

**Monitoring of the Bt Cotton Fields in Gujarat**  
**Report of**  
**State Agriculture Department**

In response to complaint raised by Mr. Pratapsinh Zhala, President, Agriculture Development Association, Ahmedabad regarding cultivation of F2 (generation) Hybrid. Bt. Cotton by the farmers on a large scale in Gujarat during Kharif 2002. A technical committee was formed under the Chairmanship of Joint Director of Agriculture (Oilseed), by Directorate of Agriculture, Gujarat State, having members from Gujarat Agricultural University (GAU) Gujarat State Seed Corporation, Gandhinagar, GUJCOMASOL, District Agriculture Officers of the concerned district and representative of seed Association. The said committee conducted the survey of Bhavnagar, Amreli, Rajkot, Surendranagar, Bharuch, Baroda, Sabarkantha, Gandhinagar & Mehsana districts.

The said committee interviewed the farmers at random who have undertaken the cultivation & visited some of the fields. Besides this, the Committee prepared questionnaire and had a discussion with the farmers, representatives of Co-Operative Institution & Extension Officers (Agriculture) and recorded the opinion thereof.

Summarizing the whole reports, the following opinion could be established.

1. The farmers who cultivated the Hy. Cotton Bt. Mech - 184 complained for wilt in the cotton crop during Kharif 2002 & farmer suffered at huge economic loss in the state. Committee came to the conclusion that, the Large Scale Demonstration (LSD) were not conducted in the state prior to granting the permission for sale of the Bt. Mech - 184 and that may be the probable reason for the failure of this variety at most of the locations.

To prevent such incidence following steps should be taken.

- (a) The State Government is hereby requested to take up the matter to Government of India to prevent the sales of the variety under question in the state during Kharif 2003.
- (b) Looking to this experience of cultivation of Bt. Cotton, it becomes absolutely necessary for State Government to propose to Central government to give sanction

to only those varieties of transgenic seed whose large scale demonstrations are conducted in the state and whose performance is found to be satisfactory.

2. According to survey Bt. Mech- 162 was also found to be vulnerable to Boll worm menace which indicates that the expression of Bt. gene is insignificant and hence the variety may not be acceptable to farmers.
3. Bt. Mech-12 was found to susceptible to sucking pest and hence the farmers may not prefer this variety.

However, it was observed by the committee that in authorized and so called Bt. Cotton variety Navbharat – 151 became highly popular among the farming community of the state after experiencing much better performance. Whether the said variety contain any Bt. gene or not, the matter comes within the purview of GEAC Government of India.

### **Second Report of Technical Committee conducting survey on various varieties of Hy. Bt. Cotton during Kharif – 2002.**

A Technical Committee was constituted with the following objectives.

- (i) to access the economic loss suffered by the farmers in the cultivation of Bt. Cotton variety of MAHYCO.
- (ii) to conduct study of F2 Bt Cotton in the State.

In response to the direction given by the State Government, this Committee has conducted a study, collected the information on the production & recorded the experiences of the farmers who cultivated Bt. Cotton and submitted the report as under:-

Information on the production of Bt. Cotton variety in the different district of state is submitted in Annexure A.

According to study and grievances received from the farmers as well as press reports appeared in the News Paper the committee is submitting the report as under:

- (i) On a large scale, Bt. Mech-184 gets dried at ball formation stage due to susceptibility of this variety towards wilt. The wilt had not been reported in other non Bt. Cotton variety. The production of said variety was ranging from 183

kg/ha (Minimum) to 2000 kg/ha (Maximum). So farmers suffered a huge economic loss in the cultivation of Bt. Cotton. This is mainly due to under taking direct commercial cultivation without conducting Large Scale Demonstration as a pilot project.

- (ii) Cotton Variety, Bt. Mech- 162 is reported to be less susceptible to wilt to some extent and also to the pod borer complex. The production of the said variety is recorded 1200 kg/ha (Minimum) and 2966 kg/ha (Maximum). This variety also showed some susceptibility toward sucking pest and as such this variety may not be acceptable to farmers.
- (iii) Cotton variety Bt. Mech 12 also showed susceptibility toward sucking pest and to some extent towards Heliothis larval. Cultivation of the said variety was done on small scale in the state.

During the survey, cultivation of this variety was reported in two districts & the production recorded was 1700 kg/ha (minimum) to 2250 kg/ha (maximum). Susceptibility of this variety toward sucking pest may lead to non-preference by the farmers.

During the study, it was observed that the so called Bt. variety Navbharat 151 received wide popularity among farming community. Majority of farmers cultivated this variety registered and recorded the production ranging from 1300 kg/ha 4600 kg/ha without undertaking any plant protection measures especially for heliothis.

#### Annexure A

Technical committee conducted study in different district by the way of random survey of the fields, collected the opinion of farmers & information on production given is as under:-

S.No.	District	Average Production of Bt. Cotton kg/ha				Opinion of farmers
		Mech 162	Mech 184	Mech 12	Navbharat F.1, F. 2	
1.	Gandhinagar	1200	1360	-	2200	Nav Bharat – 151, F.1

2.	Surendranagar	-	1100	-	2000	& F.2 registered a high production & this variety is beneficial for farmers. Farmers are having a good opinion for the same. While Bt. Cotton variety developed by Maharashtra Hybrid seed co. Ltd., is susceptible to wilt & hence may not be fit for cultivation, according to opinion of farmers.
3.	Vadodara	1827	1700	1700	4600	
4.	Rajkot	1227	183	-	1227	
5.	Bhavnagar	2966	833	-	3500	
6.	Bharuch	1925	1875	2250	2000	
7.	Sabarkantha	-	2000	-	-	
8.	Amreli	-	1200	-	1300	

For under Secretary to the Govt. of Gujarat  
Agriculture and Co-Operation Department.