CROP BIOTECH UPDATE

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), and AgBiotechNet

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POLICY INITIATIVES FOR CROP BIOTECH IN INDIA

Crop biotechnology is essential for food and nutritional security in India. However, policy initiatives are necessary to accelerate investments by technology holders and adoption by the farming community. This was stressed by R.K. Sinha, executive director of the All India Crop Biotechnology Association, during his talk at the International Conference on Agricultural Biotechnology in New Delhi.

Aside from policy initiatives, Sinha noted that transparent protocols for each crop must be established and that international guidelines be followed. He also saw the need to establish a world class intellectual property rights regime for biotechnology inventions and the protection of plant varieties. Sinha added that concurrent and transparent trials for biosafety for both new and released events were necessary and that a determined drive against illegal genetically modified seeds trade was important to maximize the benefits that biotechnology had to offer.

For a copy of his PowerPoint presentation as well as those of other speakers, visit http://www.isaaa.org/kc.

POTENTIAL BENEFITS OF GM IMPROVED RICE

Rice production has reached its maximum potential but genetically modified (GM) rice breeding with advancement of functional genomics will provide ample scope to increase yield, build plant protection, improve nutrition, and enable rice to grow using less water and in adverse environment. This was the view of Dr. Swapan Datta, scientist at the International Rice Research Institute in Los Banos, Philippines, who discussed the potential benefits of GM improved rice at the International Conference on Agricultural Biotechnology in New Delhi.

Datta said that over 27 million tons of rice yield is lost annually due to problems brought about by rice pests such as the stem borer, sheath blight, and bacterial blight. This translates to an annual loss of US$5560 million. With GM rice, solutions are in the offing to help offset yield loss. He cited the following initiatives that are currently being done: marker free Bt rice which is resistance to four insect pests; Xa21 rice resistant to bacterial blight; marker free Golden indica rice; high iron rice (Ferritin indica); and salinity-tolerant rice.

Ready for field evaluation are Bt/hybrid rice in China and India; Xa21 rice in China, Philippines and India; Golden rice in the US, Philippines and India; and herbicide tolerant rice in Spain, USA and China. For commercialization by 2005-06 will be Bt rice in China, and Golden Rice and Ferritin rice by 2007-08.

Datta stressed that India can play an important lead role in developing GM rice along with adequate biosafety regulations.

For a copy of his PowerPoint presentation as well as those of other speakers, visit http://www.isaaa.org/kc.

ICRISAT SETS FIELD TRIALS FOR GM GROUNDNUT

The International Crop Research Institute for the Semi-Arid Tropics (ICRISAT) has identified resistant lines for genetically modified (GM) groundnut and is ready for open field trials by July or August 2005. In addition, pigeonpea transgenics are currently under contained field trials for testing of promising lines. ICRISAT scientist Dr. Kiran Sharma said that this will be repeated in 2005 under contained trials to be followed by an open field trial in 2006.

Contact Kiran Sharma at k.sharma@icrisat.org for more information.

In related developments, Dr. William Dar, ICRISAT director general, said that a large number of cultivars have been released from the breeding material/germplasm supplied by ICRISAT. These cultivars contribute significantly to the increased productivity and sustainability of agricultural development in India and other countries.

Dar mentioned that 11 varieties were released in India from the basic germplasm supplied from ICRISAT. These include sorghum, pigeonpea, pearl millet, small millets, and chickpea. In India alone, of the 70 pearl millet hybrids in cultivation, 60 were developed on breeding material supplied by ICRISAT.

Dar's PowerPoint presentation on "Access to germplasm: ICRISAT's experience in India" can be viewed at http://www.isaaa.org/kc.

SCIENTISTS DEMAND USE OF BIOTECH TO HELP FIGHT BANANA DISEASE

Banana wilt disease is threatening to wipe out Uganda's banana plantations unless urgent steps are taken to contain the situation. Participants to a symposium organized by the country's National Agricultural Research Organization (NARO) in Entebbe were told that the disease has destroyed plantations in 21 out of 56 districts and that it was spreading fast.

Consequently, the 300 participants representing various banana stakeholders urged the government to speed up the process of passing the biosafety law so that the country can benefit from biotechnology to help solve the problem.

Dr Otim Nape, the director general of NARO, said the wilt menace presents a clear and present danger to the country's food security. Over 65% of Ugandans depend on banana for their staple food. The country has put 1.5 million hectares of land under the crop, producing an estimated 8.5 million tons of bananas annually, and accounting for 15 % of the world's total output.

Ogenga Latigo, a member of the parliament's Agriculture Committee, told the audience that he would ask parliament to debate on the biosafety draft bill. / Kenya Biotechnology Information Center

For more of the Kenya Biotechnology Center, visit http://www.isaaa-africenter.org.

THAILAND'S BIOTECH ASSOC TO EDUCATE PUBLIC RE GM CROPS

The Biotechnology Alliance Association (BAA) in Thailand has been set up to educate the public about biotechnology applications including genetically modified (GM) crops. Dr. Sutat Sriwatanapongse, senior scientist at the National Centre for Genetic Engineering and Biotechnology (BIOTEC), acting chairman of the alliance group, said that science-based information will be provided to the public and that several fora will be organized to discuss the benefits and risks of GM crops so that stakeholders can make crucial decisions pertaining to the technology.

The multi-sectoral BAA was organized as a response to the negative perception of consumers regarding biotechnology, particularly GM crops. Sutat attributed the perception problem to the "public's GM knowledge not being based on science."

Ranjana Wangvipula of the Bangkok Post reported that BAA cited the case of GM papaya which was being said to have adverse effects on human health and the environment. Dr. Supat Attathom, a scientist at Kasetsart University working on GM papayas, said this was erroneous and that it was necessary to give science-based information to clear this perception. Thailand is part of the Papaya Biotechnology Regional Network of Southeast Asia which seeks to develop transgenic papayas that address two major constraints that limit the crop's production and availability: papaya ringspot virus and significant post-harvest

losses. For more on the papaya project in Thailand, email Supat Attathom at agrspa@ku.ac.th.

MANIFESTO ON BIOTECH FOR ABIC 2004

Over three hundred scientists and technologists have already signed a manifesto favoring the “effective exploitation of scientific principles in modern agriculture, including, when useful, the safe adoption of genetically modified organisms (GMOs), and ask the support of colleagues active at the interface between science and its applications.” This manifesto is being released in time for the Agricultural Biotechnology International Conference (ABIC) 2004 to be held in Cologne, Germany on September 12 to 15, 2004.

The manifesto also asks politicians and regulators in plant genetic engineering for: the use of unbiased information in law-making and politics, the support of research and development to foster innovation in plant genetic engineering, and the elimination of unnecessary hurdles in laws and regulations concerning these technologies.

Those who are interested to sign the manifesto can do so by visiting http://www.abic2004.org/manifesto. For more information about the conference, go to http://www.abic2004.org.

IN PROFILE: EFB

The European Federation of Biotechnology (EFB) was established by European scientists to “promote safe and ethically acceptable biotechnology for the better use of nature's resources.” EFB also collaborates with academic and industrial researchers throughout Europe to increase competencies, strengthen education, promote innovation and increase the benefits of biotechnological research to society. Every second year, EFB holds a European Congress on Biotechnology.

EFB is currently initiating activities to assess and develop opportunities for cooperation and strategic relations in the field of biotechnology between the European Union and major countries and regions such as China, Southeast Asia and South America.

The federation is open to universities, scientific institutes, companies, national bioindustry associations, and personal members. For more information, visit http://www.efbweb.org.

DOCUMENT REMINDER

INDIA INTERNATIONAL PAPERS AVAILABLE ONLINE

Paper presentations of various speakers during the International Conference on Agricultural Biotechnology Ushering in the Second Green Revolution held in New Delhi, India are now available online at http://www.isaaa.org/kc. Also posted on

the website are speeches of government officials led by India's Science and Technology Minister Kapil Sibal as well as pictures of the said conference.

CROP BIOTECH UPDATE IN ITALIAN

The weekly electronic newsletter Crop Biotech Update is now available in Italian. Produced by the Global Knowledge Center on Crop Biotechnology of the International Service for the Acquisition of Agri-biotech Applications, the e-newsletter summarizes global developments on crop biotechnology with implications for the developing world. Visit http://www.isaaa.org/kc for the Italian version of the Crop Biotech Update. Those interested to subscribe to the Italian version can email knowledge.center@isaaa.org.

REVISED POCKET K ON LABELING OF GM FOODS

An updated version of Pocket K No. 7 on labeling GM foods is now available online at http://www.isaaa.org/kc. It discusses examples of international approaches to labeling and implications of labeling food. Pocket Ks are Pockets of Knowledge on various issues related to crop biotechnology products and issues. They are produced by the Global Knowledge Center on Crop Biotechnology. There are 15 Pocket Ks which are all available at ISAAA's website.

ISAAA SUBSCRIBER SURVEY

Subscribers in 189 countries now receive the weekly e-newsletter Crop Biotech Update. To have a better profile of our valued subscribers and to better serve you, we are currently conducting a subscriber's survey. Thank you to all those who have responded. For those who have not done so, please take time to fill in the short questionnaire we have sent you, or go to http://www.isaaa.org/kc/profile/subscription.asp

ANNOUNCEMENTS:

BIOTECH MANAGEMENT PROGRAM

The Tennessee Biotechnology Association, the Nashville Health Care Council, the Biotechnology Industry Organization (BIO), and the Owen Graduate School of Management at Vanderbilt University are offering a biotechnology management program designed to help organizational leaders working in the fields of biotechnology, life sciences and related health care to better manage the business.

For more information, email hermano.rocha@owen.vanderbilt.edu.

NEW BOOK ON PLANT BIOTECH

Introgression from Genetically Modified Plants into Wild Relatives has just been released. The book reviews issues related to the unintentional spread of new genes from cultivated plants to their wild relatives and the subsequent impacts on the ecology of wild plants. Focus is on the ecological and evolutionary effects of introducing GM cultivars. It presents current knowledge of crop-wild relatives hybridization and introgression, and the measurement and prediction of their consequences. The book is edited by a team headed by H.C.H. den Nijs of the University of Amsterdam. Inquiries about the book can be forwarded to http://www.iospress.nl/html/boek1087383333.html.

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