

COMMENT from GMWatch

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The Guardian article below is based on reports about a Discussion Paper from researchers at the International Food Policy Research Institute, "Bt Cotton and Farmer Suicides: Reviewing the Evidence".

IFPRI has always been pro-GM, although that does not by itself mean that this discussion paper is invalid. As will become apparent, though, there are plenty of indications in the paper that suggest the authors have adopted a very limited pro-GM perspective.

Some accounts of this research, including the article below, have actually suggested that the paper absolves Bt cotton of causing farmer suicides in India, or even that Bt cotton cultivation may have led to a reduction in farmer suicides. But the authors admit in the actual paper that the data is simply not available that would allow specific conclusions as to the numbers of Bt cotton farmers who have committed suicide:

"...none of the reported data sources on farmer suicide provide information about the concerned farmers' characteristics." (p.26)

In fact, there are not even numbers on how many of the Indian farmers who have killed themselves grew cotton, let alone Bt cotton, or even as to how many farmers committed suicide after their crops failed (p.26).

The authors point this out in order to say there is no statistical evidence that could be used to prove any link between suicides and Bt cotton cultivation, but equally this means there is no quantitative evidence to negate such a link. What they can say is that although the stats show suicides across India have risen in recent years, they have not increased in the period since the introduction of Bt cotton at as high a rate as might have been predicted from previous trend data, and that the proportion of suicide victims who are farmers within the overall total for all types of suicides in India has decreased.

And even the authors' abstract shows that the following bald statement of their findings is highly misleading:

"[this paper] first shows that there is no evidence in available data of a "resurgence" of farmer suicides in India in the last five years. Second, the research finds that Bt cotton technology has been very effective overall in India. Third, the analysis clearly shows that Bt cotton is neither a necessary nor a sufficient condition for the occurrence of farmer suicides." (AgBioView, October 30 2008)

In the abstract, after the second point about the performance of Bt cotton, the authors concede:

"However, the context in which Bt cotton was introduced has generated disappointing results in some particular districts and seasons."

And when you look at where these "particular districts" with disappointing results are, you discover they're the Warangal district of Andhra Pradesh (AP) and the Vidarbha region of Maharashtra. These regions are not only the main cotton belts of those states but they're key cotton growing areas in the country as a whole. AP and Maharashtra are also the places

which have had the highest Bt cotton adoption rates in India, as the authors indirectly concede (p.28).

And while the authors assert that Bt cotton is "neither a necessary nor a sufficient condition for the occurrence of farmer suicides", the authors also concede in the paper that:

"What we cannot reject, however, is the potential role of Bt cotton varieties in the observed discrete increase in farmer suicides in certain states and years..." (p.29)

Now, this is entirely consistent with the detailed criticisms of the impact of Bt cotton on farmer suicides in India. Detailed accounts have almost invariably focused on AP and Maharashtra. And the authors even reluctantly admit that in the case of AP, "the rate of suicide may have increased after the introduction of Bt cotton" (p.28).

What those who've seen the problem up close have been saying is very simple.

1. Bt cotton has been massively hyped to poor farmers by Mahyco-Monsanto and seed sellers, who can make greater profits from the expensive Bt cotton seeds. For example, in Maharashtra, Mahyco-Monsanto even brought in a Bollywood star to promote Bt cotton to local farmers (although he subsequently refused to do so again after seeing the impact).
2. Bt cotton has also been massively promoted by the State Government in Maharashtra.
3. Debt is a big problem for poor farmers and a key driver of farmer suicides
4. Bt cotton is a much more expensive option and so leads to an increased level of debt, but poor farmers are tempted by it because of all the hype.
5. This means, if anything goes wrong with Bt cotton, the farmers are left more vulnerable with bigger debts.
6. There have been significant problems with Bt cotton on unirrigated farm land, and in Vidarbha, for instance, the overwhelming majority of farmers are dependent on rain fed agriculture.

Now, the report in fact provides evidence that supports a number of aspects of this analysis. For instance:

The authors mention that an overall status report on Bt cotton for the Government of India noted "the problem of wilting [with Bt cotton] found in many central states [like AP and Maharashtra]...was the result of physiological stress on the plant due to low moisture during dry spells" (p.23).

They also note that the State Government reports for AP and Maharashtra show Bt cotton performing poorly at times, compared with the popular non-Bt cotton hybrids (p.23) and they say themselves that in the case of AP and Maharashtra "the evidence shows that Bt cotton was not always effective in these two states", and they note in particular the high price of seeds (p.29).

They also note that in Maharashtra 97% of cotton is grown under rain fed (ie non-irrigated) conditions (p.23).

They also admit to identifying hypothetical "links between indebtedness and net negative returns from agriculture, particularly related to the adoption of highly costly agriculture in the risky, rain-fed conditions found in the states of Andhra Pradesh and Maharashtra." (p.49)

They also state that while, "Indebtedness among rural households In India is not a new phenomenon. What is new, however, is the nature of the debts and the pattern of high cost agriculture that farmers engage in with the hope of becoming debt-free if the harvest is sufficient. This phenomenon of "going for broke and losing out" is likely related to the increased instance of suicides among farm households." (p.25)

In other words, there's nothing in this report to contradict the award-winning Indian development journalist P Sainath, who Amartya Sen has described as one of the world's great experts on hunger, calling the massive hyping of Bt cotton to poor debt-burdened dryland farmers as, "murderous... stupid... killing".

The authors of the discussion paper dismiss this critical issue of marketing as merely "context", to be carefully separated from "the effect of Bt cotton as a technology". The fact that Mahyco-Monsanto engaged in an extreme campaign of hype for this costly new technology does not get a direct mention anywhere in the paper.

If Bt cotton fails to help poor farmers, or makes their situation worse, the technology should not be blamed for failing, according to the authors, but contextual factors like bad credit facilities, poor weather conditions, lack of irrigation, poor information and the lack of a better extension system, poor controls on seed marketing etc., etc. Never mind, that this "context" is precisely the one in which Bt cotton has been promoted to poor farmers by Monsanto as a silver bullet, thus encouraging them to "go for broke".

What makes the hyping of GM crops to poor farmers in a developing world context, like that of Indian cotton production, nothing short of criminal is that GM approaches typically only target one, or occasionally a couple, of the many problems that can lead to crop failure in any given year. Bt cotton, for example, provides protection only against the bollworm, and of course only for as long as resistance doesn't develop.

There is a big contrast here with Integrated Pest Management, agroecological and other more fully systematic farming approaches, including organic production, which are recommended as the long term answer for global agriculture in the recent IAASTD report. Because there are many things that can lead to crop failure or to very low yields, it is not uncommon that the GM trait (Bt in this case) can be of no value in preventing such losses in any given year. For example, drought, flooding, other insects, and plant diseases could all destroy a crop, and would not be addressed by Bt. When that happens, losses are exacerbated by increased debt due to the cost of inputs like Bt seed.

While the same things could happen in rich countries like the U.S., rich countries have safety nets to catch many of the farmers who face such disasters. In the U.S. there are crop subsidies, disaster payments and crop insurance, for example. Poor Indian farmers do not have any of those programmes to support them. Instead, they face grinding debt "policed" by often ruthless loan sharks.

This is why the hyping of high-priced GM seed in a farming system like India's is so reckless. By contrast agroecological systems use cheap available local resources and so have very low input costs, yet as research shows can produce high yields. As a result, these approaches offer poor farmers a much more resilient means of farming where even if natural disasters hit, farmers are not faced with terrible debts.

Finally, it's worth noting that the authors desire to spin their discussion paper in a pro-GM direction is so marked that they even try to claim Bt cotton as a successful technology in India on the basis of recent good cotton harvests, which can be dependent on climatic and other factors entirely unrelated to Bt cotton, and they also use what they say are, "Revealed preferences based on farmer adoption rates... " for Bt cotton, and in addition, "the increasing adoption rate in two suicide-prone states, Andhra Pradesh and Maharashtra", as indicators that "farmers overall are seeing this technology as one of the solutions to their problem and not a cause of the problem."

But University of Washington researcher Glenn Stone's multi-year study of Bt cotton adoption in the Warangal district of AP - one of the suicide-prone states the authors mention - showed such adoption was not based on farmers carefully assessing the technology before adopting it more widely but a "craze" reliant on advertising and a kind of herd mentality, where everybody copies everyone else leading to blind adoption. The hype around GM seeds, in fact, had added to the deskilling of the farmers - the undermining of cautious traditional assessment of performance.

As already noted, the IFPRI authors admit their findings do not allow them to "reject the potential role of Bt cotton varieties in the observed discrete increase in farmer suicides in certain states and years", which is no more than critics like the journalist P Sainath who have been investigating the on the ground realities have been reporting.

What the authors fail to face up to, is that the hyping and blind adoption of an expensive and highly limited technology surrounded by wide uncertainties, is a guaranteed way of putting poor Indian farmers at risk, and they should not seek to deny the terrible damage that can inflict just because so far the mayhem may have been limited to particular seasons and States.

Further reading

Bt Cotton and Farmer Suicides: Reviewing the Evidence
IFPRI Discussion Paper 00808, October 2008
Guillaume P. Gruère, Purvi Mehta-Bhatt, Debdatta Sengupta
International Food Policy Research Institute
Paper available at: <http://www.ifpri.org/pubs/dp/ifpridp00808.asp>

See also: Glenn Davis Stone, Agricultural Deskilling and the Spread of Genetically Modified Cotton in Warangal, *Current Anthropology*, Volume 48, Number 1, February 2007:
<http://artsci.wustl.edu/~anthro/research/stone/stone480102.web.pdf>
Articles about this research here
<http://www.lobbywatch.org/archive2.asp?arcid=7644>

See also: The relief package is a bureaucratic sham, P SAINATH speaks to SHALINI SINGH about the agrarian crisis plaguing rural India
http://www.tehelka.com/story_main19.asp?filename=Ne090906The_relief_CS.asp
A fading cotton bumper crop, P Sainath
<http://www.thehindu.com/2006/11/25/stories/2006112502891100.htm>

And on alternatives to GM:
<http://www.bangmfood.org/feed-the-world>