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)

June 3, 2005

In This Issue:

* International Trade Rules for GM Crops Tackled in Montreal
* UNECE Agree on Public Participation in GMO Discussion
* Decision-Making About GM Crops in Developing Countries
* U.S. Legislators Focus on 'Next Generation' Products
* India Agrees on Biotech Priorities for Implementation
* India R & D on GM Crops Delayed, Says Report
* TILLING for Crop Improvement
* Soybeans Screened for Resistance to YMV
* CBT News Feature: World Agroforestry Centre
* Announcements

INTERNATIONAL TRADE RULES FOR GM CROPS TACKLED IN MONTREAL

Some 700 participants from 119 member governments to the Cartagena Protocol on Biosafety are set to finalize international trade rules for genetically modified (GM) commodities in Montreal, Canada. A decision will be made on the detailed documentation requirements for bulk shipments of GM corn, soybean and other agricultural commodities that are intended for food, feed or processing. Adopted in January 2000 as a supplementary agreement to the Convention on Biological Diversity Biosafety, the Biosafety Protocol aims at ensuring that the transboundary movement of living modified organisms or LMOs, also commonly known as GMOs, does not adversely affect biological diversity or provide risks to human health.

Hamdallah Zedan, Executive Secretary of both the Protocol and its parent agreement, the Convention on Biological Diversity (CBD), said that deliberations were very crucial to the successful implementation of the Biosafety Protocol. "A rigorous and unambiguous system of identifying GM commodities will facilitate their safe handling and transportation thereby advancing the Protocol's objective. It will also clarify the rules of the game for industry, create transparency and

predictability in the international trade of those commodities and boost public confidence", he said.

More details about the conference are available online at http://www.biodiv.org/meetings/mop-02/press/default.asp. For relevant background documents visit http://www.biodiv.org/doc/meeting.aspx?mtg=MOP-02.

UNECE AGREE ON PUBLIC PARTICIPATION IN GMO DISCUSSION

The Parties to the United Nations Economic Commission for Europe (UNECE) Aarhus Convention have agreed to extend the public's legal right to participate in decision-making on the release and placing on the market of genetically modified organisms (GMOs).

Holding their second meeting in Almaty, Kazakhstan, the Parties agreed to an amendment to the Convention whereby the public would have the right to submit comments and the public authorities would be expected to take these into account in the decision making process. Such decisions, except those that require commercial confidentiality, should be publicly available including reasons and considerations for them.

The Parties also reviewed the implementation of the Guidelines on access to information, public participation and access to justice with respect to GMOs, which the Parties had adopted as a voluntary instrument in 2002. It was reported that in countries lacking biosafety legislation, the Guidelines helped in developing detailed provisions on public participation in activities with GMOs in legislation.

For more information, contact Michael Stanley-Jones of UNECE at michael.standley-jones@unece.org or visit http://www.unece.org/env/pp.

DECISION-MAKING ABOUT GM CROPS IN DEVELOPING COUNTRIES

The framework for decision making on genetically modified (GM) crops vary between countries based on specific political, economic, agricultural and environmental contexts. Despi te the differences however, it is possible to make general conclusions about how governments in developing countries make decisions and who has access to decision-makers. So says "The GM Debate – Who Decides?: An analysis of decision-making about genetically modified crops

in developing countries" released by the Panos Institute in London, an entity set-up to stimulate debate on global development issues.

The report says that GM technology in developing countries is in the following scenario:

- Regulated by agencies within ministries of agriculture, commerce, science and environment. Parliaments often have a large role in deciding the content of new laws.

- Different groups of citizens vary in their access to different parts of the policy-making process. Scientists, international donors, the biotechnology industry and groups representing commercial farmers tend to have good access to ministries of agriculture, commerce and science.

- Scientists are involved in most stages of the decision-making process and tend to have good access to decision makers across all policy areas. They advise on state regulation of GM technology and are expected to play different roles.

- Consumer groups and other nongoverment organizations are more successful at accessing ministries of environment and public health, and sympathetic legislators, than the often more powerful ministries of agriculture, commerce and science.

The full report is downloadable from http://www.panos.org.uk.

U.S. LEGISLATORS FOCUS ON 'NEXT GENERATION' PRODUCTS

State legislation introduced in 2003-2004 by United States policy makers focused on 'next generation' products of agricultural biotechnology like genetically modified (GM) fish, pharmaceutical-producing food crops and animals, or new food crops such as wheat. This was a major finding of the Pew Initiative on Food and Biotechnology, a private entity devoted to the dissemination of information on agricultural biotechnology.

Legislations varied by state although they were reflective of regional concerns and economic interests. Biotechnology legislation in the Northern Plains States where debates were held regarding GM wheat and global wheat markets tried to stop the introduction of the product. Midwestern States, on the other hand, tried to leverage both their existing agricultural infrastructure through new tax incentives and other policies that would encourage new business and research opportunities.

The 2003-2004 analysis includes a fact sheet on "State Legislative and Local Activities Related to Biotech Continue to Grow in 2003-2004," which chronicles state legislation regarding agricultural biotechnology. The fact sheet is available online at http://pewagbiotech.org.

INDIA AGREES ON BIOTECH PRIORITIES FOR IMPLEMENTATION

The Indian Government has examined the report of the Task Force on Application of Biotechnology in Agriculture and has agreed on several priorities for implementation. Shri Kanti Lal Bhuria, Minister of State for Agriculture, told the Government's Press Information Bureau that the priorities include among others:

- Finalization of the National Biotech Policy by the Department of Biotechnology
- Rationalization of the approval process under the Environment (Protection) Act 1986
- Release of Bt cotton varieties for the North Zone
- Capacity building for post-release monitoring and training
- Public awareness campaign to be launched by the Department of Agriculture in association with State Agricultural Universities and other scientific organizations/institutes
- Establishment of testing facilities for GM seeds
- Identification of crops and traits for biotechnology research

See the full list of priorities at http://pib.nic.in/release/release.asp?relid=9082.

Meanwhile, Director General Mangla Rai of the Indian Agriculture Research Institute (ICAR) has unveiled a new scheme to support the search for new genes through biotechnology as a means to revitalize Indian agriculture. While delivering the 12th Dr. BP Pal memorial lecture on "Harnessing Genetic Power to Enhance Agricultural Productivity: Profitability and Resource Use Efficiency" at the Pusa Institute, he revealed that ICAR has earmarked Rs 12 crore for selecting genes that can incorporate drought resistance and salinity tolerance in crop plants and exploiting them gainfully over the next two years.

Mangla Rai added the Indian agriculture system was geared to use biotechnology for developing crops and animal breeds that could withstand biotic

and abiotic stresses. It would also be used to enhance nutritional status of foods and enhance ability for efficient conversion of organic waste into biofuel.

News provided by Bhagirath Choudhary (b.choudhary@cgiar.org) of the International Service for the Acquisition of Agri-biotech Applications India Office. Related story at http://www.hindu.com/2005/06/01/stories/2005060101881500.htm.

INDIA R & D ON GM CROPS DELAYED, SAYS REPORT

According to a report entitled "Agricultural Biotechnology and Biosafety in India: Expectations, Outcomes and Lessons" published by the Centre for Budget and Policy Studies, Bangalore, and the Stockholm Environment Institute, it is unlikely that a public sector-led genetically modified (GM) crop in India will be released before 2007 unless several factors are dealt with. These factors include the public's willingness to accept the introduction of GM food crops into the market; successful and swift intellectual property rights negotiations; and non delay of the commercialization process.

The report authored by A. Indira, M. Bhagavan, and I. Virgin, discusses research and development on GM crops in India, the role of national research funding councils, agricultural biotechnology policy regime, biosafety regulatory regime, civil society and biotechnology, and case studies of Bt cotton and transgenic rice.

The full report is available online as a PDF document and can be downloaded free of charge from http://www.sei.se.

TILLING FOR CROP IMPROVEMENT

TILLING or Targeting Induced Local Lesions IN Genomes shows great promise as a general method for both functional genomics and modulation of key traits in diverse crops. A nontransgenic method for reverse genetics, it was developed as a method for inducing and identifying novel genetic variation.

Ann Slade and Vic Knauf of Anawah, Inc in Washington, USA write in Transgenic Research that TILLING offsets the impracticability of reverse genetics studies by transgenic means in many commercially important crops. It also has the added advantage that resulting crop varieties are not subject to the same regulatory approval requirements as transgenic crops.

Read the full paper in Volume 14 (2005) of Transgenics Research.

SOYBEANS SCREENED FOR RESISTANCE TO YMV

In “Screening and utilization of soybean germplasm for breeding resistance against Mungbean Yellow Mosaic Virus,” SK Lal and colleagues of the Genetics Division of the Indian Agriculture Research Institute (IARI) evaluated over 1200 lines of soybean germplasm for susceptibility to a virus important to India’s soybean crop. Their findings are reported at http://www.soygenetics.org.

Screenings were conducted under natural infestation, so that the intensity of disease is very high. Of the 1232 soybean lines screened for Yellow Mosaic Virus (YMV) resistance, 204 lines did not show any symptoms of the disease, and 95 lines had yellow mottle or necrotic mottle in traces on 10% or fewer plants. The 299 lines, the researchers suggested, could be used in breeding programs as a source of resistance against YMV.

Download the complete article at http://www.soygenetics.org/pdf/Screening%20and%20utilization%20of%20soybean%20germplasm%20for%20breeding%20for%20resistance%20against%20Mungbean%20yellow%20mosaic%20virus.pdf

CBT NEWS FEATURE: WORLD AGROFORESTRY CENTRE

The Kenya-based World AgroForestry Centre is one of the 15 Future Harvest Centers of the Consultative Group on International Agricultural Research (CGIAR). It takes the lead in the science and practice of integrating "working trees" on small farms in rural landscapes. The Centre began as the International Council for Research in Agroforestry (ICRAF) in 1978 and was primarily focused on the African landscape. Eventually, there was a growing awareness for global recognition of the key role trees play in farms. ICRAF became part of the CGIAR system in 1991 to conduct strategic research on agroforestry at a global scale, changing its name from Council to Centre.

As part of the CGIAR, the Centre linked its work to the goals of the system—reducing poverty, increasing food security, and improving the environment—through two ways: overcoming land depletion in smallholder farms of subhumid and semi-arid Africa, and searching for alternatives to slash-and-burn agriculture at the margins of the humid tropical forests. It has expanded into Latin America and Southeast Asia while strengthening its activities in Africa.

In 2002, the Centre changed its name to the World Agroforestry Centre to reflect its crucial role in agroforestry research and development. It operates in six geographic (regional) programs, namely Eastern and Central Africa, Sahel, Southern Africa, Latin America, Southeast Asia, and South Asia; and has four

research and development themes: land and people; trees and markets; environmental services; and strengthening institutions.

The Centre also hosts three CGIAR Systemwide Programs: the African Highlands Ecoregional Program, the Alternatives to Slash-and-Burn Program, and the Gender and Diversity Program.

Dr. Dennis Philip Garrity is the Centre's current director general and he is assisted by a staff complement in 23 countries.

Read more on the activities of the Centre at http://www.worldagroforestry.org.

ANNOUNCEMENTS

INDIA NATIONAL CONFERENCE

Indira Gandhi Agricultural University in Raipur, India is organizing an International Conference on "Plant Genomics and Biotechnology: Challenges and Opportunities" to be held from October 26-28, 2005. It will focus on recent advances in basic and applied research towards the development of globally competitive biotechnology. For more details, visit http://www.icpgb2005.org.

BULGARIA DISCUSSIONS ON GM FOOD

Two capacity building workshops and six round-table discussions on Genetically Modified Food, Organic Food and Consumer Concerns were held by the Applied and Research Communication (ARC) Fund in May 2005 throughout Bulgaria. Details of the proceedings may be obtained from Denitsa Marinova of ARC at denitsa.marinova@online.bg.

Do not hesitate to tell other colleagues/contacts about this mail list. If they wish to join, they should send an e-mail message to knowledge.center@isaaa.org leaving the subject blank and entering the one-line text message as follows:
SUBSCRIBE Crop Biotech Network

To stop receiving this newsletter, please send an e-mail message to knowledge.center@isaaa.org and write, "unsubscribe newsletter" in the subject box.

Please visit CropBiotech Net web pages (http://www.isaaa.org/kc) to view previous issues of this newsletter and see other available resources for download.

While we are still developing this site, feel free to e-mail (knowledge.center@isaaa.org) us for your views and comments on any crop biotechnology product and related issues.

Copyright (c) 2005. CropBiotech Net.