

Record note of the special meeting of the GEAC held on 18.7.2016 regarding commercial release of GM Mustard in India.

In the last meeting of GEAC held on 20.6.2016, the representative of Alliance for Sustainable and Holistic Agriculture (ASHA) had requested for two hours to express its views on the environmental release of transgenic mustard hybrid DMH-11 and parental lines containing events bn 3.6 and modbs 2.99 developed using barnase, barstar and bar genes by M/s CGMCP, University of Delhi.

Accordingly a special meeting was called on 18.7.2016 to listen the views of this society.

On behalf of ASHA the following persons have made presentation before the Committee:

1. Kavitha Kuruganti, representative member from Alliance for Sustainable and holistic Agriculture (ASHA)
2. Mr. rajesh Krishnan, Co-Convenor, Coalition for a GM-Free India
3. Dr. Debal Deb, member, Agro-Biodiversity Expert Commiottee, National Biodiversity Authority.
4. Dr. Sharad Pawar, Ex. Scientist, NABTD, BARC, Mumbai
5. Mr. Kapil Shah, National Secretary, Organic Farming Association of India, Goa
6. Mr. Ananthoo, representative from Safe Food Alliance, Chennai
7. Dr. B.K.Chandhuri
8. Mr. Yudhvir Singh, Bhartiya Kisan Union.

In the presentations the following concerns have been expressed:

- I. There are three GMOs namely: transgenic mustard hybrid DMH-11 and parental lines containing events bn 3.6 and modbs 2.99 developed using barnase, barstar and bar genes and one dossier has been submitted.
- II. Biosafety assessment on food and feed as well as impact on Ayurveda needs to be examined.
- III. Organic cultivators may have problems for their trade in case of inadvertent presence of GMO products.

- IV. Additional test on proteomics, transcriptomics & metabolomics approaches could have been done.
- V. Presence of herbicide (glufosinate), selection marker may encourage farmers to use herbicides and if used indiscriminately, may lead to development of superweeds. Further, use of glufosinate on mustard is not approved by CIBRC.
- VI. Pollen in flow to neighbouring mustard varieties may lead to high risk of male sterility transmission to other varieties and crops particularly with regard to use of the hybrid DMH-11. The team also submitted some scientific abstract published mostly on canola on aspects on pollen / gene flow etc.
- VII. Impact on non-target insects cannot be based on protein content studies in different plant tissues alone.
- VIII. Based on data available with the team accessed from DMRC, the hybrid DMH-11 does not yield more than 10% oil / yield as claimed by the applicant.
- IX. The hybrid DMH-11 cannot be released for commercial use by farmers unless its agronomic performance is evaluated by varietal registration system and adequate field trials in multiple locations since appropriate national checks are not included.
- X. There is a mismatch between the lines used in earlier years of trial compared to the once used in BRL-1/ BRL-2 trials.
- XI. Other options and alternatives should be explored for addressing oil import than introduction of GE mustard.
- XII. The release of GE mustard may impact on farmer choice of different cropping systems and alternative ways of production such as organic cultivation etc.

The members of GEAC thanked the team for their observations on various issues of GE mustard under consideration. Members also expressed discontentment on the language used by the team during their presentation. Other members of GEAC felt that the issues raised are generic to all GM crops for years and could be adequately addressed through an elaborate risk assessment system along with some post release management measures in case of identified risk if any. The GEAC would evaluate all the available data and scientific literature to address the issues raised by the team based on weight-of-evidence approach.

It was appraised during the meeting that a Sub-Committee headed by Co-Chairman, Dr. Veluthambi and other members is already looking into the issues pertaining to environmental release of transgenic mustard hybrid DMH-11 and parental lines containing events bn 3.6 and modbs 2.99 developed using barnase, barstar and bar genes by M/s CGMCP. The same committee has been asked to look into all the papers, presentations and suggestions given by the members of the ASHA. The committee has been requested to submit its reports incorporating the views if any based on today's discussion, which in turn will be discussed in next GEAC meeting.

The meeting ended with vote of thanks to the chair.
