



AGROECOLOGY AND SUSTAINABILITY OF TROPICAL RAINFED CROPPING SYSTEMS

<http://www.cirad.mg/conference/AfA-2014/>

An international conference of organizations and projects enhancing the transfer of agroecology and sustainable technologies in order to improve food security of African small-scale farmers

Hosted by the consortium FOFIFA / University of Antananarivo / LRI / IRD / CIRAD

In many parts of Africa, decreasing productivity, population pressure, environmental degradation and the threat of climate hazards and changes suggest an increasingly uncertain future for millions of African households whose livelihoods depend on farming, and in particular on rainfed agriculture. The need to address these worrying situations leads to adopt different approaches. Agroecology is one of the promising approaches based on ecological processes linked with a comprehensive level of intensification to sustain and even boost environmentally-sound agricultural production. Agroecology is then a multi-system and multi-actors approach to create a sustainable, climate-smart food system. Beyond the aspects of sustainable agricultural production, agroecology also considers the territorial dynamics, the social partners and the agricultural policy context, specific to each African country. Along with environmental, human health, economic, and social concerns involved in "sustainability," agroecology also seeks to include cultural and political systems in the search for food security and farms resilience.

Purpose

The conference intends to focus on the agroecology in friendly rainfed farming systems for sustainability in Africa and analyze agro-ecological technologies, innovation processes and innovative cropping systems as well as land management strategies benefiting small-scale agriculture in Africa. Comprehension and stimulation of ecological processes, annual production stabilization for food security, development of significant potential for crop-livestock integration, mitigation of climate change and soil quality improvement are key questions that will be discussed in the conference. Innovative approaches, including working closely with human communities to develop solutions, such as conservation agriculture, crop-livestock integration, integration of legumes or trees, among other subjects are also targeted. A particular interest of this conference deals with the comparison and scaling-up of candidate breakthrough agro-ecological technologies and their impacts within small-scale farmers and food security. Examples of these breakthroughs include better management of no-till and cover crops (trade-off for biomass between mulch and forage use, etc.); beneficial biological processes; land-use changes as means to protect carbon stocks, mitigate climate changes and reduce greenhouse gas emissions, as well as, economic and social constraints to adoption or technology changes.

Seminar objectives

Looking back to what we have achieved up to now, time is for sharing real practical experiences and identifying the best practices, innovation processes and diffusion methods with farmers. The conference has the following objectives:

1. To share and document existing knowledge on agroecological technologies or practices and local impacts in Africa;
2. To share and document existing knowledge on processes operating at different scales: soils and fertility, cropping systems, farming systems, watersheds, etc.
3. To share and document social, economic and policy innovation as well as policy actions on impacts of agroecology at both farm and landscape levels;
4. To share and document experiences, success as well as failure stories on agroecology, scale-up approaches and impacts, adoption and innovation processes.

Themes

The conference seeks to improve both scientific and practical understanding of how agroecology can be better integrated in the management of tropical rainfed agriculture for sustainability by African small-scale farmers. Specific themes include:

1- *Agroecological practices: exploring options for sustainable ecological processes and the development of the (agro) biodiversity of rainfed cropping systems*

Restoration, protection, maintenance and improvement of soil fertility with particular reference to technologies and ecological processes, soil biology, crop-livestock integration, integration of legumes and trees, ecosystem services, etc.

2- *Identifying constraints, bottlenecks and opportunities for implementation of agroecology at farm and community level*

Translation of scientific findings into practical technologies dissemination, adoption issues, policy formulation, scaling-up, market integration, entrepreneurial initiatives, social constraints, etc.

3- *Building capacity in agroecology*

How to better develop capacities among farmers, development agents, researchers and educators in Africa, using case studies, success stories, etc.

Participants

We welcome participants working in the fields of Agroecology research, extension, training, markets and policy in Africa and other countries.

You are cordially invited to submit your papers to one or two of the three themes listed above at afa-2014@ird.fr . Please indicate your preference as oral communication or poster.

Key Dates and Deadlines

Deadline for Abstract submission: **31 May 2014**

Notification on decisions – **30 June 2014**

Submission of full papers oral and poster - **15 September 2014**

Seminar: **03 – 07 November 2014**

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