

# South Asia Biosafety Program

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BANGLADESH

## Obituary Note for Professor Ahmad Shamsul Islam (6 August 1924 - 14 April 2025)

Dr. Aparna Islam, Fellow, Agriculture and Food Systems Institute and Professor, Biotechnology Program, Brac University



Prof. Ahmad Shamsul Islam, a famous Bangladeshi educator, scientist, researcher, writer, mentor, and recipient of the Ekushey Padak award, died on 14 April 2025, at the age of 100. The international academic community will never be the same after Prof. Islam's contributions to science and education. Prof. Islam played a vital role in establishing contemporary biotechnology research and development in Bangladesh and in securing Bangladesh's membership in the International Centre for Genetic Engineering Biotechnology (ICGEB).

Prof. Islam received his B.S. (1945) and M.S. (1947) in Botany from Presidency University in Kolkata, India. In 1954, he traveled to the United Kingdom and earned a Ph.D. from the University of Manchester. The training he received at Dhaka University in Bangladesh and subsequently, in the United Kingdom, the United States of America, and Japan played an important role in his development as a pioneering scientist.

Prof. Islam taught Botany (Plant Science) for more than 40 years at Dhaka University and various other universities around the world. He also served as a Supernumerary Professor at Dhaka University. During his research career, he was the first to successfully hybridize two commercial jute varieties. Additionally, he successfully established tissue culture and micropropagation techniques for jute and native orchids. He also successfully developed virus-free plants from potatoes. Moreover, he was able to introduce various tissue culture techniques, including somaclonal

variation, meristem culture, and micropropagation for several crops, as well as ornamental and horticultural plants. To encourage research and its publication, Prof. Islam was also active as the founding editor of several journals, including the *Bangladesh Journal of Botany* and *Journal of Plant Tissue Culture & Biotechnology*.

He received many awards throughout his career, most notably the prestigious Curie Memorial Award from Manchester University for his work on seedless strawberries (1953), President's Gold Medal in Agriculture (1984), Ekushey Padak in Education (1986), Bangladesh Academy of Sciences Gold Medal in Biology (1987), Bangladesh Botanical Society Gold Medal (1997), and Lifetime Achievement Award from the Global Network of Bangladeshi Biotechnologists (2017).

He was a prolific writer, authoring books including *Smritir Potey Jibon Chhobi*, *Rhymes of the Heart*, and *Bongshogotibidyar Mulkotha O Gene Prokoushol* (Fundamentals of Genetics and Genetic Engineering). His pioneering and in-depth work on jute was recognized in an article by *The Daily Star* as follows: "One can cite several important papers of Prof. Islam to justify his pioneering role in the foundation of biotechnology in Bangladesh, including the early work on jute genomics and breeding. In a paper published in 1960 in the *Nature* journal, he and his colleague were the first in the world to successfully produce a hybrid between two jute-yielding species, which continues to make impact in current research. Between 1952 and 1964, he produced three more papers in *Nature* on cytogenetics and embryo culture by use of plant hormones."

Prof. Islam was not only a pioneer in his field but also a compassionate leader who inspired countless individuals to pursue excellence. His groundbreaking research and dedication to advancing knowledge have earned him accolades and respect worldwide. He was the founding President of the Bangladesh Association for Plant Tissue Culture and Biotechnology (BAPTC&B) and co-founded the Global Network of Bangladeshi Biotechnologists (GNOBB) to help establish a strong network among Bangladeshi biotechnologists around the world. He championed the dissemination of knowledge and fostered collaboration among researchers. His vision and commitment to nurturing talent have shaped the careers of many, leaving a legacy that will endure for generations. His motto was "work is worship," where work is for the betterment of society and country by applying science.

May his soul rest in eternal peace.

## Participation in the 2<sup>nd</sup> Global Congress on New and Emerging Genetic Biocontrol Technologies

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



Group photo of participants at the 2<sup>nd</sup> Global Congress on New and Emerging Genetic Biocontrol Technologies (17 March 2025).

The 2<sup>nd</sup> Global Congress on New and Emerging Genetic Biocontrol Technologies was organized by the African Genetic Biocontrol Consortium in partnership with Ghana's National Biosafety Authority in Accra, Ghana, from 17-20 March 2025. The event brought together experts in science and science communication. Participants engaged in discussions to contribute to ground-breaking scientific advancements to improve health in Africa. The African Genetic Biocontrol Consortium provides a platform for interaction among African experts and institutions to enhance opportunities for technical capacity strengthening, knowledge exchange, and deliberation about the challenges and opportunities of genetic biocontrol technologies for the public good, which will strengthen African influence on their development and provide critical input for decision-making by product developers, policymakers, and other stakeholders.

**Over 150 African national and international professionals attended the congress, representing scientific institutions, academia, pharmaceuticals, biotechnology researchers, development and clinical organizations, biosafety authorities, and science communicators.**

Over 150 African national and international professionals attended the congress, representing scientific institutions, academia, pharmaceuticals, biotechnology researchers, development and clinical organizations, biosafety authorities, and science communicators. The deliberations focused on new and emerging genetic biocontrol technologies that can tackle vector-borne diseases, such as malaria, and how to communicate scientific information to aid the understanding of people from all walks of life.

There were two full days of intensive pre-conference workshops and two full days of presentations and panel discussions. Topics covered included but were not limited to genetics and genetic engineering tools, public health, agriculture, conservation, livestock and wildlife health, approaches to control disease-carrying insects, biosafety, biosecurity and biocontainment, and "one" health. There were discussions on training and



Dr. Vibha Ahuja at the GTV Breakfast Show in Ghana (18 March 2025).

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Dr. Vibha Ahuja at the GTV Breakfast Show in Ghana (18 March 2025).

capacity building, policy and regulation of genetic science, stakeholder and public engagement, risk assessment, and science communication, among others.

Dr. Vibha Ahuja, Senior Advisor, South Asia Biosafety Program (SABP) participated in the congress and made presentations both in the pre-congress workshop on "Regulatory Frameworks and Decision-Making Processes for Emerging Biotechnologies" and the congress. During her presentations, she shared experience from the Asian region and also provided an update on the "Additional Voluntary Guidance Materials

to Support Case-by-Case Risk Assessments of Living Modified Organisms Containing Engineered Gene Drives" adopted at 11<sup>th</sup> Conference of Parties serving as the Meeting of Parties to the Cartagena Protocol on Biosafety (COP-MOP11, held in Cali, Colombia on 21 October-1 November 2024). Dr. Ahuja also participated in the GTV Breakfast Show to talk about the need to adopt innovative biotechnologies for genetic biocontrol on 18 March 2025. The full segment can be viewed at the following URL: [facebook.com/share/v/1LJDhAXgLR/](https://facebook.com/share/v/1LJDhAXgLR/)

RESOURCE

## Additional Voluntary Guidance Materials to Support Case-by-Case Risk Assessments of Living Modified Organisms (LMOs) Containing Engineered Gene Drives (EGD)

After a series of discussions in COP-MOPs, Ad Hoc Technical Expert Groups (AHTEGs), and online discussions, additional voluntary guidance was adopted to support case-by-case risk assessments of LMOs containing engineered gene drives in 2024.

The full text of the decision can be accessed at the link below:

<https://www.cbd.int/doc/decisions/cp-mop-11/cp-mop-11-dec-07-en.pdf>

While endorsing additional, voluntary guidance materials on risk assessments of living modified organisms containing engineered gene drives (EGD-LMOs), the decision at COP-MOP11 encourages Parties, other governments, and relevant organizations to use this guidance material and calls for broad international cooperation, knowledge sharing, capacity building, and resource mobilization to support the application of this guidance material.

The additional voluntary guidance materials were developed in accordance with Annex III to the Protocol, in particular, paragraph 8, which outlines the sequential steps of the risk assessment process. These materials are structured as follows:

- Section 1 provides an overview of decision CP-10/10 and of the process by which the additional voluntary guidance materials were developed.
- Section 2 introduces EGD-LMOs, explains the precautionary approach, and establishes the context of the document.
- Section 3 provides details on EGD strategies, as well as opportunities and risk concerns.
- Section 4 outlines general risk assessment considerations for EGD-LMOs, steps of the problem formulation approach, and testing of risk hypotheses, including sources and quality of information, modeling, comparators, tier-based testing, limits of concern, the weight of evidence, and uncertainties.
- Section 5 considers the making of a recommendation of acceptability of risk and identification of risk management strategies.
- Section 6 addresses monitoring of EGD-LMOs, taking into account general surveillance and case-specific monitoring.
- Section 7 describes related issues to risk assessment.
- Annexes I to VII provide further details on modeling, uncertainties, the WHO guidance framework for testing genetically modified mosquitoes, the taxonomic classification of mosquitoes, mosquito vectors of diseases, the current landscape for the development of EGD-LMOs for disease vector control, and types of EGD systems.
- Annex VIII provides a list of terms with citations to assist the reader; it is not intended to constitute a glossary or list of definitions
- References are listed at the end of the document.

Find links to all COP-MOP 11 decision documents at:

<https://www.cbd.int/conferences/2024/cp-mop-11/documents>

## Workshop on Key Biotechnology Applications for Crop Improvement at the University of Agricultural Sciences in Raichur, Karnataka

Dr. J. M. Nidagundi, Cotton Breeder & Head, ICAR All India Coordinated Research Project on Cotton (AICRP-Cotton) and Professor & University Head (GP), University of Agricultural Sciences, Raichur



Speakers and guests at the workshop on Biotechnology Applications for Crop Improvement: Key Developments in Raichur, Karnataka (11 February 2025).

The University of Agricultural Sciences (UAS) in Raichur, Karnataka, in collaboration with Biotech Consortium India Limited (BCIL), organized the workshop "Biotechnology Applications for Crop Improvement: Key Developments" on 11 February 2025 at its campus. About 150 participants including scientists, researchers, state agricultural officials, and industry experts, attended the workshop to explore the critical role of biotechnology in developing crop varieties that are high-yielding and resilient to pests, diseases, and the impacts of climate change. The event was supported by the Federation of Seed Industry of India (FSII).

The keynote address was delivered by Dr. B. Venkateswarlu, former Vice-Chancellor, Vasantryao Naik Marathawada Krishi Vidyapeeth

**Dr. B. Venkateswarlu [...] highlighted Bt technology as one of the few technologies that made a significant mark on the farming community along the lines of the green revolution.**

(VNMKV), Parbhani, Maharashtra. He highlighted Bt technology as one of the few technologies that made a significant mark on the farming community along the lines of the green revolution. He also recalled that

when he was serving as former Vice Chancellor of VNMKV, a socio-economic impact analysis study revealed the fact that farmers realized benefits from the technology. He expressed his opinion that the Government of India must evolve mechanisms for early approval of GM technologies in the

interest of the farming community. He further said that the role of the VCs is pre-eminent for decision making in this context of trait relevance, besides liaising with the state department of agriculture officials and other stakeholders. He also predicted that the next 10 years will see



Participants at the workshop (11 February 2025).

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a flood of gene edited products in the market, and this will shape the commercial gains of seeds. He emphasized the need to train young scientists through national and international training programs on genome editing technologies.

Dr. M. Hanumanthappa, UAS Vice-Chancellor, spoke about activities at the university related to the use of biotechnology for crop improvement. He informed the audience that university scientists have been actively engaged in conducting confined field trials (CFTs) of GM crops, including cotton and maize, in addition to research efforts. He also highlighted a dedicated genomics lab being set up at the university.

Presentations were made by experts on the potential of genetic engineering and gene editing, along with updates on the regulatory framework. Dr. Paresh Verma, Executive Director, Bio-Seed Research India, spoke on how GM crops contribute significantly to sustainable agricultural productivity. He spoke about global developments, the status in India, and challenges to expediting the commercialization

process. He pointed out the key role that state agricultural universities can play by supporting the confined field trials of GM crops. Dr. Satendra Kumar Mangrauthia, Senior Scientist, ICAR-Indian Institute of Rice Research (IIRR), Hyderabad, presented a case study on gene edited BPT 5204—the gene editing of BPT 5204 in increasing the number of grains and evolving a mutant rice variety KAMALA. Dr. Vibha Ahuja, BCIL

Chief General Manager, provided an overview of regulatory policies for genetic engineering, as well as gene editing. She shared information on key initiatives by the government to support the development process. Dr. J. M. Nidagundi, Cotton Breeder & Head, AICRP-Cotton and UAS

Professor & University Head (GPB), shared his experience conducting confined field trials at UAS and emphasized the importance of structured processes and protocols that are followed in the case of GM crops. The presentations were followed by an interactive session wherein participants engaged on several topics related to genetically engineered crops with expert speakers.

**Dr. M. Hanumanthappa [...] informed the audience that university scientists have been actively engaged in conducting confined field trials (CFTs) of GM crops, including cotton and maize.**

RESOURCE

## Policy Paper: Two Decades of Bt Cotton in India - Impact and Policy Imperatives

Dr. Y. G. Prasad, Former Director, ICAR-Central Institute for Cotton Research

The Indian Council of Agricultural Research Central Institute for Cotton Research (ICAR-CICR) recently published a policy paper on *Two Decades of Bt Cotton in India: Impact and Policy Imperatives*. This paper aims to provide a comprehensive analysis of the impacts of Bt cotton on various aspects of the agricultural economy in India, focusing on farmers' incomes, exports, technical change, and total factor productivity (TFP).

Genetically modified for resistance to bollworms, Bt cotton saw rapid adoption by farmers nationwide since its introduction in 2002. The technology has also expanded cultivation areas across the country, including in drylands and drought-prone areas, leading to higher overall production levels and making India one of the largest cotton producers globally. The adoption of Bt cotton in the drylands of India, including Gujarat, Maharashtra, and Madhya Pradesh regions, has resulted in dynamism in the agricultural economy, as well as contributed to poverty reduction among the farming community.

Using unit-level data from India's Cost of Cultivation Scheme (2002-2022), this study analyzes the shift in production costs and returns. Findings reveal a significant increase in cotton yields and returns between 2002 and 2016, although recent years display mixed results due to secondary pest pressures and heightened yield variability.

The stagnation in productivity and reports of increasing resistance of pink bollworm to Bt during the latest phase of Bt cotton are immediate policy concerns in India. Similar challenges arise with conventionally bred crop varieties, as their yield growth also tends to decline after 10-15 years. ICAR-CICR has estimated that the loss caused due to pink bollworm is about an average loss of 3.6% on an open boll basis, which is equivalent to 13.2 lakh (1.32 million) bales valued at Rs 3900 crores (Rs 39 billion). In addition to technologies for pink bollworm resistance, building climate resilience to changing weather and continued efforts for soil health restoration are key for enhancing productivity and production so as to reach the 450 lakh (45 million) bales target by 2030.

Regarding the policy imperatives, the study calls for enhanced investments in research and development support, informed policy discourse on Bt cotton, and support for cotton farmers. Taking note of the significant benefits of adopting Bt cotton to the country and its farmers, strategies have been suggested to encourage science-based technologies in other crops in India and similar contexts. These include awareness and education campaigns to reduce the spread of misinformation about modern technologies and genetically modified crops, subsidies and financial incentives to make adoption financially viable, and increased investments in research and development.

**The full text of the policy paper can be downloaded at the link below:**

[https://www.researchgate.net/publication/390756315\\_Two\\_Decades\\_of\\_Bt\\_Cotton\\_in\\_India\\_Impact\\_and\\_Policy\\_Imperatives](https://www.researchgate.net/publication/390756315_Two_Decades_of_Bt_Cotton_in_India_Impact_and_Policy_Imperatives)



## Workshop on Biotechnology Applications for Crop Improvement at Acharya N.G. Ranga Agricultural University in Lam, Guntur

Dr. Vibha Ahuja, Biotech Consortium India Limited (BCIL)



Group photo of participants at the workshop on Biotechnology Applications for Crop Improvement: Key Developments in Lam, Guntur (28 February 2025).

Acharya N.G. Ranga Agricultural University (ANGRAU) in Lam, Guntur and Biotech Consortium India Limited (BCIL) jointly organized the workshop "Biotechnology Applications for Crop Improvement: Key Developments" on 28 February 2025 at the ANGRAU campus. The event focused on biotech innovations, including genetic modification (GM) and gene editing for sustainable farming. About 100 participants attended the workshop, including scientists, researchers, students, state agriculture officials, and industry representatives from Andhra Pradesh. The event was supported by the Federation of Seed Industry of India (FSII).

Dr. P.V. Satyanarayana, ANGRAU Director of Research, welcomed the participants and spoke about the agriculture scenario in Andhra Pradesh.

He emphasized the need to adopt innovative approaches and technologies to increase agricultural productivity and deal with the challenge of pests and diseases. In particular, he highlighted the problem of pink bollworm infestation in cotton.

**Dr. Y. G. Prasad [...] noted that biotech innovations would play a key role in achieving the objectives of the cotton mission and highlighted the urgent need to develop and test new GM interventions for dealing with issues like pink bollworm in Bt cotton.**

In this keynote address, Dr. Y. G. Prasad, Director of the ICAR-Central Institute for Cotton Research (ICAR-CICR), Nagpur, spoke about how introducing Bt cotton technology transformed the cotton sector by increasing productivity. He informed participants about the recently announced five-year cotton mission in the Union

budget aimed at facilitating improvements in the productivity and sustainability of cotton farming and promoting extra-long staple cotton varieties. He noted that biotech innovations would play a key role in



Opening ceremony of the workshop (28 February 2025).

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Speakers and guests at the workshop (28 February 2025).

achieving the objectives of the cotton mission and highlighted the urgent need to develop and test new GM interventions for dealing with issues like pink bollworm in Bt cotton.

Dr. R. Sarada Jayalakshmi Devi, ANGRAU Vice-Chancellor, reaffirmed the university's commitment to agricultural research, including genetic modification and gene editing. She informed participants that the university had played an important role in the introduction of Bt cotton and is now supporting the conduct of confined field trials of new Bt varieties for addressing issues being faced by farmers. She indicated that Andhra Pradesh has been a leader in the adoption of Bt cotton, which helped increase yield by 3-4 quintals (300-400 kg) per acre while reducing pesticide use. Such advancements support sustainable, climate-resilient agriculture. Technical presentations were made by Dr. Paresh Verma, Executive Director, Bioseeds Division, DCM Shriram Limited, Hyderabad

**Shri Ram Kaundinya [...] emphasized the role of biotechnology in tackling agricultural challenges. He stated: "With changing climate conditions and rising food demands, biotech innovations are crucial. Bt cotton exemplifies how GM crops boost yields, enhance resilience, and improve livelihoods."**

on GM crops, Dr. Satendra Kumar Mangrauthia, Senior Scientist, ICAR-Indian Institute of Rice Research (IIRR), Hyderabad on gene edited crops, and Dr. Vibha Ahuja on policy issues. Dr. Rani Chapara, Scientist (Plant Breeding), ANGRAU, provided a detailed account of the trials being conducted in the university, including the Standard Operating Protocols being followed. During the panel discussion, experts emphasized the importance of investment, policy support, and farmer education to unlock biotechnology's full potential.

Shri Ram Kaundinya, Advisor, FSII and Co-founder, AGVAYA, emphasized the role of biotechnology in tackling agricultural challenges. He stated: "With changing climate conditions and rising food demands, biotech innovations are crucial. Bt cotton exemplifies how GM crops boost yields, enhance resilience, and improve livelihoods."



Cotton field in Andhra Pradesh India © Ganshyam Ramchandanni | Dreamstime.com.



## Seminar on Genetically Modified Crops: How Safety is Ensured

Tasnim Kabir and Meer Zeshanul Wazid, Mathematics & Natural Sciences Department, Biotechnology Program, Brac University  
 Nazifa Anjum Prova, Computer Science and Engineering Department, Brac University

STUDENT SHOWCASE

To encourage written discourse on topics related to biosafety and biotechnology among the younger generation, the *SABP Newsletter* dedicates space in select issues to spotlight pieces written by students residing in South Asia. Since articles with the "Student Showcase" tag are meant to reflect the actual views and capabilities of the author(s), they are not revised for content and only lightly edited to conform with the newsletter's style guide.



Group photo of the audience, including guests from other institutes, along with the speaker and organizers, at the seminar on Genetically Modified Crops: How Safety is Ensured (17 February 2025).

Many have concerns about GM crops. To answer their concerns and talk about their safety, a seminar titled "Genetically Modified Crops: How Safety is Ensured" was jointly organized by the Network of Young Biotechnologists Bangladesh (NYBB) and the Brac University Research for Development Club (ReD) at Brac University on 17 February 2025.

Dr. Aparna Islam, Professor, Biotechnology Program, Brac University and an expert in biosafety talked at the plenary about the science related to the biosafety of genetically modified organisms (GMOs) and the public discourse in response to consumer concerns. She elaborated details about scientific evaluations and safety protocols that ensure GM crops are as safe as non-GM counterparts for both the environment and human consumption. She also explained the management measures taken to continue the safe use of these products.

**Bt brinjal makes farming safer, cuts costs, and supports sustainable agriculture by reducing the need for chemical pesticides.**

### KEY DISCUSSION POINTS

#### Public Concerns About GM Crops

Dr. Aparna Islam began her talk by addressing many concerns that people have about GM crops. She also engaged her audience by asking about their concerns and understanding of GM food. Many expressed their belief that consuming GM foods could result in toxicity, allergenicity, gene flow, genetic modifications in humans, or pollution of the environment. To address their concerns, she explained the science behind the development of these crops and the safety assessments conducted. Participants received reassurance that GM crops are assessed for safety by product developers and evaluated by regulators before being commercialized.



Participants at the seminar (17 February 2025).

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Dr. Aparna Islam delivering her speech at the seminar (17 February 2025).

### Types of GM Crops in Bangladesh

Dr. Islam talked about GM crops that are already grown in Bangladesh, especially Bt brinjal, which has been genetically modified to resist pest attacks. She further discussed BARI Bt Begun-1, 2, 3, and 4 and how they were assessed for safety as food. She also explained how these GM eggplants help cut down on pesticide use, thereby benefitting both farmers and the environment. Furthermore, it is much safer for human consumption as the pesticide residue deposited on the eggplant is absent in Bt varieties. Thus, Bt eggplant provides a much healthier version of this popular vegetable. In this way, Bt brinjal makes farming safer, cuts costs, and supports sustainable agriculture by reducing the need for chemical pesticides.

She also talked about the recently approved Bt cotton varieties released in Bangladesh. She additionally spoke about golden rice, Zn-rich rice, and purple rice, pointing out their health benefits and how they can help fight Vitamin A insufficiency and micro-nutrient deficiencies.

### Safety Assessments and Regulations

Dr. Islam described the biosafety measures and intensive testing GM crops undergo before commercialization. She highlighted that each GM crop is individually tested for health and environmental safety. The main phases are listed below.

- **Laboratory Research:** The first steps in development include documenting genetic transformation and molecular characterization.
- **Greenhouse Trials:** Before open-field testing, GM crops are grown in controlled environments to examine morphology, characterize the crop, and more importantly, determine whether the new trait works as expected without undesirable phenotypic effects. Strict containment measures are ensured at this stage.
- **Field Trials:** Multiple trials of limited field cultivation according to real-world agricultural settings examine the crop's performance in the natural environment. Scientists also study agronomic parameters and ecological interaction.
- **Food Safety Assessments:** Multiple tests are performed to ensure there is no toxicity or allergenicity in the GM food compared to its non-GM counterpart. If the food has enhanced food value, then that is also checked at this stage.
- **Regulatory Approval:** Even after approval, the hypothesis-driven post-release monitoring is carried out for the product.

**The seminar delivered a broad look at biotechnology-driven improvements in agriculture and how they help protect food security, the environment, and people's health in Bangladesh.**

Dr. Islam added that every single GM crop is developed using international guidance from the *Cartagena Protocol on Biosafety* and *Codex Alimentarius*. This way, the seminar delivered a broad look at biotechnology-driven improvements in agriculture and how they help protect food security, the environment, and people's health in Bangladesh.

### Potential Risks of GM Crops

Dr. Islam acknowledged that testing is also done to look at the potential effects of GM crops on non-target organisms. She said that biosafety studies make sure that the benefits of farming are in harmony with the need for safeguarding the environment.

### Role of Public Perception and Feedback

Dr. Islam emphasized the significance of scientific transparency and public acceptance of scientific findings in the successful commercialization of GM foods. She said that researchers are attentive to the concerns of the general people, carry out additional safety testing, and continue to monitor genetically modified crops after they have been commercialized.

### HIGHLIGHTS FROM THE Q&A SESSION

The Q&A session was designed to address public apprehensions about GM crops, their potential health hazards, environmental impacts, and their role in sustainable agriculture. This portion of the seminar allowed experts, faculty members, and students to discuss biosafety measures and GM crop regulations. In response to a question on gene flow, Dr. Islam explained various methods that are in place in Bangladesh to minimize the chance of gene flow in the case of Bt cotton. Dr. Islam also talked about government-approved Standard Operating Procedures (SOPs) for genome edited crops (GEd). She clarified that according to the SOPs, GEd crops developed using SDN-1 and SDN-2 (site-directed nucleases) are identical to natural mutations (e.g., mutations induced by light exposure) and are exempt from GMO laws.

### CONCLUSION

The seminar effectively addressed public concerns regarding GM crop safety, regulation, and benefits. Dr. Aparna Islam addressed myths regarding genetic alterations, biosafety, and the regulatory system while emphasizing the role of GM crops in food security, environmental conservation, and public health. Non-biotechnology and biotechnology Brac University students, teachers, researchers from the public and private sectors, and alumni of the Brac University's Biotechnology Program attended the seminar.

## CALENDAR OF EVENTS

EVENT	ORGANIZED BY	DATE	WEBSITE
<b>INDIA</b>			
Workshop on Biotechnology Applications for Crop Improvement: Key Developments	Acharya Narendra Deva University of Agriculture and Technology (ANDUAT) and Biotech Consortium India Limited (BCIL)	19 May 2025 Ayodhya	<a href="https://nduat.org">https://nduat.org</a> <a href="https://www.biotech.co.in">https://www.biotech.co.in</a>
Hands-On Training in Carbon Capture and Biofuels	International Centre for Genetic Engineering and Biotechnology (ICGEB)	9-13 June 2025 New Delhi	<a href="https://www.icgeb.org/carbon-capture-and-biofuels-new-delhi-2025/">https://www.icgeb.org/carbon-capture-and-biofuels-new-delhi-2025/</a>
International Conference on Ornamental Horticulture (ICOH-2025): From Science to Society	Tamil Nadu Agricultural University	26-28 June 2025 Coimbatore	<a href="https://tnau.ac.in/news-2/">https://tnau.ac.in/news-2/</a>
South Asian Biotechnology Conference	South Asian University and the International Centre for Genetic Engineering & Biotechnology (ICGEB)	29 October-1 November 2025 New Delhi	<a href="https://sau.int/events/">https://sau.int/events/</a> <a href="https://www.icgeb.org/south-asian-biotechnology-conference-india-2025/">https://www.icgeb.org/south-asian-biotechnology-conference-india-2025/</a>
21 <sup>st</sup> Biennial International Conference on Global Resilience in Animal Nutrition: Innovations for Sustainable Future	Animal Nutrition Society of India	19-21 November 2025 Ayodhya	<a href="https://ansi.org.in">https://ansi.org.in</a>
<b>INTERNATIONAL</b>			
FAO Global Agrifood Biotechnologies Conference: Biotechnologies for a Sustainable Future - Driving Agrifood Systems Transformation	Food and Agriculture Organization (FAO)	16-18 June 2025 Rome, Italy	<a href="https://www.fao.org/events/detail/fao-biotech-conference-2025/en/">https://www.fao.org/events/detail/fao-biotech-conference-2025/en/</a>
17 <sup>th</sup> ISBR Symposium (ISBR 2025)	International Society for Biosafety Research	2-6 November 2025 Ghent, Belgium	<a href="https://isbr.info/">https://isbr.info/</a>



**SOUTH ASIA**  
BIOSAFETY PROGRAM

The South Asia Biosafety Program (SABP) is an international development program implemented in India and Bangladesh by the Agriculture & Food Systems Institute (AFSI). 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.



**Agriculture &  
Food Systems  
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