

January 2010

This email newsletter highlights the latest additions to the site Knowledge for Development.

CTA and partners

Profiling higher education institutions - Case studies from eastern and southern Africa

<http://knowledge.cta.int/en/content/view/full/10904>

By RUFORUM and CTA, Batte Richard and Wanzala Sylvia, 2009. This study profiles the agricultural faculties of selected African universities and assesses the current status of the academic programmes. This is done to update the existing databases on higher education in agriculture, with a view to improving the outreach and impact of the work of university networks and CTA including its partners, NEPAD and FARA.

The Platform for African-European Partnership in Agricultural Research for Development (PAEPARD)

<http://knowledge.cta.int/en/content/view/full/10906>

The Platform for African-European Partnership in Agricultural Research for Development (Phase II) is to build joint African-European multi-stakeholder partnerships in agricultural research for development. PAEPARD II nurtures partnerships to increase the quantity and quality of joint proposals (leading to more funded initiatives). PAEPARD II not only focuses on FP7, but includes other European Commission (EDF, EC Budget through the FSTP) and bilateral funding instruments, supporting ARD that might be mobilized for emerging ARD partnerships.

Developments

Cassava and maize genome revealed

<http://knowledge.cta.int/en/content/view/full/10916>

Scientists have sequenced the genome of maize and cassava, providing vital information that will accelerate the development of new and more productive varieties of these staple crops. It will also assist breeding programmes to develop varieties specifically adapted to the needs of small-scale farmers in developing countries. Over 32,000 genes in the maize genome have been identified, which will enable scientists to improve yields, increase resistance to disease and enable varieties to better tolerate changes in temperature and rainfall. (Source: New Agriculturalist, January 2010)

Efforts underway to sequence *Jatropha* genome

<http://knowledge.cta.int/en/content/view/full/10950>

SG Biofuels, a plant science company, has joined forces with Life Technologies Corporation, a provider of innovative life-science solutions, to advance the development of *Jatropha* as a sustainable biofuel. The alliance brings together SG Biofuels' Genetic Resource Center, featuring the largest and most diverse library of *Jatropha* genetic material in the world, with the advanced biotechnology and synthetic biology tools of Life Technologies. The partnership will initially include sequencing the *Jatropha curcas* genome, allowing for the rapid introduction of new traits targeted towards increasing the yield of the oil-producing plant. *Jatropha curcas* is a non-edible shrub that is native to Central America. Its seeds contain large amounts of oil that can be used for a variety of bio-based materials, including biodiesel and feedstock substitutes for the petrochemical and jet fuel industries. It can be effectively grown on marginal lands that are considered undesirable for other crops. (Source: African Agriculture, January 18 2010)

World-class bio-science research lab opens in Tanzania

<http://knowledge.cta.int/en/content/view/full/10948>

A world-class bio-science research facility has opened in Tanzania. The lab is open to scientists and other stakeholders from Africa's national research institutes and universities. The laboratory, located within the compound of the International Livestock Research Institute, brings the continent's research capability up to par with that of the world's most advanced countries, its officials said on Wednesday. With its opening, the

continent's experts in bio-sciences can venture at affordable costs into new realms of science without the constraints of inadequate laboratories and restrictive regulations to conduct the same research overseas. The initiative has been endorsed by *Nepad's Comprehensive African Agricultural Development Programme (CAADP)* and developed within the framework of the centres of excellence for science and technology. (Source: All Africa, Zephania Ubwani, 15 January 2010)

Madagascar's range of biodiversity under threat

<http://knowledge.cta.int/en/content/view/full/10929>

Climate change is a real threat to many of Madagascar's biodiversity treasures, many of which cannot be found anywhere else in the world. A recent project led by *DFID's Climate Change Adaptation in Africa (CCAA) programme*, and carried out by Madagascar's University of Antananarivo, is looking to stem this trend by exploring vulnerability and adaptation options in the island's agricultural sector. The project has greatly improved the level of information on climate change vulnerabilities. It has also initiated dialogue between decision-makers, researchers and at-risk groups. (Source: R4D, 11 January 2010)

A new era for biocontrol in the Pacific

<http://knowledge.cta.int/en/content/view/full/10914>

Over the years, invasive species have wrought havoc on both natural ecosystems and farming systems in the Pacific islands. Early attempts at biocontrol saw some successes, but these were overshadowed by a few spectacular failures: the Indian mongoose, widely imported to control rats, and the cane toad brought in to control cane beetles in the sugar cane fields of Fiji, have now earned their own places in the World Conservation Union's list of the world's 100 worst invasives. But biocontrol is entering a new era in the Pacific region. A more reliable science of biocontrol, and a renewed commitment to networking across the region to share expertise and best practice, mean that biocontrol can now take its place in helping restore equilibrium within the fragile ecosystems of the islands. (Source: New Agriculturist, January 2010)

Caribbean: Hot talk, but no climate change help from Copenhagen (commentary)

<http://knowledge.cta.int/en/content/view/full/10927>

The Copenhagen Conference on Climate Change was no gift to small islands and countries with low-lying coastlands. From the Caribbean, Camillo Gonsalves, St Vincent & the Grenadine's Ambassador to the United Nations, was particularly scathing. The Caribbean Media Corporation reports him as saying: 'St Vincent and the Grenadines feels no less threatened today than we did when Copenhagen began'. He expressed the hope that the next climate change conference, scheduled for Mexico later this year, will be marked by 'openness, inclusivity, transparency and legitimacy'. One Caribbean Community and Common Market (CARICOM) country can claim some success at Copenhagen. Guyana has adopted a strategy to preserve its forests to contain greenhouse gas emissions in return for development money. The Reduced Emissions from Deforestation and Degradation (REDD) plan – which was excluded from the Kyoto Protocol – sees wealthier nations pay rainforest countries for preserving their trees, and was specifically mentioned in the political accord. (Source: Caribbean Net News, 8 January 2010)

Nigeria: Food crisis looms as climate change threatens cassava production

<http://knowledge.cta.int/en/content/view/full/10946>

One month after the Copenhagen climate change summit, which failed to live up to the expectations of many developing nations including Nigeria, indications are rife that the increasing level of carbon dioxide emissions in the atmosphere pose a serious danger to some staples like cassava, on which millions of African people depend. Recent studies by Australian scientists have shown that the crops become more toxic and produce smaller yields in environments with higher carbon dioxide levels and more droughts. The findings underscored the need to develop climate-change-resistant cultivars to feed rapidly growing human populations, said Ros Gleadow of Monash University in Melbourne, Australia. (Source: All Africa, 14 January 2010)

South African community fights biopiracy case

<http://knowledge.cta.int/en/content/view/full/10960>

A South African community challenged German homeopathic giant Schwabe Pharmaceuticals in court in Munich at the end of January. The challenge was over a traditional medicine the company is seeking to patent. The case could set a precedent in cases in which multinationals use the plants and indigenous knowledge of developing countries, where laws may not protect communities' intellectual property rights. Schwabe wants to patent a method for producing extracts from the roots of *Pelargonium sidoides* and *Pelargonium reniforme* to make cough and cold syrups. The company has also hit problems in India over alleged bioprospecting. The community, in Alice in the Eastern Cape, said the extraction method has been used for generations by traditional healers and Schwabe has no right to patent it. (Source: Mail&Guardian)

online, 22 January 2010)

Livestock trade is culprit in spread of sleeping sickness

<http://knowledge.cta.int/en/content/view/full/10962>

Scientists baffled by the continued spread of sleeping sickness through Uganda have discovered that livestock markets are driving the disease. A team from Uganda and the United Kingdom analysed the incidence of the serious Rhodesian form of sleeping sickness, which is carried by cattle, in two newly affected districts. The team looked at nearly 700 villages in the two districts. The research shows that livestock markets are a major risk to disease control. The scientists calculated the vulnerability of a village to sleeping sickness by mapping how close it was to various risk factors, such as areas where tsetse flies - which transmit the disease - are likely to live. The research was published in *PLoS Neglected Tropical Diseases*. (Source: All Africa, 22 January 2010)

'Green belt' initiative taking shape in Malawi

<http://knowledge.cta.int/en/content/view/full/10931>

The 'Green belt' programme seeks to make Malawi independent of rain-fed agriculture. The plan is to protect gains in food security, reduce vulnerability to drought and boost production still further by irrigating a million hectares of land in a swathe lying within 20 kilometres of the country's three lakes and 13 perennial rivers. The plan will also attempt to diversify crops, targeting increased production of wheat, rice, millet, cotton, lentils and beans for export. Local agriculture experts explain that two districts in the southern tip of the country could feed the entire country all year round if the Shire River, which cuts through the length of this southern plain, was utilized for intensive irrigation farming. (Source: IPS, 11 January 2010)

Solar-powered irrigation significantly improves diets and income in rural sub-Saharan Africa

<http://knowledge.cta.int/en/content/view/full/10921>

Solar-powered drip irrigation systems significantly enhance household incomes and the nutritional intake of villagers in arid sub-Saharan Africa, according to a new Stanford University study published in the Proceedings of the National Academy of Sciences (PNAS). The two-year study found that solar-powered pumps installed in remote villages in the West African nation of Benin were a cost-effective way of delivering much-needed irrigation water, particularly during the long dry season. (Source: ScienceDaily, 5 January 2010)

World's biodiversity crisis needs action

<http://knowledge.cta.int/en/content/view/full/10933>

The UN has launched the International Year of Biodiversity, warning that the ongoing loss of species around the world is affecting human well-being. Eight years ago, governments pledged to reduce the rate of biodiversity loss by 2010, but the pledge will not be met. The expansion of human cities, farming and infrastructure is the main reason. German premier Angela Merkel backed the idea of forming a scientific panel to collate and assess research on biodiversity loss, as the Intergovernmental Panel on Climate Change (IPCC) assesses evidence on climatic indicators. "The question of preserving biological diversity is on the same scale as climate protection," she said. (Source: BBC News, 11 January 2010)

Nigeria: NCCE launches committee on science and technology education

<http://knowledge.cta.int/en/content/view/full/10937>

The National Commission for Colleges of Education (NCCE) has concluded plans to develop standards to regulate the training and assessment of quality Science and Technology (S&T) educators in the Nigeria's basic-education sector. The commission stated that the committee would evolve performance norms and standards for S&T teachers in education colleges. While inaugurating the National Committee on Science and Technology Education Standards and Assessment (NACOSATES) in Abuja recently, the commission stated that the committee would evolve performance norms and standards for S&T teachers in colleges of education. (Source: All Africa, Chineme Okafor, 12 January 2010)

Selected publications

Climate frontline: African communities adapting to survive

<http://knowledge.cta.int/en/content/view/full/10978>

By Concern Universal, FARM-Africa, Find Your Feet, Self Help Africa and Utviklingsfondet/The Development Fund, 2009.

Millions of farmers across Africa are already living with, and attempting to adapt to, the effects of climate change. But rarely are their voices heard. In 'Climate frontline', African men and women describe in their own words the strategies they have

implemented in order to adapt and cope with their changing climate.

Fellowships and grants

WIPO invites submission of papers on genetic resources

<http://knowledge.cta.int/en/content/view/full/11004>

At its 15th session, WIPO's Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) invited member states and accredited observers to make available to the Secretariat papers describing regional, national and community policies, measures and experiences regarding intellectual property and genetic resources. Participants are requested to submit their papers before 12 February 2010 to facilitate the preparation, translation and distribution of information documents for the next session of the Committee. The dates for the 16th session of the IGC have been provisionally set for 3-7 May 2010.

TWAS-DFG Cooperation Visits Programme

<http://knowledge.cta.int/en/content/view/full/10999>

The TWAS-DFG Cooperation Visits Programme provides postdoctoral researchers from sub-Saharan Africa (excluding South Africa) with the opportunity to make a 'Cooperation Visit' of no more than 3 months to an institute in Germany.. Such visits must be made within twelve months of the award. The aim of the visit is to discuss research collaboration with German scientists, possibly including some preliminary experiments, with the ultimate goal of developing longer-term collaboration, perhaps through other DFG programmes. **Deadline: 31 March each year.**

Josef G. Knoll European Science Award

<http://knowledge.cta.int/en/content/view/full/11000>

This science award, presented every two years since 1986, has the aim of supporting young academics whose work focuses on helping to reduce hunger and malnutrition in developing countries. The award is named after Professor Dr. Josef G. Knoll, the pioneer of agricultural research in Germany with regard to developing countries. The objective of the award is to encourage young academics whose research concentrates on solutions to mitigate hunger in food-deficit countries. The research findings must be user-oriented and suitable for contributing towards improving the status of food and nutrition security of a certain local population, and reducing the impact of hunger (undernutrition and malnutrition). **Deadline for applications: 31 March 2010.**

ProSPER.Net-Scopus Young Researcher Award 2010

<http://knowledge.cta.int/en/content/view/full/10997>

The Prosper.Net-Scopus Young Scientist Award in Sustainable Development is given annually to young scientists or researchers, based in the Asia-Pacific region, who have made significant contributions in the area of sustainable development. For 2010, awards will be given in four areas: energy; water; agriculture and food security; and economics, business and management. The award is open to those engaged in graduate education and research activities that emphasize sustainable development in any of the above four areas. **Deadline for applications: 3 May 2010.**

TWOWS Postgraduate Training Fellowships

<http://knowledge.cta.int/en/content/view/full/10995>

Postgraduate Training Fellowships for Women Scientists from sub-Saharan Africa and Least Developed Countries (LDC) at Centres of Excellence in the South. The Fellowship is offered to women scientists to pursue postgraduate research in any field of the natural sciences. This fellowship programme is for female students from sub-Saharan Africa or Least Developed Countries (LDCs) who wish to pursue postgraduate training leading to a doctorate degree at a centre of excellence in the South outside their own country. **Deadline for applications: 31 July of each year.**

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