



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.

SABP is working 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.

RECOMMENDATIONS OF THE CONSULTATION ON HERBICIDE TOLERANT GM CROPS

A "Consultation on Herbicide Tolerant GM Crops" was held in New Delhi on December 10-11, 2007 with an objective to discuss the relevance and need of herbicide tolerant (HT) crops in India.

The consultation was jointly organized by National Research Centre for Weed Sciences (NRCWS), Jabalpur and Biotech Consortium India Limited (BCIL). It was attended by more than 60 participants including scientists from research institutions and agriculture universities, industry, policy makers and farmers.

The consultation was inaugurated by Dr. Mangala Rai, Secretary, Department of Agricultural Research and Education (DARE) and Director General, Indian Council of Agricultural Research (ICAR). In his inaugural address Dr. Rai indicated that the use of new technologies including transgenic crops is the need of the hour to meet the challenges in Indian agriculture. However, while adopting a new technology he pointed out that the market trends *vis-à-vis* national and international preferences should be kept in mind. Referring to HT technology he particularly emphasized carefully looking at economic factors including the impact on exports of various crops and their products. Giving the dimension of the problems of weed management, he stressed adopting science based solutions to tackle them. He said that weed scientists should come to the forefront and study the implications of adopting HT crops in the country. Dr. A.K. Singh, Deputy Director General, ICAR, reiterated that management of weeds is a serious issue and there is a need to give more attention to it. Dr. Jay G. Varshney, Director, NRCWS, explained that weeds remain a constant hurdle in

the development of agriculture, accounting for from nearly 37 per cent loss of production to total crop failure. He advised that such a huge loss cannot be ignored and newer technologies have to be explored in addition to traditional weed management. He indicated that NRCWS could play a lead role in evaluating the HT crops in collaboration with both public and private sector organizations.

Presentations were made by experts on the status of HT crops globally as well as in India, their impact, safety concerns, biosafety assessment procedures and socio economic considerations.

Dr. C.D. Mayee, Co-Chairman, Genetic Engineering Approval Committee (GEAC) and Chairman, Agricultural Scientists Recruitment Board, ICAR, New Delhi and Dr. K.K. Tripathi, Member Secretary, Review Committee on Genetic Manipulation (RCGM) chaired the technical sessions and said that it was time to make a concerted effort to ensure maximum benefits of HT crops. Intensive discussion followed each set of presentations.

(continued on page 2 - see Recommendations)

DRAFT GUIDELINES FOR THE SAFETY ASSESSMENT OF FOODS DERIVED FROM GENETICALLY ENGINEERED PLANTS AVAILABLE FOR PUBLIC COMMENT

The Indian Council of Medical Research (ICMR) has formulated "Guidelines for the Safety Assessment of Foods Derived from Genetically Engineered Plants" to facilitate evaluation of GM food safety submissions by India's regulatory authorities. Although no GM food has been approved in India to date, there is an urgent need to have guidelines in place to evaluate these new foods and food products to address potential safety concerns.

The Guidelines, which can be viewed at http://icmr.nic.in/icmrnews/ICMR_food_guidelines.pdf, have been formulated taking into consideration existing regulations and guidelines (including state of the art international guidance) as well as initiatives taken by various departments and organizations in India. The draft Guidelines have been also reviewed by Review Committee on Genetic Manipulation (RCGM) and Genetic Engineering Approval Committee (GEAC).

Comments are invited from all the stakeholders on the draft Guidelines up to **January 31, 2008**, following which the guidelines will be finalized. Comments may be submitted to:

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CALENDAR OF EVENTS

INDIA

Event	Organization	Date	Place
Regional Workshop on Management and Monitoring of Field Trials of Genetically Modified Crops	Ministry of Environment & Forests (MoEF), Department of Biotechnology (DBT) and Biotech Consortium India Limited (BCIL)	January 18, 2008	Chandigarh
National Consultation on Insect Resistance Management (IRM) Strategies in Bt Cotton	BCIL and MoEF	January 21 - 22, 2008	New Delhi
Orientation Programme on Biotechnology, Biosafety and IPRs	Institute of Public Enterprise, Osmania University	January 31 - February 1, 2008	Hyderabad
National Symposium on Plant Biotechnology for Conservation, Characterization and Crop Improvement	Mohanlal Sukhadia University	February 8 - 10, 2008	Udaipur
Fourth Coordination Meeting for Governments and Organizations Implementing or Funding Biosafety Capacity-Building Activities	CBD Secretariat	February 11 - 13, 2008	New Delhi
Consultation on Protection of Transgenic Crops under PPV& FR Act, 2001 with a Focus on Bt Cotton	Protection of Plant Varieties and Farmer's Rights Authority and BCIL	February 13, 2008	Bangalore
Liaison Group on Capacity-Building for Biosafety	CBD Secretariat	February 14 - 15, 2008	New Delhi
Workshop-cum-Training on Bioinformatics Applications in Agricultural Research	Indian Agricultural Research Institute	February 25 - 27, 2008	

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In the end, the major conclusions that emerged from the consultation were summarized and discussed under the chairmanship of Dr. P.L. Gautam, Deputy Director General (Crop Science), ICAR. The recommendations and the suggestions from the consultation are as follows:

1. It was agreed that labour availability has become a major issue in addition to the high cost of labour. This becomes more pertinent for weeding operations during critical times of weed control. Hence, science based solutions are needed to tackle this problem. In this regard, HT crops may offer simplified and efficient control of weeds particularly in wheat, rice, maize, cotton and pulses.
2. The biosafety aspects of HT crops should be addressed by following the existing regulations and guidelines to address health and environmental safety concerns.
3. Efforts should be made towards evaluation and development of herbicide tolerant technologies in Indian conditions. The economic aspects, including the implications on exports of various crops and their products, should be carefully considered.
4. Suitable environmental safety assessment should be carried out as part of pre commercialization studies, to address various concerns such as development of 'super weeds' due to the introduction of HT crops in the country,
5. Efforts should be made to evolve/chalk out integrated weed management strategies involving herbicide tolerant GM crops for different situations. NRCWS while coordinating state agricultural universities and non-governmental organizations will execute the pivotal/nodal role in this endeavour.

6. Appropriate models for viable public private partnership are needed to leverage their joint strength for the evaluation of such technologies. An interface can be created to work out the modalities of such collaboration specific to various crops.
7. There is a need to create public awareness about HT crops among various stakeholders.

PAPER 'GENETICALLY MODIFIED FOOD AND INTERNATIONAL TRADE - THE CASE OF INDIA, BANGLADESH, INDONESIA, AND THE PHILIPPINES' NOW AVAILABLE

A discussion paper, 'Genetically Modified Food and International Trade - The Case of India, Bangladesh, Indonesia, and the Philippines' IFPRI Discussion Paper No. 740 by Guillaume Gruère, Antoine Bouët and Simon Mevel, all of the International Food Policy Research Institute (IFPRI), has been released. It is available to download as a PDF from the IFPRI website at <http://www.ifpri.org/pubs/dp/IFPRIDP00740.pdf>

Genetically modified (GM) food crops have the potential to raise agricultural productivity in Asian countries, but they are also associated with the risk of market access losses in sensitive importing countries. We study the potential effects of introducing GM food crops in Bangladesh, India, Indonesia, and the Philippines in the presence of trade-related regulations of GM food in major importers. We focus on GM field crops (rice, wheat, maize, soybeans, and cotton) resistant to biotic and abiotic stresses, such as drought-resistant rice, and use a multi-country, multi-sector computable general equilibrium model. We build on previous international simulation models by improving the representation of the productivity shocks associated with GM crops, and by using

(continued on page 4 - see Paper)

SPOTLIGHT ON THE WORLDWIDE WEB

Over the next number of newsletters we will be spotlighting some important websites, created by the Department of Biotechnology (DBT) and the Ministry of Environment and Forests (MoEF), that provide information on genetically modified organisms.

This month we feature Capacity Building on Biosafety (<http://envfor.nic.in/divisions/csurv/biosafety/default.htm>). In the months ahead we will look at the websites of India Biosafety Clearing House; National Research Centre on Plant Biotechnology; Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India; and Biotech Consortium India Limited (BCIL). - Editor

Ministry of Environment & Forests - Capacity Building on Biosafety

(<http://envfor.nic.in/divisions/csurv/biosafety/default.htm>)

The Ministry of Environment and Forests (MoEF), Government of India, is implementing a GEF/World Bank funded project on Capacity Building on Biosafety in context of Cartagena Protocol on Biosafety. The project covers the assessment, management and long term monitoring and documentation of the risks to the sustainable use of biodiversity and to human health potentially posed by the introduction of Living Modified Organisms (LMOs).

The major objectives of the project are to improve capacity across ministries and among key stakeholders to analyse, inform, and make decisions to reduce potential risks related to LMOs, increase benefits to society, and protect biodiversity. Specifically, the project will develop national capacities in biosafety required to:

- Strengthen the legislative framework and operational mechanisms for biosafety management in India.
- Enhance capacity for risk assessment and monitoring.
- Establish the biosafety database system and Biosafety Clearing House Mechanism.
- Support centers of excellence and a network for research, risk assessment and monitoring.
- Establish the Project Coordination and Monitoring Unit (PCMU).

There are five partners in this project:

- Central Food Technological Research Institute (CFTRI), Mysore
- National Bureau of Plant Genetic Resources (NBPGR), New Delhi
- National Research Center on Plant Biotechnology (NRCPB), Indian Agricultural Research Institute (IARI), New Delhi
- G. B. Pant University of Agriculture and Technology, Pantnagar, Uttaranchal
- Biotech Consortium India Ltd. (BCIL), New Delhi

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ABOUT THE PROJECT

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What's New

[Closing workshop on Biosafety Capacity Building Project](#)

[Reports and Publications of Biosafety Capacity Building Project](#)

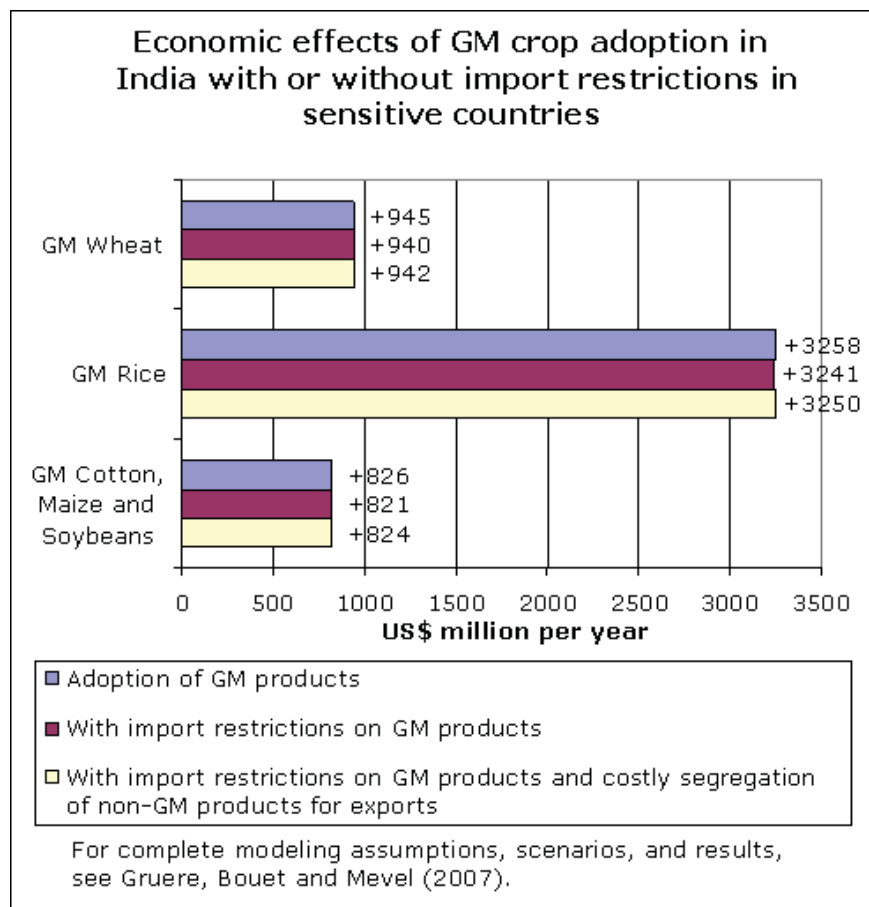
[Biosafety Information Kit](#)

Total Hits: **02633**

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Project Coordinating and Monitoring Unit(PCMU)
Ministry of Environment and Forests(MoEF), Government of India
in association with Biotech Consortium India Ltd.(BCIL)

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an improved representation of the world market, accounting for the effects of GM food labeling policies in major importers and the possibility of segregation for non-GM products going toward sensitive importing countries.



The results of our simulations first show that the gains associated with the adoption of GM food crops largely exceed any type of potential trade losses these countries may incur. Adopting GM crops also allows net importing countries to greatly reduce their imports. Overall, we find that GM rice is bound to be the most advantageous crop for the four countries. Second, we find that segregation of non-GM crops can help reduce any potential trade loss for GM adopters, such as India, that want to keep export opportunities in sensitive countries, even with a five percent segregation cost. Lastly, we find that the opportunity cost of segregation is much larger for sensitive importing countries than for countries adopting new GM crops, which suggests that sensitive importers will have the incentive to invest in separate non-GM marketing channels if exporting countries like India decide to adopt GM food crops.

REPORT ON SABP AND ISAAA SEMINAR

A seminar, 'Risk Assessment and Risk Management of Genetically Modified Plants', was jointly organized by South Asia Biosafety Program (SABP) and International Services for the Acquisition of Agri-biotech Applications (ISAAA) at the Bangladesh Agricultural University (BAU), Mymensingh on December 9, 2007. Dr. Robert Potter, Senior Associate, AGBIOS, presented the seminar, which was presided over by Prof. Dr. M.A. Halim Khan, Dean of the Faculty of Agriculture, and attended by faculty members, and graduate and post-

graduate students of different faculties working in various areas of biotechnology.

Dr. Potter highlighted various aspects of risk assessment and management but focused on the potential risks of running a field trial of genetically modified plants and the management of those risks. He also spoke about the safety concerns surrounding foods derived from transgenic plants.

A lively discussion took place after Dr. Potter's presentation when he was joined by BAU faculty members Prof. Dr. Lutful Hassan, Dr. Mokhlesur Rahman and Dr. Mahbuba Begum. Faculty members and students asked several questions specific to the safety issues of transgenic plants already approved for contained trials in Bangladesh, in particular, eggplant, golden rice and late blight resistant potato.

Prof. Khan, in his speech, expressed his appreciation for the presentation made by Dr. Potter. Noting that since the Government of Bangladesh had already approved the importation and contained trials of some transgenic plants the information gathered through the seminar would be very useful to Bangladesh scientists making decisions during the safety assessment of transgenic crops. He pointed out that genetic engineering technology would be a powerful tool in the development of biotic and abiotic stress tolerant crop varieties and in the feeding of Bangladesh's ever increasing population. He urged the people of Bangladesh not to ignore the benefits of modern biotechnology.

The session concluded with Dr. Khan expressing his thanks to SABP and ISAAA for organizing the seminar. A vote of thanks was given by Prof. Dr. Shahidul Haque, former Head, Department of Biotechnology, BAU.

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

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