

# The Paradox of Indian Agriculture

by Ramtanu Maitra

Daily news reports from India show suicides by farmers in a number of states continue unabated. Over the last five years, if the numbers that appear in Indian newspapers are accurate, at least 100,000 farmers have taken their own lives. The news is surprising for two basic reasons. First, India's economy is showing rapid GDP growth, on a par with some of the fastest-growing economies in the world. Second, one of India's basic strengths, even during the long period of low economic growth, has been its agriculture. India became a food-surplus nation in the 1980s.

Although some Indians, who have benefitted from the "information technology"-led growth in India, do not pay much attention to what is happening in their vast rural hinterland, Prime Minister Manmohan Singh concedes that there is a problem. The Indian English-language news daily, *The Hindu*, reported on Oct 20, 2006 that Singh "acknowledged that Indian agriculture is in deep trouble, there is a huge rural-urban divide and rural farmers are suffering from four deficits: 1) public investment and credit, 2) infrastructure, 3) market economy, 4) knowledge."

## Gross Inaction

Prime Minister Singh was quoted saying: "We cannot deny that there is a crisis in agriculture in many regions of the country. . . . In many parts of the country, agriculture is being carried out in adverse conditions. . . . There are large tracts where farmers seem to be in acute distress. In many other parts, agriculture is seeing a major transformation, and farmers in these parts are reaping the benefits of technology, irrigation, better infrastructure, improved marketing facilities, and advanced risk management strategies. It is this duality that we need to tackle."

Agriculture Minister Sharad Pawar said in a November 2006 interview and press briefing that "the Indian farmer is facing a serious crisis." Pawar, who did not express the view of the Prime Minister that some farmers are in better shape, told the interviewer that the idea that farmers' living standards have gone down is "100% correct." He also said, "The farming community has been ignored in this country, and especially so over the last eight to ten years."

Despite these observations at the highest level of authority, nothing much has been set in motion to improve the desperate situation. Wishful thinking was evident in the June 2005 speech by the deputy chairman of the Planning Commission, Montek Singh Ahluwalia, in Mumbai, when he told the

audience that India would achieve 8% annual GDP growth, if the agriculture sector doubles its growth from 2% to 4%. However, the reality is that during the first four years of the Tenth Five-Year Plan (2002-07), the agriculture sector has grown by a measly 1.5%. It is not clear what gave Ahluwalia the idea that the agriculture sector could achieve a 4% growth at this juncture.

In fact, due to lack of adequate investment in the areas of water management, fertilizers, and electricity in rural areas, Indian agriculture has shown a steady decline over the years. The agriculture sector contributed 32% of GDP until 1995, but it has now gone down to 18% for various reasons, including low prices for agricultural produce.

What is essential is to usher in a second Green Revolution, which would require a huge collaborative effort among the central and state governments, agricultural universities, research stations, input suppliers (particularly the fertilizer industry), and community extension services of the government to pass on to farmers the latest technologies of fertilizer application, use of high-yield varieties of seeds, plant protection, and water management.

The focus that created the first Green Revolution has to be re-lived. In the absence of a real food crisis, a syndrome of underperformance has overtaken administrators and the political leadership.

## Striking Disparities

Prime Minister Singh drew attention, during the 52nd meeting of the National Development Council in December 2006, to the depressing deceleration in growth in the agriculture sector since the mid-1990s. Agriculture had grown at 3.2% between 1980 and 1996. It slowed down to 2.1% during the Ninth Plan (1996-2001). The Prime Minister said that it is not surprising that a perception has developed that the benefits of growth have “bypassed a substantial section of our people.” He is of the view that a deeper problem affects India’s agricultural strategy; that correcting the deeper problem must be accorded highest priority. But at the same time, he neither said what those measures could be, nor did he give any indication that serious efforts are afoot to rejuvenate the Indian agricultural sector and pay attention to the hundreds of millions of people who survive marginally, or take their own lives, in India’s farm sector.

Another indicator that India’s agriculture is in trouble emerges from what the National Sample Survey Organization said in its 2003 report. It found that about 40% of the 51,770 farm households surveyed would quit farming, given a choice. About 27% said they did not like farming because it was not profitable, while 8% felt it was a “risky proposition.”

The survey found that only 19% of the households had availed themselves of services—credit facilities or services related to seeds or fertilizers—from the cooperative sector. The survey said that 57% of the farmers did not know their crops could be insured. Only 4% of the households had ever insured their crops.

## Annual Average Growth Rate, India

(Percent)

Five Year Plan	Overall GDP Growth Rate	Agriculture and Allied Sectors
Seventh Plan (1985-190)	6.0%	3.2%
Annual Plan (1990-92)	3.4	1.3
Eighth Plan (1992-97)	6.7	4.7
Ninth Plan(1997-2002)	5.5	2.1
Tenth Plan (2002-07)		
2002-03	3.8	-6.9
2003-04(P)	8.5	10.0
2004-05(Q)	7.5	0.7
2005-06(A)	8.1	2.3
2006-07(A)	9.2	2.7

P: Provisional

Q: Quick estimates

A: Advance estimates

Note: Growth rates prior to 2001 are based on 1993-94 prices and from 2000-01 onwards are based on a new series at 1999-2000 prices.

Source: Central Statistical Organization.

The survey showed that the gross irrigated area was 42% of cropped area during *kharif* (monsoon season crop) and 56% during *rabi* (Winter crop). Tube wells were the major source of irrigation. About 50% of all irrigated land during *kharif* and 60% during *rabi* was irrigated by tube wells. Wells were used to irrigate 19% of the land during *kharif* and 16% during *rabi*. Canals accounted for irrigation of 18% of the land during *kharif* and 14% during *rabi*.

At the same time, some data on the agriculture sector indicate how important it is to rejuvenate this sector. For instance, one analyst pointed out, the population dependent on the rural economy has gone up from 299 million in 1951 to 709 million in 2001. While gross investment in the economy is about 26%, the government’s investment in agriculture is only 1.3%. Agriculture’s contribution of 24% to GDP demands an investment of at least 6% of GDP, according to Som Pal, the former chairman of the National Commission of Farmers.

There are some other disturbing facts that emerge from this survey:

- Over 60% of the price paid by the consumers goes to the traders, not the farmers;
- Interest on loans is strangely higher for agricultural equipment. One can buy a car on credit from a bank at 7% interest, but for tractors, the interest rate is 12%;
- The National Insurance Scheme covers 41.7 million farmers, but this insurance does not cover the failure of crops of once the crop is sown;
- Investment in irrigation has dropped from 22.6% in the 1950s to 5.6%. Over 400 irrigation projects worth 790 billion rupees, which can irrigate 21 million hectares, remain stalled since 1960;
- India is the second-largest food producer in the world, but has the lowest yield per hectare in all principal crops (2.9



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*Prime Minister Singh concedes that farmers in India are in "acute distress," but nobody is taking action.*

tons per hectare [TPHA] yield in paddy is less than half of average U.S. yield of 6.2 TPHA. In wheat, India's yield of 2.5 TPHA is way below the 3.9 TPHA in China);

- India produces about 146 million tons of fruits and vegetables, but its processing capacity is barely 2-3% of the fruit and vegetable sector.

### **A New Scourge: Globalization**

The additional scourge that has hit farmers is globalization. Singapore Foreign Affairs Minister George Yong-Boon Yeo told business leaders at the Confederation of Indian Industry (CII) Partnership Summit in Bangalore on Jan. 18, that while the Indian cities were booming, the countryside was suffering. Calling this "a global phenomenon," Yong-Boon Yeo said the Indian farmers should not be short-changed. "If we are not concerned with the stresses of globalization, ideological counter-currents will emerge. Globalization is not a bed of roses. There is a need to be watchful, always," he stressed.

What Singapore's Foreign Minister pointed out is reflected in the negative roles of American seed companies in India. These corporations, encouraged by Indian governments, have entered into India's rural areas. A proposed bill in the Indian Parliament goes even further in the service of these multinationals, directing all farmers to get their seeds registered with the authorities, hence making it easier for multinationals to keep track of who is using their seeds. Seed inspectors will have the authority to search farmers' premises to make sure the law is obeyed. "Frustration is building in India with American multinational companies peddling costly, genetically modified seeds," writes Somini Sengupta of the *New York Times*. "They have made deep inroads in

rural India—a vast and alluring market—bringing new opportunities but also new risks as Indian farmers pile up debt."

Although these genetically modified (GM) seeds have been touted as a harbinger of higher productivity and prosperity, many farmers who committed suicide, had found the seeds were highly vulnerable to pests, devastating their fields. And the Indian government knew that all along, some observers claim.

Reports indicate that in spite of all the evidence of its failure, the Indian government has given Monsanto's Bt cotton the nod all around the country. A report from the government's Central Institute for Cotton Research, Nagpur, showed that the government itself had been sitting on a study describing the faulty technology since 2003, while farmers had been going under.

The Bt cotton is genetically engineered to produce the Cry1Ac toxin, which kills the main cotton pests in the United States, the tobacco budworm (*Heliothis virescens*), and the pink bollworm (*Pectinophora gossypiella*), but is not particularly toxic to Indian pests, such as cotton bollworms (*Helicoverpa zea* and *Helicoverpa armigera*).

One report points out that the government scientist and main author of one study, Keshav Kranthi, showed that the toxin is not always strong enough to kill pests, and is extremely variable in its effects across hybrids and between plant parts. Nevertheless, Prime Minister Singh recently stated: "I am very happy to say that U.S. President George Bush and I have decided to launch a second generation of India-U.S. collaboration in agriculture."

Some farmers have taken up the cudgel against the Bt cotton. In Karnataka, following the reports of more than 70 cotton farmers committing suicide within a period of three months, Monsanto's Bangalore office was ransacked. Monsanto says its critics have been misinformed, and its experiments in genetically modified farming have been successful in the United States, China, and other countries.

It is unlikely that one such protest would weaken the determination of either New Delhi, or the foreign seed companies. There are reports that GM produce will soon be entering India's food and feed chain as cottonseed oil and cake. This problem will continue to grow as 14 new GM varieties of India's staple crops have been approved for field trials that began in 2005.

Bt okra from a Mahyco (Monsanto's Indian partner) field trial was harvested in Guntur, Andhra Pradesh, and sold in the local market, instead of being burned as required by law. This only came to light due to monitoring by civil society groups. The farmer involved did not know that the crop was transgenic and his family was eating the vegetable. The plants were seen to be in very poor condition, with many pests; and the person hired by Mahyco to care for and monitor the crop had no agricultural background. He was selling the crop to make extra cash. Mahyco had not informed the state government of the trial, and has since abandoned the standing crop.