systems with high productive performance and low use of pesticides** -Jacques Wery
13.00 14.00	**Lunch break**
14.00 14.40	**Developing alternative, non-pesticidal pest management methods: case studies from fruit crops** - Jerry Cross
14.40 15.20	**The EU directive 2009/128 may upgrade pathogen biocontrol agents from niche to full scale applications: are we technologically ready?** - Matteo Lorito
15.20 16.00	**The biopesticide innovation chain: how can researchers and industry collaborate to commercialize biopesticide products** - Susan Boyetchko
16.00 16.30	**Coffee break**
16.30 17.10	**IPM strategies and non-traditional biological and chemical alternatives for the management of plant-parasitic nematodes** - McGawley Edward
17.10 17.50	**Cis-genic plants as alternative to fungicide for the benefit of the environment and consumers** - Cesare Gessler
17.50 18.30	**Double role of Biochar: climate change mitigation and a tool for integrated management in agricultural systems** - Yigal Elad
18.30 19.00	**Research on sustainable management of crop health at INRA** - Le Gall O. and Reboud X.

*** Streaming on www.futureIPM.eu**

RESEARCH ON SUSTAINABLE MANAGEMENT OF CROP HEALTH AT INRA

Le Gall O.[1], Reboud X.[2]

[1]INRA, Directorate General, 147 rue de l'Université, Paris Cedex 07, F-75338, France; [2]INRA, UMR1347 Agroécologie, 17 rue Sully, BP 86510, Dijon cedex, F-21065, France

The current challenge of a sustainable management of plant health calls for extensive efforts and a cross-disciplinary approach which addresses all aspects of this complex issue. Combining the three pillars of sustainability – economic, social and environmental performances – requires integrating approaches from multiple scientific disciplines such as biology, ecology, social sciences, and economics. More generally, this strategy contributes to the emergence of agro-ecology as a full-fledged discipline. Integrating spatial, temporal and organizational scales is another related challenge. Four operational objectives can be identified around the general concept of sustainable management of plant health, which should enable to put together research teams:

- Developing shared reference frameworks,
- Designing novel levers for plant health,
- Designing and evaluating alternative cropping systems,
- Instigating, stimulating, guiding and accompanying change.

These principles are implemented at INRA under the form of a metaprogramme on Sustainable Management of Crop Health (SMaCH) where researches are organized by means of key actions. Each key action is a coordinated and consistent "bunch" of research projects and involves the cooperation of several disciplines. "Plant resistance sustainable management", "Technological lock-in and transition processes", "Design of cropping systems and agricultural landscapes for a low pesticide use", "Evaluation of the damage caused by pests" are examples of key actions. This metaprogramme is intended to function as an incubator of innovative ideas enabling moving towards the re-design of management systems of crop health.