

**BREAKTHROUGH SCIENCE SOCIETY**

(Registration No S/86180 of 1996 -97 under West Bengal Societies Registration Act, 1961)

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To: Sri Anil Madhab Dave,  
The Hon'ble Minister of State,  
Ministry of Environment, Forest and Climate Change, Government of India.

Sub: Memorandum in connection with the approval of GM Mustard (DMH-11 and its parental lines)

Dear Sir,

We express our grave concern and strong opposition to the initiatives of the Genetic Engineering Appraisal Committee for according approval to the environmental release of a GM hybrid Mustard (DMH-11) and its parental lines developed by Delhi University, about 14 years after a similar move by ProAgro, a Bayer subsidiary, was rejected by the regulatory authority.

India is a centre of diversity and secondary centre of origin for Indian Mustard (*Brassica juncea*) and mustard is widely used essentially as edible and cooking vegetable oil in this country. Its seed and fresh leaves are also used as food and mustard oilseed cake is used as cattle feed. It is also used in many ways in the ayurvedic system of medicine.

As the regulatory authorities are on the verge of giving approval to the commercial cultivation of GM Mustard, we, as concerned and conscious citizens, firmly believe that introduction of this GM hybrid mustard (DMH-11) is not going to increase mustard production and reduce oil import bill to any appreciable extent. On the other hand it is going to destroy our mustard biodiversity, food security, safety and sovereignty and natural resource base for sound agricultural production system, which are to be protected to meet the demands of present and future generations for sustenance.

We strongly submit that this GM hybrid mustard (DMH-11) should not be accorded permission for environment release due to following reasons.

- 1) Agriculture being in the State list, the opinions of the State Governments are to be taken into account before talking any such decision. It may be mentioned that Rajasthan, Haryana, Bihar, West Bengal, Odisha, Madhya Pradesh, Gujarat and Kerala have refused to allow GM crop trial and/or cultivation in their states.
- 2) The claimed increase in yield of DMH-11 mustard was not verified by any independent agency.
- 3) After commercial release, the concerned GM crop (conferring sterility and herbicide resistance) will surely be transferred to other thousands of indigenous mustard varieties and its wild relatives in its centre of diversity through mechanical mixture, cross pollination and horizontal gene transfer. Hence there will be an irreparable loss of biodiversity that will be impossible to be rectified in due course. This also contravenes the Cartagena Protocol on Biosafety, of which India is a signatory, and provisions of Protection of Plant Varieties & Farmers' Rights Act, 2001. The Cartagena Protocol requires that no GM crop shall be introduced in its centre of origin/diversity. PPV&FRA, 2001 requires that, varieties containing sterility trait (GURT) and producing toxins that are injurious to life (toxins that kill cells) shall not be registered. Indeed, transgenic technology is imprecise, unsafe, uncontrollable, irreversible, unstable and unpredictable technology. This DU GM Mustard variety has GURT trait and produces toxin.

- 4) As GM mustard variety is F1 hybrid in nature, farmers will not be able to keep seed for use in subsequent years. And thus, the farmers will lose the age-old right to save and share seeds. They will be made dependent on market for supply of seeds likely to be controlled by multinational seed companies.
- 5) From the experience of Round Up ready Soybean, HT and Bt Maize, and Bt Cotton elsewhere and in India, it is conclusively documented that within a few years of introduction of these crops, the use of chemical herbicides and pesticides have increased considerably, leading to various detrimental environmental consequences and development of super weeds, new pest complexes etc. Similar development will also occur in case of this herbicide tolerant (HT) GM mustard. Adverse impacts of GM crops on non-target organisms and also on soil health are well-documented. The GM crops, that may appear to be conducive for large farm holdings of developed countries, has very little relevance to the resource-poor marginal and small farmers of India. It will not at all reduce the use of agricultural inputs like water, fertilizers and other agrochemicals and will not contribute to the achievement of food security in our country.
- 6) The real beneficiaries from the introduction of GM crops will be the seed-producing companies who will make profit from the patented seeds/technology in the forms of high seed costs, technology fees, royalties, increased sales of agri-chemicals, etc., pauperizing poor small and marginal farmers of India.
- 7) HT crops also mean greater chemical residues in consumer food that will create health hazards in due course.
- 8) Once the herbicide tolerant GM mustard is introduced, many other HT GM varieties of other crops which are in pipeline will likely get smooth entry in Indian agriculture. So, this GM mustard will act as a trojan horse for other GMOs.
- 9) Organic Farming will be directly impacted. It is reported that in Canada where similar GM canola are being grown for years, organic canola production is not possible.
- 10) Once, the GM crop is released for commercial cultivation and the contamination of local varieties occurs, the farmers and consumers will have no choice but to use GM contaminated mustard. Governments should not force their citizens to cultivate and eat GM food.
- 11) GM mustard will adversely impact honey bees and other beneficial insect populations that are major pollinators and this will eventually result in reduced yields – of not just mustard but many other open pollinated crops too. Honey production and its quality will also be affected thereby reducing its internal and export market.
- 12) The biosafety and other related data regarding this DU GM mustard are shrouded in secrecy. The ways the various tests of this GM mustard are conducted are deliberately misleading, unscientific, inadequate and unreliable. The full dossier with primary testing data has not yet been put on public domain for independent review.
- 13) The Supreme Court constituted Technical Expert Committee report said NO to GM crops for which we are the Centre of Origin/Diversity and also NO to the introduction of HT-GM crops in India. Further, a Task Force set up by the Ministry of Agriculture had earlier recommended the same.
- 14) There is no liability regime in place now as to who will be responsible and pay compensation for any detrimental consequences that will arise after release of the GM mustard – the crop developer, the regulators or the government.
- 15) On the technical front, the production of mustard and other oil seeds crop may be increased by area expansion (for which ample scopes are there), agronomically managing the crops in a better way, giving farmers adequate input and price support and adoption of SMI (System of Mustard Intensification) as well as relay sowing of the crop in rice fallows of India and

strengthening farm extension support system. Similarly, provision of emergency/protective irrigation systems coupled with participatory water management at the community level will improve and stabilize production of oil seed crops like groundnut and soybean.

- 16) It is not clear to the public as to who owns the technology used by DU scientists. Terms of conditions for the use of third party technology have not yet been revealed.

Lately, many other International Organizations like International Assessment of Agricultural Science and Technology for Development (IAASTD), Research and Information System for Developing Countries (RISDC), IFOAM expressed views that GM crops are not compatible with organic or sustainable agriculture and will not play any role in addressing climate change, hunger, poverty and food insecurity widely prevalent in developing countries. Many countries and regions of the world like France, Italy, UK, Norway, Spain, Saudi Arabia, Japan, Philippines, Thailand, Sri Lanka, Australia, New Zealand, Fiji, Algeria, Egypt. etc., have either banned or imposed moratoriums on the use and cultivation of GM crops.

This attempt by the regulatory authorities to force HT-GM mustard is a move towards establishing corporate control over our seed sovereignty and agriculture. We demand the approval shall not be accorded hastily and in a non-transparent way and farmers, consumers, biodiversity, and natural resource base of the country must be protected from the menace of GM crops. Government of India should also take initiatives and steps in favour of resource-poor farmers and consumers and also for promoting environment friendly sustainable technologies for crop production.

Thanking you

Yours faithfully

Place: Kolkata



Dhruba Mukhopadhyay  
President



S Banerjee  
General Secretary

Date: 5.10.2016