CROP BIOTECH UPDATE

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A weekly summary of world developments in agri-biotech for developing countries, produced by the Global Knowledge Center on Crop Biotechnology, International Service for the Acquisition of Agri-biotech Applications SEAsiaCenter (ISAAA)

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## AFRICA BIOTECH EXPERTS ISSUE STATEMENT

The role of biotechnology in sustainable development is underestimated largely because of the controversy regarding genetically modified organisms. This assessment led the Africa Biotechnology Experts Working Group, who met in Entebbe, Uganda, to release a statement endorsing the role of science and technology in contributing to sustainable development of the African region, and encourage the governments of the region to acknowledge this in the New Partnership for African Development (NEPAD) agenda.

The group forwarded several recommendations, among which include the need to:

* Complement initiatives to create centers of excellence by strengthening existing facilities and investment to create a critical mass of African biotechnologists

* Create incentives by national governments for the private sector to invest in the development and commercialization of biotechnology products

* Create regional IP brokerage institutions for technology transfer into and out of Africa

* Increase and sustain government and development partners' investment in biotechnology development

* Harmonize policies and regulatory frameworks for the safe transborder application of biotechnologies

* Use existing systems, products and services to create awareness, foster communication, and devise effective information exchange mechanisms amongst the parties in the region

For more information, contact Remi Akanbi of AfricaBio at remiafrica@mweb.co.za or remi@africabio.com. Visit the AfricaBio website at http://www.africabio.com.

**IFPRI OPENS NEW DELHI OFFICE**

The International Food Policy Research Institute (IFPRI) opened its South Asia office in New Delhi, India, with a ceremony presided over by India's Prime Minister Manmohan Singh. In his opening speech, Singh called on IFPRI to "Set up the credit inflow to farmers, to increase public investment in irrigation and wasteland development, to increase funds for agricultural research and extension…[and] to create a single market for agricultural produce, to increase investment in rural healthcare, education, rural electrification, and rural roads and commodities."

Dr. Joachim von Braun, Director General of IFPRI, acknowledged the role of India in IFPRI's agenda. "From now on, our commitment to the region will be solidified by our presence here, in close proximity to our partners and colleagues," Dr. Von Braun said in his welcome address, "Thus, promoting transparency and accountability, competent public administration, and the rule of law must be at the forefront of development policies."

IFPRI is based in Washington, D.C., and conducts research in developing countries to identify policies to improve agriculture, nutrition, and the environment. Download the speeches at http://www.ifpri.org/media/delhioffice20050307.htm

## BORLAUG SPEAKS AT IARI CELEBRATION

Nobel Prize Winner and Green Revolution proponent Dr. Norman Borlaug, was in India recently for the centenary celebrations of the Indian Agricultural Research Institute (IARI), where he delivered the 22nd Coromandel lecture on “From the Green to the Gene Revolution: A 21st Century Challenge.” In his speech, Dr. Borlaug expressed his support for the use of genetic modification to improve crops.

Borlaug said Bt cotton is doing a good job in many parts of the world in protecting the crop against insects. “Use of BT Cotton is in nine million hectare worldwide and six million small farmers. There is an excellent control of boll worms and 25,000 tonnes of reduction in use of insecticide.”

Dr Borlaug said there was a need to double food production by 2050 if hunger were to be banished; the ongoing `gene revolution,' he said, could definitely play a part in this. "You cannot build peace on empty stomachs. Only 8 per cent of countries with lower levels of hunger are mired in conflict," he added.

With reports from http://www.indianexpress.com/full_story.php?content_id=66628, http://www.business-standard.com/common/storypage.php?storyflag=y&leftnm=lmnu2&leftindx=2&lselect=2&chklogin=N&autono=183711, and http://www.thehindubusinessline.com/2005/03/17/stories/2005031701991000.htm

## IFPRI RELEASES NEW STRATEGY PAPER

In order to coincide with the recent opening of the International Food Policy Research Institute’s (IFPRI) New Delhi Office, Dr. Joachim Von Braun, Director General, and colleagues look at Indian Agriculture and Rural Development: Strategic Issues and Reform Options. This is a new strategy paper from members of IFPRI's Senior Management team.

Researchers outline major recommendations for the improvement of India’s agricultural state. These include increasing investments in rural infrastructure and agricultural research and development to promote pro-poor and agricultural development; creating more employment; strengthening manpower through education, nutrition, and empowerment of women; reforming water management and institutions; exploiting new opportunities to participate in the production and marketing of high-value livestock products, fruits and vegetables, and fishery; and working towards establishing and strengthening a rules-based multilateral trading system through World Trade Organization (WTO) negotiations.

Download the complete paper at http://www.ifpri.org/pubs/ib/ib35.pdf.

## UK OKS BIOTECH STATUS IN INDIA

The annual luncheon for the Labor Friends of India at the Café Royal in London also allowed United Kingdom (UK) Prime Minister Tony Blair to voice his admiration for India's biotechnology research.

Blair called modern India "an immensely exciting place" in his speech, and indicated that the country will be invited to attend the meeting of the G8 advanced nations in Gleneagles, Scotland, in July. He also said that he was tremendously influenced by the progress India had achieved in the field of biotechnology, and announced that the UK government would spend £1 billion to develop the biotechnology sector in the country over the next three years.
The luncheon was attended by over 200 guests, and included Indian business persons based in the United Kingdom. Also in the luncheon were cabinet members, Home Secretary Charles Clarke and Trade and Industry Secretary Patricia Hewitt.

With reports from http://economictimes.indiatimes.com/articleshow/1045628.cms, http://www.telegraphindia.com/1050306/asp/foreign/story_4460221.asp, and http://www.gg2.net/viewnews.asp?nid=602&tid=top_headlines&catid=Top%20Headlines.

## US REGULATORY SYSTEM CLEARS GM COTTON

The US Department of Agriculture and the Food and Drugs Administration have cleared the use of Roundup Ready Flex cotton, a step toward its potential commercial launch in 2006. There are now no restrictions on its domestic planting or food and feed use.

The clearance for Roundup Ready Flex cotton, according to technology developer Monsanto, “will provide a wider over-the-top application window for Roundup agricultural herbicides throughout the growing season, providing growers with increased flexibility and convenience on the farm.”

For more details, visit http:// www.monsanto.com.

## FLOWERING GENE ALSO CONTROLS SEED SIZE, RESEARCH FINDS

In "Control of seed mass and seed yield by the floral homeotic gene APETALA2," Dr. Diane Jofuku of the University of California, Santa Cruz and colleagues demonstrate that the gene APETALA2 (AP2) also controls seed size and weight. AP2 is best known as a regulator of flower organ identity and development in Arabidopsis. Their findings are published in the February 22, 2005 issue of the Proceedings of the National Academy of Sciences.

By mutating AP2 in Arabidopsis plants and causing the gene to be expressed in much lower quantities, Jofuku's research team found that average seed mass significantly increased to as much as 104% greater than wild-type controls. Seed weight also increased by as much as 104%. These increases, they found, were due in part to increases in total seed protein and oil; for instance, the mutant seeds showed a 37-57% increase in the levels of lignoceric acid (C24:0).

Seed mass and size are good indicators of seedling survival and vigor upon germination of many plant species. Larger seeds can mean increased tolerance to flooding and insect predation. These advantages thus make it important to identify what genes are involved in determining seed size and mass, and how they may be manipulated to produce desirable agronomic traits.

Download the article at http://www.pnas.org/cgi/reprint/102/8/3117

## DOCUMENT REMINDER: ARTICLE AVAILABLE ON BRAZIL GM

With a landmark biosafety law passed, Brazil has now opened its doors to both human embryonic stem cell research and the cultivation of genetically modified (GM) crops. Under the law, the National Technical Commission on Biosafety (CTNBio) will advise on whether a GM crop can be planted and commercialized. Laura Nelson reports on the reactions from Brazil's scientific community in Biosafety law brings stem-cell research to Brazil, published in Nature.

The article appears in the March 10, 2005 issue of Nature. For more information, visit http://www.nature.com/nature.

## CBT NEWS FEATURE: CIMMYT

The International Maize and Wheat Improvement Center (CIMMYT) applies the potentials of plant breeding to develop improved maize and wheat varieties that

naturally resist pests and diseases, thrive in marginal areas, and yield more grain. Wheat varieties developed in CIMMYT and its predecessor organization saved South Asia from famine and hunger in the 1960s, which marked the onset of the Green Revolution. The social and economic benefits of this Green Revolution were recognized worldwide when the 1970 Nobel Peace Prize was awarded to CIMMYT's plant breeder, Norman Borlaug.

CIMMYT varieties are well adopted all over the world. Recent studies showed that wheat varieties developed by CIMMYT and its partners are planted to more than 64 million hectares in developing countries, representing more than 75% of the area planted to modern wheat varieties in those countries. Its maize varieties on the other hand, are being planted on nearly half of the area sown to improved varieties in non-temperate areas of the developing world. CIMMYT also developed more nutritious varieties of maize, which won recognition from the 2000 World Food Prize.

CIMMYT also develops better cropping practices tailored to the needs of resource poor farmers. It builds capacity by training researchers on technical know-how, and teaching farmers the use of new farming practices and seed production.

CIMMYT's research priority programs include genetic resources, impacts targeting and assessment, African livelihoods, tropical ecosystems, rainfed wheat systems, and intensive agro-ecosystems. Through its genebank, CIMMYT has important worldwide collections of maize, wheat, and related species for conservation and use of genetic diversity to produce new varieties that will address food production constraints. Also, CIMMYT undertakes several disciplinary research programs on maize improvement, wheat improvement, biotechnology, social sciences, and crop and resource management.

The abbreviation "CIMMYT" is derived from its Spanish name- Centro Internacional de Mejoramiento de Maíz y Trigo. CIMMYT was one of the first international research centers to be supported through the Consultative Group on International Agricultural Research (CGIAR).

For more information on CIMMYT, visit http://www.cimmyt.org

## ANNOUNCEMENTS

## UPCOMING MEETINGS IN NAIROBI

### Public Lecture

Kenya's Minister for Planning and National Development will give a public lecture on 23rd March 2005 on "Scientifically-driven development: A means of meeting the Millennium Development Goals." The meeting, which is coordinated by ICIPE, will be held at the United Nations offices at Gigiri, Nairobi.

### Genome Conference

The Third Annual Africa Genome Conference will be held from March 21-24, 2005 at Windsor Golf & Country club, Nairobi, Kenya. This year's conference a dubbed A Time To Heal will focus on human and animal vaccines, investing in science in Africa, among others.

### IAASTD Meeting

The International Assessment of Agricultural Sciences and Technology for Development (IAASTD) meets for three days in Nairobi from 4-6 April 2005 to develop detailed chapter outlines for the sub-Saharan Africa (SSA) sub-global component of the Assessment. IAASTD aims to assess agricultural knowledge, science and technology in order to use them more effectively to reduce hunger and poverty, improve rural livelihoods, and facilitate sustainable development.

## ISAAA HOLDS MEDIA WORKSHOP IN HINDI

ISAAA, in collaboration with the Indian Agricultural Research Institute (IARI) and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), is organizing a Media Workshop in Hindi on "Reporting Biotechnology: Issues & Opportunities for the Hindi News Media" from the 13-15th April 2005 at the NAAS Auditorium, National Agricultural Science Center (NASC) Complex, New Delhi, India.

The workshop is organized to provide a platform to science and business journalists & reporters from the Hindi News Media to discuss and understand issues and concerns related to crop biotechnology. It is also aimed at educating the media in news reporting that will effectively explain the complexities of the science of crop biotechnology to the Indian farming community.

Details (in Hindi) are available for download at http://www.isaaa.org/kc. For more information, contact Dr. Bhagirath Choudhary at b.choudhary@cgiar.org.

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