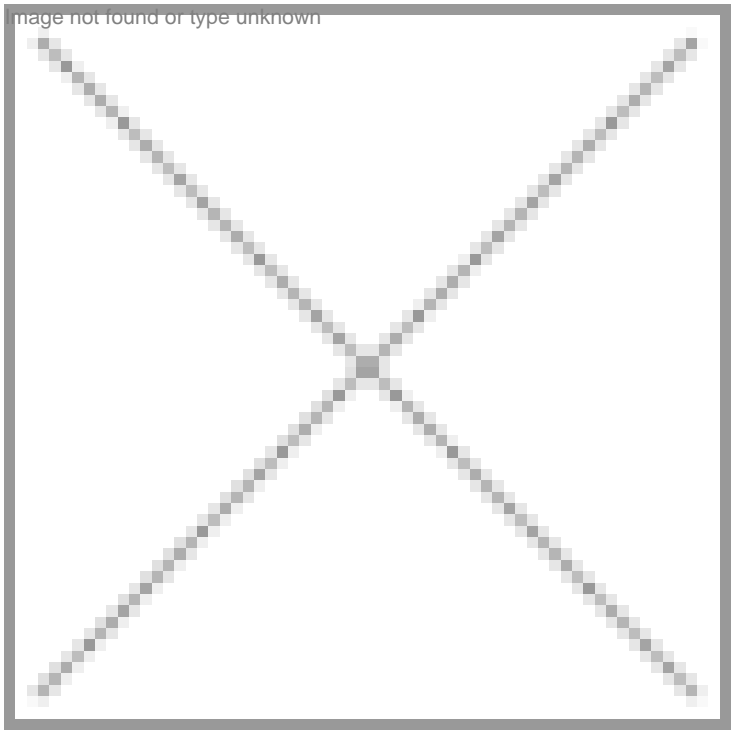


## If it can't work, fake it

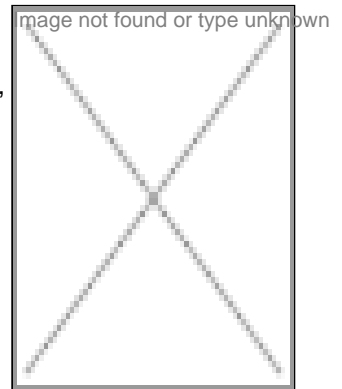
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For years, they made us believe that genetically modified (GM) crops reduce pesticide applications and thereby help in protecting the environment. For years, they worked hard, manipulating scientific data, to justify the increasing public investment in a risky technology. For several years now, they have succeeded in diverting the public attention.

The citadel of scientific fraud has now begun to crumble. Amidst reports that the pesticides application in GM crops in the United States has actually multiplied, comes the damning indictment of the faulty technology from the crop fields in Africa. Trials to develop a virus-resistant sweet potato, launched in Kenya in 2001 by the US special envoy, Dr Andrew Young, have failed. The much-hyped GM technology, that was claimed to usher in a green revolution in Africa, has finally turned out to be a scientific crap.

The virus-resistant sweet potato, donated by Monsanto to Kenya Agricultural Research Institute (KARI), has been found to be susceptible to viral attacks. This is the same sweet potato that a black African woman, in her colourful traditional dress, has used in her non-stop global sermons on feeding the hungry in Africa. Sponsored by the US Agency for International Development (USAID) and Monsanto, Dr Florence Wambugu of KARI, has gone around the world telling how the transgenic potato could raise the crop yield from four to ten tonnes per hectare.



The media loved her. The media, in fact, adores everyone who speaks in favor of the GM crops. After all, the future of the world lies only in increasing the corporate profits, which in turn benefits the media. So whether it was The New York Times,

The Washington Post, CNN, or the discredited Fox TV, they all clamored around her. The Forbes magazine even went to the extent of naming her among the 15 people from all over the world who will 'reinvent the future'.

Reports now indicate that the transgenic sweet potato yields less than the traditional varieties. In other words, knowing that the transgenic sweet potato wouldn't work, Dr Florence Wambugu, had faked it.

Earlier, Aaron deGrassi of the Institute of Development Studies at Sussex (UK) too had picked up holes in Dr Florence Wambugu's claims. In a detailed report on GM crops in Africa, he had said: "Accounts of the transgenic sweet potato have used low figures on average yields in Kenya to paint a picture of stagnation. An early article stated 6 tons per hectare - without mentioning the data source - which was then reproduced in subsequent analyses. However, FAO statistics indicate 9.7 tons, and official statistics report 10.4." In simple words, the transgenic sweet potato that was being imposed as the answer to Africa's food security was no better.

His warning went unheard. Meanwhile, World Bank, USAID and Monsanto continue to sponsor her research project running for over 12 years now, involving 19 researchers, 16 of them with PhDs, something unusual for Africa. If only the \$6 million that was incurred on her research project had been used for fighting hunger, more than six million impoverished Africans could have been fed adequately for as many as six years.

No one is however keen to remove hunger. Not only the World Bank, USAID or the private companies, even agricultural scientists are looking forward to any and every possibility to latch on to hunger and malnutrition.

The sweet potato debacle is the latest in the series of flops that have tumbled out from the GM industry laboratories, and that too in the name of ameliorating hunger and building food security. Ever since the days of the Flavr Savr tomato, the magic bullets of technology have failed to enthuse the farmers and the consumers alike. The 'golden rice', the protein-rich potato in India and the 'protrato', and now the fall of the transgenic sweet potato in Africa, are all classic examples of the great exercise in public deception.

At the same time, the GM industry finds itself in a terrible fix over reports that the cultivation of transgenic crops in the United States has actually led to an increase in the application and use of pesticides. This negates the only saving grace that the industry had so far used successfully used - "GM crops reduce the use of pesticides thereby leading not only to sustainable farming systems but also to a safe environment. Drawing on the official records of the US Department of Agriculture, Charles Benbrook of the Northwest Science and Environment Policy Centre at Idaho (USA), concludes that the planting of 55 million acres of genetically engineered (GE) corn, soybeans and cotton in the United States since 1996 has increased pesticide use by about 50 million pounds.

Substantial increases in herbicide use on "herbicide tolerant" crops, especially soybeans, was cited as the main reason that accounted for the increase in pesticide use on GM crops compared to acres planted to conventional plant varieties. 'Herbicide tolerant' plants are genetically modified to ensure that those who grow these crops have no other option but to also use the herbicides of the same companies. For the agribusiness companies, 'herbicide tolerant' crops are the sure means of profit security. That the American farmers have complied with the profit motive of the companies is quite obvious.

Benbrook says that many farmers have had to spray incrementally more herbicides on GM crops in order to keep up with shifts in weeds toward tougher-to-control species, coupled with the emergence of genetic resistance in certain weed populations. For the developing countries, the implications of this study are enormous and of course serious. Agribusiness companies will exploit the small farmers pushing them more into a debt trap and at the same time do more damage to the environment and crop sustainability.

Whether it is chemical pesticides or the pest-resistant GM crops, the effectiveness against the target pest lasts only for a couple of years. In case of cotton, for instance, the agribusiness industry is exhorting farmers to adopt Bt cotton, which has the inbuilt ability to produce a toxin that kills the pink bollworms. In India, in the very first year of commercial planting, Mahyco-Monsanto priced the seed four times than the existing price, thereby earning its pound of flesh in the very first year. The Bt gene has been further licensed to half a dozen companies from which a substantial royalty has also been drawn.

The Bt cotton crop has, meanwhile, failed in the very first year of planting in large parts of the country. While the farmers suffered, the company that sold the seed has gone scot-free. By the time the farmers wake up to the damage done by the Bt crop to the environment as well as the economy, the seed companies will bring in the next generation transgenic. Agribusiness industry had done exactly the same in the past five decades, bringing in more potent chemicals each time the insect developed resistance to the pesticides. In the bargain, the number of problem insects that the farmers are now confronted with has multiplied to 70. In the 1960s, only seven crop pests worried the farmers. In three decades, the problem pests have multiplied 10 times.

All over the world, Bt cotton is now losing its resistance to the pests as a result of which the pesticides consumption is going up. In China, where over 7 million hectares are under Bt cotton cultivation, pesticides usage has once again reverted back to almost what existed before its commercialization in 1999. Scientists are therefore refraining from conducting studies on pesticides saving four years later, knowing that such an analysis would be damning for the industry.

For India, the failure of the GM crop technology elsewhere should serve as an eye-opener. We cannot afford to operate like the five blind men for the simple reason that Indian agriculture is faced with a severe crisis in sustainability. Already more than 16,000 farmers have committed suicide, and several thousand more end up each year selling their body organs. At the same time, 320 million continue to go hungry. The national priority should be to feed the hungry now rather than spend the same money for producing GM crops that feed the hunger of a handful of private companies.

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