

Year of CfP: 2008

Project No 0802-019 Completed

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| Project title: AGRO2010 MONTPELLIER – The Scientific Week around Agronomy |
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Unit managing the project: UMR SYSTEM (Functioning and management of tree-based Planted Ecosystems) (CIRAD, INRA, Montpellier SupAgro)

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Countries involved in the project: International

Research units from the Foundation's scientific network involved: AMAP, BGPI, CBGP, AGAP, ECO&SOLS, EMMAH, GREEN, INNOVATION, LAMETA, LEPSE, LISAH, LSTM, PSH

Sub-thematic axis: IPB-1 (Integrative Plant Biology 1: *Genetics and genomics, plant breeding, ecophysiology*), IPB-2 (Integrative Plant Biology 2: *Plant pests and diseases, integrated crop protection, population ecology*), STDI-1 (Socio-Technical Dynamics of Innovation 1: *Agri-environmental innovations, agri-ecosystems, resources management*), STDI-3 (Socio-Technical Dynamics of Innovation 3: *Innovation processes, social management of innovations*)

Objectives:

The objective assigned to Agronomy by the society was to improve production on the basis of external input (fertilizers, pesticides, energy). During the past 20 years Agronomy came back progressively to its original concept with the integration of environmental impacts in the assessment or in the design of cropping systems. With the launching of the *Agence Nationale de Recherche* (ANR) Call "Systerra", the challenge is now to design agro-ecosystems with high production performance based on limited input and environmental impacts. This has to be conducted into a sustainable development context thereby adding socio-economic criteria to this multi-functional vision of agronomy. Although it remains deeply anchored in the biophysical functioning of the cultivated field, the science of agronomy is, today, a multi-scale and multi-criteria systemic approach.

This project will use the opportunity of the 11th Congress of the European Society for Agronomy (ESA) in 2010 in Montpellier to create a major international scientific event around Agronomy (Agro2010). This event includes a set of symposia and workshops covering (i) the scientific challenges for agronomic research in the context of sustainable development, (ii) the presentation and discussion of recent advances in the interfaces of agronomy and neighboring disciplines, and (iii) the major advances and research agenda for agronomy in Europe and in the developing world.

Specifics workshops will be organized for young scientists and students from developing countries, in order to help them to manage their research project and establish networks with the Agropolis Fondation scientists.

Action carried-out and results obtained:

The International Scientific Week Around Agronomy, Agro 2010 (Montpellier August 29 - September 3, 2010), has been co-organized by Agropolis International and the European Society for Agronomy (ESA) for its XIth congress, with the help of SupAgro, Inra and Cirad under the chair of Professor Jacques Wery (Executive Secretariat of ESA). The aim of this congress was to demonstrate the scientific grounds, the applied results and the ambitions of Agronomy to address the burning questions of the XXIst century for agriculture and its contribution to sustainable development. It was more specifically dealing with adaptation to climate change, ecological intensification of cropping systems, yield gap analysis and the design of productive and resilient cropping systems with low use of pesticides, fertilizers and energy. The design of this scientific event allows to follow a large range of trails with specific combinations of the following elements:

- an International symposium "Agronomy for Sustainable Development" with high level contributions opening the dialogue between scientists and stakeholders on the major challenges for Agronomic Research in Europe and in the developing countries
- Three Parallel symposia on scientific advances and challenges of interdisciplinary research between Agronomy and other disciplines:
 - o Plant Biology and Genetics: Co-designing plants and cropping systems for new targets
 - o Ecology: Ecological intensification of cropping systems
 - o Economy and Social Sciences: Co-assessment and co-design of technological innovations and agro-environmental policies
- Three parallel symposia organized by the scientific division of ESA on the three pillars of modern agronomy:
 - o Plant System Biology: the cultivated plant in a field (ESA - Division 1),
 - o Field Scale Agroecology: the cultivated field as an ecosystem (ESA - Division 2),
 - o Cropping Systems at Farm, Regional and Global Scales: the Cropping System in its embedding systems (ESA - Division 2),
- A symposium for the dialog between researchers and extension services on "Decision-Aid in Agriculture: which type of research and how to better use it in extension" with specific sessions for Europe and Africa,
- Three field trips combining meetings with farmers, tasting of regional products and visits of monuments
- Two international master classes on crop modelling and integrated assessment of agricultural systems, given for young scientists with priority given to developing countries,
- Two seminars aimed to develop international collaborations on Adaptation of Agriculture to Global Changes in OECD countries and on Ecological Intensification of cropping systems in the tropics.
- This congress was opened by an evening show to open the discussion between scientists and the Montpellier inhabitants on agriculture and the role of research.

Agro2010 has gathered 590 participants, which is a record in ESA congresses history. 56 countries were represented, 75% from Europe and 25% from all over the world, Africa being represented by more than 30 participants

Across the first four days Agro2010 organized 29 scientific sessions of two hours each. 470 papers have been published in the proceedings from which 160 oral presentations have been selected for an oral presentation and 370 have been presented as posters. All these communications and a large set of films are available on the congress web site www.agropolis.fr/agro2010

Prospects for the future:

A specific brochure of 68 pages dedicated to the expertise in Agronomy of 13 Montpellier's research teams, and their partners, was especially edited in French and English by Agropolis International and distributed to all participants. It is available at <http://www.agropolis.org/publications/thematic-files-agropolis.php>

During Agro2010, and thanks to the involvement of Agropolis International, the European Society for Agronomy (<http://www.european-agronomy.org>) has established its headquarters in Montpellier and will continue on the international momentum of this congress.

Total Agropolis Fondation funding: € 61,136 (edition, invited speakers fees, scientific committee members fees, grants for 20 young scientists from developing countries)

Funding categorie(s): Agropolis Fondation visiting fellowships, Agropolis Fondation small grants (support for the organisation of high-level scientific events, support for publication and dissemination of results)

Project duration: 1 September 2008 – 01 April 2011

Keywords: Agronomy – sustainable development – AGRO2010