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AFRICA

Kenya Launches Research Maize Screening Site

<http://www.merid.org/fs-agbiotech/more.php?id=7033>

The Kenyan government has commissioned a US\$500,000 Maize Stress Screening Site at the Kenya Agricultural Research Institute (KARI) Kiboko Sub centre in Kibwezi, Kenya. "Our goal is to have this Sub centre grow to host a facility that will be used by scientists, locally and internationally. We aim to host students who would like to undertake strategic research towards solving the problems of a farmer," says KARI Director Ephraim Mukisira.

The project has a ten-year strategic vision, which includes plans to: 1) generate maize varieties with strongly increased yields under drought-affected conditions; 2) increase average maize productivity under smallholder farmer conditions by 20-30 percent on adopting farms; and 3) reach 30-40 million farmers in sub-Saharan Africa. Conventionally bred open pollinated varieties (OPVs) and hybrid maize varieties are being developed under the project, as are genetically modified (GM) maize plants.

Scientists to find ways of training South Africans

<http://www.buanews.gov.za/news/08/08091515151003>

SA Deputy President Phumzile Mlambo-Ngcuka has urged scientists from around the world to assist South Africa in finding ways to increase the number of skilled scientists in the country through human resource development programmes.

Speaking at the International Association of Science Parks (IASP) conference on Monday, Ms Mlambo-Ngcuka said: "One of the biggest challenges as a country is human resource development. We hope that as innovators, you will find a way of addressing this challenge."

The world conference, the first of its kind to be held in South Africa, will provide an opportunity to share knowledge and information on how science parks can add value by accelerating the knowledge economy.

Until recently The Innovative Hub was Africa's first and only internationally accredited Science Park. There are now science parks in Morocco and Tunisia too.

Minister for Science and Technology Mosibudi Mangena said science parks fostered entrepreneurship and economic competitiveness. They also create environments that enhance knowledge sharing, transfer and commercialisation of technology.

Uganda Scientists Voice Need for Single Policy on Biotech

<http://www.newvision.co.ug/>

The executive secretary of the Uganda National Council for Science and Technology, Dr. Peter Ndebere, voiced the call of Ugandan scientists for the East African Community to adopt a single policy for genetically modified (GM) products.

"Our countries have similar challenges. Having the same policy for GMs will help improve our farming as well as fight household famine and poverty," Ndebere said. A single biotechnology policy will likewise help the Government decide whether or not to approve commercialization of GM products.

Dr. Roshan Abdullah, a scientist from the East African Community-Arusha, said that while East African countries were in the process of drafting policies on biotech only Kenya and Tanzania are at an advance stage.

Would GM Seed Benefit Farmers?

<http://www.ifpri.org/pubs/dp/ifpridp00785.asp>

Tomato, cabbage, and garden egg (African eggplant) are important crops for small-scale farmers and migrants in the rural and peri-urban areas of Ghana. An ex ante study "Insecticide Use on Vegetables in Ghana: Would GM Seed Benefit Farmers?" by Daniela Horna and colleagues from the International Food Policy Research Institute (IFPRI) uses farm survey data to gauge the potential for adoption of GM varieties, estimate the potential impact of adoption on farm profits, and highlight economic differences among the three crops.

Farmers' expenditures on insecticides are below the economic optimum for all three crops. The estimated function for damage abatement shows that insecticide amounts are significant determinants of cabbage yields only. Nonetheless, yield losses from pests and disease affect insecticide use. Non-insecticide users could accrue higher marginal benefits than current insecticide users. Comparing vegetable crops with distinct economic characteristics provides a wider perspective on the potential impact of GM technology.

Maize Streak Virus Strain in Africa

<http://www.sgm.ac.uk/news/releases/JGV.0908.DM.1.cfm>

Maize, the most important food crop in Africa has been recently damaged by a much more virulent strain of maize streak virus (MSV), said a report published in the Journal of General Virology.

Through a thorough study of the many different strains of the virus in Africa, a team of researchers from the University of Cape Town, South Africa, led by Darren Martin revealed that this new strain is a recombination product of two relatively harmless wild grass infecting viruses. The new strain can now adapt to extreme conditions including cold winters and can infect many different host species.

"Given the fragility of African agriculture and perpetual famine risks with millions of lives at stake, MSV is actually one of the most important plant pathogens worldwide," said Martin. "We wanted to learn more about how the virus emerged and spread so we can develop new ways to fight the diseases it causes." The group is now currently testing various resistance strategies like stacking resistance genes and targeting different virus components that can be simultaneously exchanged by recombination.

Greenlight for CSIR sorghum trials in bid to improve nutrition in Africa

http://ntww1.csir.co.za/plsql/ptl0002/PTL0002_PGE157_MEDIA_REL?MEDIA_RELEASE_NO=7522063

South Africa's Council for Scientific and Industrial Research (CSIR) recently received approval from the South African government to undertake greenhouse trials on GM sorghum. An Appeal Board set aside an earlier ruling by the regulating authority, the Executive Council of Genetically Modified Organisms, denying the CSIR a permit to undertake contained greenhouse trials on transformed sorghum.

The CSIR filed an appeal in March 2007, as provided for by the GMO Act. The CSIR is one of the key scientific contributors in an international research project to nutritionally enhance grain sorghum. The Africa Biofortified Sorghum (ABS) Project seeks to develop a more nutritious and easily digestible sorghum that contains increased levels of essential amino acids, especially lysine, increased levels of Vitamins A and E, and more available iron and zinc.

The project brings together seven African and two US organisations. South African organisations include the CSIR, the Agricultural Research Council (ARC) and the University of Pretoria. CSIR Biosciences Executive Director, Dr Gatscha Mazithulela, welcomed the news: "The application was approved in view of the potential scientific impact of the project in the long term". The decision is in the best interest of scientific inquiry and provides a basis for making a difference to the neediest people of our continent.

"This process proves that South Africa has robust regulation. We respect the fact that decision-makers have an obligation towards safety and that rigorous investigations are part of the process. Work on the project will now continue in our level 3 biosafety greenhouse," says Mazithulela. He says the CSIR and its consortium partners support biosafety. They are undertaking additional responsibilities to satisfy the public and the regulators that the work conducted is ethical, conforms to the highest safety levels, and is in the interests of the public. The consortium has already started investigating some fundamental questions in genetics of sorghum as an additional contribution to knowledge in this area. Scientific progress will be documented for scientific review and the organisation will keep the Minister's advisory panel abreast of developments.

Sorghum is an African crop that is the staple food of millions of people in sub-Saharan Africa. While it is one of the few crops that grow well in arid parts, it is lacking in most essential nutrients and it has poor protein digestibility. Scientific evidence shows that deficiencies in essential micronutrients - such as iron, zinc, Vitamin A and others - can cause impaired immune systems, blindness, low birth weight, impaired neuropsychological development and growth stunting. Malnutrition remains a leading direct and indirect cause of the rise in the many non-communicable diseases, especially in Africa.

WARDA Signs Memorandum of Understanding

[http://www.warda.cgiar.org/warda/newsbrief.asp#MoU_signed_with_French_Institutions_\(CIRAD,_I_NRA_and_IRD\)](http://www.warda.cgiar.org/warda/newsbrief.asp#MoU_signed_with_French_Institutions_(CIRAD,_I_NRA_and_IRD))

A memorandum of understanding (MoU) was signed by African Rice Center (WARDA), the French National Institute for Agricultural Research (INRA), Research Institute for Development (IRD) and the French Agricultural Research Center for International Development (CIRAD) to help improve sustainable rice production, address climatic change-related issues, diversify rice-based systems and reduce post-harvest losses in Africa. The four institutions will carry out joint research projects, training and information dissemination on rice-based production systems in the region.

As part of this agreement, scientists from the French research organizations will be posted at WARDA's research stations to work on specific constraints to rice production in the continent. WARDA Director General Papa Abdoulaye Seck said that the MoU will help bring together the institutions' comparative and complementary advantages to benefit Africa's rice sector.

Call for Increased Agricultural Investment in Africa

<http://www.ifad.org/media/press/2008/38.htm>

The International Fund for Agricultural Development (IFAD) supports the initiatives of the African Green Revolution Conference in upholding new agricultural technologies in Africa. At the conference, IFAD's President Lennart Båge stated that "smallholder farmers in Africa need to be empowered to become rural entrepreneurs who can build productive and profitable partnerships with the private sector."

To make this possible, African farmers should be supported with agricultural research, policy, and investment measures to lift themselves out of poverty and contribute to their country's economic growth. Agricultural productivity has been a powerful instrument in fighting poverty and hunger in the past. The Asian green revolution was successfully implemented and this can be similarly implemented in Africa to support the development of varieties that have resistance to pests, drought and salinity.

Controlling Crop Pests with Stealth Worms

http://www.iita.org/cms/details/news_details.aspx?articleid=1772&zoneid=81

Scientists from the Nigeria-based International Institute of Tropical Agriculture (IITA) and Ghent University in Belgium have identified certain entomopathogenic nematode (EPN) species that could effectively be deployed as biological control agents against crop pests in Sub-Saharan Africa. EPNs are microscopic roundworms similar in morphology to plant parasitic nematodes. The juvenile stage of these tiny worms travels with bacteria in its intestine that can rapidly kill their pest host, usually within 48 hours. They reproduce until the resources in the cadaver are depleted, then they migrate in search of new hosts.

EPNs have been successfully used to control insect pests, especially in tropical regions. In Brazil, Venezuela, Egypt and in the tropical areas of Australia, they have been applied to manage banana weevil and diamond-back moths. However, information on indigenous EPNs in Africa is still limited. The IITA –Ghent University project addressed this by isolating local species, determining nematode/bacterium associations for commercial production, and training farmers on the effective use and proper application of EPNs.

According to Françoise Kanga Messiga, coordinator of the project, "Within limits, EPNs are compatible with the use of chemical pesticides since their virulence is not affected. More importantly, using EPNs is safe for users and the environment as their associated bacteria poses no threat to vertebrates or plants". However, she cautions that EPNs may affect some beneficial insects such as pollinators.

Other News

GM Food is Safe

http://ec.europa.eu/dgs/jrc/downloads/jrc_20080910_gmo_study_en.pdf
<http://www.europabio.org/>

A report issued by the Joint Research Centre reconfirms the results of a 2001 Commission study concluding that no demonstration of any health effect of GM food products has ever been reported and the use of more precise technology and the greater regulatory scrutiny very likely makes them even safer than conventional plants and foods.

"That food made from biotech crops is safe for human and animal consumption is not exactly news," says Willy De Greef, Secretary General of EuropaBio. The 2001 study by the European Commission covering 15 years experience with agricultural biotech products affirmed exactly that, and so did the more recent reports by the WHO, the French and British Academies of Medicine and other renowned institutes, "We hope that the European policymakers who have insisted on verifying this fact again will now act in accordance with the findings in the form of more timely and actual approvals of biotech products".

"Now that we have once again (re-)ascertained the safety of biotech foods, let's give consumers the opportunity to choose among a variety of safe foods produced with the help of modern biotechnology... let's get these products approved!" he concluded.

Fifth Anniversary of the Biosafety Protocol Applauded

<http://www.cbd.int/biosafety/anniversary>.

11 September 2008 marks the 5th anniversary of the entry into force of the Cartagena Protocol on Biosafety. The Biosafety Protocol is an international environmental treaty under the United Nations Convention on Biological Diversity, which establishes rules and procedures for the international trade in certain agricultural biotechnology products.

Sharon Bomer Lauritsen, executive vice president of food and agriculture for the Biotechnology Industry Organization (BIO) reaffirmed BIO's commitment to working with Biosafety Protocol Parties to ensure the safe transfer, handling and use of agricultural biotechnology products and added that "over the past five years, more than 140 countries have made significant gains in implementation of the Biosafety Protocol. The biotechnology industry has contributed to these efforts, through ongoing capacity-building efforts, improvements to the quality and quantity of information available on the Biosafety Clearing-House, and the development of guidance language for industry to use in implementation of the Biosafety Protocol's shipping documentation requirements.

"BIO and its members remain supportive of the Biosafety Protocol. This support represents our industry's unwavering commitment to environmental protection, food security and resource preservation while allowing for the global community to take advantage of the real benefits of agricultural biotechnology.

"Crops improved through biotechnology are increasing yields on current agricultural lands around the world. Higher-yielding crops can help feed more people and boost incomes for farmers. In addition, the use of biotech crops that resist pests and diseases, tolerate harsh growing conditions and reduce spoilage has also prevented the loss of many important crops. Crops improved by biotechnology are being embraced by farmers around the world.

"The theme selected for this fifth anniversary is 'The Cartagena Protocol on Biosafety: Five years of global cooperation towards sustainable development'. BIO looks forward to continuing to support implementation of the Biosafety Protocol through focused, capacity-building at the national level. This is key to the effective operation of the Biosafety Protocol and to ensuring compliance by all Parties with their existing obligations."

Scientists React to Prince Charles' Comments on GM Crops

<http://www.timesonline.co.uk/tol/news/uk/science/article4526133.ece>

Scientists have reacted to the well publicized statement of the Prince of Wales this week. The Prince publicly stated that GM crops are causing the biggest-ever environmental disaster and warned that it is utterly dangerous to rely on multinational corporations for food, a statement that crop researchers and scientists don't agree with.

Among the scientists include Alison Smith, professor of plant biochemistry at the John Innes Centre, who said that the Prince is ill-informed and he is not contributing to a rational debate on the issue. Ian Denholm, of Rothamsted Research Institute also added that the GM technology should be explored without prejudice and assessed on how it can help overcome agricultural challenges.

Bt Maize Poses Negligible Risk to Green Lacewing Adults

<http://www.plosone.org/article/info:doi%2F10.1371%2Fjournal.pone.0002909>

One risk associated with the growing of insect-resistant genetically engineered maize varieties expressing Cry proteins derived from *Bacillus thuringiensis* (Bt) is their potential to adversely affect non-target organisms. Adults of the common green lacewing, *Chrysoperla carnea*, are prevalent pollen-consumers in maize that could therefore be exposed to insecticidal proteins expressed in the pollen of these maize varieties.

Yunhe Li, Michael Meissle and Jörg Romeis from Agroscope ART in Zurich, Switzerland, conducted a laboratory experiment to evaluate the impact of pollen from both Cry3Bb1 (Event MON 88017) and Cry1Ab (Event Bt176)-expressing transgenic maize varieties on a number of fitness parameters of adult *C. carnea*. An additional experiment aimed at adding certainty to the hazard assessment included feeding adult *C. carnea* with an artificial diet containing purified Cry3Bb1 or Cry1Ab toxin at a 10 times higher concentration than in maize pollen. This worst-case experiment intended to prove that the insects are not sensitive to the tested toxins independent from the plant background. In both experiments, no impacts of the two Cry proteins on any of the tested life-table parameters were recorded.

The results show that consumption of maize pollen containing those Bt toxins poses a negligible risk to adult *C. carnea*.

NOTICEBOARD

22 – 26 September 2008- The 1st ever All Africa Congress on Biotechnology will be held in the Kenyan Capital Nairobi. The theme of the Congress will be '***Harnessing the Potential of Agricultural Biotechnology for Food Security and Socio-Economic Development in Africa***'. In addition to the main theme, congress participants will have an opportunity to listen to experiences of other countries in Europe, Asia, USA and Latin America about modern agricultural biotechnology and its applications in their economic transformation processes. For further details, visit www.abneta.org/congress

12 – 15 October 2008 - The European Network for the Durable Exploitation of Crop Protection Strategies will conduct its first International Conference "Diversifying Crop Protection" at the La Grande Motte, France. All researchers, scientists and specialists involved or interested in sustainable agriculture and crop protection are invited to participate in the conference. For further details, visit http://www.endure-network.eu/international_conference_2008

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23 October 2008 - 8th Plenary Meeting of the National Agricultural Research Forum (NARF). The Secretariat of the National Agricultural Research Forum (NARF) hereby invites all stakeholders to the 8th Plenary Meeting of the forum scheduled for 23 October 2008, in Pretoria. The NARF was established in May 2002 as an apex consultative body on research and technology development in the agricultural sector in South Africa. The forum provides a unique platform for stakeholders to articulate and recommend national priorities for agricultural research, technology development and transfer in the sector. For further details, visit: www.nda.agric.za

26 – 31 October 2008 - The Technical Center for Agricultural and Rural Cooperation ACP-EU (CTA) is organizing an international seminar on the “Implications of Global Climate Change for Sustainable Agricultural Production Systems in ACP countries”. The seminar will be held in Ouagadougou, Burkina Faso. The seminar will focus on how climate change affects interactions between the main ACP (African, Caribbean and Pacific countries) agricultural production systems and the cross-cutting issues that threaten agricultural sustainability and rural development. For more information, visit the conference site <http://ctaseminar2008.cta.int/about.html>

2 – 5 November 2008 - The International Centre for Plant Breeding Education and Research, the University of Western Australia, Perth will be the site of the workshop on “Mixed models for plant improvement”. This workshop will present advanced statistical methods for the design of plant breeding trials and analysis of data in plant improvement programs. Topics will include the design and analysis of single/multi environment and single/multiphase experiments. Details of the workshop are available at <http://km.fao.org/gipb/>

9 – 12 November 2009 - The 2009 International Conference on Horticulture, organized by Prem Nath Agricultural Science Foundation (PNASF) and Vegetable Science International Network (VEGINET), in collaboration with the Food and Agriculture Organization of the United Nations (FAO), will be conducted in Bangalore, Karnataka, India. With the theme Horticulture for Livelihood Security and Economic Growth, the conference is designed to provide a common forum for all stakeholders to share their experience and expertise so as to suggest much needed technology-institution-policy package for sustainable production and marketing of horticultural products. For more information, visit <http://www.pnasf.org/ich2009.htm>

16 – 21 November 2008 - The 10th International Symposium on the Biosafety of Genetically Modified Organisms (GMOs) will be held in Wellington, New Zealand. The workshops and lectures will focus on recent developments in the science supporting biosafety research and the state of the art of risk assessment. Among the specific topics include those pertaining to impacts of GMOs in relation to their fitness and invasiveness and due to pest, impacts of GMOs on complex soil ecosystems, biosafety issues associated with GM domestic animals, fish and insects, methods for restricting gene flow from GM crops, and methods of pre and post market environmental monitoring of GMOs. For more information and to register please visit <http://www.isbgmo.info/>.

25 – 28 November 2008 - The Second Brazilian Symposium of Genetic Resources, organized by the Brazilian Agricultural Research Corporation, Embrapa, will be held in Brasilia. Up for discussion are new paradigms and strategies related to access, conservation and use of genetic diversity and the need to maintain the availability of genetic resources in support of food security and development. More information about the symposium in Portuguese at <http://km.fao.org/gipb/>

23 November – 2 December 2008 - The Association of Agricultural Research Institutions in the Near East and North Africa (AARINENA) will organize, in collaboration with the Agricultural Genetic Engineering Research Institute (AGERI) and the support of the Global Forum for Agricultural Research (GFAR), will offer an introductory course in bioinformatics in Giza, Egypt. Topics will include information databases, sequence alignment, sequence similarity search, structural bioinformatics, and functional genomics. Course and sponsorship information can be obtained from Dr. Dina El-Khishin at khishin@ageri.sci.eg or <http://www.aarinena.org/documents/courses/Bioinformatic2008/index.htm>

18 – 21 February 2009 - The South African Agency for Science & Technology Advancement (SAASTA) is organizing the 2nd African Science Communication Conference. The conference, which will highlight science communication's contribution to science,

technology and innovation and the development of democracy in the continent, will be held in Gauteng, South Africa. For more information, download the first announcement at http://www.saasta.ac.za/2ndascc/pdf/ascc_first_announcement.pdf

10 – 12 March 2009 - The international scientific congress "Climate Change: Global Risks, Challenges and Decisions" will be held in Copenhagen, Denmark. The congress is organized by the University of Copenhagen in cooperation with nine other universities in the International Alliance of Research Universities (IARU). The congress aims to provide a synthesis of existing and emerging scientific knowledge necessary in order to make intelligent societal decisions concerning application of mitigation and adaptation strategies in response to climate change. For more information, visit http://www.cifor.cgiar.org/Events/CIFOR/climatechange_copenhagen.htm