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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SIX COUNTRIES NOW PLANTING 99% OF GM CROPS

Brazil and South Africa now join the United States, Argentina, Canada and China as the leading growers of genetically modified (GM) crops. These six countries, up from four in 2002, are responsible for 99 percent of the global biotech crop areas. China and South Africa experienced the greatest annual increase, with both countries planting one-third more biotech hectares than in 2002. This was reported by Dr. Clive James, chairman and founder of the International Service for the Acquisition of Agri-biotech Applications (ISAAA) in his latest preview on the global status of commercialized transgenic crops for 2003.

James also adds that the remaining top countries planting more than 50,000 hectares are Australia, India, Romania and Uruguay. Eight countries each plant up to 50,000 hectares of biotech crops. These are Spain, Mexico, Philippines, Colombia, Bulgaria, Honduras, Germany, and Indonesia.

The preview published as ISAAA Briefs No. 30 stated that 7 million farmers in 18 countries or more than 85 percent resource-poor farmers in the developing world, now plant biotech crops. About 167.2 million acres or 67.7 million hectares are now planted worldwide to biotech crops or about a 15 percent increase over 2002 figures.

For more information, read the executive summary at http://www.isaaa.org/kc. For publication orders write to publications@isaaa.org. The preview is available free of charge to nationals of developing countries.

Translations of ISAAA’s press release on the preview is also available in French, Portugese, Hindi, Thai, Bahasa Indonesia, German, Italian, Spanish, and Spanish (Argentina). Download these translations from http://www.isaaa.org/kc.

ACRE ISSUES ADVICE ON UK FARM SCALE TRIALS

The Advisory Committee on Releases to the Environment (ACRE) told the British government that biotech corn grown under the same conditions as in the field trials would not harm the environment. It also advised that biotech rapeseed and sugar beet, if grown under the same conditions as in the field trials, may have environmental risks. The advice was based on the results of the Farm Scale Evaluations (FSE) published in October.

British Environment Secretary Margaret Beckett stated that the government will review ACRE's advice "very carefully" before deciding on whether it will recommend the EU to change its rules on growing biotech crops. She added that "the Government is neither pro-nor anti-GM crops – our over-riding concern is to protect human health and the environment, and to ensure genuine consumer choice."

The Department for Environment, Food and Rural Affairs (DEFRA) reports that Ministers have also received advice on the FSE results from English Nature, on behalf of the statutory conservation bodies. English Nature said that on the basis of the FSE results, genetically modified herbicide tolerant (GMHT) spring oilseed rape and beet should not be commercialized, but that GMHT corn may be commercialized subject to certain conditions.

The DEFRA news report is available online at http://www.degra.gov.uk/news/latest/2004/gm-0104.htm. For more of English Nature visit http://www.english-nature.org.uk.

NCFAP: GM CROPS COULD BENEFIT EUROPEAN AGRICULTURE

"The widespread adoption of plant biotechnology in maize, oilseed rape, wheat, rice, tomatoes, potatoes, sugarbeets and stone fruit in Europe would result in significant yield increases, savings for growers and pesticide use reductions," says Leonard Gianessi, Sujatha Sankula, and Nathan Reigner of the National Center for Food and Agricultural Policy (NCFAP) in their recent comprehensive study on genetically modified crops entitled "Plant Biotechnology: Potential Impact for Improving Pest Management in European Agriculture."

Gianessi and colleagues added that collectively the nine biotech crops have the potential to increase yields by 8.5 billion kilograms per year, increase grower net income by €1.6 billion per year, and reduce pesticide use by 14.4 million kilograms per year. Among the six new case studies featured in the report, biotech tomato offers the greatest yield and grower income increase. Herbicide tolerant maize, on the other hand, would have the largest reduction in pesticide usage.

The other findings of the said comprehensive study are as follows:

* Biotech herbicide tolerant crops would enable European growers to use fewer herbicide active ingredients at a lower cost to achieve equivalent (maize, wheat, rice) or better (sugarbeet, rapeseed) control with higher yields.

* Use of biotech varieties developed at European institutions could eliminate the losses and enable tomato growers to reduce their use of insecticides.

* The biotech potato that is resistant to the late blight disease provides another choice to the management and control of the said disease.

A copy of the executive summary is available at http://www.ncfap.org/reports/Europe/ExecutiveSummaryDecember.pdf.

BRAZIL GOING GM IS TOP 2003 DEVELOPMENT

The most important development for genetically modified (GM) crops in 2003 was the first approval for commercialization of any GM crop in Brazil. Specifically, this involved the passage in September of a Presidential decree by the Government of Brazil to allow, for the first time, the planting of herbicide tolerant soybeans for the 2003-2004 crop. Brazil is currently second to the United States in soybean hectarage and is projected to become the top soybean producer in the world. This observation was forwarded by Dr. Clive James, chair and founder of the International Service for the Acquisition of Agri-biotech Applications (ISAAA) in the latest preview on the global status of commercialized transgenic crops for 2003.

James notes that the decree is an interim measure pending passage of a new law to regulate the procedures for evaluation and approval of all GM crops and thus is a provisional approval for one year to allow planting of GM soybean for 2003-2004. President Luiz Inacio Lula de Silva of Brazil had earlier officially approved the sale of the harvest from the 2002-2003 herbicide tolerant soybean crop.

An executive summary of the Clive James report (ISAAA Briefs 30) is available online at http://www.isaaa.org/kc.

BIOTECH HOLDS GREAT PROMISE FOR BULGARIAN FARMERS

Taking into account the possibility of adopting biotechnology in Bulgaria, Atanas Atanassov and K. Georgieva of the AgroBioInstitute in Bulgaria stated that “plant biotechnology is the most suitable alternative (to conventional farming), complementing the drawbacks of traditional plant breeding programs which are rather labor intensive and time consuming.”

Atanassov and Georgieva added that biotechnology is ideal in Bulgaria since it has a continental climate (very cold winter and very hot summer). Diseases and pests are also prevalent due to the varying climatic and soil conditions from region to region. Crop losses every year are estimated at 15 to 50 percent.

The authors recognized that genetically modified (GM) crops have indeed raised concerns in Europe. However, they believe that consumers should be provided sufficient information to enable them to make informed choices, thus only then can GM crops be made acceptable in Europe. Open and informed debates about the

science’s risks and benefits must also be held with all the important stakeholders.

Lastly, food supply is not an issue in Europe due to the large surplus of agricultural products. However, according to the authors, there is still room for biotech products and new technologies that could improve the nutritional value of agricultural products. They also encouraged the creation of a regulatory framework that is based on sound science, and determined by experts and endorsed by policy-makers.

For more information email, Atanas Atanassov at atanas_atanassov@agrobioinstitut.org. The AgroBioInstitute website can also be viewed at http://www.geocities.com/PicketFence/Garden/9151/.

EUROPE "SUFFERS ECONOMIC CONSEQUENCES" FROM GM MORATORIUM

A study of the Flanders Interuniversity Institute for Biotechnology (VIB) in Belgium argues that Europe has missed out economically through the ban on genetically modified (GM) crops. Matty Demont and Eric Tollens, researchers at the Catholic University of Leuven, base their findings on two case studies on GM sugar beets and corn.

Demont and Tollens concluded that the present situation (in which transgenic sugar beets are barred) is not economically rational. In addition, their study on the current cultivation of transgenic corn in Spain shows that Spanish farmers have clearly benefited from the crop.

To estimate the consequences of the ban on transgene sugar beets in the period from 1996 to 2000, the researchers used a simulation model that took into account agricultural policy, the cultivation data of sugar beet, and the technology subsidy for transgene crops. According to the researchers, by not choosing to grow transgene sugar beets, the Belgian sugar beet growers have missed out on approximately EUR15 million during this five-year period, and that worldwide up to EUR1 billion could have been earned by cultivating these sugar beets.

For the study on GM in Spain, the researchers noted that farmers gained EUR1.7million annually. Their profit was attributed to higher yield and lower cost from reduced use of pesticide. The biotech industry also reaped an annual profit of EUR0.5 million.
The researchers averred that 75 percent of the profits went to the farmers and 25 percent to the biotech industry.

For more on the Flanders Interuniversity Institute for Biotechnology, visit http://www.vib.be.

MALAYSIAN PM SUPPORTS AGBIOTECH

The Malaysian Prime Minister, Dato Seri Abdullah Ahmad Badawi, believes the Malaysian government needs to catalyze agriculture, agro-based industries, and biotechnology - "industries that appear to have good potential given our

distinct advantages." He said that although Malaysian biotechnology is still in its infancy, the country had great potential given its vast biodiversity. He shared these thoughts during the NEAC Dialogue Forum in Malaysia.

The Prime Minister, however, stressed that while “these sectors are on the government's list of priorities, it is still incumbent on the private sector to lead the investment and promotion of viable businesses in these industries. The government will ensure that it supports these sectors, in terms of incentives and funds, but it will not participate in a manner that will crowd out the private sector."

Meanwhile, Kuala Lumpur is the site of the Seventh meeting of the Conference of the Parties to the Convention on Biological Diversity and the first meeting of the Conference of the Parties to the Cartegena Protocal on Biosafety to be held on February 9-27, 2004. Sessions will be held at the Putra World Trade Center.

Priority issues include the biological diversity of mountain ecosystems, the role of protected areas in the preservation of biological diversity, and the transfer of technology and technology cooperation. The other meeting will deal with issues such as information sharing including the Biosafety Clearing-House; capacity-building; liability and redress; compliance; and handling, transport, packaging and identification of living modified organisms.

For more information visit http://www.biodiv.org/default.aspx

NEW ISAAA-KC WEBSITE

The Global Knowledge Center on Crop Biotechnology (KC) recently updated its website which can be viewed at www.isaaa.org/kc. The Crop Biotech Update news can now be searched via the different news categories. Also, the global status carries the latest information on biosafety regulations, global value of genetically modified (GM) crops, global research and development (R&D) expenditures, labeling legislation, public attitudes of consumers worldwide, and position statements from selected organizations.

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