

February 2010

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

New initiatives

Radically rethinking agriculture for the 21st century

<http://knowledge.cta.int/en/content/view/full/11132>

Population growth, arable land and fresh water limits, and climate change have profound implications for the ability of agriculture to meet this century's demands for food, feed, fibre and fuel while reducing the environmental impact of their production. Success depends on the acceptance and use of contemporary molecular techniques, as well as the increasing development of farming systems that use saline water and integrate nutrient flows. (Source: Science, 12 February 2010). See also Agrominde, UK foresighting and IAASTD.

An expert group met at CTA headquarters, Wageningen the Netherlands on February 25 & 26 to hold the second in the series of controversial dialogues to reflect on the reports of several international assessments, foresight studies and projections on agriculture to determine where future research priorities should be placed. The results will be presented at the GCARD in Montpellier, France from March 28-31.

First Global Conference on Agric Research for Development (GCARD)

<http://knowledge.cta.int/en/content/view/full/11059>

Date: 28-31 March 2010

Venue: Montpellier, France

Some 1,000 World Food Prize Laureates, ministers, farmers, community development organizations, leading scientists and innovators will gather in Montpellier, France from 28-31 March 2010 for the first Global Conference on Agricultural Research for Development (GCARD). The G8 called for this meeting to identify research priorities and required actions to improve agriculture. GCARD will seek to strengthen and harness the use of agricultural research to meet the global food requirements for a growing population in an environmentally sustainable process.

Identification of European academic actors interested in the Pacific region

<http://knowledge.cta.int/en/content/view/full/11094>

The European Commission's Directorate General for Development (DG-DEV) wants to identify European researchers, students and universities interested in the Pacific region. The Commission feels that EU-based research initiatives in the Pacific are not well known and not widely accessible. To fill the gap, the 2006 EU strategy for the Pacific included stimulating European research in the Pacific as one of its objectives. Setting up a network between the relevant actors is expected to contribute towards this objective. Registration deadline: 31 March 2010.

Conclusions of stakeholders' conference 'Africa-Europe Cooperation in S&T', Mombasa, November 2009

<http://knowledge.cta.int/en/content/view/full/11041>

On the 10 and 11 November 2009 a stakeholders' conference entitled 'Africa-Europe Cooperation in Science and Technology: Status and Way Forward' was held in Mombasa, Kenya as an activity of the CAAST-Net project, funded by the European Union's 7th Framework Programme for Research and Technological Development. The conference was organized by the Kenyan Ministry of Higher Education, Science and Technology (MoHEST) in collaboration with the International Bureau of the German Federal Ministry of Education and Research (IB of BMBF). Its goal was to enhance bi-regional cooperation in science and technology (S&T) through an examination of the nature and the role of cooperation processes. The link below contains the 'Summary Report and Recommendations' (in English and French), which are the result of intensive discussions at the conference and which have been prepared in consultation with conference participants and therefore represent a consensus of opinion of a substantial body of stakeholders.

AU gives awards to two African scientists

<http://knowledge.cta.int/en/content/view/full/11104>

On 30 January the African Union gave awards to two African scientists for the first time in the history of the organization, to express its gratitude to science. The winners, Professor Diane Hildebrandt of the University of Witwatersrand in South Africa (winner in the Basic Science and Innovation category) and Dr Patrick George Eriksson of the University of Pretoria, South Africa (winner in the Life Sciences category), were chosen from 50 candidates through a transparent process carried out by the African Union, according to the AU Commission chairperson Dr Jean Ping. He said the objective of the award was to stimulate scientific research at national, regional and continental levels. (Source: All Africa, 31 January 2010)

Backing grows for African research chairs

<http://knowledge.cta.int/en/content/view/full/11139>

Support is growing for a bid to persuade the G8+5 nations to fund 1,000 senior research positions in African universities. The Academic Chairs for Africa initiative would require the rich G8 countries and the emerging economies that now attend the group's gatherings — Brazil, China, India, South Africa and Mexico — to commit US\$100m per year over a five-year period. The initiative is modelled on a ten-year-old Canadian programme aimed at preventing promising academics from leaving the country. The African version will be discussed at a meeting of the science academies from the G8+5 countries which takes place in Canada next month (4–5 March). African chair holders stand to receive US\$100,000 a year, a substantially higher amount than professors usually earn at most African universities. They would be expected to train PhDs, mentor young academics and prove that they were using their research to address the UN's Millennium Development Goals. (Source: SciDev.net, 12 February 2010)

Developments

Learning agro-biodiversity: options for universities in Sub-Saharan Africa

<http://knowledge.cta.int/en/content/view/full/11174>

Proceedings of a regional workshop, 21-23 January 2009, Nairobi, Kenya
By Per Rudebjer, Boudy Van Schagen, Sebastian Chakeredza, Henry Kamau, editors

The workshop 'Learning agro-biodiversity' for universities in sub-Saharan Africa' was the first regional workshop of its kind and gathered 46 participants from universities and international organizations in 16 African and two European countries. The workshop focused on sharing knowledge and experiences; discussing implications for and feasible approaches to, mainstreaming agro-biodiversity in higher education in Sub-Saharan Africa; and exploring modalities and mechanisms for strengthening agro-biodiversity education and research in Africa through networking and joint learning.

Seven steps to save biodiversity

<http://knowledge.cta.int/en/content/view/full/11098>

There is an emerging consensus about what needs to be done to save biodiversity. Seven steps need to be observed, including the following:

1. bring at least 10% of all ecosystem types under protection to maintain nature and natural landscapes;
2. improve farmland diversity and reduce usage of pesticides and fertilizers;
3. move towards sustainable use of fish stocks;
4. make 'nature' an integral part of all urban and rural development plans;
5. fight climate change and make sure that species can migrate or adapt to new surroundings;
6. reduce the occurrence of aliens invasive species that could destroy local flora and fauna; and
7. integrate biodiversity concerns in all areas of policy-making.

(Source: Countdown 2010)

Geographical indications to preserve Ethiopia's biodiversity

<http://knowledge.cta.int/en/content/view/full/11096>

Ethiopia is one of the front runners in the use of intellectual property rights for fully capitalizing on its plant genetic resources and traditional knowledge assets. In the absence of legislation on geographical indications, it has endeavored to use collective trademarks in the main export markets to add value to its Sidamo, Yirgacheffe, and Harrar/Harar coffees. The Ethiopian parliament is now expected to pass geographical indications legislation later this year. This will then provide the legal basis for Ethiopia's plans to register geographical indications protection, first nationally and then abroad,

for emblematic home garden products like coffee, beans, spices and condiments or aromatic plants. (Source: Agricultural Biodiversity Weblog, André Heitz, 6 February 2010)

Scientists, donors blast Ethiopia's biosafety law

<http://knowledge.cta.int/en/content/view/full/11113>

Scientists and farmers are urging Ethiopia to reconsider a new biodiversity law they say restricts agricultural research and could hamper delivery of urgently needed food aid. The law has prompted foreign donors to cut off funding to Ethiopian scientific research institutions. Ethiopia's government held a two-day forum in the first week of February to hear objections to a Biodiversity Proclamation approved by parliament last July. The law's stated objective is to protect biodiversity, as well as human health and animals, from 'the adverse effects of modified organisms'. Critics say the proclamation chokes off research into improving crop production in a country suffering chronic food shortages. (Source VOA, 4 February 2010)

Joy as Pelargonium patent revoked

<http://knowledge.cta.int/en/content/view/full/11101>

On January 26 the Opposition Division of the European Patent Office (EPO) revoked a patent granted to Dr Willmar Schwabe in its entirety. The patent was opposed by the African Centre for Biosafety (ACB) from South Africa acting on behalf of a rural community in Alice, in the Eastern Cape, in collaboration with the Swiss anti-biopiracy watchdog, the Berne Declaration. The patent concerned a method for producing extracts of *Pelargonium sidoides* and *Pelargonium reniforme* for the manufacture of Schwabe's blockbuster cough and cold syrup, Umckaloabo. Nomtunzi Api, a representative from the Alice community, expressed elation in response to the revocation: 'this is the first time that a patent has been successfully challenged by Africans. It gives us hope for the future because the patent ends Schwabe's monopoly over the use of our genetic resources and traditional knowledge.' (Source: African Centre for Biosafety, 26 January 2010)

US and Brazil seek patent for local sorghum

<http://knowledge.cta.int/en/content/view/full/11146>

Tanzania is planning to go to court to stop the US and Brazilian governments from patenting a sorghum gene, together with two multinationals, isolated on Tanzanian farms. The strain of sorghum -- a staple food in the country -- has proven to be acid-aluminium tolerant. Tanzania explains that the patenting of this crop by the US or Brazil would be a fatal blow to its food security, and moreover it violates international treaties. It would also increase local food prices as multinational corporations seek to exploit their patent to boost profits by selling sorghum seeds at high prices at a time when millions of Tanzanians currently living under conditions of abject poverty are struggling to put food on their table. (Source: All Africa, 15 February 2010)

New ecosystem approach based project: Wild pollinators for food production

<http://knowledge.cta.int/en/content/view/full/11100>

FAO is coordinating a United Nations Environment Programme/Global Environment Facility (UNEP/GEF) project worth \$26.45 million to better manage those aspects of wild biodiversity that provide pollination services for human livelihood. The five-year project, entitled 'Conservation and Management of Pollinators for Sustainable Agriculture, through an Ecosystem Approach', will be implemented in seven countries: Brazil, Ghana, India, Kenya, Pakistan, Nepal and South Africa. The development objective of this unique project is improved food security, nutrition and livelihoods through enhanced conservation and sustainable use of pollinators. The immediate objective is to harness the benefits of pollination services provided by wild biodiversity for human livelihoods and sustainable agriculture, through an ecosystem approach in selected countries. (Source: FAO, 2010)

Fiji, Pacific region exposed to invasive alien species

<http://knowledge.cta.int/en/content/view/full/11159>

The Pacific regional countries, including Fiji, are facing a serious threat from alien invasive species, according to a new publication coordinated by the Global Invasive Species Program (GISP). The publication, released on February 19, listed a number of alien species as a major threat to life on earth, 'and unfortunately a number of these now exist in the South Pacific islands', said Don Stewart, Regional Director of BirdLife International in the Pacific. Invasive alien species are plants and animals not native to the South Pacific countries but have been introduced either through trade, or through 'misguided' attempts to protect local flora and fauna. (Source: English.news.cn, 19 February 2010)

Seeds of discontent: the 'miracle' crop that has failed to deliver

<http://knowledge.cta.int/en/content/view/full/11149>

A 'miracle' plant, once thought to be the answer to producing renewable biofuels on a vast scale, is driving thousands of farmers in the developing world into food poverty, a damning report concludes today. Five years ago jatropha was hailed by investors and scientists as a breakthrough in the battle to find a biofuel alternative to fossil fuels that would not further impoverish developing countries by diverting resources away from food production. Jatropha was said to be resistant to drought and pests and able to grow on land that was unsuitable for food production. But researchers have found that it has increased poverty in countries such as India and Tanzania. (Source: the Independent, 15 February 2010)

Crop breeding for climate change : A moving target

<http://knowledge.cta.int/en/content/view/full/11109>

Adapting our food plants to climate change is a challenge that is exercising the minds of the world's plant breeders, including Dr Calvin Qualset of the University of California, Davis, who spoke at the Food Security and Climate Change conference in Amman on 3 February. Breeding for uncertain environmental conditions is often like aiming for a moving target, said Dr Qualset. He spoke about the range of tools that plant breeders can use to develop crop varieties that are resilient in the face of variable climatic conditions, increasing water shortage and increasing consumer demand. He also highlighted the way in which plant breeders have changed their approach over the last few decades, moving from the solutions of the Green Revolution – where a small number of relatively homogenous varieties could be grown across large areas – to a focus on landraces and their development. (Source: CGIAR, 3 February 2010)

Yam research in West & Central Africa gets EU funding support

<http://knowledge.cta.int/en/content/view/full/11105>

Research to improve and promote yam in West and Central Africa (WCA) has received a €750,000 (about US\$1 million) grant from the European Union-African, Caribbean and Pacific Science and Technology Programme (EU-ACP). The programme will benefit six WCA countries: Cameroon, Benin, Ivory Coast, Ghana, Nigeria and Togo. The research project entitled 'Strengthening Capacity for Yam Research for Development in Central and Western Africa' or SCYReC, aims to improve research for development capacity for yam in the region. (Source: IITA, African Agriculture, 1 February 2010)

Ghana: Admission of agricultural students drops

<http://knowledge.cta.int/en/content/view/full/11156>

Four university lecturers in agriculture have expressed concern over the decline in the number of students studying agriculture in Ghana's universities, saying the situation could have dire consequences for the country's food security. They have, therefore, urged stakeholders, namely, the West African Examinations Council (WAEC), the junior and senior high schools, the universities and the government, to come up with policies and programmes that will put to rest all misconceptions about that area of training and encourage students to study agriculture. (Source: Graphic Ghana, 18 February 2010)

Gene function discovery: Guilt by association

<http://knowledge.cta.int/en/content/view/full/11107>

Scientists have created a new computational model that can be used to predict the gene function of uncharacterized plant genes with unprecedented speed and accuracy. The network, dubbed AraNet, has over 19,600 genes associated to each other by over one million links and can increase the discovery rate of new genes affiliated with a given trait tenfold. It is a huge boost to fundamental plant biology and agricultural research. (Source: Carnegie Institute for Science, 1 February 1 2010)

Research ministers adopt declaration on role of science

<http://knowledge.cta.int/en/content/view/full/11122>

European research ministers have made a commitment to increase investments in research and development (R&D) and create a culture of trust in scientists. The ministers were gathered in the Spanish town of San Sebastián for an informal meeting of the Competitiveness Council. The delegates also unanimously adopted the Donostia Declaration, which Spain describes as 'a document that will launch the concept of a responsive and responsible science, capable of providing solutions in the short term'. The declaration explains that in addition to developing new products and services, research relies on advanced materials, equipment and infrastructures, much of which is supplied by European companies. (Source: CORDIS, 9 February 2010)

Selected publications

Guidelines for rapid appraisals of agrifood chain performance in developing countries

<http://knowledge.cta.int/en/content/view/full/11164>

Value chain analysis: a standard guideline?

By C. da Silva; H. de Souza Filho, Food and Agriculture Organization of the United Nations, 2007.

This paper gives guidelines and presents a methodological strategy for the analysis of agrifood value chains. The guideline aims to provide information on the conceptual fundamentals of chain analyses, such as the components of the agrifood chain, research planning and stakeholder validation.

The REDD direction: the potential for reduced forest carbon emissions, biodiversity protection and enhanced development: a desk study with special focus on Tanzania and Uganda

<http://knowledge.cta.int/en/content/view/full/11165>

By A. Vatn; P. Vedeld and J.G. Petursson, Norwegian University of Life Sciences, 2009.

This paper examines whether reduced emissions from deforestation and forest degradation (the REDD project) – should be included in a post-Kyoto agreement. It focuses on how REDD could be instituted at the national level, and sheds light on specific challenges for two African countries – Tanzania and Uganda. The paper demonstrates that REDD would require an international agreement concerning its role and format and an international governance structure to distribute the resources involved. It would also need national governance structures in countries where REDD activities are supposed to take place to ensure that measures are instituted on the ground.

Potential for second-generation biofuels in developing countries

<http://knowledge.cta.int/en/content/view/full/11166>

By International Energy Agency (IEA), February 2010

IIED has published an information paper entitled 'Sustainable Production of Second-Generation Biofuels: Potential and Perspectives in Major Economies and Developing Countries'. The paper focuses on opportunities and risks presented by second-generation biofuels technologies in eight case study countries: Brazil, Cameroon, China, India, Mexico, South Africa, Tanzania and Thailand. The report begins by exploring state-of-the-art second-generation technologies and their production, followed by projections of future demand and a discussion of drivers of that demand. The report then delves into various feedstock options and the global potential for bioenergy production. The final chapter offers a look at the potential for sustainable second-generation biofuel production in developing countries including considerations of economic, social and environmental impacts. See also CTA's policy brief on biofuels.

30 years in science: Secular movements in knowledge creation

<http://knowledge.cta.int/en/content/view/full/11169>

This discussion paper examines the relationship between geopolitical factors and scientific activity based on publication data from a 30-year period (1980 to 2009). Using bibliometric methods, the analysis concentrates on large-scale, secular movements in the geopolitics of knowledge creation. First, the evolution of the scientific outputs of the countries of the former USSR and Eastern Bloc is examined followed by that of the Middle East. The paper then looks at how the global map of science has been reshaped in Asia's favour.

Events

9th International Symposium on Plant Biotechnology in Cuba

<http://knowledge.cta.int/en/content/view/full/11058>

Venue: Santa Clara, Cuba
Date: 20 - 22 April 2010

The 9th International Symposium on Plant Biotechnology, organized by the Instituto de Biotecnología de las Plantas, will be held 20-22 April 2010 at Santa Clara, Villa Clara, Cuba. Topics for discussion include plant breeding; biofortification and metabolic engineering; functional genomics and proteomics; and biotechnology, climate change and food security.

5th World Cowpea Research Conference

<http://knowledge.cta.int/en/content/view/full/11057>

Venue: Dakar, Senegal
Date: 27 September to 1 October 2010

Researchers from around the world will converge at Dakar, Senegal from 27 September to 1 October 2010 for the 5th World Cowpea Research Conference. For five days, participants will tackle research-related issues to enhance the profile of cowpea as a viable income-generating and food security crop. The theme 'improving livelihoods in the cowpea value chain through advancement in science' will cover a wide range of topics, from cowpea genetic improvement and the use of molecular tools, to human nutrition and processing and enterprise development. The conference is organized by the International Institute for Tropical Agriculture (IITA) in cooperation with the Dry Grain Pulses Collaborative Research Support Programme (Pulse-CRSP), Purdue University, and the Institut Senegalais de Recherches Agricoles (ISRA). Visit the website for more information on the call for papers.

Fellowships and grants

Call for nominations: The Crawford Fund Fellowship 2010 (Opportunities for Pacific scientists)

<http://knowledge.cta.int/en/content/view/full/11171>

The Crawford Fund is now calling for nominations for the Crawford Fund Fellowship for 2010. The Crawford Fund Fellowship has been set up to provide further training for an agricultural scientist whose work has shown potential. This prestigious award provides an opportunity for the successful candidate to spend a period of focused study and training in Australia, with resulting benefits to the awardees as well as to their country's agriculture and Australia. Candidates should be below the age of 35 and from a selected group of developing countries (Bangladesh, Bhutan, Burma, Cambodia, East Timor, Fiji, Indonesia, Laos, Nepal, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Kiribati, Vanuatu or Vietnam). The training will take place at an Australian institution and will emphasize the application of knowledge to increase agricultural production in the Fellow's home country. **Closing date for nominations: 12 April 2010**

Job for ACP scientists

FARA is seeking consultants

<http://knowledge.cta.int/en/content/view/full/11172>

FARA is seeking consultants for the following: to conduct targeted key informant interviews and coordinate the development of a continental strategy for capacity strengthening for agriculture and natural resources in Africa; and to provide e-consultation for the development of a continental strategy for capacity strengthening for agriculture and natural resources in Africa.

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