



SOUTH ASIA  
BIOSAFETY PROGRAM

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# NEWSLETTER

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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.

## CALL FOR PROPOSALS

As part of the GEF-World Bank Capacity Building Project for Implementation of the Cartagena Protocol, the Ministry of Environment and Forests, in partnership with the South Asia Biosafety Program, are seeking proposals for the project "Environmental Risk Assessment and Decision-Making Support for LMOs in India".

This project is a review and comparative analysis of the regulations, guidelines and procedures, with particular attention to information/data requirements, used in India by regulatory authorities and/or their designates for the environmental risk assessment and approval of transgenic plants. This will include the extent to which, and how, socio-economic or other non-safety considerations related to LMOs are taken into account during the decision-making process surrounding field trials and/or commercial releases of transgenic crops.

Respondents should have: regulatory expertise in, and preferably first-hand experience with, the approval process for transgenic crops in India, and experience in cost-benefit analysis (e.g., *ex-ante* studies of technology/regulatory impacts on agriculture).

For more information, please see the Call for Proposals found under Advertisements at <http://envfor.nic.in/>.

**Please note that the deadline for proposals has been extended to June 30, 2005.**

## APPLICATION OF BIOTECHNOLOGY FOR INCREASING AGRICULTURAL PRODUCTIVITY IN BANGLADESH

Bangladesh currently has a population of 150 million and estimates have it at 165 million by 2015. The population density is presently about 950 per square km. and by 2015 it will be about 1150 per square km. We have a total of 14 million hectares of arable land, where 1.5 million hectares are very flood prone, 5.05 million hectares are drought prone and 3 million hectares have a salinity problem. Our arable land is decreasing by 1.6% per year due to river erosion, house construction, road building, establishment of industries, expansion of towns and cities, and so on.

Our rice production was 11 million tons in 1971 and 27 million tons in 2002. In 2015 we will need 38 to 39 million tons. The contribution of the agriculture sector in GDP was 65% in 1971, 25% in 2001, 24% in 2002, 23.5% in 2003 and 22.8% in 2004, of which crops were 12.9%, animals 2.9%, forests 1.8% and fish 5.2%. About 66% of family units depend on agriculture and 62% of employment is in the agriculture sector. The Bangladesh economy is agro-based. As GDP contribution is falling, employment is also reducing in the agriculture sector. The growth rate was 3.1% in 2001, zero in 2002, 3.1% in 2003 and 2.7% in 2004. An increase in agricultural biotechnology is the only answer to solving the problem. Biotechnology has the potential to make agriculture much more productive. It is a useful tool in our effort to fight hunger, poverty and malnutrition.

Much of Asia is rushing forward with the development and cultivation of biotech crops and Bangladesh is worried about falling behind. The three most populous countries in Asia, China, India and Indonesia are already planting millions of acres of Bt cotton. Other large Asian countries like Japan, Thailand, the Philippines and Malaysia are earmarking billions of US dollars for research on biotech crops. Spending on biotech research and development is booming. Malaysia has created "Biotech Valley" and Indonesia has created "Bio - Inland". China presently employs 20,000 people in 200 labs and spends about US\$1.5 billion per year. North and South America are already planting millions of acres with biotech crops.

Modern biotechnology offers powerful new tools for improving agricultural productivity, environmental sustainability and nutritional quality of staple foods. We must respond to technical training needs for food, feed and environmental safety assessment. Our scientists must communicate with farmers and other stakeholder groups about both the benefits and the concerns associated with new agri-biotechnology. Biotechnology should be a part of the Poverty Reduction Strategy Paper under the Millennium Development Goals.

We must support and sustain our large population of 150 million in a country of only 147,570 square km. To achieve this Bangladesh must use biotechnology to its full potential.

Abdul Awal Mintoo

President, FBCCI & Chairman East West Seed  
(Bangladesh) Ltd

## ISAAA: FACT SHEET ON APPROVED BT COTTON HYBRIDS IN INDIA

- All approved hybrids belong to four major seed companies from India *i.e.* Mahyco (MECH, MRC), Rasi (RCH), Ankur seed and Nuziveedu seed (NSC) companies in India.
- In 2002, Maharashtra Hybrids Seeds Co Ltd (Mahyco) received approval for three Bt cotton hybrids such as MECH 12, MECH 162 and MECH 184 for commercial cultivation in Central & Southern Zones in India.
- In 2003, three Bt cotton hybrids were cultivated over 100,000 ha, which was more than three times area under Bt cotton cultivation in 2002 *i.e.* 30,000 ha.
- In 2004, The GEAC (Ministry of Environment & Forest) has approved one more Bt cotton hybrid of Rasi Seeds for cultivation in Central and Southern Zones. With four Bt cotton hybrids in market, area under Bt cotton rose from 100,000 ha in 2003 to 500,000 ha in 2004, a quantum five-fold increase in Bt cotton area between 2003 and 2004.
- In 2004, more than 300,000 small and medium farmers in Central and Southern Zones enjoyed the benefits of Bt cotton technology with increased yield, reduced pesticides applications and health and environmental benefits.
- In 2005, farmers in India will have more choices to grow Bt cotton hybrids such as 6 hybrids in Northern Zone, 12 hybrids in Central Zone and 9 hybrids in Southern Zone respectively.

For further information, you may contact:

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ZONE	2002	2003	2004	2005
<b>NORTH ZONE</b>				<b>6 hybrids</b>
Haryana Punjab Rajasthan				RCH 134 RCH 317 MRC 6304 MRC 6301 Ankur 651 Ankur 2534
<b>CENTRAL ZONE</b>	<b>3 hybrids</b>	<b>3 hybrids</b>	<b>4 hybrids</b>	<b>12 hybrids</b>
Gujarat Madhya Pradesh Maharashtra	Mech 12 Mech 162 Mech 184	Mech 12 Mech 162 Mech 184	Mech 12 Mech 162 Mech 184 RCH 2	Mech 12 Mech 162 Mech 184 RCH 2 RCH 118 RCH 138 RCH 144 Ankur 09 Ankur 651 MRC 6301 NCS-145 Bunny Bt NCS-207 Mallika Bt
<b>SOUTH ZONE</b>	<b>3 hybrids</b>	<b>3 hybrids</b>	<b>4 hybrids</b>	<b>9 hybrids</b>
Andhra Pradesh Karnataka Tamil Nadu	Mech 12 Mech 162 Mech 184	Mech 12 Mech 162 Mech 184	Mech 12 Mech 162 Mech 184 RCH 2	Mech 162* Mech 184* RCH 2 RCH 20 RCH 368 MRC 6322 MRC 6918 NCS-145 Bunny Bt NCS-207 Mallika Bt
Total number of Hybrids for sale	3	3	4	20

\*Mech 162 and Mech 184 not approved for AP and Mech 12 discontinued for Southern Zone

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

## FOOD SAFETY WORKSHOPS IN CHENNAI AND GURGAON

Two additional workshops on the safety assessment of genetically modified foods were held in Chennai (May 27-28) and in Gurgaon at the TERI Retreat (May 30-31).

The workshops were delivered by Dr. Flerida Carino, Professor, University of the Philippines and a long-standing member of the National Committee on the Biosafety of the Philippines; Dr. Swapan Datta, former Senior Plant Biotechnologist and HarvestPlus Rice Crop Leader, IIRI; Dr. Usha Antony, Assistant Professor, Centre for Biotechnology, Anna University, Chennai and a nutrition expert; and Dr. Donald MacKenzie, Vice-President, AGBIOS.

Participants from academia, public research institutes and the private sector spent two days working through a practical case-study to illustrate the various issues to be addressed during the safety assessment. Participants were interested in the experiences of countries and were particularly keen to hear of the Philippine experience with approving the first GM food crop in Asia.



Professor M.S. Swaminathan with participants at the workshop on safety assessment of genetically modified foods held on May 27-28, 2005, at the M.S. Swaminathan Research Foundation in Chennai.

## NEWSLETTER FEEDBACK

The first SABP newsletter (April 2005) was distributed to more than 200 people in India. A copy was sent to each state government agriculture ministry, some key central government departments, scientific organizations, consultants, NGOs, industries and other stakeholders. The feedback has been encouraging and we thank those who took the time to respond.

One response read: "I am happy to receive the first newsletter. Very informative, wonderfully done. Speaks of quality, congratulations." Dr. O.P. Agarwal, CSIR.

CALENDAR OF EVENTS (BANGLADESH)

Event	Date	Place
ISAAA Risk Communication Workshop	19-20 June 2005	Dhaka
Regional Workshop on the Awareness Building on the Recent Advancement of Agri-Biotechnology	July 2005	Rangpur
Assisting in the Development of a Field Trial Code of Practice	June-August 2005	



Workshop participants engaged in group work.

**WORKSHOP ON REVIEW AND EVALUATION OF EXPERIMENTAL FIELD TRIALS OF TRANSGENIC CROPS**

SABP, in association with the Bangladesh Agricultural Research Council (BARC), hosted a three-day workshop on the review and evaluation of experimental field trials of transgenic crops in Dhaka from May 23 to 25, 2005.

The workshop started off on a high note with encouraging addresses by both the Minister of Agriculture and the Minister of Environment and Forests. The workshop participants were charged with a mandate from the Minister of Agriculture to prepare an action plan with focused outcomes and a time-frame for moving agricultural biotechnology applications forward in Bangladesh.



Mr. MK Anwar, M.P., Hon'ble Minister for Agriculture delivering his speech as Chief Guest during the inaugural ceremony of the workshop. Seated on the dias from the left : Dr. D. MacKenzie, AGBIOS, Mr. Tariqul Islam, M.P., Hon'ble Minister for Environment and Forests, Dr. M. Nurul Alam, Executive Chairman, Bangladesh Agricultural Research Council and Dr. Md. Abdur Razzaque, Member Director (Crops), BARC.

The participants reviewed a number of issues related to the conduct of experimental field trials of transgenic plants. These included the current status of biosafety guidelines in Bangladesh; approaches to risk assessment; the importance of distinguishing controlled environmental releases of transgenic plants in confined field trials from broader-scale commercial releases, and how these require different risk management approaches; the factors to be considered during the development of trial site monitoring plans; examining how confined experimental field trials are regulated and managed in other countries, including the Philippines, Canada, India and the United States; key information requirements relevant to reviewing applications for experimental field trials of transgenic plants; the core administrative, scientific and inspection capacities required by a confined field trial regulatory system; and lessons learned from neighbouring countries, particularly India and the Philippines.

The participants formulated a number of recommendations for future action. These included:

- Developing a core group of scientists with the necessary expertise to evaluate biotechnology applications on a case-by-case basis;
- Activating the Field-Level Biosafety Committee (FBC) referenced in the existing Bangladesh Biosafety Guidelines;
- Developing a code of practice for the conduct of experimental field trials of transgenic plants that would address various risk management issues;
- Increasing public outreach and awareness raising around the potential benefits of applying biotechnology in Bangladesh agriculture;
- Pursuing the acquisition of biotechnological applications from abroad and the streamlining of review procedures for products that have been assessed and found to be safe in other countries; and
- Promoting broader application of biotechnological techniques in plant breeding, agriculture and the conservation of genetic resources.

The workshops, attended by 46 scientists and regulators from Bangladesh, were delivered by Dr. Swapan Datta, former Senior Plant Biotechnologist and HarvestPlus Rice Crop Leader, IRRI; Dr. Florida Cariño, Professor, University of the Philippines and a long-standing member of the National Committee on the Biosafety of the Philippines; Dr. Satish K. Raina, Chief Adviser, Nath Biogene (India) Ltd.; and Dr. Donald J. MacKenzie, Executive Vice President, AGBIOS.

**ISAAA WORKSHOP ON BIOTECHNOLOGY ISSUES AND RISK COMMUNICATION**

ISAAA Bangladesh is organizing a two-day workshop at BRAC Center Inn, Dhaka, June 19 and 20, 2005. About 50 scientists working in various universities, research institutes and also from private and NGO labs will participate in this workshop. Resource speakers will be from Thailand, the Philippines and Bangladesh. Distinguished scientists, policy makers and the Ministers for Science and Information & Communication Technology are expected to be present as guests at the inaugural ceremony of the workshop.

## BIOTECHNOLOGY IN AGRICULTURE DEVELOPMENT IS NECESSARY: ANWAR

United News of Bangladesh - May 23, 2005

**B**iotecnology, a new aspect of biological science to solve emerging problems of agriculture, has to be adopted for rapid development of agriculture in Bangladesh, Agriculture Minister MK Anwar told a workshop here today.

**T**he 3-day workshop, "The review and evaluation of experimental trials of transgenic crops", was jointly organised by Bangladesh Agricultural Research Institute (BARC) and South Asian Biosafety Programme (SAPB).

**A**gricultural scientists from home and abroad are participating in the workshop.

**T**he Agriculture Minister, who inaugurated workshop, said the country would have to grow additional 5-6 million tons of food grains by 2020 to meet the cereal need for around 173 million people at that time. "But arable land is shrinking everyday and the yield level has nearly reached a plateau due to use of the existing technologies," he said.

**T**he situation has further compounded due to large-scale degradation of agriculture resources, primarily because of the use of unbalanced chemical fertilizer, inadequate crop rotation and depletion of organic substances in the soil, he told the workshop.

**H**e said: "We'll encourage researches in biotechnology and genetically modified (GM) crops as most of the agriculturally developed countries have been producing GM crops."

**T**he minister said Bangladesh has achieved a tremendous success in agriculture in the past three decades as foodgrain production was about 10 million tons in 1970 and it rose to 27 million tons in 2004.

**P**roduction of other crops have also got a boost with the adoption of modern technologies, he adding that the rate of production increase has slowed down as the sector is facing some serious challenges.

**"T**he main challenges are the mounting pressure of population, loss of cropland, increased demand of diversified food and recurrence of drought and flood," Anwar said.

**T**he Minister informed that Bangladesh would soon start adaptability research on golden rice, a vitamin-A enriched rice variety developed by International Rice Research Institute.

**H**e urged the concerned scientists to make a work-plan for early field trial of the variety and laid emphasis on risk management mechanism in promoting biotechnology.

## VIETNAM, BANGLADESH ISSUE JOINT STATEMENT ON PM KHALEDA ZIA'S VISIT

BBC Monitoring

**T**he Prime Ministers of Bangladesh and Vietnam met May 17-19 in Vietnam and agreed to take further measures to promote trade and research cooperation between their countries. Bangladesh noted "the commendable achievements" of Vietnam in the field of agriculture. Both countries showed "keen interest" in strengthening their existing cooperation in agriculture.

**A**reas being considered for cooperation include: 1) agricultural biotechnology; 2) agricultural processing; 3) intensive methods of cultivation; and 4) agricultural research. The two sides agreed to activate a Joint Commission for Economic, Cultural, Scientific, and Technological Cooperation to de-

velop a "roadmap" for bilateral cooperation in all fields.

## GENETIC MODIFICATION SEEN AS FUTURE OF THAI RUBBER INDUSTRY

TNA - May 26 2005

**O**ne of Thailand's largest businesses, the Charoen Pokphand (CP) group, has announced it is beginning research to develop genetically modified (GM) rubber trees. Sumeth Phinyosanit, the group's crop manager for Thailand, says, "CP is currently collecting rubber trees from all over the world to prepare for research." A team from CP has also been sent to the U.S. to study GM technology. According to the article, studies suggest that GM rubber trees could produce higher quantities of latex than conventional

**R**ubber trees, and their wood might be of higher quality. Phinyosanit acknowledges that there will need to be changes in legislation and levels of public acceptance before GM rubber trees can be commercialized in Thailand. He says, however, "We hope that the government will open up to this issue, especially for crops not for consumption, such as rubber."

See the full article at: <http://www.mcot.org/query.php?nid=38806>

## CHINA RATIFIES CARTAGENA PROTOCOL ON BIOSAFETY

Press Trust of India - May 20, 2005

**C**hina, which is drafting a new law on genetically modified organisms (GMO), has ratified the Cartagena Protocol on Biosafety (CPB), which regulates international transboundary movement of GMOs. "The ratification of the protocol demonstrates China's commitment to enhancing management on biosafety in line with international law", said an official from the State Environmental Protection Administration (SEPA).

**T**he CPB obliges exporters to give greater information to recipient nations about GMO products. It also gives importers the power to reject GMO imports or donations, even without scientific proof, if they might pose a danger to traditional crops and indigenous societies. The CPB, a part of the Convention on Biological Diversity, became effective in September 2003 and has been ratified by 120 countries.

**I**t is believed that ratification will promote China's own legislation on GMOs, strengthen its management of GMO cross-border movement, improve GMO labelling system and promote public involvement in biosafety.

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