

To  
Assistant Director (Seed),  
Ministry of Agriculture,  
Government of India,  
Shastri Bhavan,  
New Delhi.


Sub: Monitoring Committee Report  
about performance to Bt. Cotton.

Please find enclosed herewith the performance  
report of Bt. Cotton crop in Gujarat State during  
Kharif 2004. The report is prepared on the basis of  
monitoring committee report received from various  
districts of the state.

Thanking you,

Yours faithfully,

Encl: As above.

  
for Director of Agriculture,  
G.S. Gandhinagar.

Copy submitted to the Under Secretary, Government of  
Gujarat, Agriculture and Co-operation Department,  
Sachivalaya, Gandhinagar for information.

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## BT. COTTON PERFORMANCE IN GUJARAT: 2004-05

Area covered under cotton crop during Kharif-2004 was 17lac hector. Out of this an area of 208502 hector has been covered under four varieties of Bt. Cotton viz., Mech-12, Mech-184, and Mech-162. The variety wise break up and area sown is as under:

No.	Variety	Area Sown (in ha.)
1	Bt.Mech-12	136000
2	Bt.Mech-184	8000
3	Bt.Mech-162	16000
4	RCH-2	48502
	<b>Total</b>	<b>208502</b>

District level committees have been constituted to monitor the performance of these Bt. Cotton varieties in the entire district where it is under cultivation. Report is prepared in the prescribed format given by Ministry of Agriculture, Department of Agriculture & Cooperation, Government of India, New Delhi which is enclosed herewith.

The most common findings regarding all these <sup>four</sup> varieties are as under.

~~It cotton has been growing in Gujarat since last three years.~~ In which MECH-12 variety is early type and less incidence of heliothis as well as sucking pest menace is greater than medium level. MECH-162 variety is late type and more incidence of sucking pest than medium level. While in MECH-184 variety sucking pest menace is higher than medium level and at later stage wilt is also seen. Thus, this year cultivation area of both these varieties viz., MECH-162 and MECH-184 is reduced due to menace of sucking pest and wilt. Sowing area of MECH-184 is not significant at all. Bt.MECH-184 variety plants become dry at boll stage. In current season not any cotton hybrid variety shows wilt in the state. Farmers suffer a lot due to wilt, large scale trials should be taken which is not yet happen. RCH-2 variety production is higher than MECH variety and sowing area about 50,000 hector even though its first year of cultivation. This shows that RCH-2 variety is superior as compared to MECH varieties in respect of yield.

PROFORMA FOR FIELD OBSERVATION ON BT COTTON

For use of State Agriculture Department

Central Institute for Cotton Research

PB. No.2, Shankarnagar PO, Nagpur 440010. PH.:07103-75549, Fax:07103-75529

**MONTHLY OBSERVATION : 10 PLANTS /ACRE : BT Cotton Plot**

Sr. No.	District	Average of ten plant		Name of hybrid MECH-12		Date of sowing 5-6-04		Date of Observation		28-10-2004			
		Farmer No.	Height	Squares	Flowers	Green Bolls	Jassid damage	Aphid damage	Whitefly damage	Spodop	Helicoverpa	Pink	Spotted
				Total	Damage	Total	Damage	Grade	Grade	larvae	eggs	larvae	larvae
1	Ahmedabad	1	148	12	3	23	4	3+	+	-	-	-	-
		2	142	11	1	11	2	5+	-	-	-	-	-
		3	142	11	4	11	4	5+	-	-	-	-	-
2	Bhavanagar	1	150	30	-	7	-	+++	+	-	14	2	-
		2	150	32	-	6	-	+++	++	-	8	4	-
		3	150	30	-	6	-	+++	+	-	4	1	-
		4	150	29	-	16	-	+++	++	-	3	-	-
3	Porabandar	1	179	6	2	34	2	6++	++	1	2	1	-
		2	154	54	2	38	3	71	4+	+	1	1	1
		3	174	55	2	33	2	69	4++	++	1	1	1
4	Himatnagar	1	152	-	-	-	-	-	+	-	-	-	-
		2	150	47	1	7	1	64	1+	+	-	-	-
5	Junagadha	1	150	146	40	11	2	61	6+	+	1	2	1
		2	151	147	45	10	2	71	6+	+	1	1	1
		3	157	144	4	10	3	70	6+	+	1	1	1
		4	152	144	47	11	2	71	6+	+	1	1	1



**MONTHLY OBSERVATION : 10 PLANTS /ACRE : BT Cotton Plot**

Average of ten plant		Name of hybrid MECH-162		Date of sowing 14-6-04		Date of Observation		28-10-2004												
Sr. No.	District	Farmer No.	Height	Flowers		Green Bolls		Jassid damage		Whitefly damage		Spodop		Helicoverpa		Pink		Spotted		
				Total	Damage	Total	Damage	Grade	Grade	Grade	Grade	larvae	eggs	larvae	larvae	larvae	larvae	larvae	larvae	larvae
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
1	Bhavenagar	1	155	50	16	19					+			5	2					
2	Himatnagar	1	142						55			+								
2	Himatnagar	2	150	76	13	74	13	122	19		+	++	+++	3	2	2	4	4		
3	Porabandsr	1	169	54	2	34	2	69	4		++		++	1		1				

**MONTHLY OBSERVATION : 10 PLANTS /ACRE : BT Cotton Plot**

Average of ten plant		Name of hybrid MECH-184		Date of sowing 14-6-04		Date of Observation		28-10-2004												
Sr. No.	District	Farmer No.	Height	Flowers		Green Bolls		Jassid damage		Whitefly damage		Spodop		Helicoverpa		Pink		Spotted		
				Total	Damage	Total	Damage	Grade	Grade	Grade	Grade	larvae	eggs	larvae	larvae	larvae	larvae	larvae	larvae	larvae
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
1	Bhavenagar	1																		
2	Himatnagar	1	100	37	1	4	1	19												
2	Himatnagar	2	145	130	9	16	2	93	2		++	++	++	1	2	2	1	1		



5

**MONTHLY OBSERVATION : 10 PLANTS /ACRE : BT Cotton Plot**

Sr. No.	District	Average of ten plant		Name of hybrid		Date of sowing		Date of Observation		23-To		28-10-2004				
		Farmer No.	Height	Flowers	Green Bolls	14-6-04	23-10-2004	Spodop	Helicoverpa	Pink	Spotted					
		Squares	Total	Damage	Total	Damage	Total	Jassid damage Grade	Aphid damage Grade	Whitertly damage Grade	larvae	eggs	larvae			
1		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Ahmedabad	1	154	21	4	26	3	143	2	+	+	-	-	-	-	-
		2	154	19	3	28	4	144	3	+	+	-	-	-	-	-
		3	154	21	5	26	5	143	6	+	+	-	-	-	-	-
		4	154	19	5	28	4	144	5	+	+	-	-	-	-	-
2	Bhavanagar	1	163	24	-	15	-	17	-	+	-	7	8	-	-	-
		2	165	60	-	15	-	39	++	+	-	2	-	-	-	-
		3	165	24	-	14	-	18	+	+	-	4	5	-	-	-
		4	170	40	3	22	-	51	++	+	-	2	3	-	-	-
3	Himatnagar	1	150	131	6	17	-	97	++	++	+++	1	2	2	-	1
		2	159	-	-	-	-	88	-	-	+	-	-	-	-	-
4	Junagadh	1	153	145	48	11	2	71	+	+	++	1	-	1	-	1



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9 MAY 2005

Dr. KIRIT N. SHELAT

I.A.S.

SECRETARY

GOVERNMENT OF GUJARAT  
AGRICULTURE & CO-OP. DEPARTMENT

**Sub :** Renewal of Mahyco-Bt. hybrids regarding  
**Ref :** D.O. letter No. 10/4/2005-CS/GEAC dated 20/4/2005

**Dear Shri Chandra,**

I am in receipt of your above letter regarding performance report Bt. Cotton hybrids of Mahyco and their renewal beyond March, 2005. Specific views sought on the points in your letter are as follows :-

- a) Whether the Bt. technology introduced in cotton crop has been beneficial to the farmers in your state.

Yes, indeed the technology is worth adopting as evident from the area of Bt.cotton area which has grown from 9000 ha in 2002-03 to 132000 in 2004-05. It is so because the farmers have recorded higher production and at the same time substantially lower expenses on crop protection thereby hither returns.

- b) Whether the overall productivity of cotton crops in general has increased over the period of 2002 to 2005 in your state.

Yes the productivity which was 175 kg./ha. in 2002-03 is touching 460 kg/ha. in 2004-05. But this is not solely due to Bt-cotton hybrids, as Gujarat recorded 450 in 1998-99 when there were no Bt-cotton. In our opinion, all these years were good years with low to medium bollworm activity, hence this increase.

- c) Any other finding specific to an area.

Out of the three Bt. hybrids of mahyco being grown in Gujarat, MECH-184 Bt has been found to very prone to water stress. If the reports flowing from North Gujarat where the soils are sandy to sandy loam are any indicator, this hybrid showed wide spread wilting/drying. Similar report have been received from other parts of the state also. Further all the three hybrids MECH-184, MECH-12, and MECH-162 are highly susceptible to sucking pests and not very potential for yield.



A part from this, I have some other issues which need to be considered on priority basis in the best interest of farmers.

- i) The said Cry I.A(c) gene has already completed 15 years, therefore should be deregulated so that Bt-cotton seed could be made available at reasonable price.
- ii) There are better Bt-hybrids available in pipe line, hence the efforts should be to promote latest and outstanding hybrids.
- iii) It is high time that the route and rules prescribed for conventional cotton hybrids must be adhered to for Bt. hybrids as well.

With regards.

Yours sincerely,

  
(K.N. SHELAT)

To  
Shri Suresh Chandra,  
Special Secretary,  
Ministry of Environmental Forest,  
Paryavaran Bhawan, CGO Complex,  
Lodi Road, New Delhi-110 003