

## Performance of Bt Cotton

This is with reference to the article 'Performance of Bt Cotton: Data from First Commercial Crop' by Suman Sahai and Shakeelur Rahman (July 26). It is our view that the data presented by the authors is clearly biased against technology and does not reflect field-level realities. We would also like to point out that a number of statements in the article are untrue.

The report is based on a study of just 100 farming families in two states, Andhra Pradesh and Maharashtra, which evidently is not representative of the Bt cotton farming community at large. This compares weakly with the survey conducted by Mahyco Monsanto Biotech (MMB) where a large sampling of 1,090 farmers was surveyed across 52 districts in the six states – Andhra Pradesh, Maharashtra, Gujarat, Madhya Pradesh, Karnataka and Tamil Nadu – where Bollgard was planted in 2002. The survey results by MMB showed that over 65 per cent of those surveyed expressed satisfaction over the benefits of Bollgard, pesticide use against bollworms dropped by 65-70 per cent, yields increased by 30 per cent and farmers earned an extra income of Rs 4,500 – 5,000 per acre.

As for the comment on Bt cotton being of shorter crop duration, this varies from hybrid to hybrid and is not dependent on Bt technology since Bt cotton has exactly the same physiology as conventional cotton. Regarding the point on staple length, the only difference between Bt and non-Bt cotton is the addition of a single gene which provides resistance to the bollworm. The three approved Bt cotton hybrids include both medium staple and long staple types and the farmer is free to choose the hybrid that suits him.

It is untrue that Bt cotton fails to offer protection against pink bollworm and that Bt resistance would persist and spread in the bollworm population. Bt cotton controls three types of bollworms, i.e., American Bollworm (*Helicoverpa armigera*), Spotted Bollworm (*Earias insulana*) and Pink

Bollworm (*Pectinophora gossypiella*). Till date there has been no evidence of resistance to Bt cotton anywhere in the world. In the US Bt cotton has been planted commercially for six years, in Australia for five years and in China for three years and any evidence of bollworms developing resistance in the field is yet to be seen.

With reference to the comment that "pre-cultivation efforts of the company were directed towards extolling the virtues of Bt cotton rather than providing tips on its cultivation", MMB had conducted a massive education programme for farmers in all the six states where 5,000 farmer meetings were conducted by trained staff in villages. This was supplemented by a wide variety of audio-visual inputs aimed at seamless communication of the technology to farmers.

RANJANA SMETACEK,  
Monsanto India Limited,  
Mumbai

## Mercury Pollution

Propos 'Industrial Pollution: Irresponsible Monitoring' (May 3), mercury pollution in India is alarming. Our environment is being loaded with around 70 tonnes of mercury annually by existing mercury-cell plants over and above a substantial quantity released by products like pesticides, pharmaceutical drugs, agricultural products and mercury-bearing waste materials like clinical thermometers, fluorescent lamps, metal switches, etc. Taking the total amount of mercury released from all these sources into account, we run the risk of at least five Minamata Disasters every year.

Mercury is a powerful pollutant. One gram of it is enough to contaminate a lake with a surface area of about 20 acres to the degree that fish in it would be unsafe to eat. Human foetus is extremely sensitive to mercury.

(Continued on p 3512)

## Subscription

### Inland

	(Rs)			
	Six months	One year	Two years	Three years
Institutions	–	1000	1850	2650
Individuals	400	750	1400	2000

### Concessional Rates

Teachers/Researchers	–	550	–	1450
Students	–	350	–	–

Concessional rates are available only in India. To avail of concessional rates, certificate from relevant institution is essential. Remittance by money order/bank draft preferred. Please add Rs 25 to outstation cheques towards bank collection charges.

### Nepal and Bhutan

Institutions	–	1500	–	4150
Individuals	–	1250	–	3500

### Foreign

	(US \$)					
	Air Mail			Surface Mail		
	Institutions					
	1yr	2yrs	3yrs	1yr	2yrs	3yrs
Sri Lanka, Pakistan and Bangladesh	80	150	200	65	120	175
Other countries	150	275	375	90	170	240
	Individuals					
Sri Lanka, Pakistan and Bangladesh	50	90	125	30	50	75
Other countries	100	175	240	65	120	170

All remittances to:

**Economic and Political Weekly**

### Economic and Political Weekly

Hitkari House, 284 Shahid Bhagatsingh Road,  
Mumbai 400 001

Phones: 2269 6072/73 Fax: (022) 2269 6072  
epw@vsnl.com  
edit@epw.org.in

**Editor** : Krishna Raj

**Associate Editor** : Padma Prakash

**Assistant Editors** :

Anuradha Kumar, Vimala Subramanian  
Angshuman Bhattacharya (EPW On-line)  
Bharati Bhargava (Delhi)

**Editorial Staff** : Prabha Pillai

**Editorial Consultant** : Gautam Navlakha (Delhi)

**Circulation** : Gauraang Pradhan (Manager),  
B S Sharma  
circulation@epw.org.in

**Advertisement Manager** : Kamal G Fanibanda  
advnt@epw.org.in

**General Manager** : K Vijayakumar  
queries@epw.org.in

### EPW Research Foundation

C 212, Akurli Industrial Estate, Kandivali (East)  
Mumbai 400 101, Phones: 2887 3038/3041

Fax: (022) 2887 3038.  
epwrf@vsnl.com  
http://www.epwrf.res.in

**Director** : S L Shetty

*(Continued from p 3434)*

In most developed countries construction of new mercury plants has been banned and existing industries dealing in mercury have also been asked to close down once their economic life ends. In the US the greatest source of mercury emission is thermal power plants. There, in model legislation drafted by the Mercury Policy Project, coal-burning electric utilities would be required to reduce their mercury releases by 95 per cent by 2008.

While in developed countries regulations focus on the total mercury being released from plants along with the concentration, in our country the focus of regulations is on placing checks on mercury concentration from various point sources rather than on putting a check on the total mercury pollution load entering the environment. With our lax regulatory arrangements we are on the brink of mercurial disaster.

Jaydev Jana  
Kolkata