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Multitrophic Interactions in Soil

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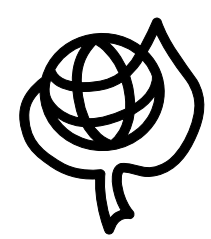
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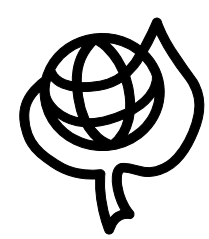


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IOBC-wprs Working Group Multitrophic Interactions in Soil



Convenor : Christian Steinberg
Liaison officer : Yigal Elad



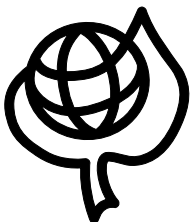
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Activities Oct 2009 - Oct 2011

1 - Bulletin

- Reviewing-edition and publication in 2011 of the Multitrophic Interactions in Soil Bulletin IOBC/WPRS 63. (WG meeting at Uppsala, Sweden, 11-13 June 2009)
- Reviewing-edition and submission in 2011 of the Multitrophic Interactions in Soil Bulletin IOBC/WPRS XX. (WG meeting at Cordoba, Spain, 4-7 April 2011)



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Activities Oct 2009 - Oct 2011

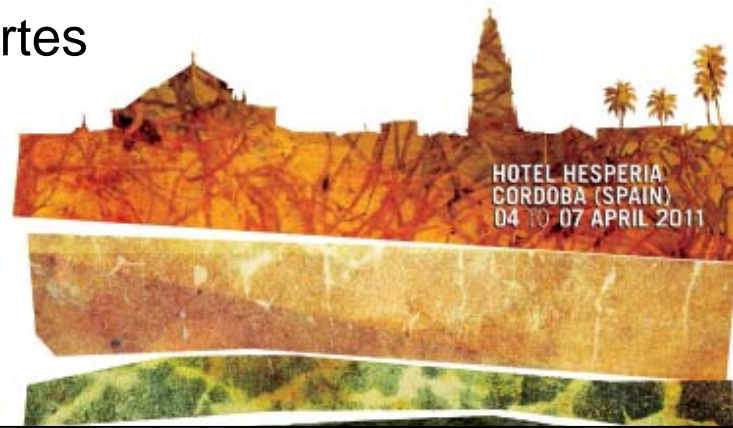
2 – Meeting of the WG

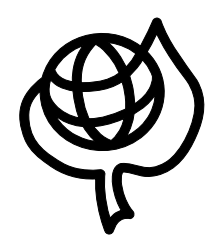
- Organisation of the 6th meeting on Multitrophic Interactions in Soil.

Cordoba (Spain) 4-7 April 2011

Local organization B. Landa and J. Navas Cortes
(Instituto de Agricultura Sostenible)

6TH IOBC
WORKING GROUP
MEETING ON
MULTITROPHIC
INTERACTIONS
IN SOIL
www.cordobamultitrophic2011.com





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82 participants

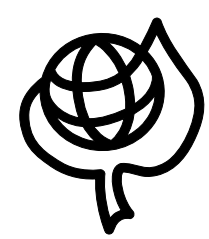
About 25 IOBC members

15 countries represented

36 oral presentations and 7 invited lectures

28 posters were exhibited

Numerous and active discussions "off records"

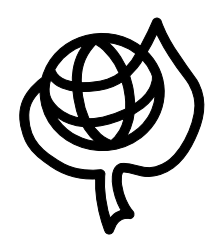


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1 - Main scientific topics

- What molecular (-omics) approaches can bring to the understanding of multitrophic interactions?
- Biocontrol mechanisms and multitrophic interactions in soil (i.e. thinking the control of bio-aggressors using multitrophic interactions within and among soil-borne communities as a complementary approach to the "classical binary approach")
- Effect of traditional and new agricultural practices on Multitrophic interactions.
- Evolution of the multitrophic interactions in soil to the environmental changes.
- In which way mathematical modelization, theoretical ecology, and biotechnological approaches can help to understand the multitrophic interactions in the soil.

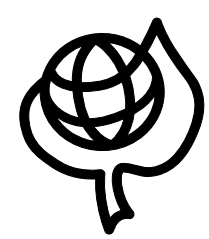


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Trends ?

- ⇒ Systemic approach ⇒ Ecology- **Ecosystem services**
- ⇒ Descriptions ⇒ **Functional diversity**
- ⇒ ...omics and molecular biology
 - ⇒ a beneficial **tool box**, not a disciplinary
- ⇒ Up scaling from the root to the landscape
 - ⇒ Huge amount of data ↑↓
 - ⇒ Identification of **Indicators** ???
 - ⇒ **risk assessment ?** ↑↓
- ⇒ Black boxes ⇒ **modelling**
 - ⇒ i) Conceptual approach and Hypotheses (and optimism);
 - ⇒ ii) Prediction

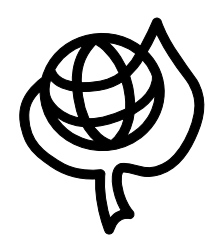


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⇒ Conclusions (of the WG meeting)

- ⇒ Growers ⇔ fundamental research
- ⇒ Contribution to innovation
 - ⇒ Policy and decision makers (indicators)
- ⇒ Education : basic and essential knowledge
 - ⇒ Plant pathology
 - ⇒ Soil biology
 - ⇒ Demystification of mathematical modelling



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In between meetings ???

⇒ a specific website ?

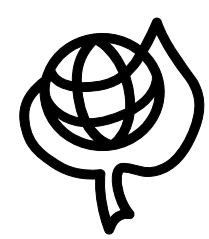
- ⇒ memory of the meetings
- ⇒ hybrid formula between cost action and journal club ?
- ⇒ standardized procedures ?
- ⇒ forum of discussions about technical points or recent

news?

- ⇒ up to date literature, ?
- ⇒ calls for projects and common responses ?
- ⇒ calls for PhD or post doc candidates...?

Who can manage such a web site? Any experience from other WG ?, any specific pages/ WG on the IOBC website?

- ⇒ **Publication of the bulletins in the year of the workshop ?**
- ⇒ **Simplification of the editing format (a simpler template) ?**



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Next meeting ? (June 2013)

⇒ Two possible candidates but none of them gave a definitive answer.

Cambridge would be an interesting opportunity to "demystify" mathematical modelling and include more of it in our approaches.

Model prediction for control of rhizomania disease of sugarbeet. Red represents a high probability of disease, green a low probability, white uninfested.





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Thanks for your attention