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April 2012 newsletter

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CTA and S&T
Developments
Publications
Events
Grants & Competitions
Jobs
Web resources

New feature articles

Technology development and women's empowerment: The case of the forage chopper for smallholder dairy farmers in Uganda

By Florence Lubwama Kiyimba, National Agricultural Research Organization, Uganda



In Uganda as well as in many other countries, labour-saving tools have been advocated as important in increasing productivity, and improving the quality of life. Women have been specifically targeted because they are seen as central to overcoming rural poverty. Engineers have always assumed that by considering women in technology development and dissemination processes, this will guarantee use of the labour saving tools and consequently reduce time spent on agriculture related activities. However, existing processes which focus on the technology and the problem it is intended to solve, without necessarily giving women a role in their development, have little chance of succeeding.

This paper demonstrates how women can be incorporated in reshaping technological solutions. The argument is made that an integrated approach that is grounded not only in engineering but also in the sociology of gender, and insights from Science and Technology Studies (STS) is needed, if labour saving tools are to be used for women's empowerment.

Click to read the article.

Research and governance in the fisheries value chain: Lessons from CARICOM

By Patrick McConney, Centre for Resource Management and Environmental Studies, The University of the West Indies, Barbados



Although fisheries, mainly small-scale as well as a few industrial size operations, contribute only a small percentage to gross domestic product in most Caribbean Community (CARICOM) countries: they are important for food security, livelihoods, culture and tourism among other economic activities. In many fisheries value chains, postharvest processing is minimal and mainly fresh chilled and frozen seafood products are supplied to domestic and premium export markets. Ecosystem and economic contexts place these value chains within the arena of governance for socio-economic development. However, social-ecological interactions within fisheries, and between fisheries and other sectors, are complex and

adaptive.

In this article, Patrick McConney explores the increasing convergence of value chains and governance issues which are expanded to include additional elements of institutional analysis as well as civil society and power dynamics. He argues that there needs to be a stronger connection between value chains and the governance of socio-ecological systems from a network perspective. This would clearly show that fisheries value chains are more than financial and commodity transactions as they are linked to ecosystem health and the well-being of human communities. What lessons can be learned and what are the future directions for research and development are critical questions. Drawing on examples of CARICOM fisheries value chains, one answer is that enabling fisheries policies are needed. Responses from CARICOM fisherfolk organizations are also highlighted.

Click to read the article.

Back To Top

CTA and S&T

Update on CTA/FARA/IFS/ANAFE/RUFORUM/AGRA "3rd Africa-wide Women and Young Professionals in Science Competitions"

knowledge.cta.int/en/content/view/full/15390

The deadline for submission of the 1000 - 2000 word abstract for the 3rd Africa-wide Science Competitions was extended to

June 4th, although the organizers had received 200 abstracts by May 14th in response to the 1st and 2nd calls. New deadlines are as follows:

- Announcement of semi-finalists: July 20th, 2012

- Submission of full draft papers: August 20th, 2012

Download the "Women in Science" competition announcement with the new deadlines here:

knowledge.cta.int/en/content/view/full/15382

Download the "Young Professionals in Science" competition announcement with the new deadlines here:

knowledge.cta.int/en/content/view/full/15383

Read the concept note for the competitions here.

Back To Top

Developments | RSS

Co-management of fisheries most viable solution to global overfishing

knowledge.cta.int/en/content/view/full/15407

A study led by the Wildlife Conservation Society on more than 40 coral reefs in the Indian and Pacific Oceans indicates that 'co-management' – a collaborative arrangement between local communities, conservation groups, and governments – provides one solution to the global problem: overfishing. The finding is the outcome of the largest field investigation of co-managed tropical coral reef fisheries ever conducted, an effort in which researchers studied 42 managed reef systems in five countries. The study's main finding is that co-management has been largely successful in sustaining fisheries and improving people's livelihoods. More than half the fisherfolk surveyed felt co-management was positive for their livelihoods, whereas only 9% felt it was negative. A comparison of co-managed reefs with other reefs showed that co-managed reefs were half as likely to be heavily overfished. Dr Nick Graham, who worked on the project, said: '[...] we also found that where fisheries are closest to big, hungry markets, they tend to be in worse shape. This strongly suggests globalized food chains can undermine local, democratic efforts to manage fisheries better. People often assume that local population size is the main driver of overfishing – but our research shows that access to global markets and seafood dependence are more important, and provide possible levers for action.' (EurekAlert, 19/03/2012)

Are countries investments in tertiary education making a difference?

knowledge.cta.int/en/content/view/full/15411

This World Bank Discussion Paper explores the relationship between education spending and outcomes. The topic is already addressed by a fairly rich body of research at the primary and secondary level, but it has been poorly documented at the tertiary level of education, despite ever rising expenditures. This paper explores the impact of various measures of spending on a range of outcomes of tertiary education, using cross-country comparisons in the South Asia Region (SAR). It finds that public expenditures are only loosely linked with outcomes in terms of access and participation, but that they are positively associated with proxies of quality. Private expenditures appear to have no impact on either quantity or quality. This exploratory research shows very different patterns for the group of high-income countries and less developed countries. (World Bank, 22/03/2012)

MIT and Harvard University to make courses available online, free of charge knowledge.cta.int/en/content/view/full/15413

The Atlantic reports on the initiative taken by two of the most venerable US universities to provide courses online, free of charge. MIT and Harvard have '[poured] US\$ 30 million into a non-profit partnership edX, which they hope will make the top-notch faculties and courses of their schools available for free to millions of people around the world'. Through edX, the two institutions will collaborate to enhance campus-based teaching and learning and build a global community of online learners. The technological platform established by MITx, which will serve as the foundation for the new learning system, was designed to offer online versions of MIT courses featuring video lesson segments, embedded quizzes, immediate feedback, student-ranked questions and answers, online laboratories, and student paced learning. Certificates of mastery (though not issued under the name Harvard or MIT) will be available for those motivated and able to demonstrate their knowledge of the course material.

(edX via The Atlantic, 2/5/2012)

Towards open science in the 21st century

knowledge.cta.int/en/content/view/full/15415

The initiative ALLEA (All European Academies) released April 2012 the Declaration 'Open Science for the 21st century' (PDF) to acknowledge Open Access as part of the future of Open Science. The declaration describes the vision of Open Science in the 21st century and lists the requirements that need to be fulfilled to realise this vision:

- Open Scientific Content arising from publicly funded research
- Open e-Infrastructures for public and private research
- Towards an Open Science Culture

It describes under the title 'Making it happen' how ALLEA and its member academies will advocate the adoption of Open Access and Open Science.

(Via AIMS, 04/2012)

New era in EU-Africa scientific collaboration

The adoption by the European Parliament of Written Declaration 45 on Science Capacity Building in Africa has given practical effect to a <u>vibrant Africa-EU partnership</u> by supporting stronger collaboration in radio astronomy projects. This collaboration will bring the importance of research, development and innovation into clearer focus and expand the relationship between Africa and Europe beyond the traditional emphasis on aid cooperation. (via <u>AfricaBrains</u>, 27/03/2012)

African Ministerial Dialogue Communiqué on knowledge and information

knowledge.cta.int/en/content/view/full/15422

The 2nd Ministerial Dialogue on Agriculture, Science and Technology was held on 18-19 April 2012 at the Forum for Agricultural Research in Africa (FARA) Secretariat in Accra, Ghana. The Ministerial Dialogue discussed ways to mobilise resources needed to support research, extension and education institutions related to agriculture. The promotion of intra and cross-border collaboration among and in research, extension and education across Africa. You can read the communiqué here. (FARA, 24/04/2012)

Mapping out agriculture and food security in a changing climate

knowledge.cta.int/en/content/view/full/15424

The Joint Programming Initiative <u>FACCE-JPI</u> has announced the approval for funding of its first joint action which brings together 67 research groups from 17 European countries. The initiative's research agenda will address the modelling of impacts of climate change on European agriculture and food security and the reduction of uncertainties in climate change scenarios. An innovative, tailor-made instrument, a 'Knowledge Hub', was developed by the FACCE-JPI, associating three complementary dimensions: networking, research and capacity building. (via <u>WUR</u>, 12/04/2012)

Global Soil Partnership selects the Harmonized World Soil Database IIASA database

knowledge.cta.int/en/content/view/full/15428

The Harmonized World Soil Database (<u>HWSD</u>), developed and maintained by the International Institute for Applied Systems Analysis (IIASA), was adopted by the <u>Global Soil Partnership</u> as the definitive database for global soil analyses. Early in 2012, the USDA and Australia's CSIRO agreed to provide new soil data from their respective countries within the next year, and plans were made for updated information from Canada, Europe, West Africa, and South Asia. (<u>IIASA</u>, 04/2012)

Renewable energy potential and policy options for islands and remote areas

knowledge.cta.int/en/content/view/full/15432

The International Energy Agency (IEA) Renewable Energy Technology Deployment (IEA-RETD) has published a study on renewable energies for remote areas and islands (REMOTE). Its objective is to provide policy perspectives for making remote areas and islands largely independent from fossil fuel imports and costly energy transmission infrastructures. It provides decision-makers with a better grasp of the technical, economic and energy issues facing remote areas, as well as to present a menu of policy options available to accelerate renewable energy development in these regions. The report aims to equip national, regional and local policymakers with perspective, context, and inspiration on how to develop sustainable energy strategies. (IICD SIDS, 27/04/2012)

Prices of pollination-dependent produce to rise in the long term

knowledge.cta.int/en/content/view/full/15437

In an article entitled 'Spatial and temporal trends of global pollination benefit', a German research team shows in which regions of the world pollination in agriculture plays an important role. Sixty major crops were taken into account in the study, enabling the research team to map the dependence of agricultural yields upon pollination worldwide. The results of the spatial analysis provide important information for nature conservation practice and political decisions. It would help design appropriate recommendations for regional agricultural policy protecting and valuing this essential ecosystem service. (UFZ via AlphaGalileo, 27/04/2012)

New forage plant prepares farmers for climate changes

knowledge.cta.int/en/content/view/full/15441

Plant researchers from the University of Copenhagen, Denmark, Monash University, Australia, and plant breeding company Pacific Seeds have developed a new type of sorghum. Unlike the conventional drought-resistant sorghum plant, which is an important crop in Africa, China and the USA, this new type does not form toxic cyanide when exposed to long-term drought. (Eurekalert, 4/04/2012)

New avocado rootstocks are high-performing and disease-tolerant

knowledge.cta.int/en/content/view/full/15444

Avocado, a significant fruit crop grown in many tropical and subtropical parts of the world, is threatened by *Phytophthora* root rot (PRR), a disease that has already eliminated commercial avocado production in many areas in Latin America and crippled production in Australia and South Africa. Research on developing PRR-tolerant rootstocks to manage the disease has been a major focus of avocado research at the University of California, Riverside. Now, a research team has released three rootstocks, available for commercial propagation by nurseries, showing superior tolerance to PRR. The research, to appear in the journal *HortScience*, describes the three avocado root-rot-tolerant varieties: Zentmyer, Steddom, and Uzi. (Physorg, 27/04/2012)

New coconut press technology adopted in the Pacific

knowledge.cta.int/en/content/view/full/15447

International markets for virgin coconut oil have expanded rapidly over the past decade. Solomon Island business owner Dr Dan Etherington in collaboration with Australia's CSIRO and colleagues from the Australian National University (ANU), developed an all-weather cottage industry technology for countries in the Pacific region that produces coconut oil of 'remarkable' quality. A March 2012 training workshop introduced coconut oil producers to 'organic agriculture' certification and quality control process based on the principles of hazard analysis and critical control points (HACCP). (Crawford Fund, 03/2012)

Pesticide misuse a major threat to farmers' health and food

knowledge.cta.int/en/content/view/full/15451

The survey, Ghana's Pesticide Crisis, The Need for Further Government Action, says seven banned or restricted pesticides appear to still be in use in Ghana, with the government failing to act, despite the fact that 'numerous academic studies show alarming levels of poisoning' among farmers and the public. (Christian Aid, 04/2012)

Back To Top

Selected publications | RSS

Darwinian Agriculture: How Understanding Evolution Can Improve Agriculture knowledge cta int/en/content/view/full/15457

As human populations grow and resources are depleted, agriculture will need to use land, water, and other resources more efficiently and without sacrificing long-term sustainability. *Darwinian Agriculture* presents an entirely new approach to these challenges, one that draws on the principles of evolution and natural selection.

R. Ford Denison, professor of ecology at the University of Minnesota, shows how both biotechnology and traditional plant breeding can use Darwinian insights to identify promising routes for crop genetic improvement and avoid costly dead ends. Denison explains why plant traits that have been genetically optimized by individual selection are bad candidates for genetic improvement. Traits like plant height and leaf angle, which determine the collective performance of plant communities, offer more room for improvement. Agriculturalists can also benefit from more sophisticated comparisons among natural communities and from the study of wild species in the landscapes where they evolved.

Darwinian Agriculture reveals why it is sometimes better to slow or even reverse evolutionary trends when they are inconsistent with our present goals, and how we can glean new ideas from natural selection's marvellous innovations in wild species. (via <u>Agro.biodiv.se</u>, 19/04/2012)

Environment and Development Challenges: The Imperative to Act

knowledge.cta.int/en/content/view/full/15461

A group of the world's leading scientists and experts in sustainable development – all past winners of the Blue Planet Prize – called for urgent changes to policies and institutions to enable humanity to tackle environmental crises and improve human wellbeing. The paper emphasises transformational solutions to key environment and development challenges. It highlights the policies, technologies and behaviour changes required to protect the local, regional and global environment, stimulate the economy and enhance the livelihoods of the poor. (STWR and Mongabay, 04/2012)

2011 Global Food Policy Report

knowledge.cta.int/en/content/view/full/15465

IFPRI's 2011 Global Food Policy Report – the first in a new annual series – provides an in-depth, contextualised look at the past year's major food policy developments and events. It both raises and answers these key questions: What happened in food policy in 2011 and why? What challenges and opportunities arose? What could have been done differently? What should be done in the future? The topics covered in the 2011 Global Food Policy Report were selected after numerous consultations by a strategic advisory council consisting of policymakers, researchers, and other experts that sought to represent the most profound, relevant, and broadly applicable food policy issues that arose in 2011.

Back To Top

Events | RSS

3rd RUFORUM Biennial Conference

knowledge.cta.int/en/content/view/full/15373

Dates: 24 – 28 September 2012 Venue: Entebbe, Uganda

The Third RUFORUM Biennial Conference will be held in Entebbe, Uganda in conjunction with the RUFORUM Annual General Meeting. This conference will be hosted by Makerere University in partnership with RUFORUM. The conference sub-themes include: Risk and Vulnerability in African Agriculture; Value Chains and Innovation Platforms; Innovations in Agricultural Information, Communication and Knowledge Management; Natural Resource Management; Strengthening S&T Capacity in Africa, and more.

The registration process ends on July 30, 2012.

2012 Pacific Platform for Disaster Risk Management and Pacific Regional Water and Sanitation Consultations knowledge.cta.int/en/content/view/full/15474

Date: 17 – 21 September 2012 Venue: Noumea, New Caledonia

The Secretariat of the Pacific Community (SPC) and the United Nations International Strategy for Disaster Reduction (UNISDR) are pleased to announce that the 4th Session of the Pacific Platform for Disaster Risk Management and the Pacific Regional Water and Sanitation Consultations (RWSC) will be held from 17 – 21 September 2012 in Noumea, New Caledonia. The Platform is the annual opportunity for Pacific island countries and territories (PICTs) to share experiences and knowledge in building the resilience of their island communities to disasters.

Tropentag 2012 'Resilience of agricultural systems against crisis'

knowledge.cta.int/en/content/view/full/15404

Date: 19 – 21 September 2012 Venue: Göttingen, Germany

Tropentag 2012 will be organised jointly by the faculty of agricultural sciences and the faculty of forestry of the Georg-August Universität Göttingen and the faculty of organic agricultural sciences of the University of Kassel. The conference venue will be in Göttingen, Germany. All students, Ph.D. students, scientists, extension workers, decision makers, politicians and practical farmers, interested and engaged in agricultural research and rural development in the tropics and subtropics are invited to participate and to contribute. The Tropentag is a development-oriented and interdisciplinary conference. It addresses issues of resource management, environment, agriculture, forestry, fisheries, food, nutrition and related sciences in the context of rural development, sustainable resource use and poverty alleviation worldwide.

Second Global Conference on Agricultural Research for Development (GCARD 2) – Online pre-registration knowledge.cta.int/en/content/view/full/15405

Date: 29 October – 1 November 2012 Venue: Punta del Este, Uruguay

The purpose of the Conference is to move from why transformation of AR4D, to how to implement the GCARD roadmap in practice and what difference does it make. The objective of the GCARD II is to take stock of progress and lessons from experiences in developing and strengthening collaborative actions to transform innovation processes towards achieving large scale development impacts, in particular on the livelihoods of resource poor smallholder farmers.

Back To Top

Grants, Competitions and Calls | RSS

AIRD-CIRAD Call for proposals (for PhD Students from countries of the South Pacific)

knowledge.cta.int/en/content/view/full/15468

Application deadline: 18 June 2012

'Doctorants du Sud' (PhD students from countries of the South, including Vanuatu, Fiji or Papua New Guinea) is a support programme aiming at strengthening and consolidating the research potential of the countries of the South. It is implemented by the AIRD (Inter-Establishment Agency of Research for Development) on behalf of the IRD (French public research institute for development) and the CIRAD (French research centre working with developing countries to tackle international agricultural and development issues). This programme targets students coming from developing countries in the inter-tropical (and Mediterranean) regions, who have a master (or equivalent qualification) who wish to complete a PhD in partnership with a research unit of the CIRAD or the IAC and a research team in the South (possibly the IRD), ensuring a quality 'supervision'. Some 15 PhD students will receive a grant from November 2012 for three year to work on one of the 24 subjects proposed by the CIRAD.

Call for papers: Online Journal of Public Interest Intellectual Property

knowledge.cta.int/en/content/view/full/15476

Deadline: 30 June 2012

The Public Interest Intellectual Property Advisors (PIIPA) Journal invites all intellectual property (IP) professionals to submit papers for its next edition of the Online Journal of Public Interest IP www.piipajournal.org.

The next edition will focus on 'Food, Climate Change and Intellectual Property: Defining the Issue'. Online submission guidelines can be found in the 'About' section of the journal website. The journal is a repository of peer reviewed knowledge from thought leaders around the world. Each issue highlights and discusses examples and solutions that meet the practical demands of developing countries and public interest organizations seeking to use intellectual property regimes for human and economic development.

Alltech launches graduate programme 2012

knowledge.cta.int/en/content/view/full/15477

Deadline: 31 July 2012

Alltech is a global leader in the animal health and nutrition industry and among the top ten animal health companies in the world. Alltech's Graduate Programme selects 20 graduates to give them the opportunity to work in areas including agribusiness, aquaculture, algae, crop science and fermentation technology. Successful candidates will work on R&D, Sales, Marketing, Finance, I.T., Operational, Engineering and Regulatory projects in several areas of Alltech's business including animal science, aquaculture, agronomy and in its consumer division. Applicants who have graduated or are expected to graduate from a Bachelor's, Master's or Doctoral degree course between May 1st, 2011 and October 1st, 2012 may apply. To apply for a place on the programme, all applicants must submit their online application by the deadline: July 31st, 2012.

Jobs | RSS

Junior Specialist - Regional Center Specialist (Horticulture Collaborative Research Support Program) knowledge.cta.int/en/content/view/full/15400

Deadline: Until filled

Horticulture Collaborative Research Support Program (CRSP) is hiring a Regional Center Specialist to coordinate the Horticulture CRSP Centers of Innovation. The Junior Specialist will also develop manuals (specifications, materials, costs, etc.) for horticultural technologies. The position will require periodic travel to the Centers where the Junior Specialist will assist in building the technologies with faculty and staff at the partner institution. Finally, the Junior Specialist will facilitate the relationship between the partner institutions and the Horticulture CRSP Management Entity to maintain resource flow and diligent reporting.

Senior Programme Officer - Biodiversity & Agriculture (UNEP-WCMC)

knowledge.cta.int/en/content/view/full/15401

Deadline: 15 June 2012

This Senior PO role will play a pivotal part in developing a portfolio of technical work integrating biodiversity concerns into agricultural policy, planning and landscape management. The UNEP World Conservation Monitoring Centre (UNEP-WCMC) is looking for an exceptional candidate to work at the frontier of this emerging area of work.

Back To Top

Web resources and S&T organisations | RSS

Glossary of Biotechnology for Food and Agriculture

knowledge.cta.int/en/content/view/full/15469

This 'Glossary of Biotechnology for Food and Agriculture' is a revised, augmented version of the 'Glossary of Biotechnology and Genetic Engineering' published by FAO in 1999. The idea for such a collection of terminology associated with the rapidly expanding fields related to or deriving from biotechnology and genetic engineering, was stimulated by the difficulty of communicating effectively in discussions at intergovernmental level. On various occasions, simple differences of interpretation of terminology have threatened to de-rail negotiations of international importance. This Glossary tries to provide a consolidated, comprehensive and yet accessible list of terms and acronyms that are used regularly in biotechnology for food and agriculture and that represent a convenient reference source for researchers, students and technicians. (via AIMS, 12/04/2012)

CABI's Invasive Species Compendium (ISC)

knowledge.cta.int/en/content/view/full/15471

The <u>Invasive Species Compendium</u> (ISC) developed and maintained by CABI is an encyclopaedic resource that brings together a wide range of different types of science-based information to support decision-making on invasive species management worldwide. It comprises detailed datasheets that have been written by experts, edited by an independent scientific organization, peer reviewed, and enhanced with data from specialist organizations, images, and maps, a bibliographic database and full text articles. New datasheets and data sets continue to be added, datasheets are reviewed and updated, and scientific literature added on a weekly basis. The ISC has been resourced by a diverse international Consortium of Government departments, Non-governmental organizations and private companies.

International Science and Technology Practice and Policy (InSTePP)

InSTEPP, an initiative hosted by the University of Minnesota, US undertakes economic research and fosters professional dialogue to inform and thereby influence strategic policy choices and actions dealing with science and technology. The centre deals with both the public and private dimensions of science and technology, and their implications for the conduct, performance and economic consequences of R&D worldwide. Public and private decisions shaping science and technology increasingly involve international dimensions. Investments in research in one locale have consequences in other locations and other areas of science. International agreements and policy initiatives and the actions of governments and (multinational) firms regarding trade, regulatory and intellectual property concerns are also impinging on and being affected by innovation processes.

Back To Top

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