



SOUTH ASIA
BIOSAFETY PROGRAM

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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.

INDIAN BIOTECHNOLOGY DURING THE NEXT DECADE

India has placed great hope on the application of modern biotechnology in such diverse fields as health care, agriculture, industrial applications and environmental management. In health care, the emphasis is on developing modern vaccines for prolonging the longevity of newborns and children. India also dreams of making available large quantities of bioactive therapeutic proteins for treating a large number of stress and age-related afflictions like diabetes, cancer, and cardiovascular diseases, and for producing monoclonal antibodies and modern diagnostic devices. The goal is to emerge as a healthier nation. Availability of nutritious food for the people is another aim. Raising the production of cereals, fruits and vegetables by deploying recombinant DNA technology is also the goal. Great efforts are being made to raise the productivity of cotton because the crop is cultivated extensively and can create a visible impact on the economy. In the industrial sector, the emphasis has been to use bio-catalysts for, among other things, improving the quality of textiles and leather; introducing enzyme-enriched detergents; using enzymes for improving the extraction efficiencies of the fruit juice industry; and using microbial rennet in cheesemaking. Composting of municipal dumps and treatment of petroleum oil spillages through the deployment of specific microbes is making inroads.

The Government of India has made concerted efforts for more than two decades to create a culture of biotechnology in the country. The vision was a wholesome development through the central Department of Biotechnology. Efforts have included the development of skilled manpower and institutes of excellence, the creation of sophisticated infrastructure and funding support to R&D institutions, the

creation of catalytic venture capital funds, biotech parks and the like. To date government funds of more than INR 18 billion have been spent on promoting biotechnology. Another INR 5 to 7 billion have been invested by the industry. The combined efforts will be intensified further and are bound to flourish into a sound biotech production hub in the coming years.

Government policies have been proactive towards the promotion of biotechnologies in a precautionary mode. Biosafety has been the key milestone for authorizing the use of recombinant DNA products. Institutionally-developed products are protected with fiscal and legal assistance through patents and are then transferred to industry. Procedures have been simplified for setting up manufacturing units. Several states have announced long-term tax concessions to promote R&D. Import of equipment for research is subject to reduced import duties. Several windows have opened up to provide venture capital funds. The infrastructure of government-funded institutions is being strengthened to set up high quality standards for bioproducts. There are distinct initiatives for going global. These, along with private initiatives, are expected to promote modern biotechnologies quickly.

Manufacturing facilities for seven recombinant DNA products in health care have been set up. Pest-resistant Bt genes have been incorporated into better Indian cotton lines and some of these have been commercialized, which has resulted in increased cotton yields with better quality and a reduction in chemical pesticides. Indian efforts are poised to make modern biotech products available at affordable prices.

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**FOOD SAFETY WORKSHOP
COMING IN SEPTEMBER
SEE PAGE 4 FOR DETAILS AND
REGISTRATION FORM**

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FIRST SABP "TRAINING FOR TRAINERS" COMMUNICATION WORKSHOP

The first in a series of SABP-organized, one-day awareness-building workshops for extension workers from private and public sectors was given on June 8, 2005, in Vadodara, Gujarat. Similar workshops are being planned for other Indian states.

More than 50 participants represented the critical bridge between agro-scientists, regulators and agriculturists. They included personnel from farmers' co-operatives, NGOs working in rural areas, traders dealing in agro-inputs, farmer's horticulturists, and officials from agro-related institutions. For the benefit of participants the workshop proceedings were conducted in Gujarati and Hindi.



Group discussions at "Training for Trainers" workshop.

Presentations were made by Prof. K.C. Bansal, National Research Center on Plant Biotechnology, Indian Agricultural Research Institute, New Delhi; Dr. P.K. Ghosh, former advisor on biotechnology in agriculture to the Government of India and currently President, Biotechnology, Cadila Pharmaceuticals, Ahmedabad; P.J. Suresh, AICBA, Gujarat; Purvi Mehta-Bhatt, SABP; and two delegates who recounted their experiences and concerns with biotechnology.

Delegates worked in small groups to discuss the topics and identify key questions that needed to be addressed in their sectors. From the group discussion key questions emerged that the delegates felt needed to be addressed. These questions were addressed by the expert panel comprising the presenters and Muffy Koch, AGBIOS, Aleen Mukharjee, USAID, and Bhagirath Choudhary, ISAAA, who led a discussion that involved all participants. In a spirit of cooperation the delegates shared their experiences on a cross section of issues including the field application of and challenges of biotechnology.

An easy-to-use; spiral-bound training manual in Gujarati, covering frequently asked questions about GM crops, biotechnology and biosafety was distributed to all participants. It was also sent to selected libraries across the state. Participants received two wall posters on aspects of GM crop development and use.

Some Inputs from Delegates:

'This is one of the first times I have seen extension workers from all organizations in the corporate, private and public

CALENDAR OF EVENTS (INDIA)		
Event	Date	Place
Communications Training for Agriculture Extension Personnel	July 27 & 28, 2005	Hyderabad, Andhra Pradesh
	September 2005	Maharashtra
GM Food Safety Conference	September 26 & 27, 2005	New Delhi

sectors, co-operative sector, NGOs and educational institutions come together under one roof and share their concerns as well as success stories. I am so glad I came to this workshop and request SABP to do more such workshops and help us understand this amazing science of biotechnology.'

Kishorbhai Shah (leader of a farmer cooperative)

'I have been involved in extension for last 17 years, today for the first time I know what exactly biotechnology means. Farmers in our area do grow Bt cotton but almost none of them grow refugia. I never asked them to grow because I myself was not sure of why to grow. This workshop has opened my eyes.'

Babubhai Rawal (extension officer)

'This workshop has been extremely useful to me and has made me re-think my idea that organic farming and biotech are very different. Now I feel that biotech reduces the use of pesticides and is in fact closer to organic farming than conventional farming where the crop is 'flooded' with pesticides.'

Hasmukhbhai Patel (leader of farmers' organization growing organic cotton)

IFPRI RESEARCH PROJECT INITIATED

As part of the SABP, the International Food Policy Research Institute (IFPRI) has initiated a new research project entitled "An Economic Analysis of Domestic and International Biosafety and Marketing Regulations for Agricultural Biotechnology in India and Bangladesh".

The two main objectives of the project are:

- 1) To** evaluate the potential impacts of international regulations and international agreements on the economic effects of adopting particular genetically modified (GM) crops in India and Bangladesh; and
- 2) To** evaluate how alternative biosafety regulations and marketing policies (such as labeling, and information requirements) in India and Bangladesh would affect the production, consumption, imports and exports of GM and non-GM crops under the international regulatory environment previously defined.

As a first step of this research project, IFPRI researchers are about to conduct an ex-ante productivity assessment of future transgenic crops (such as drought-tolerant rice) in India and Bangladesh this July. In association with the two SABP national coordinators, they will conduct small meetings with a number of leading agricultural researchers, scientists and biotechnology experts from public and private institutions in India and Bangladesh to elicit the potential yield effects of current and future main transgenic crops and with conventional breeding techniques. The major crops studied include rice, wheat, cotton, maize and soybeans resistant to biotic and abiotic constraints.

CALENDAR OF EVENTS (BANGLADESH)

Event	Date	Place
ISAAA Media Workshop on Reporting Biotechnology: Issues and Opportunities for the News Media	August 29 & 30, 2005	BRAC Center Inn, Dhaka

REPORT ON THE WORKSHOP ON BIOTECH ISSUES AND RISK COMMUNICATION

A two-day workshop on Biotech Issues and Risk Communication was organized by ISAAA Bangladesh in collaboration with Bangladesh Agricultural Research Council (BARC) at BRAC Center Inn on June 19 and 20, 2005. About 60 participants from various stakeholders including scientists from National Agriculture Research Systems (NARS), Universities, NGO and private sector and policy makers attended the workshop. Prof. Eufemio Rasco, University of Philippines Mindanao, Dr. Antonio Laurena, University of Philippines Los Banos, Dr. Boonyanath Nathwong, BIOTEC Thailand and Ms. Sonny Tababa, BIC, Philippines, were present as resource persons for the workshop.

Mr. Kazi Abul Kashem, Secretary, Ministry of Agriculture inaugurated the workshop as Chief Guest. Dr. M. Nurul Alam, Executive Chairman, BARC and Prof. A.M. Farooque, Vice Chancellor, Sher-e-Bangla Agricultural University spoke in the inaugural ceremony as Special Guests. Dr. Md. Abdur



Dr. Md. Abdur Razzaque, Member Director (Crops), BARC offering address of welcome. Sitting on the dais (from left), Dr. M. Nurul Alam, Executive Chairman, BARC, Mr. Kazi Abul Kashem, Secretary, Ministry of Agriculture, Govt. of the People's Republic of Bangladesh, Prof. A.M. Farooque, Vice Chancellor, Sher-e-Bangla Agricultural University

Razzaque, Member Director (Crops), BARC delivered the address of welcome. Dr. Mariechel J. Navarro, Manager, Global Knowledge Center on Crop Biotechnology, ISAAA highlighted the workshop program and ISAAA activities in Bangladesh.

In his inaugural speech, Mr. Kashem stressed the necessity of utilizing the full potential of biotechnology in solving the increasing food requirements of Bangladesh. He said that to feed its ever increasing population Bangladesh needs to produce at least 10 to 15 million metric tons more food in the year 2020. Since every year the cultivated land is being decreasing due to infra-structural development Bangladesh needs to look for alternate methods like biotechnology to grow more food in the limited land available. He also made note of the progress of GM technology in some of the neighbouring

countries, particularly India, China, Indonesia, and the Philippines. He gave his assurance that the Bangladesh government is very keen to support biotech research in Bangladesh. He disclosed at the meeting that the Technical Committee on Crop Biotechnology under the Ministry of Agriculture has already approved the importation of Golden rice, Bt-Chickpea and Bt-Brinjal for contained experiments. If they prove to be safe for human and animal health and the environment, they will go to the field for commercial cultivation.

The participants were addressed on a number of issues on agricultural biotechnology and risk communication and took part in group activities on various issues including how to develop message mapping, and communicating with print as well as electronic media. Dr. Boonyanath Nathwong of BIOTEC Thailand spoke on the PRSV Papaya case study in Thailand and Ms Sonny Tababa presented her experience on the public acceptance of Bt corn in the Philippines.

The workshop concluded with a speech given by Dr. Nurul Alam, Executive Chairman, BARC, who advocated holding more such workshops and inviting foreign participants to share their experiences. He also urged the organizers to consider sending local participants to similar workshops in other countries. Dr. Alam delivered the workshop certificates to the participants.

The scientists and relevant stakeholders gained exposure to good communication techniques, which we hope will be used for effective communication with society about crop biotechnology.

IFPRI MEETING IN BANGLADESH

International Food Policy Research Institute (IFPRI) in collaboration with Bangladesh Agricultural Research Council (BARC) and South Asia Biosafety Program (SABP) will be holding two Discussion Meetings in Bangladesh. The first meeting will be held on July 18, 2005, in the conference room of BARC under the Chairmanship of Dr. Nurul Alam, Executive Chairman, BARC. At this meeting selected expert scientists from BARC, Bangladesh Rice Research Institute (BRRRI), Bangladesh Agricultural Research Institute (BARI), Cotton Development Board and Dhaka University will participate.

The second meeting will be held on July 18, 2005, at the Bangladesh Institute of Nuclear Agriculture (BINA). Dr. Zia Uddin Ahemed, Director General, BINA will chair this meeting. Selected expert scientists from the departments of Genetics and Plant Breeding, Biotechnology, Agronomy, Entomology, Pathology of Bangladesh Agricultural University and BINA will attend this meeting, which is being held under the IFPRI research project entitled "An Economic Analysis of Domestic and International Biosafety and Marketing Regulations for Agricultural Biotechnology in India and Bangladesh".

Dr. Guillaume P. Gruere, Post-Doctoral Fellow and Ms. Rowena Valmonte-Santos, Research Analyst of IFPRI will come to Dhaka on July 16, 2005, to conduct the study. Dr. Purvi Mehta-Bhatt, SABP Country Coordinator for India will accompany them during this study visit.

Foods Derived from GM Crops: Issues for Consumers, Regulators and Scientists

Conference Registration

The South Asia Biosafety Programme (SABP) and the Indian Council of Medical Research (ICMR), in association with Biotechnology Consortium India Limited (BCIL), is hosting a national conference on the regulation and safety assessment of genetically modified (GM) foods to be held September 26 & 27, 2005 in New Delhi, India. The themes of the conference are *Regulation, Public Participation and the Consumer* on Day 1 and the *Safety Assessment of GM Foods* on Day 2. A detailed agenda will be made available shortly on the SABP website at http://www.agbios.com/sabp_main.php, ICMR website at www.icmr.nic.in and BCIL website at www.biotech.co.in.

Registration Details

PLEASE USE BLOCK LETTERS

Name Preferred on Badge:

Title: Dr. Prof. Mr. Mrs. Ms.

First Name: _____ Middle Initial: _____

Last Name: _____

Position: _____

Employer/Institution/Company: _____

Address: _____

Street _____

City _____

State/Province _____

Zip/Postal Code _____

Country _____

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Submit registration forms to:

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Cancellation/Refund Policy

Registration/cancellations must be made in writing and received by BCIL no later than September 1, 2005. Cancellations received after Sept. 1 are subject to a 25% processing fee. Cancellations received after September 12, 2005, are NOT subject to a refund.

Registration Fees

Fees must be paid by Demand Draft in favour of Biotech Consortium India Limited, New Delhi and accompany this registration.

Industry	Rs. 2,000/-
Research Institution	Rs. 1,000/-
Universities	
Individual experts	
Students	Rs. 500/-
BCIL Biotech Club Members	25% discount
Government Departments & Ministries	No fee up to two nominations and Rs. 1,000/- each for additional nomination

