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SABP

The South Asia Biosafety Program (SABP) is an international developmental program initiated with support from the United States Agency for International Development (USAID). The program is implemented in India and Bangladesh and aims to work with the local governments to facilitate implementation of transparent, efficient and responsive regulatory frameworks that ensure the safety of new foods and feeds, and protect the environment.

Over the next three years, SABP will work with its in-country partners to:

- Identify and respond to technical training needs for food, feed and environmental safety assessment.
- Develop a sustainable network of trained, authoritative local experts to communicate both the benefits and the concerns associated with new agricultural biotechnologies to farmers and other stakeholder groups.
- Raise the profile of biotechnology and biosafety on the policy agenda within India and address policy issues within the overall context of economic development, international trade, environmental safety and sustainability.

A REVIEW OF CURRENT RULES FOR THE LABELING OF GM FOODS IN DEVELOPED AND DEVELOPING COUNTRIES

Guillaume P. Gruere, Ph.D., International Food Policy Research Institute, Washington, D.C.

and

Dr. S.R. Rao, Ph.D., Department of Biotechnology, Ministry of Science and Technology, New Delhi

In light of the draft labeling rules published by the Indian Ministry of Health and Family Welfare earlier this year, which stipulate mandatory labeling of foods derived from genetically modified (GM) organisms, it is informative to examine how other countries have addressed this issue. During the last seven years, more than forty countries have adopted labeling regulations but the characteristics of the regulations vary greatly. In particular, the majority of OECD countries have implemented some type of labeling regulation. At the same time only a few developing countries have introduced labeling laws, and even fewer have implemented these.

Among the countries with labeling laws, the only common feature is the quasi-generalized requirements to label products derived from GM crops that are not substantially equivalent to their conventional counterparts. This labeling requirement concerns products that have novel traits, such as high oleic content canola, or the future nutritionally enhanced rice (e.g., Golden Rice). Labeling is mandatory for these products in all countries with regulations because they recognize that consumers should be informed of the novel traits and properties of the food products in order to make informed decisions.

On the other hand, for products that are considered substantially equivalent to their conventional counterparts, which includes all transgenic crops with input related traits (i.e., virtually all GM products today), there is a large international heterogeneity in labeling regulations. A first major dichotomy separates countries with voluntary labeling guidelines (the United States, Canada, South Africa, Argentina and the upcoming guidelines in the Philippines) to those with mandatory labeling requirements (the European Union, other European nations, Japan, South Korea, Saudi Arabia, Brazil and China). Voluntary labeling guidelines dictate rules that define what food can be called GM or non-GM, and let the food industry decide if they want to use such information signals on their products. In contrast, mandatory labeling requires food handlers (processors, retailers and sometimes food producers) to display whether the targeted product/ingredient contains or is derived from genetically engineered material. A certain number of countries with mandatory labeling for GM ingredients also have voluntary guidelines for the labeling of non-GM food (e.g., Japan, European Union). This mixed mandatory/voluntary system is in place in countries with mandatory labeling for which consumers are willing to pay a premium to completely avoid GM ingredients, even at a residual level.

Secondly, the scopes of the regulations widely differ among countries with mandatory labeling according to the following main characteristics:

1. Coverage: countries may require labeling for:
 - a. A list of particular food ingredients or all ingredients in packaged food products that include detectable transgenic protein or DNA;
 - b. Highly processed products derived from GM ingredients- even without quantifiable presence of GM ingredients;
 - c. Animal feed;
 - d. Additives and flavorings;
 - e. Meat and products from animals fed with GM feed;
 - f. Food sold at caterers and restaurants;
2. Threshold level for labeling of GM ingredients:
 - a. Applied to each ingredient or only to major 3 or 5 ingredients;
 - b. Level, ranging from 0.9% to 5% with the exception of China and the United States (that have no threshold level).

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**SAFETY ASSESSMENT OF GENETICALLY
MODIFIED (GM) FOODS
WORKSHOP
COMING IN SEPTEMBER
SEE PAGE 2 FOR DETAILS AND
REGISTRATION FORM**

CALENDAR OF EVENTS (INDIA)			
Event	Organization	Date	Place
Workshops on Safety Assessment of Genetically Modified(GM) Foods	Indian Council of Medical Research (ICMR)	September 18-22, 2006	Hyderabad
		September 25-29, 2006	Lucknow
Second Asian Graduate Course on Production and Use of Food Composition Data in Nutrition	National Institute of Nutrition (ICMR) and International Nutrition Foundation. For more information go to ftp://ftp.fao.org/ag/agn/infoods/asia_food_comp06.pdf	November 5-25, 2006	National Institute of Nutrition, Hyderabad, India

WORKSHOPS ON SAFETY ASSESSMENT OF GENETICALLY MODIFIED (GM) FOODS SEPTEMBER 18-22 2006, HYDERABAD AND SEPTEMBER 25-29 2006, LUCKNOW

The Indian Council of Medical Research (ICMR) in association with AGBIOS Inc. and Biotech Consortium India Limited (BCIL) under the South Asia Biosafety Program, is hosting two workshops on the "Safety Assessment of Genetically Modified (GM) Foods" to be held at the National Institute of Nutrition, Hyderabad (September 18-22, 2006) and at the Industrial Toxicology Research Centre, Lucknow (September 25-29, 2006).

These technical workshops have been designed to provide in-depth, hands-on training about key requirements for the safety assessment of foods derived from genetically modified plants, includ-

ing methodologies used to evaluate the potential toxicity and allergenicity of novel proteins, and the nutritional analysis of GM foods.

Well known international experts from the U.S.A. and Canada, who are highly experienced in GM food safety assessments, will conduct these workshops.

The total number of participants will be restricted to 20 in each workshop. Scientists and members of regulatory bodies interested in participating in the workshops may apply for or be nominated using the following registration form. Applicants/nominees should provide details about their relevant areas of expertise as this will facilitate the shortlisting of participants by the workshop organisers.

REGISTRATION FORM

**PLEASE FAX/E-MAIL REGISTRATION FORM TO
OR FOR MORE INFORMATION PLEASE CONTACT:**

Dr. Vibha Ahuja, Deputy General Manager
Biotech Consortium India Limited
Anuvrat Bhawan, 5th Floor
210, Deen Dayal Upadhyaya Marg
New Delhi - 110 002
Tel. ++91-11-23219064-67 (PBX), 23219059 (D)
Fax No. ++91-11-23219063
Email: biotechdelhi@vsnl.com; bcildelhi@vsnl.com
Website: <<http://www.biotech.co.in/>>

PLEASE USE BLOCK LETTERS

Name: _____ **Position:** _____

Employer/Institution/Company: _____

Address: _____

Telephone: _____ **Fax:** _____ **E-mail:** _____

Relevant areas of expertise to GM food safety assessment: _____

AWARENESS BUILDING WORKSHOP HELD AT KHULNA

SABP in collaboration with Bangladesh Agricultural Research Council (BARC) organized a workshop on recent advances in agricultural biotechnology at Khulna on June 12/13, 2006.

The inaugural ceremony was held under the chairmanship of Dr. Md. Nurul Alam, Executive Chairman, Bangladesh Agricultural Research Council (BARC). Mr. Md. Ibrahim Khalil, Director General, Department of Agricultural Extension (DAE) was the chief guest. Dr. M. Khalequzzaman Akando Chowdhury, Chief Scientific Officer (Crops), BARC offered the address of welcome and Dr. D.J. MacKenzie, Executive Vice President, AGBIOS highlighted the workshop programs and SABP activities in Bangladesh. Prof. Dr. Rakha Hari Sarker of the Botany Department, Dhaka University acted as facilitator during the inaugural session and Dr. Swapan Kumar Datta, Professor of Botany, Calcutta University and former Principal Biotechnologist, IRRI was the invited speaker.

The majority of the workshop participants were officers from the Department of Agricultural Extension (DAE) working at the district and sub-district levels of Khulna and Barisal divisions. Participants were also selected from the scientists of Bangladesh Rice Research Institute (BRRRI), Bangladesh Agricultural Research Institute (BARI), and the Bangladesh Jute Research Institute (BJRI) working at regional stations/sub-stations in the Khulna and Barisal divisions. Other participants were college level teachers and individuals from the private sector and NGOs. There were 59 participants in total.

In his address, Mr. Khalil remarked on the Extension Department's willingness to promote modern agricultural technologies to increase the productivity of existing agricultural crops. He opined that agricultural biotechnology may be one of the options to ensure food security and alleviate poverty in Bangladesh. He pointed out, however, that the task of the Extension Department starts after the research phase has finished. He assured that the Extension Department will be making every effort to popularize agricultural biotechnology at the field level so that biotech products can be in farmers' hands in the shortest possible time. He thanked BARC and SABP for taking the steps to train Extension Department officers on the recent advances on agricultural biotechnology and biosafety.

Dr. M. Nurul Alam urged field level officers of DAE as well as other participants to convey the real message of the prospect and advantages of agricultural biotechnology to the end users. He also remarked that there are people who have been

opposing the application of agricultural biotechnology in the country who have been giving misleading messages without any scientific evidence to back up their claims. He noted that biotech products have been consumed for the last ten years by the people of not only developing nations but also by people of many developed countries like the United States and Canada. He went on to say that the Technical Committee of Crop Biotechnology under the Ministry of Agriculture has already approved some GM crops, namely, Golden Rice, fruit and shoot borer resistant eggplant, insect resistant chickpea and late blight resistant potato. Bangladesh Rice Research Institute has already received Golden Rice from IRRI, which has been tested in a confined environment. Recently BARI received fruit and shoot borer resistant eggplant from MAHYCO through the ABSP II project for confined trial. Those products will be evaluated for their agronomic performance as well as for other parameters like toxicity, impact on the environment including gene flow, etc. If those

products prove to be safe for human and animal consumption then they will ultimately go to the fields. In such a situation the role of DAE officers is very vital. His hope was that such a two-day workshop would be useful in knowing the latest developments in agricultural biotechnology as well as the status of biosafety worldwide.

Following the inaugural ceremony and a brief introduction by Prof. Dr. M. Imdadul Hoque, SABP, Bangladesh Country Coordinator, presentations were made on recent developments in agricultural biotechnology, biosafety related issues including the global status of biotech crops, their benefits and potential risks. There were also presentations on the field trials of biotech crops and the assessment of foods derived from GM crops.

Participants were encouraged to ask questions and an open discussion followed each presentation. There were many questions about allergenicity, biodiversity and the high cost of biotech derived seeds and their availability to poor farmers and other questions that addressed the benefits and possible risks associated with transgenic crops. Participants also took part in group exercises simulating case studies on the confined field trials of Golden Rice and Bt-brinjal.



Inaugural ceremony at Khulna Workshop: Dr. D.J. MacKenzie, Executive Vice President, AGBIOS delivering his speech. Seated on the dais (from the left), Dr. R.H. Sarker, Professor of Botany, Dhaka University, Dr. M. Khalequzzaman A. Chowdhury, C.S.O. (Crops), BARC, Dr. Md. Nurul Alam, Executive Chairman, BARC and Mr. Md. Ibrahim Khalil, DG, DAE.



Khulna workshop participants during group exercise.

Review - continued from page 1

In particular, one of the major differences in regulations among countries with mandatory labeling depends on whether the regulation targets the presence of GM in the finished product (like Australia, New Zealand, Japan) or on GM technology as a production process (like the European Union, Brazil, China). In the former case, only products with detectable and quantifiable traces of GM materials or ingredients are required to carry a label. In contrast, in the latter case, any product derived from GM crop will have to be labeled, whether or not it contains any traces of GM material. This means that canola or soybean refined oils are required to be labeled even if current detection techniques can not detect significant traces of transgenic DNA or proteins in the final product. This difference is crucial for enforcement: a product-based system can be enforced with testing equipment and can filter a cheater, whereas a process-based system requires viable and trustable documentation systems, which will lead to identity preservation or traceability requirements for the producers and importers, *i.e.*, systems that track GM food from their origin to their final package, and does not guarantee the absence of cheaters.

Lastly, national regulations differ by their degree of implementation and enforcement. Certain developing countries have approved laws requiring labeling GM food, but have not implemented the laws, or have only partially enforced the laws. For instance, Brazil introduced labeling laws in 2003, but had yet to implement its labeling law in March 2006. Recent declarations announced that the authorities would start enforcing the measure this year, but this remains to be verified. To a certain extent, other Asian countries such as Indonesia have only partially implemented their regulation. They may require importers to label their food as GM, but consumers do not see GM labels on food products. China has implemented labeling since 2004, but it is still considered that its labeling policy is not effectively in force in most provinces.

NATIONAL BIOTECHNOLOGY POLICY OF BANGLADESH DECLARED

The Daily Star - July 20, 2006

The government of Bangladesh declared a National Biotechnology Policy in order to keep pace with the fast advancing field of modern biotechnology and achieve world class competence in the fields of research and innovation.

A meeting of the National Taskforce on Biotechnology of Bangladesh (NTFBB) with Prime Minister Khaleda Zia in the chair gave final approval to the policy placed by the Ministry of Science, Information and Communication Technology.

"The policy will help increase agriculture productivity and food security as well contribute to poverty alleviation and ensure higher quality of life," he told The Daily Star after the meeting. He said the policy will open up a new window of opportunity for a resource-starved country like Bangladesh.

Under the new policy one can easily go into research involving genetic engineering and open up new vistas of innovation and development involving living cells, be it human, animal or plant.

The policy also emphasized protecting indigenous community knowledge, collective innovations and community rights. For ensuring those, the Community Knowledge Protection Act will be enacted to give guidelines, where it is necessary, to innovations of any form that have used natural and biological resources.

Dr. Abdul Moyeen Khan, Honourable Minister for Science and ICT said after the meeting that, "The approval of National Biotechnology Policy will be considered as a milestone in our effort to promote highest level of science and technology in this country."

Immediate action programmes will also be taken for the development of biotechnology in the country in various sectors like agriculture, health, industry and environment. The programmes will reflect the urgent national needs and requirements in terms of funding manpower and equipment, he added.

An international biotechnology advisory committee will be formed with internationally recognised experts in different areas of biotechnology to advise the government on priority areas of research and development.

Besides, the science and ICT ministry will develop a priority plan in different areas of biotechnology to keep pace with the fast advancing field of biotechnology and genetic engineering for poverty alleviation, sustainable development, improvement of quality of life and biodiversity conservation.

The new policy will encourage the universities to introduce and strengthen biotechnology and genetic engineering at the undergraduate and post-graduate levels. At the same time the biotechnological courses will be introduced at the secondary and higher secondary levels through modification of existing course curricula on biology. Young graduates will be encouraged for undertaking higher academic studies in advanced universities abroad.

The policy says in biotechnology research problems arise concerning the protection of intellectual property for innovations in this field beyond legal and ethical questions. In view of the special quality of living organisms the scope of patents has to be clearly defined to find balance between innovation and public interest.

Under the policy, legal measures will be taken to achieve a balanced system for protecting the interest of the innovation without compromising public interest.

We welcome reader comments or suggestions. E-mail your letters to: nringma@agbios.com **Mail your letters to:** The Editor, SABP Newsletter, P.O. Box 475, Merrickville, Ontario, K0G 1N0 Canada

SABP CONTACTS

India

Purvi Mehta-Bhatt
SABP Coordination Cell,
The Science Ashram,
9, Krishna Industrial Estate,
Opp. BIDD,
Gorwa, Vadodara - 390 016,
Gujarat, India
Tel: 0265-3257368
Email: p_mehta_bhatt@rediffmail.com

Bangladesh

Prof. Imdadul Hoque
SABP Country Coordinator
House 18, Road 4
Sector 4, Uttara
Dhaka 1230 Bangladesh
Tel: +880-2-8916929 Ext. 121
Email: imdadul@agbios.com

To receive an electronic copy of this newsletter send your name and e-mail address to: info@agbios.com

