Fielding Trials for Genetic Engineering

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The manner in which the United Progressive Alliance government approved field trials of genetically engineered crops in the last few weeks of its term in office speaks poorly of its regard for the decision-making process.

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n 27 February 2014 the Association of Biotechnology Led Enterprises-Agriculture Group (ABLE-AG) issued a press release welcoming the approval of the March 2013 decisions of the Genetic Engineering Appraisal Committee (GEAC) (ABLE-AG 2014). The press release thanked the Union Minister of Environment and Forests at the time, Veerappa Moily, for permitting the open field trials of over 200 varieties of rice, wheat, maize, castor and cotton that had undergone genetic modification (GM) in laboratories. For India these are crucial food and cash crops which both small and large farmers depend on.

Moily's predecessor, Jayanthi Natarajan had held off from signing the minutes for almost a year though the GEAC's March 2013 meeting had recommended field trials by big biotechnology companies like Bayer Bioscience, Mahyco and BASF India. While her refusal to sign had been translated by ABLE-AG as a "setback to scientists and the biotech industry", Natarajan's letter to the Prime Minister's Office (PMO) dated 9 July 2013 stated clearly that she could not allow these permissions as the matter was sub judice in the Supreme Court of India.¹

Moily's appointment in December 2013 had raised the alarm among several activists and researchers when he sent out signals that he would be reviewing several "pending" decisions of his predecessor. This included decisions related to environment clearances and forest diversion related applications as well as those related to GE crops. By the time of his appointment, the Congress-led United Progressive Alliance (UPA) government had been under sharp attacks from economists and corporates that it was stalling approvals and delaying investments that were badly needed for economic growth. The main opposition party then, the Bharatiya Janata Party, went one step ahead and accused them of rent-seeking and corruption by way of the "Jayanti tax". This coupled with the charges of the ad hoc allocation of coal blocks literally brought the UPA government to a grinding halt. Moily's rapid clearances just before the election campaign got into full swing did not alter this perception of the Congress, but only added to its public image of being corrupt and indecisive.

Need for Discussion

The UPA government's fate has been sealed by the ballot of 2014, but for the sake of communities already facing the environmental and social impacts of environmental decisions, some matters related to what constitutes good decisionmaking need discussion. The compromised manner in which permissions were granted for field trials of GE crops is a good example to reflect upon this.

The GEAC is an expert body set up to scientifically appraise and recommend approvals on the use and commercial application of genetic engineering (GE) in agriculture, pharmaceutical and other related sectors. This statutory body draws its mandate from the Rules for Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms/ Genetically Engineered Organisms or Cells 1989, notified under India's Environment (Protection) Act, 1986. In the current biosafety regulatory framework in the country, GEAC is one of the three approval-granting authorities with respect to GE. The other two being the Institutional Biosafety Committee (IBSC) and the Review Committee on Genetic Manipulation (RCGM).

Functioning of GEAC

The GEAC has been considering granting approvals to GE crops since it was constituted in 1989. It has been functioning since then except for a brief hiatus when the then GEAC's term expired in April 2012 and the new one was set up in March 2013. In fact ABLE-AG – the industry body representing 14 agricultural biotechnology companies – had urged Natarajan to reactivate the GEAC so that approvals could be granted. ABLE's key objective is to do advocacy work for a favourable policy environment. On being reconstituted in 2013, the GEAC conducted its meeting within a fortnight.

Despite the GEAC's permission to allow field trials during this meeting, Natarajan was of the view that permitting field trials of crops would not be in the best interests of farmers and food consumers. She gave three reasons to support her ministry's judgment on the matter: one, that experts in the field of agriculture were divided on the benefits of GE crops; two, that there was an ongoing case in the Supreme Court which sought a moratorium on the release of genetically modified organisms (GMOs) and, three, that there were less risky and better-tested methods of improving agricultural productivity (Sethi 2013). Logical though these reasons may sound, ABLE saw this refusal to allow GM field trials as a "delay", as "cost (to) our nation" and as causing "too much negativity" towards GE crops. ABLE's communication to the ministry stated clearly that the industry has suffered losses on account of its fear of GE crops (Biospectrum 2013).

Conflicts over GE

The Supreme Court has been hearing a public interest litigation, *Aruna Rodrigues & Others versus Union of India & Others* (Writ Petition (Civil) 260 of 2005), for nearly a decade now. The writ petition was filed by the petitioners seeking a moratorium on the release of any GMOs into the environment pending a comprehensive, transparent and rigorous biosafety protocol in the public domain for India, which is to be conducted by agencies of independent expert bodies, the results of which are made open and public.

In July 2013 the sc-appointed Technical Expert Committee (TEC) gave its final report indicting GE. Five out of six members of the TEC called for a moratorium on GE in food crops till their safety was established. It was this report that made Jayanthi Natarajan "hold up" the GE field trials. This is evident as her letter to the PMO explaining her decision is dated 9 July 2013. In this letter she requested that her ministry be allowed to take an independent decision on the matter (Sethi 2013). Between July and November 2013, the major differences between the Ministry of Environment and Forests (MOEF) and the Ministry of Agriculture (MOA) played out through official communication. The then minister of agriculture Sharad Pawar's pro-GE position remained unchanged during 2009-14 when he was holding charge of the ministry. The MOA drafted an affidavit with the Department of Biotechnology's (DBT) comments and sent it to the MOEF for their response. Natarajan clearly noted on file

I do not agree with the averments made in the draft affidavit sent by MOA. MOEF is a regulatory ministry and there is clear conflict of interest. MOEF has also filed criminal cases against the major companies conducting field trials. MOEF cannot file a joint affidavit with MOA for this reason.²

She had earlier written to the prime minister with these views. The matter was to be heard in the Supreme Court in November and December 2013 and clearly the MOEF was held responsible for the delay on the submission of the affidavit.

At a Committee of Secretaries (cos) meeting in November 2013, headed by the prime minister, a decision was taken that the government would file not several but one common affidavit with a "harmonised position".³ The MoA was requested to redraft the affidavit taking into view the comments of the MOEF. Ranjini Warrier, director, MOEF in a note on 22 November 2013 states that the director, PMO, had contacted her that morning seeking the status of the ministry's approval of the draft affidavit. By this time, the PMO had taken charge of the matter. Natarajan's file noting of 11 December:

the MOEF is a regulatory body and therefore the MOEF mandate requires arm's length and impartiality in deciding these issues. Whereas, MOA is certainly mandated with the task of encouraging productive agriculture. She refused to agree to the contents of the joint affidavit. Within 10 days, Jayanthi Natarajan was replaced by Veerappa Moily as minister.

At the 101st Indian Science Congress on 3 February 2014 at Jammu, the then prime minister, Manmohan Singh endorsed genetically engineered (GE) crops, urging the people of India not to "succumb to unscientific prejudices". The prime minister unequivocally voiced his government's commitment to the use of these new technologies for agricultural development with their safety issues addressed.

After his sudden appointment, Moily saw to the conduct of two quick GEAC meetings and approvals to several field trials and revalidation of 12 GEAC clearances. Thirty applications for GE crop field trials were approved which included 19 for rice, brinjal and even cotton. It also included 10 applications for Biosafety Research Level-I (BRL-I) trials with rice, cotton and maize expressing new events and one for Biosafety Research Level-II (BRL-II) trials with brinjal expressing new events.⁴ These meetings took place on 21 and 24 March when the entire country was gripped by the election fever. The decisions taken at these meetings were prefixed by the GEAC's understanding that the Supreme Court had not yet imposed any ban or restrictions on GE crops field trials. The GEAC was aware then that the next hearing of the Supreme Court in this case was scheduled for 14 April.

The government submitted a near 300-page affidavit in April 2014.⁵ This was only the second time in the history of this long case that the government's affidavit in the GE case was submitted by the MOA (previously a response to the TEC report). Until then, the Court's questions

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were all being fielded by the MOEF on behalf of the Union of India. This affidavit pleaded that GE field trials be allowed. It stated that the two TEC reports had "accepted the need for field trials". This was untrue as a majority of TEC members held that field trials may be allowed only after legal changes, removal of conflict of interests, a new biosafety regime, etc, had been completed.

The Supreme Court will continue hearing this matter after its vacation in July 2014.

Environment Regulation Split Wide Open

The case of GE approvals bring into sharp focus that environment regulation is a product of the tension between various ministries and the PMO as well as the conflicts between government decisions and public opinion. The environment ministry has always been trapped by the demands of speedy clearances from other ministries whose only emphasis is production, be it agriculture, power or tourism. The ministry has been accused of "delay" simply because it is the only ministry that is engaged in qualitative decision-making on complex matters of how projects will affect people and the environment in the present and the future. Speedy decisions certainly do not mean good decisions.

The environment ministry although a part of the government with all its political compulsions operates within a much wider world. It is the only ministry that engages directly with environmental groups, human rights activists, peoples' collectives and international conventions for protection of the environment. It is accountable to millions of project-displaced families and those affected by industrial pollution. To be in dialogue with all these parties and take decisions is not an easy task by any means. However, if the government, especially the PMO, were to encourage the ministry to do this without fear or favour, all decisions for or against a project could be good and just.

NOTES

- 1 D O No-1 -52/MOS (E&F)-2013 dated 9 July 2013 from Ms Jayanthi Natarajan, minister of state, environment and forests, to Dr Manmohan Singh, the then prime minister of India
- 2 File notings of 12 November 2013 available on http://indiagminfo.org/wp-content/uploads/ 2014/04/219667926-Scan-Moef-Gmo.pdf

- 3 File notings related to MoEF's comments on the draft affidavit to Supreme Court prepared by MoA available at http://indiagminfo.org/wpcontent/uploads/2014/04/219667926-Scan-Moef-Gmo.pdf
- 4 Biosafety Research Level (BRL I) field trials are confined to one acre per trial site. It is after the IBSC and RCGM give the go-ahead that a matter reaches the GEAC. The GEAC is responsible for inter alia for BRL II level clearances; the size, scale and number of trials per GE event is decided on a case-by-case basis.
- 5 Filed in the name of Smriti Sharan, Director, Ministry of Agriculture, Department of Agriculture and Co-operation and signed by her on 1 April 2014.

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In Search of Equality, Quality and Quantity

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Jandhyala **B G T**ilak

India has a large network of universities and colleges with a massive geographical reach and the facilities for higher education have been expanding rapidly in recent years. The story of higher education in India has seen many challenges over the decades and has not been without its share of problems, the most serious being a very high degree of inequity.

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