



Fortnightly Bulletin on Genetic Engineering South Against Genetic Engineering (SAGE)

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Ban on trials of GM crops to continue

The GM industry has nothing to cheer about. SC has not vacated its order on fresh field trials of genetically modified crops.

The apex court has only allowed ongoing and earlier approved trials to continue, while not vacating the ban that it had imposed in an interim order of September 22, 2006, banning any fresh field trials of GM crops.

The court, in its order, said, "The Genetic Engineering Approval Committee (GEAC) shall take sufficient precautions to see that these (ongoing and already approved) trials are not causing any contamination to the cultivation in the neighbouring fields."

In order to pin down responsibility in case of any mishap, the court said: "In all trials that are being conducted, the name of the scientist and other details of who will be responsible for all aspects of the trials should be reported to GEAC and there should be regular supervision by them."

The court, in fact, tightening the leash on the government, has also ordered that the government release data on any tests of toxicity and allergenicity that may have been conducted on the four species of Bt Cotton already approved by the government. The precedent setting order has elated the green groups as they have been constantly asking for such data to be put out in the public domain.

Meanwhile, the lawyer for the petitioners in the case, Prashant Bhushan, has sent a legal notice to the environment ministry for the 'misinterpretation' of the SC order by minister of state for environment and forests, Namo Narain Meena.

In a speech, the MoS was quoted as saying, "The stay on Genetic Engineering Approval Committee has been vacated today (May 9) during judicial hearing."

http://timesofindia.indiatimes.com/Ban_on_trials_of_GM_crops_to_continue/articleshow/2036223.cms

Indian government misleading press and public

In the aftermath of the Supreme Court hearing last week, it's become all too clear that the Government of India sees its role as one of promoting rather than regulating GM crops.

Below is the text of the legal notice that's been sent to the environment ministry by the lawyer for the petitioners in the case. It charges the ministry with deliberately misinterpreting the Supreme Court's order.

The charge relates both to a press release issued by the ministry, which seems to have seriously misled much of the Indian press, and to a speech by the minister of state for environment and forests, Namo Narain Meena.

Both the press release and the minister himself stated unequivocally that the stay on GM crop trials granted by the Supreme Court back in September had been vacated.

But, in fact, as the legal notice to the ministry points out, the Supreme Court has not vacated its order as regards fresh field trials of GM crops. Those that haven't already had approval remain banned.

What the Supreme Court has actually done is add stringent *new conditions* onto the trials that already had approval.

And, in the words of the Times of India, the Supreme Court has also tightened "the leash on the government" still further, by ordering it to release toxicity and allergenicity data.

As the paper notes, this "precedent setting order has elated the green groups as they have been constantly asking for such data to be put out in the public domain."

Below is the text of the legal notice

*PRASHANT BHUSHAN
ADVOCATE*

*To,
The Secretary
Ministry of Environment and Forests
Paryavaran Bhavan, CGO complex
Lodi road, New Delhi*

SUBJECT: PRESS RELEASE BY THE MINISTRY OF ENVIRONMENT ON 9th MAY 2007 CLAIMING THAT THE SUPREME COURT HAD VACATED THE INTERIM ORDER STAYING FURTHER FIELD TRIAL APPROVALS OF GM CROPS.

Dear Sir,

I wish to bring to your attention the above-mentioned press release by the Ministry of environment which claims that the stay on the approvals of the GEAC by the Supreme Court had been vacated by the court during the hearing that day. I am in annexing a copy of your press release.

To begin with, it is distressing to note the Ministry of environment acting as the promoter of genetically modified foods, when its statutory duty is to act as the regulator of these products, which by law and under the rules have been determined to be per se hazardous. Apart from this, the press release gives a completely incorrect and misleading impression about the court order. In fact the court ordered (copy annexed) does nothing of the kind as claimed in the press release. The court order does not in any way vacate or alter the interim order passed by the court on 22 September 2006. It only clarifies that if any trials are going on or are to go on, pursuant to the approvals granted by the GEAC between the period from 2/5/2006 and 22/9/ 2006, they would be subject to the following restrictions: --

- 1. The GEAC shall take sufficient precautions to see that these trials are not causing any contamination to the cultivation of neighbouring fields.*
 - 2. There should be at least 200 m distance from the trial fields from the neighbouring fields having the same type of cultivation.*
 - 3. In all the trials that are being conducted, the name of the scientist and other details of who will be responsible for all aspects of the trials should be reported to the GEAC and there should be regular supervision by them.*
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4. Prior to bringing out the GM material from the greenhouse for the conduct of open field trials, the approved institution should submit a validated even specific test protocol at an LOD of at least .01% to detect and confirm that there has been no contamination.

In these circumstances, it would be desirable for you to issue a fresh press release to correct the misleading impression created by your earlier release. In any case, you must make sure that the GEAC, which is under the Ministry of Environment does not proceed to act by assuming that they are now free to grant fresh approvals for field trials of GM products. The GEAC must also be told to ensure the implementation of the above restrictions which have been placed on field trials which were approved between 2 May 2006 and 22nd September 2006.

I would be grateful if you let me know what action has been taken by you on this letter/notice.

Yours sincerely,

(PRASHANT BHUSHAN)

Copy to: --

- 1. The Chairman, GEAC*
- 2. The Chairman, RCGM*
- 3. The Secretary, Department of Biotechnology*

SAGE observed Joint GM Opposition Month (JIGMOM)

In solidarity with the Joint GM Opposition Month (JIGMOM) observed worldwide, SAGE observed a day of protest between April 9th and May 10th in the States of Karnataka, Andhra Pradesh, Maharashtra and Tamil Nadu. *Below is brief report of the same.*

- **Karnataka and APCIDD observed the day on April 9th**

Karnataka observed GM Opposition on April 9th in Nanjangud town.

Below is the Press Statement made on the occasion in Karnataka

A protest march was held in Najangud town on 9.4.07 under the auspices of 'Anti GM Campaign, Najangud', 'South Against Genetic Engineering (SAGE)' and 'Institute For Cultural Research And Action(ICRA)' against GE crops, specifically BT cotton invading farmers' field. Around 700 farmers

and farm women from surrounding villages, especially cotton growing areas took part in the protest march.

The procession started from the R M Circle, took a halt at ADA office in R P Road and submitted a memorandum. After receiving the memorandum the ADA declared that the ban on DCH-32 variety cotton has been lifted and the same will be made available to the farmers in the coming season. The procession proceeded to Tahashildar office in Hullalli circle and a memorandum was submitted. Tahashildar received the memorandum and promised to forward the demand immediately to the District Commissioner, Mysore. He expressed concern over the demands raised by the organisations.

The following were the demands

1. Ban BT Cotton, which has proved disastrous to human, cattle and environment.
2. Declare our district as GM free zone.
3. Lift ban on DCH-32 cotton variety in chamarajanagar and Nanjangud Talukas.
4. Address the technical issues related to spurious seeds, decline in yield immediately.
5. Support farmers directly rather than seed and fertilizer companies.

The protest march was lead by Mr.M.Shivalingegowda of Anti GM Campaign, Nanjangud: Mr.K.Satya Shankar and Mr.Basavaraj Biradar of Institute for Cultural Research and Action and farmer leaders like Mr.Shivamadappa ofhaginavalu village, Mr. Nagarajappa of Kaggalur village, Mr. Puttalingashetty of Channapatna village. Anti GE and BT slogans were raised thought out the protest march. This was followed by a Media Meet.

While, on the same day AP Coalition in Defence of Diversity (APCIDD) partners from Adilabad, Anapur, East Godavari, Kurnool, Khammam, Nalgonda, Nellore, Karimnagar, Nizamabad, Prakasam, Srikakulam, Visakhapatnam, Vizianagaram, Warangal & West Godavari districts also observed GM Opposition day in their respective districts.

Similar protests, rallies, meetings and media meet was observed on the same day by all of the district partners of Andhra Pradesh Coalition in Defecne of Diversity (APCIDD).

- **Protest demonstration in front of ICRISAT, Andhra Pradesh.**

On April 10th ,DDS- SAGE and APCIDD observed the Day by staging a protest demonstration in front of ICRISAT, Andhra Pradesh denouncing ICRISAT for its corporate backed pro- GM research agenda and submitted a of memorandum to the Director General, ICRISAT and demanded to:

1. Move away from GE and move back to basics. Work with farmers and start building on the foundations of their science once again.
2. Get out of the unholy alliance with the biotech industry which has very little to do with Life and everything to do with Death. Death of the environment, death of the poor and death of food sovereignty and dignity.
3. Stop renting out your facilities which was donated to you by the international community to the biotech industry. This is a total breach of trust.

4. Bring back biodiversity and NPM on to your agenda. We hope these terms, biodiversity and NPM ring a bell in you. Can you retrace this path from where you strayed away and redeem yourself as a public research institution?
5. Start repatriating the genetic wealth you have amassed from the farmers of Asia and Africa. Farmers have the right over it but are unable to access it from you whereas the biotech industry which is accessing it from you do it as biopirates

Later in the day, the farmers also marched on to the office of the head of Medak District and demanded to:

1. Ban genetic engineering from agriculture from the Medak District. All over the dryland belts of the Deccan genetic engineering as seen in the cultivation of Bt cotton, has proved a disaster for small and marginal farmers resulting in thousands of suicides. Besides it has also started toxifying our soils and killing the livestock.
 2. Genetic engineering in agriculture is the surest way of depriving farmers their control over agriculture and handing it over to large agrochemical corporations.
 3. As the custodian of the farming communities in Medak, where small and marginal farmers constitute nearly 70% of the population, it becomes your duty to do everything to save their life, honour and dignity. One of the ways of achieving this is to stop institutions such as ICRISAT and the state agricultural research institutions from engaging in genetic engineering.
 4. Instead, promote ecological farming which is the surest answer to the horrifying water wars and the climate change that looms threateningly on our horizon.
 5. Expand the state support to food farmers, particularly in the rainfed farming systems thereby reducing the stress on natural resources. This can be done by promoting dryland crops such as sorghum, millets and pulses which still form the finest mosaic of biodiversity on the farms of Medak District.
- **In Maharashtra, the day was observed on April 30th which was marked by a Media Meet.**

To observe the day, Maharashtra organized a press meet in Nagpur, Maharashtra where SAGE partners Mr. Tarak Kate, Mr. Vijay Jhawandiya and Mr. Vasant Futane addressed the Media Meet and highlighted the plight of Bt cotton farmers and the havoc it has spelt on the lives and livelihoods of the farmers.

- **Tamil Nadu observed the day on May 10th**

On the occasion of International GM opposition Month, South Against Genetic Engineering [SAGE]-Tamil Nadu, composed of farmers, farmers organizations, civil society groups, consumers, human rights and media organizations, scientists and academicians held a Day Long Protest in the South Indian city of Chennai, and drafted a charter of demands. The charter was presented to the Government of Tamil Nadu and Government of India.

Charter of Demands

Tamil Nadu should be declared a GM Free State. GM trials and cultivation of genetically engineered crops should be declared illegal in the state of Tamil Nadu.

In the light of the recent Supreme Court decision on GM Trials, Panchayats [local assemblies at the village level] should be given the power to disallow any GM Trial in their territory. In order to ensure that the real people keep vigil over such decisions Gram Sabhas must be made the centres of such decisions. No trial

should be undertaken without obtaining the approval of the Gram Sabha in a given Panchayat to avoid the possibility of Panchayats being appropriated by big money and corporate power.

Tamil Nadu Agricultural University which has a hoary past as the repository of people's knowledge and indigenous science, must stop getting into the trap of doing research in genetic engineering. The Government of Tamil Nadu must order the TNAU to stop all such activities. If it does not stop it, Tamil Nadu farmers will boycott TNAU and hold a series of rallies against it in all parts of the state.

More than 10,000 farmers in Tamil Nadu have lost heavily by cultivating Bt cotton. The government must immediately take steps to force Mahyco Monsanto to adequately compensate these farmers. Currently not even 15% of these farmers have received compensation. The compensation given is a pittance. It is time that all farmers are provided proper compensation commensurate with the losses they have incurred.

This Charter of Demands has been put forward by more than 300 members of South Against Genetic Engineering [SAGE] – Tamil Nadu who held a day long protest against Genetic Engineering in front of the Legislators hostel in Chennai.

Open letter to Chief Minister of Andhra Pradesh

Dear Mr Chief Minister

A news of extraordinary significance that you will address the World Agricultural Forum is buried somewhere in Page 5.

For us, the civil society activists working with the poor and their agriculture, this is an exciting news. This is significant not only for the fact that you as the head of a great agrarian state will be addressing this Global Farm Forum but also for the location where this forum is being held.

Mr Chief Minister, you are surely aware that St Louis is the headquarters of Monsanto Corporation, a corporation that has handed down despair, destruction and death to cotton farmers in Andhra Pradesh through its hyped up sales pitch for Bt Cotton. Small farmers who trusted the propaganda blitz of Monsanto and planted Bt cotton, had all their hopes dashed to the ground, as it started performing disastrously year after year.

When you are addressing the Forum Mr Chief Minister, please share the following results of the sustained independent scientific study that the AP Coalition in Defence of Diversity [APCID] has been carrying out since last five years in the cotton growing areas of the state. They point to an unqualified failure of Bt cotton in AP

In terms of economics:

*To cultivate, Bt cotton cost 17% more than the non Bt cotton

*NPM [non-pesticidal management] farmers, who used neither Bt nor any pesticides on their farms, spent 23% less than Bt farmers.

*In terms of yield, Bt cotton's advantage was a paltry 6%.

*The net return for Bt farmers was 35% less than NPM farmers

*Reduction in pest management costs, which is the USP [Unique Selling Point] of the Bt industry was another myth. Actually Bt farmers spent 3% more on pest management costs over non-Bt farmers. In fact Bt farmers spent 100% more than NPM farmers to protect their cotton against pests.

*Thus the Bt industry's claim that it has the answer for the pest problem was the biggest lie.

Mr Chief Minister, while disclosing this miserable economics of Bt cotton, please do not forget to tell the World Agricultural Forum that the greatest danger being posed by the Bt cotton to Indian farmers is the never-seen-before diseases that it is spreading on the cotton fields.

*Root Rot disease, which had never affected cotton plants in their century old history has struck Bt cotton plants.

*Tobacco Streak Virus, a new virus infestation, never seen before, has struck Bt cotton in AP and using it as a vector has spread to other cotton fields.

*Bacterial Leaf Blight hit Bt cotton viciously and was more intense on it than non Bt fields

*All these forced farmers to uproot Bt plants from their own fields to detoxify the soil in hundreds of hectares in Nalgonda District.

Mr Chief Minister, you must speak about all this in St Louis. Because that is the Forum which will be used by the Genetic Engineering industry to blow their own trumpets and say how brilliant has been their performance. Already inspired research funded by the GE industry has started saying how great has been the performance of Bt cotton in India. Unless the other side of the picture is brought out, this mega hype will blind people to reality and make them think that Bt cotton has been a God Sent for Indian farmers.

You must also tell the Forum Mr Chief Minister, how the surveys conducted by your own government unambiguously proved that farmers growing Monsanto's Bt cotton had lost heavily. As a consequence your government ordered Monsanto to pay compensation. You must also tell the world through the Forum that when the arrogant Monsanto flouted your government's orders, you asked them to pack up and get out of AP. This is very significant because a number of weaker nations do not know how to deal with corporate power and arrogance.

It is another matter [and we leave it to your conscience to tell this Forum or not], how President Bush came calling on you and probably twisted your arms behind the scenes and forced your government to readmit Monsanto even if on the ruse of reduced prices. Because the survival of Monsanto and Genetic Engineering is a part of the US foreign policy in the same manner as their aggression in Iraq. They pursue both with a satanic passion and achieve the same result: death of hundreds of thousands of powerless people. If possible, Mr Chief Minister, please make this comparison and tell the world how US politics is so closely intertwined with its desire to control the food and seed industry to maintain its global hegemony.

The reduced price is itself another important story. That your government forced Monsanto to sell its Bt cotton seeds at 40% of its original prices illustrates how profit hungry corporations bleed poor farmers to death by charging unpardonable prices, criminally oblivious to the tragic consequences of their string of lies and hype coupled with back breaking prices of their products.

This is important because the Monsantos of the world justify their existence by telling their own countrymen that their biotechnology is meeting the needs of the poor. Right now this is the debate in the UN's Solutions Exchange forum and you won't believe the outright lies and half truths served on this forum on behalf of Bt

cotton.

Finally, Mr Chief Minister tell the world through the Forum how your government has taken up Non Pesticidal Management [NPM] of pests as a major plank of your agricultural policy. How this is pursued through one of largest anti poverty programme in the world called VELUGU which is a women-focused initiative. And how brilliantly this programme combines the gendered vision of agriculture where all life forms are seen with deep respect. In this manner, by bringing together the poor, the women and NPM, how your government has been able to redefine agriculture and dispel the myths of genetic engineering as the answer for small farming.

This is an important statement to make, Mr Chief Minister. Because in the World Agricultural Forum, you will probably be the only courageous politician who will be able to tell the truth and call the naked US emperor that he is not wearing any clothes at all. You will be shocked to know that US is trying to bring a law which says that Genetically Engineered seeds are organic!! Talk about an Orwellian world!

We wish you the best, Mr Chief Minister and hope that you will keep truth and the interests of millions of the small and marginal farmers of AP above the interests of big farmers and agro chemical industry who will surely try to twist your arm. Please tell all the truths from AP. This is very important for the world to listen.

In solidarity
[p v satheesh]

Success story: Organic farming to get a boost in Erode

SATHYAMANGALAM HILLS: Atop the hills, tucked away in a remote corner a group of committed men and women came together to formulate a strategy to expand their empire. The met under the leadership of a man who said he was in a hurry to finish the task.

After a brief discussion, the group under the leader vowed to take the mission forward in a big way and conquer as much as possible.

Mission

The group that got together was of organic farmers, and the leader was the Collector, T. Udayachandran. Their mission to conquer: the minds of farmers in the district to turn them organic. At the MYRADA office at Arepalayam, in Sathyamangalam hills, as many as 20 organic farmers assembled to discuss steps to expand organic farming in the district. The farmers presented a list of suggestions to the Collector to formulate a plan of action. Organic farmer R. Selvam of Arachalur, who presented the plan of action, said they aimed to unite organic farmers to create awareness among others in farming community; increase the involvement of women in organic farming; enlighten consumers about the benefits of organic produce; protect traditional seed varieties and animal breeds; rejuvenate lands 'polluted by chemical farming'; evolve steps to make organic farming a part of school syllabi; create awareness about genetically modified crops, among others.

After fixing the target, Mr. Selvam said their resources included trainers, both men and women; model farms to explain the benefits of organic farming and train farmers in therein; people with good communication, ability to bring out books, etc.

As part of their mission, Mr. Selvam continued, they would train agriculture, horticulture and sericulture officials in organic farming along with explaining the benefits to high and higher secondary school teachers, social organisations, media, members of SHGs and students.

S.R. Sunderaraman of Sathyamangalam, also an organic farmer, wanted the State Government should help organic farmers obtain farm validation and certification by bearing the cost.

Mr. Udayachandran, who listened to the demands, observed that successful models were many and that to train they could use the farms either according to the area or crop.

He said in the current financial year training programmes would be organised at the block-level and many exposure visits would be carried out. He also promised to give thrust to organic farming under the National Horticulture Mission.

<http://www.hinduonnet.com/2007/04/27/stories/2007042700340300.htm>

Ban upheld on Monsanto genetically modified alfalfa

SAN FRANCISCO (Reuters) - Citing the potential for genetic contamination, a U.S. judge on Thursday let stand a ban on the planting of Roundup Ready alfalfa, a genetically modified variety of the crop developed by Monsanto Co.

U.S. District Court Judge Charles Breyer, in a published order, said an injunction against planting more of the herbicide-resistant alfalfa should stay in place until government studies on its environmental effects are concluded.

Alfalfa is a perennial livestock fodder crop and one of the mostly widely grown crops in the United States. The commercialization of the biotech variety angered environmental groups as well as organic farmers, consumer groups and others who fear the biotech alfalfa will contaminate organic and conventional varieties, create "superweeds" that don't respond to herbicide, and damage export business.

Breyer had issued a preliminary injunction in March, ruling that U.S. regulators acted illegally in allowing the commercialization of the biotech alfalfa without a thorough examination of its impact.

The court action marked the first time a federal court overturned USDA approval of a biotech seed and halted planting, according to The Center for Food Safety, a consumer advocacy group.

The Roundup Ready alfalfa genetic trait was developed by Monsanto and licensed to Forage Genetics International, which produces and markets the seeds.

Neither party would provide any immediate comment.

The USDA, a defendant in the case, also did not immediately comment on the ruling Monsanto and Forage Genetics had asked the court to lift the ban, arguing there was a low risk of contamination. But the judge rejected that argument.

"The harm to these farmers and consumers who do not want to purchase genetically engineered alfalfa or animals fed with such alfalfa outweighs the economic harm to Monsanto, Forage Genetics and those farmers who desire to switch to Roundup Ready alfalfa," the judge wrote.

The ruling Thursday does not stop the harvesting of Roundup Ready alfalfa that already has been planted and is contracted to be sold for seed back to Forage Genetics. About 76 farmers have such contracts, the court ruling states.

To minimize the risk of "genetic flow" between the genetically engineered alfalfa in the ground and conventional and organic alfalfa crops, Breyer ordered that several conditions be implemented, including the segregation of the biotech alfalfa immediately after harvest.

He also ordered the public disclosure of field locations where the crop was planted.

Monsanto shares were up 92 cents at \$59.55 in New York Stock Exchange trading.

http://today.reuters.com/news/articlenews.aspx?type=scienceNews&storyID=2007-05-03T183842Z_01_N03245104_RTRUKOC_0_US-FOOD-MONSANTO.xml&pageNumber=1&imageid=&cap=&sz=13&WTModLoc=NewsArt-C1-ArticlePage1

Venezuela: Chavez dumps Monsanto

Venezuela -- Venezuelan President Hugo Chavez Frias has announced that the cultivation of genetically modified crops will be prohibited on Venezuelan soil, possibly establishing the most sweeping restrictions on transgenic crops in the western hemisphere.

Though full details of the administration's policy on genetically modified organisms (GMOs) are still forthcoming, the statement by President Hugo Chavez will lead most immediately to the cancellation of a contract that Venezuela had negotiated with the US-based Monsanto Corporation.

Before a recent international gathering of supporters in Caracas, Chavez admonished genetically engineered crops as contrary to interests and needs of the nation's farmers and farmworkers.

www.reuters.com

Article: India's rural fortunes

IN FOREIGN media reports India is shining. Even India's biggest English daily has begun a campaign called India Poised. But India's leaders know that a deepening crisis facing India's multitude of farmers threatens to spoil the party in Mumbai and Bangalore. India's Minister of Finance Palaniappan Chidambaram put agriculture at the centre of India's latest budget.

In his speech on the budget, Chidambaram quoted Nehru: "Everything else can wait, but not agriculture." Agriculture represents much more to India than a mere slice of economic pie – it is the very lifeblood of

the country, the source of livelihood for 115 million farming families and 70 per cent of the country's population, the base upon which the entire edifice of the nation rises.

With annual growth in manufacturing and in services each topping 11 per cent, agriculture's 2.3 per cent growth rate lags stubbornly behind the 4 per cent target India must hit if it is to push overall growth – now at 9.2 per cent – into double digits. The government's challenge is to implement policies that promote growth but also provide relief to India's stressed small-scale farmers,

or else the country will have to reckon with much more than a missed growth target.

The social, political and economic threats to Indian agriculture are numerous.

India struggles with a worsening water crisis that includes plummeting water tables. Global warming increasingly threatens both the annual monsoon rains essential to life on the subcontinent and the Himalayan glaciers and snows long considered eternal. The vast majority of India's farmers exploit land holdings smaller than five acres and as small as half an acre. They have

had difficulty coping with the opening of India's agricultural sector to market forces and the elimination of price supports for crops such as cotton. Many have borrowed money at usurious rates from private lenders to pay for more expensive hybrid and genetically modified seeds, which has plunged them into debt they cannot pay off. Arable land is shrinking as urban expansion and manufacturing gobble up thousands of acres of farmland. During the past decade that brought prosperity to so many in India, more than 25,000 Indian farmers committed suicide. An emboldened Maoist insurgency continues to expand its influence, staging violent attacks and assassinations with impunity.

While farmers struggle, agricultural production cannot meet demand. Rising food prices are fuelling inflation, causing real suffering among the 850 million Indians who struggle to live on less than \$2 per day. One of the ironies of democratic India is that it is the poor who vote. The current government has many reasons for placing agriculture at the centre of the new budget.

India, long one of the most productive agricultural regions of the world, could not meet its basic need for food grains during the early years of the nation's independence. The Green Revolution of the 1960s and 1970s dramatically improved yields in India. With

considerable national pride, India boasted that it had achieved not only self-sufficiency in food grains, but had become a grain-exporting nation. In 2006, however, for the first time since the Green Revolution, and in part because of changes in agricultural policy, India had to import wheat. India will again have to import food grains in 2007.

The new budget presented by Chidambaram includes a smorgasbord of specific remedies to India's complex agricultural crisis, with increased allocations for irrigation and groundwater recharge, farm credit, rural education, farm-extension services, roads and power, and for the National Rural Employment Guarantee Scheme, which offers 100 days of guaranteed employment to one family member of impoverished rural households.

The need is great. Last year, I travelled to villages in the Vidarbha region of eastern Maharashtra state, hard hit by a spate of farmer suicides. In the village of Barshi Takli, I sat with a mother who cried for her 20-year-old son who had killed himself a few days after the family's sugarcane crop failed. Their well had gone dry, and they couldn't afford to dig it deeper. With no access to irrigation, they depended on erratic rains, and when these failed, so did their crop.

Desperate for income, they had put all their land into a

cash crop, borrowing money to purchase the inputs they needed and neglecting to set aside a portion of land to grow their own food. The family's son, carrying the burden of the household, had no way to repay the local moneylenders from whom he'd borrowed at usurious rates of interest. I visited family after family in similar straits.

The expansion of farm credit and investment in irrigation promised in the new budget, while essential to larger-scale farms, would not have saved most of these families. Their farming operations are too small to qualify for bank loans, even those guaranteed by the government. Large-scale government irrigation schemes won't reach them.

Credit and irrigation measures scaled to the limited resources and critical needs of small family farms could make a difference to these farmers. The expansion of micro-credit opportunities as well as low-cost micro-irrigation systems such as those being manufactured and sold in India by International Development Enterprises (IDE), a company supported by the innovative social-venture Acumen Fund, could make a critical difference. Designed for small plots of land and expandable with investment increments, as little as \$45, IDE systems can increase water efficiency by 50 per cent and improve yields by 30 per cent. Small-scale systems such as these not only can save crops, they can literally save farmers' lives.

Large-scale industrial agribusiness will not work in India. Indian farmers have little hope of finding employment elsewhere. They must be able to earn a decent living on their land. And they must be able to do this in a way that is environmentally sustainable. The Green Revolution's increased yields were achieved in part by huge inputs of synthetic fertilizers and pesticides, both of which

have inflicted massive damage on India's stressed environment.

Chidambaram admits that his government's true challenge is not only to come up with the right policies and programs but "to deliver the intended outcomes." The success India achieved with its IT-led service and now manufacturing industries made it a poster child for globalisation. This

could be eclipsed by the rural failure. The Manmohan Singh government cannot afford to do what its predecessors have done – let rural India languish. The best strategy it can embrace is one where farmers' needs dictate innovative solutions from the bottom up and where social entrepreneurship can flourish along with an increasingly empowered and prosperous rural population.

http://www.khaleejtimes.com/DisplayArticleNew.asp?xfile=data/opinion/2007/April/opinion_April84.xml§ion=opinion&col

This fortnightly bulletin is brought out by South Against Genetic Engineering (SAGE), a coalition of civil society activists, farmers, scientists, academicians, and consumer groups of four Southern States of India, viz., Andhra Pradesh, Karnataka, Tamil Nadu and Maharashtra. SAGE has been waging a concerted battle against genetic engineering through a series of activities that involve public protests, media actions, seminars, consultations and publication of a series of education.

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