

A Critique of the Task Force Report on the 'Application of Biotechnology in Agriculture'

The Task Force (TF) on forming a biotechnology policy for India (Application of Biotechnology in Agriculture), headed by Dr.M.S.Swaminathan, has submitted the report to the Government of India.

This report was intended to cater to the immediate need of our country to formulate a policy on Biotechnology. Being such an important matter, the public expects such a report to be objective, unbiased, scientific and farsighted. Though dealing with biotechnology as a whole, Recombinant DNA technique or rather 'Genetic Modification' (GM) of organisms for 'useful' purposes, holds, understandably, the centre stage in this report.

Background

Promotional literature on Genetically modified crops have been occurring frequently in our media and scientific circles, for quite a long time now. Evidently research on this subject is heavily dominated by a handful of Transnational /Multinational Corporations (TNCs / MNCs). Monsanto, Syngenta, Bayer Crop Science -, to name the prominent ones - have been trying to get permissions from national governments across the globe, to sell their genetically modified planting materials in the respective markets. GM-Crops carries with it an aura of being pest or disease resistant or resistant to herbicides, which incidentally were products of the same companies. But many of these nations, especially those of Europe have been sceptical about introducing these crops and have voiced serious concerns on consuming products from GM crops. There has been immense pressure on world nations, from these Biotechnology companies and also from United States of America, which hosts most of these companies. But Europe and many other countries have attempted to prevent GM Crops from entering their crop fields and the civil society had and continues to staunchly oppose the GM organisms, considering possible serious ecological effects due to genetic contamination of the existing biological world, possible serious health impacts on consumers, corporatisation of agricultural sector and lack of proof regarding usefulness of such a technology. In India, these companies, their subsidiaries and a section of the scientists have been advocating the introduction of Genetically Modified organisms (GMOs) in agriculture and animal husbandry. It is in this context that the requirement for a policy on biotechnology for the Union of India became important. The Government of India appointed a task force headed by the celebrated agricultural strategist, Dr.M.S.Swaminathan, to provide guidelines for forming a policy on Biotechnology.

In reality India has not yet allowed cultivation of genetically modified food crops, though GM-Cotton has been permitted. The introduction of GM Cotton raised protests from all sections of the society, but was ignored by the government. Bt-cotton, as reports suggests, have spread illegally, with all restrictions, barriers and refugia proving to be big failures. Cottonseed being used as cattle feed, the chances of undesirable impacts affecting human food chain also has raised concerns. India, still retains the status of being the largest agricultural nation in the world that is free of genetically modified food crops, with all the other giants – USA, China, Brazil and Argentina – already cultivating and marketing GM cereals and pulses.

The Critique

1. Predetermined notions and lack of transparency

The most striking matter, in the report, especially regarding the recommendations of the Task force (TF) is that it starts with the presumption that genetically modified organisms and biotechnological interventions on life forms need to be promoted. . This notion completely ignores the wide spread apprehensions and confusions about introducing GM crops, among the general public across the globe. Even with the little public awareness that is there now, the positive and negative side of introducing GMOs are still being debated and this debate is not reflected in the TF report, obviously because there does not seem to have been an intention of the TF to do so. . This needs to be read with the fact that in recent times many Indian universities, Food and Agricultural Organisation (FAO) of the United Nations and well-known personalities like Dr.M.S.Swaminathan, have been showing unwarranted haste in pushing Biotechnology into the centre-stage and even recommending GMOs. . The report of the TF only looks like a continuum of this rather dangerous haste, clearly displaying a 'first-we-can-implement-then-analyse'-attitude. The ground reality is that, such an important issue still remains alien to the general public, especially the farmers and the consumers in India, who are going to bear the effects of introducing genetically modified crops. Civil society, NGOs, media, voluntary organizations and subject matter experts in all sectors directly or indirectly affected by introduction of 'genetically modified organisms' (GMOs), seems to have been kept out of this discussions and decisions. .

Ironical, but true, one is reminded of the late 1960's when high yielding and hybrid varieties of crops and intense promotion of chemical fertilizers and pesticides were part of the Government propaganda, in the name of food security. Even then, public opinion was never taken and decisions came from above. The officials and scientists in the TF seems to carry on this legacy of secrecy and top-down development, continuing their historical resistance to ensure farmers and consumer participation in decision making. This is quite understandable as we will see later in this paper that the farmers and consumers are never the targeted beneficiaries and the real beneficiaries are the profiting companies of Biotechnology products.

Let us examine in detail some of the evidence on notions and transparency in the TF report.

Recommendation 10 in the report says that "*GM crops should be fitted into an IPM system*" This is intriguing because in the current paradigm of farming, IPM (Integrated Pest Management) itself is an outdated strategy. Agriculture all over the world, have shown clear signs of shifting from the existing chemical system towards a safer and sustainable farming system such as organic farming. Moreover by drawing IPM as a vehicle to carry GM into the already hapless farmers fields is in a way undermining the very meaning of the type of farming that IPM's attempted to promote. No sensibility would be left of the IPM strategy, if toxic chemicals or GMOs are incorporated in this regime. In the 21st century, the world is moving forward with the idea of organic agriculture and IPM is a poor substitute.

In the same paragraph the TF recommends that "*Non-GM components such as bio-fertilizers, bio-pesticides, IPM, etc. should be equally promoted along with GM components.*"

This statement clearly suggests that the TF presumes the need for GMOs to be 'promoted', and that "Non-GM's should be equally" promoted. The prejudice to support GM crops is crystal clear.

The farming situation in the nation is that what farmers need is a sustainable model of farming, where the factors- seed, land, water, manure and the time-tested local knowledge – need to be in farmers’ control and to his advantage. Such a system would ensure not just food security but food safety and farmer well-being as well, and the fundamental presumption of the TF clearly despoils this goal.

Recommendation. No.2 in the report says –*“There is evidence that excessive use of herbicides leads to a reduction in field biodiversity”*

While there is mounting evidences from all corners of the world, regarding the toxic effects of pesticides – insecticides, fungicides, acaricides, herbicides, rodenticides, and molluscicides – on the environment as a whole and human health in particular, why single out herbicides only, which is only a small part of the huge amount of toxic chemical inputs in the existing system of agriculture. The biggest loss to biodiversity in the last 50 years could be directly blamed on the introduction of high yielding varieties and hybrids arising from a narrow genetic base. For instance, all the rice hybrids and high yielding varieties popularised in India by the Government Extension system comes from one or two foreign strains like Taichung Native 1, erasing innumerable numbers of traditional varieties. Chemical inputs into farming, coupled with intensive monocropping system gave a death blow to our field biodiversity – both floral and faunal. The TF restrains itself from addressing such issues and such a narrow analysis of reasons for biodiversity loss is unacceptable to the public and baseless. Regarding consultations, the report says that the *“TF had detailed discussions with various stake holders like representatives of farmers, NGOs, Association of Seed Industry, Association of Industry, representatives of the State Governments and representatives of media,”* . Even if we accept this argument, the public have to know who were these representatives , what were their concerns, where or how did they had the consultations etc. Has the TF ever confronted the most basic of question – why do we need Biotechnology ? and answered it with convincing clarity (convincing to all sections of the society). Was there any state-level, regional-level and national level consultative workshops and how well attended and represented were these workshops? The bias, over sightedness and scientific blunders revealed in the report clearly points out to total lack of participation of quality scientists and visionary agriculturists, who knows the pulse and mind of the farmers and who can understand the economics of the tillers work and life. Evidently, the TF has reserved its confidentiality and “maintained” a lack of transparency.

2. Objectives of introducing GMOs -whose needs ? whose demands ?

Applying Biotechnology in Agriculture in India is not a programme but a policy level question. And one who propounds it should be able to clearly state its objectives and substantiate its need. While considering the various aspects of applying Biotechnology, and GMO’s the TF does not think it important to look at what demands us to adopt and apply them. There is no convincing evidence that productivity of GM-seeds is more, compared to the existing popular varieties nor is there any convincing field level evidence that they provide a broad-spectrum solution to the pest and disease problem (or any such hindrances to productivity). Each GM seed is infact , pest/problem-specific which doesn’t make it superior to the current propagates.

In India, food grain production is already quite high and there is no such desperate need of increasing crop productivity, especially when it is through risky and untested methods. India produces nearly 200 million tons of food grains and keeps around 30-40 million tons (15 - 20%) as stocks. Ironically, a bulk of this is being discarded every year. According to FAO, developing countries are wasting 15-16% of their food grain as post harvest losses (during storage, transportation, processing, etc.)

Thus around 30-35 % of our food grain production is not made available to the people. If a reasonably effective system to prevent this grain-loss is effectuated, the need of increasing productivity can be avoided. Even after the Green Revolution, which came with 'miracle seeds' claiming 5 or 10 times more production than traditional varieties our average productivity of food grains is only below 2 tons per year (paddy-1900 kg/ha). GMOs have no history of having improved performances. Moreover the idea of going for high individual-crop productivity is no longer the reigning paradigm. The present concept is to increase the productivity of the land by optimising the diversity of crops.

If the motive is not productivity of crops, then one wonders what is the objective or need of GM seeds ? The report does not talk about it either. As regards reducing toxic pesticides use, GMOs are not the right and reliable answer. Organic Agriculture is the real alternative, having already proven its credibility world wide; it avoids chemical use and cuts down cultivation costs. Already it is replacing chemical agriculture and there is a huge demand from the public for toxic free food at affordable rates. Organic farming is the most environmentally friendly farming system available for the farmers in India and it has no 'unknown' or 'hidden' risks. Organic Farming has already been adopted in marginal, small and large farms of almost all crops and such experiences have proven to be very promising. The need of the hour is to find ways to popularise organic farming, which is based on the health of the elements, seed and the farmer himself.

Objectively, let us look at the differences in these two approaches that the country should be weighing for its future as the basis of agriculture policy - GM-agriculture and organic agriculture. The GM-technology is backed and pushed by the biotech-industries (TNCs) and scientists. On the other hand, organic farming is being promoted and supported by the civil society, farmers, NGOs, consumer groups and also many importing nations. In the former, the profits go to the MNC's/TNC's and the scientists get to do a lot of never-ending research into the efficacy of the technology first and then on its impacts and later on mitigation of the impacts ! It is evident that because companies and scientists are knocking the doors with a new 'miracle' technology the Government wants to let them in. In the latter - organic farming- the benefits are for the farmers in terms of profits, sustainability, safety and good health and the consumers as regards safe food and health. It is also rather ludicrous that the TF is recommending an application of a technology in the field of agriculture, without actually having any need to do so, but simply because a technology is available for implementation, disregarding the fact that it is risky and could be dangerously detrimental to the farming community.

Interestingly, we will in the following pages also see how introducing a Biotechnology regime would not only be counter productive but could wipe out the growing organic farming and market. .

3. Bio-disasters - Expecting them ? And accepting them !

The report mentions a number of times on possible '*bio-disasters*' and vaguely deliberates on the same without elaborating. While this possibility is made out to be a certainty, the TF tries to underplay this extremely important concern. The use of the word 'bio-disaster' (in Recommendation. No.12), is a clear indicator that there are impending dangers associated with GMOs. But the report refuses to discuss the form, magnitude and intensity of such possible disasters. Instead the report directly jumps into a discussion of possible safety measures to be adopted. The most important of such recommendations is the assertions on the need for refugia. "*The need for refugia should be explained to farm families.*" says the report. There are no scientific evidences regarding the effectiveness of refugia in the field and the idea itself is heavily contested around the world. Obviously it is impossible to monitor the 'refugia' in each and every farm. The refugia ratios are impractical at field level especially in a country like India and cannot be evaluated or strictly enforced. Moreover the farming community in the country will not be receptive towards jargons like 'refugia', which doesn't provide them with any additional economic advantage. So it becomes the liability of non-GM cultivators in the nearby fields to bear the risk. Providing refugia also cannot ensure prevention of contamination of germplasm by transgenes. Wild and uncultivated plants of the same genera or even same species may get contaminated. This will in turn function as carriers for further disposal of transgenes. Refugia cannot prevent cross-pollination by agents like wind, insects, other animal etc, and hence is impractical. Moreover, keeping farmers and consumers in the dark is also an infringement on the right of the people to be completely informed about the consequences of introducing GMO's.

Since GMOs may trigger an irreversible change in the world gene-pool and may create hitherto unknown forms of life – the nature of which cannot be predicted, (and some have started emerging, like super weeds) and alter genetic situation and lives of all living beings – it needs to be discussed world over and decided. It cannot be left for the caprice of a group of technocrats . In spite of being in such a responsible chair, the Task force seems to have taken a very casual and amateurish approach towards the issue. The report also discusses and recommends setting up of 'Agro Biodiversity Sanctuaries'(ABS) and protecting 'Organic states', . If the creation of such High security zones, makes an important recommendation of the TF, it only reveals the risk expected by the technocrats. It is evident that there is a high chance of genetic contamination notwithstanding the walls of 'refugias' and regulations.

In the section- "*Developing a long time policy; setting priority*" The TF says that "*Core information about gene exchange taking place among modern cultivators. Traditional varieties and wild relatives should be gathered to assure concerns of transgenic escape and establishments. Data should also be gathered on the impact of transgenic on biodiversity in crop fields, on the model of recent studies in UK*".

One does not understand why we have to still go ahead with the application of GM's on Indian fields, as there is clear admission that introducing GM will result in transgenic escape and establishment and will have a huge impact on our biodiversity. All this will trigger vast dispersal of trans-genes all over the country, within no time. No 'zones' or regulations would be able to arrest such gene dispersal. One wonders whether this exercise (the TF) is an approval mechanism for a big experiment the scientists/ companies want to do to further research on the impact of GM on

the flora and fauna and also on human society. It seems that the '**collection of data**' and '**core information**' are the only things that are of interest to the TF.

4. Regulation Zones

To 'protect' the biodiversity of the nation from GM-contamination there are recommendations for creating 'Agro biodiversity sanctuaries' (ABS), 'organic regions' and 'organic states'. What does the TF mean by ABS? The example they provide is the Jaypore tract of Orissa. This gives the impression that agro biodiversity in the country remains (or needs to remain) only in specific patches and the rest of the country is (or can be) agro-biodiversity-less area and could be allowed to get contaminated. The task force is attempting, to create the impression that 'organic farming' and 'GM-farming' can co-exist, fenced by regulations, even while they acknowledge that "organic zones" need to be protected from contamination by GM. . This is, to use the right words, either senseless or deceitful. The recommendations to 'protect' organic zones, itself points to the 'threat' posed by GMOs to organic farming system.

Then comes the 'organic region' or 'states'. Organic farming is a fast growing system and farmers all over the nation, are converting from chemical farming into organic farming irrespective of any 'zones'. How can 'organic farming' be regulated into some pockets? If some selected zones are protected and others exposed to GMOs, what about the rights of a farmer outside these zones to protect his farm and seeds from being contaminated? And what about his rights to continue to enjoy the benefits of organic farming? The 'zonation' will clearly deprive him of his rights to live without being 'contaminated'.

Western Ghats, Eastern Ghats and N.E. India (Biodiversity hotspots) are recommended to be kept protected from GMOs. This means that all other ecosystems – including Protected Areas, can be contaminated. These recommendations are against our national interest of protecting the purity and diversity of every natural biome.

Maintenance and Regulation of these zones poses an impossible task. No infrastructure, expertise and money would be able to safeguard these zones. These recommendations are as frivolous as building fences in the ocean. The TF tacitly admits and we all know that the illegal seeds of GM – Cotton spread everywhere breaking the walls of legal restrictions. .

The TF report also says *"the need for streamlining the procedure for commercial release of genetically modified crops is further highlighted by mushrooming of illegal varieties of Bt-cotton seed in Gujarat, which is reported to have spread to Andhra Pradesh, Maharashtra and Punjab as well"*

Latest reports from Attapadi Area of Palakkad, Kerala, an area within the Western Ghats (' the hot spot that the TF wants to protect !), Bt Cotton has illegally infiltrated the fields in a large scale and also failed to produce results. It proves that all the so-called regulations are farcical and impossible to implement in the field. **Regulating the spread of GM seeds and transgenes, over political, institutional and geographical barriers, is not possible in a country like India.**

5. Regulating Research - vague and fallible framework

The next looming problem that the TF tackles is that of controlling genetic research in the country. As earlier mentioned, introducing GM is a priority set by some scientists and the TNC's

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and hence while the need to introduce GM's itself is at least convincing, the TF sets about hastily 'setting priorities' for research in this field.

The whole report does not sound like a policy statement at all, especially the way in which they speak about regulating research. The TF dwells on vested matters such as organising an 'Orientation workshop on priority setting in Recombinant DNA research on crop plants' to develop 'a code of conduct' of "dos" and "don'ts". Setting priorities for research is the only thing discussed and regulating research and preventing vested interests from misusing the system is not at all addressed. It is well recognised that research mandates and objectives, especially in the private sector cannot be regulated. The effectuation of constraints – biological and physical – in the existing system or in a modified system is fallible and hence precarious. The fact remains that a handful of companies are doing bulk of the research and the huge investment needed for GM-research cannot be raised inside a government system. Our government machinery, who is liable to enforce the regulations and monitor the proper practice of the code of conduct won't be able to control these multinational giants, as history proves it. "Orientation workshops" will only prove to be a prodigal affair.

The regulation of research, field trials and farmers trials (which the TF wants to be cut short for easing the cumbersome procedures for the benefit of the companies) would be difficult, if not impossible, especially when the efficiency of 'refugia' is highly contested around the world and it is known that even research trials can lead to contamination of biodiversity.

6. Bio-safety, Food Safety and Export - for whom?

Further going through the report, we come across the part dealing with food safety and bio-safety. World over, it is the consumer organisations that raised concerns about GM – contamination in food. Cases of allergic reactions from GM-products were reported earlier from the West. There are apprehensions regarding the action of the transgenes and their capacity to produce toxic by-products.

The recommendations of the Task Force, as regards bio-safety and food safety are ambiguous. 'Food quality literacy' is very important in India (as the TF also suggests in recommendation 5) as innumerable reports are flooding research journals and media in our country and across the world, regarding pesticide residues and other chemical contamination in our food and water (even underground water sources). The residues of such chemicals are detectable and are verifiable. But GM foods are not bound by such variable measures and cannot be measured in such well-defined terms.

The TF says in recommendation 5 that "*India should play a greater role in setting codex alimentarius standards in the area of GM foods.*" So the standards are not yet set! The truth is that the scientific community propounding GM are themselves not sure about the analysis. The objectivity of the standards set by biotechnologists, companies and universities funded by Biotech companies are questionable. India has not yet set standards for all the crops for pesticides used in the country and neither have they accepted or 'played a role' in codex-standards for chemical-agriculture. Indian consumers have been eating food, contaminated with toxic pesticides, for decades. Organo-chlorines like DDT, BHC, Lindane, Endrin etc. were detected from food and the environment and were even found accumulated in human fats including breast milk. After they were banned, scores of other pesticides continue to do harm to the environment. The increasing

rate of various kinds of cancers and other malfunctions could be linked to the consumption of such toxic chemicals. But the Government never acted to check or control this situation, except when they were forced to do so by civil society interventions. So, when even the standards are not followed in the existing system, recommending and expecting it for a new technology, where standards are yet to be set is highly unconvincing.

The reports also issues a warning for exporters of products from the country vis-a-vis the status of GM regulations in other countries. It says "*Considering the fact that some countries have strict laws against import of GM organisms absence of a policy relating to segregation, labelling and tracing may affect our exports*"

Here the '*some countries*' mentioned are the developed nations like the European nations, Canada, etc. TF is feigning ignorance though they would be well aware of the reasons behind such reservations by countries against GM-foods. Developed nations and their civil societies are opposing GM foods and demand for non-GM. food is growing.

The TF report also warns that "*No transgenics should be developed in crops/commodities where our international trade may be affected e.g. Basmati rice, Soybean or Darjeeling Tea.*" This clearly indicates that the niche market of such esteemed products, consumed obviously by the higher classes of the society in Europe, North America, Japan etc prefers GM-free-food. The lower stratum, which cannot afford high quality and high priced organic food, only goes for any cheap food available in the market (GM or non GM). Even in the local markets, probably due to high awareness level in these countries, GM food is not preferred.

While the TF is emphasising the importance of providing non-GM-high class-food to the rich, they are silent regarding our domestic consumers. Our domestic consumers are shabbily treated, as as they are unaware or ill informed regarding the risks of GM foods. That possibly is the reason why the segregation, labelling and tracing of GM produce is emphasised only for export food.

The cautions are for protecting the export-oriented-agriculturists only and not the local producers. As if the majority farmers who feed 102 crore Indians, need not be protected from being branded as 'GM-contaminated'! They are being denied the markets of GM-free foods. This also indicates the 'double standards' set by the TF in treating Western and Indian consumers. One does not understand why such indubitable risks are being taken !

Further, shockingly, The TF is only referring to niche market products and not other exports. For instance, the chances of India's non-Basmati rice exports (coming to around Rupees 6000 crores) and a number of other products including tea, sugar and spices, getting contaminated, are high and the ensuing loss would be colossal. .

In any system of production, the market demand drives the industry. Who is demanding GM-food? Not even one country is opening their markets for GM food, despite continued pressure from the companies. And in the huge domestic market, the consumers are not aware of the technology and its risks. This being the situation, does the TF think that an "illiterate and unaware" Indian consumer would be a "prospective market" for these globally rejected food products ?

7. Jeopardizing India's Organic and GM-Free Status

India is one of the world's agricultural giants – rice, sugar, tea, wheat, millets, vegetables, fruits, milk-pulses – in every case India stands among the top rankers and in many crops India ranks first (sugar, tea, milk). Considering the diversity of crops, India ranks arguably the first

spot. All the other major competitors in the world –US, Brazil, Argentina, China, etc. have gone GM and they have only contaminated food to export. Being the biggest 'pure' or 'GM-free' nation, India holds the greatest advantage ever in world history, to be the 'number one' in agriculture. Considering the great demand in the west and elsewhere for GM-free food, India should be able to grab this opportunity. Only India is in a position to supply the new market of GM free foods. According to Dr. Suman Sahai (*Keeping off the GM bandwagon* ; *The Hindu*, June 15, 2004; sheet no 10), 75% of US's 98% of Argentina's, 40% of Japan's and 20% of Europe's Soya production is GM. Only India produces 100% GM free soya . Not only the case of soya, but the Rs. 60000 million rice (non-Basmati) exports will also topple considering the mounting protests against GM food in all rice-importing countries; same is the case of tea, spices, etc.

Moreover, genetically modified crops are not and should not be considered a part of the ever-growing organic market. The TF itself admits the necessity for protecting 'organic zones' and 'organic states'. There is a huge demand in the world and domestic market for organically produced food. **Once India adopts the GM way, we would simply wreck this advantage. Considering the pace at which Indian states are going 'organic' (and agriculture being a state subject), within no time the whole of India may turn organic.** Already Uttaranchal and some Northeast states have declared themselves organic. States like Kerala have officially declared to be in favour of organic agriculture. This possibly is the biggest threat for pesticide-companies (incidentally they themselves are the GM-companies!). So, India remaining an organic-agricultural-nation means the interests of these multi nationals, selling agro-chemicals and now getting ready to sell GMOs, will not be met. So it is only natural that the public views the TF's motives with suspicion, to the extent that their recommendations are threatening national interests.

8. Threatening farming, Violating fundamental rights, Challenging Grama swaraj

Another underlying fact shows the recommendations of the TF, that they are against the existing constitutional rights of the citizen. Introducing GM-crops and setting up of 'organic zones' and ABS are against the fundamental rights of farmers and threatens the rights of the villages to plan and decide development, as per the 73rd amendment of the Indian Constitution. These also amount to violation of Article 21 (Right to Life).

Going GM threatens the right of states to remain or convert to organic farming on course. (Organic farming being a comprehensive approach emphasising not only in cultivation aspects, but also health, culture, social relationships and human and social psychology, cannot be compared to a rather technological circus like the GM-technology.)

Due to the peculiar nature of farmlands (when compared to wild life – Protected Areas) demarcation of areas as 'zones' and 'sanctuaries' will create more social, economic and political issues. It thwarts the right of the farmer to decide what he should cultivate. Each farmer outside the zones, where GM is recommended to be cultivated, will be under constant and immense pressure of protecting his seeds from being contaminated from transgenes travelling across fields. Here the fundamental rights of the farmers are infringed. Moreover, he will have no ways of effectively protecting his crop and would have to travel through all the technological and official intricacies to prove his claim for compensations in case of unwarranted contamination

In a macro level, these kinds of recommendations may sound attractive to technocrats. But agriculture being a state subject and many states have started decentralisation, the basic A Critique of the Task Force Report on "Biotechnology in Agriculture"

legality and existence of Panchayati Raj will be questioned. Here in the case of GMO-introduction, decisions of farming (and demarcating zones) are of a centralised nature and panchayats and 'gramasabhas' (the basic units of the nation) are not aware and are not consulted. Gramasabhas, where the people decide on what they need and what means they should adopt to achieve the end, are completely ignored. What constitutional right does a centralised decision making system hold to decide on what a panchayat should cultivate? Who will pay for the irreversible loss due to contamination, super weed formation and other unknown ecological and agricultural catastrophes? So this recommendation if implemented will destroy the essence of Panchayati Raj system of rule. Every Panchayat and farmer will have to bear the threats of GM -technology, and will be left with no choice but to pursue the governmental policy decisions.

How can the Government of India divide states as 'organic' and 'non-organic', thereby giving the organic-state-farmers an edge over his non organic-state-brother? At the same time how could a system protect an organic state from the constant threats from then adjoining 'GM States'? Literally, these recommendations will divide India based on farming operations, with one area holding an economic advantage over the other and the other facing immense dangers of getting contaminated and vulnerable to 'bio-disasters'.

The GM seeds bear really big price tags. Most of the seeds are priced many times that of the popular variety. Due to the huge corporate interests, with a few MNCs doing bulk of the research, they are bound to go up. With a virtually 'nil' world market and unsure domestic market there is no future for a GM – farmer. Coupled with the high cost of cultivation, the environmental and health risks makes the situation more precarious. The farmers, who traditionally have held the rights to keep his own seeds, will no longer have it, as seeds of the GM crops cannot be retained by the farmer for further use, according to the agreement which he will be forced to sign while purchasing such seeds. Every year the farmer will have to depend on the Biotech companies. He will not be able to shake off his 'GM – contaminated' label even if he wants to revert to organic or traditional farming. The farmers are already in debt traps and their lives are market bound. All these additional troubles will make the system more unsustainable and risky by polluting traditional genes, threatening biodiversity, building up of resistance and further destroying the social structure.

9. Insurance Drama

If anyone still dwells with the feeling that GMOs could be a miracle potion, then the report itself smothers it.

It says "The cost of GM seeds being high, farmers will get indebted if crops fail. A special insurance scheme for GM crops may there fore be devised and introduced by the MOA. There is a need to explore the possibility of the seed company selling GM seed providing farmers with an insurance cover..." Tacitly the TF admits that GM-technology is not a miracle-technology and could fail, and in such cases the failure could be more impacting than the normal crop losses.

How gullible does the TF think is the Indian civil society? Considering the myriad farming conditions, number of farm holdings, literacy rates and bargaining power of Indian farmers how could they make us believe that providing insurance cover would solve the worst of crimes, mitigating the losses of applying GM crops and failing in the venture.

The report continues by comparing India with Switzerland *"Switzerland adopted in 2003 a Gene Technology law with a strong liability regime. A similar procedure advisable since a vast majority of farmers in India have small holdings with no or poor risk taking capacity..."* Here one A Critique of the Task Force Report on "Biotechnology in Agriculture"

clearly senses the quality of the TF members, especially with their superficial and theoretical understanding of farming and farmers in the country. How can they be so simplistic? It is quite disturbing that the TF believes that small-scale "farmer with no or poor risk taking capacity" can manoeuvre through the various insurance provisions and criteria for claiming insurance. In a country like India, where farmers are killing themselves for failed crops and mounting debts, the TF seems to be expecting them to behave like farmers in Switzerland who may be industrious enough to even sue a company, for claiming his compensation

As a political nation the common Indian people holds no voice in the world society and will not be able to fight and win cases, especially if they are pitched against multinational giants, as is evident from the Bhopal Gas Tragedy (1984, December 6) case. Even after 19 years, neither the victims were given compensation nor the toxic materials removed from the locality. (This is the case of greatest agricultural-input-related-tragedy case ever in the world and Dow Chemicals, the villain, is back with the new technology) The TF itself points out that majority of Indian farmers is poor and has no capacity to go for cases (In a country, where millions of cases are pending for years at different levels of judiciary). The Government of India has also shown that it is too weak to bargain with multinational pesticide/GMO giants like Monsanto, Syngenta and Dow, having deep political strong hold and partnerships with industrialised nations of the west. The political weakness of our nation and the new world order under the WTO, coupled with the slow judicial process in our nation and the low financial capacity of our farmers will crush any farmer, who dares to sue a biotech company.

10. Public money for private advertising

One of the most remarkable statements in the document is *"Our Public research system is expected to extent of the benefits of the development of agricultural biotechnology to the farmers.....it is there fore suggested to broker alliances between the public research system and public and private companies in the area of production and marketing of GM seeds.....the development of GM-technology is expensive. Innovators who evolve new GM seeds may not always be in a position to provide their resources to commercialise their product. It is therefore suggested to set up a venture capital fund to help commercialise research breakthroughs in the development of GM seeds/ crops"* i.e. the companies or "innovators" (as the report says), can afford the "expensive" development of GM seeds , but may not be able to advertise and promote it among the hapless farmers ! The TF, therefore suggests, the government form a venture capital fund *"to help commercialise research breakthroughs"*) and take them to the farmers fields. In simple words, they want the public exchequer to pay for the promotion of their private commodity, so as *"to extent the benefits of the development of agricultural biotechnology to the farmers"*. **This is more than what any private biotech companies could have ever dreamt of ! Thanks to the Task Force !!**

Conclusions

The whole report, dealing with frameworks to decide on the formation of a policy, seems to clearly carry the prejudice of the Task Force members. The report has many recommendations, which advocates for the introduction of Genetically Modified Organisms in agriculture and animal

A Critique of the Task Force Report on "Biotechnology in Agriculture"

husbandry. In the report, there are no explanations with regard to the necessity of such a move and has not made it clear, the dangers and risks behind the exercise. Many of the recommendations in the report could easily prove dangerous to the ecology, social and economical structure and agriculture of the nation. The recommendations pose a serious threat of complete corporatisation of Indian agriculture and also to the fundamental rights of the farmers to live with dignity. Hence we conclude that

- 1. GM-technology is not indispensable as it is made out to be and there is no immediate need for applying Biotechnology and GM crops in Indian Agriculture.**
- 2. The uncanny haste of the TF to recommend that 'GM should be' incorporated into the existing system, inspite of its own admissions of concerns regarding biosafety, food safety, contamination, shows their casual, amateurish and sometimes suspicious nature, which could raise obvious questions regarding their intentions.**
- 3. Introducing GMOs violates fundamental rights, democracy and the declared principles of grama swaraj and hence is unconstitutional.**
- 4. Implementing the TF recommendations will threaten India's already endangered biodiversity, including severe genetic erosion in case of agro-bio-diversity. It holds every chance for serious ecological imbalance and creation of hitherto unknown and possibly dangerous forms of life.**
- 5. As there is no system in the world to prevent contamination of gene pools, the recommendations for implementing safety mechanisms are frivolous and unscientific.**
- 6. The TF recommendations will destroy chances of India remaining the largest GM-free and 'pure' nation in the world and along with them the chances of utilising the ever-increasing non-GM and organic market inside and outside the nation. It will also destroy the export market for organic and other non-GM crops, threatening national well being and interests.**
- 7. The TF recommendations, if implemented will discriminate and divide India as differentially preferred zones and gives reservations for some farmers creating two levels of people – the free, healthy and protected organic farmers and the defensive, corporate-dependent and poor-GM-growing farmers. The zonation will split the country creating serious social, cultural, economical and internal affairs issues.**
- 8. Introducing GM will complicate the farming equations and put more pressure on the Indian farmer. Licensing, compensation, high input costs, problems regarding right to keep seeds and other legal procedures are being imposed upon a hitherto simple decision making process.**
- 9. Introducing GMOs will lead to complete corporatisation of agriculture. GMOs are in stark contrast with the principles of sustainable farming and organic agriculture, as it increases farmer's dependence on corporates for inputs, practices and marketing of his produce.**
- 10. The TF is heavily biased and is formulated to cater to the needs of Biotechnology companies, and not to the well-being of the farmers and the food security needs of the nation.**

After word:**Lessons from the Green Revolution**

It seems that we haven't yet learned from the Green Revolution. It was the huge exercise of introducing foreign seeds and its derivatives, use of toxic fertilisers and pesticides, mono cropping, deforestation in the name of increasing food production and criminal negligence towards traditional seeds and knowledge that has led to the present situation where farmers are finding it impossible to thrive. Indian farming which was a lifestyle and which was more in the control of the farmer was subjected to ruthless change or 'revolution' as some still dare to call it. All the basic elements of farming – land, water, seed, knowledge, skill, implements, practices – were stripped off the farmer and private companies and bureaucracy were allowed to take control. The "revolution" caused the total destruction of rural India, caused huge and irreversible loss of genetic base and took farming away from the ordinary farmer. When the inputs like seed, water and manure were shifted to the control of external forces, the cost of cultivation increased dramatically over the years and made farming a losing venture. Scientists from all around the world, like Masanobu Fukuoka in Japan, who showed the way of natural farming and some others including Dr.Vandana Shiva in India, have been fighting against the atrocities inflicted upon by the Green Revolution. Several groups, individuals, farmers and scientists are working right from those times of the commencement of the 'revolution' to prevent and repair the losses. But the government have been turning a blind eye towards this movement and have continued to go for the pro-Green Revolution works. When the government has not yet obliged to analyse the effects of Green Revolution, they have no right to get along with more baseless technologies.

The GM technology is nothing other than an extension of the Green Revolution, but this time in a much more dangerous and irreversible nature. No one has yet made it clear why we should go for GM crops. The consequences of such a step are not known and are not verifiable. In a democratic state like India, such a technology, which is widely apprehended and opposed around the globe, cannot be blindly supported.

Indian farmers are already in deep debt traps, with the cost of cultivation mounting day by day. Farmers in the southern part of India, especially Andhra Pradesh and Kerala are committing suicides (In Andhra itself, nearly 3000 death in last 5 years and it continue to increase even now when we write this .) Considering the seed-cost, other input cost and pest problems, specificity of GM seeds, and the corporate control over them, the cost of production will rise again. Considering the possible damage to the environment, agro biodiversity and health of the society, pushing for GM technology is not only unnecessary but also a crime.

Dr.M.S.Swaminathan who deeply influenced the route of Indian agricultural policy since the 1960s and who continues to do so, has once again donned the mantle of the saviour with his "Ever Green Revolution" and shockingly so with the most feared introduction of Genetically Modified crops. Dr.Swaminathan, who is the force behind all those decisions which led Indian farmers to this situation, needs to be made accountable for authoring such a frivolous report This Task Force Report is yet another sell-off, a clear repetition of a historical conspiracy.

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