STAKEHOLDERS' INTERFACE ON GM FOOD CROPS

(organized jointly by APCoAB and TAAS)
NASC Complex, New Delhi
19 May, 2011

CONCEPT NOTE

With more than 60% of its population living in villages and about 70% of the rural people engaged in agriculture and allied activities, India has a large stake in agriculture. As exemplified by the Green Revolution of 1970's and 1980's, R&D innovations in agriculture have immense impact on people's livelihood and well being. The increased food grain production due to introduction of high yielding varieties resulted in increased food availability, better wages for rural labour and reduced poverty. However during the past several years, growth in agricultural production has remained at a low level of around two per cent while there is a need to achieve four per cent growth to meet the demands of expanding population. At the same time, unprecedented increase in food prices has also adversely affected the economic conditions and food security of particularly the vulnerable sections of society.

GM technology is globally recognized as a powerful tool to improve productivity, profitability and sustainability of farm production systems, including that of small farm holdings. Since the first farm level cultivation of GM crops in 1996, the global area under GM crops in 2011 reached 148 million hectares (mha) with 29 countries growing them. In India, the area under Bt cotton has reached a staggering 9.4 mha in just 8 years since its first release, comprising nearly 86% of the total 11 mha cotton area. Bt maize in the Philippines, grown for the first time in 2003, covered an area of 0.5 mha in 2010. In China, GM cotton, papaya, tomato, sweet pepper and poplar are being grown over 3.5 mha while approval was granted in 2009 to GM rice and maize, which are likely to be commercialized in three years following completion of routine field trials.

Several studies made on the performance and impact of Bt cotton in India have shown that irrespective of their farm size, farmers have benefited through increased yield and reduced pesticide use which have converted into higher profits and increased household incomes as well as increased aggregate employment. Experimental field studies on Bt brinjal have shown a reduction of 77.2% in insecticide use and increase of up to 55% in marketable fruit yields compared to non Bt brinjal. At all India level, the potential benefit to farmers and consumers would range from Rs. 623.15 cores to Rs. 2492.6 crores.

Besides insecticide resistance and weedicide tolerance, traits that have already been commercialised globally, several new GM products are in the pipeline that are likely to make a more profound impact on crop productivity while addressing issues of dwindling land and water resources, human malnutrition, the need for environment protection and possible adverse impacts of global warming on agriculture. Golden Rice and other GM crops with enhanced iron and other components essential for human nutrition are in the pipeline. Similarly, attempts are being made to improve digestibility, eliminate toxins, and induce drought and metal tolerance in crops plants. These are priority areas of crop improvement in India as well.

While these developments are encouraging, the country has also seen substantial opposition to adoption of GM crops due to several issues including concern about their perceived risks to environment, and human and animal health. Though such concerns were also expressed prior to the release of Bt cotton, the current protests over the approval granted by GEAC to Bt brinjal are more vociferous. As a consequence, despite the recommendation of two review committees and approval of GEAC, the government placed a moratorium on the release of Bt brinjal and initiated series of public discussions and consultations. The issues being debated have not remained confined to Bt brinjal but have wider implications, particularly on policies regarding R&D on GM crops and strategies to meet the country's growing food demands. It is being increasingly felt that there a need for well informed discussion among all the stakeholders to clear the wrong perceptions and address real concerns so as to develop an unbiased opinion regarding development of GM food crops. This would lead to framing of clear policies and road map to achieve the desired targets in food and agriculture production and turn agriculture into a remunerative enterprise, particularly for the small and marginal farmers.

In view of these crucial developments, a "Stakeholders' interface on GM food crops" is being organized by the Asia-Pacific Consortium on Agricultural Biotechnology and Trust for Advancement of Agricultural Sciences to discuss all the relevant issues related to potential of GM food crops in meeting the food a nutritional needs of India vis-à-vis their economic, health and environmental impacts.

Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB), a program of Asia-Pacific Association of Agricultural Institutions (APAARI) has been engaged in building consensus

among stakeholders and promoting appropriate technologies and policies, including biotechnology, for agricultural development in the Asia-pacific region. The activities include organization of expert consultations and brainstorming sessions, publication of status reports and web based information dissemination.

The meeting will be held on 19 May 2011 at National Agricultural Science Center, DPS Marg, New Delhi-110012.

TENTATIVE PROGRAM

Opening Session

Chair: Dr. S. Ayyappan
Chief Guest: Dr M. K. Bhan

10:00 – 10:10	Welcome Address	Dr. R. S. Paroda
10:10 – 10:30	Opening Address	Dr. S. Ayyappan
10:30 – 10:55	Address by the Chief Guest	Dr. M. K. Bhan
10:55 – 11:00	Vote of Thanks	Dr. J. L. Karihaloo
11:00 – 11:20	**Tea/Coffee**	

Technical Session I: Setting the Scene

Chair: Dr. Manju Sharma
Co-Chair: Dr. P. L. Gautam
Rapporteur: Dr. N. K. Dadlani

11:20 – 11:40	Status, needs and challenges of agricultural biotechnology R&D in India	Dr. Swapan Datta
11:40 – 12:00	Biosafety regulatory system in place and future developments	Dr. S. R. Rao
12:00 – 12:20	GM crops and biosafety systems – A regional perspective	Dr. J. L. Karihaloo
12:20-13:00	General Discussion	
13:00-14:00	**Lunch**	

Technical Session II: Panel Discussions

Chair: Dr. R. S. Paroda
Co-Chair: Dr. S. Natesh
Rapporteur: Dr. J. L. Karihaloo

14:00 – 16:30

Issues: I) Is GM technology necessary for Indian Agriculture? ii) Is the present biosafety regulatory system adequate? iii) How to address public concerns on GM food crops? iv) How to ensure public private partnership for promoting GM crops?

16:30 – 17:00	Chairman's Concluding remarks
17:00	**Tea/coffee**