



## Inaugural session



Dr A R Kidwai, His Excellency, Governor of Haryana lighting the inaugural lamp

The inaugural session began with a lamp lighting by the Hon'ble Chief Guest Dr A R Kidwai, His Excellency, Governor of Haryana; Dr M K Bhan, Secretary, DBT, Government of India; Dr R K Pachauri, Director-General, TERI and Chairperson, IPCC; Dr T Ramasami, Secretary, DST, Government of India; Dr Mir Mulla, distinguished Professor

Emeritus, University of California; Dr S N Puri, President, SPIB and Vice Chancellor, Central Agricultural University, Imphal, India; Dr Seema Wahab, Organizing Secretary ICOB-V, and Advisor, DBT; and Dr Nutan Kaushik, Convenor, ICOB-V and Fellow and Area Convenor, Plant Biotechnology, TERI, New Delhi, India.



Inaugural session in progress

### Introduction to the conference

Prof. Mir Mulla, Distinguished Professor Emeritus, University of California, USA



world needs many more novel tools and technologies to address plant protection and food security. He reiterated that the gathering has also been established to build professional contacts and linkages among scientists, industrialists, NGOs, and farmers engaged in commercialization and application of biopesticides. He gave new a definition to biopesticides as chemical

Prof. Mulla gave an introduction to the origin of the conference. He informed that initially the idea to hold a conference on plant products as biopesticides originated in 1984, at Bangkok, FAO Regional Office, Asia and Pacific. However, it was decided to broaden the scope of biopesticides from plant products to biological organisms, pheromones, and so on, and hold an international conference. Subsequently, the first International Conference on Biopesticides was held in 1996 in Thailand, and the subsequent conferences were held in China, Malaysia and Thailand. The fifth in series is being held in India. He opined that the

products produced by living organisms showing specific activity against pests, diseases, and weeds. Botanical pesticides constitute a major portion in biopesticides. The major constraints to biotechnological intervention in biopesticides include slow progress, environmental concerns, release of transformed organisms, regulations, and unknown long-term effects. Genetic engineering plays a greater role in overcoming these constraints and developing better management strategies. Bio-insecticide for the future will have high activity against target pest with quick action. There will also be no secondary pest outbreak.

### Welcome address

Dr Seema Wahab, Organizing Secretary ICOB-V, and Advisor, DBT



Dr Seema Wahab delivering the welcome address

Dr Seema Wahab gave a comprehensive welcome address and extended the

invitation to the dignitaries on the dais. She felt that there is an urgent need to bring out guidelines and a draft policy on quality control, registration of biopesticides, regulation, and subsidy. She also informed that the

DBT has drafted a national strategy document on biopesticides.

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## About the Society

Dr S N Puri, President, SPIB and Vice Chancellor, Central Agricultural University, Imphal, India

Dr S N Puri informed the gathering that SPIB (*Society for Promotion and Innovation of Biopesticides*) came into existence in mid 2008 and highlighted its objectives and activities. The SPIB has the distinction of organizing an International Conference



on Biopesticides in the first six months of its establishment. Several important technologies and vast information have been generated in the country due to the concerted efforts of SAUs, ICAR institutes, and R&D units, over the years, in the field of biological control and biopesticides, which needed a proper exploitation for the end users and other stakeholders. He said that the SPIB was established because a need was felt

for a common platform for industry, researchers, farmers, policy-makers, and scholars. He stressed that results of biopesticide research and application and IPM are very good at research station as well as in the farmers' field under the technical

guidance of a scientist but there is no further response from the entrepreneur group to take forward the product. At present, there is no journal published by the society but with the help of the increasing number of members in the society, it will be possible to publish journals and conduct more meetings. Group meetings with scientists, stakeholders and end-users will increase the use of biopesticides.

## Special remarks

Dr M K Bhan, Secretary, DBT, Government of India (Gol)  
Dr T Ramasami, Secretary, DST, Gol



Dr M K Bhan

Dr M K Bhan emphasized that food and nutritional security are of the highest priority in the world especially in developing economies. He also described why biopesticides are not so popular among the industry and end users. Inadequate market mechanism for the product and lack of social awareness are major issues that need to be addressed. A market needs to be created for the product. It is not the supply of bad quality products, which hinders the market but the lack of demand. Policy-makers, decision-making authorities, and farmers should have a greater role in creating demand for the product. Lack of instructional infrastructure and networking among public and private institutions, and social agencies is a

big threat for the development and commercialization of biopesticides. Quality control and quality assurance of the product are also issues that need to be addressed.



Dr T Ramasami

Dr T Ramasami said that stakeholders in the field are habituated to using alternatives to agrochemicals, the overuse of which causes more concern. Nature has its own way of managing pests and diseases but synthetic pesticides are against nature's rule. Biopesticides only have a 2.5% share in the pesticide industry. Nearly 150 industries are involved in the biopesticides business. There is an urgent need to introduce more industries and develop new methods of safety testing.

## Special address

Dr R K Pachauri, Director-General, TERI and Chairperson, IPCC



Dr Pachauri felt that with the advent of technologies and industrialization, human civilization is moving on the path of development but this development is being done without taking care of natural resources. Our health education, telecommunication, and industry are developing at a very fast rate but running against the nature. Soon our ecological footprints will expand to the level that would threaten the planet. Human

beings are meeting the current generation demand at the cost of resource availability of the future generations. We need to rethink the growing use of chemical pesticides. Climate change makes agriculture more difficult to sustain with higher frequencies of floods, droughts, heat waves, erratic precipitation, increased salinity, and rise in sea level. These have direct impact on the yields of crops. Since biopesticides have a relatively lower share in the pesticide market, there is a need to promote the market by improving the fiscal measures including incentives, and redesigning the regulatory mechanisms. There is also a need to do more research on biopesticides for different locations. With the utilization of indigenous knowledge and technology, India can develop pioneering solution for the rest of the world also.

## Keynote address

Dr Mangala Rai, Secretary, DARE, and DG, ICAR, Gol



Dr Mangala Rai began his address by mentioning that the population is increasing at an alarming rate with no increase in the arable land since the last 40 years. Thus, to meet the increasing demand for food, we need to develop better pest management strategies. With involvement of IPM strategies, reliance on pesticides has reduced, but the cases of pesticide abuse and residual effect are more due to overuse of systemic pesticides on vegetables, which are harvested just after the spray. Biopesticides have great promise and are of paramount importance. Out

of 1.72 billion species documented, only 344 have been explored for their potential as biopesticides. Looking at the potential of the microbes, a National Bureau of Agriculturally Important Micro-organisms has been set up in the country. There is a lot of potential for developing microbial biopesticides by means of bioprospecting, allele mining, and discovery, as there is no barrier to gene flow across the plants, animals, and microbes. Similarly, about six months ago, ICAR established the National Bureau for Agriculturally Important Insects and Nematodes at Bangalore. There is a greater need to restructure the registration process for biopesticides to reduce the time taken for registration.

## Inaugural address

Dr A R Kidwai, His Excellency, Governor of Haryana



Dr Kidwai, in his inaugural address, emphasized the importance of

biopesticides since many suffer from the harmful effects of chemical pesticides. As India is rich in biodiversity, it is an ideal place for research in the field of biotechnology in different agroclimatic conditions. The rich diversity of flora and fauna can be utilized to develop better products including biopesticides. He felt that the future of the society depends upon R&D in the field of biotechnology.



Some publications were also released during the inaugural session of the conference. The Hon'ble Chief Guest, Dr A R Kidwai, released the Abstracts of ICOB-V. Other publications released included Strategy Document on Biopesticides, a Souvenir to the conference, and a brochure of the society by Dr M K Bhan, Dr Mangala Rai, and Prof. Ramasami, respectively.



Mementos representing ICOB-V were presented to the dignitaries on the dais.

The inaugural session ended with a vote of thanks by Dr Nutan Kaushik, Convenor, ICOB-V.

