

## **Brief record of the 36<sup>th</sup> Meeting of GEAC held on 25.04.2003.**

The 36<sup>th</sup> meeting of the GEAC was held on 25.04.2003 at 10.00 AM in MoEF under the chairmanship of Sushma Choudhary, Additional Secretary, MoEF. List of participants is annexed.

### **1.0 Opening Remarks of the Chairman**

The Chairman welcomed all the members. The Chairman briefly dwelt upon the follow up to the decision take in the Inter-ministerial meeting on 26<sup>th</sup> march 2003 and 34<sup>th</sup> GEAC meeting held on 6.3.2003. She informed the Committee that comments from some of the Ministries and Members have been received on the issues raised in the inter-ministerial discussions. She requested all the Member to forward their comments so that matter can be further discussed and task force set in the next inter-ministerial meeting tentatively scheduled for 3<sup>rd</sup> week of May 2003. The Committee was also informed about the recent meeting of the Committee constituted by the Ministry to institute a proper monitoring and verification mechanism to assess the performance of Bt cotton during Kharif 2003.

### **2.0 Confirmation of the Minutes of the 35<sup>th</sup> Meeting of the GEAC held on 06.03.2003**

The Chairman referred to the minutes of the 35<sup>th</sup> meeting of GEAC held on 6.3.2003 which were circulated to all members. The Minutes were confirmed with the following modification.

#### **Para 5.0 – Policy Issues – Point 1 modified as follows:**

DBT is receiving many proposals from companies to permit use of higher fermentation vessels (more than 20 lit.) for standardization of process and also using the product for development of pre-clinical and clinical data. As per DBT guidelines any product any production above 20 lit requires the approval of GEAC. DBT has commended that cases where higher fermentation capacities are required for research purpose standardization of process guidelines of pre-clinical and clinical data, permission maybe granted by RCGM on a case to case basis after making the necessary amendments in the DBT guidelines. **The Committee endorsed the recommendations made by DBT.**

### **3.0 Consideration of Proposals.**

#### **A. Commercial Release of Transgenic Mustard (*Brassica Juncea*) by M/s Proagro Seeds Pvt. Ltd.**

The transgenic mustard developed by M/s Proagro Seeds Company Ltd. contain 3 genes namely Barnase (male sterility producing trait), barstar (restoration of fertility trait) and ba (marker gene having glucosinolate anomium tolerance trait). The Committee apprehended that the male sterility gene and the herbicide resistant gene could migrate to related species and impart such characteristics upon them. Considering the small land holdings, the Committee was of the view that, the risks attached to migration of these genes need to be studied in great detail.

The Committee deliberated at length on the results of the trials conducted by the Company and ICAR to address the issues related to yield crossability, gene flow, resistance to herbicides and health aspects. The Committee noted the following:

1. ICAR have conducted trials at only 4 locations which is not adequate.
2. The agronomic superiority of these transgenic mustard seeds is yet to be fully established. At one of the ICAR trial locations the yield increase was only 5% as against 20% increase in yield claimed by the company.
3. The coefficient of variation between the trials conducted by the company and ICAR are at variance. The ICAR trials indicate pollen flow upto 75 meter whereas the company has reported pollen flow upto 50 meters.
4. Mustard being an edible crop important policy issues related to labeling, traceability etc. need to be put in place prior to commercial release.
5. Toxicity and allergency studies conducted by the company to assess the health impacts are not adequate.

After detailed deliberation, the Committee concluded that the trials conducted by ICAR are not conclusive and further trials should be conducted by ICAR to address all biosafety and agronomic issues such as crossability, gene flow, resistance to herbicide, agronomic superiority, etc. The committee also noted that mustard being an edible crop, further studies to establish health safety aspects need to be conducted.

**B. Commercial release of Bt cotton MECH-915 variety in the Northern States by M/s Mahyco Seed Company Pvt. Ltd.**

M/s Mahyco have developed cotton hybrid MECH915 Bt that matures in 150-160 days keeping the specific requirements of the northern region.

The Bt hybrid MECH-915 has been tested by ICAR under AICCIP programme during Kharif 2002-03 season at nine selected locations for various parameters such as genetic uniformity, agronomic performance and performance against pests and diseases in the North Zone in the states of Punjab, Rajasthan, Haryana and Uttar Pradesh. Field experiments have been conducted at Sirca, Hisar, Ludhiana, Faridkot, Abhor, Sriganaganagar, Banswara, Modipuram and Kanpur. MECH915 Bt hybrid along with its non Bt hybrid has been tested with MECH 162, MECH Non Bt Hybrid, as well as both national and local checks. The national checks were Om Shankar and LHH, 144. ICAR has carried out the following sets of evaluations/trials:

- a) Evaluation of Bt cotton hybrids for agronomic performance.
- b) Evaluation of Bt cotton hybrids for genetic performance.
- c) Evaluation of Bt cotton hybrids for pest and disease performance under pest protected and unprotected conditions, under integrated pest management regimes, under Bio-intensive plant production, farmers practice of plant protection.

The Committee deliberated in detail the results of the trials conducted by ICAR. The Committee observed that the quality and yield parameters though at par with the National and local checks, the MECH 915 Bt hybrid was highly susceptible to foliage damage and Curl Leaf Curl Virus which is rampant in the area where it is to be grown.

The Committee noted with concern that cotton production in the north could be adversely affected by wide spread cultivation of this sensitive MECH 915 hybrid. The Committee therefore rejected the proposal.

**4.0 Monitoring of Bt Cotton for the Kharif 2003.**

The Member Secretary GEAC briefed the Committee on the report received from the State Governments on the performance of Bt Cotton in each State. The Committee was of the view that the State Govt. report

should include the status of compliance of conditions stipulated by GEAC while according approval for commercial cultivation.

The Member Secretary GEAC also briefly touched upon the terms of reference of the Committee constituted by the Ministry to institute a proper monitoring and verification mechanism to assess the performance of Bt cotton for the Kharif 2003 season. It was decided that the report of the first Meeting of the Committee held on 22<sup>nd</sup> April, 2003 would be circulated to all Members and after obtaining their comments, the report would be finalized by Chairman, GEAC in consultation with the Co-chairman, GEAC and JS, Ministry of Agriculture.

#### **5.0 The step wise procedure for development of rDNA pharmaceutical approved by the RCGM.**

Dr. T.V. Ramanaiyah, Director, DBT briefed the Committee on the measures taken by RCGM to streamline the clearance process for pharmaceuticals. At the request of some members it was decided that the above matter would be discussed in the next GEAC meeting.

#### **6.0 The Meeting ended with a Vote of Thanks to the Chair.**

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**List of Participants**

1. Ms. Sushma Choudhary, Additional Secretary, Chairman GEAC, MoEF.
2. Shri Sushil Kumar, Co-chairman, GEAC
3. Mr. Ashish Bahuguna, Joint Secretary, MOA
4. Shri D.D. Verma, Joint Secretary, MOEF
5. Shri C.M. Bhandari, Joint Secretary, MEA
6. Dr. K.C. Jain, Dy. Director General, ICAR, New Delhi
7. Dr. V. Muthuswamy, Dy. Director General, ICMR, New Delhi
8. Dr. T.V. Ramanaiah, Director, DBT.
9. Dr. R.P. Sharma, Member, GEAC
10. Dr. S.K. Mahajan, Member, GEAC
11. Dr. (Mrs.) S. Kulshrestha, Dte. Of PPQ&S, Faridabad
12. Dr. P.S. Raju, Scientist, CSIR, New Delhi
13. Shri S. Kar, DPR (PIB)
14. Shri M.M. Ali Khan, Deputy Secretary, MOI
15. Dr. Sundravadivel, Scientist, CPCB
16. Shri D.R. Pahuja, Deputy Secretary, MEA
17. Dr. R. Warriar, Additional Director, MoEF
18. Ms. M. Gupta, Research Asstt. MoEF