

# SEED MONOPOLIES, GENETIC ENGINEERING AND FARMERS SUICIDES

Vandana Shiva  
15 Nov 08

An epidemic of farmers' suicides has spread across four states of India over the last decade. According to official data, more than 160,000 farmers have committed suicide in India since 1997.

These four states are Maharashtra, Andhra Pradesh, Karnataka and Punjab. The suicides are most frequent where farmers grow cotton and have been a direct result of the creation of seed monopolies. According to official data, more than 160,000 farmers have committed suicide in India since 1997.

Increasingly, the supply of cotton seeds has slipped out of the hands of the farmers and the public system, into the hands of global seed corporations like Monsanto. The entry of seed MNCs was part of the globalization process.

Corporate seed supply implies a number of shifts simultaneously. Firstly, giant corporations start to control local seed companies through buyouts, joint ventures and licensing arrangements, leading to a seed monopoly.

Secondly, seed is transformed from being a common good, to being the "intellectual property" of Monsanto, for which the corporation can claim limitless profits through royalty payments. For the farmer this means deeper debt.

Thirdly, seed is transformed from a renewable regenerative, multiplicative resource into a non-renewable resource and commodity. Seed scarcity and seed farmers are a consequence of seed monopolies, which are based on renewability of seed, beginning with hybrids, moving to genetically engineered seed like Bt-cotton, with the ultimate aim of the "terminator" seed which is engineered for sterility. Each of these technologies of non-renewability is guided by one factor alone – forcing farmers to buy seed every planting season. For farmers this means higher costs. For seed corporations it translates into higher profits.

Fourthly, the creation of seed monopolies is based on the simultaneous deregulation of seed corporations, including biosafety and seed deregulation, and super-regulation of farmers seeds and varieties. Globalization allowed seed companies to sell self-certified seeds, and in the case of genetically engineered seed, they are seeking self-regulation for biosafety. This is the main aim of the recently proposed National Biotechnology Regulatory Authority, which is in effect a Biosafety 'Deregulation Authority. The proposed Seed Bill 2004, which has been blocked by a massive nationwide Gandhian Seed Satyagraha by farmers, aims at forcing every farmer to register the varieties they have evolved over

millennia. This compulsory registration and licensing system robs farmers of their fundamental freedoms.

State regulation extinguishes biodiversity, and pushes all farmers into dependency on patented, corporate seed. Such compulsory licensing has been the main vehicle of destruction of biodiversity and farmers rights in U.S. and Europe.

Fifthly, corporate seeds impose monocultures on farmers. Mixed croppings of cotton with cereals, legumes, oilseeds, vegetables is replaced with a monoculture of Bt-cotton hybrids.

The creation of seed monopolies and with it the creation of unpayable debt to a new species of money lender, the agents of the seed and chemical companies, has led to hundreds of thousands of Indian farmers killing themselves since 1997.

The suicides first started in the district of Warangal in Andhra Pradesh. Peasants in Warangal used to grow millets, pulses, oilseeds. Overnight, Warangal was converted to a cotton growing district based on non-renewable hybrids which need irrigation and are prone to pest attacks. Small peasants without capital were trapped in a vicious cycle of debt. Some ended up committing suicide.

This was the period when Monsanto and its Indian partner Mahyco were also carrying out illegal field experiments with genetically engineered Bt- cotton. All imports and field trials of genetically engineered organisms in India are governed by a law under the Environment Protection Act called the “Rules for the Manufacture Use, Import, Export and Storage” of Hazardous Microorganisms, Genetically Engineered Organisms or Cells 1989.”

We at the Research Foundation for Science, Technology and Ecology used these laws to stop Monsanto’s commercialization of Bt- cotton in 1999, which is why approval was not granted for commercial sales until 2002.

The Government of Andhra Pradesh filed a case in the Monopoly and Restrictive Trade Practices Act (MRTP), India’s Anti Trust Law, arguing that Monsanto’s seed monopolies were the primary cause of farmers’ suicides in Andhra Pradesh. Monsanto was forced to reduce its prices of Bt- cotton seeds.

The high costs of seeds and other inputs were combined with falling prices of cotton due to \$4billion U.S. subsidy and the dumping of this subsidized cotton on India by using the W.T.O. to force India to remove Quantitative Restrictions on agricultural imports. Rising costs of production and falling prices of the product is a recipe for indebtedness, and indebtedness is the main cause of farmers’ suicides. This is why farmers’ suicides are most prevalent in the cotton belt on

which seed industries own claim is rapidly becoming a Bt-cotton belt. Bt-cotton is thus heavily implicated in farmers' suicides.

The International Food Policy Research Institute (IFPRI) has recently released a discussion paper "Bt-cotton and Farmers' Suicides in India: Reviewing the Evidence".

The report is manipulative of the truth about farmers suicides and Bt-cotton at every level.

Firstly, it states that "Farmers suicides is a long-term phenomena", and the "long term" is 1997-2007.

Ten years is not a long term in a 10,000 year old farming tradition. And 1997 is precisely when the suicides take on an epidemic proportion due to seed monopolies, initially through hybrids and from 2002 through Bt. Hybrids.

Secondly, the chronology of Bt-cotton introduction is false. The story begins with Monsanto's illegal Bt trials, not with commercialisation in 2002.

Secondly, the report states that "In specific regions and years, where Bt-cotton may have indirectly contributed to farmer indebtedness (via crop failure) leading to suicides, its failure was mainly the result of the context or environment in which it was introduced or planted; Bt-cotton as a technology is not to blame".

This is an interesting argument. A technology is always developed in the context of local socio-economic and ecological conditions. A technology that is a misfit in a context is a failed technology for that context. You cannot blame the context to save a failed technology.

The technology of engineering Bt-genes into cotton was aimed primarily at controlling pests. However, new pests have emerged in Bt-cotton, leading to higher use of pesticides. In Vidharbha region of Maharashtra, which has the highest suicides, the area under Bt-cotton has increased from 0.200 million ha in 2004 to 2.880 million ha in 2007. Costs of pesticides for farmers has increased from Rs. 921 million to Rs. 13,264 billion in the same period, which is a 13 fold increase. A pest control technology that fails to control pests might be good for seed corporations which are also agrichemical corporations. For farmers it translates into suicide.

The IFPRI study uses industry data to falsely claim reduction of pesticide use in Bt-cotton when the empirical data and ground reality shows pesticide use increase.

There are alternatives to Bt-cotton and toxic pesticides. Through Navdanya we have promoted 'Organic Farming and Seeds of Hope', to help farmers move away from Monsanto's "Seeds of Suicide".

Organic farmers in Vidharbha are earning Rs. 6287 per acre on average, compared to Bt-cotton farmers who are earning Rs. 714 per acre on average. Many Bt-cotton farmers have a negative income, hence the suicides.

The field data of Bt-cotton is also manipulated when cotton yields are shown as low in the pre-Bt-cotton years, it is not mentioned that cotton has traditionally not been grown as a monoculture but as a mixed crop converting biodiversity to monocultures of course leads to increase in "yield" of the monoculture, but this is accompanied by a decline in production at the biodiversity level.

The IFPRI paper has attempted to play with figures, just like the investment bankers and hedge fund managers played with figures and caused the collapse of Wall Street. Manipulation of reality with numbers does not make for truth. In the case of seeds, it is threatening farmers' lives.

Technologies are tools. When the tool fails it needs replacing. Bt-cotton technology has failed to control pests or secure farmers lives and livelihoods. It is time to replace GM technology with ecological farming. It is time to stop farmers' suicides.