CAPACITY BUILDING IN COMMUNICATING SCIENCE AND BIOSAFETY

Executed by :

Organised by :

CAPACITY BUILDING IN COMMUNICATING SCIENCE AND BIOSAFETY

Executed By

Ministry of Environment, Forest and Climate Change

United Nations Environment Programme

Global Environment Facility

Organised By

DEPARTMENT OF COMMUNICATION RESEARCH (DECORE)

INDIAN INSTITUTE OF MASS COMMUNICATION (IIMC)

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CONTENT

Preface

*I*n moving science and technology debates from sidelines to realms of policy concerns, media visibility is crucial. Indeed most of us depend on the media to help make sense of the bewildering daily deluge of information about technologies and initiatives. News media's role as an agent of environmental education and in building scientific temperament among the general masses is important and crucial. Media as part of the public sphere not only acts as an opinion builder but also provides a vital platform for debates and discussions on issues of public importance. On the other hand, the basic approach to development seems to place an indirect emphasis on upgrading the level of agricultural technology with a view to increase farm production. Keeping in view these perspectives and facts, this project on capacity building on Biosafety was conceptualized and implemented.

In keeping with the aims and goals of the project, the national and national media workshops provided an excellent platform for both scientific and journalistic community to interact on an important theme, like agri-biotechnology, as well as debate and deconstruct the various issues involved in it. The speakers and scientists got acquainted with the way an issue is dealt in media and also how journalists think of GM crops and agri-biotechnology. On the other hand, journalists became informed about the basic techniques of plant biotechnology and how it can be beneficial and the perceived harms associated with it. In the course of the discussion, many unsaid things got revealed, many myths were demystified and various prevailing confusions sorted-out. The community radio as part of the capacity building initiative helped in spreading the message of agri-biotechnology and in creating awareness among common people, farmers, students of journalism, community radio personnel etc.

This collaboration of MoEF&CC and IIMC proved fruitful, as there was a shift in the opinions of most of the participants with respect to agri-biotechnology and GM, which can be seen from the news coverage and news production during the workshops. This initiative was just a starting point of a long marathon and extensive collaborations are needed in other parts of the country for a sustained and fruitful dialogue on agri-biotechnology and biosafety, among different stakeholders in the society.

Project Coordinators
October 2015
New Delhi

Acknowledgement

We take this opportunity to thank all those who have contributed to the successful completion of this unique project. The project team wishes to thank all members of the organizing committee of IIMC, collaborating institutions and Community Radio Stations(CRs) for their support and dedication in the successful conduction of national and regional workshops on "Communicating Science and Biosafety" across the country. We would like to express our gratitude to all scientists, panellists, moderators, and participants for their contribution and in helping us to achieve the proposed goal of this project in communicating bio safety issues in use of biotechnology in agriculture.

We would like to acknowledge the support provided by the Ministry of Environment Forest and Climate change (MoEFCC), United Nations Environment Programme (UNEP) and Global Environment Facility (GEF) that enabled the realization of this venture. Our gratitude to Shri Hem Pande (Additional Secretary, MoEF & CC) for his indispensable support from the MoEF&CC side. We sincerely thank Dr. Ranjini Warrier (Director, Ministry of Environment, Forest and Climate Change), Dr. Vibha Ahuja (Chief General Manager, Biotech Consortium India Limited) and Dr. Murali Krishna Chimata (Manager, Biotech Consortium India Limited) for their valuable and timely suggestions throughout this project.

In a new initiative IIMC tied up with various university departments of Journalism and Mass Communication in organising these media workshops on bio safety. Special mention can be made of Universities of Mumbai, Kolkata, Bangalore, Gujarat and Panjab University and Makhanlal Chaturvedi National University of Journalism and Communication, Bhopal. In this effort, Press Information Bureau (Ministry of Information and Broadcasting) offices at Bhopal, Mumbai, Chandigarh, Ahmadabad, Kolkata and Bangalore provided yeoman service in contacting journalists from the states.

The project team would also like to thank Mr. Sunit Tandon, DG, IIMC and Mr. Anurag Misra, OSD, IIMC for their administrative support and guidance. We would like to thank the In-charge, Mr Rajendra Chugh and staff of APNA Radio of IIMC, Ms Soumya Jha (Programme Coordinator), Ms. Sunita, Mr. Manish, Ms. Jagrutik and Mr. Kamal for coordinating with various community radio stations in the country and in the production and broadcasting of programs. We would like to thank Dr. Manushi for providing support in organising inter-departmental and inter-university quiz programme. We would also acknowledge DECORE team (Mr. B. N. Ambade, Ms. Anupriya) for the departmental support. Special mention can be made of Mr Gulab Sharma (DTP Operator, IIMC), Mr Sanjay Meena (Graphic Artist, IIMC), Mr. Suresh, Mr. Pratap Singh (Digital Lab, IIMC) and Mr. Rawat (Video Recording).

Advances in medicine and agriculture have saved vastly more lives than have been lost in all the wars in history.

Carl Sagan

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ROLE OF MEDIA IN COMMUNICATING SCIENCE

Science is a great human activity and is a vital part of the culture of any society like literature or art. Human beings have always held science in awe when it comes to its inventions, discoveries and innovations. Scientific progress in both theory and practice has not only changed man's outlook but has broadened intellectual horizons radically. With scientific innovations, man's capability and capacity to control nature and natural phenomena has tremendously improved. Man is ruling skies, dominating deep oceans and living in far-away lands today; almost all aspects of human life have had a tremendous impact of science & technology. Science can improve things greatly and that is why we should be optimistic about its capacity to change living conditions in poor countries. Agriculture is one such area where science has made its impact more visible and decisive. The scientific and technological intervention in agriculture has changed the whole dynamics of agricultural produce and production in the form of 'Agricultural Sciences'.

Scientific knowledge has really helped mankind to achieve the objective of self-sufficiency in food and alleviating the threat of food insecurity globally. These innovations, commonly known as Green Revolution, brought about marked improvements in the yield and productivity in land use and higher remuneration in reduction in food deficit in developing nations like Africa, India etc. The progress in medical sciences and allied fields has translated into reduction in mortality rate and an increase in average life span of human beings which also means an ever increasing human population and lesser availability of land for agriculture. To feed the burgeoning population and faced with a situation where land for crop production is shrinking at a never before pace, scientists have started to think out-of-box to meet the crisis. Agri-biotechnology offers hope and scope to address the gap between demand and supply, improve productivity and diversification of farm land. Agri-biotechnology is biotechnological intervention at DNA level to enhance the produce and productivity with less and less use of chemical fertilizers, pesticides and insecticides, whose harmful effects on both man and ecosystem are now increasingly coming to the fore. By employing agri-biotechnological techniques like 'Gene Modification', crop scientists can create desired traits in food crops, like more yields per hectare, increasing resistance to pests, less use of chemical fertilizers, less use of irrigation in situations of water shortage, enhancing nutritious value etc.

India alone has increased food grain production more than three-fold in last three to four decades primarily by the application of genetics in improving crop varieties. But India, with its current population of more than one billion, still faces daunting challenges of hunger, poverty and malnutrition that will only get worse as its population further increases. Transforming India's agriculture is vital not only to address the issue of hunger and poverty but also to strengthen the sector that is so fundamental to India's existence. Conventional plant breeding techniques have little potential to deal with these problems. The yield per hectare, using conventional plant breeding techniques, has reached its peak and can not go beyond a certain level. Here the role of agri-biotechnology becomes imperative.

COMMUNICATING RISKS IN APPLICATION OF SCIENTIFIC KNOWLEDGE

Any technology or technological application, whether mobile phone, nuclear technology, X-Ray technology etc., has faced resistance from the people or consumers but ultimately it has become an inalienable part of human beings now. Technological diffusion is essential if any technology is to benefit the ultimate beneficiary and society at large. By technological diffusion we mean easy reach of any technology to the grassroots level. For any technology to get efficiently diffused, information exchange or communication plays an important role. Communication media or channels popularise the technology, its use and potential and thus initiate the process of technology diffusion. Media is intrinsically associated with the idea of technology transfer or technological innovation. Journalists as information gatekeepers have a very important role to play as far as technology's acceptance and relevance in the society is concerned. To build the capacities of journalists in the area of science & technology, communication become very vital, especially in the field of agri-biotechnology. However, interlinked as the subject of bio-technology is with many scientific disciplines, makes the understanding of its' complex systems difficult and resultant mis-information than the actual information prevails. An informed journalist would not only empower common man with right kind of knowledge but also help create or build an informed public opinion which ultimately leads to progressive social and scientific policies. Many studies around the world have so far shown that media coverage of agri-biotechnology has a direct bearing on public perception of agro-biotechnology.

Other than mainstream mass media, there are alternate media, which are effective reaching out to the rural households, than the press. The top-down communication models of the 70's have lost their sheen considerably, and the new keywords are 'inclusion' and 'participation'. One such media, based on bottom-up approach, is Community Radio (CR) which has a wide reach as far as the rural audience is concerned. Community driven tools, such as CR, have democratised the communication process in rural areas and contributed towards empowerment and knowledge enhancement of rural masses. Agri-biotechnology, even the entire agriculture sector is inherently tied to the lives of the farmers who are also its ultimate consumers or beneficiaries. Community Radio has a far reaching impact on how farmers

contemplate modern agri-biotechnology. Among the major hurdles in the successful communication is the language barrier. CRs have broken the barrier of language as they work mostly in local languages and dialects, there by reaching the last man. Communicating science and technological issues/innovation through the medium of CR not only results in an effective communication but also brings the technological literacy to the rural masses. CR can play a considerable role in demystification of technologies for marginalised communities as well.

To effectively communicate scientific and technological innovation like agri-biotechnology, which is characterised by both conceptual complexity and multi-disciplinarily, a multi-pronged approach is needed. This approach should rest on a paradigm which is inclusive, empowering and involves both mainstream as well as alternate media of communication.

INTRODUCTION TO THE PROJECT

PROJECT OVERVIEW

The project was supported and sponsored by Ministry of Environment, Forest and Climate Change (MoEF&CC) under 'Capacity Building Project on Biosafety: Phase II'. The activities undertaken by Indian Institute of Mass Communication (IIMC) and approved by MoEF&CC come under the Thrust Area IV, under the subtheme of 'Awareness Programmes'. The main aim of the project was to create awareness about Biosafety among the journalists, which in turn is expected to generate awareness among the masses. The project had also the mandate of collaborating with selected Community Radio Stations in the country including APNA Radio of IIMC, to produce and broadcast programmes on various aspects of Biosafety in agri-biotechnology. The programmes were produced and broadcast throughout the duration of the project.

SCOPE OF THE PROJECT

Scientific issues are an inherent part of the modern society, and media are the main information sources for such issues. The rapid developments in the biosciences and biotechnologies have led to widespread public debates about the risks involved with such innovations. The societal debate about relevance and safety of genetically modified organisms (GMOs) (also known as LMOs) has a history of more than three decades. As biotechnology moves beyond the walls of a university, government and industry labs, people have to be informed about the possible benefits and related risks (if any) associated with handling of LMOs and other biosafety issues.

The use of biotechnology for food production and crop modification is encountering differing levels of support worldwide. In an effort to promote democratic decision making regarding an issue that has not only scientific but also social and political implications, efforts are underway in different countries to encourage public participation and public deliberation. Public awareness, education and participation have been identified as key elements for the effective implementation of any Capacity Building Programme. In a country, like India, which is governed by democratic norms and laws, it becomes essential for the public, to know and understand the issues and processes related to Living Modified Organisms (LMOs) and have full access to information so that they can take informed decisions and participate in decision making processes, especially in the frontier areas like Biotechnology. Democratic decision making should be at the heart of policy making in Biotechnology sector, if we are to develop an inclusive and cost effective approach in Agri-biotech. The lack of public engagement results in what some have termed as 'surprise-of-Dolly-problem', referring to the public's response to the surprise appearance of the first cloned sheep, Dolly, in 1997. Public trust has a strategic implication for the scientific areas trying to introduce new technologies like biotechnology.

Public Policy Debate on Biosafety Issues & Agri-Biotechnology

Debate about the potential benefits and risks of genetically modified organisms (GMOs) to the environment or human health spurred attention to biosafety issues of the technology. Biosafety is associated with the safe use of GMOs and, more generally, with the introduction of non-indigenous species into natural or managed ecosystems. Biosafety Regulation—the policies and procedures adopted to ensure the environmentally safe application of modern biotechnology has been extensively discussed at various national and international fora. Much of the discussion has focused on developing guidelines, appropriate legal frameworks and, at the international level, a legally binding international Biosafety Protocol—the Cartagena Protocol on Biosafety. Implementation of Biosafety at the national level has proven to be a major challenge, particularly in developing countries.

Public participation in policy decision making related to agricultural biotechnology is encouraged in various countries. Time and again it has been proved that mass media has a prominent role in ensuring an effective public participation in decision making process. They not only sensitize but also inform the public about the issues at stake and above all act as a platform for the public to express their opinions. Media are crucial players in public discourse by offering public platforms for the development of political attitudes and public knowledge about science and scientists. Scientists and science are portrayed in the media on a daily basis and Nisbet et al. (2002) showed that media play an important role in shaping how people feel about science. In many countries, the news serves as a primary source of risk communication to the general public. This process of mediated public attention is known as "agenda setting," or the concept that the media may not tell us what to think, but they tell us what to think about.

The media thus play a crucial role in shaping public perceptions on biotechnology. Journalists therefore need to be sensitized on basic concepts of biotechnology and its application to enhance their reporting on biotechnology. The project aimed at not only sensitizing the journalistic community, who are gatekeepers of information and at the same time contribute towards building a link between science and public at large.

Biosafety Capacity-Building activities are aimed at building capacity for biosafety (i.e. component on promoting Biosafety, minimize the environmental and health risks of living modified organisms), or at least have a component on promoting biosafety practices. Capacity Building projects are usually implemented for a minimum period of six months or more.

Objectives of the Media Workshop

- To create an interest and enhancement of knowledge about biotechnology and biosafety issues among journalists/media practitioners.
- To enhance the level of balanced reporting on agri-biotechnology and biosafety issues through electronic and print media.

- To discuss the innovative formats of scientific write-ups/ programmes and sources of information on bio-safety for journalists/media practitioners.
- To develop an understanding of the scientific approaches in coverage and news writing about Biosafety in agriculture sector.
- To produce and broadcast programmes and quiz shows on bio-safety for Community Radio stations in selected regions.

Activities Undertaken

Under the project two types of activities were carried out:

a) Conduction of media workshops for media professionals/journalists
b) Producing and broadcasting radio programs in collaboration with Community Radio stations at the state level.

Activities completed during the entire duration of the Project (January to September 2015):

Following details of the workshops conducted during the entire duration of the project.

a) Conducted 2 National Level workshops (1 in New Delhi and 1 in Mumbai)
b) Organized 5 Regional Level workshops: Bangalore (Karnataka), Kolkata (West Bengal), Bhopal (Madhya Pradesh), Chandigarh (Punjab) and Ahmedabad (Gujarat)
c) Two special workshops for Indian Information Services (IIS) officers (Group A & B)
d) Produced and broadcasted programmes and quiz shows on Biosafety for Community Radio stations in selected regions of the country. The details are as follows:

Sl. No	Place	Name of Radio Station	No. of Prog. Produced	Formats
1	Kolkata	Radio JU	10	Talk Show- 6 Quiz-2 , Audio Drama- 2
2	Chandigarh	Radio Jyotirgamaya	4	Talk Show- 3 Quiz-1
3	Bangalore	Radio Universal	6	Talk Show- 1 Quiz-1
4	Ahmedabad	Radio Guruvani	9	Lecture- 9
5	Delhi	Apna Radio	5	Talk Show-3 Inter-departmental Quiz-1 Inter-university Quiz-1

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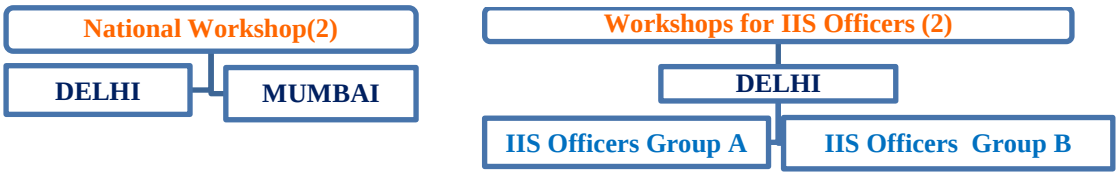
MEDIA WORKSHOPS ON ISSUES OF AGRI-BIOTECHNOLOGY & BIOSAFETY

NATIONAL AND REGIONAL WORKSHOPS

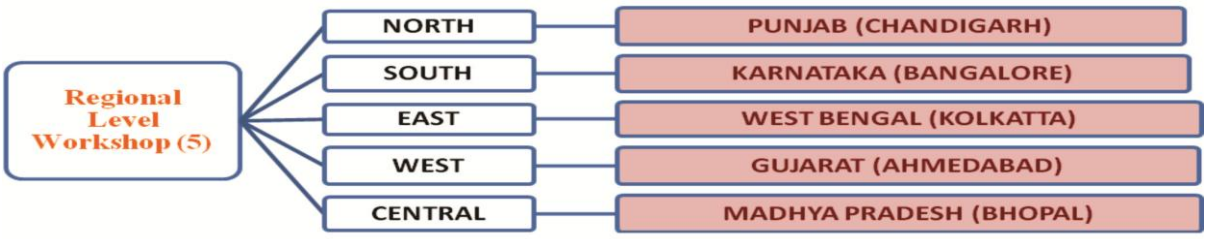
The nine workshops conducted under this project were executed by the Indian Institute of Mass Communication (IIMC), Delhi in collaboration with the Ministry of Environment, Forest and Climate Change, Government of India, United Nations Environment Programme, Global environment facility, , provided an opportunity to media practitioners to interact with Indian scientists from leading research institutions to talk about the issues, prospects and innovations in biotechnology and allied aspects of Biosafety. Apart from the talks by scientists and policy makers, the workshops also discussed the role of media in reporting science in a panel discussion with eminent journalists and media researchers as well.

On an average the workshops were of two-days duration and average number of participants was 25 (in some cases it was less than 25 and in others it was more than 25), representing diverse fields of communication such as newspapers, television, government media organisations, magazine journalists, bloggers, NGO etc. In the workshops, broad range of topics related to Genetically Modified crops, food safety issues, agri-biotech innovations, science communication practices etc., were discussed and deliberated upon by renowned scientists from leading research institutes and agricultural universities, including IIMC faculty also.

Schematic Representation of Media Workshops conducted by IIMC



In addition to the above four workshops, five regional level workshops were conducted in the five states of India as shown below:



Workshops Timeline

	City	Venue	Dates	Type of Participants	Collaborator
National Level Workshop	**Mumbai**	Pherozshah Mehta Bhawan,University of Mumbai, CST Road, Kalina Santacruz East Mumbai 400098, Maharashtra	April 21-22, 2015	Media Professionals/ Journalist	University of Mumbai
National Level Workshop	**Delhi**	Seminar Hall Indian Institute of Mass Communication JNU Campus Aruna Asaf Ali Road New Delhi-110067	August 20, 2015	Media Professionals/ Journalist	Indian Institute of Mass Communication
Workshop for IIS Officers	**Delhi**		April 7-8, 2015	IIS Officers Group A	
			June 5-6, 2015	IIS Officers Group B	
Regional Level Workshop	**Kolkata**	Kadambini and Chandramukhi Hall, 3rd Floor of Central Library, University of Calcutta	May 21 , 2015	Media Professionals/ Journalist	University of Calcutta
	Bangalore	Jnanajyothy Auditorium, Central College, Bangalore University, Bangalore - 560001	May 15-16, 2015	Media Professionals/ Journalist	Bangalore University
	Bhopal	Conference Hall, 5th Floor, Makhanlal Chaturvedi National University of Journalism & Communication Bhopal 462011 Madhya Pradesh	July 14-15, 2015	Media Professionals/ Journalist	Makhanlal Chaturvedi National University of Journalism & Communication
	Ahmedabad	Seminar Hall, Department of Communication Journalism & Public Relations C/o H. K. Centre for Professional Training Gujarat University Navrangpura-380009 Ahmedabad	July 22 -23, 2015	Media Professionals/ Journalist	Gujarat University
	Chandigarh	ICSSR Complex, Panjab University, Sector 14, Chandigarh Chandigarh, U.T. – 160014	July 28-29, 2015	Media Professionals/ Journalist	Panjab University

Participants

The project provides an interactive platform for professionals from different spheres like academic institutions, research organizations, non-profit organizations, community radio stations and public broadcasting services and across diverse disciplines like Biotechnology, Media Studies, Agricultural Sciences, Life Sciences, Environmental Sciences, Science Communication and Engineering. The workshops brought together Indian Information Officers (Group – A & B) and media professionals from diverse streams of media. Community radio stations from various regions of the country also showed their active interest in all the workshops. (The detailed list of participants from each workshop is attached as Appendix I)

Resource Persons

To provide a holistic perspective on wide range of topics related to Biosafety and its communication, along with faculty members from IIMC, reputed and learned speakers and research scientists actively involved in the field of Agri-biotechnology and associated organizations/institutes were invited to deliver talks. Their profound experience, acumen and reflective insights helped participants to appraise basic as well as vital intricacies of Biosafety and science communication. (The detailed list of resource persons is attached as Appendix II)

Organization of the Workshops

Keeping the multi-faceted nature of Agri-biosafety in view, the workshop schedule was designed to provide a broader overview of diverse spectrum of themes related to Biosafety and its communication. Sessions were planned to cover the topics ranging from basic concepts and innovations in Agri-biotechnology to themes meticulously addressing biosafety regulatory regime of India and abroad, safety assessment and mechanisms of GM crops in India, experiences and participatory approaches to applications dealing with challenges in the area of communication of Agricultural-biotechnology and Bio-safety and information Sources on Biosafety. Group work activities and video sessions were introduced to convey the message related to Biosafety in an assorted way. Comprehensive workshop program with details on the topics and sub-themes dealt in each of the sessions are provided in Program Schedule of the workshop presented in Appendix III.

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NATIONAL WORKSHOPS FOR MEDIA PROFESSIONALS

NATIONAL MEDIA WORKSHOP AT MUMBAI

Date: April 21st and 22nd, 2015;
Venue: Pherozshah Mehta Bhawan, University of Mumbai, Vidya Nagri Campus, Mumbai

Day 1 – 21st April, 2015 (Tuesday)

Inauguration: The workshop was inaugurated by Shri Naresh Chandra, Hon'ble Pro Vice Chancellor of the University of Mumbai. Signifying the instrumental role of media in communicating science, he emphasized the need of organizing more number of knowledge enhancing and informative workshops of such nature at intermittent intervals. The workshop gradually proceeded through oral presentations, group interactions, brain-storming sessions, screening of recorded Skype presentation to uncover various aspects of Biosafety and its communication.

The workshop started with a welcome note by Dr Sunder Rajdeep, Head, Department of Communication and Journalism, University of Mumbai. Highlighting the presence of experts from diverse backgrounds as key speakers of the workshop, he pointed out that this attested to the serious implication for the capacity-building process, especially for the media professionals.

In her session, Dr Ranjini Warrier, Advisor, MoEF&CC, Government of India, explained the difference between conventional biotechnology and modern genetic engineering techniques. Distinguishing both the technologies, she underlined that conventional biotechnologies had gone through many trial and errors, while use of biotechnology in conjugation with information technology, termed as 'bioinformatics', has led to new advancements and innovations in the current era. Citing MoEF&CC as the nodal agency for the Biosafety initiatives, Dr. Warrier elaborated on the instrumental role played by the Ministry towards ratification and implementation of Cartagena Protocol in India. She informed the participants about the conceptualization and planning for this capacity building initiative and the larger project initiated as part of the process. Against the backdrop of this initiative, she stated that the major focus of this workshop was to address the concern and present the fact and figures related to GM field.

Prof. Gita Bamezai, Principal Investigator of the project and Head, Department of Communication Research (DECORE), IIMC presented a brief overview of the project. She spoke about the importance of Biosafety awareness and emphasized the need of Biosafety

capacity building programmes for media professionals/journalists. She solicited further co-operation from Mumbai University to join hands together with IIMC for future collaborative efforts in the area of science communication.

Inaugural Session chaired by the Pro-Vice Chancellor of Mumbai University

Technical Session I: Innovations in Biotechnology and Importance of the Bio-safety Programme: As the foundation session of two-day workshop, this prime slot gave a concise introduction to the advances in the area of biotechnology and explained some basic concepts related to the discipline. This technical session by Prof. Ashwani Pareek, School of Life Sciences, JNU stressed upon the history, growth of bio-technology across the world and evolution of bio-safety issues related to agricultural bio-technology. He addressed several aspects of modern biotechnology and highlighted the benefits of recent techniques. He drew the attention to the implementation of biosafety approach and how it held enormous potential to provide viable solutions and a credible response to the growing need of economic growth food security, conservation and protection of environmental resources. He familiarized the participants with the process of production of Genetically Modified food and cleared some of the misconceptions regarding GM crops. Through various examples he brought out a comprehensive depiction of many important innovations that have taken place in the field of biotechnology. The focus of this section centred on numerous advances made in this field in the form of Golden Rice, Bt Cotton, superior varieties of tomato, brinjal, soyabean among others.

Technical Session II: Biosafety Regulatory Framework in India: In this session Dr Ranjini Warrier, Advisor, MoEF&CC gave a brief account of Biosafety Regulatory Framework in India and global regulatory regime with a special focus on Biosafety. She started her talk with an expansive discussion on Environmental Protection laws of India and subsequently outlined current status and recent developments related to existing laws,

regulations, legislations, guidelines and policy frameworks incorporating Biosafety in India. Dr. Warrier expounded on the mandate and role of various ministries and departments dealing with the issues of GM and Biosafety and underlined Cartagena Protocol as the major and most important international treaty so far dedicated to the field of Biosafety. The session covered topics ranging from fundamentals and scope of the protocol along with description of its obligatory components and mechanisms. The requirements and precautions needed for GM field trials and the detailed procedure of safety assessment mechanisms and processes were also highlighted. She also shared valuable information on the current status of various GM crops and matters related to their approval.

Technical Session III: Practice of Science Journalism in India - Challenges & Opportunities: The next session was a brain-storming session on the standards of science reporting in Indian media, constraints and opportunities in reporting scientific issues, how to report agro-biotechnological issues/innovations. The participants shared their experiences and highlighted numerous problems and challenges of reporting science in the present context. The issues like problem of non-availability of scientific information in local languages and a direct access to scientists/scientific institutions were some of the salient issues raised during the session.

Technical Session IV: Opportunities & Challenges for Media Professional in Reporting Innovations in Science: In the fourth technical session, a Skype presentation was organised with Ms. Helen Briggs, BBC Science/Health Correspondent in UK. From an empirical standpoint, this presentation dealt with opportunities and challenges faced by media professionals in reporting science in Europe. It highlighted the vital role of the public broadcaster in communicating scientific issues and shared pragmatic experience on various practical challenges/lessons learnt from the field while dealing with GM related information in the British Media.

Day 2 – 22nd April, 2015 (Wednesday)

Technical Session I: Biosafety Issues & Media - Dimensions of Risk Communication: In this session, Prof. Gita Bamezai IIMC extensively discussed about the gaps and challenges for building capacities of mass media in reporting science and bio-safety issues in India. She argued that media was consistently focused on risks than benefits and mostly presents benefits of GMOs as secondary and risks as primary areas of debate. She underlined some criticism of media by scientists/policy-makers and highlighted that media fails in setting agenda for critical public debate and policy formulation. Speaking on the *reporting issues*, she commented that media does selective reporting and does not give high priority to biotechnology and Biosafety issues, tends to exaggerate and heighten perception of risks in pressurized situations, although acknowledging the fact that media faces challenges of

limited resources. Dr. Bamezai discussed the contesting lines between proponents and opponents of GMO and pointed out that the involvement of multiple stakeholders in Biotechnology and Biosafety programme (business, government, scientists, farming Communities, NGOs and public) and diverse perspectives make the issues related to this field more complex and competitive.

This session brought attention to the fact that risks are vastly affected by socially constructed norms and practices prevailing in a particular society and thus success of biotech products are located within social settings. Dr. Bamezai added that the public perception rests on how media reports diligently and intelligently. Public knowledge, attitudes, and perception of biotech products largely determine if biotech crops are contributing remarkably to the world food supply. Hence it is important for media to act in a responsible way to generate pragmatic knowledge, attitudes, and perception on such issues in society. Citing numerous positive and negative reflections on GM crops, she appealed media to report these issues intelligently and in a sensible and scientific manner. To encourage rational and scientific media reporting, media needs to demystify the process of biotech crop production and biotech products for public understanding and apt policy formulation.

Technical Session II: Communication of Scientific Innovations: This session was conducted by Dr. G.P. Phondke**,** Former Director of NISCOM (now NISCAIR), New Delhi, who spoke about new areas and innovations in Biology. He informed participants about Organ Transplantation, Technology of Reproduction, Recombinant DNA-Genetic Engineering, GM Foods, Irradiated Foods, GM Animals, Human Cloning, Stem Cell Development, Human Genome and other frontier scientific discoveries and innovations. He raised various legal, socio-cultural and ethical concerns, highlighted the challenges and opportunities in communication of Biological research, especially in the area of GM research and emphasized on the need of educating the society to prevent rise in undue fears. Citing views of many philosophers and sociologists, Dr. Phondke pointed out that our scientific knowledge is socially, culturally and historically constructed and it offers, at best, a constrained interpretation of the material world. This session finally touched upon realistic hopes and time frame of realization, allaying apprehensions, superhuman or Frankenstein concepts and focused on using all media - print, electronic and digital- including scientists and science communicators to forge a joint front.

Dr. G.P. Phondke speaking at the Workshop

Technical Session III: Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety Issues: The final session of the workshop was designed to provide adequate information regarding the web portals, links and databases (both online and offline) for dissemination of facts, figures and updates in the field of Agri-biotechnology, Biosafety and science communication. Mr. Rayies Altaf, Project Coordinator delineated about Biosafety Clearing House and numerous other reliable sources of information on GMOs/LMOs and Biosafety for credible and authentic reporting.

Valedictory session: The two days workshop culminated with a formal valedictory session and certificate distribution to the participants by Dr. G.P. Phondke**,** Former Director of NISCOM, New Delhi. Feedback/suggestions were invited from the participants through a structured questionnaire for the performance evaluation and further improvements in succeeding workshops in the series.

Certificate distribution to participants by Dr. Phondke

Group Photograph

NATIONAL MEDIA WORKSHOP AT NEW DELHI

Date: August 20th, 2015; **Venue:** Seminar Room, Teaching Block, IIMC

Introduction and Technical Session I: Innovations in Agri-Biotechnology: New Frontiers in Science & Agriculture: Prof. Deepak Pental, Former Vice Chancellor, University of Delhi in his opening remarks gave a brief overview about the aim of the project, objectives, and further elaborated on important outcomes of public understanding and cohesive public policy as partof this novel initiative. The succeeding technical session gave an epigrammatic introduction to biotechnology and explained some basic concepts of the subject to the media professionals.

Renowned Bio-technologist, Professor Deepak Pental speaking at the National workshop in Delhi

The presentation familiarized the participants with some of the important innovations in the field of biotechnology. The process of production of Genetically Modified food and misconceptions regarding the GM crops were broadly discussed in this session. It also shed light on growth and global status of GM crops across the world.

Technical Session II: From Green to Gene Revolution: Dr. Jagdeep S. Sandhu, Senior Biotechnologist, Punjab Agricultural University began his talk with a brief introduction on GM crops and dealt on the journey, Gene Technology has covered over the years. He detailed out the rigorous process of biosafety assessment covering environmental safety assessment, food and feed safety assessment and laboratory stage development of GM crops prior to its commercial release. He extensively discussed about the safety parameters, stringent safety standards to be maintained during the release of GM

Dr.Jagdeep S Sandhu, Senior Biotechnologist, Punjab Agricultural University

crops. The guidelines, principles and regulatory mechanisms to be followed for the safe handling, transfer and the use of genetically modified (GM) plants were also explicitly underlined in this talk.

Technical Session III: Developing Regional capacities in GMOs: South East Asian Perspectives: Third talk of the session by Dr. Vibha Ahuja, Chief General Manager, BCIL provided an overview on various capacities building systems, regulations and guidelines available in South East Asian region. She briefed about the Cartagena Protocol on Biosafety and shed light on the other related laws on GMOs/LMOs. This talk comprehensively discussed about South Asia Biosafety Program (SABP). She elaborated on the need for GMOs and products in South Asia Region and presented current status of research/ commercialization of GMOs in this area.

Technical Session IV: Technologies for Local Solutions: Mr. R. Gopichandran, Director, Vigyan Prasar explained various important aspects related to communicating science and technology. The session dealt with several facets of scientific/agri-biotech communication that needs to be considered for an effective scientist-communicator interface.

Valedictory session: Two days workshops culminated with a valedictory session, graced by Dr. S R Rao, Advisor, Department of Biotechnology, Ministry of Science and Technology, GOI followed by certificate distribution to participants. In his address, Dr. Rao gave an overview of agricultural technologies with a special emphasis on GM crops. He further explained the food security issues relevant to GM crops and shed some light on Indian Biosafety Regulatory Framework. Feedback/suggestions were invited from the participants through a structured questionnaire for the performance evaluation of the workshop.

Dr. Vibha Ahuja
Chief General Manager, BCIL

Mr. R. Gopichandran
Director, Vigyan Prasar

Certificate distribution to participants by *Dr.SR Rao, Advisor, DBT. Present on the occasion are Mr. Sunit Tandon, DG IIMC, Dr. Gopi Chand, Director, Vigyan Prasar, DST and Prof. Gita Bamezai, HOD, Communication Research, IIMC*

Group Photograph

4

SPECIAL WORKSHOPS FOR IIS OFFICERS WORKING IN CENTRAL GOVERNMENT MEDIA UNITS

IIS OFFICERS: GROUP-A

Date: April 7th and 8th, 2015; **Venue:** Seminar Room, Teaching Block, IIMC, New Delhi

Day 1 – 7th April, 2015 Tuesday

Introduction: The workshop started with the project overview presentation by Prof. Gita Bamezai, Head, Department of Communication Research (DECORE), IIMC. Providing a brief overview on various UNEP-GEF initiatives on Biosafety, she highlighted the importance and need of Biosafety capacity building programmes for media professionals/journalists. Dr. Bamezai introduced the participants to the background, purpose, aim, objectives and anticipated outcomes of this novel initiative. The duration, phases, format and the course of the action encompassing entire timeline of the project were concisely summarized. The workshop gradually proceeded through oral presentations, skype presentation, screening of short documentaries and final group work presentation by participants to address various aspects of Biosafety and its communication.

Inaugural Session

Technical Session I: Innovations in Biotechnology and Importance of the Bio-safety Programme: In his technical session, Prof. Ashwani Pareek, School of Life Sciences, Jawaharlal Nehru University (JNU) covered the scope, concept of biotechnology, potential of this field of science in the area of agriculture and the status of biotechnological innovations in India and abroad. As the foundation session of two-day workshop, this maiden slot described the basic terms, definitions; applied themes related to GMOs/LMOs and shed light on the evolution of the technology over time. It explained the advances made in this field and also delineated the future trends in Agri-biotechnology and its implications for India.

Emphasizing the significance of Biosafety approach in Agri-biotechnology, the session highlighted the benefits of biotechnology against the backdrop of increased concerns and apprehensions related to transgenic crops. Clearing some of the misconceptions regarding GM crops, Professor Pareek drew the attention to implementation of Biosafety approach which holds enormous potential to provide vital and viable solutions to steer away the fear among public regarding concerns of safety to health and environment. The second Green or Gene Revolution would significantly contribute to the growing need of economic growth, food security, conservation and protection of environmental resources.

Technical Session II: Biosafety Regulatory Framework in India - Key Feature of Cartagena Protocol: In this session Dr. S. R. Rao, Advisor, Department of Biotechnology (DBT) gave a brief account of worldwide development of regulatory regimes for testing and handling of GM crops and their products in the Indian context. A short overview was presented on the current status and recent developments related to existing laws, guidelines and regulatory systems addressing safety and regulatory issues of GM crops. This talk meticulously outlined the roles and responsibilities of various competent organizations like Genetic Engineering Appraisal Committee (GEAC), Review Committee on Genetic Manipulation (RCGM), State Biotechnology Coordination Committee (SBCC), District Level Committee (DLC) and Institutional Bio-safety Committee (IBSC) in successful implementation of Biosafety regulatory regime in India. Underlining the importance of the Cartagena Protocol as the major and most important international treaty so far dedicated to the field of Biosafety, the objective, scope and fundamentals of the protocol were extensively discussed in this session. Elaborating on numerous benefits conferred by Biosafety approach in agricultural sector, Dr. Rao stressed upon a comprehensive integrated approach which is needed to develop a sound national biotechnology policy and national Biosafety system. To ensure Biosafety measures are in place, he cited effective implementation and harmonization of national framework, laws and legislations as the key and principal component of a prolific Biosafety regulatory regime.

Dr. S. R. Rao, Advisor, Department of Biotechnology (DBT) and Professor Gita Bamezai

Technical Session III: Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety: This session was designed to provide extensive information regarding the sources and references on biotechnology and Biosafety research,

Dr. Vibha Ahuja, Chief General Manager, Biotech Consortium of India Limited (BCIL) introduced the participants to varied collection of web portals, links and databases (both online and offline) responsible for the dissemination of facts, figures and updates in the field of Agri-biotechnology, Biosafety and Science Communication. This session also delineated aspects of Biosafety Clearing House and numerous other reliable sources of GMOs/LMOs and Biosafety for credible and authentic reporting.

Technical Session IV: What Makes Science Report Interesting and Readable - Practice of Science Journalism in India: In this session intensive focus was on the issues, concerns, challenges and prospects related to Science and Biosafety Communication. Realistic experiences from SciDev.Net platform threw light on challenges faced by science communicators in achieving the twin objectives of making the story interesting as well as accurate, besides focusing on neutral and innovative way of writing science. It promptly highlighted the challenges faced by media when reporting on a scientific issue, alongside several participatory ways and approaches through which media can help in allaying the ungrounded fears and misconceptions regarding Agri-biotechnological innovations. Mr. Ranjit Devraj of SciDev.Net spoke about the reflection and deliberation as the key attributes on the part of the journalists while advocating to uphold the need for sustained and informative dialogues between scientists and journalists.

Skype presentation on: Opportunities & Challenges in Covering Science - As a Public Broadcaster: In the following session, a special skype presentation was organized in which Ms. Helen Briggs, BBC Correspondent from London interacted with workshop participants. Highlighting the vital role of public broadcaster in communicating scientific issues, Ms. Briggs shared her experience through live interaction with participants on various practical challenges/lessons learnt from the field while dealing with GM related information in British Media.

Skype Session with Ms. Helen Briggs, BBC Correspondent from London

Day 2 – *8*th April, 2015 Wednesday

Technical Session I: Safety Assessment of GM crops in India and Biosafety Mechanisms: The day two of the workshop started with the session on safety assessment of GM crops by Dr. T.R. Sharma, Project Director, National Research Centre on Plant Biotechnology. He outlined the rigorous process of Biosafety assessment of GM crops and gave a brief introduction to salient aspects of trends in innovation in Agri-bio-technology in India. Dr. Sharma highlighted different aspects of the technology encompassing environmental safety assessment, food and feed safety assessment and laboratory stage development of GM crops prior to its commercial release. The guidelines, standards and mechanisms to be followed for the safe handling, transfer and use of genetically modified (GM) plants moving from the laboratory phase to subsequent trials were explicitly underlined. Dr. Sharma also shared with participants an insight to the policy of *'case by case approval'* of each biotech crop as undertaken by the Government of India.

Dr. T. R. Sharma, Project Directory, National Research Centre on Plant Biotechnlogy

Technical Session II: Making a Difference - Working with Digital Tools to Communicate: In order to provide a pragmatic experience to media professionals/science communicators, efforts were made to facilitate interaction of workshop participants with experts/practitioners from grassroot level. The case of Digital Green presented promising approaches to use digital media in empowering community of small farmers. Dr. Vinay Kumar, Chief Operating Officer of this large organizational network, narrated the methodology and procedures adopted by their team while using digital media as a participatory tool. Using film as a medium of learning on scientific issues, a short documentary on Cartagena Protocol on Biosafety was screened in the followingsession.

Group Work: Post-lunch session of the workshop was dedicated for group-work activities where participants were invited to make presentations on the topics related to Biosafety which was followed by interactive Q &A session. The broad areas assigned for the group-work were:

1. Innovations in Agri-Bio-technology and implications for the region

2. Agricultural Productivity, Self-reliance and Farmers' issues in the Bio-safety regime
3. Food, Nutrition and Bio-safety Issues for Consumers
4. Socio-Economic aspects of Agri-Bio-technology
5. Environment, Biodiversity and Bio-safety norms
6. Dimensions of Regulation and Bio-safety norms in the Country and the region.

Round-up report presentation

Certificate Distribution to Participants

Group photo with IIS Officers Group A

IIS OFFICERS: GROUP-B

Date: June 5th and 6th, 2015; **Venue:** Seminar Room, Teaching Block, IIMC

Day 1– 5th June, 2015 Friday

Introduction and Technical Session I: Innovations in Biotechnology and Importance of the Bio-safety Programme: The workshop started with a brief overview on project objectives, aim, plan of action and anticipated outcomes of this novel initiative. The succeeding technical session by Prof. K.C. Bansal, Director, National Bureau of Plant Genetic Resources, ICAR-Pusa familiarized the participants with the scope, concept of biotechnology, potential of this field of science in the area of agriculture and the status of biotechnological innovations in India and abroad. As the foundation session of two-day workshop, this maiden slot described the basic terms, definitions; applied themes related to GMOs/LMOs and shed light on evolutionary technologies relevant to this field. The session also delineated information and projections regarding the future trends in agri-biotechnology and its implications for India.

Prof. K.C. Bansal, Director, National Bureau of Plant Genetic Resources, ICAR-Pusa

Technical Session II: Communicating Biotech: The Government Way: The relevance of social media and websites in communicating biotechnological innovations was the major theme of the session. The session conducted by Ms Archita Bhatta, Chief Editor, DBT Communications Cell, Vigyan Prasar had as its nucleus on how DBT's initiative in feeding facts, figures and other pertinent information via its website is instrumental in timely spread of information, in stimulating participatory communication, dispelling existing fallacies regarding Agri-

Ms. Archita Bhatta, Chief Editor, DBT Communications Cell, Vigyan Prasar

biotechnology, especially GMOs/LMOs and in providing a platform that addresses public doubts without the domination of interest groups. The session strove to acquaint the participants with DBT's further interest in increased interaction with the science fraternity through talk shows, interviews, discussions, in order to encourage science communication practices in the country.

Technical Session III: Safety Assessment and Biosafety Mechanisms of GM Crops in India: In this session Dr Gurinderjit Randhawa, Principal Scientist, NBPGR, ICAR-Pusa extensively interacted with the participants and detailed out the rigorous process of Biosafety assessment covering environmental safety assessment, food and feed safety assessment and laboratory stage development of GM crops prior to its commercial release. Dr. Randhawa suggested that while working on GM technologies/procedures or DNA alterations, proper care are taken and all safety procedures are followed very rigidly. The speaker detailed out the procedures and processes employed in laboratories by agriculture scientists to ensure that safety standards and national as well as international guidelines on Biosafety are strictly followed. The speaker also explained how, using various techniques and laboratory instruments, it is possible to detect genetic manipulation in a food crop or fruit. Such techniques are used to detect if any GM food/crops are being grown or used or even imported illegally into the country. These techniques are known as GM detection technologies and such technologies are now available in Indian laboratories also.

Dr Gurinderjit Randhawa, Principal Scientist, NBPGR ICAR-Pusa

Technical Session IV: Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety: A session was designed to provide adequate information regarding the web portals, links and databases (both online and offline) responsible for the dissemination of the facts, figures and updates in the field of Agri-biotechnology, Biosafety and science communication. In this session, Rayies Altaf, DECORE, IIMC delineated details related to Biosafety Clearing House and numerous other reliable sources of GMOs/LMOs and Biosafety for credible and authentic reporting. In this session number of databases and knowledge banks both national and international, related to Agri-biotechnology and Biosafety, were shown databases range from basic knowledge in biotechnology to updated information related to GM crops or GM techniques. The participants especially found the session useful for their knowledge enhancement and for updation of information on current research related to GM.

Day 2– 6th June, 2015 Saturday

Technical Session I: Biosafety Regulatory Framework in India - Key Feature of Cartagena Protocol: In this session, Dr Ranjini Warrier, Adviser, MoEFCC gave a brief account of worldwide development of regulatory regimes for testing and handling of GM crops and their products with a special focus on Indian context. It meticulously outlined the roles and responsibilities of various organizations like Genetic Engineering Appraisal Committee (GEAC), Review Committee on Genetic Manipulation (RCGM), State Biotechnology Coordination Committee (SBCC), District Level Committee (DLC) and Institutional Bio-safety Committee (IBSC) in successful implementation of Biosafety regulatory regime in India. This session also had extensive discussion on the objective, scope and fundamentals of Cartagena protocol, the only international treaty so far, dedicated to the field of Biosafety. Using film as a medium of learning on scientific issues, a short documentary on Cartagena Protocol on Biosafety was screened in this session. Other two short documentaries on science communication were also shown to the participants, which dealt with themes like how press should cover science and how to shoot a video on a scientific topic etc.

Panel Discussion: Panel discussion on '*innovations in agri-biotechnology and media coverage of emerging issues for public consultation'* formed an important part of the 2nd day sessions. Panel discussants comprised of Mr Sanjiv Shankaran, Senior Correspondent, Times of India; Mr Ratnajyoti Dutta, Correspondent of Reuters and Mr Manoj Varghese, Senior Consultant at IIMC. The speakers stressed upon the need of engaging citizens through print media on issues, such as GM food, important from both socio-economic as well as public policy perspectives. Mr Sanjiv Shankaran pointed that each stakeholder should be taken into account while framing the news or writing on such issues, while Ratnajyoti Dutta put more stress on role of agriculture ministry and plant biotechnologists, as they have more expertise and credibility than others. Mr Manoj Varghese deliberated on the pros and cons of covering any science news which is not only technologically complicated but also sociologically debated. He chose to take a more balanced approach and urged to present the reality to the reader in a very objective and non-biased way.

Group Work: Post-lunch session of the workshop was devoted to the group-work activities where participants were invited to make presentations on the topics related to Biosafety which was followed by an interactive Q&A Session. The broad areas assigned for the group-work were:

1. Innovations in Agri-Bio-technology and implications for the region
2. Agricultural Productivity, Self-reliance and Farmers' issues in the Bio-safety regime
3. Food, Nutrition and Bio-safety Issues for Consumers

4. Socio-Economic aspects of Agri-Bio-technology
5. Environment, Biodiversity issues and Bio-safety norms
6. Dimensions of Regulation and Bio-safety norms in the country and the region.

Valedictory Session: The two-day workshops culminated with a formal valedictory session and certificate distribution to the participants. Feedback/suggestions were collected from the participants through a structured questionnaire for the performance evaluation and nurturing further improvements in succeeding workshops to be conducted in the near future as part of this series. It is expected that the feedback and suggestions from the workshops would enrich the national discourse on Biosafety at various levels and would contribute to effective policy making on this promising field of Agri-biotechnology.

5

REGIONAL MEDIA WORKSHOPS ON COMMUNICATING SCIENCE AND BIOSAFETY

BANGALORE, KARNATAKA

Date: May 15th and 16th, 2015
Venue: Jnanajyothy Auditorium, Central College, Bangalore University, Bangalore - 560001

Day 1– 15thMay, 2015 Friday

Inauguration: The workshop started with a welcome note by Prof. Narasimha Murthy, Head, Department of Electronic Media, Bangalore University. Prof. Gita Bamezai, Chief Project Coordinator & Head, Department of Communication Research (DECORE), IIMC presented a brief overview of the project. She apprised the participants about the background, purpose, aim, objectives and anticipated outcomes of this project. The inaugural speech by Prof B. Thimme Gowda, Hon'ble Vice Chancellor, Bangalore University called attention to the importance of biotechnology and highlighted the need of biotech based research in the field of agriculture to ensure food security. He also focused on the need for more such workshops to sensitize the journalists in this area. Dr. S.R. Rao, Advisor, DBT in his keynote address explained the significance of Biosafety in biotechnology. The workshop gradually proceeded through oral presentations, lively interactions and group presentation by the participants on various aspects of the Biosafety and its communication.

Inaugural Session by the Prof B. Thimme Gowda, Vice-Chancellor, Bangalore University and Dr. S.R. Rao, Adviser, DBT

Technical Session I: Innovations in Biotechnology and Importance of the Bio-safety Programme: At the introductory session, Dr. Channarayappa, Professor and Head, Department of Biotechnology, M.S. Ramaiah Institute of Technology explained food security

issues in his preliminary segment of the talk, and highlighted enormous potential of biotechnology in providing feasible solutions and a rational response to the growing need of economic growth, food security, conservation and protection of environmental resources. He described the basic terms, definitions applied themes related to GMOs/LMOs and shed light on growth and global status of GM crops across the world. He familiarized the participants with the process of production of Genetically Modified food and the evolution of the technology over time. Clarifying some of the misconceptions regarding GM, he stated that GMOs are safe to use and offer enormous social and environmental benefits while also addressing some concerns and risks associated with GM crops. He promptly outlined the precautionary measures to be taken during the development of GMOs. In the final part of the talk he suggested quite a few potential applications of GM crop technology for future use.

Technical Session II: Why do we need Agri-biotechnology? Working with new technologies for Local Solutions: Dr. S.R Rao, Advisor, Department of Biotechnology, Govt of India, draw attention to issues of growing population, widespread malnutrition, hunger, climate change effects and global warming. In this context, next green revolution is only possible with new gene technology. He gave a broader overview of agricultural technologies with a special emphasis on GM crops while underlining the prospect that India has the potential to become a major producer of transgenic rice and genetically modified or engineered vegetables. He discussed about ongoing developments in the field of GM crop technology, expanded on current status of worldwide GM cultivation, and their approval scenario. He provided a comprehensive roadmap for development process of GM crop and explained various policies, schemes and regulations dealing with agri-biotechnology. He also detailed out the risk assessment procedures for GM crops and assured that current and new technologies are an evolving part of solution to India's food needs. He argued for development of intense collaboration and partnership among allied sectors to bring out a positive outcome in this field.

Dr. S.R. Rao, Adviser, DBT

Technical Session III: Practice of Science Journalism in India - Challenges & Opportunities: The next session discussed several issues, concerns, challenges faced by the media professionals/science communicators in reporting science and technology, for example, the problem of non-availability of scientific information in local languages, problems in getting direct access to scientists/scientific institutions etc. The instrumental role of regional media in bringing clarity to local issues and to clarify misconceptions among public was

emphasised in the session and the need of organizing more knowledge-based and informative workshops for regional media professionals. The discussion centred on facilitating a connective link among local and regional journalists by way of video conferencing in all districts of the country to encourage district level reporting/publications on scientific topics.

Day 2– 16th May, 2015 Saturday

Technical Session I: Safety Assessment and Detection methods of GM Crops in India: In the session on safety assessment of GM crops, Dr. Lalitha R. Gowda, Former Chief Scientist, CSIR-Central Food Technological Research Institute detailed out the rigorous process of Biosafety assessment covering environmental safety assessment, food and feed safety assessment of GM crops prior to its commercial release. She began her talk with a brief discussion on safe food, criteria laid down for food and feed safety, institutions dealing with food safety systems, existing act and standards for food safety and focused on the test methods, used for safety assessment of GE Crops. Elaborating extensively on safety parameters, regulatory requirements, stringent safety standards to be maintained during the release of GM crops, Dr. Gowda underlined that any safety assessment study to be performed should be wholesome, with clear objective(s), study design, protocol, dose level selection, sensitivity, statistical validity, compliance, data analysis and science based interpretation. She also pointed out few limitations associated with these methods.

Technical Session II: Biosafety Regulatory Framework in India: Challenges and Prospects: Inthis session Dr. Ranjini Warrier, Adviser, MoEF&CC gave a brief account of Biosafety Regulatory Framework in India and Global regulatory regime with a special focus on Biosafety. She spoke about the Environmental Protection laws of India and subsequently outlined current status and recent developments related to the existing laws, regulations, legislations, guidelines and policy frameworks incorporating Biosafety in India. Further, she explained the mandate and roles of various ministries and departments dealing with the issues of GM and Biosafety. The fundamentals and scope of Cartagena protocol, along with an inclusive description of its obligatory components and mechanisms, were also discussed extensively in this session. In addition, she stressed upon the requirements and precautions needed for GM field trials and unfolded the detailed procedure of safety assessment mechanisms and processes. She also

Dr. Ranjini Warrier, Adviser, MoEF&CC

shared valuable information on current status of various GM crops and matters related to their approval by the central government.

Technical Session III: Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety: The final session of the workshop was designed to provide adequate information regarding the web portals, links and databases (both online and offline) responsible for the dissemination of the facts, figures and updates in the field of Agri-biotechnology, Biosafety and science communication. In this session, Mr. Rayies Altaf, Project Coordinator delineated details related to Biosafety Clearing House and numerous other reliable sources of GMOs/LMOs and Biosafety for credible and authentic reporting.

Group Work: Post-lunch session of the workshop was dedicated for group-work activities where participants were invited to make presentations on the topics related to the Biosafety which was followed by Q&A session. The broad areas assigned for the group-work were:

1. Innovations in Agri-Bio-technology and implications for the region
2. Agricultural Productivity, Self-reliance and Farmers' issues in the Bio-safety regime
3. Food, Nutrition and Bio-safety Issues for Consumers
4. Socio-Economic aspects of Agri-Bio-technology
5. Environment, Biodiversity issues and Bio-safety norms
6. Dimensions of Regulation and Bio-safety norms in the country and the region.

Panel Discussion: The panel discussion conducted on Regional Media & its role in communicating science and technology was led by Prof. A. S. Balasubramanya, Emeritus Professor, University of Bangalore, Karnataka. Other panellists were Prof. Gita Bamezai and Dr. Anand Pradhan of IIMC. The session deliberated on how to report Agro-biotechnological innovations and bring an informed perspective to the debate. This would ensure a more pragmatic approach in

programme design and implementation at the state and district level. Secondly, how to write good science features was an issue which the journalists had to contend with if working in a language press. Scientific writings have been confined to the margins and readership is considered poor for such articles. There is an urgent requirement for the academic programmes to provide skills and learning about covering science in an interesting way which will distil the technical verbiage from more commonsense understanding of how science impacts our lives.

Certificate distribution to participants

Group Photograph

KOLKATA, WEST BENGAL

Date: May 21st, 2015
Venue: Kadambini and Chandramukhi Hall, 3rd Floor of Central Library, University of Calcutta

21st May, 2015 Thursday

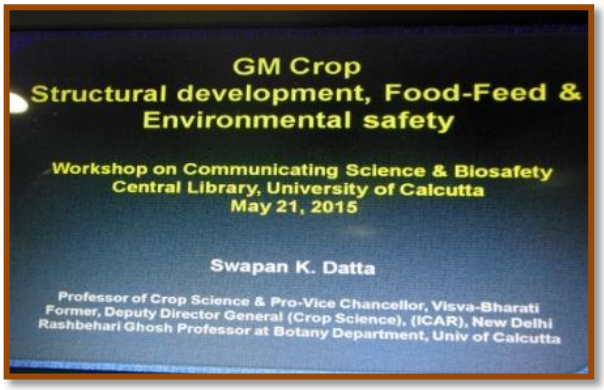
Inauguration: The workshop began with the welcome note by Prof. Tapati Basu of Department of Journalism & Mass Communication, University of Calcutta and subsequently advanced through a brief overview on project objectives, aim, plan of action and anticipated outcomes of this novel initiative by Prof. Gita Bamezai, Head, Department of Communication Research, IIMC, New Delhi. The inaugural speech by Prof. Dhrubajyoti Chattopadhyay, Hon'ble Pro Vice-Chancellor, University of Calcutta outlined the importance of such workshops which assist in bringing media practitioners and scientists to steer the debate about critical scientific issues and to explore new vistas of knowledge for the benefit of the society. Prof. Santanu Sanyal in his address outlined few challenges faced by media professionals in covering environmental issues. Underlining the major problem of current day journalism, he pointed that in the absence of dedicated journalists to cover science and technology issues, reporters covering the general beats and having inadequate understanding of science are compelled to work on scientific issues. As a result, they fail to deliver efficiently on any scientific theme which needs their rational and incisive attention. Commenting further on this topic, Dr.Snehasis Sur stated that ahead of presenting a scientific issue, all the journalists, irrespective of their backgrounds, have to understand it from every aspect and then try their best to communicate in common man's language. Dr. Manas Pratim Das discussed concisely how the issues of ownership pattern and profit of media vehicles interfere with the importce given to science coverage.

Technical Session I: Innovations in Biotechnology and Importance of the Bio-safety Programme: The first technical session began with the presentation by Prof. Sampa Das from Bose Institute, who highlighted uniqueness of India, with its geographical location and diverse source of organisms bearing rich potential of medicinally and industrially important components, possesses enormous possibility for variable germplasm use. She explained some fundamental concepts related to agricultural biotechnology and familiarized the participants with various genetic engineering techniques used in the agricultural sector and elaborated on the process of

Prof. Sampa Das, Bose Institute

production of Genetically Modified (GM) food. She presented information on the current status of the GM crops under research, development and field trials. Speaking on several issues that need careful consideration prior to the commercialisation of any GM crop, she outlined that before going into the application programme of any new gene/ protein, it is always desirable to assess the safety aspect of gene/protein as per the guidelines provided by FAO/ WHO. The studies and procedures used for safety assessment of GE Crops were explained through a case study of MON 863.

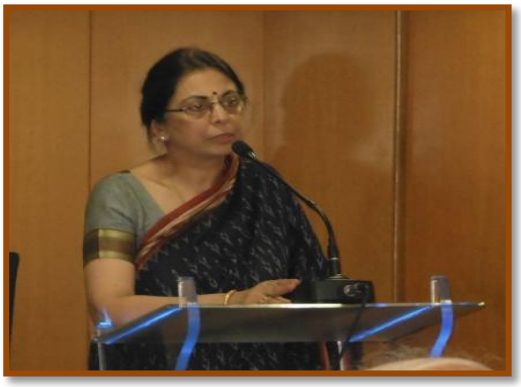
Technical Session II: Safety Assessment and Monitoring Mechanism of GM crops: Dr Swapan K. Datta, Professor of Crop Science & Pro-Vice Chancellor, Visva-Bharati began his talk with the definition of Biosafety and addressed the issues and people's concerns related to GM crops. He provided a sequential timeline of the developments made over past few years in the field of gene technology. He also highlighted the milestones from the international arena on the safety assessment of biotech crops. A synopsis of steps involved in GE crop development and commercialization alongside a GM crop road map was presented.



Dr Swapan K. Datta, Professor, Crop Science & Pro-Vice Chancellor, Visva-Bharati

He detailed out various phases of safety assessment covering environmental safety assessment, food and feed safety assessment, containment field trials of GM crops prior to its commercial release. Professor Dutta extensively discussed about the safety parameters and stringent safety standards to be maintained during the release of GM crops and presented a comprehensive overview on *BACILLUS THURINGIENSIS (BT*) and a holistic perspective on BT cotton in India. Summarizing key components of his talk in concluding remarks, Dutta pointed out that Biotechnology has the potential to revolutionize agriculture and benefit the farmers and society. Functional and effective dissemination of the correct knowledge is a pre-requisite to promote this technology.

Technical Session III: Covering Biosafety Issues by Media - Dimensions of Risk Communication: In this session, Professor Gita Bamezai, Chief Project Coordinator and Head DECORE, IIMC discussed about the gaps and challenges for building capacities of mass media in reporting science and bio-safety issues in India. She argued that the Media is consistently focused on the risks than benefits and mostly presents benefits of GMOs as secondary and risks as the primary areas of debate. She underlined some criticism of media by scientists/policy-makers and highlighted that media fails in setting agenda for critical public debate and the policy formulation. Speaking on the reporting issues, she commented that media does selective reporting and does not give high priority to biotechnology and Biosafety issues, tends to exaggerate and heighten the perception of risks in pressurized situations, although acknowledging the fact that media faces challenges of limited resources. She discussed the contesting lines between proponents and opponents of GMO and pointed out that the involvement of multiple stakeholders in Biotechnology & Biosafety programme (business, government, scientists, farming Communities, NGOs and public) and diverse perspectives make the issues related to this field more complex and competitive.



Prof. Gita Bamezai, IIMC, New Delhi

This session brought attention to the fact that risks are vastly affected by socially constructed norms and practices prevailing in a particular society and thus success of biotech products are located within social settings. She added that the public perception rests on how media reports intelligently. Public knowledge, attitudes, and perception of biotech products largely determine if the biotech crops are contributing remarkably to the world's food supply. Hence it adjured media to act in a responsible way to generate pragmatic knowledge, attitudes, and perception on such issues in the society. Citing numerous positive and negative reflections on GM crops, she appealed media to report these issues intelligently and in a sensible and scientific manner. In her final remarks, suggesting further directions for rational and scientific media reporting, Prof. Bamezai asserted that media needs to demystify the process of Biotech crop production and Biotech Products for public understanding and apt policy formulation.

Technical Session IV: Communication of Scientific Innovations: The panel session was moderated by Dr Anand Pradhan in which Prof Gita Bamezai, Prof Tapati Basu and Dr Dipayan Dey also participated. Panellists addressed several issues, concerns, challenges faced by media professionals/science communicators in reporting science and technology. The problem of non-availability of scientific information in local languages and getting direct access to scientists/scientific institutions were highlighted. Pointing at the emergence of science as an integral part of journalism over the past few years, Dr Dipayan Dey adjured

media to avoid unverified news coverage and articulate scientific issues in laymen language to build a harmonious relation with its target audience/readers.

Participants

Group Photograph

BHOPAL, MADHYA PRADESH

Date: July 14th and 15th, 2015
Venue: Conference Hall, 5th Floor, Makhanlal Chaturvedi National University of Journalism & Communication

Day 1 –14th July, 2015, Tuesday

Inauguration: The workshop started with a welcome note by Dr. P. Sasikala, Head, Department of New Media Technology, Makhanlal Chaturvedi National University (MCU). Prof. Gita Bamezai, Chief Project Coordinator & Head, Department of Communication Research (DECORE), IIMC presented a brief project overview and the background, purpose, aim, objectives and anticipated outcomes of the project. In his address, Mr. P.J. Sudhakar, Additional Director General, PIB, Bhopal emphasized on the significance and need of organizing training workshops for wider dissemination of knowledge and skill among journalists on biotechnology, Biosafety and science communication as a whole.

Prof. B.K.Kuthiala, Vice-Chancellor, Makhan-lal Chaturvedi Jourmailsm and Mass Communication University, Bhopal
Mr. Ranjan Mukherjee, ADG, Prasar Bharti (DD Kisan & DD India international)
Mr. P.J. Sudhakar, Additional Director General, PIB, Bhopal

Mr. Ranjan Mukherjee, ADG, Prasar Bharti (DD Kisan & DD India international highlighted the importance of creating and promoting scientific temper through mass media. In the scientific age, the meanings and imperatives of the scientific temper are of significant value to us as individuals and as a society. Outlining the challenges in this field, he commented that scientific temper cannot flourish in a grossly disenfranchised society where half of the population lives below the poverty line and almost 70 per cent of the people, especially women, are functionally illiterate. Social justice, widespread education and unrestricted

communication are pre-requisites for the spread of scientific temper and thus optimizing the results of science and technology. He suggested that the mass media should play an instrumental role to allay the fears and superstitions among public and create logical and pragmatic thinking through communication of correct information on science and technology. Highlighting the vital role played by Kisan channel, he explained that the objective of DD Kisan is to educate farmers by providing information on latest technology, newer methods of cropping and high-yielding varieties of crops for the benefit of rural communities. The channel educates the farmers to plan for better use of science and technology rather than superstitions.

In his presidential address, Prof. B. K. Kuthiala, Vice Chancellor, MCU urged journalists to demystify the science behind communication. He stated that though media professionals are aware of their major responsibility in communicating good for the society , under the pressurised system and strained work environment they are compelled to disseminate wrong information many times which should be avoided completely.

The workshop gradually proceeded through oral presentations, lively interactions and group work presentation by participants on various aspects of bio-safety and imperatives of risk communication.

Technical Session I: Innovations in Biotechnology and Importance of the Bio-safety Programme: In the preliminary session of the workshop, Dr. Sharad Tiwari, Director, Biotechnology Centre, J.N. Agricultural University gave a concise introduction on biotechnology and explained some fundamental concepts related to the discipline of agricultural biotechnology. Highlighting the need for Genetic Engineering techniques, he underlined that the application of biotechnology holds enormous potential to provide feasible solutions and a rational response to the growing need of economic growth, food security, conservation and protection of environmental resources. He described the basic terms, definitions; applied themes related to GMOs/LMOs and shed light on growth and current status of transgenic crops in India and across the world. He familiarized the participants with the process of production of Genetically Modified food and illustrated the steps involved in generating transgenic plants in the lab. Signifying the importance of Biosafety in agricultural sector, he widely expanded on the present scenario of Biosafety initiatives, role, and responsibilities of various institutions, existing regulatory system and safety assessment procedures dealing with Biosafety issues in India. Clarifying some of the misconceptions regarding GM, he stated that GMOs are safe to use and offer enormous social and environmental benefits. In the final part of the talk he suggested few information sources for agricultural biotechnology which journalists can source for covering various dimensions of GMOs.

Technical Session II: Safety Assessment and Detection methods of GM Crops in India: In the session on safety assessment of GM crops Dr. Milind B. Ratnaparkhe, Senior Scientist, Directorate of Soybean Researchaddressed the basic objectives of the transgenic crops and the major concerns related to GM crops. He highlighted the need for safety assessment procedures and subsequently detailed out the rigorous process of Biosafety assessment covering environmental safety assessment, food and feed safety assessment of GM crops and laboratory stage development prior to its commercial release. The stepwise process of safety assessment and various detection methods of GM crops were covered extensively in this session.

Technical Session III: Regional Media & its role in communicating science & technology: The session was moderated by Dr Anand Pradhan, IIMC and panellists Mr. Alok Mishra and Mr Rakesh Dixit discussed several issues, concerns and challenges faced by media professionals/science communicators in reporting science and technology. For example, the problem of non-availability of scientific information in local languages and direct access to scientists/scientific institutions were primary gaps. The discussants explained the instrumental role of regional media in bringing out clarity of the perception among public. Panellists widely acknowledged the seminal role media plays in society by providing information which is critical to the way people comprehended and make sense of the world. Given lack of competence or specialized knowledge of scientific issues, it is extremely important for media organizations to invest in people with scientific background rather than people with mere journalistic knowledge and skills. Employing or investing in people with expert knowledge of science issues may repair the damage caused by the apparent misreporting and in turn improve the relationship between media and the scientific community. The panellists urged the media industry to work closely with training institutions to introduce science curricula in improving the understanding of science and technology issues among journalists. Mr Rakesh Dixit, as a seasoned journalist, dealt with the challenges journalists face while covering science & technology and the ways to overcome paucity of information sources and in improving standards of scientific writing.

Technical Session IV: Unveiling Biosafety Communication: In this session, Dr. S.C Dubey, Joint Director (Retd.), HSADL, IVRI delved deeply into the idea of communicating scientific information with major focus on Biosafety and the problems faced by journalists in understanding scientific terms since most of them are complex or of foreign origin. He emphasized on creating an indigenous vocabulary with local terms, easy to remember and understood by people with science background as well as by common people. The speaker urged journalists to use local terms instead of complex foreign words and popularize local terms, so that they become part of the scientific writings or terminology. The speaker also dealt briefly about allowing GM research in laboratories (both animal and plants) and commercialisation of products. He emphasised consensus based on logic and evidence in

dealing with scientific issues but simultaneously ensuring wider public support and trust. He recommended his fellow scientific community to talk about their research and make the public aware about how their research can be useful and beneficial to the society.

Day 2– 15th July, 2015 Wednesday

Technical Session I: Biosafety Regulatory Framework in India: Challenges and Prospects: Dr Ranjini Warrier, Advisor, MoEFCC gave a brief account of Biosafety Regulatory Framework in India and Global regulatory regime with a special focus on Biosafety. The Environmental Protection laws of India have to include the existing laws, regulations, legislations, guidelines and policy frameworks incorporating Biosafety in India to make them holistic. She explained the mandate and roles of various ministries and departments dealing with the issues of GM and Biosafety. The fundamentals and scope of Cartagena protocol and its obligatory components and mechanisms were extensively discussed in this session. Dr. Warrier expanded on the requirements and precautions needed for GM field trials and elaborated on the procedure of safety assessment mechanisms and processes. She also shared valuable information on current status of various GM crops and matters related to their approval.

Technical Session II: Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety: The final session of the workshop was designed to provide adequate information regarding the web portals, links and databases (both online and offline) responsible for the dissemination of the facts, figures and updates in the field of Agri-biotechnology, Biosafety and science communication. Mr Rayies Altaf, Project coordinator delineated details related to Biosafety Clearing House and numerous other reliable sources of GMOs/LMOs and Biosafety for credible and authentic reporting.

Group Work: Post-lunch session of the workshop was dedicated to group-work activities and presentations on the topics related to Biosafety. The broad areas assigned for the group-work were:

1. Innovations in Agri-Bio-technology and implications for the region
2. Agricultural Productivity, Self-reliance and Farmers' issues in the Bio-safety regime
3. Food, Nutrition and Bio-safety Issues for Consumers
4. Socio-Economic aspects of Agri-Bio-technology
5. Environment, Biodiversity issues and Bio-safety norms
6. Dimensions of Regulation and Bio-safety norms in the country and the region

AHMEDABAD, GUJARAT

Date: July 22nd and 23rd, 2015
Venue: Seminar Room, 2nd Floor, Dept. of Communication Journalism, Gujarat University

Day 1– 22nd July, 2015 Wednesday

Inauguration: The workshop commenced with a welcome note by Dr. Sonal Pandya, Head, Department of Communication and Journalism, University of Gujarat and a brief overview project objectives, aim, plan of action and anticipated outcomes of this novel initiative by Prof. Gita Bamezai, Chief Project Coordinator & Head, Department of Communication Research, IIMC, New Delhi. In his inaugural speech, Registrar of the University welcomed the idea of sharing with the media scientific innovations, since lack of scientific news in the media reduces the value of learning of newspapers readers.

Technical Session I: Innovations in Biotechnology and Importance of the Bio-safety Programme: In the preliminary session, Prof. Vasant P. Gandhi, Chairman, Centre for Management in Agriculture, Indian Institute of Management, Ahmedabad focused on biotechnology and Biosafety and highlighted promises offered by Biotechnology in Indian scenario. Highlighting the Bt Cotton as the only Biotech crop in India to be used as commercialized GM crop, his exposition covered varied dimensions of the technology -the growth, adoption status, area under cotton production, impact, advantages, disadvantages of Bt cotton, issues, concerns raised for and against its usage. Citing experts' views on risk assessment and various consumer survey results on GM crops, he clarified some of the misconecptions regarding GM crops. GMOs are safe to use and offer enormous social and environmental benefits. Discussing the vital role of news media in GM related communication in the final part of the talk, he urged extensive communication by the government and the media to disseminate accurate information on GM crops among the public.

Technical Session II: Safety Assessment and Biosafety Mechanisms of GM Crops in India: Dr. Milind B. Ratnaparkhe, Senior Scientist, Directorate of Soybean Research addressed the basic objectives of transgenic crops and the major concerns related to GM crops. He highlighted the need for safety assessment procedures and rigorous process of

Biosafety assessment covering environmental safety assessment, food and feed safety assessment of GM crops and laboratory stage development prior to its commercial release. The stepwise process of safety assessment and various detection methods of GM crops were extensively covered in this session.

Day 2– 23rd July, 2015 Thursday

Technical Session I: Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety: The first session of the second day of the workshop was designed to provide adequate information regarding the web portals, links and databases (both online and offline) responsible for the dissemination of the facts, figures and updates in the field of agri-biotechnology, Biosafety and science communication.

Technical Session II:Regional Media & its role in communicating science & technology: The panel discussion moderated by Dr Anand Pradhan had eminent communication researcher Prof. Binod C. Aggrawal Director General of TALEEM Research Foundation, and Mr. Pradeep Mallik Deputy Resident Editor, Mirror, Ahmadabad participating in the discussion. Professor Aggarwal bemoaned the fact that science writing has not received due attention in the Indian media and lack-lustre approach and treatment given to such stories is making Indian media more publicity oriented. The SITE experience provides a rich understanding of how to reach millions through meaningful information. Research is an important element in writing on science which journalists find it difficult to comprehend because they are averse to putting serious attention to meaningful and practical aspects of our daily lives. Mr. Mallik was of the opinion that journalists need to rediscover new ways of approaching scientific issues and digital media provides many interesting opportunities today in reporting science.

Group Work: The broad areas assigned for the group-work were:

1. Innovations in Agri-Bio-technology and implications for the region
2. Agricultural Productivity, Self-reliance and Farmers' issues in the Bio-safety regime
3. Food, Nutrition and Bio-safety Issues for Consumers
4. Socio-Economic aspects of Agri-Bio-technology
5. Environment, Biodiversity issues and Bio-safety norms
6. Dimensions of Regulation and Bio-safety norms in the country and the region.

CHANDIGARH, PUNJAB

Date: July 28th and 29th, 2015
Venue: ICSSR Complex, Panjab University, Sector 14, Chandigarh

Day 1 –28th July, 2015 Tuesday

Inauguration: In his presidential address Prof Arun K. Grover, Hon'ble Vice Chancellor of Panjab University, emphasised the art of science communication and the need to prioritise it in today's environment when contesting views require more deliberate and evidence-based news to be presented as a balanced perspective. As a scientist himself, he shared his own experiences as a communicator of scientific knowledge and explained why the field of science communication is vital for the society's growth and progress and how we can be good science communicators. The programme started with a formal welcome address by Dr. Archana R. Singh, Professor, School of Communication Studies, Panjab University Chandigarh. It was followed by a brief introduction of workshop by Dr Anand Pradhan, Project Co-Coordinator and Associate Professor, IIMC, New Delhi and vote of thanks were given by Dr Surbhi Dahiya, Project Co-Coordinator & Associate Professor, IIMC.

Technical Session I: Innovations in Biotechnology and Importance of the Bio-safety Programme: Dr. Siddharth Tiwari, Scientist-C, National Agri-Food Biotechnology Institute (NABI) gavea concise introduction about frontiers of biotechnology and explained some fundamental concepts related to the discipline of agricultural biotechnology. Highlighting the need for Genetic Engineering techniques, he underlined that the applications of biotechnology holds enormous potential to provide feasible solutions and a rational response to the growing need of economic growth, food security, conservation and protection of environmental resources. He explained about the progress science had made in the area and the position India had achieved in becoming one of the major countries in the region after China in use of GMOs technology for experimentation and controlled field trials. He expanded on the present scenario of Biosafety initiatives, role and responsibilities of various institutions, existing regulatory system and safety assessment procedures dealing with Biosafety issues in India.

Technical Session II: Safety Assessment and Biosafety Mechanisms of GM Crops in India: Dr Gurinderjit Randhawa, Principal Scientist, NBPGR, ICAR-Pusa interacted with the participants and detailed out the rigorous process of Biosafety assessment covering environmental safety assessment, food and feed safety assessment and laboratory stage development of GM crops prior to its commercial release. While working on GM technologies/procedures or DNA alterations, proper care is taken and all safety procedures are followed very rigidly. Procedures and processes employed in government laboratories by

agriculture scientists to ensure that safety standards and national as well as international guidelines on Biosafety are strictly followed. Through use of such technologies and and laboratory instruments it is possible to detect genetic manipulation in a food crop or fruit. Such techniques are used to detect if any GM food/crops are being grown or used or even imported illegally into the country. These techniques are known as GM detection technologies and such technologies are now available in Indian laboratories also.

Technical Session III: Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety: In this session number of databases and knowledge banks, both national and international related to agri-biotechnology and Biosafety, were shown to the participants. The information given by these databases ranges from basic knowledge in biotechnology to updated information related to GM crops or GM techniques.

Day 2 –29th July, 2015 Wednesday

Technical Session I: Transgenic Crops: Risk Assessment:Dr.Jagdeep S. Sandhu, Senior Biotechnologist, Punjab Agricultural University gave a brief introduction about the GM crops and the journey Gene Technology has covered over the years. He detailed out the rigorous process of Biosafety assessment covering environmental safety assessment, food and feed safety assessment and laboratory stage development of GM crops prior to its commercial release. The safety parameters, stringent safety standards to be maintained during the release of GM crops are important. The guidelines, principles and regulatory mechanisms to be followed for the safe handling, transfer and use of genetically modified (GM) plants are essential parts of the programme.

Technical Session II: Regional Media & its role in communicating science & technology: Dr. Neelam Gulati Sharma, Director (POS) PSCST, Chandigarh, Prof. Daizy Rani BatishDeptt. of Botany, Panjab Univ. Chandigarh, Mr. R. Chugh, HoP, Apna Radio, CR, IIMCand Dr. Archana R. Singh, Professor, Panjab Univ. Chandigarh participated in the panel discussion which was moderated by Dr. Anand Pradhan of IIMC. The panellists spoke about developing a collaborative mechanism which would fuel interaction among scientists and media practitioners on a sustained and consistent basis. This would require a more active engagement in developing material on scientific issues in assistance with communication experts. Equally important would be to develop curricula which inspires more confidence and brings in a culture where news pertaining to scientific innovations and discoveries can ignite interest of the readers and viewers. Criticism of sensational slant given to even scientific news comes from lack of understanding about the constraints that journalists face from the deadlines and the pressures exerted from the management which run these media organisations. This situation requires multi-pronged effort to encourage more extensive sharing of scientific information and published work with public and policy makers through

the media and developing easy to understand material for the rural communities about the difference scientific innovations can make to their lives and for building lab to land culture in a more meaningful way between scientific establishments and the communities they serve.

6

COMMUNITY RADIO PROGRAMME ON BIOSAFETY ISSUES

WHY COMMUNITY RADIO?

As an expansion of its ambit of ambition, IIMC teamed up with various Community Radio stations (CRs) across the country to induct additional collaborators in its endeavour to spread awareness on Biosafety and agri-biotechnology issues. Two representatives from each of the CR in the states attended the media workshops organized by IIMC as part of an orientation to the salient aspects of the Biosafety and innovations in agri-biotechnology.

Community Radio is an excellent forum to raise, understand and solve the issues of their community. Representing a local community, CR, develops an intimate and trusted association with its listeners. Thus CR can be a very useful tool in educating people about Biosafety issues in a simple, non-technical and creative way. The issues can be related to the socio-cultural milieu of the community by the CR and the feedback to the programs can be ascertained and necessary inputs can be provided by the local scientists.

Objectives

Broad Objectives for CR programme Initiatives were to create an interest and enhancement of knowledge about biotechnology and bio-safety issues among the communities. Another important aspect was to use a set of participatory communication techniques using local languages, to communicate directly with farmers and listeners' groups and to use simplified but precise language to address the queries pertaining to local problems. The program designed for the CRs included:

- Broadcast and production
- Public Service Announcements (PSAs)
- Documentation and Reporting

Collaboration with Community Radios

IIMC has collaborated with following CRs - Radio Jyotirgamaya (91.2MHz), Panjab University, Chandigarh; Radio Universal (106.8MHz), Universal College, Bangalore ; Radio Guruvani (90.8 MHz), Gujarat University, Ahmedabad; Radio JU (90.8 MHz), Jadavpur University, Kolkata; and Apna Radio, IIMC. These CRs have produced over 20 programmes ranging from live talk shows, interviews, quiz, panel discussions, and audio dramas. The programs are in regional languages like Gujarati, Marathi, Kannad, Bengali and Hindi. Each programme has had experts to disseminate information, views and opinions from various

organisations across the country like School of Life Science, JNU, Bose Institute, Kolkata, Visva Bharati University, National Bureau of Plant Genetic Resources, New Delhi, Punjab Agricultural University, and many more such eminent establishments. The topics covered in these programmes ranged from Role of communication in promotion of Biosafety, GM (Genetically Modified) Crops, Assessment of food derived by GMO crops , Biosafety in General, Biosafety related to Plants and Animals, Protocol on Biosafety, GM Studies related in India, Complaint Department for farmers for resolving their Problems and Queries, to name a few. The radio programmes have met with fair amount of success in terms of response from varied audience like students, farmers, science enthusiasts, professors and journalists. The feedbacks received by CRs complimented on the simplicity of language, comprehensibility of the way the issues were been handled, in its scope to widen the knowledge of the students that would in turn help them in their perusal of the issues.

Table 1.1

CR in the Collaborating University Campus		
1.	Ahmedabad (Gujarat)	Radio Guruvani (90.8 MHz) , Gujarat University
2.	Chandigarh (Punjab)	Radio Jyotirgamaya ((91.2MHz) , Panjab University
CRs outside the Collaborating University Campus		
1.	Kolkata (W.B.)	Radio JU (90.8 MHz) , Jadavpur University
2.	Bangalore (Karnataka)	Radio Universal ((106.8MHz) , Universal College
3.	Mumbai (Maharashtra)	Radio Dnyanvani (90.4 MHz) , D. Y. Patil University
CR in the IIMC Campus		
1.	New Delhi	Apna Radio (96.9 MHz), IIMC

RADIO JU
Radio JU (90.8 MHz) , Jadavpur University, Kolkata, West Bengal

Radio JU, the "direct descendant of the movement for modern indigenous education" is the community radio station of Jadavpur University. Launched as a part of Technical Education Quality Improvement Program on 14 April 2008, it collaborates with the School of Media, Communication & Culture of Jadavpur University and is a pioneering project of its kind in eastern India.

Radio JU, in keeping with its stature as a diligent establishment, teamed up with IIMC for the "Communicating Science and Bio-safety'' initiative and hosted and produced talk shows, inter-college quiz competition and audio drama. Their programmes like *'What is BT? How is it useful? Is it harmful for human beings?'* and *'BT in Agriculture'* dealt with the exact definition of GM crops, the difference between GM and normal crops, about BT-brinjal and BT-cotton and how safe it is for human beings. Dr. Sampa Das, the expert from Bose Institute, Kolkata shed light on BT, its alleged toxicity, the kind of insects the toxin can kill, the other functions of BT and the answer to the widespread suspicion that BT may pose

danger to the soil. The inter-college quiz programme had college students from Jadavpur University and Calcutta University participate in the quiz programm focused on the Biotechnology and its innovations. Radio JU brought to the forefront its innovative side by producing the talk show with a short documentary-feature. This rendered the show more dramatic thereby helping the listeners connect with the subject better.

RADIO JYOTIRGAMAYA

Radio Jyotirgamaya ((91.2MHz), Panjab University,Chandigarh, Punjab

Radio Jyotirgamaya (91.2 MHz), "acting as a unifying agent' amongst the university faculty, students and also the community" is the community radio station run by the School of Communication Studies, Panjab University. Jyotirgamaya has been instrumental in raising awareness regarding Agri-Biotechnology, GMOs/LMOs, Biosafety and other issues related to the innovations in the area. In its busy quotidian of 8 programmes per day, Radio Jyotirgamaya accommodated slots wherein it held interviews with experts in the area, viz., Dr Mangal Singh Sandhu ,Director of Agriculture, Punjab Kheti Bhawan and Dr Gurenderjit Randhawa , Principal Scientist, Division of Genomic Resources, National Bureau of plants genetic resource, New Delhi etc. The programmes primarily provided an insight about GM (genetically modified) crops; assessment of food derived by GMOs/LMOs; Biosafety in general; Biosafety related to plants and animals; related studies in India; how farmers can contact the complaint department regarding their problems and queries; safety of normal seed during maturation; safety of the crops after harvesting, increasing the shelf life of the crops; what agricultural biotechnology is; disadvantages of the excess use of pesticides and how GMOs/LMOs could be helpful in curtailing the use of it. The length of the programmes ranged from 18 minutes to half an hour.

In sync with its catchphrase, "tamso ma jyotirgamay" which translates in English as *Lead me from darknessto light*, the CR cast light on many doubts that have canopied Agri-

biotechnology and Biosafety for a long time now. Its endeavour met with positive feedbacks in the form of phone calls from varied sections of the society. An example of the suspension of communication barriers between the scientists and the stakeholders in the rural areas, who are otherwise bereft of updates regarding the new innovations, lies in a phone call by farmer. The farmer was thankful to Radio Jyotirgamaya for feeding information regarding the harmful effects of pesticides that he was not aware of. A *Sarpanch* from Khuda Lahora appreciated one of the shows for simplicity of language which would be very helpful to poor farmers. The pragmatic approach of the CR in the preparation of the programmes received constructive responses from the academic quarters wherein professors, teachers and even students pointed out how the show contributed in stepping their knowledge in the area. According to Dr. Amarjot Kaur, *"The best part of this show is its simplicity of language which will be helpful in comprehension of the subject matter by a farmer and also as far as innovation is concerned, it will encourage others as well in future. 95% area of India is under agriculture, so, it is very necessary to know the safety measures and how to use the new technology with care and caution."*

RADIO GURUVANI

Radio Guruvani (90.8 MHz) , Gujarat University, Ahmedabad (Gujarat)

Radio Guruvani (90.8 MHz), the community radio station of Gujarat University came in operation in 2012. The station broadcasts programme on various topics including career, literature, mythology, philosophy, education, subject knowledge, health, environment, women empowerment, and social awareness programmes in Gujarati, Hindi and English medium.

Radio Guruvani's contribution to the "Communicating Science and Biosafety" project lies in its sincere

facilitation of lectures by experts on radio. Dr. Nainesh Modi, Professor, M.G. Science College, Ahmbedabad and Dr. Sonal R. Pandya, Head & Assistant Professor, Department of Communication, Journalism & Public Relations were among many experts who took time from their busy schedule in order to shed light on the issues of Biosafety, food security and Agri-biotechnology which are otherwise not frequently discussed among the non-scientific community. Biosafety measures suggested by WHO, guidelines of microbial risk management were among the key subjects elaborated upon in the radio lectures.

RADIO UNIVERSAL

Radio Universal ((106.8MHz) , Universal College, Bangalore (Karnataka)

Radio Universal was launched on December 1, 2010, to mark the World AIDS Day. It is housed in the campus of Universal College that is affiliated to Bangalore University.

Radio Universal has been instrumental in taking the vision of IIMC to raise awareness regarding the issue of Biosafety, food security and innovations in biotechnology in and around Bengaluru by means of radio programmes. The community radio has been sincere in sending its staff to the 'Communicating Science and Biosafety' workshop in Bengaluru, held in May 15th-16th, 2015 so as to acquaint them adequately with the raging issue of GMOs/LMOs and safety concerns related to it. This information, along with the interviews, discussions and lectures by the experts in the subject, have been fairly incorporated in their radio programmes.

APNA RADIO

Apna Radio (96.9 MHz), Indian Institute of Mass Communication, New Delhi

Apna Radio was set up primarily as a campus radio for the students of the Indian Institute of Mass Communication (IIMC), New Delhi. By opening its gates to the general public, Apna Radio now involves not only the students of IIMC, but all sections of the community to participate in its programmes.

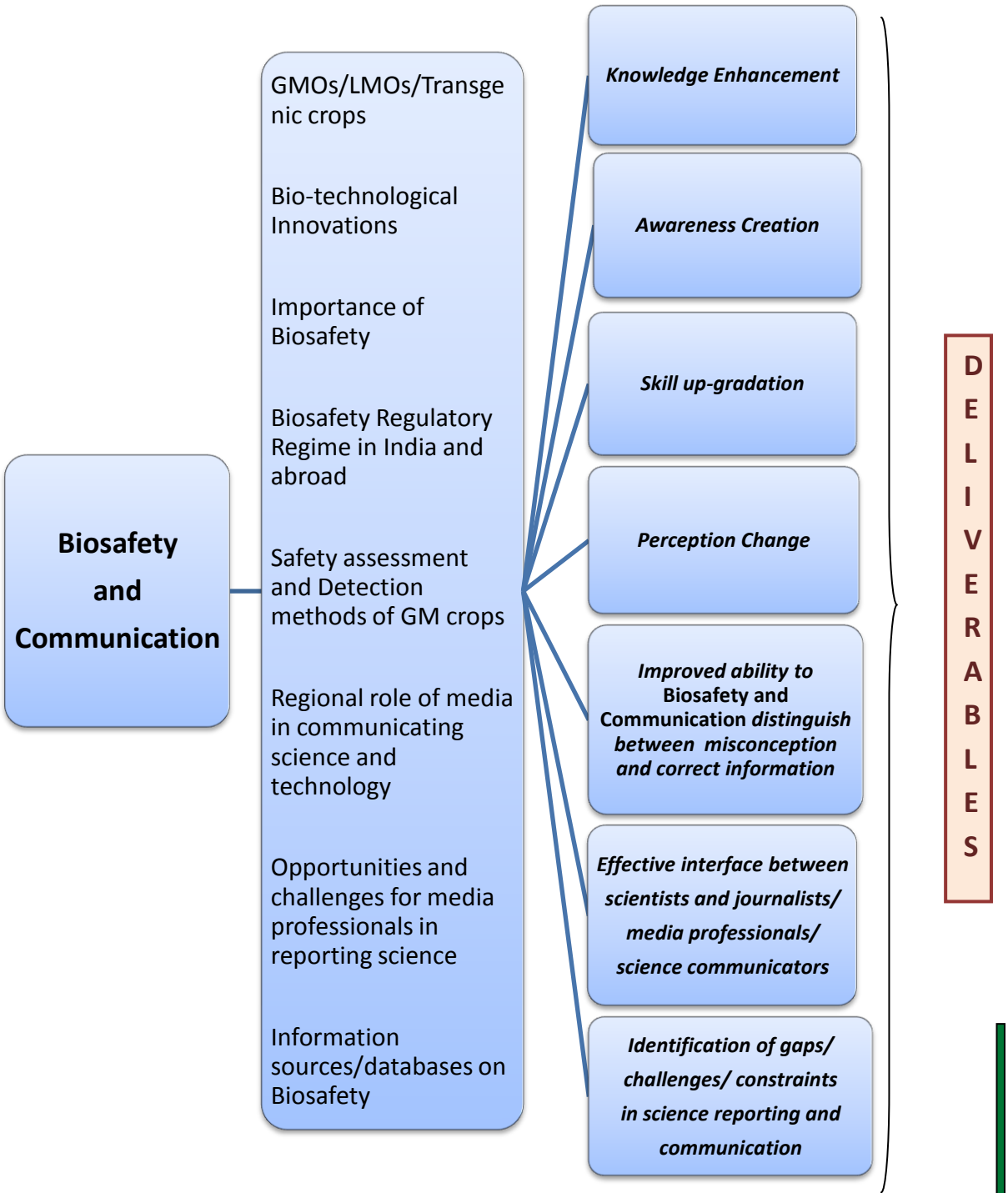
Apna Radio has expanded the scope of the project beyond the seminar halls and has striven to render such issues a public status by making them a matter of popular, academic and scientific discussions. Apna Radio through their diligent undertaking has been instrumental in spreading awareness regarding the issues of GMOs/LMOs and Biosafety that are generally neglected by the mainstream media. Many issues related to Science & Technology that are yet to make

their way into the public domain like Agri-Biotechnology, of paramount importance, have been incorporated into their programmes.

As a part of IIMC's initiation to communicate Biosafety issues, Apna Radio, through its numerous programmes, ranging from interviews, quiz, talk shows – featuring scientists and experts from the field, have tried to sensitize the local community listeners, especially in rural areas who are indispensible stakeholders, to various issues of Agri-biotechnology. Apna Radio has an added advantage over other media in its reach among rural community groups, a majority of whom are involved in agriculture. It has the potential in providing a platform wherein two different communities, viz. scientists and farmers can interact with each other and influence formation of opinions and perceptions on *agricultural biotechnology*.

7

REFLECTONS ON THE WORKSHOPS: OUTCOMES AND RECOMMENDATIONS



The evaluation of the workshop was based on the pre and post questionnaires delivered to the participants at the beginning and end of the event. Participants were asked to give their opinion about organization of the workshop, technical sessions, themes/content of the workshop, duration of the workshop, food, transport and other logistic arrangements, gains through this workshop, suggestions and remarks about further improvement. The outcomes of the project were pronounced in terms of knowledge enhancement, awareness creation, skill-upgradation, perception change, improved ability of the participants to distinguish between misconception and correct information, effective interface between scientists and journalists/media professionals/science communicators, identification of gaps/challenges/ constraints in science reporting and communication in addition to several other related aspects of the workshop set-up.

Knowledge Enhancement: Participants from all the regions agreed that the workshops conducted enhanced their knowledge about GMOs/LMOs, Agri-biotechnology and Biosafety. More than half (51.2%) agreed that it enhanced their knowledge base to a reasonable degree, while 34.9% agreed that the workshop increased their awareness and information on different aspects of Biosafety to a great extent *(Fig 1)*. The talks delivered by the experts provided them adequate information on basic facts, terminology, safety assessment methods, regulatory framework, information sources/databases related to GM crops and Biosafety communication. This added to their existing knowledge as well and gave them specific and detailed information about GM, Agri-biotechnology and Biosafety. When asked to give their opinion on the treatment of the basic theme of the workshop, more than half (54.3%) opined that workshop presented a balanced view of Biosafety and GMOs, while 29% participants believed that workshop provided a holistic and wider perspective on Biosafety issues*(Fig 2)*. Before the workshop, only 59.7% participants answered the definition of LMOs/GMOs correctly, but this level of understanding increased substantially to 73.6% after the workshop. Similarly, 77.5% of participants gave correct definition of Biosafety, while this level increased to 89.1% after the workshop (Fig 4). Regarding the role of Journalist in science communication, 42.6% of participants agreed that the workshop was extremely important while 41.9% found it reasonable *(Fig 5)*.

Figure 1: Enhancement of Knowledge on Biosafety (N=129)

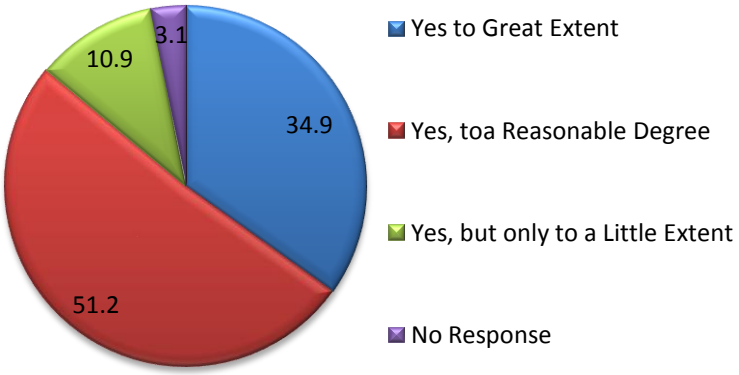


Figure 2: Opinion on Treatment of Basic Theme in the Workshop (N=129)

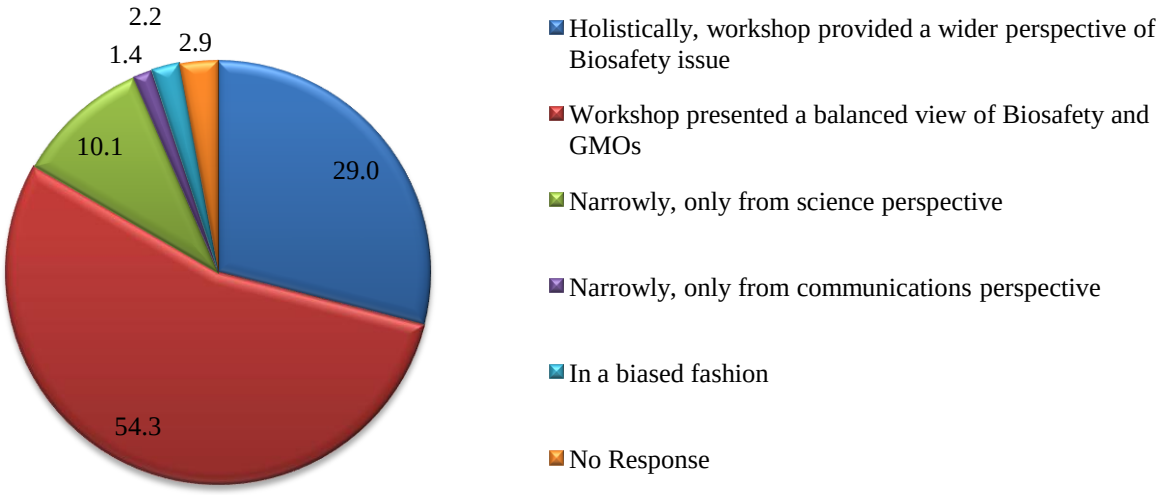


Figure 3: Understanding by Living Modified Organisms (LMOs)/Genetically Modified Organisms (GMOs)

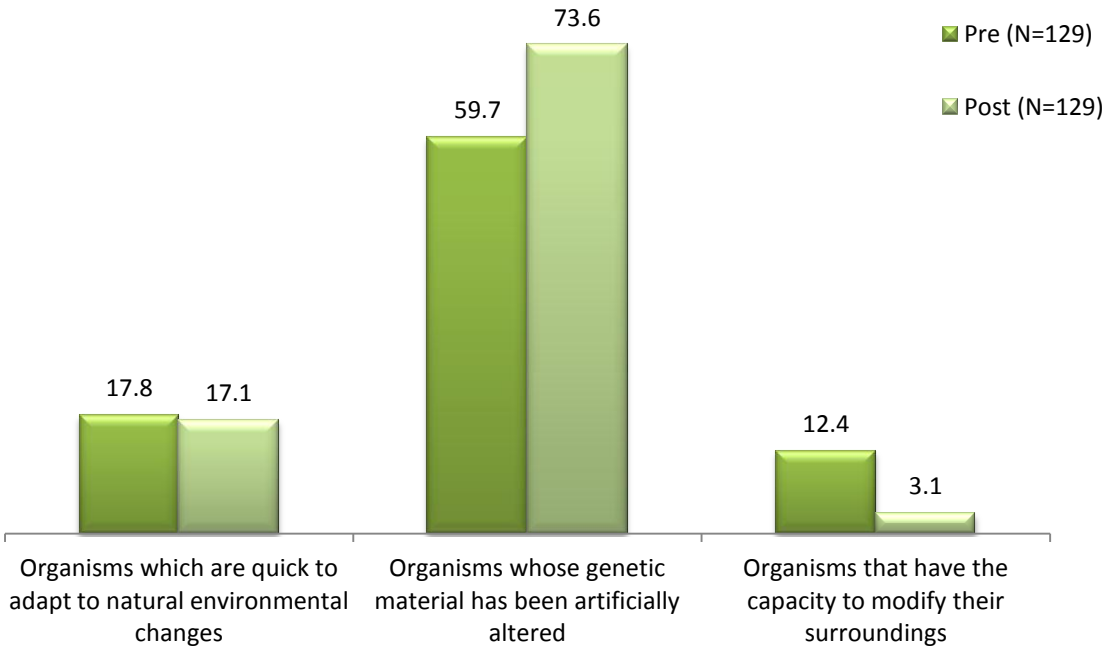


Figure 4: Understanding by the term Biosafety

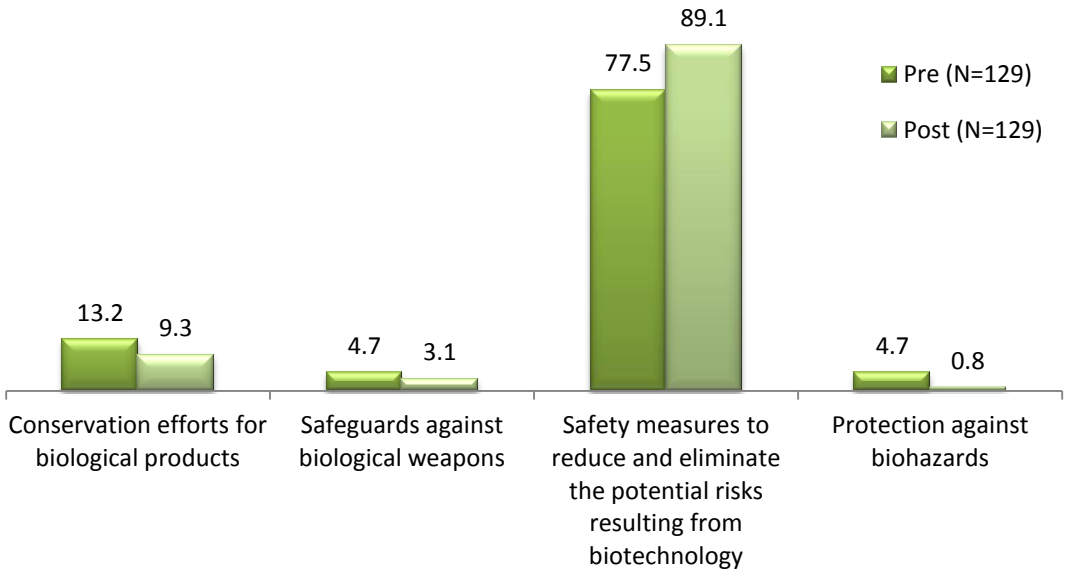
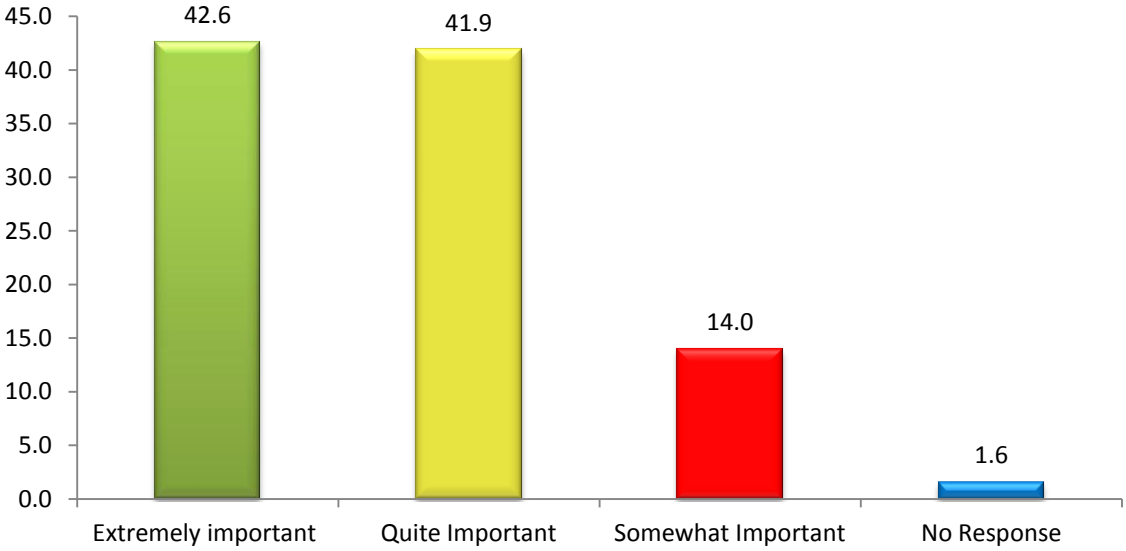


Figure 5: Importance of workshop to Understand the role of Journalist in Science Communication (N=129)



Awareness Creation*:* Before the workshop, most of the participants (61.5%) had only **limited knowledge** on Biosafety. Technical sessions familiarized the participants about basic as well as vital information related to agri-biotechnology and biosafety themes, few participants opined that some details brought them entirely new information in a substantial way and introduced them to some core new areas of Biosafety which they were not aware of prior to the workshop.

Perception Change and Improved ability to distinguish between misconception and correct information: The understanding and approach of the participants towards Agri-biotechnology has been refined after the workshops. Resource persons from all the workshops have made significant efforts to clear the misconceptions associated with GM crops and clarify queries raised by the participants. The knowledge gain on GM issues made a clear-cut distinction between misapprehension and correct information and encouraged them to question the existing fault-lines about GM research.

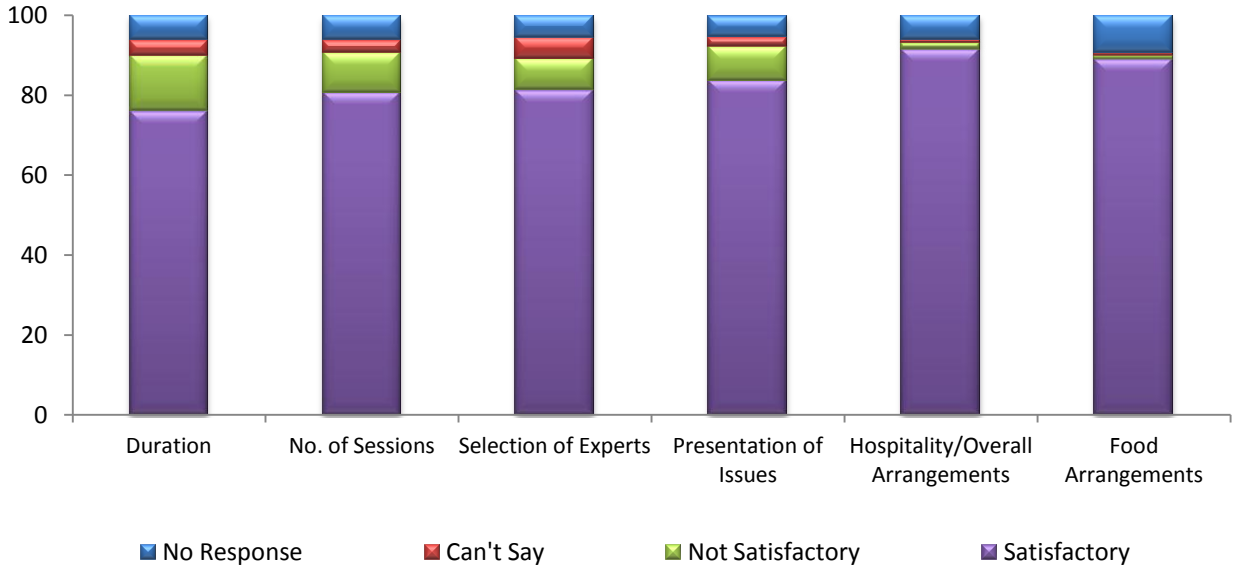
Skill up-gradation*:* Many participants agreed that their thinking process and organization of ideas had broadened radically. Their ability to observe, ability to differentiate between incorrect and accurate and willingness to learn the sensitiveness of the issues were significantly increased. Innovative as well as viable ways in mitigating the negative coverage and inadequacy related to this field were extensively discussed in workshops which provided them scope to learn, interpret and understand reality in a different way.

Effective interface between scientists and journalists/media professionals/science communicators*:* This workshop provided an excellent forum for extensive discussion on diverse biosafety issues involving participants and experts from assorted fields through an open and interactive stance. Synchronization of the participants' professional background with the principal theme of the workshop facilitated a lively interaction between the participants and resource persons of the workshop. Several Participants expressed their gratification over one to one interaction with the subject experts. While experts from diverse backgrounds enlightened the participants with their rich acumen, in-depth knowledge and enormous experience, media professionals/participants from wide range of streams acquainted the speakers with real life challenges, constraints faced by them during the time of science coverage, reporting and communication.

Identifying gaps/challenges/constraints in science reporting and communication: Intensive discussion on the issues, challenges and prospects related to Science and Biosafety Communication helped in recognizing essential factors that need astute attention for firm coverage and reporting of scientific and sensitive issues. Both participants and speakers emphasized that there should be similar workshops planned intermittently for journalists and media professionals. Acknowledging this unique effort of brining subject experts/scientists with media professionals, many participants stated that the best part was to initiate a discussion on the topic which was not much talked about before. They stated that it was apparent from the current situation that lack of know-how impacts the quality of reporting and communicating scientific issues does have a negative impact on motivation and performance of the journalists. To do their job confidently there is a greater need for training on Biosafety and Science Communication on a regular basis. They insisted on facilitating a

connective link among national and local journalists through various innovative ways and thereby encouraging regional level reporting/communication on scientific themes.

Figure 6: Rating by Participants on different Aspects of Workshop (N=129)



Logistic Arrangement*:* The preparations for the workshops were found to be sufficient and satisfactory and many delegates were of the view that it was a well-conducted and well-structured workshop.

Setting of Technical Sessions*:* The duration of the workshop received mixed opinions as some participants suggested reduction in duration to one day while others wanted extending it to four days. To some, attending the workshop on weekends and for two full days was a tedious task, while some favoured longer workshop. According to them the duration of the workshop was not enough to cover vast aspects of this diverse topic within a short span and hence adequate time should be devoted to additional sessions, more time for interaction with scientists and for field/lab visit. However, participants expressed their satisfaction over selection of experts, themes of the workshops, presentation of issues/topics, although some suggested themes like: simple ways of science writing, specific communication strategies, with focus on case studies and applied aspects of GMOs and in regional languages. Some participants suggested inclusion of people from the grassroots level/end users like farmers, civil society etc. as workshop participants. They found each session very informative and enriching while few recommended incorporating more films/video sessions to make it much more interesting.

Recommendations: Based on the discussions and interactions during the technical sessions and results obtained through analyses of evaluation forms, major recommendations emanated from the workshop are:

- There is a greater need of training of all media practitioners /journalists/science communicators on scientific issues through various seminars, workshops and capacity building programmes.
- Emphasis should be given to conduct the workshops in regional languages keeping English as an auxiliary medium. To make the sessions more interactive and participation-friendly, every speaker should make substantial attempts to convey the message in local/regional language.
- Additional sessions should be planned to facilitate more interaction with scientists/experts and to provide empirical experience to participants from grassroots level.
- Suggestions for additional topics to discuss at length included simple ways of science writing, specific communication strategies, ground level realistic experience with more case studies and applied aspects of GMOs/LMOs.
- Significant efforts should be made to facilitate a connective link among national, local and regional journalists through various dynamic ways and in encouraging regional level reporting/communication on scientific themes.
- Success stories/best practice case studies need to be highlighted to better articulate the potentials of this promising area of research.
- Persons from grassroots level or end users like farmers, civil society etc. should be included as workshop participants or their inputs should get due recognition in all the talks/discourse.
- To maintain the vivacity of the workshop and to make it much more appealing, films/video sessions should be included in the programme schedule.

SELECTED MEDIA COVERAGE

SELECTED MEDIA COVERAGE OF THE WORKSHOPS IN DIFFERENT NEWSPAPERS

KOLKATA

जीएम क्रॉप्स को वैज्ञानिकों ने दी हरी झंडी

- सतर्कता और सुरक्षा के पहलुओं पर नजरदारी पर दिया जोर
- जागरूकता फैलाने के लिए आइआइएमसी की कार्यशाला

अजय विद्यार्थी, कोलकाता

जेनेटिक्ली मोडिफाइड (जीएम) क्रॉप्स यानी अनुवांशिक रूप से संशोधित फसले जैसे बीटी ब्रिंजल, बीटी कॉटन, बीटी मस्टर्ड, गोल्डेन राइस आदि को लेकर पूरे देश में बहस चल रही है. गुरुवार को भारतीय जन संचार संस्थान (आइआइएमसी), नयी दिल्ली की ओर से कलकत्ता विश्वविद्यालय के पत्रकारिता व जन संचार विभाग के सहयोग से आयोजित विज्ञान संचार और जैव सुरक्षा क्षेत्रीय कार्यशाला में कोलकाता के कृषि वैज्ञानिकों ने जमकर जीएम क्रॉप्स की वकालत की. केंद्रीय पर्यावरण, वन व जलवायु परिवर्तन मंत्रालय, यूनाइटेड नेशंस इनवायरमेंट प्रोग्राम व ग्लोबल इनवायरमेंट फैसिलिटी के अधीन आयोजित कार्यशाला में विश्वभारती विश्वविद्यालय के सह उपकुलपति प्रोफेसर स्वपन कुमार दत्ता ने कहा कि जीएम क्रॉप्स सुरक्षित हैं. इनका कोई प्रतिकूल प्रभाव नहीं है. भारत की जनसंख्या बढ़ रही है. जनसंख्या की वृद्धि के अनुपात में फसलों के उत्पादन में वृद्धि करने की जरूरत है. बीटी को लेकर 100 वर्षों से शोध हो रहे हैं. प्रयोगशालाओं व खुले मैदान में भी प्रयोग हुए हैं. कोई प्रतिकूल प्रभाव नहीं दिखा है. बांग्लादेश के मार्फत कोलकाता के बाजार में भी बीटी ब्रिंजल (अनुवांशिक रूप से संशोधित बैंगन) उपलब्ध हैं. जूट में अनुवांशिक रूप से संशोधन के माध्यम से ज्यादा उत्पादन किया जा सकता है. बीटी कॉटन से उत्पादन बढ़ा है. जीएम बोस इंस्टीच्यूट की प्रोफसर शंपा दास ने कहा कि 2025 तक जैव प्रौद्योगिकी का बाजार 100 बिलियन अमेरिकी डॉलर का होगा. इसमें प्रत्येक वर्ष 30 फीसदी की वृद्धि हो रही है. उन्होंने जीएम क्रॉप्स का पक्ष लिया, लेकिन सतर्क किया कि इन फसलों की सुरक्षा पहलुओं को भी देखने की जरूरत है. खासकर खाद्य पदार्थों में यह देखना होगा कि इनसे फूड एलर्जी तो नहीं हो रही. इनमें इस्तेमाल होनेवाले कीटनाशक कहीं इम्यून सिस्टम को प्रभावित तो नहीं कर रहे. पूरे मामले में विश्व स्वास्थ्य संघ के दिशा-निर्देशों का पालन होना चाहिए. उन्होंने कहा कि भविष्य विज्ञान का ही है. इसका अंध विरोध नहीं किया जाना चाहिए.

कलकत्ता विश्वविद्यालय के सह उपकुलपति प्रो ध्रुवज्योति चट्टोपाध्याय ने कहा कि जैव सुरक्षा के प्रति लोगों को जागरूक करने की जरूरत है . साउथ एशियन फोरम फॉर इनवायरमेंट के डॉ दिपायन दे ने जीएम क्रॉप्स के मामले में किसानों को भी जागरूक करने पर जोर दिया. किसानों को इसकी जानकारी होनी चाहिए कि इन फसलों में किस मात्रा में उर्वरक या पानी का इस्तेमाल होना चाहिए. कलकत्ता विश्वविद्यालय के पत्रकारिता और संचार विभाग की डॉ तापती बसु ने भी प्रदूषण व ग्लोबल वार्मिंग जैसे मुद्दों को उठाते हुए आमलोगों को सचेत करने की आवश्यकता पर जोर दिया. दूरदर्शन के वरिष्ठ पत्रकार स्नेहाशीष सुर ने वीडियो फिल्म के माध्यम से देश और समाज पर ग्लोबल वार्मिंग के कुप्रभाव को रेखांकित किया. आइआइएमसी की प्रिंसिपल समन्वयक प्रोफेसर गीता बम्जइ ने विज्ञान व जैव सुरक्षा से संबंधित पहलुओं की कवरेज में सतर्कता बरतने की अपील करते हुए कहा कि मीडिया को सभी पहलुओं पर दृष्टि डालनी चाहिए तथा जैव सुरक्षा के प्रति लोगों में जागरूकता पैदा किये जाने की जरूरत है. उन्होंने कहा कि इसी उद्देश्य से देश के विभिन्न शहरों में कार्यशालाएं आयोजित की जा रही हैं. दिल्ली और मुंबई में कार्यशाला के आयोजन के बाद अब बेंगलुरु, भोपाल, अहमदाबाद और चंडीगढ़ में कार्यशालाएं आयोजित होंगी.

आइआइएमसी के प्रोफेसर आनंद प्रधान ने कहा कि इस तरह के कार्यशाला के आयोजन का उद्देश्य विज्ञान और जैव सुरक्षा से संबंधित पहलुओं पर गैप को भरना है.

गौरतलब है कि संप्रग सरकार के पूर्व मंत्री जयराम रमेश ने भी बीटी ब्रिंजल को मंजूरी दिलाने का मन बनाया था. इस बारे में लोगों की राय भी ली गयी थी, लेकिन एनजीओ व लोगों के विरोध को देखते हुए इसे टाल दिया गया था. आरोप लगाया गया था कि कुछ बहुराष्ट्रीय कंपनी के लोगों को लाभ दिलाने के लिए इसकी अनुमति दी जा रही है. अब मोदी सरकार का एक खेमा जीएम क्रॉप्स को बाजार में उतारने के पक्ष में लगा है. हालांकि भाजपा का स्वदेशी खेमा इसका विरोधी है.

Prabhat Khabar, Kokata, May 22, 2015)

Workshop assesses risks and benefits of GM food

Event to see eminent speakers from the field of agriculture research together

dna correspondent
@dnaahmedabad

Pravin Indrekardna

Workshop participants listen in rapt attention

Professor Vasant Gandhi, chairman, Centre for Management in Agriculture, Indian Institute of Management, discussed the risks and positive effects of genetically modified food. He spoke at a workshop on 'Communicating Science & Biosafety' which was held at department of communication journalism, Gujarat University, on July 22-23. "The risk involved in cotton, the only biotech crop of India, are negligible compared to its benefits and yield," he said.

The two-day workshop brought together eminent speakers from the field of agriculture research. It was aimed at encouraging media professionals to create awareness on the subject. the event was a joint effort by Ministry of Environment, Forest and Climate Change, Govt of India and Indian Institute of Mass Communication (IIMC). The event was inaugurated by Gita Bamezai, HOD at IIMC and Dr Anand Pradhan, associate professor at IIMC, who introduced biosafety issues in agri-biotechnology and the role of media in the same. "We are entering the 'gene' revolution from the 'green' revolution. The issues of food safety affects all. So awareness regarding agri-biotechnology and biosafety is necessary. Media can play an important role in framing public perspective and scientific understanding," said professor Bamezai.

Milind Ratnaparkhe, senior scientist, Directorate of Soybean Research, Indian Council of Agriculture Research, Indore, gave insights on safety assessment and biosafety mechanisms of GM Crops in India.

EXPERTS SPEAK

- Banana, papaya and rice have enhanced nutritional value when genetically modified
- Oil from Bt cotton is the same as the oil from non Bt cotton, as oil is devoid of protein and in a genetically modified crop, only protein structures are changed
- Bt Soya bean is not introduced yet as there is demand for non Bt Soya bean from many countries which brings foreign exchange for the country through exports

DNA, Ahmedabad, July 23, 2015

CHANDIGARH

Dainik Tribune

कम्युनिकेटिंग साइंस पर मीडिया वर्कशाप आज से

चंडीगढ़, 27 जुलाई (ट्रिब्यू)

पंजाब विश्वविद्यालय आईआईएमसी (इंडियन इंस्टीच्यूट आफ मास कम्युनिकेशन) नयी दिल्ली के साथ मिलकर कल से कम्युनिकेटिंग साइंस एंड बायोसेफ्टी विषय पर दो दिवसीय एक रीजनल मीडिया वर्कशाप का आयोजन कराने जा रहा है।

इस कार्यशाला में रिसोर्स पर्सन के तौर पर नाबी (नेशनल एग्री फीड बायोटेक्नोलॉजी इंस्टीच्यूट) के डॉ. सिद्धार्थ तिवारी, नेशनल ब्यूरो आफ प्लांट जेनेटिक रिसोर्सिज नयी दिल्ली के डॉ. गुरिंदरजीत रंधावा, बायो-प्रोसेसिंग यूनिट भारत सरकार के निदेशक डॉ. आरएस सांगवान, पंजाब स्टेट कौंसिल फार साइंस एंड टेक्नोलॉजी निदेशक डॉ. नीलम गुलाटी शर्मा, पीयू की डेजी रानी बातिश होंगी, जबकि उद्घाटन अवसर पर कुलपति प्रो. अरुण कुमार ग्रोवर मुख्य भाषण देंगे। प्रोजेक्ट कोआर्डिनेटर डॉ. आनंद प्रधान कार्यशाला बारे रोशनी डालेंगे।

Hindustan Times

TALK: Chandigarh department of hepatology Dr Ajay Duseja and Oral Health Sciences Centre Dr Vidya Rattan to deliver talk on hepatitis and emergencies in dental set-up, seminar hall of Golden Jubilee Guest House, PU, 10am to 1pm.

REGIONAL WORKSHOP: PU to host a regional workshop on "Communicating Science and Biosafety" for media professionals, ICSSR complex, Panjab University, 11am.

Hindustan Times

Amar Ujala

मीडिया प्रोफेशनल्स के लिए वर्कशॉप आज

चंडीगढ़। पंजाब यूनिवर्सिटी ने इंडियन इंस्टीट्यूट ऑफ मास कम्युनिकेशन नई दिल्ली मिनिस्ट्री ऑफ इन्वायरमेंट, फोरेस्ट एंड क्लाइमेट चेंज (भारत सरकार) और स्कूल ऑफ कम्युनिकेशन स्टडीज के संयुक्त सहयोग से मंगलवार को मीडिया प्रोफेशनल्स के लिए वर्कशॉप का आयोजन हो रहा है। कम्युनिकेटिंग साइंस एंड बायोसेफ्टी के विषय पर इस वर्कशॉप में चर्चा होगी। पीयू के आईसीएसएसआर कॉम्प्लेक्स में सुबह साढ़े 10 बजे से शुरू हो रही वर्कशॉप का उद्घाटन पीयू के कुलपति प्रो. अरुण कुमार ग्रोवर करेंगे।

Amar ujala

Aaj Samaj

संचार विज्ञान, बायो सेफ्टी पर सेमिनार

चंडीगढ़। पीयू के आईसीएसएसआर हाल में संचार और बायोसेफ्टी विषय पर पर्यावरण, वन व मौसम परिवर्तन मंत्रालय और आईआईएमसी के संयुक्त तत्वावधान में दो दिवसीय सेमिनार का आयोजन किया गया। सेमिनार में आईआईएमसी के प्रोफेसर्स ने शिरकत की और अपने विचार साझा किए। वर्कशॉप में दिवंगत राष्ट्रपति कलाम के लिए दो मिनट का मौन रखा गया। इस मौके पर वीसी प्रोफेसर अरुण कुमार ग्रोवर रहे। डॉ. आनंद प्रधान ने सेमिनार की रूपरेखा के बारे में जानकारी दी। नाबी से डॉ. सिद्धार्थ ने गेस्ट स्पीच दिया। उन्होंने बॉयोटेक्नोलॉजी में खोजों पर बात की और बताया कि वर्तमान में बॉयोसेफ्टी कार्यक्रमों की क्या जरूरत व अहमियत है। दूसरे गेस्ट स्पीकर के रूप में डॉ. गुरजीत रंधावा ने प्रतिभागियों से खुलकर बातचीत की व उनके सवालों के जवाब दिए। उन्होंने जीम फसलों के सेफ्टी असेसमेंट और बायोसेफ्टी मेकेनिज्म के मुद्दों पर बातचीत की। अंत में आईआईएमसी के रविश अल्ताफ ने बॉयोसेफ्टी के ऑन लाइन सोर्सिज के बारे में जानकारी दी व डाटाबेसिस की जानकारी दी।

Aaj Samaj

GM crops are safe, commercialise Bt Brinjal: Scientist

DEEPTI VERMA
TRIBUNE NEWS SERVICE

CHANDIGARH, JULY 28

Years after the government imposed an indefinite moratorium on the commercial release of Bt Brinjal, genetically-modified for resistance to the fruit and shoot borer, a principal scientist of the National Bureau of Plant Genetic Resources, New Delhi, puts forth a strong case for its commercial approval.

"Debunking" the criticism surrounding the country's first transgenic food crop, Dr Gurinderjit Randhawa said: "Bt Brinjal is safe for human consumption and should be commercialised at all costs."

She was addressing a workshop on "Communicating Science and Bio-safety", organised by the Indian Institute of the Mass Communication, New Delhi, in collaboration with the Ministry of Environment, Forest and Climate Change, at Panjab University today.

Having served the Indian Council of Agricultural Research for 29 years, Randhawa agrees that these crops are controversial and it is difficult to obtain an "overwhelming" consensus in their favour. "GM crops are good but one has to be cautious," she said. About making such crops available to consumers through farmers, she said: "After a research is presented, it undergoes lot of tests. Experts from diverse fields weigh the risks and the benefits involved before giving any crop a go-ahead."

Dr Gurinderjit Randhawa

Why GM foods

- Genetically modified foods have been projected as a solution to world hunger, crop failures and farmer suicides
- They are promoted with the claim that they increase yields and reduce pesticide use, which benefits farmers, consumers and the environment
- However, it has been argued that the Bt toxin is an insecticide, which cannot increase yield but only reduces losses

What is Bt Brinjal

- Bt Brinjal is a genetically modified plant in which a gene is inserted into the genome of the brinjal, which can then produce a protein
- This protein behaves as a toxin against the shoot and fruit borer, a pest that commonly affects brinjal.

Being critical of the "lab-to-land" programme, she said farmers need to be informed about the way GM crops are grown. "Majority of them don't even know that these crops must contain some percentage of non-GM seeds as well. They need to be informed about it. To bridge this gap, lab-to-land programme is organised, but it has not been implemented effectively."

She said a monitoring and evaluation committee has also been formed to oversee the implementation of the project. "To ensure safe crop yield, members of the committee conduct surprise field visits to check whether the correct procedure is being followed," she said.

A patent holder of three GM crops, including potato, Randhawa said: "No technology is risk-free and it keeps evolving. If some problem occurs, solutions are also suggested." On the risks such problems pose to consumers, she said: "No problems are caused if the technology is used the way it is meant to be."

On the consumers' freedom to choose what they eat, she said: "Unlike retailers in the US or other developed nations, Indian retailers don't differentiate the natural crops from those produced with genetic modifications, which is wrong. Crops should be appropriately labelled to let consumers make an informed decision."

Randhawa has been instrumental in establishing the National Containment Facility of CL-4 level and GM Detection Laboratory of International Standards and developed cost-effective and DNA-based diagnostics for 13 GM crops. She has also made significant contributions in the DNA profiling and molecular characterisation of rice, chickpea and eight medicinal plants of commercial importance.

Dr Gurinderjit Randhawa, Principal Scientists, NBPGR, ICAR, New Delhi, The Tribune, Chandigarh July 28

सरसों, मक्का और टमाटर तैयार हो रहे हैं बीटी ब्रिंजल की तरह

आटे में आयरन और केले में विटामिन ए बढ़ाने पर हो रही है रिसर्च

चंडीगढ़, 28 जुलाई (रश्मि हंस): सरसो, मक्का और टमाटर अब बीटी ब्रिंजल की तरह तैयार हो जाएंगे। इस पर तेजी से रिसर्च चल रही है और परिणाम बेहद ही पॉजीटिव आए हैं। मार्कीट में आने वाले बीटी ब्रिंजल (बैंगन) खराब नहीं है, बल्कि यह एक शुरूआत है इस तरह से सब्जियों की तादाद बढ़ाने की। यह जानकारी इंडियन काऊंसिल ऑफ एग्रीकल्चर रिसर्च जैनोमिक रिर्सोसेज डिवीजन की डा. गुरिंद्रजीत रंधावा ने दी। वह मंगलवार को कम्युनिकेटिंग साइंस एंड सोसायटी टी वर्कशाप में भाग लेने के लिए आई थी। यह वर्कशॉप मिनिस्ट्री ऑफ एन्वायरमैंट, फॉरैस्ट, क्लाइमेटचेंज गवर्नमैंट ऑफ इंडियाकी ओर से आयोजित की गई थी। ध्यान रहे कि बीटी ब्रिंजल से मतलब उन बैंगन से है जो साइंटस्टों ने जैनेटिक मॉडीफिकेशन करके उगाए गए थे। लेकिन लोगों ने प्रकृति से की गई छेड़छाड़ का विरोध किया था।

केले में प्रो विटामिन ए पर रिसर्च कर रहे है सिद्धार्थ तिवारी

प्रो. सिद्धार्थ ने बताया कि केले में प्रो- विटामिन ए डालने के लिए रिसर्च कर रहे है। उन्होंने कहा कि शरीर के लिए विटामिन ए बहुत जरूरी होता है। लेकिन केले में जो मात्रा में और साऊथ के क्षेत्र में केले की पैदावार अधिक होती है। लेकिन इसमें मौजूद विटामिन ए शरीर में बहुत ही कम मात्रा में पहुंच पाता है। इसके लिए एक जीन आईडैंटिफाई किया जिससे फलों में डाला गया है। अब जब इस पर केला उतेगा तो पता चलेगा कि इसमें कितना प्रो-विटामिन ए कितना होता है। उन्होंने बताया कि यह रिसर्च डेढ़ साल में पूरी हो जाएगी।

इस सर्वशॉप में डा. गुरिंद्र जीत रंधावा ने बताया कि बीटी ब्रिंजल या बीटी कॉटन खराब नहीं है। अगर खराब होते तो बंगलादेश में माईको कंपनी द्वारा यह बनाए जा रहे है और वहीं पर बिक रहे है। अगर इसका साइड इफैक्ट होता तो अब तक लोगों ने शिकायत कर दी होती। डा. रंधावा ने कहा कि कई भी चीज जो मार्कीट में आती है तो उस पर लंबी रिसर्च की जाती है। करीब आटसे दस साल इसके टॉपिक्स व अन्य प्रभावों को जांचा जाता है। हालांकि गुजरात में बनाएगा इस तरह से चावल को दोस बाद बेद करने बाबत सवाल के जवाब में रंधावा ने कहा कि कई बार कुछ गड़बड़ियां हो जाती है।

लैक्चर देने आए एन.ए.बी.आई. के प्रो. सिद्धार्थ दुनिया में मौजूद 29 फीसदी धरती का कुल 2.9 फीसदी हिस्सा ऐसा हो जिस पर हम लोगद रह रहे है। इसमें से करीबन 1.6 फीसदी हिस्से पर खेती हो रही है यानि 60 फीसदी खेती पर। लेकिन जिस तह से दुनिया में जनसंख्या (पॉपुलेशन) बढ़ रही है। पॉपुलेशन के बढ़ने से खेती की भी ज्यादा जरूरत है। अब अधिक मात्रा में खेती हो इसके जैनेटिक मॉडीफिकेशन करके लिए बीटी ब्रिंजल का अविष्कार किया गया।

लेबलिंग होनी जरूरी : मार्कीट में आने वाली चीजों पर लेबलिंग होनी जरूरी है। जिससे लोगों को पता चले कि कौन सी चीजें प्राकृतिक है और कौन सी चीजे जैनेटिक मोडीफिकेशन करके बनाई गई है। इससे यह उनकी मर्जी पर निर्भर करेगा वह कौन सी वस्तु खरीद सकते है।

आटे में आयरन बढ़ाने पर रिसर्च : प्रो. सिद्धार्थ ने बताया कि आटे (वीट) में आयरन बढ़ाने के लिए भी इसी तरह से काम चल रहा है। लेकिन एक फिटीक एसिड होता है एक जीन प्लांट में डाल दिया है जो फयेटिकएसिडको कम करेगा इससे वीट में मौजूद आयरन को नुकसान नहीं होगा।

Punjab Kesari, Chandigarh, July 28, 2015

Two-day workshop on science

CHANDIGARH: A passionate sharing of information and ideas marked the opening day of 'Communicating Science and Biosafety'- a two-day workshop organised by the Ministry of Environment, Forest and Climate Change in collaboration with the Indian Institute of Mass Communication (IIMC), Delhi, on Tuesday. Two-minute silence was observed at the very outset, to pay tribute to Dr. APJ Abdul Kalam, former President of India, who passed away on Monday. It was followed by a brief introduction of the workshop by Dr Surbhi Dahiya, member of faculty at IIMC.

Hindustan Times, Chandigarh

Punjab Kesari

पंजाब यूनिवर्सिटी के हैल्थ सैंटर में आज सुबह 11 बजे वर्ल्ड हैपेटाइटिस-डे मनाया जाएगा।

News Clippings Dated:-

जैविक खेती से उत्पादन को मिल सकती है गति

जैविक खेती को बढ़ावा देने के लिए भारत सरकार कर रही प्रयास

चंडीगढ़, 28 जुलाई (सौरव) : जैविक खेती को बढ़ावा देने के लिए भारत सरकार निरंतर प्रयास कर रही है वहीं वैज्ञानिक भी इस क्षेत्र में नए शोधकर्यों से प्रोडक्शन को बढ़ावा देने के मददगार साबित हो रहे है। इसी संदर्भ में पंजाब विश्वविद्यालय के मास कम्युनिकेशन विभाग, इंडियन इंस्टीच्यूट ऑफ मास कम्युनिकेशन दिल्ली तथा इंवायरनमैंट फॉरैस्ट एंड क्लाइमेट चेंज मंत्रालय, भारत सरकार के संयुक्त सहयोग से पी.यू. के आई.सी.एस.एस.आर. हॉल में विशेष कार्यशाला का आयोजन किया गया। कार्यशाला का शुभारंभ बतौर मुख्यातिथि कुलपति प्रो. अरुण ग्रोवर ने किया। कर्यशाला का मुख्य उद्देश्य मीडिया जगत में कृषि विज्ञान से जुड़ी घटती रिपोर्टिंग, कृषि विज्ञान से जुड़ी जानकारियों के साथ उनके प्रति मीडिया कर्मियों की रुचि को बढ़ावा देना था। कार्यशाला में यह बात सामने आई कि जैविक खेती में जीन्स के माध्यम से कृषि को बड़े स्तर पर बढ़ाया जा सकता है। यहां पता चला कि एक ही वराइटी की प्रोडक्शन को बढ़ाने के लिए उसके क्रोमोजोन्स को लेकर उसके जीन्स से दूसरी वराइटी तैयार की जा सकती है लेकिन यहां ध्यान रखना होगा कि उस जीन्स के नाकारात्मक परिणाम न निकले साथ ही वह एक प्रजाति के होने चाहिए। इसके लिए वैज्ञानिक लैबस में जीन्स का टैस्ट करते है जिसके बाद अवांछनीय जीन्स को अलग कर आवश्यक जीस से नई प्रजाति की फसल तैयार की जाती है। इसके लिए जैनेटिक इंजीनियरिंग इंथौर और थ्यौर जीन्स को अलग करने का कम करती है। कार्यशाला में मौजूद वैज्ञानिकों ने बताया की मिट्टी में भी जैनेटिक तत्व होते हैं जिनमें भी बदलाव किर पैदावर को बढ़ाया जा सकता है। इस मौके पर नैशनल एग्रो-फूड बायोटैक्नोलॉजी इंस्टीच्यूट मोहाली, पंजाब के डा. सिद्धार्थ तिवारी, नैशनल ब्यौरो ऑफ प्लांट जैनेटिक रिसोर्स, नई दिल्ली की डा. गुरिंदर जीत ने प्रैजैंटेशन दी। उनके साथ आई.आई.एम.सी. के प्रो. आनंद प्रधान, प्रो. सुरभि दहिया, पी.यू. के मास कम्युनिकेशन विभाग से प्रो. अर्चना सिंह मौजूद रहीं।

कार्यक्रम के दौरान संबोधित करते हुए प्रो. अरुण ग्रोवर साथ प्रो. आनंद प्रधान

Dainik Savera, July 29, 2015

'बीटी क्रॉप्स उगाने संबंधी अधूरी जानकारी भी खतरनाक'

असर उजाला ब्यूरो

चंडीगढ़। पंजाब यूनिवर्सिटी के आईसीएसएसआर हॉल में मंगलवार को मीडिया प्रोफेशनल्स के लिए दो दिवसीय वर्कशॉप का आयोजन किया गया।

इंडियन इंस्टीट्यूट ऑफ मास कम्युनिकेशन (आईआईएमसी) नई दिल्ली ने पीयू के स्कूल ऑफ मास कम्युनिकेशन और इंवायरमेंट फोरेस्ट एंड क्लाइमेट चेंज मंत्रालय, भारत सरकार के संयुक्त सहयोग से यह वर्कशॉप आयोजित की। वाइस चांसलर प्रो. अरुण ग्रोवर वर्कशॉप में मुख्यातिथि रहे। नेशनल ब्यूरो ऑफ प्लांट जेनेटिक रिसोर्स, नई दिल्ली की साइंटिस्ट डा. गुरिंदर जीत रंधावा ने बीयो टेक्नोलॉजी (बीटी) क्षेत्र के विस्तार और जेनेटिक मोडिफाइड फसलों की सुरक्षा संबंधी विषयों पर चर्चा की। मीडिया में साइंस की घटती रिपोर्टिंग पर भी चिंता जताई गई।

प्रतिरोधी पालन न करने से सफेद मक्खी व बीमारियों का खतरा

वैज्ञानिकों ने कहा कि बीटी क्रॉप्स को उगाने में प्रक्रिया का सही से पालन नहीं होता, जिससे सफेद मक्खी जैसी समस्याएं उत्पन्न होती हैं। नियमों अनुसार बीटी कॉटन और बिंजल उगाए जाएं तो इससे राहत मिल सकती है। इसके लिए किसानों को जागरूक करना बेहद जरूरी है। बीटी कॉटन व बीटी बैंगन को मार्केट में उतारने से पहले 8 सालों तक रिसर्च की गई थी। बीटी प्रोडक्ट्स की मार्केट में पहचान करने की चिंता पर भी चर्चा हुई। इस मौके पर नेशनल एग्री- फूड बायोटेकभनोलॉजी इंस्टीट्यूट (नाबी) पंजाब के साइंटिस्ट डा. सिद्धार्थ तिवारी ने जीएम फसलों के क्षेत्र और इसके भविष्य में फैलाव पर प्रजेंटेशन दी।

आईआईएमसी से प्रो. आनंद प्रधान, प्रो. सुरभि दहिया और पीयू कैंकुल ऑफ मास कम्युनिकेशन से प्रो. अर्चना सिंह भी इस मौके पर मौजूद रहीं।

पंजाब यूनिवर्सिटी के आईसीएसएसआर हॉल में मंगलवार को मीडिया प्रोफेशनल के लिए दो दिवसीय वर्कशॉप में तैयार देती डा. अर्चना। असर उजाला

Daily Post, July 29, 2015

2-day bio-safety workshop begins at university

Workshop on 'Communicating Science and Biosafety' held at Panjab University, on Tuesday. DP

DP CORRESPONDENT
Chandigarh

The opening day of 'Communicating Science and Bio safety' – a two day workshop organised by the Ministry of Environment, Forest and Climate Change in collaboration with the Indian Institute of Mass Communication (IIMC), Delhi for media professionals was marked by a sharing of information and ideas.

A unique initiative, organised with the support of Panjab University (PU), saw an active participation by media professionals, as they gathered at the ICSSR Complex in PU on the morning of July 28. The workshop took off with a two minute silence as a tribute to Dr A P J Abdul Kalam. This was followed by a brief introduction by Faculty at IIMC, Dr Surbhi Dahiya. PU School of Communication Studies (SCS), Professor, Dr Archana R Singh welcomed the chief guest, PU Vice Chancellor Prof Arun K Grover.

> Participants were enlightened about technology driven programmes founded by Dr Kalam

Prof Grover enlightened the participants about the technology driven programmes founded by Dr Kalam, including the INSPIRE camps carried out nationally and how he envisioned inclusive growth for the youth of the country. Prof Grover congratulated his colleagues for the initiative. Associate Professor at Indian Institute of Mass Communication, New Delhi, D. Anand Pradhan provided an overview of the two-day workshop.

National Agri-Food Biotechnology Institute, Punjab, Dr Siddharth Tiwari was the first guest speaker. He addressed issues of innovations in biotechnology and the importance of a bio-safety programme. Second guest speaker Dr Gurinder Jit Randhawa received an actively participant response as she spoke on Safety Assessment and Biosafety Mechanisms of GM crops in India.

The workshop concluded with a presentation by Rayies Altaf from IIMC about the information databases and other online sources of bio-safety. The first day saw a successful culmination with the efforts of Chairperson, SCS Jayanth N Pethkar and Assistant Professor, SCS Dr Sumedha Singh.

Amar Ujala, July 29, 2015

पराये देश से आया एक आम भी रेडियेशन बम सरीखा

जैव सुरक्षा में सेंध बिगाड़ सकती है सैकड़ों पीढ़ियों का भविष्य

चंडीगढ़, 28 जुलाई (दिल्ली)

पराये देश से आया एक आम भी रेडियेशन बम सरीखा है। बगैर विधिवत जांच पड़ताल के कोई भी खाद्य, बीज फल या फूल आदि कोई भी सजीव सामग्री बाहर से ले आना देश की जैव सुरक्षा में सेंध लगाने जैसा काम है जिससे देसी जर्मप्लाज्म हमेशा के लिए बदल सकता है और जाने-अनजाने में ऐसी गलती बिगाड़ सकती है सैकड़ों पीढ़ियों का भविष्य।

चंडीगढ़, पंजाब, हरियाणा हिमाचल से दूर देश जाकर बसे प्रवासी भारतीयों के परिजन अक्सर परिजनों से मिलने विदेश जाते हैं तो भारत से आम, छोले, मटर, मिर्ची जैसे देशी फल-फूल और सब्जियां मसाले साथ ले जाते हैं। वापसी में विदेशी खानपान की सामग्री साथ ले आते हैं। नेशनल ब्यूरो आफ प्लांट जेनेटिक रिसोर्सेज की प्रिंसिपल साइंटिस्ट डॉ गुरिंदरजीत रंधावा ने चेताया है कि देश-विदेश से कोई भी जैविक सामग्री, फल, फूल या बीज बगैर सरकारी अनुमति के लाना कानूनन अपराध तो है ही, अपने देश की जैविक सुरक्षा में सेंध लगाने जैसा कृत्य है। जिसका खामियाजा सदियों तक कई पीढ़ियों को भुगतना पड़ सकता है। पंजाब विश्वविद्यालय में जैव सुरक्षा विज्ञान और संचार विषयक कार्यशाला को संबोधित करते हुए डॉ रंधावा ने देशवासियों को कांग्रेस घास की याद दिलाई। पारथेनियम हिस्टेरोफोरस नाम की यह घास मूलतः अमेरिकी देश मैक्सिको से समूची दुनिया में फैली। विदेशी अनाज के बीजों के साथ भारत आ पहुंची कांग्रेस घास आज मानव स्वास्थ्य से लेकर खेती बाड़ी तक हर क्षेत्र में चुनौतीपूर्ण समस्या का रूप ले चुकी है। डॉ रंधावा ने कहा कि जैविक पदार्थों के आयात निर्यात के लिए भारत समेत दुनिया के तमाम देशों में सख्त नियम कानून बन चुके हैं और कोई भी व्यक्ति या संस्था किसी तरह का जीवित पौधा, बीज, फल, फूल खाद्य पदार्थ बगैर सरकार की अनुमति के भीतर नहीं ला सकता। सरकार भी जैविक पदार्थों की हर खेप की जांच करती है और सघन प्रयोगशाला जांच के बाद ही उसे देश के भीतर लाने की अनुमति देती है। उन्होंने कहा कि जाने अनजाने में किसी एक बीज या फल के साथ एक या अनेक तरह के जीवाणु, विषाणु, अमीबा और एककोशीय या बहुकोशीय जीव अथवा जैविक जेनेटिक मैटीरियल देश-विदेश में पहुंच कर भारी नुकसान पहुंचा सकता है जिससे किसी स्थान, राज्य अथवा देश की जैविक संपदा को हमेशा के लिए नुकसान पहुंच सकता है।

उन्होंने अपने पति के पटना से आम लाने की घटना का जिक्र भी किया। उनका कहना है कि देश के भीतर भी एक जगह से दूसरी जगह पर इन्हें ले जाने पर भी जांच अवश्य होनी चाहिये। उन्होंने कहा कि देश के भीतर भी जैविक पदार्थ के परागमन में बेहद सतर्कता और जांच पड़ताल की जरूरत है क्योंकि कई जैविक रोग या परिवर्तन दिशा काल-परिस्थितिजन्य और स्थानी होते हैं। यदि ऐसे जेनेटिक बदलाव वाला जैविक पदार्थ किसी दूसरे राज्य या देश में पहुंच जाए, जैविक सुरक्षा को ऐसी सेंध से सकती है जिसका अनुमान लगा भी मुश्किल है।

Dainik Tribune, July 29, 2015

PU hosts workshop for media personnel

EXPRESS NEWS SERVICE
CHANDIGARH, JULY 28

During the workshop at Panjab University on Tuesday. Sumit Malhotra

A TWO-DAY workshop on 'Communicating science and bio-safety' for media professionals was inaugurated at the ICSSR Complex at Panjab University (PU) on Tuesday.

The workshop has been organised by the Ministry of Environment, Forest and Climate Change in collaboration with the Indian Institute of Mass Communication (IIMC), Delhi. On Tuesday, the workshop started with a two-minute silent tribute to former President Dr A P J Abdul Kalam. Vice-Chancellor of PU, Professor Arum Kumar Grover, was the chief guest on the occasion.

Professor Grover enlightened the participants about the technology-driven programmes founded by Dr Kalam, including the INSPIRE camps. He further spoke about the former President's vision for India and urged everyone to strive to create the same.

Dr Siddharth Tiwari from the National Agri-Food Biotechnology Institute, Punjab, elaborated on the innovations in biotechnology and stressed the importance of a bio-safety programmes. Following this, Dr Gurinderjit Randhawa from the National Bureau of Plant Genetic Resources, New Delhi, delivered a lecture on 'Safety assessment and bio-safety mechanisms for GM crops in India'.

The workshop concluded with a presentation by Rayies Altaf from IIMC about information databases and other online sources of bio-safety. The second day of the workshop will begin with a session on 'Transgenic crops: Risk assessment' by Dr Jagdeep Singh Sandhu at 10.30 am.

Indian Express, July 29, 2015

Indian Express

News Clippings Dated:-

'Scientific writing is provided minimal coverage in mainstream media'

EXPRESS NEWS SERVICE
CHANDIGARH, JULY 29

A TWO-DAY workshop on 'Communicating Science and Biosafety' at Panjab University (PU) concluded on Wednesday evening.

The workshop was organised by the Ministry of Environment, Forest and Climate Change in collaboration with the Indian Institute of Mass Communication (IIMC), Delhi.

The second day of the workshop commenced with a talk on 'Transgenic Crops: Risk Management' by Dr Jagdeep Singh Sandhu, senior biotechnologist at Panjab Agricultural University, Ludhiana.

He provided the participants with an insight into the working of Genetically Modified Crops, taking Bt Cotton as a major case study. He also addressed various safety concerns and apprehensions associated with the usage of this variety. Issues concerning the toxicity of consumption of these crops were also discussed.

A panel of communicators and scientists including Director, Punjab State Council for Science & Technology (PSCST), Dr Neelam Gulati, PU professors Archana R Singh and Daisy Rani Batish, and Rajinder Chugh from IIMC discussed various issues concerning media and scientific writing.

"We are surrounded by technology and yet we are very consciously ignorant about it. Surprisingly, scientific writing is provided with very minimal coverage in mainstream media as most of such material is derived from foreign sources. Further, such kind of news stories do not run on dedicated pages. Instead, they are found cramped up with entertainment news," pointed out Dr Neelam Gulati.

Dr Archana Singh pushed for active research and organisational support in the field of science writing.

Professor Daisy Rani Batish from the Department of Botany, PU, provided an insight into a scientist's mind as to why there reluctance to talk to journalists among them exists.

The media personnel were then divided into groups of four, who shared their ideas on themes such as 'Innovations in agri-biotechnology and implications for the region', 'agricultural productivity, self-reliance and farmers' issues in the bio-safety regime', 'socio-economic aspects of agri-bio-technology', and 'food, nutrition and bio-safety norms', among others.

Hindustan Times

'Science events are downplayed by media'

HT Correspondent
chandigarh@hindustantimes.com

CHANDIGARH: The two-day workshop on science journalism ended on Wednesday at PU with discussion sessions between journalists, academicians and scientists.

During a session on regional media and its role in communicating science and technology, director, Punjab State Council for Science and Technology (PSCST), Dr Neelam Gulati Sharma said, "Science journalism is like an investigation. We have to see whether experiments can be repeated." Sharma who has been working on science communication added, "We are organising workshops for making scientists into journalists."

On the problem of journalists pursuing science journalism, Prof Archana R Singh, from School of Communication Studies, PU, said, "They face certain constraints like absence of reliable information source, no financial backing and not enough time is provided to journalists. "It (science events) is underreported as it is abstract." She added that agriculture, health and science were being covered but less. Prof Daizy Rani Batish from Botany department explained why there was so much gap between scientists and journalists. "Scientists are more interested in getting research published in research journals than newspapers. Our (scientists) focus is on citations. A scientist should popularise his research." She added that journalists sometimes distort the facts which create problem.

R Chug from Indian Institute of Mass Communication (IIMC) said, "It is wrong to suggest that people are not interested in reading about science. We have been interested in smartphones, achievements of ISRO regarding moon mission, NASA's probe around Pluto and scientific achievements of former president APJ Abdul Kalam." He added, "There is no motivation for an expert to become a science journalist. The journalists working in vernacular are short of vocabulary to translate technical terms." Senior journalist Gobind Thukral suggested for educating editors and owners of newspapers. He gave the example of Tarksheel society's magazine, which works on disseminating scientific knowledge at ground level.

Amar Ujala

साइंस रिसर्च में स्थानीय पुट की कमी

चंडीगढ़(ब्यूरो)। पीयू के आईसीएसएसआर हॉल में आयोजित 'कम्युनिकेटिंग साइंस एंड बायोसेफ्टी' का बुधवार को समापन हो गया। इंडियन इंस्टीट्यूट ऑफ मास कम्युनिकेशन नई दिल्ली ने पीयू केस्कूल ऑफ मास कम्युनिकेशन केसाथ मिलकर मीडिया प्रोफेशनल्स के लिए इस वर्कशॉप का आयोजन किया था। इससे पहले वर्कशॉप केदूसरे दिन पंजाब एग्रीकल्चर यूनिवर्सिटी लुधियाना के सीनियर बायोटेकभनोलॉजिस्ट डॉ. जगदीप सिंह संधू ने ट्रांसजेनिक क्रॉप्स रिस्क मैनेजमेंट विषय पर विचार व्यक्त किए।

उन्होंने जेनेटिकली मोडिफाइड क्रॉप्स और बीटी क्रॉप्स पर की गई कई स्टडी को पेश किया। पंजाब स्टेट काउंसिल फॉर साइंस एंड टेकभनोलॉजी की डायरेक्टर डा. नीलम गुलाटी, पीयू प्रो. अर्चना आर सिंह, प्रो. डेजी रानी बतिश और राजेंद्र चुघ ने भी साइंस राइटिंग को लेकर अपने विचार रखे। प्रो. अर्चना ने एक रिसर्च केआधार पर बताया कि 1 से 2 प्रतिशत तक ही मीडिया में एग्रीकल्चर रिपोर्टिंग होती है। अर्थिक स्पोर्ट्स रिपोर्टिंग को तव्वजो दी जाती है। डा. नीलम गुलाटी ने कहा कि बायोसेफ्टी को लेकर अखबारों में जो रिसर्च छपती है वे अधिकतर ग्लोबल स्तर की होती हैं। लोकल उदाहरणों का अभाव लोगों को आकर्षित नहीं कर पाता।

Daily Post

2-day bio-safety workshop concludes

CHANDIGARH: Two day long workshop on 'Communicating Science and Bio-safety' concluded at Panjab University (PU), Chandigarh on Wednesday. Media professionals from various news organisations participated in the prestigious workshop. The workshop organised by the Ministry of Environment, Forest and Climate Change in collaboration with the Indian Institute of Mass Communication (IIMC), Delhi and Panjab University. The second day of the workshop on 'Communicating Science and Biosafety' commenced with a talk on 'Transgenic Crops: Risk Management' by Dr. Jagdeep Singh Sandhu, Senior Biotechnologist, Panjab Agricultural University, Ludhiana. He provided the participants with a deep insight of the working of Genetically Modified Crops taking Bt Cotton as a major case study. DP

The Tribune

PU NOTES

Workshop concludes

Chandigarh: The two-day workshop on communicating science and biosafety concluded at Panjab University on Wednesday. Media professionals from various news organisations participated in the prestigious workshop. It was organised by the Ministry of Environment, Forest and Climate Change, in collaboration with the Indian Institute of Mass Communication, Delhi and PU.

Dainik Jagran

बढ़ती जनसंख्या के कारण जीएम फसल जरूरी

• कम्युनिकेटिंग साइंस एंड बायो सेफ्टी विषय पर वर्कशाप आयोजित

जागरण संवाददाता, चंडीगढ़ : इंडियन इंस्टीट्यूट ऑफ मास कम्युनिकेशन, नई दिल्ली की केंद्रीय पर्यावरण, वन एवं क्लाइमेट चेंज मंत्रालय के सहयोग से आइसीएमआर में कम्युनिकेटिंग साइंस एंड बायो सेफ्टी विषय पर वर्कशाप हुई, जिसमें बायो सेफ्टी के कई पहलुओं पर चर्चा हुई। वर्कशाप का उद्देश्य लोगों को बायो सेफ्टी विषय पर जागरूक करना है। जर्नलिस्टों को भी बायो सेफ्टी और जीएम क्रॉप्स मोडीफिकेशन के कई पहलुओं से मौजूद साइंटिस्टों ने अवगत कराया और उनकी शंकाओं का निवारण किया। इस तरह की कई वर्कशाप देश के कई इलाकों में वहां की यूनिवर्सिटियों के साथ मिलकर आयोजित की जाएंगी।

मंगलवार को मौजूद वैज्ञानिकों ने एग्री बायोटेक्नोलॉजी पर अपने विचार रखे। बायो सेफ्टी के विभिन्न पहलुओं को खुला गया। कार्यक्रम में मुख्य अतिथि के तौर पर पधारे वीसी प्रो. एके ग्रोवर ने कई वैज्ञानिकों का जिक्र किया जिन्होंने साइंस को अपनी भाषा में आम जन तक पहुंचाया। देश के पूर्व राष्ट्रपति एपीजे अब्दुल कलाम का जिक्र करते हुए उन्होंने उन्हें बेहतरीन साइंस कम्युनिकेटर करार दिया और कहा कि वह बच्चों से लेकर युवाओं और बुजुर्गों के गेल मॉडल थे जिन्होंने वर्ष 2020 का विजन डाक्यूमेंट सेट किया था जिसमें मिश्रित विकास की बात थी। राइट टू एजूकेशन, वोकेशनल ट्रेनिंग, स्किल डेवलपमेंट प्रोग्राम के साथ इंप्लायर स्कीम को युवाओं के लिए तैयार किया ताकि युवाओं को अवसर मिल सकें। उन्होंने पत्रकार व साइंटिस्ट एन राम का जिक्र करते हुए उन्हें भी बेहतरीन साइंस कम्युनिकेटर करार दिया।

28 देश जीएम फसलों का कर रहे प्रयोग

नेशनल एग्री बायो टेक्नोलॉजी इंस्टीट्यूट के डा. सिद्धार्थ तिवारी ने बताया कि किस तरह देश दुनिया की आबादी बढ़ रही है और इनको जरूरतों को पूरा करने की लिए फसल का ज्यादा उत्पादन जरूरी होगा ताकि लोगों का पेट भरा जा सके। फसलें जो हो भी रही हैं उनमें पोषक तत्वों का अभाव है लिहाजा ऐसे में जरूरी हो गया है कि हम जेनेटिक मोडीफाइड क्रॉप्स को अपनाएं जिससे न केवल उत्पादन बढ़ेगा बल्कि मनचाहे वैरायटी और ब्रीड भी तैयार की जा सकेंगी। दुनिया भर के 28 देश जीएम मोडीफाइड क्रॉप्स प्रयोग कर रहे हैं। उन्होंने डिश्यू कल्चर और जेनेटिक प्रोटोकॉल पर विचार रखते हुए कहा कि जीएम क्रॉप्स अपनाने से पेस्टीसाइड का इस्तेमाल भी घट जाएगा।

नेशनल ब्यूरो आफ प्लांट जेनेटिक रिसोर्सेस नई दिल्ली की डा. गुरदेवजीत सिंह रंधावा ने कहा कि जीएम क्रॉप्स को लेकर लोगों में जो भ्रांतियां हैं उन पर साइंटिस्ट काम कर रहे हैं।

इस सैशन स्कूल आफ कम्युनिकेशन स्टडीज, पांडू की एसोसिएट प्रोफेसर डॉ. अर्चना आर सिंह प्रोजेक्ट कोआर्डिनेटर आइआइएमसी डॉ. सुरभि दहिया, एसोसिएट प्रोफेसर आइआइएमसी प्रो आनंद प्रधान और प्रोजेक्ट कोआर्डिनेटर रेचिल अल्ताफ मौजूद रहे।

Dainik Jagran, July 29, 2015

BENGALURU

వైజ్ఞానిక అంశాలపై ప్రచారాన్ని కల్పించండి

• మీడియా వర్క్‌షాప్‌లో ప్రముఖ శాస్త్రవేత్త ఎస్.ఆర్.రావు

సాక్షి, బెంగళూరు: వైజ్ఞానిక రంగంలో ప్రతిరోజూ చోటు చేసుకుంటున్న ఆవిష్కరణలు, తద్వారా కలిగే ప్రయోజనాలపై ఎక్కువగా ప్రచారాన్ని కల్పించాల్సిన అవసరం ఉందని ప్రముఖ శాస్త్రవేత్త, కేంద్ర ప్రభుత్వ ఆధ్వర్యంలోని బయోటెక్నాలజీ విభాగం సలహాదారు డాక్టర్ ఎస్.ఆర్.రావు పేర్కొన్నారు. ఇండియన్ ఇన్‌స్టిట్యూట్ ఆఫ్ మాస్ కమ్యూనికేషన్(ఐఐఎంసీ) ఆధ్వర్యంలో 'కమ్యూనికేటింగ్ సైన్స్ అండ్ బయోటెక్నాలజీ' అంశంపై శుక్రవారమిక్కడ ప్రారంభమైన మీడియా వర్క్‌షాప్‌లో ఎస్.ఆర్.రావు స్పీకర్‌గా పాల్గొన్నారు. ఈ సందర్భంగా ఆయన మాట్లాడుతూ...బీటీ పత్తి ఆవిష్కరణ జరిగి ఇప్పటికి 20 ఏళ్లు కావస్తోందని, అయినా ఇప్పటికీ బీటీ పత్తిపై చర్చలు జరుగుతూనే ఉన్నాయని అన్నారు. ప్రజల్లో బయో టెక్నాలజీపై సరైన అవగాహన లేకపోవడం వల్లనే శాస్త్రవేత్తలు ఎంతో కష్టపడి చేస్తున్న ఆవిష్కరణలు సైతం ప్రజలకు చేరువ కావడం లేదని పేర్కొన్నారు. అందువల్ల వైజ్ఞానిక రంగంలో వస్తున్న సరికొత్త ఆవిష్కరణలను ప్రజలకు చేరువ చేసే బాధ్యతను పాత్రికేయులు తీసుకోవాల్సిన అవసరం ఎంతైనా ఉందని అన్నారు. మాధ్యమాల ద్వారా జెనెటికల్లీ మాడిఫైడ్, లివింగ్ మాడిఫైడ్ వంటి పంటల రకాలను రైతులను సులభంగా చేర్చేందుకు వీలవుతుందని, అదే సందర్భంలో ఈ తరహా పంటల పట్ల ప్రజల్లో ఉన్న అపోహలను సైతం తొలగించేందుకు సాధ్యమవుతుందని తెలిపారు. కార్యక్రమంలో బెంగళూరు యూనివర్సిటీ వైస్ ఛాన్స్‌లర్ తిమ్మెగౌడ, ఐఐఎంసీ ప్రతినిధి గీతా బెమ్‌జాయ్ తదితరులు పాల్గొన్నారు.

వర్క్‌షాప్‌లో పాల్గొన్న ఎస్.ఆర్.రావు, తిమ్మెగౌడ తదితరులు

(From left to right)
Dr S.R. Rao (adviser, DBT), Prof B. Thimme Gowda, Hon'ble Vice Chancellor, Bangalore University, Prof Gita Bamezai, IIMC

ವಿದ್ಯಾರ್ಥಿಗಳ ಪ್ರಾಜೆಕ್ಟ್‌ಗೆ ಮೆಚ್ಚುಗೆ

ಬೆಂಗಳೂರು: ಎಂ.ಎಸ್.ರಾಮಯ್ಯ ತಾಂತ್ರಿಕ ಸಂಸ್ಥೆಯು ತಾಂತ್ರಿಕ ಕಾಲೇಜುಗಳ ಅಂತಿಮ ವರ್ಷದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಆಯೋಜಿಸಿದ್ದ ಪ್ರಾಜೆಕ್ಟ್ ಪ್ರದರ್ಶನದಲ್ಲಿ ಹೊಸ ಆವಿಷ್ಕಾರಗಳ ಮಾದರಿಗಳು ವಿಜ್ಞಾನ ಕ್ಷೇತ್ರದ ಗಣ್ಯರಿಂದ ಮೆಚ್ಚುಗೆಗೆ ಪಾತ್ರವಾಯಿತು.

ಗುರುವಾರ ನಡೆದ ಪ್ರದರ್ಶನದ ಅವಲೋಕನದ ವೇಳೆ ಹದಿಮೂರು ವಿಭಾಗಗಳ ಸ್ಪರ್ಧೆಗೆ ಬಂದಿದ್ದ ವೈವಿಧ್ಯಮಯ 360 ಪ್ರಾಜೆಕ್ಟ್‌ಗಳಿಗೆ ತೀರ್ಪುಗಾರರು ತಲೆದೂಗಿದರು. ಐಟಿ/ಬಿಟಿ ಸೇರಿದಂತೆ ಸಿವಿಲ್, ಮೆಕಾನಿಕಲ್, ಕೈಗಾರಿಕೆ ಎಂಜಿನಿಯರಿಂಗ್ ವಿಭಾಗದ ವಿದ್ಯಾರ್ಥಿಗಳು ನವೀನ ಮಾದರಿಯಲ್ಲಿ ಯಂತ್ರಗಳನ್ನು ರೂಪಿಸಿ ಜನ ಬಳಕೆಗೆ ಅವಕಾಶ ಮಾಡಿಕೊಡಬಹುದು ಎಂಬುದನ್ನು ಸಾಬೀತುಪಡಿಸಿದರು.

'ಆನಂದೋತ್ಸವ'

ಬೆಂಗಳೂರು: ಆರ್ಟ್ ಆಫ್ ಲಿವಿಂಗ್‌ನ ಬೆಂಗಳೂರು ಆಂತಾರಾಷ್ಟ್ರೀಯ ಕೇಂದ್ರ ಮೇ 17ರವರೆಗೆ 'ಆನಂದೋತ್ಸವ' ಎಂಬ ವಿಶೇಷ ಕಾರ್ಯಕ್ರಮ ಹಮ್ಮಿಕೊಂಡಿದೆ. ಈ ಸಂದರ್ಭದಲ್ಲಿ ಶ್ರೀ ಶ್ರೀ ರವಿಶಂಕರ ಗುರೂಜಿ ಅವರು ಯೋಗ ಮತ್ತು ಧ್ಯಾನದ ಬಗ್ಗೆ ಭೋಧಿಸುತ್ತಾರೆ. ಆರ್ಟ್ ಆಫ್ ಲಿವಿಂಗ್ 35ನೇ ವರ್ಷಾಚರಣೆಯ ಪೂರ್ವ ಸಮಾರಂಭಗಳು ಮೇ 17ರಂದು ಸಂಜೆ ಆನಾವರಣಗೊಳ್ಳುವವೆ. ಸಮಾರಂಭವನ್ನು ನೇರ ಪ್ರದರ್ಶನದ ಮೂಲಕ ಜಗತ್ತಿನೆಲ್ಲೆಡೆಯೂ ಪ್ರಸಾರ ಮಾಡ ಲಾಗುತ್ತದೆ. ಸಂಸ್ಥೆಯ ವೆಬ್ ಸೈಟ್ ಲಿಂಕ್ ಮೂಲಕವೂ ನೇರ ಪ್ರಸಾರ ಪಡೆಯಬಹುದು.

ನಿರಾಕರಣೆ ಚಳವಳಿ ನಡೆಸುವ ಎಚ್ಚರಿಕೆ ನೀಡಲಾಗಿದೆ.

ಅನಿಕೇತನ ಕನ್ನಡ ಬಳಗ, ಕರ್ನಾಟಕ ವಿಚಾರ ವೇದಿಕೆ ಹಾಗೂ ಕನ್ನಡ ಕ್ರಿಯಾ ಸಮಿತಿಯು ಕನ್ನಡ ಸಾಹಿತ್ಯ ಪರಿಷತ್‌ನಲ್ಲಿ ಗುರುವಾರ ಹಮ್ಮಿಕೊಂಡಿದ್ದ 'ಬೆಂಗಳೂರು ಮಹಾನಗರ ವಿಧಾನಸಭೆ ಕನ್ನಡ- ಕನ್ನಡಿಗರ ಮುಂದಿರುವ ಸವಾಲುಗಳು?' ಕುರಿತ ಚಿಂತನಾಗೋಷ್ಠಿಯಲ್ಲಿ ಮೇಲ್ಕಂಡ ನಿರ್ಣಯ ಕೈಗೊಳ್ಳಲಾಯಿತು.

ಆರಂಭದಲ್ಲೇ ಖಂಡನಾ ನಿರ್ಣಯ ಮಂಡಿಸಿದ ಕನ್ನಡ ಪರ ಹೋರಾಟಗಾರ ವಾಟಾಳ್ ನಾಗರಾಜ್, "ಸಿಎಂ ಆಗ್ಗಿಸಿದರು.

ಚುನಾವಣೆಗೆ ಸ್ಪರ್ಧಿಸಲಿ: "ಸದ್ಯದಲ್ಲೇ ಬಿಬಿಎಂಪಿ ಚುನಾವಣೆಯಿದ್ದು ಕನ್ನಡಪರ ಸಂಘಟನೆಯವರು ಸ್ಪರ್ಧಿಸಬೇಕು. ಪಾಲಿಕೆ ಆಖಂಡವಾಗಿ ಉಳಿಯಬೇಕೆಂದು ಬಯಸುವ ಕನ್ನಡ ಪರ ಹೋರಾಟಗಾರರು ಚುನಾವಣೆಗೆ ಸ್ಪರ್ಧಿಸಬೇಕು. ಕನಿಷ್ಠ 50 ಮಂದಿ ಗೆದ್ದರೆ ವಿಭಜನೆಯಂತಹ ಪ್ರಯತ್ನವನ್ನು ತಡೆಗಟ್ಟಬಹುದು. ಇಷ್ಟಾದರೂ ಸರಕಾರ ವಿಭಜನೆಗೆ ಮುಂದಾದರೆ ಕರ ನಿರಾಕರಣೆ ಚಳವಳಿ ನಡೆಸಲಾಗುವುದು. ನಗರದ ಯಾವುದೇ ಗಳಿಗೆ ಮನವಿ ಸಲ್ಲಿಸಿತ್ತು. ಆಗ ಕನ್ನಡ ಪರ ಸಂಘಟನೆಗಳೇ ಹೋರಾಟ ನಡೆಸುದ್ದವು. ಇದೀಗ ಪಾಲಿಕೆ ವಿಭಜನೆಯಾದರೆ ಕನ್ನಡಿಗರು ಛಿದ್ರರಾಗಲಿದ್ದಾರೆ," ಎಂದರು.

ವಿಧೂತಿಪುರ ಮಠದ ಡಾ. ಮಹಾಂತಲಿಂಗ ಶಿವಾಚಾರ್ಯ ಸ್ವಾಮೀಜಿ, ಕರ್ನಾಟಕ ರಕ್ಷಣಾ ವೇದಿಕೆ ಅಧ್ಯಕ್ಷ ಶಿವರಾಮೇಗೌಡ, ಜಯ ಕರ್ನಾಟಕ ಸಂಘಟನೆ ಅಧ್ಯಕ್ಷ ಬಿ.ಎನ್.ಜಗದೀಶ್, ಅನಿಕೇತನ ಕನ್ನಡ ಬಳಗದ ಅಧ್ಯಕ್ಷ ಮಾಯಣ್ಣ, ಕನ್ನಡ ಕ್ರಿಯಾ ಸಮಿತಿ ಅಧ್ಯಕ್ಷ ಕುಮಾರ್ ಮತ್ತಿತರರು ಉಪಸ್ಥಿತರಿದ್ದರು.

ಎಂ.ಎಸ್.ರಾಮಯ್ಯ ತಾಂತ್ರಿಕ ಸಂಸ್ಥೆಯು ಆಯೋಜಿಸಿದ್ದ ಪ್ರಾಜೆಕ್ಟ್ ಪ್ರದರ್ಶನದಲ್ಲಿ ಹೊಸ ಆವಿಷ್ಕಾರ ಮಾದರಿಗಳ ಕುರಿತು ವಿದ್ಯಾರ್ಥಿಗಳು ಮಾಹಿತಿ ನೀಡಿದರು.

ಚಿತ್ರ ಸುದ್ದಿ

ನಗರದ ಜ್ಞಾನಜ್ಯೋತಿ ಸಭಾಂಗಣದಲ್ಲಿ ಶುಕ್ರವಾರ ನಡೆದ 'ವಿಜ್ಞಾನ ಮತ್ತು ಜೈವಿಕ ಸುರಕ್ಷತೆ ಸಂವಹನ' ಕುರಿತ ಕಾರ್ಯಾಗಾರದಲ್ಲಿ ಕೇಂದ್ರ ಜೈವಿಕ ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆ ಸಲಹೆಗಾರ ಎಸ್ ಆರ್ ರಾವ್, ಬೆಂಗಳೂರು ವಿವಿ ಕುಲಪತಿ ಪ್ರೊ.ಬಿ.ತಿಮ್ಮೇಗೌಡ ಮತ್ತಿತರರು ಇದ್ದರು.

ಸುಗಮ ಸಂಗೀತ ಪರಿಷತ್ತಿಗೆ ಸೂಕ್ತ ನಿವೇಶನ ಒದಗಿಸುವುದು ಸೇರಿದಂತೆ ಹಲವು ಬೇಡಿಕೆಗಳನ್ನು ಈಡೇರಿಸಬೇಕೆಂದು ಕೋರಿ ಮುಖ್ಯಮಂತ್ರಿ ಸಿದ್ದರಾಮಯ್ಯ ಅವರಿಗೆ ಪರಿಷತ್ತಿನ ಅಧ್ಯಕ್ಷ ವೈ ಕೆ ಮುದುಕ್ಷಪ್ಪ ಹಾಗೂ ಮತ್ತಿತರರು ಮನವಿ ಸಲ್ಲಿಸಿದರು.

Coverage of Bangalore Workshop

ಜಾತಿ ಸಮೀಕ್ಷೆ ಅವಧಿ ಮುಕ್ತಾಯ

ಬೆಂಗಳೂರು: ಜಾತಿ ಸಮೀಕ್ಷೆಯು ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ ವ್ಯಾಪ್ತಿಯಲ್ಲಿ ಶುಕ್ರವಾರ ಕೊನೆಗೊಂಡಿದೆ. ಹಿಂದುಳಿದ ವರ್ಗಗಳ ಇಲಾಖೆಯ ವೆಬ್ ಸೈಟ್‌ನಲ್ಲಿ ನೀಡಿರುವ ಮಾಹಿತಿ ಅನ್ವಯ ಗುರುವಾರದವರೆಗೆ ಬೆಂಗಳೂರಿನಲ್ಲಿ ಶೇಕಡ 94.76ರಷ್ಟು ಮನೆಗಳ ಸಮೀಕ್ಷೆ ಪೂರ್ಣಗೊಂಡಿದೆ.

'ಶನಿವಾರ ನಾವು ಸಭೆ ಕರೆದಿದ್ದೇವೆ. ಸಮೀಕ್ಷೆಯ ಪ್ರಗತಿ ಕುರಿತು ಬೆಂಗಳೂರಿನ ವಿವಿಧ ಭಾಗಗಳಿಂದ ವರದಿ ದೊರೆಯಲಿದೆ. ಮುಂದಿನ ಕ್ರಮದ ಬಗ್ಗೆ ತೀರ್ಮಾನಿಸಲಾಗುವುದು' ಎಂದು ರಾಜ್ಯ ಹಿಂದುಳಿದ ವರ್ಗಗಳ ಶಾಶ್ವತ ಆಯೋಗದ ಅಧ್ಯಕ್ಷ ಎಚ್. ಕಾಂತರಾಜ ತಿಳಿಸಿದರು.

ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಕ್ಷೇತ್ರದಲ್ಲಿ ಭಾರತದ ಪ್ರಗತಿಗೆ ಮೆಚ್ಚುಗೆ

ಸಂಶೋಧನಾ ವರದಿ ಪ್ರಸಾರ: ರಾವ್ ಸಲಹೆ

ಪ್ರಜಾವಾಣಿ ವಾರ್ತೆ

ಬೆಂಗಳೂರು: 'ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಕ್ಷೇತ್ರದಲ್ಲಿ ಆಗುತ್ತಿರುವ ಹೊಸ ಹೊಸ ಸಂಶೋಧನೆಗಳ ಬಗ್ಗೆ ಸಾರ್ವಜನಿಕರಿಗೆ ಮಾಹಿತಿ ನೀಡುವ ನಿಟ್ಟಿನಲ್ಲಿ ಮಾಧ್ಯಮಗಳು ವರದಿ ಪ್ರಸಾರ ಮಾಡಬೇಕು' ಎಂದು ಕೇಂದ್ರ ಜೈವಿಕ ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆಯ ಸಲಹೆಗಾರ ಡಾ.ಎಸ್.ಆರ್.ರಾವ್ ಹೇಳಿದರು.

ಇಂಡಿಯನ್ ಇನ್‌ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಮಾಸ್ ಕಮ್ಯೂನಿಕೇಷನ್ (ಐಐಎಂಸಿ) ಮತ್ತು ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯದ ವಿದ್ಯುನ್ಮಾನ ವಿಭಾಗದ ವತಿಯಿಂದ ಸೆಂಟ್ರಲ್ ಕಾಲೇಜಿನ ಜ್ಞಾನಜ್ಯೋತಿ ಸಭಾಂಗಣದಲ್ಲಿ ಶುಕ್ರವಾರ ಏರ್ಪಡಿಸಿದ್ದ 'ಸಂವಹನ ವಿಜ್ಞಾನ ಮತ್ತು ಜೈವಿಕ ಸುರಕ್ಷತೆ' ವಿಷಯ ಕುರಿತ ಕಾರ್ಯಾಗಾರದಲ್ಲಿ ಅವರು ಮಾತನಾಡಿದರು.

ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಕ್ಷೇತ್ರದಲ್ಲಿ ದೇಶ ಸಾಕಷ್ಟು ಪ್ರಗತಿ ಸಾಧಿಸಿದೆ. ಆದರೆ, ಹೊಸ ಆವಿಷ್ಕಾರಗಳ ಬಗ್ಗೆ ಮಾಧ್ಯಮಗಳು ಹೆಚ್ಚು ವರದಿ ಮಾಡುತ್ತಿಲ್ಲ. ಹೊಸ ಸಂಶೋಧನೆಗಳ ಬಗ್ಗೆ ಜನರಿಗೆ ಮಾಹಿತಿ ಸಿಗುತ್ತಿಲ್ಲ ಎಂದರು.

ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯದ ಕುಲಪತಿ ಪ್ರೊ.ಬಿ.ತಿಮ್ಮೇಗೌಡ ಮಾತನಾಡಿ, 'ವಿದ್ಯುನ್ಮಾನ ವಿಭಾಗವು ಸಮುದಾಯ ರೇಡಿಯೊ ಸೇವೆ ಆರಂಭಿಸುವುದಾದರೆ ವಿಶ್ವವಿದ್ಯಾಲಯದ ವತಿಯಿಂದ ಸಹಕಾರ ನೀಡಲಾಗುವುದು' ಎಂದರು.

ವಿಶ್ವವಿದ್ಯಾಲಯದ ಸಮೂಹ ಸಂವಹನ ವಿಭಾಗವು ಈವರೆಗೆ ವಿಜ್ಞಾನ ವಿಭಾಗದಲ್ಲೆತ್ತು. ಅದನ್ನು ಬೇರ್ಪಡಿಸಿ ಕಲಾ ವಿಭಾಗಕ್ಕೆ ಸೇರಿಸುವಂತೆ ಯುಜಿಸಿ ನಿರ್ದೇಶನ ನೀಡಿದೆ. ಹೀಗಾಗಿ ಸಮೂಹ ಸಂವಹನ ವಿಭಾಗದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕಲಾ ವಿಭಾಗದಲ್ಲಿ ಸ್ನಾತಕೋತ್ತರ ಪದವಿ ನೀಡಲಾಗುವುದು ಎಂದರು.

ಕಾರ್ಯಕ್ರಮದಲ್ಲಿ ಡಾ.ಎಸ್.ಆರ್.ರಾವ್ ಮಾತನಾಡಿದರು. ಪ್ರೊ.ಬಿ.ತಿಮ್ಮೇಗೌಡ ಇದ್ದರು.

In the picture (from left to right): Dr S.R. Rao (adviser, DBT) and Hon'ble Vice-Chancellor Bangalore University

BHOPAL

Gene revolution can combat hunger, say agri scientists

TIMES NEWS NETWORK

Bhopal: Genetic engineering has become a hot button for debate and misinformation. When scientists genetically modifies a plant, they insert a foreign gene like a bacterium resistant to pesticide. And you can harvest a crop with a GM seed, which can withstand pests. The gene revolution to battle hunger, malnutrition with a bumper crop without pesticide was the centre of discussion at a two-day workshop held by Indian Institute of Mass Communication in collaboration with ministry of environment and United Nations Environment Programme at Makhanlal Chaturvedi University of Journalism and Communication in the city.

Ongoing tussle between organic farming and genetic modifying crops, Monsanto controversy and lack of progress in GM field trials may have bogged down the venture, but scientists at the workshop discussed threadbare how dissemination of information on biosafety could lift the cloud.

While fibre produce BT Cotton is the only GM crop grown for the market, Madhya Pradesh despite having black soil has only 6.10 lakh hectares under cultivation in Khandwa and Khargone, according to a study by International Service For Acquisition of Agribiotech Application. The state government is still cagey about field trials of GM crop in the state.

Senior scientist with ICAR, Milind Ratnaparkhe, said effective GM technology can be used in soyabean production through genetic recombination and identification of chromosome strands.

Director, Biotechnology Institute, JN Agriculture University, Jabalpur, Sharad Tiwari, spoke about molecular marker assisted selection (MAAS) as an useful tool to identify particular DNA strands to help generate more GM crops. "These innovations in agri-biotechnology can help improve crop yield in the state. Root modules of plants can help in nitrogen fixing by promoting rhizo bacteria and this can be used as bio-fertilizers."

Ranjini Warrier, director, ministry of environment, forests and climate change, and Prof Gita Bamezai, HoD, department of communication research, IIMC, spoke on the occasion.

Times of India, Bhopal Edition

ANNEXURE

- *Bio of Resource Persons*
- *List of participants*
- *Pre & Post Training Evaluation Questionnaires*
- *Concept note for Community Radio*

SHORT BIO OF RESOURCE PERSONS – Technical Session

Ms. Archita Bhatta
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Ms. Archita Bhatta is a science and environmental journalist with several years experience in research-based reporting and writing on issues like trends in science research, climate change, science policy and intellectual property issues seeking a challenging role that will help develop and sharpen these skills. Presently she works as communications consultant and science journalist with organizations like *Vigyan Prasar, Scidev and Nature*. She holds a Masters of Research in Sustainability degree from University of Leeds.

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Prof. Ashwini Parikh is presently working at JNU, Dept. of Life Sciences. He has been a CREST fellow at University of California, Davis, USA, Visiting Fellow University of Cambridge, U.K. His primary area of research is Stress Physiology and Molecular Biology and he has published 86 articles and book chapters. He has numerous awards and honours to his credit like Award of Fellowship (F.N.A.Sc) by the National Academy of Sciences (NASI), Allahabad Nominated as member of Academic Committee of Central Institute of Medicinal and Aromatic Plants (CIMAP, Lucknow) from 2011-2013 and 2013-2015.

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Dr.A.S.Balasubramanya is serving as UGC Emeritus Fellow in the Department of Electronic Media, Bangalore University. Earlier, he served as Professor and Chairman, Department of Mass Communication and Journalism, Karnatak University, Dharawad. He was also the Coordinator of Swami Vivekananda Centre at KUD. He studied in the University of Mysore for his graduation and post-graduation and obtained doctoral degree from the University of Mysore itself. He was in the active teaching and research fields for 37 years. He has worked for two years in two Kannada daily

newspapers in Bangalore before joining the Department of Communication, Bangalore University in 1977. He was the Chairman of the department for over two decades and played a major role in building the department as a major centre for media training and research in north Karnataka. He initiated two more programmes namely a two year masters programme in Electronic Media and one year diploma in Graphics and Animation. He was able to set up a state of the art multimedia production facility-Educational Technology Media Centre (ETMC) on the campus.He has served as a Member of Karnatak University Syndicate, Academic Council and as a Dean, Faculty of Social Science. He was on the UGC Panel on Communication for one term.

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Dr. Channarayappa obtained B.Sc. (Ag.), MSc (Ag.) and Ph.D from the University of Agricultural Sciences, Bangalore (1981, 1983, & 1992) and a second Ph.D. from West Virginia University, Morgantown, USA (1986-90).He was a Postdoctoral fellow and Research associate in TXMDACC Houston, USA from 1991-95 and Visiting scientist in NIOSH, Morgantown, WV, USA from 1995-96.He has also worked as Assistant Professor, UAS, from 1996, then Principal and Head of the Department of Genetics in Vydehi Institute of Biotech Sciences, Bangalore (2003-07). Since 2007 he has been working as a Professor and Head, Department of Biotechnology, MSRIT, Bangalore. He was honored with many awards, Jawaharlal Nehru award for Best PG research 1993, by ICAR, New Delhi; Environmental Mutagen Society Student Travel Award 1989, USA,. Mother Teresa Excellence Award 2013, Thrissur, Kerala; Best Citizens of India Award 2013, Mahatma Gandhi Ekta Samman 2013, Shiksha Rattan Pruskar 2013, Glory of India Gold Medal 2013, New Delhi.

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Prof. Deepak Pental is a Professor of Genetics and the Ex-Vice Chancellor at the University of Delhi. He obtained his Ph.D. from Rutgers University, USA in 1978 and subsequently Postdoctoral and University Research Fellow at the University of Nottingham, UK from 1978-84.He is a renowned researcher in the field of Genetics whose current research interests lie in development of transgenics and marker-assisted breeding of crops, especially mustard and cotton. He has published more than sixty research papers in the national and international peer reviewed journals and his work has led to major breakthroughs in hybrid seed production technologies. He is also quite active in the area of social science policy particularly related to the field of agriculture. He has the distinction of receiving numerous honours, international fellowships and national awards in recognition to his excellent academic and research contributions.

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Dr Dipayan Dey is currently serving as Chair (Research & Planning), South Asian Forum for Environment [SAFE], a civil society organization working towards sustainable environment development and poverty alleviation in the Indian eco-region. As an adept professional he has more than a decade of comprehensive experience in tertiary teaching and nearly fifteen years of acumen in environmental research, planning, designing and management towards sustainable development in global south. He has a PhD degree in Conservation Ecology from University of Delhi.With vast research and professional experiences he has served many organizations at various levels and actively involved in various research projects under the aegis of UNEP, UNDP, UNFPA, IUCN, ILEC, DFID(UK), British Ecological Society, Korea Green Foundation, Japan World Water Forum, Bhutan Trust Fund, Royal Society for Protection of Nature (Bhutan), National Agricultural Bank for Rural Development (India) and South Asian Forum for Environment.

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Dr. Phondke is not currently associated with any particular institution on a full time basis. He is actively involved in certain projects of two organisations and until recently, was responsible for running the National Institute of Science Communication. At that institute he was in charge of an international inter-institutional project of producing CD-ROMs of databases concerning traditional medicinal uses of natural resources of India, such as flora, fauna and minerals,that are used by industries, as well as practitioners of indigenous industries and medical practices. Currently, Dr. Phondke is a consultant to COSTED, an international UNESCO affiliate. He is running its programme on developing science communication skills in small countries from underprivileged parts of the world. Dr. Phondke is also involved with Vidnyan Samvardhan Mandal, an organisation founded by scientists in Pune, which aims are to provide non-formal education and inculcate the spirit of exploratory ways of learning among children of all ages and all strata of society.

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Dr. Gurinderjit Randhawa is currently working as Principal Scientist in the Division of Genomic Resources, National Bureau of Plant Genetic Resources. She has been actively engaged in **Technologies Development, Transfer and Commercialization of Technologies, Consultancy Services for developing expertise in the area of GMO Testing, Designing of GM Testing laboratory, and International validations for quality assurance and global harmonization.** She has served as an active member and technical expert of a number of national and international committees on GM. She has numerous publications related to GM research and many patents to her credit.

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Dr Jagdeep Singh Sandhu is currently working as Assistant Biotechnologist, School of Agricultural Biotechnology, Punjab Agricultural University. He obtained his Ph.D. in Plant Molecular Biology from Downing College, University of Cambridge. Earlier he served as Post-Doctoral Research Associate in Plant Molecular Biology at University of Illinois at Urbana-Champaign, USA before joining the Department of Plant Breeding in the college of Agriculture, PAU in 2001. His major area of specialization is Plant Molecular Biology. He completed several projects and contributed numerous research publications in his field of research.

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Prof. K C Bansal obtained his Ph.D. with Gold Medal from the Indian Agricultural Research Institute, New Delhi in 1988. Starting his career in 1977 as Scientist S1, Prof. Bansal worked at different ICAR institutes and joined the current position as Director, National Bureau of Plant Genetic Resources (NBPGR), ICAR, New Delhi in 2010. Before joining NBPGR, Prof. Bansal served as Professor of Molecular Biology and Biotechnology at the National Research Centre on

Plant Biotechnology, IARI, New Delhi for about 6 years. His recent research interests include gene identification using genomics approaches, and characterization of wheat germplasm for identification of useful genes and alleles for drought- and thermo-tolerance, and pre-breeding in chickpea and lentil pulse crops.He has over 100 publications. He is a recipient of several national and international awards and honours like Professor Hira Lal Chakarvarty award of the Indian Science Congress Association in 1994, Hari Krishna Shastri award by IARI in 2008-09 and Rafi Ahmad Kidwai award by the ICAR in 2009 to name a few.Prof. Bansal was elected as Vice-Chair from Asia for the 15th Regular Session of the Commission on Genetic Resources for Food and Agriculture of the FAO, United Nations, 2013-15.He is Fellow of the National Academy of Agricultural Sciences (NAAS) and the National Academy of Sciences, India (NASI), and recipient of Recognition Award of the NAAS.

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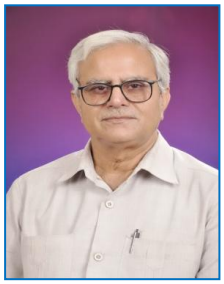

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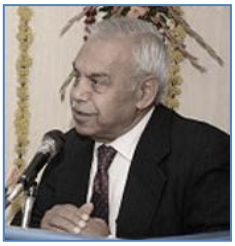
SHORT BIO OF RESOURCE PERSONS – Panel Discussion



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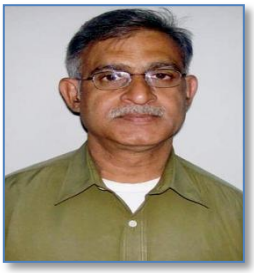

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REGIONAL WORKSHOP

STATE: MADHYA PRADESH
CAPITAL: BHOPAL
Collaboration University: Makhanlal Chaturvedi National University of Journalism and Communication
Venue: Conference Hall, 5th Floor, MCNUJC, Bhopal, Madhya Pradesh

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REGIONAL WORKSHOP

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PLACE: AHMEDABAD
Collaborating University: Gujarat University
Venue: Seminar Room, Gujarat University, Navrangpura, Ahmedabad

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REGIONAL WORKSHOP

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CAPITAL: CHANDIGARH
Collaborating University: Panjab University
Venue: ICSSR Complex, Panjab University, Sector 14, Chandigarh

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WORKSHOP FOR IIS OFFICERS – Group A

Venue: Seminar Hall, Indian Institute of Mass Communication, New Delhi

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WORKSHOP FOR IIS OFFICERS - Group B

Venue: Seminar Hall, Indian Institute of Mass Communication, New Delhi

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RADIO QUIZ PARTICIPANTS

INTER – UNIVERSITY RADIO QUIZ ON BIOSAFETY

Participants from various universities/Colleges of Delhi:

1) Maharaja Agrasen College, Delhi University
2) Amity University
3) Indraprastha University
4) Indian Institute of Mass Communication

1st Prize Winner – Maharaja Agrasen College, Delhi University

1) Surbhi Mishra
1) Vidyanshika Mehta
2) Parikshit Joshi

Runner Up- Indian Institute of Mass Communication

1) Mahak Juneja
2) Pooja
3) Shivam Yadav

INTER – DEPARTMENTAL RADIO QUIZ ON BIOSAFETY AT IIMC

Participants from all four courses of IIMC

1) Hindi Journalism
2) English Journalism
3) Radio and TV Journalism
4) Advertising and Public Relations

1st Prize Winner – Radio and TV Journalism

1) Mahak Juneja
2) Pooja
3) Shivam Yadav

Runner Up – Hindi Journalism

1) Komal Singh
2) Ankur Sinha
3) Gunjan Tripathi

Programme Schedule

April 7-8th, 2015-12-26
IIS Officers, Group A

DAY 1					
Session	**Time**	**Title of Technical Session**	**Issues to be Covered**	**Resource Persons**	**Moderator**
1.	10.45-11:30 am	**Innovations in Biotechnology and Importance of the Bio- safety Programme**	1. Scope and Future of Biotechnology globally and in India 2. Application of GMOs/LMOs in Agriculture	**Prof. Ashwani Pareek School of Lice Sciences Jawaharlal Nehru University (JNU)**	**Dr. Surbhi Dahiya**
2	11:30-12:15 noon	**a) Biosafety Regulatory Framework in India: Key Feature of Cartagena Protocol**	1. Biosafety in India 2. Global regulatory regime with special focus on Cartagena Protocol on Biosafety 3. Global status of GM Crops	**Dr. S.R. Rao Advisor Department of Biotechnology Government of India**	
	12.15-12.45 pm	**b) Covering Biosafety Issues by Media : Dimensions of Risk Communication**	1. Discuss the issues related to Biosafety Communication and challenges for mass media & communicators in India 2. Bridging Gaps & Building Capacities in Biosafety Communication	**Prof. Gita Bamezai DECORE, IIMC**	
	12.45-1.00 p.m.	**c) Joint Session**	Questions and Answers		
3	2:00 - 2:30 pm	**Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety**	Information Data Bases and other Sources on Biosafety	**Dr. Vibha Ahuja Chief General Manager Biotech Consortium India Limited**	**Dr. Anand Pradhan**
4	2:30 - 3:00 pm	**What Makes Science Report Interesting and Readable : Practice of Science Journalism in India**	• Reporting Science and Meeting the Challenges of Craft and Tapping Authentic Sources of News • Experience of Online-Science Journalism: Developing Countries' Perspective • Writing Science Features: Balancing Facts with Ideas of Development.	**Mr. Ranjit Devraj, Science Journalist SciDevNet**	**Dr. Anand Pradhan**
	3:00-3:30 p.m.	**Joint Session**	Questions and Answers		

Session	Time	Title of Technical Session	Issues to be Covered	Resource Persons	Moderator
	3.45-4.15 pm	**Opportunities & Challenges in Covering Science: As a Public Broadcaster**	**S**kype Presentation from London • Covering Biosafety Issues as a Public Broadcaster/Media Professional • Balancing the scientific perspectives with newsworthiness in reporting Biosafety issues • Challenges of Working with Research Data in	**Ms. Helen Briggs BBC, England**	**Prof. Gita Bamezai** **&** **Ms. Rinku Pegu**
	4:15 – 4:45 pm	**Round up Session**	The session will invite participants to deliberate on the level of Science Reporting in Indian Media. Constraints and Opportunities in reporting agro-biotechnological innovations.	Dr. Anand Pradhan Dr. Surbhi Dahiya Mr. Rayees Altaf	Brain-Storming session
End of Day 1					
DAY 2					
1	10.00 – 11.00 a.m.	**Safety Assessment of GM Crops in India and Biosafety Mechanisms**	• Safety Assessment of GM crops • Disseminating information about technical aspects of biosafety assessment	**Dr. T. R. Sharma** **Project Director** National Research Centre on Plant Biotechnology LBS Centre, IARI, Pusa Campus, Government of India	**Dr. Rasmi Patnaik**
2	11.15 - 12.15 pm	**Making A Difference : Working with Digital Tools to Communicate**	• Participatory Approach to communicating Science • Using new communication technologies at the grassroots Level • Experiences of using Video with Agriculture communities on innovations and Biosafety Issues	**Dr. Vinay Kmar** **Chief Operating Officer** **Digital Green Organization India**	

Session	Time	Title of Technical Session	Issues to be Covered	Resource Persons	Moderator
3	12.15 – 1.00 pm	**Breaking Barriers : Learning Skills and Building Perspectives in Science Communication**	• Overview of Salient Issues in Science Communication and Biosafety • Cultivating a creative approach to building comprehension about technical issues • Craft of Journalistic Writing	Mr.Rayies Altaf	Dr. Rasmi Patnaik IIMC
4	2.00 – 3.30 pm	**Biosafety Issues for the Media Professionals** Participant will be invited to make a presentation on an assigned topic in the concluding session. Five groups will be formed based on their own expertise, choice and interest. Each group will work on their presentation for 30 minutes. Each group will get 5 minutes for presentations based on their interaction during the workshop. The broad areas for group-work are: 1. Technology in Agriculture and farmers' issues 2. Food, consumers and bio safety Issues 3. Impact of Agri-Bio-technology on socio-economic aspects 4. Environment and issues of bio-safety 5. Regulation and bio-safety norms		**Group-Work** During the session participants can refer to the reading material given. Each group will get 35-40 minutes to work on the assigned area or the presentations. After presentation by each group, participants will offer comments for 5-7 minutes.	Dr. Anand Pradhan, Dr. Surbhi Dhaiya Mr. Rayees Altaf Dr. Rasmi Patnaik **IIMC**
5	3.30 - 4:30 pm	**Valedictory function & Tea**	Keynote speech on Importance of Science & Biosafety Communication for Development	**Dr. R Gopichandran,** Director, Vigyan Prasar	
			A Round-up Report by IIMC Coordinators	Dr Rasmi Patnaik / Mr Dwarkeshwar Dutt	
			Presentation of certificates	DG, IIMC	
			Vote of Thanks	Dr. Surbhi Dahiya, IIMC	
End of Day 2 and conclusion of the Workshop					

April 21-22nd, 2015
Mumbai

DAY 1 (21.04.2015)					
10.00-10.30am			**Registration**		
10.30 -11.00am			**Inauguration**		
Session	**Time**	**Title of Technical Session**	**Issues to be Covered**	**Resource Persons**	**Moderator**
1.	11.15-12:00 pm	**Innovations in Biotechnology and Importance of the Bio- safety Programme**	1. Status of biotech innovations in India and in the region 2. What are GMOs/ LMOs and their applications in agriculture 3. Significance of Bio-safety Issues in Agri-Biotechnology	**Prof. Ashwani Pareek** School of Life Sciences JNU, New Delhi	Moderated by Professor Gita Bamezai
2	12:00-12.30 pm	**Biosafety Regulatory Framework in India**	1. Global regulatory regime with special focus on Cartagena Protocol on Biosafety 2. Biosafety Rules and regulation in India	**Dr. Ranjini Warrier** Director MoEF& CC	
	12.30 – 1.15 pm	Interaction Session with Panellists			
3	2:00 - 3:15 pm	**Practice of Science Journalism in India : Challenges & Opportunities**	The session will invite participants to deliberate on 1. Level of Science Reporting in the Indian Media. 2. Constraints and Opportunities in Reporting Science and Bio-safety Issues 3. How to report Agro-biotechnological Issues/innovations 4. Limited/Unauthorized News Sources for Science Reporting	Moderated by: Dr. Anand Pradhan Dr. Sunder Rajdeep Dr. Surbhi Dahiya	Brain-Storming session with Participants
4	3:30-4:00 pm	**Opportunities & Challenges for Media Professional in Reporting Innovations in Science**	1. Covering Biosafety Issues as a Public Broadcaster/Media Professional 2. Balancing the scientific perspectives with newsworthiness in reporting Biosafety issues 3. Challenges of Working with Research Data	**Ms. Helen Briggs** BBC Science/Health Correspondent, England	Skype Presentation from London
End of Day 1					

DAY 2 (22.04.2015)					
Session	**Time**	**Title of Technical Session**	**Issues to be Covered**	**Resource Persons**	**Moderator**
1	10.30-11.15 pm	**Biosafety Issues &Media: Dimensions of Risk Communication**	1. Issues related to Biosafety Communication and challenges for mass media in India 2. Bridging Gaps & Building Capacities in Reporting Bio-safety	**Prof. Gita Bamezai** DECORE, IIMC	**Mr. Rayies Altaf**
	Questions and Answers				
2	11.15 - 12.30 pm	**Communication of Scientific Innovations**	Participatory Approaches to communicating Science with special focus on Biotechnology	**Dr. G. P. Phondke** Former Director of NISCOM, Delhi	
	Questions and Answers				
3	12:30 - 1:15 pm	**Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety Issues**	Information Data Bases and other Sources on Biosafety	**Mr. Rayies Altaf** IIMC	
	Questions and Answers				

4	2.00 – 3:30 pm	**Biosafety Issues for the Media Professionals** Participants will be invited to make a presentation in the form of a feature, report or an article on any Bio-safety topic in the concluding session. The broad areas for group-work are: 1. Innovations in Agri-Bio-technology and implications for the region 2. Agricultural Productivity, Self-reliance and Farmers' issues in the Bio-safety regime 3. Food, Nutrition and Bio-safety Issues for Consumers 4. Socio-Economic aspects of Agri-Bio-technology 5. Environment, Biodiversity issues and Bio-safety norms 6. Dimensions of Regulation and Bio-safety norms in the country and the region.	**Group-Work** Five groups will be formed based on their own expertise, choice and interest. Each group will work on their presentation for 30 minutes. Each group will get 10 minutes for presentations which can be a Write-Up, PPT or an Oral Presentation. The topic of presentation will be based on the range of issues covered during the workshop. During the session participants can refer to the reading material given. Each group will get 35-40 minutes to work on the assigned area or the presentations. Presentations will be followed by comments/feedback for 5 minutes.	Workshop Coordinators
6.	3.30-4.00 pm	**Valedictory function & Tea**	Presentation of certificates	IIMC & University of Mumbai
			Group Photo	
End of Day 2 and conclusion of the Workshop				

May 15-16th, 2015
Bangalore

DAY 1 (15.05.2015)					
10.00-10.30am			**Registration**		
10.30 -11.00am			**Inauguration**		
Session	**Time**	**Title of Technical Session**	**Issues to be Covered**	**Resource Persons**	**Moderator**
1	11.15-12:00 pm	**Innovations in Biotechnology and Importance of the Bio- Safety Programme**	1. Status of biotech innovations in India and abroad 2. What are GMOs/ LMOs and their applications in agriculture 3. Significance of biosafety	**Dr. Channarayappa** Professor and Head Department of Biotechnology MSRIT, Bangalore	**Professor Gita Bamezai**
2	12:00-1.15 pm	**Why do we need Agri-biotechnology? Working with new technologies for Local Solutions**	1. Scope and Status of agri-biotechnology in India. 2. Agri-biotech as a boon for India's Food Security 3. Using technologies for Enhancing Local Development	**Dr. S.R. Rao** Advisor Department of Biotechnology Government of India	
		Questions and Answers			
3	2:00 - 3.30 pm	**Regional Media & its role in communicating science & technology**	The session will invite participants to deliberate on 5. How to report Agro-biotechnological innovations 6. How to write good science features 7. Constraints and Opportunities in Reporting biotechnological and bio-safety Issues	**Prof A.S. Balasubramanya** **Prof. Gita Bamezai** **Dr. Anand Pradhan**	Panel Discussion
		Questions and Answers with Panelists			
4	3:45-4.30 pm	**Opportunities & Challenges in Covering Science**	Short Documentaries on Science in Media		
End of Day 1					

DAY 2 (16.05.2015)					
1	10.30-11.30 am	**Safety Assessment and Biosafety Mechanisms of GM Crops in India**	1. Safety Assessment of food and feed derived from GMOs 2. Detection methods for GMOs	**Dr. Lalitha Gowda** CFTRI, Mysore	**Dr. Anand Pradhan**
Questions and Answers					
2	11.45 - 12.45 pm	**Biosafety Regulatory Framework in India: Challenges and Prospects**	1. Primacy of Global Regulatory Regime 2. Relevance of Cartagena Protocol on Biosafety 3. Challenges of Implementation of Biosafety Rules and Regulation in India	**Dr. Ranjini Warrier** Director MoEF&CC Government of India	
	Questions and Answers				

Session	Time	Title of Technical Session	Issues to be Covered	Resource Persons Moderator
3	12:45 - 1:15 pm	**Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety**	Information Data Bases and other Sources on Biosafety	**Mr. Rayies Altaf** IIMC
	Questions and Answers			
4	2.00 – 3:30 pm	**Biosafety Issues for the Media Professionals** The topics for presentations will be based on the range of issues covered during the workshop.	The broad areas are: 1. Innovations in Agri-Bio-technology and implications for the region 2. Agricultural Productivity, Self-reliance and Farmers' issues in the Bio-safety regime 3. Food, Nutrition and Bio-safety Issues for Consumers 4. Socio-Economic aspects of Agri-Bio-technology 5. Environment, Biodiversity issues and Bio-safety norms 6. Dimensions of Regulation and Bio-safety norms in the country and the region.	Brainstorming on thematic issues Moderated by IIMC Coordinators and Bangalore University
5	3.30-4.00 pm	**Valedictory function followed by *High Tea***	Presentation of certificates to the participants	Guest of Honour Dr. Ranjini Warrier, Director MoEF&CC, Government of India
End of Day 2 and conclusion of the Workshop				

May 21st, 2015
Kolkata

21.05.2015					
10:30-11:00			**Registration and Tea**		
11.00-11.30am			**Inauguration**		
Session	**Time**	**Title of Technical Session**	**Issues to be Covered**	**Resource Persons**	**Moderator**
1.	11.30am-12:30 pm	**Innovations in Biotechnology and Importance of Bio- Safety Programme**	1. Status of biotech innovations in India and abroad 2. What are GMOs/ LMOs and their applications in agriculture 3. Future Trends in agri-biotechnology & Implications for India	**Prof. Sampa Das** Bose Institute	**Prof. Gita Bamezai**
	Questions and Answers				
2.	12:30-1:30 pm	**Safety Assessment and Monitoring Mechanism of GM crops**	1. Environmental Safety Assessment 2. Food and feed safety assessment 3. Laboratory stage development	**Prof. Swapan Kumar Datta** Pro-Vice Chancellor Visva Bharati University	
	Questions and Answers				
3.	2:30 - 3:30 pm	**Covering Biosafety Issues by Media : Dimensions of Risk Communication**	3. Issues related to Biosafety Communication and challenges for mass media & communicators in India 4. Bridging Gaps & Building Capacities in Biosafety Communication	**Prof. Gita Bamezai** DECORE, IIMC	**Dr. Anand Pradhan**
	Questions and Answers				
4.	3:45 - 4:30 pm	**Communication of Scientific Innovations**	Participatory Approaches to communicating Science with special focus on Biotechnology (Panel Discussion)	**Prof. Tapati Basu** **Prof. Gita Bamezai** **Prof. Anand Pradhan** **Dr Dipayan Dey**	
Questions and Answers					
5.	4:30 – 5:00 pm	**Valedictory function and Tea**	Presentation of certificates to Participants	**Prof. Dhrubojyoti Chattopadhyay** Pro-Vice Chancellor University of Calcutta	
Conclusion of the Workshop					

June 5-6, 2015
IIS Officers, Group B

<table>
<tr><td colspan="6">DAY 1</td></tr>
<tr><td colspan="2">09:30-10:00 am</td><td colspan="4">Registration</td></tr>
<tr><td>Session</td><td>Time</td><td>Title of Technical Session</td><td>Issues to be Covered</td><td>Resource Persons</td><td>Moderator</td></tr>
<tr><td>1</td><td>10.00-11:00 am</td><td>Innovations in Biotechnology and Importance of the Bio- safety Programme</td><td>1. What is agribiotechnology.
2. What are GMOs/ LMOs and their applications in agriculture
3. Application of GMOs/LMOs in Agriculture
4. Future Trends in agri-biotechnology & Implications for India</td><td>Dr. K.C Bansal
Director
ICAR-NBPGR</td><td rowspan="6">Dr. Surbhi Dahiya</td></tr>
<tr><td></td><td colspan="4">Questions and Answers</td></tr>
<tr><td colspan="5">Tea Break (11:00 – 11:15 pm)</td></tr>
<tr><td>2</td><td>11:15-12:15 pm</td><td></td><td>1. Scope and Status of agri-biotechnology in India.
2. Agri-biotech as a boon for India’s Food Security
3. Using technologies for Enhancing Local Development</td><td>Ms. Archita Bhatta
Biotech Division
Vigyan Prasar</td></tr>
<tr><td></td><td colspan="4">Questions and Answers</td></tr>
<tr><td rowspan="2"></td><td>12:15 – 1:00 pm</td><td>Video Session</td><td>Short Documentaries on Communicating Science</td><td>Mr Rayies Altaf
IIMC</td></tr>
<tr><td colspan="4">Questions and Answers</td></tr>
<tr><td rowspan="2"></td><td>2:00 - 3:00 pm</td><td>Safety Assessment and Biosafety Mechanisms of GM Crops in India</td><td>3. Safety Assessment of food and feed derived from GMOs
4. Detection methods for GMOs</td><td>Dr. Gurinderjit Randhawa
Principal Scientist
ICAR-NBPGR</td><td rowspan="3">Ms. Rinku Pegu</td></tr>
<tr><td>3.00 - 3:30pm</td><td>Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety</td><td>Information Data Bases and other Sources on Biosafety</td><td>Mr. Rayies Altaf</td></tr>
<tr><td></td><td colspan="4">Questions and Answers</td></tr>
<tr><td colspan="6">End of Day 1</td></tr>
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Day 2					
Session	**Time**	**Title of Technical Session**	**Issues to be Covered**	**Resource Persons**	**Moderator**
1	10:30-11:30 am	**Biosafety Regulatory Framework in India**	Global regulatory regime with special focus on Cartagena Protocol on Biosafety. Biosafety rules and regulation in India.	**Dr Ranjini Warrier** Director MoEF & CC	**Mr. Rayies Altaf**
2	11.30 am – 12.30 p.m.	**Panel Discussion**	Innovations in Agri-biotechnology and media coverage of emerging issues for public consultation.	**Mr. Sanjiv Shankaran** Times of India **Mr. Ratnajyoti Dutta** Reuters **Mr. Manoj Varghese** IIMC	
Lunch (12:30-1:30)					
4.	1.30 – 2:30 pm	**Biosafety Issues for the Media Professionals** The topics for presentations will be based on the range of issues covered during the workshop.	The broad areas are: 1. Innovations in Agri-Bio-technology and implications for the region 2. Agricultural Productivity, Self-reliance and Farmers' issues in the Bio-safety regime 3. Food, Nutrition and Bio-safety Issues for Consumers 4. Socio-Economic aspects of Agri-Bio-technology 5. Environment, Biodiversity issues and Bio-safety norms Dimensions of Regulation and Bio-safety norms in the country and the region.		Group Work: Moderated by Workshop Coordinators
	2.30 – 3.00 pm	**Valedictory function followed by *High Tea***		Presentation of certificates to participants and Group photo	
End of Day 1					

July 14-15th, 2015
Bhopal

<table>
<tr><th colspan="6">DAY 1 (14.07.2015)</th></tr>
<tr><td colspan="2">10.00-10.30am</td><td colspan="4">Registration</td></tr>
<tr><td colspan="2">10:30 -11:00am</td><td colspan="4">Inauguration
Project Overview on Biosafety Issues in Agri-biotechnology And About the Media Workshop: Prof. Gita Bamezai & Dr. Anand Pradhan</td></tr>
<tr><th>Session</th><th>Time</th><th>Title of Technical Session</th><th>Issues to be Covered</th><th>Resource Persons</th><th>Moderator</th></tr>
<tr><td rowspan="2">1.</td><td rowspan="2">11:15 am - 12:00 pm</td><td rowspan="2">Innovations in Biotechnology and Importance of the Bio- Safety Programme</td><td>1. Status of biotech innovations in India and abroad
2. What are GMOs/ LMOs and their applications in agriculture
3. Significance of biosafety</td><td>Dr. Sharad Tiwari
JN Agricultural University, Jabalpur</td><td rowspan="3">Prof. Gita Bamezai</td></tr>
<tr><td colspan="2">Questions and Answers</td></tr>
<tr><td rowspan="2">2.</td><td rowspan="2">12:00 - 1:00 pm</td><td rowspan="2">Safety Assessment and Biosafety Mechanisms of GM Crops in India</td><td>1. Safety Assessment of food and feed derived from GMOs
2. Detection methods for GMOs</td><td>Dr. Milind B. Ratnaparkhe
Directorate of Soybean Research, Indore</td></tr>
<tr><td colspan="2">Questions and Answers</td></tr>
<tr><td rowspan="2">3.</td><td rowspan="2">2:00 -3:30 pm</td><td rowspan="2">Regional Media & its role in communicating science & technology</td><td>The session will invite participants to deliberate on
1. How to report Agro-biotechnological innovations
2. How to write good science features
3. Constraints and Opportunities in Reporting biotechnological and bio-safety Issues</td><td>Mr.Rakesh Dixit
Mr.Alok Mishra
Prof.Gita Bamezai
Dr. Anand Pradhan</td><td>Panel Discussion
Mr. Rayies Altaf, IIMC</td></tr>
<tr><td colspan="3">Questions and Answers with Panelists</td></tr>
<tr><td rowspan="2">4.</td><td rowspan="2">3:45- 4:30 pm</td><td rowspan="2">Unveiling Biosafety Communication</td><td>1. Need of biosafety communication
2. Contents of biosafety communication</td><td colspan="2">Dr. S C Dubey
Joint Director (Retd.)
HSADL, IVRI, Bhopal</td></tr>
<tr><td colspan="3">Questions and Answers</td></tr>
<tr><td colspan="6">End of Day 1</td></tr>
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DAY 2 (15.07.2015)					
Session	**Time**	**Title of Technical Session**	**Issues to be Covered**	**Resource Persons**	**Moderator**
1	10:30-11:30 am	**Biosafety Regulatory Framework in India: Challenges and Prospects**	1. Primacy of Global Regulatory Regime 2. Relevance of Cartagena Protocol on Biosafety 3. Challenges of Implementation of Biosafety Rules and Regulation in India	**Dr. Ranjini Warrier** Director Ministry of Environment, Forest& Climate Change Government of India	**Dr. Anand Pradhan**
Questions and Answers					
2	11:45 am – 1:00 pm	**Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety**	Information Data Bases and other Sources on Biosafety	**Mr. Rayies Altaf** IIMC	
Questions and Answers					
3	2:00 - 3:30 pm	**Biosafety Issues for the Media Professionals** The topics for presentations will be based on the range of issues covered during the workshop.	The broad areas are: 1. Innovations in Agri-Bio-technology and implications for the region 2. Agricultural Productivity, Self-reliance and Farmers' issues in the Bio-safety regime 3. Food, Nutrition and Bio-safety Issues for Consumers 4. Socio-Economic aspects of Agri-Bio-technology 5. Environment, Biodiversity issues and Bio-safety norms 6. Dimensions of Regulation and Bio-safety norms in the country and the region.	Brainstorming on thematic issues Moderated by IIMC Coordinators and Makhanlal Chaturvedi National University	
4	3.30-4.00 pm	**Valedictory function followed by *High Tea***	Presentation of Certificates to Participants	**Guest of Honour**	
End of Day 2 and conclusion of the Workshop					

July 22-23rd, 2015
Ahmedabad

DAY 1 (22.07.2015)					
10:00-10:30am			**Registration**		
10:30 -11:00am			**Inauguration** **Project Overview on Biosafety Issues in Agri-biotechnology and About the Media Workshop: Prof. Gita Bamezai & Dr. Anand Pradhan**		
Session	**Time**	**Title of Technical Session**	**Issues to be Covered**	**Resource Persons**	**Moderator**
1.	11:15 am - 12:00 pm	**Innovations in Biotechnology and Importance of the Bio- Safety Programme**	1. Status of biotech innovations in India and abroad 2. What are GMOs/ LMOs and their applications in agriculture 3. Significance of biosafety	**Prof. Vasant P. Gandhi** IIM Ahmedabad	**Professor Gita Bamezai**
Questions and Answers					
2	12:00- 1:00 pm	**Safety Assessment and Biosafety Mechanisms of GM Crops in India**	1. Safety Assessment of food and feed derived from GMOs 2. Detection methods for GMOs	**Dr. Milind B. Ratnaparkhe** *Directorate of Soybean Research, Indore*	
Questions and Answers					
End of Day 1					

DAY 2 (23.07.2015)					
Session	**Time**	**Title of Technical Session**	**Issues to be Covered**	**Resource Persons**	**Moderator**
1	10:30 - 11:30 am	**Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety**	Information Data Bases and other Sources on Biosafety	**Mr. Rayies Altaf** IIMC	**Rayies Altaf**
Questions and Answers					
2	11:45 am – 12:45 pm	**Regional Media & its role in communicating science & technology**	The session will invite participants to deliberate on 1. How to report Agro-biotechnological innovations 2. How to write good science features 3. Constraints and Opportunities in Reporting biotechnological and bio-safety Issues	**Dr. Rajendra Khimani** **Mr. Pradeep Mallik** **Prof. Binod C. Aggrawal** **Prof. Gita Bamezai** **Dr. Anand Pradhan**	
3	12:45 - 1:00 pm	Questions and Answers			

Session	Time	Title of Technical Session	Issues to be Covered	Methodology
4	2:00 – 3:30 pm	**Biosafety Issues for the Media Professionals** The topics for presentations will be based on the range of issues covered during the workshop.	The broad areas are: 1. Innovations in Agri-Bio-technology and implications for the region 2. Agricultural Productivity, Self-reliance and Farmers' issues in the Bio-safety regime 3. Food, Nutrition and Bio-safety Issues for Consumers 4. Socio-Economic aspects of Agri-Bio-technology 5. Environment, Biodiversity issues and Bio-safety norms 6. Dimensions of Regulation and Bio-safety norms in the country and the region.	Brainstorming on thematic issues Moderated by IIMC Coordinators and Gujarat University
5	3:30 – 4:00 pm	**Valedictory function followed by *High Tea***	Presentation of certificates to participants	**Guest of Honour**
End of Day 2 and conclusion of the Workshop				

July 28-29th, 2015
Chandigarh

Session	Time	Title of Technical Session	Issues to be Covered	Resource Persons	Moderator
DAY 1 (28.07.2015)					
10.30-11.00 am			**Registration**		
11:00 – 11:30 am			**Inauguration**		
1.	11:45 am - 1:00 pm	**Innovations in Biotechnology and Importance of Bio-Safety Programme**	1. Status of biotech innovations in India and abroad 2. What are GMOs/ LMOs and their applications in agriculture productivity 3. Significance of biosafety issues in agri-biotechnology	**Dr. Siddharth Tiwari** National Agri-Food Biotechnology Institute (NABI), Punjab Govt. of India	**Dr. Anand Pradhan**
	Questions and Answers				
2	2:00-3:15 pm	**Safety Assessment and Biosafety Mechanisms of GM Crops in India**	1. Safety Assessment of food and feed derived from GMOs 2. Regulatory Regimes in the country for ensuring Bio-safety standards in application of innovations in agri biotechnology: from lab to land	**Dr. Gurinder Jit Randhawa** National Bureau of Plant Genetic Resources New Delhi	**Dr. Surbhi Dahiya**
	Questions and Answers				
3	3:30 – 4:00 pm	**Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety**	Information Data Bases and other Sources on Biosafety	Mr. Rayies Altaf IIMC	
	Questions and Answers				
End of Day 1					
DAY 2 (29.07.2015)					
1	10:30 – 11:30	**Transgenic Crops: Risk Assessment**	1. Detection methods & Monitoring Mechanism of GM crops	**Dr Jagdeep Singh Sandhu** **Senior Biotechnologist** Punjab Agricultural University, Ludhiana	**Dr. Surbhi Dahiya**
	Questions and Answers				
2.	11:45 am – 1:00 pm	**Regional Media & its role in communicating science & technology**	The session will invite participants to deliberate on 1. How to report Agro-biotechnological innovations 2. How to write good science features 3. Constraints and Opportunities in Reporting biotechnological and bio-safety Issues	**Dr. Neelam Gulati Sharma** Director (POS) PSCST, Chandigarh **Prof. Daizy Rani Batish** Deptt. of Botany Panjab Univ. Chandigarh **Mr. R. Chugh** HoP, Apna Radio, CR, IIMC **Dr. Archana R. Singh** Professor, Panjab Univ. Chandigarh	**Dr. Anand Pradhan**
	Questions and Answers with Panelists				

Session	Time	Title of Technical Session	Issues to be Covered	Resource Persons	Moderator
3	2.00 – 3:30 pm	**Biosafety Issues for the Media Professionals** The topics for presentations will be based on the range of issues covered during the workshop.	The broad areas are: 1. Innovations in Agri-Bio-technology and implications for the region 2. Agricultural Productivity, Self-reliance and Farmers' issues in the Bio-safety regime 3. Food, Nutrition and Bio-safety Issues for Consumers 4. Socio-Economic aspects of Agri-Bio-technology 5. Environment, Biodiversity issues and Bio-safety norms 6. Dimensions of Regulation and Bio-safety norms in the country and the region.	Brainstorming on thematic issues Moderated by IIMC Coordinators : **Dr. Anand Pradhan** **Dr. Surbhi Dahiya** **Mr. Rayies Altaf**	
4	3.30-4.30 pm	**Valedictory function followed by *Tea***	Keynote Address: Possibilities in the Region with New Technologies for Local Solutions	**Dr. R. S. Sangwan, CEO** Center of Innovative and Applied Bioprocessing (CIAB), Govt. of India. Mohali	
End of Day 2 and conclusion of the Workshop					

August 20th, 2015
Delhi

Workshop Programme: 20.08.2015					
10:00-10:30 am			**Registration & Tea**		
10:30 – 11:00 am			**Inauguration**		
Session	**Time**	**Title of Technical Session**	**Issues to be Covered**	**Resource Persons**	**Moderator**
1	11:00 am – 12:15 pm	**Innovations in Agri-Biotechnology: New Frontiers in Science & Agriculture**	1. Status of biotech innovations in India and abroad 2. What are GMOs/ LMOs and their applications in agriculture productivity 3. New trends in GM crop technology	**Prof. Deepak Pental** University of Delhi	**Prof. Gita Bamezai**
	Questions and Answers				
2	12:15 – 1:30 pm	**From Green to Gene Revolution**	1. Safety Assessment of food and feed derived from GMOs 2. Detection Methods for GMOs 3. Bio-safety Assessment in Agriculture Practices	**Dr. Jagdeep Singh Sandhu** **Senior Biotechnologist** Punjab Agricultural University, Ludhiana	**Dr. Surbhi Dahiya**
	Questions and Answers				
3	2:30 – 3:15 pm	**Developing Regional capacities in GMOs: South East Asian Perspectives**	1. South Asian Regional initiatives in Biosafety Protocols 2. Biosafety Clearing House (BCH) and Information Sources/Databases on Biosafety 1. Information Data Bases and other sources on Biosafety	**Dr. Vibha Ahuja** **Chief General Manager** Biotech Consortium India Limited, New Delhi	
	Questions and Answers				
4	3:15 – 4:00 pm	**Technologies for Local Solutions: Mapping new Horizons in Biotechnology & Biosafety in the Farm Sector**	1. Using technologies for Enhancing Local Development	**Dr. R. Gopichandran** Director, Vigyan Prasar Department of Science and Technology Government of India	**Dr. Surbhi Dahiya**
	Questions and Answers				
5	4:00 – 4:30 pm	**Valedictory Function**	Valedictory Address on **Meeting the Challenge of Food Security Issues & Regulatory Regimes in Agri-biotechnology - India's Approach to the Regulatory Protocol**	**Dr. S. R. Rao** Adviser, Department of Biotechnology Government of India	
			Round up Report and Vote of Thanks		
			Group Photo followed by Tea & Refereshment		
Conclusion of the Workshop					

Questionnaires

INDIAN INSTITUTE OF MASS COMMUNICATION (IIMC)
DEPARTMENT OF COMMUNICATION RESEARCH (DECORE)

Aruna Asaf Ali Marg, JNU Campus, New Delhi- 110067
Website: www.iimc.gov.in Email-ID: decore.iimc@gmail.com

MEDIA WORKSHOP ON COMMUNICATING SCIENCE AND BIOSAFETY

Pre Evaluation Questionnaire

Dear Participant,

This questionnaire is designed to determine what you already know about the workshop theme. We will ask you to complete the questionnaire again at the end of the workshop as your feedback is critical for us to ensure that we are meeting our objectives set for this event.

This is not a "test" and you will not be "graded" on your performance. You are requested to complete all questions on your own and to the best of your ability.

Name (Optional) :_____
Organization (Optional) :_____
Area of specialization :_____

1. Have you come across any news/article on the issues of agric-biotechnology/GMOs or LMOs /biosafety?

1. Yes 2. No

1.1 If yes, please name the source. (Newspaper/Journal/Magazine/Internet/TV/Radio)

_____
_____
_

2. How frequently do you follow articles on science and technology? (Please tick your response)

a) Regularly (Daily) b) Frequently (more than once a week)
c) Occasionally (2-3 times a month) d) Rarely
d) Never

3. Do you refer to any magazines/journals while writing/reporting an article on scientific issue? (Please tick your response)

1. Yes 2. No

3.1 If yes, please name them_____

4. Do you cross-check the data/information gathered during coverage of scientific news?

1. Yes 2. No

4.1 If yes, please name the sources (Informal or formal).

_____

_____

5. According to you, what sources of scientific information can be used / tapped for writing on Biosafety issues in the media?

a) Online repository b) Scientific Journals c) Institutional web Sites
d) Any Other (Please specify)_____

6. What do you understand by Living Modified Organisms (LMOs) / Genetically Modified Organisms (GMOs)?

a) Organisms which are quick to adapt to natural environmental changes
b) Organisms that change their colour to blend in the environment
c) Organisms whose genetic material has been artificially altered.
d) Organisms that have the capacity to modify their surroundings

7. What do you understand by the term Biosafety?

a) Conservation efforts for biological products
b) Safeguards against biological weapons
c) Safety measures to reduce and eliminate the potential risks resulting from biotechnology and its products on plant, animal, or human health or the environment
d) Protection against biohazards

8. How would you rate your knowledge about biosafety issues?

a) In depth knowledge b) Moderately well informed
c) Basic knowledge d) Only heard of the term
e) Never heard of it before

9. Do you know about the protocol dealing with biosafety?

1. Yes 2. No

9.1 If yes, please name it_____

10. What do you expect from this workshop? (Please tick your response)

a) Gain scientific knowledge from the workshop sessions
b) Expect information on scientific resources
c) Learn holistic treatment of Biosafety issue within science communication framework
d) Learn required skills for writing science columns features

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INDIAN INSTITUTE OF MASS COMMUNICATION (IIMC)
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MEDIA WORKSHOP ON COMMUNICATING SCIENCE AND BIOSAFETY

Post Evaluation Questionnaire

Dear Participant,

This questionnaire has questions about a wide variety of topics that were covered in this workshop. This is not a "test" and you will not be "graded" on your performance. We would appreciate if you could take a few minutes to share your opinions with us so we can perform better in our future endeavour.

Name (Optional) :_____
Organization (Optional) :_____
Area of specialization :_____

1. According to you how was the issue of Biosafety treated in the workshop? (Please √ your response)

a) Holistically, workshop provided a wider perspective of biosafety issue
b) Workshop presented a balanced view of biosafety and GMOs
c) Narrowly, only from science perspective
d) Narrowly, only from communications perspective
e) In a biased fashion

2. Do you think the workshop enhanced your knowledge on Biosafety? (Please √ your response)

a) Yes, to great extent b) Yes, to a reasonable degree
c) Yes, but only to a little extent d) No

3. To what extent did the workshop enhanced your knowledge on GMO/LMOs? (Please √ your response)

a) To great extent b) To some extent c) Negligibly

4. After the workshop, how would you rate the coverage of science in Indian media? (Please √ your response)

a) Satisfactory b) Somewhat adequate c) Not at all adequate

5. Please tell how important this workshop was to understanding your role in science communication? (Please √ your response)

a) Extremely important b) Quite Important
c) Somewhat important d) Not at all important

6. What do you understand by the term Biosafety now?

a) Conservation efforts for biological products
b) Safeguards against biological weapons
c) Safety measures to reduce and eliminate the potential risks resulting from biotechnology and its products on plant, animal, or human health or the environment
d) Protection against biohazards

7. What do you understand by Living Modified Organisms (LMOs) now?

a) Organisms which are quick to adapt to natural environmental changes
b) Organisms that change their colour to blend in the environment
c) Organisms whose genetic material has been artificially altered.
d) Organisms that have the capacity to modify their surroundings

8. Which of the following according to you is true regarding Cartagena Protocol?

a) It deals with nuclear waste.
b) It deals with cross country movement of Living Modified Organisms (LMOs)
c) It deals with nuclear disarmament
d) It deals with hygiene and sanitation

9. Which session topic you liked most and why?

_____

10. What is/are themes/ topics you would suggest for the next workshop on the same issue for greater learning?

_____

11. What did you most appreciate/enjoy/think was best about the workshop?

_____

12. Any suggestions for improvement?

_____

13. How would you rate the following (Please tick your response)

a) Duration of the workshop

A) Satisfactory B) Not Satisfactory C) Can't Say

b) No. of sessions

A) Satisfactory B) Not Satisfactory C) Can't Say

c) Selection of Experts

A) Satisfactory B) Not Satisfactory C) Can't Say

d) Presentation of issues/topics

A) Satisfactory B) Not Satisfactory C) Can't Say

e) Hospitality/Overall Arrangement

A) Satisfactory B) Not Satisfactory C) Can't Say

f) Food/Catering Arrangement

A) Satisfactory B) Not Satisfactory C) Can't Say

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- Broadcast start date: - ……
- Day & time of fresh broadcasts: ……
- Day and time of repeat broadcasts: - ……
- Name of the series : - …….
- Names of two CR station Representatives who will take forward this project. ……..
- Full Name and contact details of two persons (email and mobile Number) …….
- Name of CR station - …….

Authorized Signatory **Authorized Signatory**

Timelines

Week	Tasks	May	June	July	Aug	Sept
1st	Preparation & Production of Promos and sharing the first draft with Apna Radio,IIMC, New Delhi.					
2nd	Finalization of Promos					
2nd/3rd	Produce the episodes and share draft with Apna Radio, IIMC, New Delhi.					
3rd week	Broadcast of Episodes by CR Station as per schedule					
3/4the week	Monthly Report to Apna Radio, IIMC, New Delhi.	25th of the month	25th of the month	25th of the month	25th of the month	25th of the month

Broadcast Schedule (Fill the dates under months column)

Episode No.	May	June	July	August	September
1 Fresh Repeat	28/ 05/ 15 29/ 05/ 15				

Report Format for CR Programmes on Biosafety

(To be filled and sent along with audio files)

Logo of the CR

1. Name of the Community Radio: ……
2. Day and Date of Broadcast: ……
3. Name of the person writing the report: ……...
4. List of experts: ……
5. Format of the program:
……..……
6. Highlights of the program: ……..
7. Duration of the program : …….
8. Any community engagement or story you want to share (Number of calls and feedback of the callers): ……..
9. Images from the recording :

Date: ……..

1965-2015
IIMC
स्वर्णजयंती GOLDEN JUBILEE

भारतीय जन संचार संस्थान

अरुणा आसफ अली मार्ग, जे.एन.यू न्यू कैम्पस
नई दिल्ली-११००६७