

South Asia Biosafety Program

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INDIA

Capacity Building Workshop on Food Safety Assessment of GE Plants in New Delhi

Dr. Vibha Ahuja, Chief General Manager, Biotech Consortium India Limited



Speakers and participants at the Capacity Building Workshop on Food Safety Assessment of GE Plants (5 September 2023).

A two-day "Capacity Building Workshop on Food Safety Assessment of GE Plants" was organized by the Food Safety and Standards Authority of India (FSSAI), Agriculture & Food Systems Institute (AFSI), and Biotech Consortium India Limited (BCIL) on 5-6 September 2023 at India Habitat Centre, New Delhi. The workshop is part of the project "Facilitating Trade Through Harmonization of Genetically Engineered Food and Feed Safety Assessment in South Asia," managed by AFSI, which included setting up an expert working group (EWG) consisting of experts and regulators from four participating countries—Bangladesh, Bhutan, India, and Sri Lanka. From India, Dr. Lalitha Gowda, former Chief Scientist of the Central Food Technological Research Institute (CFTRI) and former Chair of the Scientific Panel on GM foods at FSSAI, and Mr. Sunil Bakshi, Head of Regulations/Codex/International Cooperation at FSSAI, participated in the EWG in their individual capacities. The project also involved developing various tools to support the regulatory guidance.

After a series of detailed deliberations spanning more than a year, the EWG prepared the report "Towards a Harmonised Approach to Food Safety Assessment of Genetically Engineered Plants in South Asia."

After a series of detailed deliberations spanning more than a year, the EWG prepared the report "Towards a Harmonised Approach to Food Safety Assessment of Genetically Engineered Plants in South Asia." The report included a consensus statement on the safety assessment of foods derived from GE plants in South Asia and a series of documents, viz. recommended information requirements, application form, and the format of a risk assessment summary report. The consensus statement emphasized using Codex Principles and Codex Guidelines as the basis of safety assessment, as Bangladesh, Bhutan, India, and Sri Lanka, the four participating countries in South Asia, are members of the Codex Alimentarius Commission. A series of workshops are currently being held in the participating countries for capacity building.

The roughly 20 participants at the workshop in New Delhi included members of FSSAI's Scientific Panel on Genetically Modified Organisms and Foods and other related panels. The training included detailed

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Dr. Andrew Roberts, Dr. Dinesh Kumar, Mr. Sunil Bakshi, and Dr. Donald MacKenzie (left to right) on stage at the workshop (5 September 2023).

presentations on the key concepts of safety assessment followed by group exercises. In his welcome remarks, Mr. Sunil Bakshi informed participants that as per the *Food Safety and Standards Act, 2006* (FSSAI, 2006), GM food is to be regulated by FSSAI, and the regulations for the same are in process. He thanked all participants, particularly the members of the concerned scientific panel, for attending the capacity-building workshop.

Dr. Dinesh Kumar, Chair of the Scientific Panel on GM Foods of FSSAI, indicated that this is a timely initiative as the regulations are under finalization, and understanding the guidelines and international approaches would really help both the panel members and FSSAI officials. He also indicated that the panel members are from diverse backgrounds and can address various aspects of the safety assessment in an efficient manner.

Dr. Donald MacKenzie, Executive Director, Institute for International Crop Improvement (IICI), Donald Danforth Plant Science Center, spoke about "Whole Food Safety Assessment and International Guidance for Assessing Foods Derived from Genetically Engineered Plants," wherein he explained the principles and guidance by the Codex Alimentarius Commission in detail. Dr. Vibha Ahuja shared an overview of the Indian guidelines on the safety of foods derived from GE plants, which were prepared by the Indian Council of Medical Research (ICMR) and adopted by the Review Committee on Genetic Manipulation (RCGM) and the Genetic Engineering Appraisal Committee (GEAC) in 2008.

This is a timely initiative as the regulations are under finalization, and understanding the guidelines and international approaches would really help both the panel members and FSSAI officials.

The guidelines were further updated in 2012 with the addition of two annexures in line with Codex guidelines.

Dr. Andrew F. Roberts, Chief Executive Officer, AFSI, spoke about problem formulation for food safety assessment, which was followed by detailed presentations on key concepts, viz. characterization of the genetic modification and newly expressed proteins, assessment of toxicity potential, assessment of allergenicity potential, and compositional analysis by resource persons.

Dr. Bhavneet Bajaj, Manager–Scientific Programs, AFSI, demonstrated the AFSI Crop Composition Database (CCDB) and also informed participants about the range of internet resources available for food safety assessment.

Members of the scientific panels and FSSAI officials had in-depth interactions on the topics. All the participants thanked FSSAI, AFSI, and BCIL for organizing the workshop.

LINK
The EWG report "Towards a Harmonised Approach to Food Safety Assessment of Genetically Engineered Plants in South Asia" may be accessed at:
<https://foodsystems.org/publication/harmonised-approach-food-safety-assessment-ge-plants-south-asia/>



Participants at the workshop (5 September 2023).

5th International Conference on Biotechnology in Health and Agriculture (ICBHA 2023) in Dhaka

Israt Jahan and Tomalika Azim, Plant Biotechnology Laboratory, Department of Biochemistry and Molecular Biology, University of Dhaka



Conference guests sitting on the dais at the inaugural ceremony (1 September 2023).

The 5th International Conference on Biotechnology in Health and Agriculture (ICBHA) was held from 1-3 September 2023 at the Nabab Nawab Ali Chowdhury Senate Bhaban, University of Dhaka. It was jointly organized by the Global Network of Bangladeshi Biotechnologists (GNOBB), the Bangladesh Biosafety and Biosecurity Society (BBBS), and the Federation of Asian Biotech Associations (FABA). The goal of this conference was to build capacity and create awareness of the latest trends in biotechnology for improving health, agriculture, and the environment in Bangladesh. At the same time, it was intended to create awareness regarding biosafety and biosecurity in different areas of biotechnology. The first two days of the conference covered the current status of biotechnology in health and agriculture, with an emphasis on biosafety and biosecurity in biotechnological applications. The third day of the conference was solely dedicated to discussions on the containment of antimicrobial resistance (AMR).

Renowned researchers from Bangladesh and abroad joined and shared their core research. In the plant biotechnology section, Dr. Rod A Wing, as an international plenary speaker, presented his research on unlocking 15 million years of evolutionary history to meet the challenge of food shortage by investigating the genus *Oryza*. Dr. Wing, a professor at King Abdullah University of Science and Technology (KAUST) in Saudi Arabia, is now leading KAUST's Center for Desert Agriculture, where he aims to find sustainable solutions to feed the world's growing population without destroying the environment. He leads the rice genome sequencing project in the USA and is now focused on creating a deep understanding of the wild relatives of rice, which contain a virtually untapped reservoir of genes that can be used for crop improvement and neo-domestication. Dr. Ajith V. Kamath from India, the former head of External R&D at Pfizer, was the plenary speaker in the medical section. Dr. Kamath's presentation

focused on corneal blindness, lung and liver diseases, and cancer metastasis.

Many emerging and young scientists, along with undergraduate and graduate students, shared their research, ideas, and thoughts on biotechnology. A total of 450 participants, both from within and outside of the country, attended the conference. There were 163 poster presentations, 16 flash talks, and 76 oral presentations. In total, 6 participants received awards for their flash talks and 20 for their poster presentations. To increase connection and collaboration within the scientific community, a dinner and cultural program was arranged at the Dhaka Club, which provided a networking opportunity for emerging scientists and both graduate and undergraduate students.

A number of pre-conference training workshops in the fields of biotechnology, biosafety, biosecurity, and strengthening lab capacity were organized in August to coincide with the beginning and end of the 5th ICBHA conference. A day-long workshop on "Rice Ratooning: A New Strategy to Ensure Food Security" and a "Hands-on Training on CRISPR-Cas9 Genome Editing Targeting Rice" were jointly organized by GNOBB and the Department of Biochemistry and Molecular Biology, University of Dhaka on 31 August and 3-4 September, respectively. Several students and researchers from different universities in Bangladesh and India participated in these workshops.

GNOBB always gives recognition for outstanding scientific works in the field of biotechnology. Continuing this trend, four resident and non-resident Bangladeshi scientists were the winners of the GNOBB Award 2021 for their scientific achievements. Dr. Md. Tofazzal Islam, Institute of Biotechnology and Genetic Engineering (IBGE) of Bangabandhu Sheikh Mujibur Rahman Agricultural University (BSMRAU) was honored for his outstanding scientific contribution to agricultural biotechnology in

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Participants in the conference hall during the inaugural ceremony (1 September 2023).

Bangladesh as a senior resident scientist. Mid-career scientist Dr. Mirza Hasanuzzaman, a professor of Agronomy at Sher-e-Bangla Agricultural University, Dhaka, was awarded for his outstanding scientific contribution to plant stress physiology. Dr. Hasan Zaki, a tenured Associate Professor at the Department of Pathology, UT Southwestern Medical Center, USA, was awarded as a senior non-resident Bangladeshi scientist for his outstanding contribution to health science. Dr. Mohammad Ariful Islam, who currently works as a Principal Scientist and Sub-Team Lead at the mRNA Center of Excellence in Sanofi Pasteur, USA, was awarded as a mid-career non-resident Bangladeshi scientist for his contribution to biomedical engineering and pharmaceutical science.

Four resident and non-resident Bangladeshi scientists were the winners of the GNOBB Award 2021 for their scientific achievements.

Dr. Ahmad Shamsul Islam and Dr. Abidur Rahman provided donations, which will be used as funds for GNOBB outreach to schools, travel fellowships for young scientists, and small research projects.

GNOBB is honored to have the opportunity to hold this joint conference with BBBS and FABA. It cordially invites the active participation of Bangladeshi scientists, researchers, educators, students, policymakers, businesspersons, product developers, and manufacturers in the fields of agriculture, biochemistry, molecular biology, bioinformatics, biotechnology, botany, environmental sciences, food sciences, genetics and genomics, medical sciences, microbiology, zoology, or other branches of biological sciences in its activities.



Winners of the "GNOBB Award 2021" and the awardees for flash talks and poster presentations, along with conference guests (1 September 2023).

CALENDAR OF EVENTS

EVENT	ORGANIZED BY	DATE	WEBSITE
INDIA			
DST-SERB Sponsored National Symposium on Crop Health Management: Safeguarding Crop through Diagnostics and Innovations	ICAR-Vivekananda Parvatiya Krishi Anusandhan Sansthan	29-30 September 2023 New Delhi	https://vpkas.icar.gov.in/latest-updates
International Hybrid Conference 2023	University of Agricultural Science	30 September 2023 Bengaluru	https://forms.gle/Vqk8EhN5BFzqovuu7 (registration link)
XVI Agricultural Science Congress and ASC Expo	National Academy of Agricultural Sciences (NAAS)	10-13 October 2023 Kochi	http://www.16asc2023.in
National Conference on Transformation of Agro-Technologies for Enhancing Production Under Diverse Agro-Ecosystem	Navsari Agricultural University	12-14 October 2023 Saputara	https://nau.in/index
Asian Citrus Congress - 2023	Indian Society of Citriculture (ISC)	28-30 October 2023 Nagpur	https://accindia2023.iscindia.org.in/
International Conference on Biochemical and Biotechnological Approaches for Crop Improvement	Society for Plant Biochemistry and Biotechnology, ICAR-IARI, ICAR-NIPB, and CSIR-NBRI	30 October-1 November 2023 New Delhi	https://www.ibbaci.org/
10 th Indian Horticulture Congress-2023 on Unleashing Horticultural Potential for Self-Reliant India	Indian Academy of Horticultural Sciences (IAHS)	6-9 November 2023 Jorhat	http://www.aau.ac.in/ http://www.iahs.org.in
INTERNATIONAL			
6 th International Rice Congress 2023	International Rice Research Institute and Department of Agriculture, Republic of the Philippines	16-19 October 2023 Manila, Philippines	https://www.irri.org/IRC2023-teaser.html
Resumed 2 nd Part of the 10 th Meeting of the Conference of the Parties Serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety	CBD Secretariat	19-20 October 2023 Nairobi, Kenya	https://bch.cbd.int/protocol#tab=2
18 th Meeting of the Compliance Committee Under the Cartagena Protocol on Biosafety		24-26 October 2023 Montreal, Canada	
1 st Meeting of the Ad Hoc Technical Expert Group on Risk Assessment		1-3 November 2023 Montreal, Canada	



SOUTH ASIA
BIOSAFETY PROGRAM

The South Asia Biosafety Program (SABP) is an international development program implemented in India and Bangladesh with support from the United States Agency for International Development (USAID). SABP aims to work with national governmental agencies and other public sector partners to facilitate the implementation of transparent, efficient, and responsive regulatory frameworks for products of modern biotechnology that meet national goals as regards the safety of novel foods and feeds, and environmental protection.



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