



INTERNATIONAL
FOUNDATION FOR
SCIENCE



Call for research notes/applications to a training course on:

Research Design and Data Analysis with focus on underutilized crops research

Dates and venue: July 25th – 29th, 2011, Accra, Ghana
Deadline for application: May 27th, 2011

We hereby invite young scientists from **Benin, Ghana, Mali, Nigeria and Senegal** to submit a Research Note and apply for participation in a training course on: Research design and data analysis with focus on underutilized crops research, to be held on July 25-29 2011, in Accra, Ghana.

Background

Neglected and underutilized plant species (NUS) include hundreds of locally domesticated and wild species, which are rich in nutrients and adapted to low-input agriculture. NUS and their traditional production systems can play a key role in supporting rural livelihoods. They are important in strategies to alleviate the effects of biotic and abiotic stresses – particularly those related to climate change. Their commercialization can provide income opportunities and many NUS species are important in traditional pharmacology. Due to the intensification of agriculture and the commoditization of food markets towards a narrow range of the most important food crops, diversity of NUS and associated local knowledge is rapidly being lost. Research on NUS, therefore, needs strengthening.

A Partnership of five African and two European organizations¹ are implementing the project **“Building human and institutional capacity for enhancing the conservation and use of Neglected and Underutilized Species of crops in West Africa, and Eastern and Southern Africa”**. The project is funded by the European Union in cooperation with the ACP Science and Technology Programme during 2009-2012.

The objective is to contribute towards poverty reduction and greater food and nutrition security in West Africa, and Eastern and Southern Africa through enhanced conservation and use of neglected and underutilized species (NUS).

¹ Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), Uganda; International Foundation for Science (IFS), Sweden; Bioversity International, Italy; African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE), Kenya; Institut de Recherche et de Développement sur la Biodiversité des Plantes Cultivées, Aromatiques et Médicinales (IRDCAM), Benin; Plant Genetic Resources Research Institute (PGRRI), Ghana; University of Nairobi, Kenya; and University of Malawi, Malawi.

This call

The project aims to strengthen the ability of young scientists to develop and manage interdisciplinary, multi-stakeholder research projects on NUS and to publish research results. To this end, the project provides training on **Research design and data analysis** with focus on underutilized crops research.

The training course is jointly organized by the International Foundation for Science (IFS), the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), and the Plant Genetic Resources Research Institute, Ghana. The course will be held on 25-29 July 2011, in Accra, Ghana.

Aim

The overall aim of the training course is to improve the quality and effectiveness of applied research on neglected and underutilized crops in West Africa through building capacity of scientists in research design and data analysis.

Specifically, the course aims to increase young scientists' understanding and awareness of methods for all stages of the research cycle (problem analysis, setting objectives, study design, data collection and handling, analysis and interpretation). At the same time it will suggest resources and strategies for scientists to continue building their scientific skills on research design and data analysis after the course.

Methods

The training course will focus on research on priority species and research issues identified at a regional stakeholder workshop on underutilized crops research, held in 2010 (Please refer to Annex 1).

The course will be built around participants' own research – past, ongoing and that being planned – and experiences. It will identify key principles and elements of good practice for each stage of research. It will draw out participants' common problem areas and try to address them, either directly during the course or by identifying follow up actions for the participant. Research on underutilized crops is diverse, integrating both biophysical and social aspects, and requiring both experimental and observational approaches. The course will therefore consider methods appropriate for diverse research problems, but specifically work on the tools needed by participants to improve the quality of their own research.

The course will be flexible and adaptive, adjusting content and methods to best meet participants' emerging needs.

Who should apply?

Applicants eligible for this call should:

- **Be citizens of Benin, Ghana, Mali, Nigeria or Senegal**
- Be national scientists attached to a university, research institution or a research oriented and not-for-profit NGO,
- Be under 40 years of age (or up to 45 providing the last higher degree was obtained in the previous 5 years) and at the beginning of their research career
- Have at least a Master's or equivalent degree.
- Be involved in research on regional priority NUS species. **Please refer to the list of priority species and research themes (Annex 1).**
- We particularly welcome applications from female scientists.

Applications should include:

- Research note/application form – download here:
http://www.ifs.se/Programme/ApplicationForm_NUS_ResearchDesign_Ghana2011.doc
- Curriculum Vitae

Deadline for applications is 27th May 2011. Late applications will not be considered.
Only selected participants will be notified by 30th June 2011.

Applications should be sent via email to:

nus@ifs.se

Deadline for applications is 27th May, 2011

Annex 1.

Priority species and research topics in West Africa

A regional stakeholder workshop for West Africa was held on 8-10th June, 2010, in Cotonou, Benin, with 24 participants from Benin, Ghana, Mali, Nigeria and Senegal. Building on national studies conducted in Benin and Ghana, and the knowledge and experiences of the workshop participants, a list of regional priority species for NUS research was developed (Table1). A major criterion in the priority setting was the potential for impact on livelihood, nutrition and income generation.

Table 1. Priority species for NUS research in West Africa

Type of crop	Priority species
Cereals	<ul style="list-style-type: none"> • Fonio (<i>Digitaria exilis</i>) • Pearl Millet (<i>Pennisetum glaucum</i> and <i>Pennisetum spp</i>)
Legumes	<ul style="list-style-type: none"> • Kersting's groundnut (<i>Macrotyloma (=Kerstingiella) geocarpum</i>) • African yam beans (<i>Sphenostylis stenocarpa</i>) • Bambara groundnut (<i>Vigna subterranea</i>)
Leafy vegetables	<ul style="list-style-type: none"> • <i>Corchorus olitorius</i> • <i>Amaranthus cruentus</i> • <i>Crassocephalum rubens</i> • <i>Telfairia occidentalis</i> • <i>Cassia obtusifolia</i>
Roots and tubers	<ul style="list-style-type: none"> • Bitter yam (<i>Dioscorea dumetorum</i>) • Elephant ears/taro/cocoyam (<i>Colocasia esculenta</i>) • <i>Xanthosoma spp</i>
Fruit trees	No regional priority species was agreed upon, due to differences across countries

Secondly, the stakeholder workshop identified research priority for the different groups of NUS crops in West Africa: cereals and legumes, leafy vegetables and roots and tubers, and fruit trees. Across all groups there are major gaps regarding networking, research capacity, access to funds and exchange of information. Specific research priorities were identified for each group of crops (Table 2)

Table 2. Priorities research theme for NUS in West Africa

Research theme	Cereals and Legumes	Leafy vegetables and roots and tubers	Fruit trees
Genetics	<ul style="list-style-type: none"> • Ethnobotanical studies • Genetic diversity studies 	<ul style="list-style-type: none"> • Ethno-botanical studies • Local knowledge • Genetic diversity • Conservation 	<ul style="list-style-type: none"> • Genetic studies (diversity, collections, domestication) • Ethnobotanical studies
Ecology	<ul style="list-style-type: none"> • Biological studies • Ecological adaptation of NUS 	<ul style="list-style-type: none"> • Biotic and abiotic constraints: pests and diseases, climate change, water utilization, 	<ul style="list-style-type: none"> • Ecological and biological studies
Agronomy	<ul style="list-style-type: none"> • Improvement of production • Pest management techniques 	<ul style="list-style-type: none"> • Agronomy and breeding • Production systems • Domestication • Cultural practices 	<ul style="list-style-type: none"> • Pest and disease management • Best practices for cultivation
Post-harvest	<ul style="list-style-type: none"> • Post harvest handling • Value addition • Entrepreneurship 	<ul style="list-style-type: none"> • Value addition: processing, product development, branding • Post-harvest handling, preservation, shelf life 	<ul style="list-style-type: none"> • Post harvest technology
Socio-economics	<ul style="list-style-type: none"> • Socio economic studies • Value chain analysis 	<ul style="list-style-type: none"> • Utilization: nutrition, health • Socio-economic studies: marketing, income generation, value chain analysis • Economic value 	<ul style="list-style-type: none"> • Marketing (value chain, processing, uses, values, development of product, branding) • Participatory research for up-scaling, mainstreaming and impact delivery