

Knowledge for Development

Observatory on Science, Technology and Innovation for ACP Agricultural and Rural Development

"K4D lets scientists and policymakers express themselves"

January 2012 newsletter

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New K4D dossier: Measuring the impact of agricultural research



This new dossier on the CTA S&T knowledge for development website (K4D) includes a series of three lead articles by Johannes Roseboom, Innovation Policy Consultant, The Netherlands. The articles provide a novel perspective on investing in agricultural innovation and responds to the increasing demand for public agricultural research and extension agencies to; measure and document the impact of their activities, define clear performance indicators and monitor the outcomes and improve the relevance of research results. Links to several documentary and on-line resources are also included in the dossier. Compiled and edited by CABI and CTA. Published by CTA. Editor-in-chief, J. Francis, CTA.

Lead article 1: Investing in agricultural innovation: a market economy perspective

In the first lead article, Roseboom explores how the adoption of a market economy perspective is affecting/redefining the role of government in agricultural innovation. He focuses on two key questions that policymakers investing in agricultural innovation are struggling with in a market economy, namely: (i) what should be the role of government and how much should be invested in agricultural research, extension and other innovation stimulating measures and; what is the optimal level of public and private investment? According to Roseboom, in an 'ideal' market economy, the business enterprise sector takes care of its own innovation activities and the government only plays an enabling and stimulating role by: (i) supporting education and basic research; (ii) creating the right incentives for the private sector to invest in innovation e.g. IPR and anti-trust policies and regulations; and (iii) coordinating the country's innovation capacity strategically. He suggests that market failure should be eliminated or at least reduced and the responsibility for agricultural innovation handed over to the economic actors in agriculture but notes that this process does not happen overnight.

[Read the article: knowledge.cta.int/en/content/view/full/14687](http://knowledge.cta.int/en/content/view/full/14687)

Lead article 2: The optimal level of investment in agricultural innovation

Roseboom notes that although benchmarking is the most common way of evaluating the level of government investment in agricultural innovation, it is a rather poor tool because it lacks the theoretical underpinning and tends to reinforce the status quo. For example, many economists have argued that there is serious underinvestment in agricultural innovation based on ex-post rate of return studies of agricultural research and extension projects. He suggests that using a three step approach based on a standard cost-benefit analysis technique to calculate the expected rate of return (ERR), provides the theoretical answer for establishing the optimal level of investment in agricultural innovation. However, such a rational economic approach is not common practice for investing in agricultural innovation projects either in developing or developed countries. The size of the optimal investment in agricultural innovation and as such the overall productivity depends on the country's level of economic development, its agricultural innovation capacity and various structural factors such as the level of technological capacity and risk and uncertainty.

[Read the article: knowledge.cta.int/en/content/view/full/14689](http://knowledge.cta.int/en/content/view/full/14689)

Lead article 3: Optimizing public and private investments in agricultural innovations: policy implications

In the final lead article, Roseboom explores the policy implications of the various options for optimizing public and private sector investments in agricultural innovation. In a market economy, the responsibility for agricultural innovation lies principally with the private sector and the public role is very limited. It is only when markets fail that the government should step in; either by trying to resolve the failure or by assuming responsibility for certain agricultural innovation activities. He opines that it is important to understand the cause and depth of the market failure in terms of horizontal and vertical spill over losses to be able to resolve or moderate it. These losses seriously undermine the expected profitability of private investment in agricultural innovation in general and hence have a negative impact on the economically optimal volume of investments. He recommends differentiated support strategies and developments in public management namely; performance-based budgeting, competitive funding schemes and greater involvement of the ultimate beneficiaries for ensuring that available public resources

are invested in the most promising agricultural innovation opportunities.

[Read the article: knowledge.cta.int/en/content/view/full/14690](http://knowledge.cta.int/en/content/view/full/14690)

New K4D Dossier - Selected Documentary and Online Resources

Challenges for Impact Evaluation of Agricultural Projects

E. Sadoulet and A. de Janvry. *FERDI Policy Brief* 29. Fondation pour les études et recherches sur le développement international. 08/2011.

The difficulties of impact assessment are considered. It is concluded that methodological pluralism is needed, including use of Randomized Control Trials as one option in a portfolio of methods and not always as the superior approach. Each case is different. Hence, each case needs to be carefully diagnosed (through case studies, descriptive statistics) to understand in particular who has adopted and why non-adoption occurs. Impact analysis is all in design and robustness checks. Not everything can be measured for impact. It is consequently better not to do it when it cannot be done well than to do it wrong. Impact analysis is an art, not a mechanical application of methods. Hence, high quality impact evaluation can be very useful to help define priorities for agricultural investment, identify its effectiveness, and assist in improving implementation, if rigorously done when it can be done.

www.ferdi.fr/uploads/sfCmsContent/html/111/B29.pdf

Recent Advances in Impact Analysis Methods for Ex-post Impact Assessments of Agricultural Technology: Options for the CGIAR

A. de Janvry, A. Dustan and E. Sadoulet. Independent Science and Partnership Council Secretariat, Consultative Group on International Agricultural Research, Rome, Italy. 2011

The key quantity that impact evaluation studies attempt to estimate is the average effect of adoption on outcomes for those who have adopted, known as the average treatment effect on the treated (ATT). The following steps are suggested: 1. Researchers should use either natural or randomized experiments in which the village or the community is the unit of randomization. 2. When using randomization, researchers should pursue supply-side interventions in which the new technology is introduced to entire villages. 3. Research designs should not be limited to randomized controlled trials (RCTs) as natural experiments can yield reliable estimates of impact even in the absence of controlled, explicit randomization. 4. There may be opportunities to use public-private-civil society partnerships (e.g., agro-dealers) to perform supply-side interventions. 5. Researchers should plan the evaluation before, and conduct it during diffusion of a new technology. While impact analysis is ex-post, evaluation should be planned and begin beforehand. Impact analysis designs are shown for genetically improved farm tilapia, treatment for internal parasites in goats, and drought-tolerant crop varieties. It is important to measure long-term and aggregate effects, to assess ex-post the aggregate benefit of a technology that has diffused over a large area. As there is no observable counterfactual situation, researchers can do the following: (a) focus on smaller units of observation (such as villages) on the presumption that markets are not well integrated and therefore each unit represents a small 'economy'. Econometric analyses of observations over time are presumed to identify the causal effect of an uneven development of technological change. (b) use simulation models to extrapolate impacts measured at the micro-level (most often increases in yields) to the level of aggregate effects. This includes the economic surplus method and the computable general equilibrium (CGE) simulation models. However, these simulations are not impact estimations. CGIAR needs to focus on generating rigorous impact estimates.

impact.cgiar.org/sites/default/files/images/deJanvryetal2011.pdf

Click the link below to access the dossier's articles, selected publications and links to web resources

knowledge.cta.int/en/content/view/full/14678

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CTA S&T Programme Activity Updates

Nairobi Declaration – International Conference on Innovations in Extension and Advisory Services, 15-18 November 2011

extensionconference2011.cta.int/sites/default/files/NairobiDeclaration30112011.pdf

More than 450 participants representing public, private and civil society organisations, policy-makers, the research and development community, academia, the private sector, donor agencies, financial institutions and the media from more than 75 countries participated in the International Conference on 'Innovations in Extension and Advisory Services: Linking Knowledge to Policy and Action for Food and Livelihoods', 15-18, November 2011, Nairobi, Kenya. The delegates called upon all key stakeholders including governments and other actors to: (i) develop clear policies and strategies for extension and advisory services in a participatory manner and put coordination and quality assurance mechanisms in place; (ii) advocate for increased funding within national budgets and develop and implement public, private and donor funding mechanisms that ensure sustainability, risk sharing and efficient use of funds to provide high-quality demand-led services; (iii) promote and facilitate continuous capacity building, learning and foresighting as well as greater use of ICTs and the media which take into account culture and gender in the provision of advisory and extension services so that millions of smallholder farmers can move up the value chain; and (iv) develop and implement participatory processes for monitoring, evaluation and impact assessments and for conducting research on extension to facilitate learning, accountability, efficiency and empowerment.

All conference presentations and reports are available on the conference website extensionconference2011.cta.int.

10th Meeting of the Advisory Committee on Science and Technology for ACP Agricultural & Rural Development

knowledge.cta.int/en/content/view/full/14677

The report of the 10th meeting of ACP/EU think tank comprising senior level ACP and EU scientists, policymakers and other key stakeholders in the Commonwealth of Dominica from 9-13 October, 2011 is now available. The theme of the meeting was 'Science and Technology for ACP Agricultural & Rural Development: Safeguarding the ACP Food System through Science, Technology and Innovation'. The Advisory Committee concluded that ACP countries face a daunting challenge regarding food and nutrition security and climate change and need to act urgently by adopting systematic, focused and evidence-based approaches in partnership with strategic allies (north-south and south-south). The opportunity for the private sector to fund research also needs to be tapped. The AC agreed that, there is clear evidence that research and development are central to agricultural reform and modernization and for increased national funding to support public sector research and for leveraging the best in international scientific cooperation. There is also the critical issue of data and information gaps to support development of evidence-based approaches to inform policy and action: e.g. points along the value chain where post harvest losses occur; the different attributes of different commodities; and market intelligence and the use of foresight methods, to be applied. Analysing postharvest knowledge systems was considered a priority within the context of the ACP food system.

[Click here to read the report.](#)

K4D contributions from ACP scientists

Description of cactus pear (*Opuntia ficus-indica* [L.] Mill.) cultivars from Tigray, Northern Ethiopia

By Tesfay Belay, Mulugeta Gebreselassie and Tadesse Abadi, Tigray Agricultural Research Institute, Ethiopia. 2011.



Cactus pear (*Opuntia ficus-indica*) has colonised many parts of northern Ethiopia and is now an integral part of the culture and economy of the Tigray region. Cactus fruits are eaten fresh from July to September. Cladodes are used as livestock feed and for soil and water conservation purposes. Recently, other uses have emerged and the fruits and cladodes are now a stable source of income. This report from the Tigray Agricultural Research Institute, Ethiopia, provides a scientific description of 13 commonly growing cactus pear cultivars. It builds on farmers' knowledge related to the local

taxonomies and maps the characteristics of cactus pear cultivars in the eastern part of Tigray. Descriptors used include the local name of the cultivars, plant height, width and shape / branching and growing habit. Cladode characteristics including shape, length, width, and thickness; colour, number of fruits per cladode, spines, and spines per areole are also featured. Fruit weight, length, width, receptacular scar position and depth, areoles per fruit, and other physical characteristics are provided. Descriptions follow the internationally accepted and standardized descriptors developed by Chessa and Nieddu (1997).

knowledge.cta.int/en/content/view/full/14835

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Agricultural R&D - Investing in Africa's future: Analysing Trends, Challenges, and Opportunities

knowledge.cta.int/en/content/view/full/14834

The International Food Policy Research Institute (IFPRI) Agricultural Science and Technology Indicators (ASTI) and its partners including the Forum for Agricultural Research in Africa (FARA), held a conference on 'Agricultural R&D Investing in Africa's Future : Analyzing Trends, Challenges, and Opportunities in Ghana', 5–7 December, 2011. It was attended by stakeholders from international organisations, universities, civil society organisations, the public sector and NGOs. Papers, presentations, discussion notes, blog items, and other relevant materials on the conference can be consulted at

www.asti.cgiar.org/2011conf

agINFRA: Creating a data infrastructure to support agricultural communities

knowledge.cta.int/en/content/view/full/14735

agINFRA, a European innovative Integrated Infrastructure Initiative (I3) project was launched November 2011 – and will introduce agricultural scientific communities to the vision of open and participatory data-intensive science. To achieve this aim, agINFRA will design and develop a scientific data infrastructure for agricultural sciences that will facilitate the development of policies and services that promote the sharing of data among agricultural scientists in a manner that develops trust within and amongst their communities. The project website www.aginfra-project.eu will be launched early 2012.

([AIMS Blog](#) via GSDI newsletter, 15/11/2011)

ESRI announces grant worth \$10 M to African universities

knowledge.cta.int/en/content/view/full/14753

Environmental Systems Research Institute (Esri), the GIS software leader, has made a [commitment](#) worth US\$ 10 million to support 100 African universities in teaching GIS. During the remainder of 2011 and into 2012, ESRI will expand its programme by providing University Site Licenses and developing stronger relationships with 100 universities. The objective of this program is to help accelerate GIS education opportunities in Africa, resulting in greater availability of skilled GIS professionals. Educational workshops and a forum for collaboration for participating Universities were provided at the Africa GIS Conference in Abuja, Nigeria in November 2011.

([ESRI](#), 8/11/2011)

Tropix 7.0 by CIRAD

knowledge.cta.int/en/content/view/full/14756

Developed by the Cirad's 'Tropical Wood Production and Processing Research Unit', the new release of TROPIC software ([Version 7](#)) presents the main characteristics of 245 tropical or temperate wood species. Tropix 7 can be used to find species in two ways: based on one or more species descriptor(s) or by similarity to certain properties of another species. It can also plot

graphically each of the 245 species described in relation to the others, based on one or two physical or mechanical properties. For each species, TROPIX provides data and information on the scientific names of the species described, their origins and local names and any trade restrictions, appearance of the log or wood, physical and mechanical properties, durability and preservation, drying behaviour, processing behaviour and commercial grades.

Food crops processing: the way forward for Papua New Guinea

knowledge.cta.int/en/content/view/full/14763

Malum Nalu's blog features among other exclusive posts on agriculture in PNG, a piece by Joel Waramboi, Senior Scientist with PNG's NARI. Waramboi explains in detail what progress the agricultural sector has made in terms of harvested volume and crop diversification. He also makes the case for a greater commitment to post-harvest technologies within the country, taking the sweet potato as an example. This post is rich in data and has insights into PNG'S NARI work and efforts. Other recent blog posts on PNG's agricultural sector can be found on Malum's blog.

([Malum Nalu](#), 16/11/2011)

Bringing weather information to every African village

knowledge.cta.int/en/content/view/full/14767

The Coordinated Regional Climate Downscaling Experiment ([CORDEX](#)), an initiative of the World Meteorological Organization and the [World Climate Research Programme](#) is now able to render the data from regional climate models to the scale people live in, and decision makers work at. The information will not only help countries but also communities in their efforts to adapt to changing weather patterns, and to tailor their disaster risk reduction plans. The effort is geared to feed into the next assessment report of the Intergovernmental Panel on Climate Change (IPCC), due to be released in 2014.

([IRINNews](#), 2/11/2011)

Greenhouses in Jamaica helping forge an agricultural renaissance

knowledge.cta.int/en/content/view/full/14771

As Jamaica seeks to slash high import food bills, the country and its farmers are reaping success with greenhouse technology. This report by the Miami Herald tells the story of Jamaican farmers and entrepreneurs who successfully developed, vegetable-growing greenhouses to grow the food crops that are normally imported to the island, helping reduce prices at food stalls and dependence towards imported agricultural commodities. Such initiative to use technology should encourage farmers in the Caribbean to compete with food imports.

([Miami Herald](#), 31/10/2011)

Overview of Trinidad and Tobago's cocoa germplasm projects

knowledge.cta.int/en/content/view/full/14775

Trinidad and Tobago is one of ten cocoa producing countries participating in an international cocoa germplasm project which is organised, supervised and financed by the Common Fund for Commodities (CFC), the International Cocoa Organisation (ICCO) and Bioversity International. The major objective is to provide new cocoa varieties with improved yielding capacity, disease resistance and quality traits for increasing cocoa outputs. Specifically, the project utilizes participatory approaches for the development of more efficient and sustainable cocoa cropping systems through distribution, validation and use of new cocoa varieties. This page overview offers an insight of what has been achieved to date by T&T's Ministry of Food Production, Land and Marine Affairs (MFPLMA).

([MFPLMA](#), 20/10/2011)

New test can precisely pinpoint food pathogens

knowledge.cta.int/en/content/view/full/14751

A new approach, reported by a collaborative team led by Cornell University scientists, will enable government agencies and food companies to pinpoint the exact nature and origin of food-borne bacteria with unprecedented accuracy. The standard method of tracing food-borne illness involves breaking up the DNA of bacteria samples into smaller pieces and analyzing their banding patterns. But scientists often find that different strains of bacteria have common DNA fingerprints that are too genetically similar to be able to differentiate between them. To surmount this challenge, Martin Wiedmann and colleagues adopted a genomic approach. The use of genome sequencing methods to investigate outbreaks of food-borne bacterial diseases holds great promise as it can help to identify the temporal, geographical and evolutionary origin of an outbreak. Full genome sequence data may help to identify small outbreaks that may not be easily detected with lower resolution sub-typing approaches.

([Cornell Chronicles](#), 24/10/2011)

Breakthrough in the production of flood-tolerant crops

knowledge.cta.int/en/content/view/full/14777

Prolonged flooding drastically reduces yields by cutting off the supply of oxygen crops need to survive. Experts at the University of Nottingham (UK), working in collaboration with the University of California, Riverside, have recently identified the molecular mechanism plants use to sense low oxygen levels. The discovery could lead, eventually, to the production of high-yielding, flood-tolerant crops, benefiting farmers, markets and consumers across the globe. The mechanism controls key regulatory proteins in plants called transcription factors causing them to be unstable when oxygen levels are normal. When roots or shoots are flooded and oxygen levels drop these proteins become stable. The team expects that over the next decade scientists will be able to manipulate the protein turnover mechanism in a wide range of crops prone to damage by flooding.

([EurekAlert](#), 23/10/2011)

Products from savannah generate 39% of total household income in northern Benin

knowledge.cta.int/en/content/view/full/14780

According to a study by the German Biodiversity and Climate Research Centre (BiK-F), the value derived from the savannah amounts to 39% of the average annual income of a rural household in northern Benin. The authors also found that poorer households are more dependent on savannah biodiversity than wealthier ones. The Convention on Biological Diversity of the United Nations (CBD) and most recently the TEEB ('The Economics of Ecosystems and Biodiversity') study have shown that the amount of economic contribution nature and environment make to society can be measured. Scientists from the German Biodiversity and Research Centre have now analysed the value of the savannah in northern Benin and determined how much income is generated by the exploitation of non-timber forest products in the region.

([AlphaGalileo](#), 25/10/2011)

Meta-study shows current climate change makes flora and fauna shrink

knowledge.cta.int/en/content/view/full/14785

Determining how climate change will affect global ecology and ecosystem services is one of the next important frontiers in environmental science. A meta-study by two researchers of the National University of Singapore published in *Nature Climate Change*, shows many species exhibit smaller sizes as a result of climate change and suggests many others are likely to shrink in response to continued climate change, following fundamental ecological and metabolic rules. This could negatively impact both crop plants and protein sources such as fish that are important for human nutrition. Furthermore, heterogeneity in response is likely to upset ecosystem balances. The authors discuss future research directions to better understand the trend and help ameliorate the trophic cascades and loss of biodiversity that will probably result from continued decreases in organism size.

([Bits of Science](#), 17/10/2011)

Caribbean fisheries vulnerable to climate change

knowledge.cta.int/en/content/view/full/14800

[The review](#), 'The implications of global climate change for fisheries management in the Caribbean' is authored by Leonard Nurse, Ph.D., senior lecturer at the Centre for Resource Management and Environmental Studies at the University of the West Indies and a member of the scientific team of the Intergovernmental Panel on Climate Change. The analysis predicts severe negative impacts, including loss and alteration of habitats, smaller and less-diverse fish stocks, and coral bleaching, and urges prompt action to help the region's fishers prepare.

([AlphaGalileo](#), 23/11/2011)

Aqua shops, a new initiative

knowledge.cta.int/en/content/view/full/14788

Over the last two years the Kenyan Government has funded the construction of 46,000 fish ponds in 160 of the 210 constituencies in the country. The government has also provided catfish and tilapia fingerlings and fish feed as a start up measure, but many farmers have little access to basic extension services or long-term access to inputs. To complement and enhance the government's extension services in aquaculture, FARM-Africa has established six franchised Aqua Shops in western Kenya to provide smallholders with inputs and technical advice on best aquaculture practices. The hubs also provide market information and teach fish farmers how to link their businesses with markets to generate additional income. Over 600 farmers have also been trained and equipped to set up and run viable fish farming businesses.

([New Agriculturalist](#), 11/2011)

Spotlight on EU policy coherence for development

knowledge.cta.int/en/content/view/full/14798

EU policies are continuing to seriously undermine rights in developing countries says a new report by CONCORD, the confederation of European development NGOs. The report shows incoherencies between EU development objectives and other policies, coming at an important time as the EU reforms its agricultural, trade and development policies. In the 2011 report, throughout the thematic chapters relating to food security, natural resources management, human security, and migration, CONCORD uncovers some incoherencies of current EU policies and proposes fairer measures. The report finds that (a) the EU is failing to meet its obligations under the Lisbon Treaty to make its policies coherent so that they do not undermine development objectives; (b) the EU can greatly improve the impact of its €53 billion per year in development aid if it shows a clearer commitment to Policy Coherence for Development.

([CONCORD](#) via [ICTSD](#), 11/2011)

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Virtuous circles: Values, systems and sustainability

knowledge.cta.int/en/content/view/full/14738

Andy Jones, Michel Pimbert and Janice Jiggins. IIED, IUCN. Nov 2011.

Our current way of providing food and other basic needs involves industrialised systems that are linear, centralised and globalised. The result is resource shortages on the one hand and solid waste, climate change, biodiversity loss, and air pollution problems on the other. An alternative to the current linear paradigm is to develop productive systems that minimise

external inputs, pollution and waste (as well as risk, dependency and costs) by adopting a circular metabolism. [This book](#) shows how a systems approach can be used to create systems and settlements that provide food, energy and water without consuming large quantities of fossil fuels and other finite resources.

Improving nutrition with agricultural biodiversity

knowledge.cta.int/en/content/view/full/14812

[This guide](#), produced by Bioversity International, describes the process and procedures for collecting important information required to assess local farming systems and agrobiodiversity, household food consumption norms and the nutritional status of vulnerable groups within a given population using specific indicators. Additionally, this guide provides a framework for practical implementation of a holistic programme that focuses on creating a customized intervention based on community-specific data.

The significance of African vegetables in ensuring food security for South Africa's rural poor

knowledge.cta.int/en/content/view/full/14814

Tim G. B. Hart. Centre for Poverty, Employment and Growth, Human Sciences Research Council, South Africa. *Agriculture and Human Values*. 2011.28:321-333.

[This paper](#), examines the contribution of extension services to the food security of resource-poor farmers in a rural village in South Africa. It considers these in terms of the local context and the production of African vegetables in household food plots. A mixture of participatory, qualitative and quantitative research tools, including a household survey, is used to argue that local production practices contribute more to food security requirements than the extension services. The paper concludes that social and agro-ecological constraints could be improved if the extension services were changed so as to promote African vegetables, by nature better adapted to semi-arid areas and the production of multiple foodstuffs. (via Agro.biodiver.se)

Intellectual property tools for products based on bio-cultural heritage

knowledge.cta.int/en/content/view/full/14816

Graham Dutfield. *Shaping sustainable markets Series*. IIED. Nov 2011.

Small producers and indigenous communities face significant difficulties in acquiring IP (intellectual property) rights in important markets. But particular forms of IP – such as geographical indications and trademarks, which can recognise and support group rights – may be better suited to use by groups or associations of small producers and may help protect their bio-cultural heritage. [This review](#) suggests that achieving appropriate design of intellectual property tools will be a significant challenge for developing countries and producers, requiring strong organisational and institutional structures, equitable participation among producers, strong market partners who can help to promote bio-cultural products over the long term, and effective legal protection. Some developing countries have already been able to benefit from geographical indications and trademarks.

A comparative analysis of the technical efficiency of rain-fed and smallholder irrigation in Ethiopia

knowledge.cta.int/en/content/view/full/14821

Godswill Makambe *et al.* IWMI Working Paper No.143. 2011.

Most of the agricultural production in Ethiopia is under rain-fed conditions and thus extremely sensitive to rainfall variability. Irrigation development, including smallholder irrigation, is used by the Ethiopian Government to attempt to mitigate the effects of rainfall variability. In [this study](#), the authors look at smallholder irrigation – modern and traditional irrigation systems. A stochastic frontier production function approach is used to estimate technical inefficiency, and constraints to production are analyzed. Since the traditional system is found to be efficient but on a lower production frontier, the study shows that significant gains can be made by raising the frontier of the traditional systems and increasing the efficiency of the modern systems.

World Bank's ARD dept. releases the "ICT in Agriculture" e-sourcebook

knowledge.cta.int/en/content/view/full/14734

Fully and freely available on the web (at www.ictinagriculture.org), the ICT in Agriculture e-Sourcebook, *Connecting Smallholders to Knowledge, Networks, and Institutions* is purposed to support development practitioners in exploring the use of or designing, implementing, and investing in information and communication technology (ICT)-enabled agriculture interventions. The book is a compilation of modules related to 14 agricultural subsectors. Each module covers the challenges, lessons learned, and enabling factors associated with using ICT to improve smallholder livelihoods in these subsectors. Over 200 examples and case studies across the regions are presented in the text.

African Agricultural Technology Foundation and the commission of the Africa Union sign MoU

knowledge.cta.int/en/content/view/full/14877

The African Agricultural Technology Foundation (AATF) and the Commission of the African Union (AU) signed a Memorandum of Understanding (MoU) on 23 January 2012 in Addis Ababa, Ethiopia. The MoU, which is a culmination of various consultations between the two organizations, will see the AU Commission and AATF work together on matters related to agricultural technology access and transfer, stewardship, intellectual property, regulatory matters and public/private partnerships for agricultural development. For more information on this collaboration please see speeches made during the MoU signing ceremony here: www.aatf-africa.org/news/aatf_and_the_commission_of_the_african_union_a_u_sign_mou/en/

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Global Conference on Women in Agriculture

knowledge.cta.int/en/content/view/full/14889

Dates: 13-15 March 2012

Venue: NASC Complex, New Delhi, India

The Global Conference on Women in Agriculture (GCWA) is being organized with participation of researchers, policy makers, women farmers and other stakeholders from different regions of the world. Visit the conference website:

www.gcwa.in, or read the concept note and the technical programme on our website.

International Conference of Agricultural Engineering 2012

knowledge.cta.int/en/content/view/full/14808

Dates: 8-12 July 2012

Venue: Valencia Conference Centre, Valencia, Spain

This Conference covers emerging research and new engineering solutions for food production and rural activities, as a means to enhance human well-being and promote social benefits. The conference will cover all the general topics included in the International Commission of Agricultural and Biosystems Engineering (CIGR) and European Society of Agricultural Engineers (EurAgEng) societies, described here: cigr.ageng2012.org

Symposium on Inclusive Agro-Enterprise Development

knowledge.cta.int/en/content/view/full/14879

Dates: 18-24 August 2012

Venue: Foz do Iguaçu, Brazil

The International Association of Agricultural Economists (IAAE), the FAO and Cornell International Institute for Food Agriculture and Development (CIIFAD) will host an international symposium on "Inclusive Agro-Enterprise Development".

More here: www.iaae-agecon.org/conferences/triennial.html

3rd International Conference on Research for Development (ICRD 2012)

knowledge.cta.int/en/content/view/full/14807

Dates: 20-22 August 2012

Venue: Bern, Switzerland

Participants in the conference are expected to bring in multiple national and international perspectives on development-oriented research, policy dialogue, and practice aiming towards global transformation. The conference will have a strong focus on the global South; but the role of the global North will also be addressed. Further emphasis will be given to discussing research policy and funding in the North, including in Switzerland. More here: www.icrd.ch

The Roots (and Tubers) of Development and Climate Change: International Society for Tropical Root Crops (ISTRC) 16th Triennial Symposium

knowledge.cta.int/en/content/view/full/14878

Dates: 23-28 September 2012

Venue: Federal University of Agriculture, Abeokuta (FUNAAB), Ogun State, Nigeria

This symposium provides an opportunity for experts worldwide to meet and address the opportunities and challenges of climate change in attaining the contribution of tropical roots (sweet potato, Cassava, Andean roots and tubers, Yam and Aroids) for sustainable human development. The need to develop strategies to address productivity, crop plat-soil/water/energy resources management, and postharvest utilization as food and feed, nutritional and health value addition, trade and commercialization for the enhancement of the role of tropical roots in ensuring sustainable development will be emphasised.

More here: istrc2012abeokuta.multiply.com/journal/item/1/16th_ISTRC_Triennial_Symposium_Announcement

7th international CIGR Technical Symposium "Innovating the food value chain" and 2nd International Conference on Postharvest Technology and Quality Management "Postharvest Africa 2012"

knowledge.cta.int/en/content/view/full/14873

Dates: 25-28 November 2012

Venue: Stellenbosch University, South Africa

The International Commission of Agricultural Engineering (CIGR) and its partners are organizing the 7th International CIGR Technical Symposium "Innovating the food value chain" and 2nd International Conference on Postharvest Technology & Quality Management "Postharvest Africa 2012". The Conference will highlight recent scientific advances and technological tools to handle, preserve, process, maintain and control quality and reduce losses in fresh and processed foods and agro-industrial raw materials, including fruit and vegetables, grains, roots and tuber, meat, seafood, herbs, spices, and cut flowers.

More here: www0.sun.ac.za/postharvest/cigr2012

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Call for Abstracts – Symposium Inclusive Agro-Enterprise Development

knowledge.cta.int/en/content/view/full/14676

Deadline for extended abstract (400 words): 28 February 2012

In collaboration with the International Association of Agricultural Economists (IAAE), the Food and Agriculture Organization of the United Nations (FAO) and Cornell International Institute for Food Agriculture and Development (CIIFAD) will host an international symposium on 'Inclusive Agro-Enterprise Development', as part of the technical programme of IAAE's Triennial Conference of 2012. CIIFAD/FAO is planning to publish a book of readings from the workshop. Also, please note that up to ten travel grants will be awarded to economists from developing countries.

The 2012 Borlaug Fellowship Program

knowledge.cta.int/en/content/view/full/14887

Deadline : 7 February 2012

The Norman E. Borlaug International Agricultural Science and Technology Fellowship Program ([Borlaug Fellowship Program](#)) helps developing countries strengthen sustainable agricultural practices by providing scientific training and collaborative research opportunities to visiting researchers, policymakers, and university faculty. The Borlaug Fellowship Program has provided over 500 fellowships for agricultural professionals from 64 developing countries worldwide.

Call for Communications: 'Strengthening the Adaptive Capacity of Rural Poor Populations to Climate Change and Variability in West and Central Africa'

knowledge.cta.int/en/content/view/full/14887

Deadline : 25 February 2012

The West and Central African Council for Agricultural Research and Development (CORAF/WECARD), in collaboration with its partners, is holding its Third West and Central Africa Agricultural Science Week (3rd WCA-ASW) and 10th General Assembly in N'djamena, Chad, in May, 2012. The main theme chosen for the 3rd WCA-ASW is: 'Strengthening the adaptive capacity of rural poor populations to climate change and variability in West and Central Africa'. This theme will be dealt with in the prospect of improving productivity, competitiveness and agricultural markets in order to reduce poverty and food insecurity in West and Central Africa. Click [here to read](#) the call.

Future Agricultures Consortium Early Career Fellowship Programme (ECFP)

knowledge.cta.int/en/content/view/full/14880

Deadline: 17 February 2012

The Future Agricultures Consortium (FAC) announces the third call of its grant programme to support talented young researchers working on African agricultural policy for its Early Career Fellowship Programme (ECFP). The ECFP is available to early career professionals working in Africa and the UK. Both full-time and part-time appointments are available and all fellowships will include mentorship support from a senior FAC researcher affiliated with a FAC partner institution. The awards will support original field-based and policy-oriented research on African agriculture.

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Director of Programmes

knowledge.cta.int/en/content/view/full/14886

Deadline: 25 February 2012

Organisation and duty station: CORAF/WECARD, Dakar, Senegal

[The present vacancy](#) is for the position of Director of Programmes whom, under the supervision of the Executive Director and in collaboration with relevant Directions/Units of the Executive Secretariat, will guide, support and manage CORAF/WECARD's portfolio of Programme Managers and programmes and provide support to CORAF/WECARD's Executive Director, Scientific and Technical committee, and Governing Board, in the management and coordination of the Association.

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EcoHort : Designing ecologically innovative horticultural systems

knowledge.cta.int/en/content/view/full/14786

[This project](#) is being conducted by INRA, CIRAD, Agro campus Ouest and Montpellier SupAgro. The project reflects the need to promote sustainable horticulture and, more generally, manage biodiversity, which should be accompanied by intelligent management of plants in order to provide food in sufficient quantity and of sufficient quality for populations in both the northern and southern hemispheres.

Numerous European initiatives for ACP countries have been created, such as the PIP (Pesticides Initiative Programme). These initiatives must encourage stakeholders to adopt better practices in terms of food safety, human health and protection of the environment. The ultimate goal of ECOHORT is to devise ecological horticultural systems, based on biological, socio-economic and methodological knowledge.

The systems to be studied will be representative of the current situation and will include major production sectors, such as market gardening and fruit crops, which are subject to pest problems.

Meridian Institute's 'Agriculture and Climate Change' project

knowledge.cta.int/en/content/view/full/14784

[Meridian Institute](#), a non-profit NGO internationally recognized for convening and facilitating neutral and independent dialogues and assessments, has been working since 2010 at the nexus of agriculture and climate change, with focus on

informing the United Nations Framework Convention on Climate Change (UNFCCC) process.

Meridian has assembled expert authors to develop independent, objective analysis of key issues on agriculture and climate change. Consultations with UNFCCC negotiators, experts, and civil society organizations guided the development of a policy brief (Nov. 2011) and a scoping report (June 2011). Going into 2012 Meridian Institute will continue to host a series of focused dialogues and to coordinate independent research and analysis on these topics.

Caribbean network for the development of agro-ecological horticultural systems (DEVAG)

knowledge.cta.int/en/content/view/full/14781

DEVAG is a Research & Development project, in cooperation and for the insular Caribbean, funded by the INTERREG IV Caribbean programme and supported by the Cooperation services and cultural actions of the French Embassy of Cuba and Haiti. The project started since October 2009 and is planned for 4 years. It is based on a largely shared assessment of an insufficient development of horticultural agro-ecological or organic production in the Caribbean – even if these productions are identified as an essential element for a healthy diet, food self-sufficiency and as an important source of income (high value crops). The project has a global objective which is accelerating the implementation of the innovative and adoptable crop systems to satisfy a huge demand from local markets in fresh and healthy products, reducing the negative impact of these crops on insular and fragile environments under high anthropic pressure. To do so, it mobilizes the competences of the present partners (CIRAD, IIFT, IIHLD, UNICA, MARNDR and FAMV) on four Caribbean islands: Cuba, Haïti, Martinique and Guadeloupe. [IPS reports](#) on the project.

CORDEX: A Coordinated Regional climate Downscaling Experiment

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Regional climate downscaling (RCD) techniques, including both dynamical and statistical methods, are increasingly being utilized to produce regional climate information for impact and adaptation studies. It is thus critical that the potentials and limitations of RCD-based information, along with the related uncertainties, are well understood by the modelling and user communities. Recognizing this need, the World Climate Research Program (WCRP) recently formed a task Force on Regional Climate Downscaling (TFRCD). IRIN News has [recent reports](#) on CORDEX.

DesertWatch

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DesertWatch is an European Space Agency (ESA) project aiming at developing a user-oriented Information System based on EO technology to support national and local authorities in responding to the reporting obligations of the UNCCD and in monitoring land degradation trends over time.

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