

BITTER SEEDS

FAQ

The film is shot in the Vidarbha region of the state of Maharashtra in India, where most farmers are cotton growers. This document refers to the specifics of this region. All the statements in this document are substantiated in our FAQ FOOTNOTES document, which is also available on this DVD and on the film's webpage:

<http://www.bullfrogfilms.com/catalog/bitter.html>

- **What is the role of genetically modified (Bt) seeds in the farmers' suicide crisis?**

The most common reason for farmers' suicide is their hopeless indebtedness. They get trapped in a vicious cycle of debts because their farming costs are higher than what their yield fetches in the market.

Many factors, both domestic and global, contribute to the problem, but the overall main factor is the seeds. It is the only important thing that has changed in recent years.

The genetically modified seeds (known in cotton as Bt) require a large upfront investment. They are 3-4 times more expensive than the hybrid seeds. They need more fertilizer and substantial doses of pesticides. 80% of the farmers can only borrow from private money lenders, who charge exorbitant interest rates, thus increasing the farming costs even higher. To obtain the loans, farmers often have to put up their land as collateral.

The fertilizers present another problem. They must be applied according to a precise timetable in the growing season. Fertilizers require watering (the ground must be moist), but 90% of the farmers don't have irrigation and are rain-dependent. In drought years, farmers risk losing not only their crop and initial investment, but also their land.

All of this would have been manageable if the Bt seeds increased crop yields significantly. However, on the average yields have remained unchanged for most farmers.

- **The film mentions that the wave of farmers' suicides began before genetically modified seeds were introduced. Doesn't that imply that there is no connection between the seeds and the suicides?**

The Bt seeds were introduced in 2002, five years after the suicide wave began. At the time, most farmers were using hybrid seeds, which required increasing amounts of

pesticide as the insects (primarily bollworm, cotton's main pest) were developing resistance to the chemicals. Farmers began accumulating large debts, which started the wave of suicides.

Promoters of Bt seeds promised the farmers prosperity and an end to their economic problems, thanks to increased yields and reduction in pesticide use. But clearly they have failed to deliver – otherwise, the farmers wouldn't still be hopelessly trapped in debts and committing suicide at higher rates (See FOOTNOTES for stats.)

- **What about studies that conclude that there is no connection between the Bt seeds and the farmers' suicides?**

Major corporate industries that produce controversial products (pharmaceuticals, tobacco, cars) ensure that studies promoting the safety and benefits of these products are widely published. Such studies are optimized in search engines and are easy to find on-line.

One well-known study in this vein was conducted by the International Food Research Policy Institute (IFPRI). While its website discloses a clear pro-GMO agenda, it is less transparent on other facts: the organization was founded by the World Bank, which along with the IMF pressured India into allowing private companies to take over its seed market. In addition, IFPRI has representatives of the ag biotech industry on its board of directors. (Letter from expert on this subject available.)

- **What other factors contribute to the farmers' suicide crisis? Does the film over-emphasize the role of the seeds in the crisis?**

The situation is certainly complex. Main additional factors are:

- The government of India stopped public support to farmers (seeds, advice), under pressure from the World Bank and the IMF.
- Farmers are denied bank lending if they are delinquent on previous loans. 80% must borrow from private lenders, who charge exorbitant rates.
- Cotton prices have been kept artificially low because they are linked to the global market. American and European cotton farmers benefit from subsidies and can afford to sell their cotton for less than the cost of production.
- Farmers are poorly educated and often illiterate, which makes it hard for them to understand the requirements of the Bt seeds.
- Local seed salesmen often make false claims about Bt seeds, e.g. that they won't get infested, that they guarantee high yields.
- Social traditions such as the caste dowry requirements add to the farmers' burdens.

These factors are presented in the film's feature version. The film could not find time to mention other local factors, such as the endemic corruption. Still, no viewer will walk away with the impression that the seeds by themselves present the entire problem.

- **Isn't it the role of the Indian government to help its farmers?**

In the past, the government has offered loan relief. But that only enabled farmers to amass new debts. It hasn't tackled the systemic problems. In addition, loan relief applies only to official loans from the banks.

- **Does climate change affect the situation?**

While the Vidarbha region, where the film is shot, has always been semi-arid, recent years have seen a significant increase in the frequency of droughts. Because most farmers are rain-dependent, droughts can bring about the loss of the entire crop.

It's interesting to keep in mind that the harsh conditions had not prevented farmers from supporting their families by growing cotton for millennia. They used their own seed varieties, saved from their plants. They fertilized by using cow dung, without irrigation.

- **Do Bt seeds bring about a reduction in the use of pesticides, as Monsanto claims?**

Bt cotton plants indeed reduce the need for pesticide against bollworms, cotton's main pest. But now secondary pests, like the mealy bug, have become a major problem, and cotton growers must apply substantial pesticides against them. Some local studies (i.e., Vandana Shiva's) show Bt cotton actually requiring more pesticides, while Monsanto claims the opposite. (See FOOTNOTES for details.) These counter-claims cannot be investigated by independent scientists because companies like Monsanto don't allow independent research of their seeds.

In addition, bollworm insects have been developing resistance to the Bt toxin. Monsanto is currently developing a new GM technology to combat this resistance, which is projected to make the seeds more expensive.

Monsanto's history is relevant here. In the past, the company sold other products which were later found to be harmful to both the environment and humans. Agent Orange, PCBs and DDT were all banned.

- **Why don't the farmers use conventional seeds?**

Such seeds are not available locally. The seed shops only sell genetically modified brands. It is in their interest to stock only Bt seeds because they also sell the chemical inputs that Bt seeds require.

- **Why don't the farmers switch to a different crop?**

Some attempts were not successful. Soy beans are also dominated by GM seeds. The private money lenders, on whom 80% of the farmers must depend, will only lend to cotton growers. As Christian Parenti points out in his book, *Tropic of Chaos: Climate Change and the New Geography of Violence*, the money lenders won't lend to farmers who grow food because they are afraid the farmers will eat, or sell the crop, before they pay back their debt.

- **Who benefits from the Bt seeds (besides the industry)?**

The GM seeds can be suitable for large, industrial farming operations. Two basic conditions are required to prosper with GM seeds:

- Access to low-interest loans, for the high upfront expenses.
- Continuous access to water, so that the plants can be fertilized according to the required time table.