

# Evaluation of Bt Cotton Hybrids

## Central Zone - 2008-09

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## EVALUATION OF BT COTTON HYBRIDS

The All India Coordinated Cotton Improvement Project (AICCIP) of the Indian Council of Agricultural Research was assigned the task of evaluating sponsoring R&D firms' Bt Cotton hybrids comprising four events which have been approved for commercial cultivation by GEAC (Ministry of Environment and Forests, Govt. of India) in the Central Zone during the crop season of 2008-09. The technical programme for the conduct of ICAR trials was formulated during All India Coordinated Cotton Improvement Project (AICCIP) Group Meeting held at Punjab Agricultural University, Ludhiana on 10<sup>th</sup> April, 2008. As the number of entries was large from the sponsoring private R&D firms, it was decided to have two sets of first year Intra *Hirsutum* Hybrid Evaluation trials viz., Trial "Set A" and Trial "Set B" for both irrigated as well as rainfed conditions separately and an inter-specific ( *G.hirsutum* x *G.barbadense* ) hybrid trial under irrigated conditions. The same Bt, non-Bt and local check hybrids were maintained in both the sets of trials to maintain parity in evaluation.

The following sponsored Bt cotton hybrids were evaluated during 2008-09.

IRRIGATED IHH TRIAL – SET 'A'			IRRIGATED IHH TRIAL – SET 'B'		
S. No	Name of Entry	Sponsoring R&D firm	S. No	Name of Entry	Sponsoring R&D firm
1.	ACH 51-2 BG II	Ajeet Seeds	1.	ACH 52-2 BG II	Ajeet Seeds
2.	ABCH 143 BG II	Amar Bio	2.	ABCH 148 BG II	Amar Bio
3.	Jai BG II	Ankur Seeds	3.	Ankur 3028 BG II	Ankur Seeds
4.	SP 700 B2	Bayer	4.	SP 1016 B2	Bayer
5.	JKCH 1305 (Event 1)	JK Seeds	5.	557-2	Bioseeds
6.	KDCHH 507 Bt	Krishidhan	6.	JKCH 2245 (Event 1)	JK Seeds
7.	MRC 7373 BG II	Mahyco	7.	MRC 7383 BG II	Mahyco
8.	MLCH 317 BG II	Monsanto	8.	NSPL 666 BG II	Nandi
9.	Brahma BG II	Monsanto	9.	NCS 860 Bt 2	Nuziveedu
10.	NSPL 333 BG II	Nandi	10.	PCH 882 Bt 2	Prabhat Agri
11.	NCS 859 Bt 2	Nuziveedu	11.	PRCH 333 BG II	Pravardhan
12.	PCH 881 Bt 2	Prabhat Agri	12.	RCH 377 BG II	Rasi Seeds
13.	PRCH 305 BG II	Pravardhan	13.	SWCH 4708 BGII	Seedworks
14.	RCH 530 BG II	Rasi Seeds	14.	Solar 60 BG II	Solar Agro
15.	SBCH 311 (Fusion)	Safal Seeds	15.	Tulasi 144 BG II	Tulasi
16.	SWCH 2 BG II	Seedworks	16.	UPLHH 10 (Fusion)	UEL
17.	Sarju BG II	Solar Agro	17.	VBCH 1520 BG II	Vibha
18.	Tulasi 135 BG II	Tulasi	18.	VICH 303 BG II	Vikram
19.	UPLHH 1 (Fusion)	UEL	19.	ZCH 50106 Bt (Fusion)	Zuari
20.	VBCH 1519 BG II	Vibha	20.	RCH 2 Bt (C)	Bt Check
21.	VICH 301 BG II	Vikram	21.	Ankur 651 (C)	Non Bt CH
22.	RCH 2 Bt (C)	Bt Check	22.	Local Check Hybrid	Non Bt CH
23.	Ankur 651 (C)	Non Bt CH			
24.	Local Check Hybrid	Non Bt CH			

RAINFED IHH TRIAL – SET ‘A’			RAINFED IHH TRIAL – SET ‘B’		
S. No	Name of Entry	Sponsoring R&D firm	S. No	Name of Entry	Sponsoring R&D firm
1.	ABCH 146 BG II	Amar Biotech	1.	ACH 232-1 BG II	Ajeet Seeds
2.	Ankur 3034 BG II	Ankur Seeds	2.	ABCH 147 BG II	Amar Biotech
3.	SP 503 B2	Bayer	3.	Ankur 3028 BG II	Ankur Seeds
4.	JKCH 2255 (Event 1)	JK Seeds	4.	SP 1170 B2	Bayer
5.	MRC 7375 BG II	Mahyco	5.	557-2	Bioseeds
6.	Krishna BG II	Monsanto	6.	KDCHH 9821 BG II	Krishidhan
7.	MLCH 317 BG II	Monsanto	7.	MRC 7377 BG II	Mahyco
8.	NCS 859 Bt 2	Nuziveedu	8.	NSPL 432 BG II	Nandi
9.	PCH 881 Bt 2	Prabhat Agri	9.	NCEH 24 (Fusion)	Nath Seeds
10.	PRCH 305 BG II	Pravardhan	10.	NCS 860 Bt 2	Nuziveedu
11.	RCH 530 BG II	Rasi Seeds	11.	PCH 882 Bt 2	Prabhat Agri
12.	SBCH 310 (Fusion)	Safal Seeds	12.	PRCH 333 BG II	Pravardhan
13.	SWCH 1 BG II	Seedworks	13.	RCH 377 BG II	Rasi Seeds
14.	Sarju BG II	Solar Agro	14.	SWCH 4715 BG II	Seedworks
15.	Tulasi 153 BG II	Tulasi	15.	Tulasi 162 BG II	Tulasi
16.	UPLHH 1 (Fusion)	UEL	16.	UPLHH 10 (Fusion)	UEL
17.	VBCH 1516 BG II	Vibha	17.	VBCH 1521 BG II	Vibha
18.	VICH 304 BG II	Vikram	18.	Bunny Bt (C)	Bt Check
19.	Bunny Bt (C)	Bt Check	19.	Ankur 651 (C)	Non Bt CH
20.	Ankur 651 (C)	Non Bt CH	20.	Local Check Hybrid	Non Bt CH
21.	Local Check Hybrid	Non Bt CH			

IRRIGATED INTERSPECIFIC HYBRID TRIAL					
S. No	Name of Entry	Sponsoring R&D firm	S. No	Name of Entry	Sponsoring R&D firm
1	Tulasi 888 BG II	Tulasi	14	ACHB 907-1 BG I	Ajeet Seeds
2	MCHB 7941 BG II	Mahyco	15	ABCH 137 BG I	Amar
3	NCHB 990 Bt 2	Nuziveedu	16	MCHB 7945 BG II	Mahyco
4	SP 911 B2	Bayer	17	Ankur HB 2110 BG II	Ankur
5	NSPL 63 BG II	Nandi Seeds	18	ABCH 140 BG I	Amar
6	Ankur HB 2104 BG II	Ankur	19	PRCHB 405 BG I	Pravardhan
7	SWCH 5017 BG II	Seed Works	20	NCHB 991 Bt 2	Nuziveedu
8	JKCHB 212 (Event 1)	JK Seeds	21	MLBCH 6 BG II	Monsanto
9	VBCHB 1526 BG II	Vibha	22	JK Chamundi	JK Seeds
10	JKCHB 2250 (Event 1)	JK Seeds	23	JKCHB 229	JK Seeds
11	VICHB 502 BG II	Vikram	24	MRC 6918 (Bt-CC)	Bt Check
12	VBCHB 1525 BG II	Vibha	25	DCH 32 (Non Bt –C)	Non Bt CH
13	PRCHB 402 BG I	Pravardhan	26	Local Check Hybrid	Non Bt CH

## Trial locations

The following were the trial locations:

### Irrigated

1. Cotton Research Station, **Khandwa** under Jawaharlal Nehru Krishi Vishwa Vidhyalaya, Madhya Pradesh
2. Main Cotton Research Station, **Surat** under Navsari Agricultural University, Gujarat.
3. Cotton Research Station, **Junagadh** under Junagadh Agricultural University, Gujarat
4. Cotton Research Station, **Talod** under Sardar Krishinagar Dhantiwada Agricultural University, Gujarat
5. Agricultural Research Station, Borwat Farm, **Banswara** under Maharana Pratap University of Agriculture & Technology, Rajasthan.

### Rainfed

1. Dr.Panjabrao Deshmukh Krishi Vidyapeeth, **Akola**, Maharashtra
2. Agricultural Research Station, **Yavatmal** under Dr.PDKV, Maharashtra
3. Cotton Research Station, **Nanded** under Marathwada Agricultural University, Maharashtra
4. Central Institute for Cotton Research, **Nagpur**, Maharashtra
5. Cotton Research Station, Makrampur, **Bharuch** under Navsari Agricultural University, Gujarat.
6. College of Agriculture, **Indore** under JNKVV, Madhya Pradesh

## Trial Details

No. of Entries	: 21 + 3 checks (Set A Irrigated ) & 19 + 3 checks ( Set B-Irrigated)
	: 18+3 check (Set A Rainfed) & 17 + 3 checks (Set B-Rainfed)
No. of Rows	: 6 Rows
Row Length	: 6m
Spacing	
Irrigated:	
Gujarat	: 120 x 45 cm
Madhya Pradesh	: 90 x 60 cm
Rajasthan	: 90 x 45 cm
Rainfed:	
Madhya Pradesh	: 90 x 60 cm
Maharashtra	: 90 x 60 cm
Gujarat	: 120 x 45 cm
No. of Replications	: Three
Design	: Randomized Block Design
Fertilizers	: As per recommendations

## Observations Recorded

**Entomological Evaluation:** ETL Based Entomological evaluations were carried out and weekly observations were recorded from 45 DAS against major sucking pests and boll worms. The insecticide sprayings were based on the economic threshold levels (ETL) for sap sucking pests and boll worms. The insecticide sprayings were undertaken in all the replications of the entries even if in one of the replications exceeds the threshold level of infestation.

**Biometrical Evaluation:** All the biometrical observations were recorded under ETL based plant protection trials. The biometrical observations recorded were Germination Percentage, Final Plant Stand, Ginning Percentage, Lint Index, Seed Index, Seed Cotton Yield and Lint Yield. The entomological observations on sap sucking pests, boll worm damages and natural enemies were recorded under ETL based plant protection trial. The pathological observations on incidence of major diseases like Alternaria leaf spot, bacterial blight and grey mildew were also recorded under the field conditions.

### INTRA HIRSUTUM HYBRID (IHH) TRIAL SET A (IRRIGATED)

#### BIOMETRICAL EVALUATION

**Germination and Final Plant Stand:** The germination was in general good in all the entries, except that of NCS 859 Bt 2 and PCH 881 Bt2 ( 73% and 71%) at Khandwa (Table 1) and SBCH 311(fusion) recorded highest mean germination percent against other entries. The stand at harvest was adequate at all the locations in all the entries.

**Boll Weight:** The overall Mean Boll weight of the Bt hybrids varied from 4.0 to 5.0 g. The non Bt check hybrids recorded a mean boll weight of 4.3 g. RCH 530 BG II, VBCH 1519 BG II and Brahma BG II recorded the highest boll weight of 5.0 g (Table 2).

**Ginning Outturn:** The mean ginning outturn of the Bt cotton hybrids varied from 31.7 to 38.8 %. Hybrid MLCH 317 BG II recorded the highest ginning outturn of 38.8 percent. The Bt check hybrid RCH 2 Bt and local check hybrid recorded a mean ginning out turn of 32.9 and 33.7 percent, respectively (Table 3).

**Lint Index and Seed Index :** In general, most of the Bt hybrids had lint index in the range of 4.7 to 6.1 with local hybrid check and non-Bt check hybrid recording 5.1 and 5.7 respectively. (Table 4). The seed index ranged from 9.0 to 12.1 with Jai BG II having higher index of 12.1 (Table 5)

**Mean Seed Cotton Yield under ETL based Plant Protection:** The mean seed cotton yield recorded by the Bt cotton hybrids under irrigated conditions are presented in Table 6. Nineteen test Bt cotton hybrids recorded higher seed cotton yield than Bt check hybrid RCH 2 Bt, while thirteen test hybrids recorded higher seed cotton yield over non-Bt check hybrid and seventeen test hybrids recorded higher seed cotton yield than local check hybrid. JKCH 1305 (Event 1) recorded higher seed cotton yield over 22q/ha. Around 20 hybrids showed better lint yield as compared to Bt check hybrid. (Table 7)

**Fibre Quality Evaluation:** Fibre quality evaluation of the lint samples of all test entries from many centres were carried out and the details like fibre length, strength, micronaire, uniformity ratio are presented in Table 8, 9, 10 and 11. Most of the test hybrids had equal or better fibre length than that of Bt check hybrid (28.3 mm). Entry UPLHH 1 ( Fusion) had lesser mean fibre length of 26.2 mm compared to Bt check hybrid. The hybrid entries had around 3.4 – 4.5 as regards micronaire is concerned ; however, NSPL 333 BG II and RCH 530 BG II had low micronaire of 3.4. Similarly, fibre strength did not exhibit much variation. Most of the hybrids had fibre strength in the range of 20 – 23 g/tex. However, RCH 530 BG II exhibited high fiber strength of 25.5 g/tex. Characteristic variation could not be noticed regarding uniformity ratio with most of the hybrids showing around 47 - 50%.

### **ETL BASED ENTOMOLOGICAL EVALUATION**

**Sucking pests and bollworms:** The data on incidences of sap sucking pests and bollworms were recorded and the details are given in Tables 12 – 18. Jassids, whitefly, thrips and mealy bugs were observed in all test Bt hybrids at different centres under irrigated conditions. However, there was no difference in the population recorded in Bt test hybrids and the non-Bt check hybrids. The population of thrips in Surat was high compared to other centres. Notable reduction in sucking pest and bollworm infestation were observed at Talod may be due to good count of predators that were observed at that center.

Larval populations of *Earias sp.*, and *Pectinophora gossypiella* were, in general, rather low, while the incidence of pink bollworm was rather notable in Khandwa ( Table 17). The test Bt cotton hybrids recorded minimum damage compared to check hybrids with respect to square damage ( 1.6 – 3.7 % compared to 7.5 – 8.9 % in Check hybrids), open boll and locule damage by bollworms (Table 18).

Summary Table: SET – A Irrigated Trials

Entry	Germination (%)	Boll weight (g)	Ginning Out Turn (%)	Lint index (g)	Seed index (g)	Lint yield (kg/ha)	Seed cotton yield (kg/ha)
JKCH 1305 (Event 1)	94.3	4.5	33.1	5.0	10.2	754	2283
MRC 7373 BG II	94.8	4.8	32.7	4.8	9.9	668	2040
SBCH 311 (Fusion)	97.7	4.6	33.2	4.7	9.4	643	1947
KDCHH 507 Bt	95.6	4.2	34.7	5.1	9.6	671	1927
ACH 51-2 BG II	93.7	4.5	31.7	5.4	11.5	603	1905
UPLHH 1 (Fusion)	94.1	4.0	35.0	4.9	9.1	655	1873
Jai BG II	94.4	4.7	33.9	6.1	12.1	615	1826
Brahma BG II	95.4	5.0	33.8	4.7	9.2	598	1774
Sarju BG II	90.8	4.7	36.5	6.1	10.7	617	1699
VBCH 1519 BG II	91.0	5.0	32.8	5.2	10.7	541	1663
NCS 859 Bt 2	89.5	4.8	34.9	5.1	9.8	572	1657
VICH 301 BG II	96.7	4.7	32.0	5.2	11.2	517	1620
MLCH 317 BG II	93.7	4.5	38.8	5.7	9.2	608	1587
Ankur 651 (C)	96.5	4.2	34.6	5.7	10.9	550	1576
SP 700 B2	94.9	4.0	32.4	5.0	10.2	498	1524
PCH 881 Bt 2	89.4	4.5	35.5	5.2	9.5	522	1502
RCH 530 BG II	93.2	5.0	33.1	5.7	11.6	481	1455
LC (H)	87.7	4.3	33.7	5.1	10.1	480	1408
ABCH 143 BG II	92.4	4.3	32.6	4.8	9.9	451	1371
RCH 2 Bt (C)	93.2	4.2	32.9	5.3	10.8	383	1170
SWCH 2 BG II	94.8	4.4	33.8	5.2	10.1	390	1156
PRCH 305 BG II	91.4	4.7	34.9	5.0	9.0	371	1072
NSPL 333 BG II	87.5	4.5	33.8	4.9	9.9	331	1002
Tulasi 135 BG II	91.4	4.5	33.1	5.1	10.4	273	827

Note : Hybrids are arranged according to descending order of Seed Cotton Yield



Entry	2.5% span length (mm)	Micronaire value	Uniformity ratio	Strength (g/tex)	Jassid / plant	Whitefly / plant	Thrips/ plant	Mealy bug/10cm terminal	Predators	% square damage by Bollworms	Spotted bollworm, Earias spp. (No. of Lar / 5 pts)	Number of Pink Boll worm larvae / 20 GB	Open boll damage (%)	Locule damage (%)
<b>JKCH 1305 (Event 1)</b>	29.7	4.0	50.0	23.4	3.7	2.0	3.9	0.4	2.2	1.6	1.1	1.5	4.7	4.6
<b>MRC 7373 BG II</b>	29.5	4.1	49.0	23.0	3.6	2.1	4.1	0.9	1.7	1.6	1.2	1.2	4.2	3.8
<b>SBCH 311 (Fusion)</b>	27.1	4.3	51.3	22.9	3.3	2.4	3.1	1.4	1.2	1.4	1.5	1.4	5.0	3.9
<b>KDCHH 507 Bt</b>	29.0	4.1	49.0	23.1	4.0	1.4	3.1	1.4	2.2	2.0	1.0	1.4	3.9	3.9
<b>ACH 51-2 BG II</b>	31.5	3.5	47.5	24.7	3.7	2.0	4.6	0.6	2.1	2.5	1.0	1.6	4.2	3.7
<b>UPLHH 1 (Fusion)</b>	26.2	3.5	49.0	20.8	4.0	2.4	4.2	1.7	1.4	3.7	0.9	1.0	4.0	3.1
<b>Jai BG II</b>	31.4	4.0	47.3	24.2	4.1	1.8	4.3	1.1	1.7	1.5	1.0	1.5	4.5	4.2
<b>Brahma BG II</b>	29.4	4.1	48.0	22.5	3.8	1.3	3.8	0.7	2.0	1.6	1.3	1.5	4.2	3.9
<b>Sarju BG II</b>	27.8	4.1	50.0	22.5	4.8	2.2	3.9	1.4	2.4	1.8	1.0	1.7	4.2	3.4
<b>VBCH 1519 BG II</b>	30.8	3.7	45.5	22.9	5.2	2.2	3.9	1.1	1.9	1.9	1.4	1.4	4.2	4.0
<b>NCS 859 Bt 2</b>	30.4	3.8	49.0	23.7	4.1	2.4	4.6	1.3	2.2	1.9	1.4	1.6	5.1	4.5
<b>VICH 301 BG II</b>	29.4	4.5	48.8	22.1	5.2	1.8	4.8	1.3	2.0	1.6	1.3	1.3	4.1	3.7
<b>MLCH 317 BG II</b>	27.2	4.1	46.0	18.6	4.9	2.1	4.5	1.6	1.5	1.8	0.9	1.5	4.3	3.5
<b>Ankur 651 (C)</b>	29.8	4.0	48.5	22.5	4.3	2.0	3.8	0.8	1.1	7.5	1.9	1.5	16.4	13.0
<b>SP 700 B2</b>	29.1	4.0	49.3	23.3	5.7	2.2	2.5	1.3	2.7	1.6	1.1	1.6	4.0	4.2
<b>PCH 881 Bt 2</b>	30.2	4.0	48.5	22.4	5.1	2.1	3.9	1.2	2.1	2.2	1.4	1.4	4.6	3.6
<b>RCH 530 BG II</b>	31.4	3.4	47.3	25.5	5.1	1.4	3.4	0.7	2.0	1.5	1.5	1.9	5.3	4.4
<b>LC (H)</b>	27.1	4.6	50.7	21.9	6.4	2.0	3.7	1.1	1.8	8.9	3.1	3.5	16.2	13.2
<b>ABCH 143 BG II</b>	30.0	3.5	46.3	23.2	5.6	1.5	3.7	1.3	2.8	1.6	1.2	1.8	4.2	3.7
<b>SWCH 2 BG II</b>	28.0	3.6	45.3	20.8	6.7	2.2	5.3	1.1	1.8	1.9	1.0	1.3	4.1	3.3
<b>RCH 2 Bt (C)</b>	28.3	4.0	47.0	21.0	7.0	2.1	3.7	1.2	2.7	2.5	1.4	1.7	5.3	4.0
<b>PRCH 305 BG II</b>	28.9	4.2	49.0	22.5	6.0	2.5	4.7	1.6	2.9	2.0	1.4	1.4	5.6	4.3
<b>NSPL 333 BG II</b>	29.9	3.4	46.0	21.8	6.9	2.5	4.8	1.2	2.9	1.9	1.3	1.3	5.3	4.7
<b>Tulasi 135 BG II</b>	28.7	3.5	46.8	22.4	5.7	2.6	4.0	1.6	2.5	1.8	1.2	2.0	3.6	2.9

Note : Hybrids are arranged according to descending order of Seed Cotton Yield

Table 1. Germination (%) and Plant Stand at harvest

Entry	Germination %				Stand at harvest (number of plants)	
	Khandwa	Surat	Banswara	Mean	Khandwa	Surat
SP 700 B2	90.0	95.0	99.7	<b>94.9</b>	54.0	44.0
ACH 51-2 BG II	88.9	93.0	99.3	<b>93.7</b>	53.3	44.0
Tulasi 135 BG II	86.1	92.0	96.0	<b>91.4</b>	51.7	44.0
Ankur 651 (C)	95.6	97.0	97.0	<b>96.5</b>	57.3	44.0
Sarju BG II	78.3	96.0	98.0	<b>90.8</b>	47.0	43.0
PRCH 305 BG II	85.6	91.0	97.7	<b>91.4</b>	51.3	43.0
SBCH 311 (Fusion)	97.8	98.0	97.3	<b>97.7</b>	58.7	42.0
MLCH 317 BG II	91.7	91.0	98.3	<b>93.7</b>	55.0	43.0
UPLHH 1 (Fusion)	95.0	93.0	94.3	<b>94.1</b>	57.0	42.0
Jai BG II	93.3	94.0	96.0	<b>94.4</b>	56.0	43.0
JKCH 1305 (Event	90.6	95.0	97.3	<b>94.3</b>	54.3	43.0
NCS 859 Bt 2	72.8	97.0	98.7	<b>89.5</b>	43.7	42.0
NSPL 333 BG II	78.9	95.0	88.7	<b>87.5</b>	47.3	44.0
RCH 530 BG II	88.3	93.0	98.3	<b>93.2</b>	53.0	41.0
VBCH 1519 BG II	85.0	91.0	97.0	<b>91.0</b>	51.0	43.0
PCH 881 Bt 2	71.1	98.0	99.0	<b>89.4</b>	42.7	43.0
VICH 301 BG II	96.7	94.0	99.3	<b>96.7</b>	58.0	43.0
MRC 7373 BG II	91.1	96.0	97.3	<b>94.8</b>	54.7	44.0
ABCH 143 BG II	91.7	89.0	96.7	<b>92.4</b>	55.0	43.0
SWCH 2 BG II	96.1	90.0	98.3	<b>94.8</b>	57.7	43.0
RCH 2 Bt (C)	88.3	93.0	98.3	<b>93.2</b>	53.0	44.0
KDCHH 507 Bt	96.1	92.0	98.7	<b>95.6</b>	57.7	43.0
Brahma BG II	91.1	96.0	99.0	<b>95.4</b>	54.7	42.0
LC (H)	71.1	96.0	96.0	<b>87.7</b>	42.7	43.0

Table 2. Mean boll weight (g)

Entry	Khandwa	Surat	Junagadh	Talod	Banswara	Mean
SP 700 B2	3.9	4.0	4.2	3.4	4.4	<b>4.0</b>
ACH 51-2 BG II	4.2	4.9	5.3	3.5	4.4	<b>4.5</b>
Tulasi 135 BG II	3.3	4.9	4.9	4.9	4.4	<b>4.5</b>
Ankur 651 (C)	4.4	4.0	4.5	4.0	4.3	<b>4.2</b>
Sarju BG II	4.0	5.0	4.5	5.5	4.4	<b>4.7</b>
PRCH 305 BG II	4.7	4.3	4.6	6.0	3.9	<b>4.7</b>
SBCH 311 (Fusion)	3.7	4.8	4.3	5.3	4.7	<b>4.6</b>
MLCH 317 BG II	4.0	4.2	4.0	5.4	4.8	<b>4.5</b>
UPLHH 1 (Fusion)	3.1	3.7	3.8	5.0	4.3	<b>4.0</b>
Jai BG II	4.8	4.5	4.7	5.1	4.4	<b>4.7</b>
JKCH 1305 (Event 1)	3.9	4.3	4.5	5.1	4.6	<b>4.5</b>
NCS 859 Bt 2	3.6	4.6	5.1	7.0	3.9	<b>4.8</b>
NSPL 333 BG II	3.8	5.2	4.9	4.5	4.0	<b>4.5</b>
RCH 530 BG II	4.2	4.6	5.0	6.4	4.8	<b>5.0</b>
VBCH 1519 BG II	4.5	5.0	5.4	5.2	4.8	<b>5.0</b>
PCH 881 Bt 2	4.2	5.0	5.0	4.2	4.3	<b>4.5</b>
VICH 301 BG II	4.5	5.2	4.8	4.9	3.9	<b>4.7</b>
MRC 7373 BG II	4.4	4.9	4.6	5.4	4.8	<b>4.8</b>
ABCH 143 BG II	3.2	4.7	4.6	4.6	4.6	<b>4.3</b>
SWCH 2 BG II	3.6	4.6	4.9	4.4	4.3	<b>4.4</b>
RCH 2 Bt (C)	3.7	5.0	4.4	3.3	4.6	<b>4.2</b>
KDCHH 507 Bt	3.9	4.1	4.9	4.1	4.1	<b>4.2</b>
Brahma BG II	4.4	6.1	5.1	4.8	4.5	<b>5.0</b>
LC (H)	4.0	4.7	4.4	4.5	4.1	<b>4.3</b>

Table 3. Mean Ginning Out Turn (%)

Entry	Khandwa	Surat	Junagadh	Talod	Banswara	Mean
SP 700 B2	36.0	31.9	30.8	29.6	33.7	32.4
ACH 51-2 BG II	39.1	28.5	29.5	30.5	31.0	31.7
Tulasi 135 BG II	35.6	31.1	33.6	34.5	30.7	33.1
Ankur 651 (C)	38.1	33.3	33.9	35.5	32.2	34.6
Sarju BG II	40.9	35.8	35.3	36.9	33.6	36.5
PRCH 305 BG II	39.6	34.5	34.7	31.9	33.5	34.9
SBCH 311 (Fusion)	37.1	31.0	31.6	33.3	33.1	33.2
MLCH 317 BG II	43.3	36.5	38.2	39.4	36.5	38.8
UPLHH 1 (Fusion)	38.5	34.0	34.5	34.7	33.2	35.0
Jai BG II	36.1	31.2	32.6	35.2	34.2	33.9
JKCH 1305 (Event 1)	30.1	34.1	34.1	33.6	33.5	33.1
NCS 859 Bt 2	40.0	31.0	33.9	36.1	33.4	34.9
NSPL 333 BG II	38.1	31.0	33.1	35.9	30.7	33.8
RCH 530 BG II	37.9	31.1	31.5	33.9	31.3	33.1
VBCH 1519 BG II	37.6	30.3	31.9	33.2	30.9	32.8
PCH 881 Bt 2	40.3	31.4	33.7	35.7	36.6	35.5
VICH 301 BG II	34.8	30.5	30.4	31.8	32.4	32.0
MRC 7373 BG II	35.7	30.4	32.7	32.6	32.2	32.7
ABCH 143 BG II	35.7	31.8	30.4	31.6	33.3	32.6
SWCH 2 BG II	37.2	31.3	34.1	32.9	33.6	33.8
RCH 2 Bt (C)	38.7	31.8	31.7	31.6	30.8	32.9
KDCHH 507 Bt	37.3	32.2	35.3	34.7	33.9	34.7
Brahma BG II	37.3	31.7	33.6	33.6	33.0	33.8
LC (H)	37.3	33.9	32.2	33.2	32.0	33.7

Table 4. Lint index (g)

Entry	Khandwa	Surat	Junagadh	Banswara	Mean
SP 700 B2	5.1	4.5	4.9	5.7	5.0
ACH 51-2 BG II	6.7	4.8	5.5	4.8	5.4
Tulasi 135 BG II	5.5	4.5	6.3	4.1	5.1
Ankur 651 (C)	6.0	5.7	5.1	5.9	5.7
Sarju BG II	6.3	5.6	6.3	6.2	6.1
PRCH 305 BG II	5.6	4.7	4.9	4.6	5.0
SBCH 311 (Fusion)	5.1	4.3	4.9	4.4	4.7
MLCH 317 BG II	4.9	4.9	5.7	7.2	5.7
UPLHH 1 (Fusion)	5.1	4.4	4.9	5.2	4.9
Jai BG II	6.4	5.4	6.1	6.6	6.1
JKCH 1305 (Event 1)	3.8	5.2	5.4	5.7	5.0
NCS 859 Bt 2	5.1	4.7	5.4	5.3	5.1
NSPL 333 BG II	5.0	4.9	5.6	4.1	4.9
RCH 530 BG II	6.4	6.3	5.9	4.1	5.7
VBCH 1519 BG II	5.6	5.0	5.7	4.3	5.2
PCH 881 Bt 2	5.2	4.8	5.4	5.4	5.2
VICH 301 BG II	5.4	4.8	5.5	5.2	5.2
MRC 7373 BG II	5.1	3.9	5.8	4.6	4.8
ABCH 143 BG II	4.5	4.9	5.4	4.4	4.8
SWCH 2 BG II	5.4	4.6	5.6	5.2	5.2
RCH 2 Bt (C)	5.1	5.1	5.7	5.4	5.3
KDCHH 507 Bt	4.9	4.5	5.6	5.3	5.1
Brahma BG II	4.4	4.4	5.3	4.8	4.7
LC (H)	5.2	5.1	5.0	5.2	5.1

Table 5. Seed index (g)

Entry	Khandwa	Surat	Junagadh	Banswara	Mean
SP 700 B2	9.1	9.5	11.0	11.2	<b>10.2</b>
ACH 51-2 BG II	10.4	12.0	13.1	10.6	<b>11.5</b>
Tulasi 135 BG II	9.9	10.0	12.5	9.2	<b>10.4</b>
Ankur 651 (C)	9.8	11.5	9.9	12.4	<b>10.9</b>
Sarju BG II	9.1	10.0	11.6	12.3	<b>10.7</b>
PRCH 305 BG II	8.6	9.0	9.2	9.1	<b>9.0</b>
SBCH 311 (Fusion)	8.7	9.5	10.6	8.8	<b>9.4</b>
MLCH 317 BG II	6.4	8.5	9.2	12.5	<b>9.2</b>
UPLHH 1 (Fusion)	8.1	8.5	9.3	10.4	<b>9.1</b>
Jai BG II	11.3	12.0	12.5	12.7	<b>12.1</b>
JKCH 1305 (Event 1)	8.9	10.0	10.4	11.3	<b>10.2</b>
NCS 859 Bt 2	7.7	10.5	10.5	10.5	<b>9.8</b>
NSPL 333 BG II	8.1	11.0	11.3	9.3	<b>9.9</b>
RCH 530 BG II	10.5	14.0	12.8	8.9	<b>11.6</b>
VBCH 1519 BG II	9.3	11.5	12.2	9.7	<b>10.7</b>
PCH 881 Bt 2	7.7	10.5	10.6	9.3	<b>9.5</b>
VICH 301 BG II	10.2	11.0	12.6	10.8	<b>11.2</b>
MRC 7373 BG II	9.1	9.0	11.9	9.6	<b>9.9</b>
ABCH 143 BG II	8.0	10.5	12.3	8.9	<b>9.9</b>
SWCH 2 BG II	9.1	10.0	10.9	10.3	<b>10.1</b>
RCH 2 Bt (C)	8.1	11.0	12.2	12.0	<b>10.8</b>
KDCHH 507 Bt	8.2	9.5	10.3	10.3	<b>9.6</b>
Brahma BG II	7.3	9.5	10.4	9.7	<b>9.2</b>
LC (H)	8.7	10.0	10.5	11.0	<b>10.1</b>

Table 6. Seed cotton yield (kg/ha)

Entry	Khandwa	Surat	Junagadh	Talod	Banswara	Mean	% Inc. over Ankur 651 (C)	% Inc. over RCH 2 Bt (C)	% Inc. over LC Hybrid
JKCH 1305 (Event 1)	2589	3103	2786	1585	1353	<b>2283</b>	45	95	62
MRC 7373 BG II	2799	2828	1847	1105	1619	<b>2040</b>	29	74	45
SBCH 311 (Fusion)	1964	2756	1820	1684	1511	<b>1947</b>	24	66	38
KDCHH 507 Bt	2284	2140	2379	999	1831	<b>1927</b>	22	65	37
ACH 51-2 BG II	1957	2347	2015	1503	1702	<b>1905</b>	21	63	35
UPLHH 1 (Fusion)	1905	2181	1957	1290	2032	<b>1873</b>	19	60	33
Jai BG II	1893	2434	1536	1314	1956	<b>1826</b>	16	56	30
Brahma BG II	1700	2193	2299	1383	1293	<b>1774</b>	13	52	26
Sarju BG II	1546	1896	1525	1544	1983	<b>1699</b>	8	45	21
VBCH 1519 BG II	1390	2217	2014	1421	1275	<b>1663</b>	6	42	18
NCS 859 Bt 2	1367	1882	1830	1605	1600	<b>1657</b>	5	42	18
VICH 301 BG II	1603	2202	1593	1152	1549	<b>1620</b>	3	38	15
MLCH 317 BG II	1266	1999	1542	1050	2080	<b>1587</b>	1	36	13
Ankur 651 (C)	2310	1937	818	1184	1631	<b>1576</b>	0	35	12
SP 700 B2	1523	1920	1339	1058	1782	<b>1524</b>	-3	30	8
PCH 881 Bt 2	991	1792	1922	1624	1184	<b>1502</b>	-5	28	7
RCH 530 BG II	1540	1926	1809	1096	904	<b>1455</b>	-8	24	3
LC (H)	1757	2472	693	504	1614	<b>1408</b>	-11	20	0
ABCH 143 BG II	1819	1642	1152	772	1469	<b>1371</b>	-13	17	-3
RCH 2 Bt (C)	1063	1032	1470	869	1417	<b>1170</b>	-26	0	-17
SWCH 2 BG II	896	1264	1114	786	1723	<b>1156</b>	-27	-1	-18
PRCH 305 BG II	985	1226	644	822	1682	<b>1072</b>	-32	-8	-24
NSPL 333 BG II	555	1090	1212	796	1359	<b>1002</b>	-36	-14	-29
Tulasi 135 BG II	927	828	652	606	1123	<b>827</b>	-48	-29	-41
CD @ 5 %	503	577	390	372	479	464			
CV %	19	18	15	19	19	18			

Table 7. Lint yield (kg/ha)

Entry	Khandwa	Surat	Junagadh	Talod	Banswara	Mean	% Inc. over Ankur 651 (C)	% Inc. over RCH 2 Bt (C)	% Inc. over LC Hybrid
JKCH 1305 (Event 1)	780	1058	950	532	452	754	37	97	57
KDCHH 507 Bt	853	689	840	348	624	671	22	75	40
MRC 7373 BG II	1000	859	603	359	520	668	21	74	39
UPLHH 1 (Fusion)	734	741	675	449	675	655	19	71	36
SBCH 311 (Fusion)	728	854	575	560	496	643	17	68	34
Sarju BG II	633	682	538	571	663	617	12	61	29
Jai BG II	684	760	501	461	668	615	12	60	28
MLCH 317 BG II	549	731	589	415	758	608	11	59	27
ACH 51-2 BG II	764	669	594	458	528	603	10	57	26
Brahma BG II	635	695	770	465	427	598	9	56	25
NCS 859 Bt 2	547	581	619	579	535	572	4	49	19
Ankur 651 (C)	881	645	276	422	527	550	0	44	15
VBCH 1519 BG II	523	669	644	472	395	541	-2	41	13
PCH 881 Bt 2	399	562	647	572	432	522	-5	36	9
VICH 301 BG II	558	674	489	365	500	517	-6	35	8
SP 700 B2	548	613	413	313	601	498	-10	30	4
RCH 530 BG II	583	599	573	367	281	481	-13	25	0
LC (H)	656	841	221	167	516	480	-13	25	0
ABCH 143 BG II	650	524	351	243	488	451	-18	18	-6
SWCH 2 BG II	333	395	382	260	579	390	-29	2	-19
RCH 2 Bt (C)	411	327	466	275	436	383	-30	0	-20
PRCH 305 BG II	390	422	224	255	565	371	-33	-3	-23
NSPL 333 BG II	212	338	402	283	420	331	-40	-14	-31
Tulasi 135 BG II	330	259	219	210	347	273	-50	-29	-43
CD @ 5 %		194	131		157				

Table 8. 2.5 % Span Length (mm)

Entry	2.5% span length (mm)				
	Khandwa	Surat	Talod	Banswara	Mean
SP 700 B2	28.9	29.2	29.4	28.8	29.1
ACH 51-2 BG II	27.4	33.3	32.9	32.5	31.5
Tulasi 135 BG II	30.4	29.1	27.9	27.5	28.7
Ankur 651 (C)	28.1	31.0	29.2	30.7	29.8
Sarju BG II	26.6	27.9	28.9	27.8	27.8
PRCH 305 BG II	27.0	30.0	30.7	28.0	28.9
SBCH 311 (Fusion)	25.4	28.8	27.6	26.5	27.1
MLCH 317 BG II	26.5	27.7	28.7	25.9	27.2
UPLHH 1 (Fusion)	25.6	28.3	26.2	24.8	26.2
Jai BG II	30.0	33.4	31.9	30.2	31.4
JKCH 1305 (Event 1)	27.5	31.0	30.0	30.1	29.7
NCS 859 Bt 2	28.5	31.4	32.1	29.5	30.4
NSPL 333 BG II	29.5	31.3	30.5	28.3	29.9
RCH 530 BG II	28.5	33.4	33.3	30.3	31.4
VBCH 1519 BG II	28.1	33.1	32.3	29.8	30.8
PCH 881 Bt 2	28.2	31.1	30.9	30.7	30.2
VICH 301 BG II	28.8	29.9	29.7	29.1	29.4
MRC 7373 BG II	26.7	31.6	30.3	29.5	29.5
ABCH 143 BG II	27.8	30.7	31.3	30.2	30.0
SWCH 2 BG II	26.8	28.8	29.8	26.6	28.0
RCH 2 Bt (C)	26.2	29.9	28.5	28.4	28.3
KDCHH 507 Bt	26.7	30.5	29.6	29.2	29.0
Brahma BG II	28.6	30.6	29.3	29.2	29.4
LC (H)	27.9	26.3	27.2		27.1

Table 9. Micronaire Value

Entry	Micronaire value				
	Khandwa	Surat	Talod	Banswara	Mean
SP 700 B2	3.4	3.8	5.1	3.8	4.0
ACH 51-2 BG II	3.3	3.4	4.0	3.4	3.5
Tulasi 135 BG II	3.1	4.2	3.5	3.2	3.5
Ankur 651 (C)	3.8	4.3	4.1	3.7	4.0
Sarju BG II	3.5	4.8	4.6	3.5	4.1
PRCH 305 BG II	3.9	4.9	4.2	3.8	4.2
SBCH 311 (Fusion)	3.8	5.0	4.7	3.8	4.3
MLCH 317 BG II	3.8	4.9	4.1	3.6	4.1
UPLHH 1 (Fusion)	3.1	3.6	4.1	3.0	3.5
Jai BG II	3.8	5.2	3.6	3.5	4.0
JKCH 1305 (Event 1)	3.8	4.8	3.9	3.5	4.0
NCS 859 Bt 2	4.0	4.6	3.4	3.2	3.8
NSPL 333 BG II	3.3	3.0	4.2	3.1	3.4
RCH 530 BG II	3.3	3.3	3.6	3.4	3.4
VBCH 1519 BG II	3.7	3.9	4.1	3.2	3.7
PCH 881 Bt 2	3.8	4.1	4.3	3.7	4.0
VICH 301 BG II	3.8	5.0	5.2	3.8	4.5
MRC 7373 BG II	3.9	4.6	4.7	3.3	4.1
ABCH 143 BG II	2.8	3.8	3.4	4.0	3.5
SWCH 2 BG II	3.1	4.1	3.8	3.2	3.6
RCH 2 Bt (C)	3.5	4.6	4.3	3.7	4.0
KDCHH 507 Bt	3.6	4.8	4.4	3.7	4.1
Brahma BG II	3.8	4.6	4.1	3.8	4.1
LC (H)	3.8	4.9	5.0		4.6

Table 10. Uniformity Ratio

Entry	Uniformity ratio				
	Khandwa	Surat	Talod	Banswara	Mean
SP 700 B2	48.0	49.0	53.0	47.0	49.3
ACH 51-2 BG II	48.0	47.0	47.0	48.0	47.5
Tulasi 135 BG II	44.0	49.0	47.0	47.0	46.8
Ankur 651 (C)	48.0	49.0	51.0	46.0	48.5
Sarju BG II	50.0	50.0	51.0	49.0	50.0
PRCH 305 BG II	47.0	51.0	52.0	46.0	49.0
SBCH 311 (Fusion)	50.0	53.0	53.0	49.0	51.3
MLCH 317 BG II	46.0	47.0	44.0	47.0	46.0
UPLHH 1 (Fusion)	49.0	49.0	52.0	46.0	49.0
Jai BG II	46.0	47.0	48.0	48.0	47.3
JKCH 1305 (Event 1)	50.0	52.0	51.0	47.0	50.0
NCS 859 Bt 2	48.0	50.0	51.0	47.0	49.0
NSPL 333 BG II	43.0	46.0	51.0	44.0	46.0
RCH 530 BG II	46.0	49.0	48.0	46.0	47.3
VBCH 1519 BG II	44.0	47.0	48.0	43.0	45.5
PCH 881 Bt 2	48.0	49.0	49.0	48.0	48.5
VICH 301 BG II	47.0	51.0	48.0	49.0	48.8
MRC 7373 BG II	47.0	50.0	51.0	48.0	49.0
ABCH 143 BG II	45.0	46.0	50.0	44.0	46.3
SWCH 2 BG II	44.0	47.0	45.0	45.0	45.3
RCH 2 Bt (C)	46.0	49.0	46.0	47.0	47.0
KDCHH 507 Bt	47.0	49.0	51.0	49.0	49.0
Brahma BG II	47.0	51.0	49.0	45.0	48.0
LC (H)	46.0	53.0	53.0		50.7

Table 11. Fiber Strength (g/tex)

Entry	Strength (g/tex)				
	Khandwa	Surat	Talod	Banswara	Mean
SP 700 B2	24.2	24.6	22.7	21.7	<b>23.3</b>
ACH 51-2 BG II	21.4	28.3	25.5	23.6	<b>24.7</b>
Tulasi 135 BG II	23.6	21.5	23.5	21.0	<b>22.4</b>
Ankur 651 (C)	22.1	23.4	22.5	21.9	<b>22.5</b>
Sarju BG II	21.5	23.7	23.7	21.1	<b>22.5</b>
PRCH 305 BG II	21.1	23.1	23.4	22.4	<b>22.5</b>
SBCH 311 (Fusion)	20.4	24.6	25.3	21.3	<b>22.9</b>
MLCH 317 BG II	17.6	20.0	20.4	16.5	<b>18.6</b>
UPLHH 1 (Fusion)	19.6	23.4	23.0	17.2	<b>20.8</b>
Jai BG II	22.3	25.3	25.1	24.2	<b>24.2</b>
JKCH 1305 (Event 1)	22.9	22.8	24.9	23.1	<b>23.4</b>
NCS 859 Bt 2	21.6	25.1	27.5	20.5	<b>23.7</b>
NSPL 333 BG II	20.2	23.4	24.9	18.6	<b>21.8</b>
RCH 530 BG II	21.9	29.4	27.0	23.5	<b>25.5</b>
VBCH 1519 BG II	20.2	24.1	23.6	23.5	<b>22.9</b>
PCH 881 Bt 2	22.3	23.8	24.3	19.0	<b>22.4</b>
VICH 301 BG II	21.9	21.8	23.0	21.7	<b>22.1</b>
MRC 7373 BG II	21.3	24.0	22.4	24.2	<b>23.0</b>
ABCH 143 BG II	22.6	23.3	24.1	22.6	<b>23.2</b>
SWCH 2 BG II	19.2	21.1	21.6	21.4	<b>20.8</b>
RCH 2 Bt (C)	20.0	21.3	22.2	20.3	<b>21.0</b>
KDCHH 507 Bt	21.6	23.8	22.9	24.2	<b>23.1</b>
Brahma BG II	20.6	23.4	25.2	20.7	<b>22.5</b>
LC (H)	20.2	23.4	22.2		<b>21.9</b>

Table 12. Jassid and whitefly/plant

Entry	Jassid / plant					Whitefly / plant			
	Khand	Surat	Junag	Talod	Mean	Khand	Surat	Talod	Mean
SP 700 B2	5.5	5.3	10.7	1.2	<b>5.7</b>	3.6	2.8	0.1	<b>2.2</b>
ACH 51-2 BG II	2.8	5.0	6.4	0.7	<b>3.7</b>	1.9	4.0	0.2	<b>2.0</b>
Tulasi 135 BG II	5.2	5.6	10.9	1.0	<b>5.7</b>	3.8	3.9	0.1	<b>2.6</b>
Ankur 651 (C)	2.7	4.6	9.7	0.1	<b>4.3</b>	1.8	4.1	0.0	<b>2.0</b>
Sarju BG II	3.8	6.2	8.0	1.2	<b>4.8</b>	2.9	3.5	0.1	<b>2.2</b>
PRCH 305 BG II	5.7	5.3	11.8	1.3	<b>6.0</b>	3.7	3.7	0.1	<b>2.5</b>
SBCH 311 (Fusion)	2.8	3.7	6.4	0.2	<b>3.3</b>	1.6	5.4	0.1	<b>2.4</b>
MLCH 317 BG II	3.4	5.1	10.7	0.5	<b>4.9</b>	3.1	3.2	0.1	<b>2.1</b>
UPLHH 1 (Fusion)	3.8	3.5	8.2	0.4	<b>4.0</b>	3.1	4.1	0.1	<b>2.4</b>
Jai BG II	3.0	3.8	8.9	0.5	<b>4.1</b>	1.9	3.5	0.0	<b>1.8</b>
JKCH 1305 (Event	3.2	3.9	6.6	1.0	<b>3.7</b>	1.9	4.0	0.0	<b>2.0</b>
NCS 859 Bt 2	4.1	4.7	6.7	1.0	<b>4.1</b>	3.2	4.0	0.1	<b>2.4</b>
NSPL 333 BG II	5.4	6.9	12.7	2.6	<b>6.9</b>	4.1	3.2	0.1	<b>2.5</b>
RCH 530 BG II	3.6	6.2	9.9	0.7	<b>5.1</b>	2.7	1.5	0.1	<b>1.4</b>
VBCH 1519 BG II	3.5	6.6	10.1	0.7	<b>5.2</b>	2.9	3.7	0.1	<b>2.2</b>
PCH 881 Bt 2	5.6	5.9	8.1	0.9	<b>5.1</b>	3.8	2.2	0.2	<b>2.1</b>
VICH 301 BG II	3.7	5.5	10.6	0.9	<b>5.2</b>	3.0	2.3	0.1	<b>1.8</b>
MRC 7373 BG II	2.4	5.3	5.9	0.6	<b>3.6</b>	1.9	4.5	0.0	<b>2.1</b>
ABCH 143 BG II	2.7	6.1	12.4	1.3	<b>5.6</b>	2.2	2.2	0.2	<b>1.5</b>
SWCH 2 BG II	6.0	5.8	14.4	0.5	<b>6.7</b>	4.0	2.4	0.1	<b>2.2</b>
RCH 2 Bt (C)	5.4	5.4	15.9	1.3	<b>7.0</b>	4.1	2.1	0.1	<b>2.1</b>
KDCHH 507 Bt	2.5	4.5	8.1	0.9	<b>4.0</b>	2.0	2.2	0.1	<b>1.4</b>
Brahma BG II	2.8	5.8	5.8	0.8	<b>3.8</b>	2.3	1.6	0.0	<b>1.3</b>
LC (H)	2.4	3.9	8.4	1.7	<b>6.4</b>	2.1	3.7	0.1	<b>2.0</b>

Table 13. Thrips/ plant and Mealy bug/10cm terminal shoot

Entry	Thrips/ plant				Mealy bug/10cm terminal		
	Khandw	Surat	Talod	Mean	Surat	Junagad	Mean
SP 700 B2	0.7	6.9	0.0	<b>2.5</b>	0.0	2.6	<b>1.3</b>
ACH 51-2 BG II	0.3	13.3	0.1	<b>4.6</b>	0.0	1.1	<b>0.6</b>
Tulasi 135 BG II	0.6	11.2	0.1	<b>4.0</b>	0.1	3.1	<b>1.6</b>
Ankur 651 (C)	0.3	11.2	0.0	<b>3.8</b>	0.1	1.6	<b>0.8</b>
Sarju BG II	0.5	11.1	0.0	<b>3.9</b>	0.1	2.8	<b>1.4</b>
PRCH 305 BG II	0.8	13.2	0.2	<b>4.7</b>	0.0	3.2	<b>1.6</b>
SBCH 311 (Fusion)	0.2	8.8	0.2	<b>3.1</b>	0.0	2.7	<b>1.4</b>
MLCH 317 BG II	0.4	12.7	0.3	<b>4.5</b>	0.0	3.2	<b>1.6</b>
UPLHH 1 (Fusion)	0.2	12.4	0.0	<b>4.2</b>	0.0	3.3	<b>1.7</b>
Jai BG II	0.2	12.8	0.1	<b>4.3</b>	0.1	2.1	<b>1.1</b>
JKCH 1305 (Event 1)	0.3	11.3	0.0	<b>3.9</b>	0.1	0.8	<b>0.4</b>
NCS 859 Bt 2	0.4	13.5	0.0	<b>4.6</b>	0.1	2.6	<b>1.3</b>
NSPL 333 BG II	0.7	13.8	0.0	<b>4.8</b>	0.1	2.3	<b>1.2</b>
RCH 530 BG II	0.4	9.7	0.0	<b>3.4</b>	0.1	1.3	<b>0.7</b>
VBCH 1519 BG II	0.6	11.1	0.0	<b>3.9</b>	0.1	2.1	<b>1.1</b>
PCH 881 Bt 2	0.9	10.5	0.2	<b>3.9</b>	0.0	2.3	<b>1.2</b>
VICH 301 BG II	0.6	13.7	0.0	<b>4.8</b>	0.1	2.6	<b>1.3</b>
MRC 7373 BG II	0.3	11.9	0.0	<b>4.1</b>	0.1	1.8	<b>0.9</b>
ABCH 143 BG II	0.3	10.6	0.1	<b>3.7</b>	0.1	2.5	<b>1.3</b>
SWCH 2 BG II	0.6	15.1	0.1	<b>5.3</b>	0.1	2.1	<b>1.1</b>
RCH 2 Bt (C)	0.6	10.2	0.4	<b>3.7</b>	0.1	2.3	<b>1.2</b>
KDCHH 507 Bt	0.3	9.0	0.0	<b>3.1</b>	0.2	2.6	<b>1.4</b>
Brahma BG II	0.4	10.9	0.1	<b>3.8</b>	0.1	1.4	<b>0.7</b>
LC (H)	0.2	11.0	0.0	<b>3.7</b>	0.1	2.1	<b>1.1</b>

Table 14. Predators

Entry	Khandwa	Surat	Junagadh	Talod	Banswara	Mean
SP 700 B2	1.4	1.0	0.7	8.1	2.0	<b>2.7</b>
ACH 51-2 BG II	1.6	0.8	0.6	5.1	2.2	<b>2.1</b>
Tulasi 135 BG II	1.6	1.0	0.6	6.7	2.4	<b>2.5</b>
Ankur 651 (C)	1.2	0.5	0.7	0.6	2.5	<b>1.1</b>
Sarju BG II	1.1	0.0	0.7	8.1	2.3	<b>2.4</b>
PRCH 305 BG II	1.9	0.5	0.7	9.1	2.3	<b>2.9</b>
SBCH 311 (Fusion)	1.1	0.0	0.7	1.8	2.3	<b>1.2</b>
MLCH 317 BG II	1.1	0.0	0.7	3.2	2.2	<b>1.5</b>
UPLHH 1 (Fusion)	1.4	0.0	0.7	2.8	2.1	<b>1.4</b>
Jai BG II	1.3	0.0	0.8	3.8	2.5	<b>1.7</b>
JKCH 1305 (Event 1)	1.3	0.0	0.8	7.0	2.2	<b>2.2</b>
NCS 859 Bt 2	0.7	0.0	0.7	7.0	2.7	<b>2.2</b>
NSPL 333 BG II	1.5	0.5	0.7	9.6	2.4	<b>2.9</b>
RCH 530 BG II	1.7	0.7	0.7	4.6	2.3	<b>2.0</b>
VBCH 1519 BG II	1.4	0.0	0.7	5.0	2.5	<b>1.9</b>
PCH 881 Bt 2	1.3	0.0	0.7	6.4	2.2	<b>2.1</b>
VICH 301 BG II	1.5	0.0	0.7	5.1	2.5	<b>2.0</b>
MRC 7373 BG II	1.3	0.0	0.7	4.5	2.1	<b>1.7</b>
ABCH 143 BG II	1.5	0.0	0.8	9.4	2.4	<b>2.8</b>
SWCH 2 BG II	1.4	0.7	0.8	3.6	2.4	<b>1.8</b>
RCH 2 Bt (C)	1.3	0.0	0.7	9.0	2.3	<b>2.7</b>
KDCHH 507 Bt	1.4	0.5	0.7	6.2	2.1	<b>2.2</b>
Brahma BG II	1.5	0.0	0.8	5.4	2.1	<b>2.0</b>
LC (H)	1.7	0.0	0.8	4.2	2.1	<b>1.8</b>



Table 15. Percent square damage by Bollworms

Entry	Khandwa	Surat	Junagadh	Mean
SP 700 B2	3.8	0.0	0.9	1.6
ACH 51-2 BG II	4.3	1.9	1.2	2.5
Tulasi 135 BG II	4.0	0.4	1.0	1.8
Ankur 651 (C)	3.8	8.0	10.6	7.5
Sarju BG II	4.2	0.3	1.0	1.8
PRCH 305 BG II	4.8	0.0	1.1	2.0
SBCH 311 (Fusion)	2.9	0.0	1.2	1.4
MLCH 317 BG II	4.1	0.0	1.4	1.8
UPLHH 1 (Fusion)	3.9	3.3	3.8	3.7
Jai BG II	3.4	0.0	1.1	1.5
JKCH 1305 (Event 1)	2.8	1.2	0.9	1.6
NCS 859 Bt 2	3.5	1.3	1.0	1.9
NSPL 333 BG II	4.4	0.0	1.2	1.9
RCH 530 BG II	3.5	0.0	1.1	1.5
VBCH 1519 BG II	3.8	0.3	1.5	1.9
PCH 881 Bt 2	4.3	0.9	1.4	2.2
VICH 301 BG II	3.3	0.3	1.1	1.6
MRC 7373 BG II	3.2	0.5	1.1	1.6
ABCH 143 BG II	3.2	0.4	1.2	1.6
SWCH 2 BG II	4.1	0.5	1.2	1.9
RCH 2 Bt (C)	5.8	0.6	1.1	2.5
KDCHH 507 Bt	4.2	0.7	1.2	2.0
Brahma BG II	3.5	0.0	1.3	1.6
LC (H)	9.3	5.8	11.5	8.9

Table 16. Spotted bollworm, Earias spp. (No. of Larvae / 5 plants)

Entry	Khandwa	Surat	Talod	Banswara	Mean
SP 700 B2	2.7	0.0	0.0	1.6	1.1
ACH 51-2 BG II	2.2	0.0	0.0	1.8	1.0
Tulasi 135 BG II	2.4	0.0	0.0	2.6	1.2
Ankur 651 (C)	2.4	3.2	0.0	1.9	1.9
Sarju BG II	2.5	0.0	0.0	1.4	1.0
PRCH 305 BG II	3.1	0.5	0.0	2.1	1.4
SBCH 311 (Fusion)	3.2	0.0	0.0	2.8	1.5
MLCH 317 BG II	2.4	0.3	0.0	0.9	0.9
UPLHH 1 (Fusion)	2.3	0.0	0.0	1.2	0.9
Jai BG II	2.6	0.0	0.0	1.3	1.0
JKCH 1305 (Event 1)	2.6	0.0	0.0	1.9	1.1
NCS 859 Bt 2	3.2	0.0	0.0	2.2	1.4
NSPL 333 BG II	2.5	0.0	0.0	2.6	1.3
RCH 530 BG II	2.8	0.0	0.0	3.1	1.5
VBCH 1519 BG II	3.0	0.0	0.0	2.7	1.4
PCH 881 Bt 2	2.5	0.0	0.1	3.0	1.4
VICH 301 BG II	2.9	0.0	0.0	2.3	1.3
MRC 7373 BG II	2.5	0.0	0.0	2.2	1.2
ABCH 143 BG II	2.9	0.0	0.0	2.1	1.2
SWCH 2 BG II	2.4	0.0	0.0	1.7	1.0
RCH 2 Bt (C)	3.2	0.0	0.0	2.4	1.4
KDCHH 507 Bt	2.1	0.0	0.0	1.7	1.0
Brahma BG II	2.3	0.2	0.0	2.9	1.3
LC (H)	7.3	1.2	1.0	3.1	3.1

Table 17. Number of Pink Boll worm larvae / 20 green bolls

Entry	Khandwa	Surat	Talod	Banswara	Mean
SP 700 B2	4.8	0.0	0.0	1.6	1.6
ACH 51-2 BG II	4.7	0.0	0.0	1.7	1.6
Tulasi 135 BG II	5.8	0.0	0.0	2.0	2.0
Ankur 651 (C)	3.6	0.0	0.0	2.2	1.5
Sarju BG II	5.8	0.0	0.0	1.1	1.7
PRCH 305 BG II	3.4	0.0	0.0	2.0	1.4
SBCH 311 (Fusion)	4.3	0.0	0.0	1.3	1.4
MLCH 317 BG II	5.1	0.0	0.0	0.9	1.5
UPLHH 1 (Fusion)	3.1	0.0	0.0	1.0	1.0
Jai BG II	4.9	0.0	0.0	1.1	1.5
JKCH 1305 (Event 1)	4.6	0.0	0.0	1.2	1.5
NCS 859 Bt 2	4.8	0.0	0.0	1.4	1.6
NSPL 333 BG II	3.9	0.0	0.0	1.3	1.3
RCH 530 BG II	5.3	0.0	0.0	2.1	1.9
VBCH 1519 BG II	4.3	0.0	0.0	1.3	1.4
PCH 881 Bt 2	4.0	0.0	0.0	1.6	1.4
VICH 301 BG II	4.0	0.0	0.0	1.3	1.3
MRC 7373 BG II	3.4	0.0	0.0	1.6	1.2
ABCH 143 BG II	5.9	0.0	0.0	1.3	1.8
SWCH 2 BG II	3.8	0.0	0.0	1.6	1.3
RCH 2 Bt (C)	5.4	0.0	0.0	1.4	1.7
KDCHH 507 Bt	4.2	0.0	0.0	1.4	1.4
Brahma BG II	4.7	0.0	0.0	1.4	1.5
LC (H)	10.4	1.0	0.0	2.5	3.5

Table 18. Open boll and locule damage (%)

Entry	Open boll damage (%)				Locule damage (%)			
	Khandwa	Surat	Junagadh	Mean	Khandwa	Surat	Junagadh	Mean
SP 700 B2	6.7	2.8	2.4	4.0	8.8	1.9	1.9	4.2
ACH 51-2 BG II	8.3	2.3	2.1	4.2	8.0	1.4	1.7	3.7
Tulasi 135 BG II	8.5	0.7	1.6	3.6	7.2	0.4	1.1	2.9
Ankur 651 (C)	8.8	31.6	8.7	16.4	6.3	26.3	6.3	13.0
Sarju BG II	8.9	1.7	2.0	4.2	7.5	1.2	1.4	3.4
PRCH 305 BG II	7.5	6.8	2.4	5.6	7.6	3.7	1.6	4.3
SBCH 311 (Fusion)	8.8	3.9	2.2	5.0	7.8	2.4	1.5	3.9
MLCH 317 BG II	8.6	2.0	2.2	4.3	7.6	1.6	1.2	3.5
UPLHH 1 (Fusion)	7.9	1.3	2.9	4.0	6.6	0.8	2.0	3.1
Jai BG II	7.5	3.7	2.3	4.5	8.6	2.2	1.7	4.2
JKCH 1305 (Event 1)	7.8	4.0	2.2	4.7	10.0	2.3	1.6	4.6
NCS 859 Bt 2	8.0	4.5	2.7	5.1	9.6	1.9	2.0	4.5
NSPL 333 BG II	8.5	4.7	2.6	5.3	9.7	2.4	2.0	4.7
RCH 530 BG II	7.2	6.7	2.0	5.3	8.7	3.2	1.3	4.4
VBCH 1519 BG II	7.3	3.1	2.3	4.2	8.2	2.2	1.5	4.0
PCH 881 Bt 2	9.8	1.8	2.1	4.6	8.3	1.1	1.4	3.6
VICH 301 BG II	8.3	1.7	2.4	4.1	8.7	0.8	1.6	3.7
MRC 7373 BG II	8.4	2.3	2.0	4.2	8.8	1.4	1.1	3.8
ABCH 143 BG II	7.2	3.4	1.9	4.2	8.5	1.7	1.0	3.7
SWCH 2 BG II	9.1	1.4	1.9	4.1	8.1	0.7	1.2	3.3
RCH 2 Bt (C)	9.4	4.4	2.2	5.3	7.4	2.9	1.6	4.0
KDCHH 507 Bt	7.5	1.8	2.3	3.9	8.7	1.3	1.6	3.9
Brahma BG II	8.4	2.2	2.1	4.2	8.9	1.5	1.4	3.9
LC (H)	15.8	22.4	10.5	16.2	16.1	15.5	7.9	13.2

## BIOMETRICAL EVALUATION

**Germination and Final Plant Stand:** The germination was in general good in all the entries and the stand at harvest was adequate at all the locations in all the entries, except that of VBCH 1520 BG II at Khandwa (Table 19).

**Boll Weight:** The overall Mean Boll weight of the Bt hybrids varied from 3.8 to 5.0 g. The non Bt check hybrids recorded a mean boll weight of 4.1-4.3 g. PRCH 333 BG II recorded the highest boll weight of 5.0 g (Table 20).

**Ginning Outturn:** The mean ginning outturn of the Bt cotton hybrids varied from 29 to 36.2 %. Hybrid ZCH 50106Bt ( Fusion) recorded the highest ginning outturn of 36.2 per cent. The Bt check hybrid RCH 2 Bt and local check hybrid recorded a mean ginning out turn of 34.1 and 31.1 percent, respectively (Table 21).

**Lint Index and Seed Index:** In general, most of the Bt hybrids had lint index in the range of 4.1 to 6.1 with local hybrid check and non-Bt check hybrid recording 5.0 and 5.1 respectively. (Table 22). The seed index ranged from 9.3 to 11.1 with ACH 52-2 BG II having higher index of 11.1 (Table 23)

**Mean Seed Cotton Yield under ETL based Plant Protection:** The mean seed cotton yield recorded by the Bt cotton hybrids under irrigated conditions are presented in Table 24. Under irrigated conditions, nineteen test Bt cotton hybrids recorded higher seed cotton yield than Bt check hybrid RCH 2 Bt, while sixteen test hybrids recorded higher seed cotton yield over non-Bt check hybrid. However, only nine Bt hybrids recorded higher seed cotton yield than local non-Bt check hybrid. RCH 377 BG II recorded highest mean yield of 23 q/ha. Around two hybrids showed lesser lint yield as compared to Bt check hybrid. (Table 25)

**Fibre Quality Evaluation:** The lint samples of all test entries from many centres were subjected to Fibre quality evaluation and the details like fibre length, strength, micronaire, uniformity ratio are presented in Table 26, 27, 28 and 29. Most of the test hybrids had equal or better fibre length than that of Bt check hybrid (29.0 mm). Entry UPLHH 10 ( Fusion) had lesser fibre length of 27.3 mm compared to Bt check hybrid. The hybrid entries had around 3.6 – 4.7 as regards micronaire is concerned ; Similarly, fibre strength did not exhibit much variation. Most of the hybrids had fibre strength in the range of 21 – 23.9 g/tex. Characteristic variation could not be noticed regarding uniformity ratio with most of the hybrids showing around 47 - 53%.

## ETL BASED ENTOMOLOGICAL EVALUATION

**Sucking pests and bollworms:** The data on incidences of sap sucking pests and bollworms were recorded and the details are given in Tables 30-38. Jassids, whitefly, thrips and mealy bugs were observed in all test Bt hybrids at different centres under irrigated conditions. However, there was no difference in the population recorded in Bt test hybrids and the non-Bt check hybrids. The population of jassids in Junagadh and thrips in Surat was high compared to other centres.

Larval populations of *Earias sp.*, and *Pectinophora gossypiella* were, in general, rather low, while the incidence of pink bollworm was slightly high in Khandwa and Banswara ( Table 37). The test Bt cotton hybrids recorded minimum damage compared to check hybrids with respect to square damage ( 1.5 – 3.0% compared to 7.3 – 9.6 % in Check hybrids), open boll and locule damage by bollworms (Table 38). Mean incidence across centres was seen less compared to non-Bt check. The open boll damage ranged between 2.7% and 6.6% among test entries as against 10.2% and 11.8% in non-Bt checks.

Summary Table: SET B Irrigated trials

Entry	Germination (%)	Boll weight (g)	Ginning Out Turn (%)	Lint index (g)	Seed index (g)	Lint yield (kg/ha)	Seed cotton yield (kg/ha)
RCH 377 BG II	91.8	3.8	30.9	4.6	10.4	714	2327
ACH 52-2 BG II	83.3	4.8	32.5	5.3	11.1	641	1984
SWCH 4708 BGII	92.0	4.7	33.7	5.6	10.8	639	1910
Ankur 3028 BG II	91.9	4.6	29.9	4.5	10.6	570	1907
PRCH 333 BG II	90.9	5.0	30.4	4.3	9.8	534	1767
JKCH 2245 (Event 1)	95.9	4.3	33.1	4.8	9.7	548	1657
VICH 303 BG II	92.7	4.8	29.0	4.5	10.9	474	1630
NCS 860 Bt 2	90.3	4.9	34.2	5.2	10.1	545	1596
ABCH 148 BG II	93.0	4.3	34.3	5.6	10.5	543	1577
LC (H)	85.6	4.3	31.1	5.0	10.2	493	1525
Solar 60 BG II	91.1	4.8	35.5	6.1	11.0	533	1520
MRC 7383 BG II	92.4	4.7	30.0	4.2	9.6	454	1505
557-2	91.4	4.6	32.9	4.8	10.0	473	1441
Tulasi 144 BG II	87.9	4.6	31.8	4.8	10.4	455	1436
NSPL 666 BG II	91.3	4.8	30.0	4.1	9.4	425	1417
PCH 882 Bt 2	87.3	4.4	34.1	5.0	9.6	476	1398
Ankur 651 (C)	92.6	4.1	33.5	5.1	10.1	451	1338
ZCH 50106 Bt (Fusion)	94.6	4.4	36.2	5.6	9.7	471	1295
VBCH 1520 BG II	74.1	4.8	31.2	4.6	10.2	372	1193
RCH 2 Bt (C)	94.1	4.1	34.1	5.3	9.9	366	1070
SP 1016 B2	87.3	4.1	33.3	4.7	9.3	331	991
UPLHH 10 (Fusion)	89.5	4.6	35.3	5.5	10.0	273	776

Note : Hybrids are arranged according to descending order of Seed Cotton Yield

Entry	2.5% span length (mm)	Micronaire value	Uniformity ratio	Strength (g/tex)	Jassid / plant	Whitefly / plant	Thrips/ plant	Mealy bug/10cm terminal	Predators	% square damage by Bollworms	Spotted bollworm, Earias spp. (No. of Lar / 5 pts)	Number of Pink Boll worm larvae / 20 GB	Open boll damage (%)	Locule damage (%)
<b>RCH 377 BG II</b>	31.4	4.0	48.0	23.0	3.9	2.0	4.2	0.7	1.6	2.4	0.6	1.0	4.2	4.8
<b>ACH 52-2 BG II</b>	31.0	3.9	47.0	23.2	3.3	2.3	5.1	0.4	1.5	1.5	1.1	1.5	3.2	3.7
<b>SWCH 4708 BGII</b>	29.6	4.1	49.0	22.8	5.3	2.0	6.2	0.9	1.8	1.7	1.0	1.2	4.3	4.8
<b>Ankur 3028 BG II</b>	29.9	4.3	50.0	23.9	5.0	2.5	6.8	0.9	1.4	2.2	1.1	1.4	4.4	4.1
<b>PRCH 333 BG II</b>	30.1	3.9	49.0	23.2	3.8	2.0	4.7	0.4	1.6	1.9	1.1	1.2	3.2	4.4
<b>JKCH 2245 (Event 1)</b>	30.4	3.6	47.0	22.5	5.9	1.9	2.4	0.6	2.2	1.8	1.3	1.5	4.7	3.7
<b>VICH 303 BG II</b>	29.5	4.5	49.0	23.0	4.1	1.6	4.8	0.9	2.0	1.7	1.2	1.2	2.7	3.1
<b>NCS 860 Bt 2</b>	30.1	4.2	34.0	23.6	5.7	1.8	3.6	0.8	2.8	2.3	1.2	1.5	4.9	4.8
<b>ABCH 148 BG II</b>	30.0	3.6	48.0	23.9	5.8	2.1	4.6	1.2	2.3	1.9	0.7	1.5	5.0	4.1
<b>LC (H)</b>	27.3	4.4	51.0	22.6	4.1	2.8	6.1	0.9	1.4	9.6	2.8	3.9	11.8	10.3
<b>Solar 60 BG II</b>	30.2	4.7	50.0	22.2	6.2	2.4	5.4	0.8	1.9	1.9	1.7	2.1	5.2	4.0
<b>MRC 7383 BG II</b>	30.5	3.7	48.0	23.9	5.2	2.0	4.4	0.4	2.3	1.5	1.0	1.6	4.6	3.8
<b>557-2</b>	31.0	3.8	48.0	23.6	5.9	2.1	3.2	1.1	2.2	1.7	1.1	1.6	6.4	5.6
<b>Tulasi 144 BG II</b>	29.7	3.7	50.0	22.2	5.7	2.4	3.1	0.9	2.1	2.5	1.0	1.5	4.2	4.1
<b>NSPL 666 BG II</b>	32.2	3.8	47.0	23.9	6.5	3.1	4.7	1.1	1.9	3.0	1.6	2.0	4.6	3.9
<b>PCH 882 Bt 2</b>	29.8	4.1	48.0	22.6	5.2	1.9	4.7	0.8	1.8	2.0	1.1	1.6	4.8	3.9
<b>Ankur 651 (C)</b>	28.9	4.4	49.0	21.9	4.1	1.1	5.6	0.8	1.8	7.3	1.0	2.1	10.2	9.4
<b>ZCH 50106 Bt (Fusion)</b>	28.0	3.9	50.0	23.3	5.6	2.0	6.7	1.4	3.0	1.5	1.1	1.2	4.0	3.7
<b>VBCH 1520 BG II</b>	27.9	4.5	51.0	23.1	5.4	2.8	4.5	0.4	2.4	2.0	1.6	1.5	3.1	2.9
<b>RCH 2 Bt (C)</b>	29.0	4.0	48.0	22.7	8.0	2.3	2.4	0.8	3.1	2.3	1.4	1.9	6.6	5.0
<b>SP 1016 B2</b>	29.7	4.1	48.0	21.4	7.0	2.7	1.8	0.7	3.3	2.2	1.3	1.8	4.5	4.1
<b>UPLHH 10 (Fusion)</b>	27.3	3.8	50.0	21.7	7.7	2.5	4.2	1.5	3.0	1.9	1.4	1.8	6.0	4.6

Note : Hybrids are arranged according to descending order of Seed Cotton Yield

Table 19. Germination (%) and Plant Stand at harvest

Entry	Germination %				Stand at harvest (number of plants)	
	Khandwa	Surat	Banswara	Mean	Khandwa	Surat
ABCH 148 BG II	90.0	90.0	99.0	<b>93.0</b>	54.0	41.0
RCH 377 BG II	85.0	91.0	99.3	<b>91.8</b>	51.0	41.0
ACH 52-2 BG II	65.0	93.0	92.0	<b>83.3</b>	39.0	39.0
NCS 860 Bt 2	76.1	95.0	99.7	<b>90.3</b>	45.7	42.0
RCH 2 Bt (C)	85.0	99.0	98.3	<b>94.1</b>	51.0	40.0
JKCH 2245 (Event 1)	91.7	98.0	98.0	<b>95.9</b>	55.0	42.0
VBCH 1520 BG II	35.6	89.0	97.7	<b>74.1</b>	21.3	44.0
UPLHH 10 (Fusion)	90.6	96.0	82.0	<b>89.5</b>	54.3	43.0
ZCH 50106 Bt	93.3	91.0	99.3	<b>94.6</b>	56.0	44.0
PRCH 333 BG II	81.7	92.0	99.0	<b>90.9</b>	49.0	42.0
Ankur 3028 BG II	85.0	93.0	97.7	<b>91.9</b>	51.0	43.0
Ankur 651 (C)	90.6	90.0	97.3	<b>92.6</b>	54.3	44.0
SWCH 4708 BGII	89.4	88.0	98.7	<b>92.0</b>	53.7	41.0
Solar 60 BG II	87.8	89.0	96.7	<b>91.1</b>	52.7	44.0
NSPL 666 BG II	88.3	87.0	98.7	<b>91.3</b>	53.0	42.0
Tulasi 144 BG II	80.6	88.0	95.0	<b>87.9</b>	48.3	40.0
PCH 882 Bt 2	73.3	90.0	98.7	<b>87.3</b>	44.0	41.0
MRC 7383 BG II	88.3	91.0	98.0	<b>92.4</b>	53.0	43.0
557-2	85.0	92.0	97.3	<b>91.4</b>	51.0	44.0
VICH 303 BG II	92.2	90.0	96.0	<b>92.7</b>	55.3	40.0
SP 1016 B2	78.9	93.0	90.0	<b>87.3</b>	47.3	42.0
LC (H)	69.4	95.0	92.3	<b>85.6</b>	41.7	44.0

Table 20. Mean boll weight (g)

Entry	Khandwa	Surat	Junagadh	Talod	Banswara	Mean
ABCH 148 BG II	4.2	4.7	4.9	4.3	3.5	<b>4.3</b>
RCH 377 BG II	3.4	3.8	4.0	4.7	2.9	<b>3.8</b>
ACH 52-2 BG II	4.2	5.8	5.7	4.7	3.7	<b>4.8</b>
NCS 860 Bt 2	4.9	4.9	5.7	5.7	3.3	<b>4.9</b>
RCH 2 Bt (C)	2.6	4.7	4.5	4.9	3.7	<b>4.1</b>
JKCH 2245 (Event 1)	3.5	4.6	4.7	4.9	3.6	<b>4.3</b>
VBCH 1520 BG II	4.1	4.5	5.4	6.3	3.9	<b>4.8</b>
UPLHH 10 (Fusion)	3.6	5.6	5.3	5.7	2.6	<b>4.6</b>
ZCH 50106 Bt (Fusion)	3.8	4.8	4.6	5.5	3.1	<b>4.4</b>
PRCH 333 BG II	3.7	5.7	5.6	6.0	4.0	<b>5.0</b>
Ankur 3028 BG II	5.1	4.2	4.7	5.2	3.7	<b>4.6</b>
Ankur 651 (C)	4.0	4.2	4.3	4.6	3.6	<b>4.1</b>
SWCH 4708 BGII	4.5	5.1	5.6	5.0	3.2	<b>4.7</b>
Solar 60 BG II	4.4	4.6	4.7	6.0	4.1	<b>4.8</b>
NSPL 666 BG II	4.9	4.7	4.7	5.7	4.1	<b>4.8</b>
Tulasi 144 BG II	2.8	4.9	5.3	6.2	3.6	<b>4.6</b>
PCH 882 Bt 2	3.8	4.7	4.8	4.8	3.7	<b>4.4</b>
MRC 7383 BG II	3.4	4.6	4.7	6.5	4.3	<b>4.7</b>
557-2	4.1	5.4	5.0	5.2	3.2	<b>4.6</b>
VICH 303 BG II	3.6	4.8	5.1	6.0	4.5	<b>4.8</b>
SP 1016 B2	3.7	4.2	4.7	4.3	3.5	<b>4.1</b>
LC (H)	4.4	4.5	4.1	4.5	4.1	<b>4.3</b>
CD @ 5 %	0.7	0.9	1.0		0.4	
CV %	11.0	10.9	12.5		6.9	

Table 21. Mean Ginning Out Turn (%)

Entry	Khandwa	Surat	Junagadh	Talod	Banswara	Mean
ABCH 148 BG II	36.9	32.3	33.8	33.0	35.5	34.3
RCH 377 BG II	31.5	28.9	31.0	31.4	31.9	30.9
ACH 52-2 BG II	32.5	32.1	31.9	32.4	33.5	32.5
NCS 860 Bt 2	36.8	30.9	35.2	33.7	34.5	34.2
RCH 2 Bt (C)	33.2	38.1	32.3	31.3	35.4	34.1
JKCH 2245 (Event 1)	33.1	32.6	33.9	32.1	33.8	33.1
VBCH 1520 BG II	30.8	29.0	31.8	31.9	32.7	31.2
UPLHH 10 (Fusion)	37.3	34.5	35.1	34.0	35.3	35.3
ZCH 50106 Bt (Fusion)	36.3	34.6	36.8	35.0	38.1	36.2
PRCH 333 BG II	28.8	28.0	30.4	30.7	34.3	30.4
Ankur 3028 BG II	30.1	27.3	29.4	29.6	33.3	29.9
Ankur 651 (C)	33.3	33.3	30.5	33.3	37.0	33.5
SWCH 4708 BGII	33.1	31.2	34.5	32.5	37.1	33.7
Solar 60 BG II	35.7	33.0	34.8	35.5	38.3	35.5
NSPL 666 BG II	25.2	30.7	31.9	30.6	31.4	30.0
Tulasi 144 BG II	30.0	29.9	32.3	33.7	33.3	31.8
PCH 882 Bt 2	34.7	32.0	34.3	33.2	36.2	34.1
MRC 7383 BG II	28.5	29.6	32.5	28.9	30.4	30.0
557-2	32.8	30.9	30.7	34.0	36.3	32.9
VICH 303 BG II	29.6	28.2	30.2	28.7	28.3	29.0
SP 1016 B2	34.4	31.6	33.1	33.0	34.4	33.3
LC (H)	30.4	29.6	30.3	31.0	34.4	31.1
CD @ 5 %		1.0	1.6		1.3	
CV %		1.9	3.0		2.2	

Table 22: Lint index (g)

Entry	Khandwa	Surat	Junagadh	Banswara	Mean
ABCH 148 BG II	5.6	5.3	5.5	5.9	5.6
RCH 377 BG II	4.0	4.3	5.4	4.9	4.6
ACH 52-2 BG II	4.6	5.9	5.6	5.1	5.3
NCS 860 Bt 2	4.5	4.7	5.9	5.8	5.2
RCH 2 Bt (C)	3.6	6.5	5.6	5.5	5.3
JKCH 2245 (Event 1)	3.9	4.8	5.4	5.2	4.8
VBCH 1520 BG II	3.6	4.5	5.3	5.0	4.6
UPLHH 10 (Fusion)	4.8	5.8	5.5	5.8	5.5
ZCH 50106 Bt (Fusion)	4.4	5.3	6.0	6.8	5.6
PRCH 333 BG II	3.6	3.9	4.8	4.9	4.3
Ankur 3028 BG II	4.0	4.5	4.8	4.8	4.5
Ankur 651 (C)	3.9	5.7	4.8	6.0	5.1
SWCH 4708 BGII	4.5	5.2	6.2	6.3	5.6
Solar 60 BG II	5.2	5.7	6.1	7.4	6.1
NSPL 666 BG II	2.8	3.3	5.3	4.8	4.1
Tulasi 144 BG II	3.9	4.9	5.6	4.6	4.8
PCH 882 Bt 2	3.6	4.7	5.6	6.2	5.0
MRC 7383 BG II	3.4	4.2	5.2	4.0	4.2
557-2	4.1	4.7	5.0	5.5	4.8
VICH 303 BG II	4.0	4.7	5.2	4.0	4.5
SP 1016 B2	3.8	4.4	5.4	5.2	4.7
LC (H)	4.1	5.3	4.7	5.9	5.0



Table 23: Seed index (g)

Entry	Khandwa	Surat	Junagadh	Banswara	Mean
ABCH 148 BG II	9.5	11.0	10.8	10.7	<b>10.5</b>
RCH 377 BG II	8.6	10.5	12.1	10.4	<b>10.4</b>
ACH 52-2 BG II	9.6	12.5	12.0	10.1	<b>11.1</b>
NCS 860 Bt 2	7.8	10.5	11.0	11.1	<b>10.1</b>
RCH 2 Bt (C)	7.2	10.5	11.8	10.0	<b>9.9</b>
JKCH 2245 (Event 1)	7.9	10.0	10.5	10.3	<b>9.7</b>
VBCH 1520 BG II	8.1	11.0	11.2	10.3	<b>10.2</b>
UPLHH 10 (Fusion)	8.1	11.0	10.2	10.5	<b>10.0</b>
ZCH 50106 Bt (Fusion)	7.7	10.0	10.2	11.1	<b>9.7</b>
PRCH 333 BG II	8.8	10.0	11.1	9.4	<b>9.8</b>
Ankur 3028 BG II	9.3	12.0	11.5	9.6	<b>10.6</b>
Ankur 651 (C)	7.7	11.5	11.1	10.2	<b>10.1</b>
SWCH 4708 BGII	9.1	11.5	11.8	10.7	<b>10.8</b>
Solar 60 BG II	9.3	11.5	11.4	11.9	<b>11.0</b>
NSPL 666 BG II	8.3	7.5	11.4	10.5	<b>9.4</b>
Tulasi 144 BG II	9.1	11.5	11.7	9.2	<b>10.4</b>
PCH 882 Bt 2	6.7	10.0	10.7	11.0	<b>9.6</b>
MRC 7383 BG II	8.5	10.0	10.8	9.1	<b>9.6</b>
557-2	8.4	10.5	11.3	9.7	<b>10.0</b>
VICH 303 BG II	9.4	12.0	12.1	10.1	<b>10.9</b>
SP 1016 B2	7.2	9.5	10.8	9.8	<b>9.3</b>
LC (H)	9.3	9.5	10.8	11.3	<b>10.2</b>

Table 24. Seed cotton yield (kg/ha)

Entry	Khandwa	Surat	Junagadh	Talod	Banswara	Mean	% Inc. over Ankur 651 (C)	% Inc. over RCH 2 Bt (C)	% Inc. over LC Hybrid
MRCH 377 BG II	2320	3654	2285	1390	1986	<b>2327</b>	74	117	53
ACH 52-2 BG II	1679	3112	2178	1750	1201	<b>1984</b>	48	85	30
SWCH 4708 BGII	2343	2518	1881	1096	1714	<b>1910</b>	43	79	25
Ankur 3028 BG II	1889	2255	2045	1367	1977	<b>1907</b>	43	78	25
PRCH 333 BG II	1494	2282	2195	1411	1456	<b>1767</b>	32	65	16
JKCH 2245 (Event 1)	1631	2307	1639	1487	1221	<b>1657</b>	24	55	9
VICH 303 BG II	1766	1957	1975	981	1471	<b>1630</b>	22	52	7
NCS 860 Bt 2	1382	1782	2311	1205	1298	<b>1596</b>	19	49	5
ABCH 148 BG II	1585	2004	1322	854	2121	<b>1577</b>	18	47	3
LC (H)	1775	2469	583	1266	1531	<b>1525</b>	14	43	0
Solar 60 BG II	1500	1790	2198	1234	878	<b>1520</b>	14	42	0
MRC 7383 BG II	1266	1737	1854	1246	1422	<b>1505</b>	12	41	-1
557-2	1400	1601	1609	1163	1431	<b>1441</b>	8	35	-6
Tulasi 144 BG II	1406	1828	1597	908	1440	<b>1436</b>	7	34	-6
NSPL 666 BG II	1423	1883	1709	1159	909	<b>1417</b>	6	32	-7
PCH 882 Bt 2	1019	1425	2020	1345	1180	<b>1398</b>	4	31	-8
Ankur 651 (C)	1885	1922	652	903	1330	<b>1338</b>	0	25	-12
ZCH 50106 Bt (Fusion)	1625	989	1253	1127	1483	<b>1295</b>	-3	21	-15
VBCH 1520 BG II	827	1391	1678	1325	744	<b>1193</b>	-11	11	-22
RCH 2 Bt (C)	976	1290	1296	783	1005	<b>1070</b>	-20	0	-30
SP 1016 B2	612	1063	1097	618	1566	<b>991</b>	-26	-7	-35
UPLHH 10 (Fusion)	523	887	321	615	1533	<b>776</b>	-42	-27	-49
CD @ 5 %	433	647	383		432				
CV %	18	21	14		19				

Table 25. Lint yield (kg/ha)

Entry	Khandwa	Surat	Junagadh	Talod	Banswara	Mean	% Inc. over Ankur 651 (C)	% Inc. over RCH 2 Bt (C)	% Inc. over LC Hybrid
RCH 377 BG II	730	1055	709	439	635	<b>714</b>	58	95	45
ACH 52-2 BG II	546	997	694	566	402	<b>641</b>	42	75	30
SWCH 4708 BGII	775	783	647	355	636	<b>639</b>	42	75	30
Ankur 3028 BG II	569	615	602	406	658	<b>570</b>	26	56	16
JKCH 2245 (Event 1)	539	753	556	478	412	<b>548</b>	21	50	11
NCS 860 Bt 2	509	551	814	406	448	<b>545</b>	21	49	11
ABCH 148 BG II	586	647	446	284	754	<b>543</b>	20	48	10
PRCH 333 BG II	430	638	668	433	500	<b>534</b>	18	46	8
Solar 60 BG II	536	591	765	436	336	<b>533</b>	18	46	8
LC (H)	540	830	177	392	528	<b>493</b>	9	35	0
PCH 882 Bt 2	353	456	696	446	427	<b>476</b>	5	30	-4
VICH 303 BG II	523	551	598	281	416	<b>474</b>	5	30	-4
557-2	459	497	494	398	519	<b>473</b>	5	29	-4
ZCH 50106 Bt (Fusion)	589	342	461	396	565	<b>471</b>	4	29	-5
Tulasi 144 BG II	422	546	517	307	481	<b>455</b>	1	24	-8
MRC 7383 BG II	361	515	604	360	432	<b>454</b>	1	24	-8
Ankur 651 (C)	628	640	199	295	495	<b>451</b>	0	23	-8
NSPL 666 BG II	359	579	545	359	284	<b>425</b>	-6	16	-14
VBCH 1520 BG II	255	403	535	423	243	<b>372</b>	-18	2	-25
RCH 2 Bt (C)	324	492	415	245	356	<b>366</b>	-19	0	-26
SP 1016 B2	211	336	363	205	539	<b>331</b>	-27	-10	-33
UPLHH 10 (Fusion)	195	305	113	209	544	<b>273</b>	-39	-25	-45
CD @ 5 %		200	127		157				
CV %		20	15		20				

Table 26. 2.5% Span Length (mm)

Entry	2.5% span length (mm)				
	Khandwa	Surat	Talod	Banswara	Mean
ABCH 148 BG II	27.5	31.7	30.9	29.7	<b>30.0</b>
RCH 377 BG II	28.1	34.7	30.8	32.1	<b>31.4</b>
ACH 52-2 BG II	28.2	33.1	31.8	31.0	<b>31.0</b>
NCS 860 Bt 2	28.2	31.8	30.0	30.3	<b>30.1</b>
RCH 2 Bt (C)	26.0	31.0	29.6	29.2	<b>29.0</b>
JKCH 2245 (Event 1)	28.4	32.0	31.3	29.7	<b>30.4</b>
VBCH 1520 BG II	25.3	29.5	29.2	27.4	<b>27.9</b>
UPLHH 10 (Fusion)	24.9	28.7	28.4	27.2	<b>27.3</b>
ZCH 50106 Bt (Fusion)	26.8	27.6	28.3	29.1	<b>28.0</b>
PRCH 333 BG II	29.2	31.1	31.2	28.7	<b>30.1</b>
Ankur 3028 BG II	28.7	31.7	30.9	28.1	<b>29.9</b>
Ankur 651 (C)	27.6	30.5	29.2	28.3	<b>28.9</b>
SWCH 4708 BGII	28.6	30.3	28.9	30.5	<b>29.6</b>
Solar 60 BG II	27.5	31.5	30.9	30.7	<b>30.2</b>
NSPL 666 BG II	30.4	33.1	32.0	33.4	<b>32.2</b>
Tulasi 144 BG II	26.2	30.3	30.6	31.8	<b>29.7</b>
PCH 882 Bt 2	28.4	30.6	31.3	29.0	<b>29.8</b>
MRC 7383 BG II	28.8	31.8	31.5	30.0	<b>30.5</b>
557-2	29.5	31.7	32.4	30.2	<b>31.0</b>
VICH 303 BG II	27.0	30.8	30.2	30.1	<b>29.5</b>
SP 1016 B2	26.6	29.8	31.8	30.6	<b>29.7</b>
LC (H)	28.7	27.4	25.8		<b>27.3</b>

Table 27. Micronaire Value

Entry	Micronaire value				
	Khandwa	Surat	Talod	Banswara	Mean
ABCH 148 BG II	2.9	4.1	4.1	3.4	3.6
RCH 377 BG II	3.8	4.4	4.1	3.7	4.0
ACH 52-2 BG II	3.8	4.2	4.0	3.7	3.9
NCS 860 Bt 2	4.0	4.3	4.9	3.7	4.2
RCH 2 Bt (C)	3.3	4.1	4.0	4.4	4.0
JKCH 2245 (Event 1)	3.3	4.0	3.9	3.2	3.6
VBCH 1520 BG II	4.3	4.6	4.8	4.3	4.5
UPLHH 10 (Fusion)	3.3	4.0	3.8	4.2	3.8
ZCH 50106 Bt (Fusion)	3.7	4.1	4.0	3.7	3.9
PRCH 333 BG II	3.5	4.0	4.6	3.3	3.9
Ankur 3028 BG II	4.2	4.8	4.2	3.9	4.3
Ankur 651 (C)	4.0	5.2	4.5	3.9	4.4
SWCH 4708 BGII	3.6	5.0	3.7	4.1	4.1
Solar 60 BG II	4.4	4.9	4.9	4.4	4.7
NSPL 666 BG II	3.5	4.3	3.9	3.6	3.8
Tulasi 144 BG II	3.2	3.8	4.3	3.4	3.7
PCH 882 Bt 2	3.7	4.4	4.5	3.6	4.1
MRC 7383 BG II	3.1	4.3	3.8	3.5	3.7
557-2	3.5	3.8	4.4	3.5	3.8
VICH 303 BG II	4.0	4.9	5.0	4.1	4.5
SP 1016 B2	3.8	4.0	4.2	4.4	4.1
LC (H)	3.9	4.7	4.5		4.4

Table 28. Uniformity ratio

Entry	Uniformity ratio			
	Khandwa	Surat	Talod	Mean
ABCH 148 BG II	44	52	47	48
RCH 377 BG II	47	47	49	48
ACH 52-2 BG II	46	50	45	47
NCS 860 Bt 2	46	5	52	34
RCH 2 Bt (C)	47	50	48	48
JKCH 2245 (Event 1)	45	49	46	47
VBCH 1520 BG II	50	52	52	51
UPLHH 10 (Fusion)	47	52	52	50
ZCH 50106 Bt (Fusion)	49	49	51	50
PRCH 333 BG II	48	49	50	49
Ankur 3028 BG II	48	51	51	50
Ankur 651 (C)	50	51	47	49
SWCH 4708 BGII	47	51	49	49
Solar 60 BG II	48	52	49	50
NSPL 666 BG II	44	49	47	47
Tulasi 144 BG II	47	50	52	50
PCH 882 Bt 2	46	49	50	48
MRC 7383 BG II	45	50	48	48
557-2	47	48	48	48
VICH 303 BG II	46	50	50	49
SP 1016 B2	45	50	50	48
LC (H)	46	53	53	51

Table 29. Strength (g/tex)

Entry	Strength (g/tex)				
	Khandwa	Surat	Talod	Banswara	Mean
ABCH 148 BG II	22.9	23.9	23.2	25.4	23.9
RCH 377 BG II	20.3	25.4	22.7	23.7	23.0
ACH 52-2 BG II	20.6	25.0	22.7	24.5	23.2
NCS 860 Bt 2	21.8	23.7	22.9	26.0	23.6
RCH 2 Bt (C)	21.0	23.6	23.9	22.2	22.7
JKCH 2245 (Event 1)	20.7	23.0	24.1	22.0	22.5
VBCH 1520 BG II	20.1	25.5	24.7	22.2	23.1
UPLHH 10 (Fusion)	19.1	21.6	23.0	23.2	21.7
ZCH 50106 Bt (Fusion)	21.6	21.5	25.1	24.8	23.3
PRCH 333 BG II	21.5	23.6	23.5	24.3	23.2
Ankur 3028 BG II	21.8	24.5	25.7	23.6	23.9
Ankur 651 (C)	21.1	22.4	22.4	21.6	21.9
SWCH 4708 BGII	21.8	22.0	23.8	23.5	22.8
Solar 60 BG II	21.4	22.4	21.7	23.2	22.2
NSPL 666 BG II	23.4	23.8	24.5	24.0	23.9
Tulasi 144 BG II	20.3	24.0	23.3	21.2	22.2
PCH 882 Bt 2	21.5	22.6	23.4	22.8	22.6
MRC 7383 BG II	21.6	23.8	25.1	25.2	23.9
557-2	22.3	24.5	22.8	24.7	23.6
VICH 303 BG II	21.2	22.7	22.6	25.6	23.0
SP 1016 B2	19.4	21.4	23.2	21.4	21.4
LC (H)	20.8	22.7	24.4		22.6

Table 30. Jassid / plant

Entry	Khandwa	Surat	Junagadh	Talod	Mean
ABCH 148 BG II	6.4	5.1	10.7	0.8	5.8
RCH 377 BG II	3.4	4.8	7.1	0.3	3.9
ACH 52-2 BG II	3.3	3.9	5.6	0.3	3.3
NCS 860 Bt 2	4.6	6.5	10.0	1.5	5.7
RCH 2 Bt (C)	6.9	8.1	15.5	1.4	8.0
JKCH 2245 (Event 1)	4.8	6.2	11.5	0.9	5.9
VBCH 1520 BG II	3.2	6.9	10.9	0.7	5.4
UPLHH 10 (Fusion)	6.7	8.5	14.4	1.3	7.7
ZCH 50106 Bt (Fusion)	3.4	6.2	11.5	1.3	5.6
PRCH 333 BG II	3.2	4.7	6.7	0.4	3.8
Ankur 3028 BG II	5.2	4.7	9.6	0.4	5.0
Ankur 651 (C)	3.2	5.2	7.6	0.4	4.1
SWCH 4708 BGII	3.1	6.3	11.2	0.4	5.3
Solar 60 BG II	6.4	7.0	10.7	0.6	6.2
NSPL 666 BG II	6.6	5.9	12.7	0.7	6.5
Tulasi 144 BG II	4.9	7.6	9.6	0.7	5.7
PCH 882 Bt 2	4.7	5.5	9.9	0.5	5.2
MRC 7383 BG II	4.3	4.6	10.8	0.9	5.2
557-2	5.0	6.2	11.7	0.8	5.9
VICH 303 BG II	3.1	4.8	7.7	0.6	4.1
SP 1016 B2	6.6	7.1	12.8	1.5	7.0
LC (H)	3.0	4.3	8.8	0.1	4.1

Table 31. Whitefly / plant

Entry	Khandwa	Surat	Talod	Mean
ABCH 148 BG II	4.8	1.5	0.1	2.1
RCH 377 BG II	2.1	3.6	0.2	2.0
ACH 52-2 BG II	1.9	4.9	0.1	2.3
NCS 860 Bt 2	2.9	2.6	0.0	1.8
RCH 2 Bt (C)	5.1	1.7	0.1	2.3
JKCH 2245 (Event 1)	3.0	2.7	0.1	1.9
VBCH 1520 BG II	1.9	6.3	0.1	2.8
UPLHH 10 (Fusion)	4.9	2.4	0.1	2.5
ZCH 50106 Bt (Fusion)	1.8	4.2	0.1	2.0
PRCH 333 BG II	2.0	3.9	0.1	2.0
Ankur 3028 BG II	2.8	4.8	0.0	2.5
Ankur 651 (C)	2.1	1.0	0.1	1.1
SWCH 4708 BGII	1.9	4.1	0.1	2.0
Solar 60 BG II	4.9	2.1	0.1	2.4
NSPL 666 BG II	5.5	3.6	0.3	3.1
Tulasi 144 BG II	3.1	4.0	0.1	2.4
PCH 882 Bt 2	3.2	2.3	0.2	1.9
MRC 7383 BG II	2.9	2.9	0.3	2.0
557-2	3.1	2.8	0.4	2.1
VICH 303 BG II	2.2	2.4	0.3	1.6
SP 1016 B2	5.2	2.8	0.1	2.7
LC (H)	1.9	6.3	0.2	2.8

Table 32. Thrips/ plant

Entry	Khandwa	Surat	Talod	Mean
ABCH 148 BG II	0.9	12.8	0.0	4.6
RCH 377 BG II	0.5	12.1	0.1	4.2
ACH 52-2 BG II	0.4	14.9	0.1	5.1
NCS 860 Bt 2	0.6	10.0	0.0	3.6
RCH 2 Bt (C)	0.8	6.5	0.0	2.4
JKCH 2245 (Event 1)	0.6	6.5	0.2	2.4
VBCH 1520 BG II	0.5	12.8	0.2	4.5
UPLHH 10 (Fusion)	0.8	11.5	0.3	4.2
ZCH 50106 Bt (Fusion)	0.5	19.7	0.0	6.7
PRCH 333 BG II	0.4	13.8	0.1	4.7
Ankur 3028 BG II	0.7	19.7	0.0	6.8
Ankur 651 (C)	0.4	16.2	0.0	5.6
SWCH 4708 BGII	0.4	18.1	0.0	6.2
Solar 60 BG II	0.9	15.3	0.0	5.4
NSPL 666 BG II	1.0	13.2	0.0	4.7
Tulasi 144 BG II	0.6	8.5	0.2	3.1
PCH 882 Bt 2	0.7	13.3	0.0	4.7
MRC 7383 BG II	0.6	12.7	0.0	4.4
557-2	0.5	8.9	0.1	3.2
VICH 303 BG II	0.5	13.8	0.1	4.8
SP 1016 B2	0.9	4.1	0.4	1.8
LC (H)	0.4	18.0	0.0	6.1

Table 33. Mealy bug/10cm terminal shoot

Entry	Surat	Junagadh	Mean
ABCH 148 BG II	0.0	2.3	1.2
RCH 377 BG II	0.0	1.3	0.7
ACH 52-2 BG II	0.1	0.8	0.4
NCS 860 Bt 2	0.1	1.5	0.8
RCH 2 Bt (C)	0.0	1.6	0.8
JKCH 2245 (Event 1)	0.2	1.0	0.6
VBCH 1520 BG II	0.0	0.8	0.4
UPLHH 10 (Fusion)	0.1	3.0	1.5
ZCH 50106 Bt (Fusion)	0.1	2.7	1.4
PRCH 333 BG II	0.1	0.8	0.4
Ankur 3028 BG II	0.0	1.8	0.9
Ankur 651 (C)	0.1	1.6	0.8
SWCH 4708 BGII	0.1	1.7	0.9
Solar 60 BG II	0.0	1.6	0.8
NSPL 666 BG II	0.0	2.2	1.1
Tulasi 144 BG II	0.0	1.8	0.9
PCH 882 Bt 2	0.0	1.5	0.8
MRC 7383 BG II	0.0	0.8	0.4
557-2	0.1	2.1	1.1
VICH 303 BG II	0.0	1.8	0.9
SP 1016 B2	0.0	1.4	0.7
LC (H)	0.1	1.7	0.9

Table 34. Predators

Entry	Khandwa	Surat	Junagadh	Talod	Banswara	Mean
ABCH 148 BG II	1.8	0.3	0.6	6.3	2.3	2.3
RCH 377 BG II	2.2	0.2	0.6	2.9	2.2	1.6
ACH 52-2 BG II	1.9	0.4	0.6	2.2	2.2	1.5
NCS 860 Bt 2	1.7	0.3	0.6	9.3	2.1	2.8
RCH 2 Bt (C)	2.0	0.0	0.7	10.4	2.2	3.1
JKCH 2245 (Event 1)	1.5	0.0	0.7	6.8	1.9	2.2
VBCH 1520 BG II	2.3	0.0	0.7	7.0	1.9	2.4
UPLHH 10 (Fusion)	1.8	0.0	0.6	10.5	2.3	3.0
ZCH 50106 Bt (Fusion)	2.0	0.2	0.6	9.8	2.2	3.0
PRCH 333 BG II	1.6	0.2	0.7	3.3	2.2	1.6
Ankur 3028 BG II	1.3	0.0	0.7	2.9	2.3	1.4
Ankur 651 (C)	2.6	0.2	0.7	3.2	2.2	1.8
SWCH 4708 BGII	2.4	0.3	0.6	3.1	2.4	1.8
Solar 60 BG II	1.9	0.2	0.7	4.5	2.3	1.9
NSPL 666 BG II	1.4	0.0	0.6	5.1	2.3	1.9
Tulasi 144 BG II	1.6	0.2	0.7	5.9	2.4	2.1
PCH 882 Bt 2	1.6	0.3	0.7	4.0	2.2	1.8
MRC 7383 BG II	1.5	0.0	0.7	6.9	2.5	2.3
557-2	1.7	0.3	0.7	6.2	2.4	2.2
VICH 303 BG II	2.0	0.2	0.7	4.8	2.5	2.0
SP 1016 B2	2.1	0.0	0.7	11.2	2.7	3.3
LC (H)	2.1	0.3	0.8	1.0	2.5	1.4

Table 35. Percent square damage by Bollworms

Entry	Khandwa	Surat	Junagadh	Mean
ABCH 148 BG II	4.4	0.0	1.2	1.9
RCH 377 BG II	3.6	0.0	3.5	2.4
ACH 52-2 BG II	2.9	0.2	1.3	1.5
NCS 860 Bt 2	4.3	1.2	1.3	2.3
RCH 2 Bt (C)	4.9	0.8	1.1	2.3
JKCH 2245 (Event 1)	2.7	1.3	1.5	1.8
VBCH 1520 BG II	3.7	0.7	1.6	2.0
UPLHH 10 (Fusion)	4.2	0.0	1.5	1.9
ZCH 50106 Bt (Fusion)	3.2	0.0	1.4	1.5
PRCH 333 BG II	2.2	2.1	1.4	1.9
Ankur 3028 BG II	5.0	0.4	1.2	2.2
Ankur 651 (C)	3.9	8.0	10.0	7.3
SWCH 4708 BGII	3.4	0.0	1.6	1.7
Solar 60 BG II	4.3	0.0	1.4	1.9
NSPL 666 BG II	5.7	1.7	1.6	3.0
Tulasi 144 BG II	5.9	0.0	1.5	2.5
PCH 882 Bt 2	4.6	0.0	1.3	2.0
MRC 7383 BG II	3.4	0.0	1.1	1.5
557-2	3.5	0.0	1.5	1.7
VICH 303 BG II	3.3	0.4	1.4	1.7
SP 1016 B2	5.4	0.0	1.2	2.2
LC (H)	10.9	5.4	12.6	9.6

Table 36. Spotted bollworm, *Earias* spp. (No. of Larvae / 5 plants)

Entry	Khandwa	Surat	Talod	Banswara	Mean
ABCH 148 BG II	2.1	0.0	0.0	0.8	0.7
RCH 377 BG II	1.5	0.0	0.0	1.0	0.6
ACH 52-2 BG II	1.9	0.0	0.0	2.4	1.1
NCS 860 Bt 2	2.3	0.0	0.0	2.4	1.2
RCH 2 Bt (C)	2.9	0.0	0.0	2.7	1.4
JKCH 2245 (Event 1)	2.3	0.0	0.0	3.0	1.3
VBCH 1520 BG II	2.9	0.0	0.0	3.7	1.6
UPLHH 10 (Fusion)	3.1	0.0	0.0	2.6	1.4
ZCH 50106 Bt (Fusion)	2.3	0.0	0.0	2.1	1.1
PRCH 333 BG II	2.4	0.2	0.0	2.0	1.1
Ankur 3028 BG II	3.2	0.0	0.0	1.3	1.1
Ankur 651 (C)	1.5	0.6	0.0	2.1	1.0
SWCH 4708 BGII	2.1	0.0	0.0	1.8	1.0
Solar 60 BG II	3.0	0.3	0.0	3.3	1.7
NSPL 666 BG II	3.0	0.3	0.0	3.1	1.6
Tulasi 144 BG II	2.1	0.0	0.1	2.0	1.0
PCH 882 Bt 2	2.4	0.0	0.0	2.0	1.1
MRC 7383 BG II	2.3	0.0	0.0	1.8	1.0
557-2	2.4	0.0	0.0	2.0	1.1
VICH 303 BG II	3.1	0.0	0.0	1.8	1.2
SP 1016 B2	3.6	0.0	0.0	1.8	1.3
LC (H)	6.8	0.5	1.2	2.7	2.8

Table 37. Number of Pink Boll worm larvae / 20 green bolls

Entry	Khandwa	Surat	Talod	Banswara	Mean
ABCH 148 BG II	4.1	0.0	0.0	1.8	1.5
RCH 377 BG II	2.4	0.0	0.0	1.8	1.0
ACH 52-2 BG II	3.2	0.0	0.0	2.7	1.5
NCS 860 Bt 2	3.3	0.0	0.0	2.7	1.5
RCH 2 Bt (C)	4.6	0.0	0.0	3.1	1.9
JKCH 2245 (Event 1)	3.6	0.0	0.0	2.4	1.5
VBCH 1520 BG II	2.3	0.0	0.0	3.7	1.5
UPLHH 10 (Fusion)	4.9	0.0	0.0	2.4	1.8
ZCH 50106 Bt (Fusion)	2.3	0.0	0.0	2.4	1.2
PRCH 333 BG II	2.5	0.0	0.0	2.3	1.2
Ankur 3028 BG II	3.5	0.0	0.0	2.2	1.4
Ankur 651 (C)	2.4	2.8	0.0	3.3	2.1
SWCH 4708 BGII	2.5	0.0	0.0	2.3	1.2
Solar 60 BG II	4.6	0.0	0.0	3.7	2.1
NSPL 666 BG II	5.0	0.0	0.0	3.2	2.0
Tulasi 144 BG II	3.4	0.0	0.0	2.6	1.5
PCH 882 Bt 2	3.5	0.0	0.0	2.9	1.6
MRC 7383 BG II	3.5	0.0	0.0	2.7	1.6
557-2	3.7	0.0	0.0	2.9	1.6
VICH 303 BG II	2.3	0.0	0.0	2.3	1.2
SP 1016 B2	5.0	0.0	0.0	2.3	1.8
LC (H)	10.8	1.7	0.0	3.1	3.9

Table 38. Open boll and locule damage (%)

Entry	Open boll damage (%)				Locule damage (%)			
	Khandwa	Surat	Junagadh	Mean	Khandwa	Surat	Junagadh	Mean
ABCH 148 BG II	10.2	2.3	2.5	5.0	9.4	1.3	1.5	4.1
RCH 377 BG II	6.3	3.1	3.2	4.2	10.1	1.8	2.4	4.8
ACH 52-2 BG II	6.4	1.9	1.3	3.2	9.1	1.1	1.0	3.7
NCS 860 Bt 2	8.6	4.2	1.9	4.9	11.1	2.4	0.9	4.8
RCH 2 Bt (C)	10.9	6.9	2.1	6.6	9.9	4.0	1.2	5.0
JKCH 2245 (Event 1)	8.2	4.2	1.8	4.7	7.5	2.4	1.2	3.7
VBCH 1520 BG II	7.0	0.4	1.9	3.1	7.3	0.2	1.3	2.9
UPLHH 10 (Fusion)	10.5	5.6	2.0	6.0	8.9	3.8	1.1	4.6
ZCH 50106 Bt (Fusion)	5.9	4.3	1.8	4.0	7.7	2.3	1.2	3.7
PRCH 333 BG II	5.8	2.0	1.8	3.2	10.8	1.1	1.3	4.4
Ankur 3028 BG II	9.1	1.9	2.1	4.4	9.6	1.3	1.4	4.1
Ankur 651 (C)	5.7	17.7	7.3	10.2	10.3	12.3	5.6	9.4
SWCH 4708 BGII	5.9	5.4	1.7	4.3	10.0	3.2	1.2	4.8
Solar 60 BG II	11.0	2.7	1.9	5.2	9.3	1.6	1.1	4.0
NSPL 666 BG II	10.1	1.5	2.1	4.6	9.7	1.0	1.1	3.9
Tulasi 144 BG II	8.7	1.7	2.1	4.2	10.1	1.0	1.2	4.1
PCH 882 Bt 2	9.1	3.3	2.0	4.8	8.5	2.1	1.1	3.9
MRC 7383 BG II	8.1	3.7	1.9	4.6	8.2	2.1	1.0	3.8
557-2	8.4	8.9	1.8	6.4	10.4	5.6	0.9	5.6
VICH 303 BG II	5.5	0.6	2.1	2.7	7.8	0.3	1.1	3.1
SP 1016 B2	10.7	1.0	1.9	4.5	10.4	0.5	1.3	4.1
LC (H)	16.1	8.6	10.8	11.8	17.7	5.2	7.9	10.3



### **BIOMETRICAL EVALUATION**

**Germination and Final Plant Stand:** The germination was in general very good in all the entries (Table 39) and the final plant stand at harvest was also adequate at all the locations in all the entries.

**Boll Weight:** The overall Mean Boll weight of the Bt hybrids varied from 3.2 to 4.4 g. The non Bt check hybrids recorded a mean boll weight of 3.5 g. Ankur 3034 BG II recorded the highest boll weight of 4.4 g (Table 40).

**Ginning Outturn:** The mean ginning outturn of the Bt cotton hybrids varied from 32.2 to 36.9 %. Hybrid Sarju BG II recorded the highest ginning outturn of 36.9 per cent. The Bt check hybrid Bunny Bt and local check hybrid recorded a mean ginning out turn of 34.5% and 33.6%, respectively (Table 41).

**Lint Index and Seed Index :** In general, most of the Bt hybrids had lint index in the range of 4.1 to 6.0 with local hybrid check and non-Bt check hybrid recording 4.4 and 4.2 respectively (Table 42). The seed index ranged from 7.1 to 11.5 with RCH 530 BG II having higher index of 11.5 (Table 43).

**Mean Seed Cotton Yield under ETL based Plant Protection:** The mean seed cotton yield recorded by the Bt cotton hybrids under rainfed conditions of Central Zone are presented in Table 44 . Under rainfed conditions, only three test Bt cotton hybrids recorded higher seed cotton yield than Bt check hybrid Bunny Bt, while sixteen test hybrids recorded higher seed cotton yield over non-Bt check hybrid including Bt check and Local check. Around 15 hybrids showed better lint yield including Bt check and Local check as compared to non-Bt check hybrid, only three were seen better than Bunny Bt check hybrid. (Table 45)

**Fibre Quality Evaluation:** Fibre quality evaluation of the lint samples of all test entries from many centres were carried out and the details like fibre length, strength, micronaire, uniformity ratio are presented in Table 46, 47, 48, and 49. Most of the test hybrids had equal or better fibre length than that of Bt check hybrid (29.5 mm). Entry Krishna BG II had relatively lesser fibre length of 25.9 mm compared to Bt check hybrid. The hybrid entries had around 3.4 – 4.3 as regards micronaire is concerned ; however, UPLHH-1 ( Fusion), VBCH 1516 BG II, RCH 530 BG II had low micronaire of 3.5. Similarly, fibre strength did not exhibit much variation. Most of the hybrids had fibre strength in the range of 19.3 – 24 g/tex. However, RCH 530 BG II exhibited high fiber strength of 24.6 g/tex under rainfed conditions. Characteristic variation could not be noticed regarding uniformity ratio with most of the hybrids showing around 47 - 51%.

### **ETL BASED ENTOMOLOGICAL EVALUATION**

**Sucking pests and bollworms:** The data on incidences of sap sucking pests and bollworms were recorded and the details are given in Tables 50 – 57. Jassids, whitefly, thrips and mealy bugs were observed in all test Bt hybrids at different centres under rainfed conditions. However, whitefly and thrips population were on the higher side in Bharuch centre. Pink bollworm incidence was considerable on PCH 881 Bt2, ABCH 146 BG II, Tulasi 153 BG II, RCH 530 BG II. Open boll damage at harvest indicated higher damage levels on ABCH 146 BG II followed by SP 503 B2. The mean damage in locules varied between 0.8 – 3.9 % among entries, which was far less than checks

Summary Tables: SET A Rainfed Trials

Entry	Germination (%)	Boll weight (g)	Ginning Out Turn (%)	Lint index (g)	Seed index (g)	Lint yield (kg/ha)	Seed cotton yield (kg/ha)
MRC 7375 BG II	99.8	4.3	33.9	4.5	8.4	507	1545
SBCH 310 (Fusion)	95.9	4.1	34.4	4.6	8.4	475	1442
Ankur 3034 BG II	98.2	4.4	32.6	5.3	10.3	402	1291
Bunny Bt (C)	98.8	4.1	34.5	5.0	9.0	420	1260
SP 503 B2	91.3	3.8	32.8	4.4	8.6	391	1246
RCH 530 BG II	90.4	4.3	32.8	5.5	11.5	388	1194
Krishna BG II	95.3	3.5	33.5	4.1	7.8	393	1192
LC (H)	96.5	3.7	33.6	4.4	8.5	382	1177
Sarju BG II	95.1	4.2	36.9	6.0	10.0	424	1169
UPLHH 1 (Fusion)	98.2	3.2	35.3	4.0	7.2	402	1160
PCH 881 Bt 2	96.7	4.1	35.3	4.4	8.4	390	1118
VICH 304 BG II	98.4	3.8	34.7	4.7	8.3	382	1116
JKCH 2255 (Event 1)	93.1	3.9	36.5	4.2	7.1	389	1108
NCS 859 Bt 2	97.0	4.2	33.7	4.6	8.5	353	1086
MLCH 317 BG II	98.9	4.0	36.8	5.0	8.0	377	1069
VBCH 1516 BG II	94.3	3.9	32.8	4.5	8.9	328	1062
Ankur 651 (C)	97.2	3.5	35.8	4.2	7.4	331	951
SWCH 1 BG II	98.8	4.2	35.2	4.8	8.8	327	940
Tulasi 153 BG II	93.5	4.2	32.2	4.6	9.3	292	927
ABCH 146 BG II	94.5	3.7	36.4	4.6	8.0	274	750
PRCH 305 BG II	97.8	3.7	34.4	4.3	8.0	213	619

Note : Hybrids are arranged according to descending order of Seed Cotton Yield

Entry	2.5% span length (mm)	Micronaire value	Uniformity ratio	Strength (g/tex)	Jassid / plant	Whitefly / plant	Thrips/ plant	Mealy bug/10cm terminal	Predators	Spotted bollworm, Earias spp. (No. of Lar / 5 pts)	Number of Pink Boll worm larvae / 20 GB	Open boll damage (%)	Locule damage (%)
<b>MRC 7375 BG II</b>	29.7	3.9	49.9	21.0	3.8	5.6	6.4	2.1	3.8	0.9	1.4	0.9	0.8
<b>SBCH 310 (Fusion)</b>	28.8	4.1	50.2	21.5	2.8	7.2	6.2	1.8	4.7	0.6	1.1	1.3	0.9
<b>Ankur 3034 BG II</b>	30.2	3.9	48.7	23.1	3.8	6.2	3.6	2.3	5.3	0.9	1.5	1.1	1.3
<b>Bunny Bt (C)</b>	29.5	4.2	48.4	22.4	4.2	6.6	6.1	1.8	5.2	0.7	1.3	2.1	1.4
<b>SP 503 B2</b>	31.5	4.0	47.4	24.0	4.0	9.4	6.6	2.2	4.2	0.7	1.1	4.0	3.6
<b>RCH 530 BG II</b>	31.6	3.5	48.2	24.6	4.1	6.8	5.7	5.4	4.4	0.7	2.1	1.3	1.5
<b>Krishna BG II</b>	25.9	3.6	49.4	20.2	4.5	8.8	5.3	1.6	4.2	0.4	0.9	1.6	2.0
<b>LC (H)</b>	26.0	4.1	51.8	20.8	4.7	6.4	7.2	3.8	3.4	1.1	7.7	22.3	8.9
<b>Sarju BG II</b>	27.6	4.2	51.2	21.1	4.7	8.4	6.1	2.0	3.8	0.7	2.0	1.8	1.3
<b>UPLHH 1 (Fusion)</b>	26.5	3.4	49.4	21.6	2.7	6.8	5.7	2.2	4.3	0.8	0.8	6.4	3.0
<b>PCH 881 Bt 2</b>	28.3	3.9	49.0	22.1	5.3	8.9	5.2	2.2	3.4	0.7	2.6	2.0	1.4
<b>VICH 304 BG II</b>	26.0	3.6	50.3	20.7	3.6	6.2	5.7	1.5	5.0	0.6	1.5	3.6	2.2
<b>JKCH 2255 (Event 1)</b>	27.6	4.1	49.7	20.5	4.0	7.4	6.0	3.2	4.8	0.8	1.4	2.5	1.4
<b>NCS 859 Bt 2</b>	29.3	4.0	50.3	23.3	4.2	7.2	5.9	1.3	3.3	1.0	0.5	2.2	1.3
<b>MLCH 317 BG II</b>	27.8	4.3	47.1	19.3	5.0	7.2	5.7	2.0	3.5	0.7	1.2	1.1	1.1
<b>VBCH 1516 BG II</b>	28.8	3.5	49.1	21.8	4.2	6.9	5.2	1.5	4.4	0.7	1.4	2.4	1.4
<b>Ankur 651 (C)</b>	28.8	3.9	49.1	21.4	4.1	6.0	6.9	3.0	4.7	1.2	7.3	25.2	11.6
<b>SWCH 1 BG II</b>	30.2	4.5	47.5	21.2	4.0	9.2	5.0	1.8	4.0	0.7	1.4	2.4	1.8
<b>Tulasi 153 BG II</b>	28.3	4.3	50.1	20.5	5.9	10.6	6.5	1.9	4.6	0.6	2.8	1.5	1.2
<b>ABCH 146 BG II</b>	27.8	3.8	49.2	21.2	6.3	9.6	6.9	1.9	4.0	0.4	2.1	8.1	3.9
<b>PRCH 305 BG II</b>	27.9	4.2	49.6	22.6	5.8	6.0	5.7	1.5	3.3	0.7	0.7	1.2	1.0

Note : Hybrids are arranged according to descending order of Seed Cotton Yield

Table 39. Germination (%) and Plant Stand at harvest

Entry	Germination %				Stand at harvest (number of plants)		
	Yavatmal	Bharuch	Indore	Mean	Nanded	Nagpur	Indore
Ankur 3034 BG II	96.7	100.0	97.9	<b>98.2</b>	47.3	57.0	46.7
NCS 859 Bt 2	96.1	97.0	97.9	<b>97.0</b>	45.7	56.7	47.0
VICH 304 BG II	96.7	100.0	98.6	<b>98.4</b>	48.0	57.7	47.3
PCH 881 Bt 2	96.7	97.0	96.5	<b>96.7</b>	46.7	54.3	46.3
Krishna BG II	98.3	93.0	94.4	<b>95.3</b>	47.3	57.7	45.3
Bunny Bt (C)	97.8	100.0	98.6	<b>98.8</b>	47.3	57.0	47.0
ABCH 146 BG II	97.2	87.0	99.3	<b>94.5</b>	48.0	55.7	47.7
Tulasi 153 BG II	97.8	87.0	95.8	<b>93.5</b>	47.3	56.0	46.0
MRC 7375 BG II	100.0	100.0	99.3	<b>99.8</b>	48.0	57.3	47.7
SBCH 310 (Fusion)	96.7	93.0	97.9	<b>95.9</b>	48.0	58.7	47.0
Sarju BG II	97.2	93.0	95.1	<b>95.1</b>	47.0	54.7	45.7
PRCH 305 BG II	97.2	97.0	99.3	<b>97.8</b>	47.7	54.0	47.7
JKCH 2255 (Event 1)	97.2	87.0	95.1	<b>93.1</b>	45.3	57.0	45.7
SP 503 B2	93.9	87.0	93.1	<b>91.3</b>	48.0	57.7	44.7
RCH 530 BG II	94.4	83.0	93.8	<b>90.4</b>	48.0	56.0	45.0
SWCH 1 BG II	97.2	100.0	99.3	<b>98.8</b>	48.0	58.3	47.3
VBCH 1516 BG II	95.6	97.0	90.3	<b>94.3</b>	46.0	54.3	43.3
Ankur 651 (C)	96.7	97.0	97.9	<b>97.2</b>	47.7	57.7	47.0
UPLHH 1 (Fusion)	96.1	100.0	98.6	<b>98.2</b>	48.0	56.7	47.3
MLCH 317 BG II	96.7	100.0	100.0	<b>98.9</b>	48.0	57.7	48.0
LC (H)	95.0	98.0	96.5	<b>96.5</b>	47.7	57.0	46.0

Table 40. Mean boll weight (g)

Entry	Akola	Yavatmal	Nanded	Nagpur	Bharuch	Indore	Mean
Ankur 3034 BG II	5.1	4.1	3.9	5.2	4.5	3.5	<b>4.4</b>
NCS 859 Bt 2	5.5	3.8	3.7	4.6	4.1	3.5	<b>4.2</b>
VICH 304 BG II	4.6	3.3	3.0	4.6	4.0	3.4	<b>3.8</b>
PCH 881 Bt 2	3.7	4.1	3.9	5.0	4.2	3.8	<b>4.1</b>
Krishna BG II	4.3	3.7	2.8	4.1	3.3	3.1	<b>3.5</b>
Bunny Bt (C)	3.7	4.6	3.3	4.9	4.1	3.8	<b>4.1</b>
ABCH 146 BG II	4.3	3.7	2.9	4.7	4.1	2.7	<b>3.7</b>
Tulasi 153 BG II	4.1	4.0	3.7	5.2	4.6	3.3	<b>4.2</b>
MRC 7375 BG II	4.7	4.0	3.7	5.0	3.8	4.5	<b>4.3</b>
SBCH 310 (Fusion)	4.2	3.3	3.4	5.1	4.3	4.3	<b>4.1</b>
Sarju BG II	4.0	4.4	3.5	5.4	4.4	3.8	<b>4.2</b>
PRCH 305 BG II	3.9	2.9	2.9	5.3	4.1	3.3	<b>3.7</b>
JKCH 2255 (Event 1)	4.5	3.2	3.2	4.6	4.1	3.7	<b>3.9</b>
SP 503 B2	3.9	3.7	3.5	4.6	3.9	3.4	<b>3.8</b>
RCH 530 BG II	3.9	4.5	4.0	5.1	4.1	4.0	<b>4.3</b>
SWCH 1 BG II	4.1	3.8	3.1	5.4	4.8	3.9	<b>4.2</b>
VBCH 1516 BG II	3.4	3.5	3.2	4.8	4.8	3.7	<b>3.9</b>
Ankur 651 (C)	4.1	2.8	2.8	4.2	3.7	3.5	<b>3.5</b>
UPLHH 1 (Fusion)	4.0	2.7	2.7	3.9	3.5	2.6	<b>3.2</b>
MLCH 317 BG II	4.1	3.9	3.9	4.4	4.4	3.2	<b>4.0</b>
LC (H)	3.9	3.7	2.9	4.3	4.2	3.0	<b>3.7</b>
CD @ 5 %			0.7	0.6		0.5	
CV %			13.2	8.2		8.6	

Table 41. Mean Ginning Out Turn (%)

Entry	Akola	Yavatmal	Nanded	Nagpur	Bharuch	Indore	Mean
Ankur 3034 BG II	36.2	35.1	33.5	26.7	31.0	32.9	32.6
NCS 859 Bt 2	37.2	35.2	35.0	28.8	32.0	34.2	33.7
VICH 304 BG II	35.8	35.2	35.9	29.2	39.0	32.8	34.7
PCH 881 Bt 2	34.5	35.6	36.8	38.9	31.0	35.0	35.3
Krishna BG II	35.8	35.2	33.4	30.8	33.5	32.4	33.5
Bunny Bt (C)	36.2	37.6	35.9	29.7	33.5	34.2	34.5
ABCH 146 BG II	34.5	38.8	37.2	35.8	37.0	35.3	36.4
Tulasi 153 BG II	34.1	32.8	32.6	29.5	32.0	32.3	32.2
MRC 7375 BG II	36.2	33.8	36.4	30.2	33.0	33.7	33.9
SBCH 310 (Fusion)	39.6	34.4	37.3	29.6	32.5	33.1	34.4
Sarju BG II	39.2	37.5	38.8	34.8	36.0	35.2	36.9
PRCH 305 BG II	32.7	36.4	37.0	31.4	36.0	33.2	34.4
JKCH 2255 (Event 1)	38.5	39.3	39.3	31.4	35.0	35.4	36.5
SP 503 B2	36.2	35.6	34.2	26.9	30.5	33.7	32.8
RCH 530 BG II	36.5	31.1	32.4	34.5	30.0	32.3	32.8
SWCH 1 BG II	35.8	35.3	36.1	34.2	34.0	35.8	35.2
VBCH 1516 BG II	35.1	35.8	35.0	28.1	31.0	32.0	32.8
Ankur 651 (C)	39.2	37.6	36.2	33.2	33.5	35.2	35.8
UPLHH 1 (Fusion)	37.2	36.0	36.5	33.7	34.0	34.3	35.3
MLCH 317 BG II	39.2	40.8	37.0	30.3	36.0	37.3	36.8
LC (H)	39.2	37.0	31.9	30.3	30.0	33.2	33.6

Table 42. Lint index (g)

Entry	Akola	Yavatmal	Nanded	Bharuch	Indore	Mean
Ankur 3034 BG II	6.1	6.8	4.3	5.1	4.2	5.3
NCS 859 Bt 2	5.8	3.9	3.9	4.9	4.3	4.6
VICH 304 BG II	6.0	3.9	3.7	6.1	3.7	4.7
PCH 881 Bt 2	4.4	4.6	4.6	4.6	3.9	4.4
Krishna BG II	5.2	4.2	3.1	4.7	3.1	4.1
Bunny Bt (C)	5.0	6.2	4.3	5.3	4.1	5.0
ABCH 146 BG II	5.5	4.7	3.1	6.1	3.6	4.6
Tulasi 153 BG II	5.0	4.6	3.5	5.6	4.1	4.6
MRC 7375 BG II	5.4	4.2	3.7	5.1	3.9	4.5
SBCH 310 (Fusion)	5.8	3.7	4.3	5.1	4.1	4.6
Sarju BG II	7.0	6.3	4.6	6.9	5.0	6.0
PRCH 305 BG II	4.9	3.4	3.1	6.5	3.6	4.3
JKCH 2255 (Event 1)	5.3	3.8	3.2	4.9	3.9	4.2
SP 503 B2	4.3	4.7	4.1	4.7	4.1	4.4
RCH 530 BG II	6.2	5.8	4.8	5.7	5.2	5.5
SWCH 1 BG II	5.4	4.9	4.0	5.6	4.2	4.8
VBCH 1516 BG II	5.7	4.2	3.8	5.1	3.9	4.5
Ankur 651 (C)	4.9	3.4	3.4	4.9	4.1	4.2
UPLHH 1 (Fusion)	4.5	3.7	3.3	5.0	3.3	4.0
MLCH 317 BG II	5.1	5.8	4.5	5.4	4.0	5.0
LC (H)	5.5	4.9	3.2	4.6	4.0	4.4

Table 43. Seed index (g)

Entry	Akola	Yavatmal	Nanded	Bharuch	Indore	Mean
Ankur 3034 BG II	10.8	12.5	8.4	11.3	8.6	<b>10.3</b>
NCS 859 Bt 2	9.8	7.1	7.3	10.2	8.3	<b>8.5</b>
VICH 304 BG II	10.7	7.1	6.5	9.4	7.7	<b>8.3</b>
PCH 881 Bt 2	8.3	8.4	7.9	10.2	7.3	<b>8.4</b>
Krishna BG II	9.3	7.7	6.1	9.2	6.5	<b>7.8</b>
Bunny Bt (C)	8.8	10.3	7.7	10.4	7.8	<b>9.0</b>
ABCH 146 BG II	10.5	7.4	5.2	10.2	6.6	<b>8.0</b>
Tulasi 153 BG II	9.7	9.5	7.2	11.7	8.5	<b>9.3</b>
MRC 7375 BG II	9.5	8.3	6.5	10.2	7.6	<b>8.4</b>
SBCH 310 (Fusion)	8.8	7.1	7.3	10.5	8.3	<b>8.4</b>
Sarju BG II	10.8	10.5	7.3	12.2	9.2	<b>10.0</b>
PRCH 305 BG II	10.0	5.9	5.3	11.4	7.2	<b>8.0</b>
JKCH 2255 (Event 1)	8.5	5.9	4.9	9.0	7.1	<b>7.1</b>
SP 503 B2	7.7	8.5	7.9	10.7	8.0	<b>8.6</b>
RCH 530 BG II	10.8	12.9	9.9	13.2	10.9	<b>11.5</b>
SWCH 1 BG II	9.7	9.0	7.0	10.8	7.5	<b>8.8</b>
VBCH 1516 BG II	10.5	7.5	7.0	11.3	8.2	<b>8.9</b>
Ankur 651 (C)	7.7	5.7	6.1	9.7	7.6	<b>7.4</b>
UPLHH 1 (Fusion)	7.7	6.7	5.7	9.7	6.4	<b>7.2</b>
MLCH 317 BG II	7.8	8.4	7.6	9.4	6.7	<b>8.0</b>
LC (H)	8.5	8.3	6.8	10.7	8.0	<b>8.5</b>

Table 44. Seed cotton yield (kg/ha)

Entry	Akola	Yavatmal	Nanded	Nagpur	Bharuch	Indore	Mean	% Inc. over Ankur 651 (C)	% Inc. over Bunny Bt (C)	% Inc. over LC Hybrid
MRC 7375 BG II	746	957	661	2863	2491	1550	<b>1545</b>	62	23	31
SBCH 310 (Fusion)	771	794	720	2707	2226	1436	<b>1442</b>	52	14	23
Ankur 3034 BG II	767	883	701	2095	2069	1231	<b>1291</b>	36	2	10
Bunny Bt (C)	533	685	775	2242	1826	1499	<b>1260</b>	32	0	7
SP 503 B2	545	880	828	2053	2153	1014	<b>1246</b>	31	-1	6
RCH 530 BG II	584	698	400	2211	2209	1059	<b>1194</b>	25	-5	1
Krishna BG II	910	728	595	2083	1776	1057	<b>1192</b>	25	-5	1
LC (H)	686	810	527	2197	1818	1025	<b>1177</b>	24	-7	0
Sarju BG II	982	700	324	1941	2000	1067	<b>1169</b>	23	-7	-1
UPLHH 1 (Fusion)	860	651	369	1867	1968	1245	<b>1160</b>	22	-8	-1
PCH 881 Bt 2	333	806	538	1667	2100	1263	<b>1118</b>	18	-11	-5
VICH 304 BG II	756	640	459	2018	1865	960	<b>1116</b>	17	-11	-5
JKCH 2255 (Event 1)	586	824	414	1973	1705	1143	<b>1108</b>	16	-12	-6
NCS 859 Bt 2	548	809	526	1689	2127	816	<b>1086</b>	14	-14	-8
MLCH 317 BG II	380	693	499	1736	2110	996	<b>1069</b>	12	-15	-9
VBCH 1516 BG II	491	432	233	2378	1689	1147	<b>1062</b>	12	-16	-10
Ankur 651 (C)	675	540	273	1724	1693	801	<b>951</b>	0	-25	-19
SWCH 1 BG II	232	500	358	1724	1821	1005	<b>940</b>	-1	-25	-20
Tulasi 153 BG II	173	663	347	1665	1794	921	<b>927</b>	-3	-26	-21
ABCH 146 BG II	246	463	165	1220	1780	624	<b>750</b>	-21	-41	-36
PRCH 305 BG II	131	525	130	941	1507	480	<b>619</b>	-35	-51	-47
CD @ 5 %	372	114	147	636	195	100				
CV %	14	10	20	20	11	6				

Table 45. Lint yield (kg/ha)

Entry	Akola	Yavatmal	Nanded	Nagpur	Bharuch	Indore	Mean	% Inc. over Ankur 651 (C)	% Inc. over Bunny Bt (C)	% Inc. over LC Hybrid
<b>MRC 7375 BG II</b>	269	326	240	865	822	522	<b>507</b>	53	21	33
<b>SBCH 310 (Fusion)</b>	304	273	269	801	724	476	<b>475</b>	43	13	24
<b>Sarju BG II</b>	386	262	126	675	720	376	<b>424</b>	28	1	11
<b>Bunny Bt (C)</b>	193	257	279	666	612	513	<b>420</b>	27	0	10
<b>Ankur 3034 BG II</b>	277	292	235	559	641	405	<b>402</b>	21	-4	5
<b>UPLHH 1 (Fusion)</b>	320	234	134	629	669	428	<b>402</b>	22	-4	5
<b>Krishna BG II</b>	325	256	199	641	595	343	<b>393</b>	19	-6	3
<b>SP 503 B2</b>	197	313	283	552	657	342	<b>391</b>	18	-7	2
<b>PCH 881 Bt 2</b>	115	287	198	648	651	442	<b>390</b>	18	-7	2
<b>JKCH 2255 (Event 1)</b>	225	323	163	619	597	404	<b>389</b>	17	-8	2
<b>RCH 530 BG II</b>	213	217	130	763	663	342	<b>388</b>	17	-8	2
<b>VICH 304 BG II</b>	270	226	165	589	727	315	<b>382</b>	15	-9	0
<b>LC (H)</b>	269	300	168	666	545	341	<b>382</b>	15	-9	0
<b>MLCH 317 BG II</b>	149	267	185	526	760	372	<b>377</b>	14	-10	-1
<b>NCS 859 Bt 2</b>	204	285	184	487	681	279	<b>353</b>	7	-16	-8
<b>Ankur 651 (C)</b>	265	203	98	573	567	282	<b>331</b>	0	-21	-13
<b>VBCH 1516 BG II</b>	173	154	81	668	524	367	<b>328</b>	-1	-22	-14
<b>SWCH 1 BG II</b>	83	177	131	590	619	359	<b>327</b>	-1	-22	-15
<b>Tulasi 153 BG II</b>	59	217	112	491	574	298	<b>292</b>	-12	-31	-24
<b>ABCH 146 BG II</b>	85	180	61	437	659	220	<b>274</b>	-17	-35	-28
<b>PRCH 305 BG II</b>	43	190	48	296	543	159	<b>213</b>	-36	-49	-44
<b>CD @ 5 %</b>	139	44	50			36				
<b>CV %</b>	14	11	20			6				

Table 46. 2.5% span length (mm)

Entry	2.5% span length (mm)				
	Akola	Yavatmal	Nagpur	Bharuch	Mean
<b>Ankur 3034 BG II</b>	27.9	30.7	29.9	32.2	<b>30.2</b>
<b>NCS 859 Bt 2</b>	27.2	29.0	29.9	31.1	<b>29.3</b>
<b>VICH 304 BG II</b>	25.6	24.9	25.4	28.1	<b>26.0</b>
<b>PCH 881 Bt 2</b>	23.4	29.9	28.4	31.3	<b>28.3</b>
<b>Krishna BG II</b>	27.9	24.3	24.8	26.7	<b>25.9</b>
<b>Bunny Bt (C)</b>	28.6	29.8	29.3	30.3	<b>29.5</b>
<b>ABCH 146 BG II</b>	27.1	28.8	26.4	29.1	<b>27.8</b>
<b>Tulasi 153 BG II</b>	26.6	28.8	28.5	29.1	<b>28.3</b>
<b>MRC 7375 BG II</b>	28.1	29.6	30.0	31.1	<b>29.7</b>
<b>SBCH 310 (Fusion)</b>	28.0	28.0	28.8	30.3	<b>28.8</b>
<b>Sarju BG II</b>	26.8	27.5	27.6	28.3	<b>27.6</b>
<b>PRCH 305 BG II</b>	26.9	26.6	28.0	30.0	<b>27.9</b>
<b>JKCH 2255 (Event 1)</b>	27.7	26.4	27.8	28.3	<b>27.6</b>
<b>SP 503 B2</b>	30.2	31.7	30.3	33.9	<b>31.5</b>
<b>RCH 530 BG II</b>	30.8	32.2	29.9	33.3	<b>31.6</b>
<b>SWCH 1 BG II</b>	29.9	29.3	29.8	31.7	<b>30.2</b>
<b>VBCH 1516 BG II</b>	28.3	28.0	27.9	30.8	<b>28.8</b>
<b>Ankur 651 (C)</b>	29.1	27.1	28.7	30.5	<b>28.8</b>
<b>UPLHH 1 (Fusion)</b>	26.0	25.7	26.4	28.0	<b>26.5</b>
<b>MLCH 317 BG II</b>	27.5	27.8	27.4	28.5	<b>27.8</b>
<b>LC (H)</b>	25.9	25.1	26.3	26.9	<b>26.0</b>

Table 47. Micronaire value

Entry	Micronaire value				
	Akola	Yavatmal	Nagpur	Bharuch	Mean
Ankur 3034 BG II	4.0	3.2	4.4	4.2	3.9
NCS 859 Bt 2	4.3	2.8	4.4	4.4	4.0
VICH 304 BG II	4.4	2.8	3.9	3.5	3.6
PCH 881 Bt 2	3.9	2.8	4.4	4.4	3.9
Krishna BG II	4.4	3.2	3.7	3.3	3.6
Bunny Bt (C)	4.8	3.0	4.3	4.8	4.2
ABCH 146 BG II	4.5	3.0	3.7	4.2	3.8
Tulasi 153 BG II	4.7	2.9	4.6	4.9	4.3
MRC 7375 BG II	4.2	2.8	4.2	4.2	3.9
SBCH 310 (Fusion)	4.6	3.0	4.1	4.6	4.1
Sarju BG II	4.7	2.8	4.4	5.0	4.2
PRCH 305 BG II	4.5	2.8	4.4	5.2	4.2
JKCH 2255 (Event 1)	4.9	2.6	3.8	4.9	4.1
SP 503 B2	4.7	3.2	4.3	3.9	4.0
RCH 530 BG II	4.2	3.0	3.5	3.5	3.5
SWCH 1 BG II	5.0	3.0	5.1	4.9	4.5
VBCH 1516 BG II	4.1	2.8	3.5	3.8	3.5
Ankur 651 (C)	4.6	2.6	3.9	4.5	3.9
UPLHH 1 (Fusion)	4.0	2.4	3.7	3.4	3.4
MLCH 317 BG II	4.5	3.6	4.8	4.3	4.3
LC (H)	4.2	3.2	4.2	4.9	4.1

Table 48. Uniformity ratio

Entry	Uniformity ratio				
	Akola	Yavatmal	Nagpur	Bharuch	Mean
Ankur 3034 BG II	47.0	49.0	49.0	49.8	48.7
NCS 859 Bt 2	52.0	49.0	50.0	50.0	50.3
VICH 304 BG II	52.0	51.0	50.0	48.3	50.3
PCH 881 Bt 2	50.0	49.0	48.0	48.8	49.0
Krishna BG II	49.0	51.0	49.0	48.5	49.4
Bunny Bt (C)	49.0	48.0	49.0	47.4	48.4
ABCH 146 BG II	49.0	50.0	50.0	47.9	49.2
Tulasi 153 BG II	51.0	51.0	48.0	50.4	50.1
MRC 7375 BG II	50.0	51.0	49.0	49.7	49.9
SBCH 310 (Fusion)	51.0	50.0	50.0	49.9	50.2
Sarju BG II	52.0	51.0	50.0	51.8	51.2
PRCH 305 BG II	50.0	49.0	49.0	50.4	49.6
JKCH 2255 (Event 1)	51.0	49.0	48.0	50.8	49.7
SP 503 B2	47.0	48.0	46.0	48.4	47.4
RCH 530 BG II	49.0	50.0	47.0	46.7	48.2
SWCH 1 BG II	50.0	48.0	45.0	46.8	47.5
VBCH 1516 BG II	52.0	49.0	48.0	47.4	49.1
Ankur 651 (C)	52.0	48.0	47.0	49.4	49.1
UPLHH 1 (Fusion)	51.0	49.0	48.0	49.5	49.4
MLCH 317 BG II	48.0	46.0	49.0	45.3	47.1
LC (H)	52.0	51.0	50.0	54.0	51.8



Table 49. Strength (g/tex)

Entry	Strength (g/tex)				
	Akola	Yavatmal	Nagpur	Bharuch	Mean
Ankur 3034 BG II	20.8	23.8	21.4	26.3	23.1
NCS 859 Bt 2	19.8	23.7	25.1	24.6	23.3
VICH 304 BG II	19.4	19.8	20.1	23.6	20.7
PCH 881 Bt 2	18.5	24.4	21.3	24.1	22.1
Krishna BG II	20.3	20.4	18.2	21.7	20.2
Bunny Bt (C)	21.6	22.5	22.0	23.3	22.4
ABCH 146 BG II	20.4	23.0	19.4	22.0	21.2
Tulasi 153 BG II	15.9	22.5	20.6	23.1	20.5
MRC 7375 BG II	16.8	21.6	21.1	24.4	21.0
SBCH 310 (Fusion)	16.8	22.3	23.2	23.7	21.5
Sarju BG II	17.4	21.8	22.4	22.7	21.1
PRCH 305 BG II	21.4	22.8	22.9	23.4	22.6
JKCH 2255 (Event 1)	19.0	20.4	21.3	21.1	20.5
SP 503 B2	20.2	25.0	23.3	27.4	24.0
RCH 530 BG II	21.5	24.4	25.3	27.0	24.6
SWCH 1 BG II	17.8	22.8	21.2	23.1	21.2
VBCH 1516 BG II	21.3	22.0	22.2	21.7	21.8
Ankur 651 (C)	18.6	21.3	23.2	22.6	21.4
UPLHH 1 (Fusion)	17.4	20.8	22.5	25.8	21.6
MLCH 317 BG II	17.4	19.1	19.4	21.1	19.3
LC (H)	16.7	21.3	21.9	23.1	20.8

Table 50. Jassid / plant

Entry	Akola	Yavatmal	Nagpur	Bharuch	Mean
Ankur 3034 BG II	5.2	2.2	1.7	6.3	3.8
NCS 859 Bt 2	5.5	3.3	1.9	6.3	4.2
VICH 304 BG II	4.3	2.0	2.0	6.0	3.6
PCH 881 Bt 2	6.3	2.2	3.1	9.5	5.3
Krishna BG II	5.6	2.1	2.4	7.8	4.5
Bunny Bt (C)	5.2	1.6	2.6	7.5	4.2
ABCH 146 BG II	7.6	2.8	2.6	12.0	6.3
Tulasi 153 BG II	6.8	2.7	4.3	9.8	5.9
MRC 7375 BG II	4.2	1.7	1.7	7.5	3.8
SBCH 310 (Fusion)	3.0	2.2	1.1	4.8	2.8
Sarju BG II	5.3	2.2	3.5	7.8	4.7
PRCH 305 BG II	8.9	1.3	4.1	8.8	5.8
JKCH 2255 (Event 1)	5.3	1.7	2.0	7.0	4.0
SP 503 B2	5.4	2.8	1.9	5.8	4.0
RCH 530 BG II	5.4	1.8	3.0	6.3	4.1
SWCH 1 BG II	7.0	2.0	2.9	4.3	4.0
VBCH 1516 BG II	5.5	1.8	1.8	7.5	4.2
Ankur 651 (C)	5.0	2.0	1.5	7.8	4.1
UPLHH 1 (Fusion)	3.1	2.5	0.9	4.3	2.7
MLCH 317 BG II	6.3	2.7	3.6	7.3	5.0
LC (H)	2.4	3.2	1.0	12.3	4.7

Table 51. Whitefly / plant

Entry	Akola	Nagpur	Bharuch	Mean
Ankur 3034 BG II	2.3	5.5	11.0	6.2
NCS 859 Bt 2	1.9	5.5	14.0	7.2
VICH 304 BG II	2.3	3.9	12.5	6.2
PCH 881 Bt 2	2.5	3.8	20.5	8.9
Krishna BG II	2.7	5.2	18.5	8.8
Bunny Bt (C)	2.1	3.7	14.0	6.6
ABCH 146 BG II	2.1	3.3	23.5	9.6
Tulasi 153 BG II	2.2	4.7	25.0	10.6
MRC 7375 BG II	2.4	3.9	10.5	5.6
SBCH 310 (Fusion)	2.0	4.7	15.0	7.2
Sarju BG II	2.5	6.8	16.0	8.4
PRCH 305 BG II	2.3	4.0	11.5	6.0
JKCH 2255 (Event 1)	2.7	3.4	16.0	7.4
SP 503 B2	2.3	4.3	21.5	9.4
RCH 530 BG II	2.2	3.8	14.5	6.8
SWCH 1 BG II	1.9	2.7	23.0	9.2
VBCH 1516 BG II	2.2	4.1	14.5	6.9
Ankur 651 (C)	2.6	3.9	11.5	6.0
UPLHH 1 (Fusion)	2.5	4.9	13.0	6.8
MLCH 317 BG II	2.0	4.7	15.0	7.2
LC (H)	2.8	2.9	13.5	6.4

Table 52. Thrips/ plant

Entry	Akola	Yavatmal	Nagpur	Bharuch	Mean
Ankur 3034 BG II	4.5	3.1	5.3	1.5	3.6
NCS 859 Bt 2	4.0	4.8	5.7	9.0	5.9
VICH 304 BG II	5.7	5.6	6.2	5.5	5.7
PCH 881 Bt 2	4.1	3.2	4.2	9.5	5.2
Krishna BG II	4.9	3.4	4.1	9.0	5.3
Bunny Bt (C)	5.7	3.8	5.6	9.5	6.1
ABCH 146 BG II	3.7	5.6	3.4	15.0	6.9
Tulasi 153 BG II	5.0	5.0	6.2	10.0	6.5
MRC 7375 BG II	6.4	3.5	6.9	9.0	6.4
SBCH 310 (Fusion)	6.7	4.6	7.1	6.5	6.2
Sarju BG II	5.2	4.2	5.6	9.5	6.1
PRCH 305 BG II	4.6	3.3	6.6	8.5	5.7
JKCH 2255 (Event 1)	5.8	3.2	7.0	8.0	6.0
SP 503 B2	6.8	4.9	5.6	9.0	6.6
RCH 530 BG II	4.8	3.4	6.6	8.0	5.7
SWCH 1 BG II	3.8	5.8	4.5	6.0	5.0
VBCH 1516 BG II	5.3	3.6	4.8	7.0	5.2
Ankur 651 (C)	5.7	5.5	3.9	12.5	6.9
UPLHH 1 (Fusion)	5.8	5.6	5.4	6.0	5.7
MLCH 317 BG II	5.0	5.2	4.2	8.5	5.7
LC (H)	4.0	5.4	5.4	14.0	7.2

Table 53. Mealy bug/10cm terminal shoot

Entry	Yavatmal	Bharuch	Mean
Ankur 3034 BG II	1.8	2.9	2.3
NCS 859 Bt 2	0.0	2.7	1.3
VICH 304 BG II	0.0	3.1	1.5
PCH 881 Bt 2	0.6	3.8	2.2
Krishna BG II	0.0	3.3	1.6
Bunny Bt (C)	0.6	3.0	1.8
ABCH 146 BG II	0.0	3.9	1.9
Tulasi 153 BG II	0.0	3.8	1.9
MRC 7375 BG II	1.2	3.1	2.1
SBCH 310 (Fusion)	0.0	3.7	1.8
Sarju BG II	0.0	4.0	2.0
PRCH 305 BG II	0.0	3.0	1.5
JKCH 2255 (Event 1)	3.4	3.1	3.2
SP 503 B2	0.6	3.9	2.2
RCH 530 BG II	7.5	3.4	5.4
SWCH 1 BG II	0.0	3.7	1.8
VBCH 1516 BG II	0.0	3.0	1.5
Ankur 651 (C)	2.4	3.7	3.0
UPLHH 1 (Fusion)	1.2	3.3	2.2
MLCH 317 BG II	0.0	4.0	2.0
LC (H)	3.7	3.9	3.8

Table 54. Predators

Entry	Akola	Yavatmal	Nagpur	Mean
Ankur 3034 BG II	1.1	3.6	11.1	5.3
NCS 859 Bt 2	1.0	3.8	5.2	3.3
VICH 304 BG II	1.0	4.0	9.9	5.0
PCH 881 Bt 2	1.1	3.6	5.6	3.4
Krishna BG II	1.0	3.8	7.8	4.2
Bunny Bt (C)	1.3	3.7	10.7	5.2
ABCH 146 BG II	1.0	3.1	7.8	4.0
Tulasi 153 BG II	1.2	3.4	9.2	4.6
MRC 7375 BG II	1.1	4.2	6.1	3.8
SBCH 310 (Fusion)	1.0	4.0	9.2	4.7
Sarju BG II	0.8	3.1	7.4	3.8
PRCH 305 BG II	1.0	4.1	4.8	3.3
JKCH 2255 (Event 1)	0.9	4.0	9.3	4.8
SP 503 B2	1.1	3.8	7.9	4.2
RCH 530 BG II	0.9	3.3	9.0	4.4
SWCH 1 BG II	0.9	3.9	7.3	4.0
VBCH 1516 BG II	1.2	3.8	8.2	4.4
Ankur 651 (C)	1.1	5.0	8.1	4.7
UPLHH 1 (Fusion)	0.9	3.2	8.8	4.3
MLCH 317 BG II	1.2	3.1	6.2	3.5
LC (H)	0.9	4.1	5.1	3.4

Table 55. Spotted bollworm, *Earias* spp. (No. of Larvae / 5 plants)

Entry	Akola	Yavatmal	Nagpur	Mean
Ankur 3034 BG II	0.0	2.7	0.0	<b>0.9</b>
NCS 859 Bt 2	0.0	3.0	0.0	<b>1.0</b>
VICH 304 BG II	0.0	1.8	0.0	<b>0.6</b>
PCH 881 Bt 2	0.0	2.0	0.0	<b>0.7</b>
Krishna BG II	0.0	1.3	0.0	<b>0.4</b>
Bunny Bt (C)	0.0	2.1	0.0	<b>0.7</b>
ABCH 146 BG II	0.0	1.3	0.0	<b>0.4</b>
Tulasi 153 BG II	0.0	1.9	0.0	<b>0.6</b>
MRC 7375 BG II	0.0	2.8	0.0	<b>0.9</b>
SBCH 310 (Fusion)	0.0	1.9	0.0	<b>0.6</b>
Sarju BG II	0.0	2.1	0.0	<b>0.7</b>
PRCH 305 BG II	0.0	2.2	0.0	<b>0.7</b>
JKCH 2255 (Event 1)	0.0	2.3	0.0	<b>0.8</b>
SP 503 B2	0.0	2.0	0.0	<b>0.7</b>
RCH 530 BG II	0.0	2.1	0.0	<b>0.7</b>
SWCH 1 BG II	0.0	2.1	0.0	<b>0.7</b>
VBCH 1516 BG II	0.0	2.1	0.0	<b>0.7</b>
Ankur 651 (C)	0.2	2.6	0.8	<b>1.2</b>
UPLHH 1 (Fusion)	0.3	2.2	0.0	<b>0.8</b>
MLCH 317 BG II	0.0	2.1	0.0	<b>0.7</b>
LC (H)	0.4	2.9	0.0	<b>1.1</b>

Table 56. Number of Pink Boll worm larvae / 20 green bolls

Entry	Akola	Yavatmal	Nagpur	Mean
Ankur 3034 BG II	2.0	1.1	1.3	<b>1.5</b>
NCS 859 Bt 2	0.2	1.3	0.0	<b>0.5</b>
VICH 304 BG II	3.5	1.0	0.0	<b>1.5</b>
PCH 881 Bt 2	2.5	1.2	4.0	<b>2.6</b>
Krishna BG II	1.8	0.9	0.0	<b>0.9</b>
Bunny Bt (C)	1.5	1.1	1.3	<b>1.3</b>
ABCH 146 BG II	1.3	1.1	4.0	<b>2.1</b>
Tulasi 153 BG II	2.0	1.1	5.3	<b>2.8</b>
MRC 7375 BG II	1.8	1.0	1.3	<b>1.4</b>
SBCH 310 (Fusion)	2.0	1.2	0.0	<b>1.1</b>
Sarju BG II	3.2	1.4	1.3	<b>2.0</b>
PRCH 305 BG II	1.0	1.1	0.0	<b>0.7</b>
JKCH 2255 (Event 1)	2.8	1.2	0.0	<b>1.4</b>
SP 503 B2	2.3	1.1	0.0	<b>1.1</b>
RCH 530 BG II	1.2	1.0	4.0	<b>2.1</b>
SWCH 1 BG II	1.7	1.1	1.3	<b>1.4</b>
VBCH 1516 BG II	2.8	1.2	0.0	<b>1.4</b>
Ankur 651 (C)	16.5	1.3	4.0	<b>7.3</b>
UPLHH 1 (Fusion)	1.2	1.3	0.0	<b>0.8</b>
MLCH 317 BG II	2.3	1.2	0.0	<b>1.2</b>
LC (H)	16.3	1.3	5.3	<b>7.7</b>

Table 57. Open boll and locule damage (%)

Entry	Open boll damage (%)					Locule damage (%)				
	Akola	Yavatmal	Nagpur	Bharuch	Mean	Akola	Yavatmal	Nagpur	Bharuch	Mean
Ankur 3034 BG II	0.0	3.2	0.0	1.1	<b>1.1</b>	0.0	4.4	0.0	0.9	<b>1.3</b>
NCS 859 Bt 2	0.0	3.6	4.2	1.1	<b>2.2</b>	0.0	3.2	1.0	0.9	<b>1.3</b>
VICH 304 BG II	0.0	3.4	8.1	2.9	<b>3.6</b>	0.0	4.6	3.2	1.0	<b>2.2</b>
PCH 881 Bt 2	0.0	2.8	1.4	4.0	<b>2.0</b>	0.0	4.2	0.4	0.9	<b>1.4</b>
Krishna BG II	0.0	2.4	3.3	0.5	<b>1.6</b>	0.0	4.0	3.3	0.8	<b>2.0</b>
Bunny Bt (C)	0.0	3.1	3.3	1.9	<b>2.1</b>	0.0	4.0	0.8	0.6	<b>1.4</b>
ABCH 146 BG II	0.0	3.7	27.7	1.2	<b>8.1</b>	0.0	2.3	12.7	0.7	<b>3.9</b>
Tulasi 153 BG II	0.0	3.3	1.7	0.9	<b>1.5</b>	0.0	3.7	0.4	0.6	<b>1.2</b>
MRC 7375 BG II	0.0	2.6	0.0	0.8	<b>0.9</b>	0.0	2.5	0.0	0.7	<b>0.8</b>
SBCH 310	1.1	2.3	0.0	1.7	<b>1.3</b>	0.3	2.8	0.0	0.6	<b>0.9</b>
Sarju BG II	2.2	2.8	0.0	2.0	<b>1.8</b>	1.7	3.0	0.0	0.6	<b>1.3</b>
PRCH 305 BG II	0.0	3.0	0.0	1.9	<b>1.2</b>	0.0	3.2	0.0	0.8	<b>1.0</b>
JKCH 2255 (Event	0.0	3.1	5.5	1.3	<b>2.5</b>	0.0	3.3	1.8	0.6	<b>1.4</b>
SP 503 B2	0.0	3.1	11.1	1.7	<b>4.0</b>	0.0	4.0	9.7	0.8	<b>3.6</b>
RCH 530 BG II	0.0	3.8	0.0	1.3	<b>1.3</b>	0.0	4.8	0.0	1.0	<b>1.5</b>
SWCH 1 BG II	0.0	2.9	5.6	1.0	<b>2.4</b>	0.0	5.1	1.4	0.6	<b>1.8</b>
VBCH 1516 BG II	0.0	4.1	3.2	2.4	<b>2.4</b>	0.0	3.8	0.8	0.9	<b>1.4</b>
Ankur 651 (C)	53.3	4.9	31.6	10.9	<b>25.2</b>	22.6	5.1	17.9	0.9	<b>11.6</b>
UPLHH 1 (Fusion)	0.0	3.8	18.5	3.1	<b>6.4</b>	0.0	3.8	7.3	0.7	<b>3.0</b>
MLCH 317 BG II	0.0	3.2	0.0	1.1	<b>1.1</b>	0.0	3.9	0.0	0.6	<b>1.1</b>
LC (H)	58.9	4.7	11.1	14.4	<b>22.3</b>	24.6	5.4	4.2	1.6	<b>8.9</b>

## BIOMETRICAL EVALUATION

**Germination and Final Plant Stand:** The germination was in general very good in all the entries (Table 58) and the final plant stand at harvest was also adequate at all the locations in all the entries.

**Boll Weight:** The overall Mean Boll weight of the Bt hybrids varied from 3.5 to 4.3 g. The non Bt check hybrids recorded a mean boll weight of 3.4 g. Tulasi 162 BG II recorded the highest boll weight of 4.3 g (Table 59).

**Ginning Outturn:** The mean ginning outturn of the Bt cotton hybrids varied from 31.0 to 37.5 %. Hybrid ABCH 147BG II recorded the highest ginning outturn of 37.5 per cent. The Bt check hybrid Bunny Bt and local check hybrid recorded a mean ginning out turn of 34.8% and 34.1%, respectively (Table 60).

**Lint Index and Seed Index:** In general, most of the Bt hybrids had lint index in the range of 4.0 to 5.4 with local hybrid check and non-Bt check hybrid recording 4.3 and 4.8, respectively. (Table 61). The seed index ranged from 7.7 to 10.6 with Tulasi 162 BG II having higher index of 10.6 (Table 62)

**Mean Seed Cotton Yield under ETL based Plant Protection:** The mean seed cotton yield recorded by the Bt cotton hybrids under rainfed conditions of Central Zone are presented in Table 63. Under rainfed conditions, only four test Bt cotton hybrids recorded higher seed cotton yield than Bt check hybrid Bunny Bt, while seven test hybrids recorded higher seed cotton yield over non-Bt check hybrid. Around six hybrids showed better lint yield as compared to non-Bt check hybrid, while only three were seen equal or better than Bunny Bt check hybrid. (Table 64)

**Fibre Quality Evaluation:** Fibre quality evaluation of the lint samples of all test entries from many centres were carried out and the details like fibre length, strength, micronaire, uniformity ratio are presented in Table 65, 66, 67, and 68. Most of the test hybrids had equal or lesser fibre length than that of Bt check hybrid (30.6 mm). Entry KDCHH 9821 BG II had relatively lesser fibre length of 26.1 mm compared to Bt check hybrid, while RCH 377 BG II had 32.1 mm. The hybrid entries had around 3.4 – 4.2 as regards micronaire is concerned; however, VBCH 1521 BG II had low micronaire of 3.4. Similarly, fibre strength did not exhibit much variation. Most of the hybrids had fibre strength in the range of 21 – 24 g/tex. However, SWCH 4715 BG II exhibited rather lesser fiber strength of 19.6 g/tex under rainfed conditions. Characteristic variation could not be noticed regarding uniformity ratio with most of the hybrids showing around 47 - 50%.

## ETL BASED ENTOMOLOGICAL EVALUATION

Sucking pests and bollworms: The data on incidences of sap sucking pests and bollworms were recorded and the details are given in Tables 69 – 76. Jassids, whitefly, thrips and mealy bugs were observed in all test Bt hybrids at different centres under rainfed conditions. However, whitefly, mealybug and thrips population were on the higher side in Bharuch centre. NCS 860 Bt 2 recorded higher whitefly population at Bharuch (26.5); UPLHH 10 (Fusion) recorded higher Thrips population at Bharuch (18.0/plant); Tulasi 162 BG II recorded higher mealy bug infestation at Yavatmal (22.4/10 cm terminal shoot).

All the test entries had pink bollworm incidence at one or other location of testing; however, at least 40% lesser than non-Bt checks. The open boll and loculi damages indicated higher late season bollworm levels in some locations in conjunction with delayed maturity of some of the Bt entries such as Tulasi 162 BG II and 557-2.

Summary Table: Set B Rainfed Trials

Entry	Germination (%)	Boll weight (g)	Ginning Out Turn (%)	Lint index (g)	Seed index (g)	Lint yield (kg/ha)	Seed cotton yield (kg/ha)
ACH 232-1 BG II	94.2	4.0	35.6	5.1	9.1	552	1606
KDCHH 9821 BG II	98.5	3.6	33.9	4.0	7.7	479	1380
RCH 377 BG II	95.8	4.0	32.9	4.7	9.7	437	1359
Ankur 3028 BG II	98.7	3.8	31.1	4.4	9.9	432	1307
Bunny Bt (C)	97.8	3.8	34.8	4.8	9.0	437	1235
Tulasi 162 BG II	97.1	4.3	32.8	5.2	10.6	389	1211
557-2	94.1	4.1	33.7	4.8	8.9	390	1160
NSPL 432 BG II	95.6	4.1	34.0	4.6	9.0	402	1104
Ankur 651 (C)	92.4	3.4	37.4	4.8	8.5	402	1099
LC (H)	98.0	3.5	34.1	4.3	8.0	365	1083
SP 1170 B2	95.5	4.2	35.2	5.4	9.7	405	1079
MRC 7377 BG II	90.1	3.9	34.8	4.8	9.3	361	1075
PCH 882 Bt 2	95.4	4.2	34.9	4.9	9.3	390	1074
NCS 860 Bt 2	92.6	4.0	35.7	5.0	9.3	393	1072
PRCH 333 BG II	94.4	4.2	31.0	4.0	8.8	346	1064
VBCH 1521 BG II	92.1	4.1	33.0	4.7	9.6	361	1052
NCEH 24 (Fusion)	94.4	3.5	32.6	4.1	8.4	374	1051
SWCH 4715 BG II	94.2	4.0	34.0	4.7	9.1	285	796
ABCH 147 BG II	94.9	3.5	37.5	5.0	8.6	271	678
UPLHH 10 (Fusion)	97.1	4.0	36.8	5.2	9.0	253	640

Note : Hybrids are arranged according to descending order of Seed Cotton Yield

Entry	2.5% span length (mm)	Micronaire value	Uniformity ratio	Strength (g/tex)	Jassid / plant	Whitefly / plant	Thrips/ plant	Mealy bug/10cm terminal	Predators	Spotted bollworm, Earias spp. (No. of Lar / 5 pts)	Number of Pink Boll worm larvae / 20 GB	Open boll damage (%)	Locule damage (%)
<b>ACH 232-1 BG II</b>	27.5	3.9	50.3	21.3	2.8	6.3	6.5	6.9	4.6	0.0	0.8	2.2	1.5
<b>KDCHH 9821 BG II</b>	26.1	4.0	50.9	21.8	4.0	7.3	4.7	11.2	4.2	0.0	1.5	1.4	1.0
<b>RCH 377 BG II</b>	32.1	3.7	47.0	23.5	4.5	7.2	6.5	8.7	4.9	0.1	1.2	1.1	1.3
<b>Ankur 3028 BG II</b>	30.3	4.1	50.5	23.2	4.2	8.1	6.6	9.6	4.3	0.0	0.9	5.4	3.2
<b>Bunny Bt (C)</b>	30.6	3.7	47.5	21.4	4.4	7.9	6.1	8.6	4.7	0.1	1.2	1.2	1.4
<b>Tulasi 162 BG II</b>	30.7	3.8	49.4	23.8	4.1	6.6	7.1	17.5	3.8	0.0	1.1	12.3	4.9
<b>557-2</b>	30.1	3.6	48.5	23.7	5.0	5.2	6.5	14.8	4.1	0.0	2.5	11.4	4.4
<b>NSPL 432 BG II</b>	29.8	4.2	49.2	23.0	4.2	6.6	6.5	7.1	4.5	0.1	1.3	3.3	2.5
<b>Ankur 651 (C)</b>	28.7	3.7	48.8	22.2	4.5	6.6	6.3	10.1	4.4	0.3	4.3	23.1	11.2
<b>LC (H)</b>	26.5	4.3	51.6	21.3	5.2	8.5	7.6	12.5	4.2	1.0	5.2	20.7	10.3
<b>SP 1170 B2</b>	30.1	4.1	48.0	21.6	4.9	8.6	7.2	11.7	3.8	0.1	2.2	1.6	1.8
<b>MRC 7377 BG II</b>	30.1	4.1	47.6	21.4	3.8	8.2	6.8	10.1	3.3	0.0	1.0	1.4	1.6
<b>PCH 882 Bt 2</b>	30.4	4.1	49.5	22.6	4.3	7.2	5.6	11.5	4.5	0.1	2.5	1.3	1.7
<b>NCS 860 Bt 2</b>	29.4	4.1	49.5	22.9	3.7	11.0	5.4	6.6	4.9	0.0	1.2	1.5	1.3
<b>PRCH 333 BG II</b>	30.6	3.6	49.4	23.9	4.2	5.7	6.3	9.2	4.2	0.1	1.2	4.5	3.0
<b>VBCH 1521 BG II</b>	30.3	3.4	48.4	24.0	5.5	5.6	5.9	9.3	3.7	0.0	1.1	1.8	2.0
<b>NCEH 24 (Fusion)</b>	27.3	4.0	49.2	21.4	4.3	6.5	6.3	9.5	4.3	0.1	0.6	3.0	2.4
<b>SWCH 4715 BG II</b>	28.5	4.1	49.3	19.6	6.7	6.0	5.4	11.4	3.4	0.0	1.0	3.3	2.0
<b>ABCH 147 BG II</b>	28.5	3.8	47.7	22.1	5.7	5.5	5.7	7.5	3.5	0.0	1.5	1.3	1.1
<b>UPLHH 10 (Fusion)</b>	27.5	3.6	49.8	20.1	6.0	7.0	7.3	8.7	4.2	0.0	1.3	1.0	1.2

Note : Hybrids are arranged according to descending order of Seed Cotton Yield



Table 58. Germination (%) and Plant Stand at harvest

Entry	Germination %				Stand at harvest (number of plants)		
	Yavatmal	Bharuch	Indore	Mean	Nanded	Nagpur	Indore
NCS 860 Bt 2	97.8	87.0	93.1	<b>92.6</b>	46.3	52.3	44.7
ABCH 147 BG II	97.2	93.0	94.4	<b>94.9</b>	48.0	57.0	45.0
SP 1170 B2	97.8	90.0	98.6	<b>95.5</b>	46.7	57.3	47.0
PCH 882 Bt 2	98.9	93.0	94.4	<b>95.4</b>	47.3	51.3	45.3
RCH 377 BG II	94.4	93.0	100.0	<b>95.8</b>	47.3	58.0	48.0
MRC 7377 BG II	96.7	77.0	96.5	<b>90.1</b>	48.0	56.7	46.3
Bunny Bt (C)	96.1	100.0	97.2	<b>97.8</b>	48.0	58.7	46.7
VBCH 1521 BG II	93.9	83.0	99.3	<b>92.1</b>	47.7	55.0	47.7
SWCH 4715 BG II	93.9	90.0	98.6	<b>94.2</b>	48.0	56.0	47.3
Tulasi 162 BG II	94.4	97.0	100.0	<b>97.1</b>	48.0	59.0	48.0
557-2	96.7	87.0	98.6	<b>94.1</b>	48.0	58.0	47.3
Ankur 651 (C)	97.8	80.0	99.3	<b>92.4</b>	47.3	59.3	47.7
Ankur 3028 BG II	96.7	100.0	99.3	<b>98.7</b>	47.0	59.0	47.7
NSPL 432 BG II	98.3	90.0	98.6	<b>95.6</b>	47.7	57.7	47.3
ACH 232-1 BG II	98.3	87.0	97.2	<b>94.2</b>	47.7	58.3	46.7
UPLHH 10 (Fusion)	98.3	93.0	100.0	<b>97.1</b>	48.0	57.0	47.7
PRCH 333 BG II	95.0	93.0	95.1	<b>94.4</b>	46.3	52.3	45.7
NCEH 24 (Fusion)	93.9	90.0	99.3	<b>94.4</b>	47.3	54.7	47.7
KDCHH 9821 BG II	96.1	100.0	99.3	<b>98.5</b>	47.7	59.0	47.3
LC (H)	98.3	97.0	98.6	<b>98.0</b>	46.7	56.7	47.3

Table 59. Mean boll weight (g)

Entry	Akola	Yavatmal	Nanded	Nagpur	Bharuch	Indore	Mean
NCS 860 Bt 2	4.2	3.9	3.7	5.2	4.0	2.9	<b>4.0</b>
ABCH 147 BG II	3.9	3.3	2.1	5.0	4.1	2.5	<b>3.5</b>
SP 1170 B2	4.6	4.3	3.2	5.1	4.8	3.0	<b>4.2</b>
PCH 882 Bt 2	4.8	4.1	3.5	5.1	4.3	3.2	<b>4.2</b>
RCH 377 BG II	4.3	3.8	3.5	4.4	4.7	3.1	<b>4.0</b>
MRC 7377 BG II	4.6	3.0	3.8	5.1	4.1	2.9	<b>3.9</b>
Bunny Bt (C)	4.6	3.2	3.4	4.0	4.1	3.8	<b>3.8</b>
VBCH 1521 BG II	4.5	4.2	4.1	4.3	4.4	3.3	<b>4.1</b>
SWCH 4715 BG II	4.5	4.2	2.8	4.8	4.3	3.1	<b>4.0</b>
Tulasi 162 BG II	5.0	4.3	3.8	5.5	4.4	3.0	<b>4.3</b>
557-2	5.5	3.5	3.7	4.5	4.4	3.0	<b>4.1</b>
Ankur 651 (C)	4.1	2.7	2.7	4.1	4.0	2.8	<b>3.4</b>
Ankur 3028 BG II	4.1	3.7	3.7	4.3	4.2	3.0	<b>3.8</b>
NSPL 432 BG II	5.0	3.6	3.6	4.7	4.3	3.4	<b>4.1</b>
ACH 232-1 BG II	4.5	4.0	3.6	4.5	4.0	3.6	<b>4.0</b>
UPLHH 10 (Fusion)	4.8	3.9	2.8	5.1	4.8	2.5	<b>4.0</b>
PRCH 333 BG II	5.4	3.9	2.9	5.2	4.7	3.3	<b>4.2</b>
NCEH 24 (Fusion)	3.4	4.1	2.7	4.3	4.2	2.6	<b>3.5</b>
KDCHH 9821 BG II	4.2	2.8	3.1	4.8	4.1	2.7	<b>3.6</b>
LC (H)	3.5	3.5	2.8	4.2	3.9	2.9	<b>3.5</b>

Table 60. Mean Ginning Out Turn (%)

Entry	Akola	Yavatmal	Nanded	Nagpur	Bharuch	Indore	Mean
<b>NCS 860 Bt 2</b>	37.7	39.2	36.6	35.2	32.0	33.8	<b>35.7</b>
<b>ABCH 147 BG II</b>	39.0	40.2	37.5	37.7	35.5	35.1	<b>37.5</b>
<b>SP 1170 B2</b>	37.0	36.6	35.8	35.1	33.5	33.4	<b>35.2</b>
<b>PCH 882 Bt 2</b>	36.0	35.6	36.7	34.9	32.0	34.0	<b>34.9</b>
<b>RCH 377 BG II</b>	35.0	33.1	32.6	32.3	31.0	33.4	<b>32.9</b>
<b>MRC 7377 BG II</b>	37.0	38.5	33.4	34.9	32.5	32.7	<b>34.8</b>
<b>Bunny Bt (C)</b>	35.7	37.1	35.4	33.7	33.0	33.8	<b>34.8</b>
<b>VBCH 1521 BG II</b>	36.0	32.9	34.5	32.7	30.5	31.7	<b>33.0</b>
<b>SWCH 4715 BG II</b>	37.0	34.1	34.0	33.8	32.5	32.7	<b>34.0</b>
<b>Tulasi 162 BG II</b>	35.7	35.4	31.6	30.6	32.0	31.6	<b>32.8</b>
<b>557-2</b>	37.0	32.9	36.3	30.7	32.0	33.1	<b>33.7</b>
<b>Ankur 651 (C)</b>	40.4	43.5	35.7	34.4	35.0	35.3	<b>37.4</b>
<b>Ankur 3028 BG II</b>	32.6	31.2	31.9	31.0	30.5	29.6	<b>31.1</b>
<b>NSPL 432 BG II</b>	35.3	33.7	36.1	32.9	32.5	33.3	<b>34.0</b>
<b>ACH 232-1 BG II</b>	38.7	37.2	36.1	31.4	35.0	35.2	<b>35.6</b>
<b>UPLHH 10 (Fusion)</b>	38.0	40.2	37.9	34.2	35.0	35.4	<b>36.8</b>
<b>PRCH 333 BG II</b>	32.6	31.0	32.8	30.7	30.0	28.8	<b>31.0</b>
<b>NCEH 24 (Fusion)</b>	35.0	27.0	33.2	33.0	34.5	32.6	<b>32.6</b>
<b>KDCHH 9821 BG II</b>	34.7	33.1	35.2	33.8	34.0	32.7	<b>33.9</b>
<b>LC (H)</b>	38.7	37.6	33.4	31.7	31.5	31.9	<b>34.1</b>

Table 61. Lint index (g)

Entry	Akola	Yavatmal	Nanded	Bharuch	Indore	Mean
<b>NCS 860 Bt 2</b>	6.1	5.5	4.4	5.1	4.1	<b>5.0</b>
<b>ABCH 147 BG II</b>	6.8	5.0	3.2	6.1	3.7	<b>5.0</b>
<b>SP 1170 B2</b>	6.0	5.2	5.0	6.7	4.0	<b>5.4</b>
<b>PCH 882 Bt 2</b>	5.8	5.0	4.5	5.1	4.1	<b>4.9</b>
<b>RCH 377 BG II</b>	5.5	4.5	4.0	5.2	4.4	<b>4.7</b>
<b>MRC 7377 BG II</b>	6.6	4.5	4.5	5.2	3.3	<b>4.8</b>
<b>Bunny Bt (C)</b>	5.9	4.2	4.5	5.1	4.1	<b>4.8</b>
<b>VBCH 1521 BG II</b>	6.1	4.6	3.9	5.2	3.8	<b>4.7</b>
<b>SWCH 4715 BG II</b>	6.5	4.9	3.6	5.3	3.3	<b>4.7</b>
<b>Tulasi 162 BG II</b>	6.5	5.3	4.3	5.4	4.5	<b>5.2</b>
<b>557-2</b>	6.6	3.8	4.3	5.9	3.5	<b>4.8</b>
<b>Ankur 651 (C)</b>	5.4	5.8	3.6	5.1	4.3	<b>4.8</b>
<b>Ankur 3028 BG II</b>	4.9	4.5	4.3	4.9	3.7	<b>4.4</b>
<b>NSPL 432 BG II</b>	5.8	4.0	4.4	5.2	3.6	<b>4.6</b>
<b>ACH 232-1 BG II</b>	6.3	4.9	4.4	5.5	4.4	<b>5.1</b>
<b>UPLHH 10 (Fusion)</b>	6.8	5.1	4.0	6.1	4.1	<b>5.2</b>
<b>PRCH 333 BG II</b>	4.8	4.1	3.2	4.6	3.2	<b>4.0</b>
<b>NCEH 24 (Fusion)</b>	5.0	3.5	3.2	5.2	3.6	<b>4.1</b>
<b>KDCHH 9821 BG II</b>	4.6	3.0	3.5	5.1	3.6	<b>4.0</b>
<b>LC (H)</b>	4.5	4.3	3.3	5.8	3.6	<b>4.3</b>

Table 62. Seed index (g)

Entry	Akola	Yavatmal	Nanded	Bharuch	Indore	Mean
NCS 860 Bt 2	10.0	10.1	7.7	10.7	8.1	<b>9.3</b>
ABCH 147 BG II	10.7	9.1	5.3	11.0	6.9	<b>8.6</b>
SP 1170 B2	10.2	10.0	9.0	11.1	8.1	<b>9.7</b>
PCH 882 Bt 2	10.3	9.9	7.8	10.7	7.9	<b>9.3</b>
RCH 377 BG II	10.2	9.9	8.2	11.5	8.7	<b>9.7</b>
MRC 7377 BG II	11.2	8.8	9.0	10.6	6.7	<b>9.3</b>
Bunny Bt (C)	10.7	8.0	8.2	10.3	8.0	<b>9.0</b>
VBCH 1521 BG II	10.8	9.7	7.3	11.7	8.3	<b>9.6</b>
SWCH 4715 BG II	11.0	10.1	6.9	10.9	6.8	<b>9.1</b>
Tulasi 162 BG II	11.7	10.8	9.4	11.3	9.8	<b>10.6</b>
557-2	11.2	8.0	7.5	10.9	7.0	<b>8.9</b>
Ankur 651 (C)	8.0	10.6	6.5	9.4	8.0	<b>8.5</b>
Ankur 3028 BG II	10.0	10.6	9.1	11.1	8.9	<b>9.9</b>
NSPL 432 BG II	10.7	8.4	7.8	10.7	7.3	<b>9.0</b>
ACH 232-1 BG II	10.0	9.2	7.8	10.1	8.2	<b>9.1</b>
UPLHH 10 (Fusion)	11.0	8.7	6.6	11.2	7.4	<b>9.0</b>
PRCH 333 BG II	9.8	9.2	6.6	10.7	7.8	<b>8.8</b>
NCEH 24 (Fusion)	9.3	8.9	6.4	9.8	7.5	<b>8.4</b>
KDCHH 9821 BG II	8.7	6.3	6.5	9.7	7.3	<b>7.7</b>
LC (H)	7.2	7.9	6.5	10.9	7.7	<b>8.0</b>

Table 63. Seed cotton yield (kg/ha)

Entry	Akola	Yavatmal	Nanded	Nagpur	Bharuch	Indore	Mean	% Inc. over Ankur 651 (C)	% Inc. over Bunny Bt (C)	% Inc. over LC Hybrid
ACH 232-1 BG II	1528	923	701	2100	2833	1548	<b>1606</b>	46	30	48
KDCHH 9821 BG II	1167	797	521	2219	2499	1078	<b>1380</b>	26	12	27
RCH 377 BG II	1328	756	561	2609	1931	967	<b>1359</b>	24	10	25
Ankur 3028 BG II	784	766	883	2129	2296	982	<b>1307</b>	19	6	21
Bunny Bt (C)	933	710	769	1852	2172	974	<b>1235</b>	12	0	14
Tulasi 162 BG II	1119	759	625	1711	1994	1057	<b>1211</b>	10	-2	12
557-2	874	607	502	2123	2033	819	<b>1160</b>	6	-6	7
NSPL 432 BG II	533	530	454	1957	2215	935	<b>1104</b>	0	-11	2
Ankur 651 (C)	849	715	356	1787	1960	926	<b>1099</b>	0	-11	1
LC (H)	849	712	556	1937	1807	637	<b>1083</b>	-1	-12	0
SP 1170 B2	554	612	360	1898	2150	902	<b>1079</b>	-2	-13	0
MRC 7377 BG II	1069	583	642	1731	1795	628	<b>1075</b>	-2	-13	-1
PCH 882 Bt 2	650	663	442	1805	2061	820	<b>1074</b>	-2	-13	-1
NCS 860 Bt 2	653	663	535	1717	2067	798	<b>1072</b>	-2	-13	-1
PRCH 333 BG II	640	635	323	1492	2070	1223	<b>1064</b>	-3	-14	-2
VBCH 1521 BG II	621	642	505	1215	2357	970	<b>1052</b>	-4	-15	-3
NCEH 24 (Fusion)	635	689	271	1607	2212	894	<b>1051</b>	-4	-15	-3
SWCH 4715 BG II	443	540	230	755	2178	632	<b>796</b>	-28	-36	-26
ABCH 147 BG II	317	419	90	1019	1758	467	<b>678</b>	-38	-45	-37
UPLHH 10 (Fusion)	261	448	116	894	1681	438	<b>640</b>	-42	-48	-41
CD @ 5 %	492	125	158	398	216	77				
CV %	13	11	21	14	11	5				

Table 64. Lint yield (kg/ha)

Entry	Yavatmal	Nanded	Nagpur	Bharuch	Indore	Mean	% Inc. over Ankur 651	% Inc. over Bunny Bt	% Inc. over LC Hybrid
ACH 232-1 BG II	314	253	659	991	545	<b>552</b>	37	26	51
KDCHH 9821 BG II	258	183	750	850	352	<b>479</b>	19	10	31
RCH 377 BG II	237	183	843	599	323	<b>437</b>	9	0	20
Bunny Bt (C)	243	272	624	717	329	<b>437</b>	9	0	20
Ankur 3028 BG II	227	282	660	700	290	<b>432</b>	7	-1	18
SP 1170 B2	208	129	666	720	302	<b>405</b>	1	-7	11
Ankur 651 (C)	252	127	615	686	328	<b>402</b>	0	-8	10
NSPL 432 BG II	171	164	644	720	312	<b>402</b>	0	-8	10
NCS 860 Bt 2	233	195	604	661	270	<b>393</b>	-2	-10	8
PCH 882 Bt 2	220	163	630	659	279	<b>390</b>	-3	-11	7
557-2	195	181	652	651	271	<b>390</b>	-3	-11	7
Tulasi 162 BG II	250	198	524	638	334	<b>389</b>	-3	-11	7
NCEH 24 (Fusion)	194	90	530	763	291	<b>374</b>	-7	-15	2
LC (H)	251	186	614	569	203	<b>365</b>	-9	-17	0
MRC 7377 BG II	198	214	604	583	205	<b>361</b>	-10	-17	-1
VBCH 1521 BG II	206	175	397	719	307	<b>361</b>	-10	-17	-1
PRCH 333 BG II	194	106	458	621	352	<b>346</b>	-14	-21	-5
SWCH 4715 BG II	176	78	255	708	206	<b>285</b>	-29	-35	-22
ABCH 147 BG II	149	34	384	624	164	<b>271</b>	-33	-38	-26
UPLHH 10 (Fusion)	165	52	306	589	155	<b>253</b>	-37	-42	-31
CD @ 5 %	43	54			27				
CV %	12	21			6				

Table 65. 2.5% span length (mm)

Entry	2.5% span length (mm)				
	Akola	Yavatmal	Nagpur	Bharuch	Mean
NCS 860 Bt 2	28.0	29.9	29.1	30.7	<b>29.4</b>
ABCH 147 BG II	29.5	27.5	28.1	28.8	<b>28.5</b>
SP 1170 B2	27.3	30.1	31.7	31.3	<b>30.1</b>
PCH 882 Bt 2	30.4	29.6	29.8	31.6	<b>30.4</b>
RCH 377 BG II	32.3	30.9	31.9	33.4	<b>32.1</b>
MRC 7377 BG II	29.8	29.8	30.6	30.1	<b>30.1</b>
Bunny Bt (C)	29.7	29.4	31.1	32.1	<b>30.6</b>
VBCH 1521 BG II	29.5	30.1	29.6	32.1	<b>30.3</b>
SWCH 4715 BG II	27.9	28.0	28.5	29.6	<b>28.5</b>
Tulasi 162 BG II	30.0	30.4	30.5	31.7	<b>30.7</b>
557-2	29.3	29.3	30.2	31.6	<b>30.1</b>
Ankur 651 (C)	27.5	28.1	28.2	31.2	<b>28.7</b>
Ankur 3028 BG II	30.4	30.4	29.6	30.8	<b>30.3</b>
NSPL 432 BG II	28.0	30.3	30.8	30.2	<b>29.8</b>
ACH 232-1 BG II	27.0	27.4	27.5	28.3	<b>27.5</b>
UPLHH 10 (Fusion)	26.3	27.4	27.9	28.4	<b>27.5</b>
PRCH 333 BG II	30.0	30.2	30.8	31.4	<b>30.6</b>
NCEH 24 (Fusion)	26.4	27.1	27.2	28.5	<b>27.3</b>
KDCHH 9821 BG II	24.8	27.3	25.5	26.8	<b>26.1</b>
LC (H)	28.0	27.5	24.3	27.6	<b>26.5</b>

Table 66. Micronaire value

Entry	Micronaire value				
	Akola	Yavatmal	Nagpur	Bharuch	Mean
NCS 860 Bt 2	4.2	3.3	4.2	4.5	4.1
ABCH 147 BG II	4.4	3.2	3.4	4.1	3.8
SP 1170 B2	4.4	3.3	4.5	4.3	4.1
PCH 882 Bt 2	4.6	2.9	4.2	4.6	4.1
RCH 377 BG II	4.2	3.2	3.9	3.6	3.7
MRC 7377 BG II	4.6	3.0	4.4	4.3	4.1
Bunny Bt (C)	4.6	2.7	3.8	3.6	3.7
VBCH 1521 BG II	4.4	2.9	2.8	3.4	3.4
SWCH 4715 BG II	4.6	2.8	4.4	4.6	4.1
Tulasi 162 BG II	4.4	2.8	4.0	3.8	3.8
557-2	4.0	2.8	3.5	4.2	3.6
Ankur 651 (C)	4.0	2.7	3.9	4.3	3.7
Ankur 3028 BG II	4.7	3.5	4.1	4.2	4.1
NSPL 432 BG II	4.5	3.0	4.2	4.9	4.2
ACH 232-1 BG II	4.5	2.8	3.8	4.3	3.9
UPLHH 10 (Fusion)	4.4	2.8	3.7	3.6	3.6
PRCH 333 BG II	4.0	2.8	3.3	4.5	3.6
NCEH 24 (Fusion)	4.4	3.2	3.9	4.6	4.0
KDCHH 9821 BG II	4.5	2.7	4.2	4.7	4.0
LC (H)	4.2	3.3	4.5	5.2	4.3

Table 67. Uniformity ratio

Entry	Uniformity ratio				
	Akola	Yavatmal	Nagpur	Bharuch	Mean
NCS 860 Bt 2	48.0	49.0	50.0	50.9	49.5
ABCH 147 BG II	48.0	47.0	50.0	45.8	47.7
SP 1170 B2	50.0	48.0	49.0	44.9	48.0
PCH 882 Bt 2	51.0	48.0	50.0	49.1	49.5
RCH 377 BG II	48.0	47.0	46.0	46.9	47.0
MRC 7377 BG II	49.0	47.0	49.0	45.5	47.6
Bunny Bt (C)	50.0	46.0	47.0	47.1	47.5
VBCH 1521 BG II	49.0	48.0	48.0	48.4	48.4
SWCH 4715 BG II	52.0	49.0	50.0	46.1	49.3
Tulasi 162 BG II	49.0	49.0	50.0	49.7	49.4
557-2	50.0	49.0	49.0	46.1	48.5
Ankur 651 (C)	50.0	49.0	51.0	45.3	48.8
Ankur 3028 BG II	51.0	51.0	51.0	48.9	50.5
NSPL 432 BG II	49.0	49.0	50.0	48.7	49.2
ACH 232-1 BG II	52.0	50.0	50.0	49.0	50.3
UPLHH 10 (Fusion)	51.0	48.0	51.0	49.3	49.8
PRCH 333 BG II	51.0	49.0	49.0	48.5	49.4
NCEH 24 (Fusion)	50.0	48.0	50.0	48.7	49.2
KDCHH 9821 BG II	51.0	49.0	52.0	51.5	50.9
LC (H)	48.0	51.0	51.0	52.7	51.6

Table 68. Strength (g/tex)

Entry	Strength (g/tex)				
	Akola	Yavatmal	Nagpur	Bharuch	Mean
NCS 860 Bt 2	20.8	23.4	22.3	24.9	22.9
ABCH 147 BG II	20.6	21.9	21.9	24.0	22.1
SP 1170 B2	19.0	21.5	22.7	23.3	21.6
PCH 882 Bt 2	19.6	23.9	22.7	24.2	22.6
RCH 377 BG II	20.0	24.5	23.7	25.8	23.5
MRC 7377 BG II	20.0	22.3	22.4	20.8	21.4
Bunny Bt (C)	19.7	21.1	21.5	23.3	21.4
VBCH 1521 BG II	21.4	22.6	24.6	27.2	24.0
SWCH 4715 BG II	16.3	20.5	21.1	20.5	19.6
Tulasi 162 BG II	22.8	24.0	23.5	25.0	23.8
557-2	21.6	23.4	25.2	24.4	23.7
Ankur 651 (C)	19.4	22.4	23.7	23.4	22.2
Ankur 3028 BG II	19.8	24.9	23.1	24.9	23.2
NSPL 432 BG II	20.5	24.2	25.8	21.6	23.0
ACH 232-1 BG II	17.8	22.9	21.0	23.4	21.3
UPLHH 10 (Fusion)	17.1	20.1	20.9	22.3	20.1
PRCH 333 BG II	21.4	24.3	24.4	25.3	23.9
NCEH 24 (Fusion)	20.5	21.2	21.8	22.0	21.4
KDCHH 9821 BG II	20.4	23.3	20.7	22.8	21.8
LC (H)	20.8	22.1	18.2	23.6	21.3

Table 69. Jassid / plant

Entry	Akola	Yavatmal	Nagpur	Bharuch	Mean
NCS 860 Bt 2	3.7	2.0	2.1	7.0	3.7
ABCH 147 BG II	6.1	2.9	5.2	8.8	5.7
SP 1170 B2	4.3	3.3	3.2	8.8	4.9
PCH 882 Bt 2	5.0	3.6	1.7	7.0	4.3
RCH 377 BG II	3.1	3.8	2.7	8.5	4.5
MRC 7377 BG II	4.1	3.6	3.2	4.5	3.8
Bunny Bt (C)	4.1	2.7	1.7	9.3	4.4
VBCH 1521 BG II	4.7	2.1	1.9	13.5	5.5
SWCH 4715 BG II	5.8	4.1	3.7	13.0	6.7
Tulasi 162 BG II	4.3	2.5	1.7	7.8	4.1
557-2	3.9	5.2	2.5	8.3	5.0
Ankur 651 (C)	3.6	4.1	4.3	6.0	4.5
Ankur 3028 BG II	4.3	2.2	2.2	8.0	4.2
NSPL 432 BG II	5.0	5.2	2.0	4.8	4.2
ACH 232-1 BG II	3.1	2.9	1.6	3.5	2.8
UPLHH 10 (Fusion)	5.8	6.9	5.0	6.3	6.0
PRCH 333 BG II	4.1	2.9	3.4	6.5	4.2
NCEH 24 (Fusion)	4.3	2.8	3.1	7.0	4.3
KDCHH 9821 BG II	3.2	2.4	2.6	7.8	4.0
LC (H)	2.4	3.3	3.2	11.8	5.2

Table 70. Whitefly / plant

Entry	Akola	Nagpur	Bharuch	Mean
NCS 860 Bt 2	2.8	3.6	26.5	11.0
ABCH 147 BG II	2.4	2.6	11.5	5.5
SP 1170 B2	2.4	2.8	20.5	8.6
PCH 882 Bt 2	2.4	4.1	15.0	7.2
RCH 377 BG II	3.3	4.9	13.5	7.2
MRC 7377 BG II	4.0	4.2	16.5	8.2
Bunny Bt (C)	2.9	2.3	18.5	7.9
VBCH 1521 BG II	2.8	3.1	11.0	5.6
SWCH 4715 BG II	2.5	4.3	11.0	6.0
Tulasi 162 BG II	3.2	3.7	13.0	6.6
557-2	2.9	3.3	9.5	5.2
Ankur 651 (C)	3.1	3.8	13.0	6.6
Ankur 3028 BG II	2.8	3.4	18.0	8.1
NSPL 432 BG II	2.6	3.9	13.5	6.6
ACH 232-1 BG II	3.0	4.0	12.0	6.3
UPLHH 10 (Fusion)	2.7	3.7	14.5	7.0
PRCH 333 BG II	4.0	2.5	10.5	5.7
NCEH 24 (Fusion)	3.6	3.0	13.0	6.5
KDCHH 9821 BG II	3.7	5.3	13.0	7.3
LC (H)	4.7	3.9	17.0	8.5

Table 71. Thrips/ plant

Entry	Akola	Yavatmal	Nagpur	Bharuch	Mean
NCS 860 Bt 2	5.2	2.6	2.7	11.0	5.4
ABCH 147 BG II	3.6	4.7	4.0	10.5	5.7
SP 1170 B2	4.4	5.7	2.6	16.0	7.2
PCH 882 Bt 2	5.1	3.6	1.8	12.0	5.6
RCH 377 BG II	5.8	4.1	3.0	13.0	6.5
MRC 7377 BG II	5.3	4.6	2.3	15.0	6.8
Bunny Bt (C)	5.5	5.7	3.7	9.5	6.1
VBCH 1521 BG II	5.0	4.5	2.5	11.5	5.9
SWCH 4715 BG II	5.5	3.4	2.2	10.5	5.4
Tulasi 162 BG II	6.9	6.0	3.9	11.5	7.1
557-2	4.8	3.7	3.2	14.5	6.5
Ankur 651 (C)	5.8	4.0	3.2	12.0	6.3
Ankur 3028 BG II	5.0	2.8	3.0	15.5	6.6
NSPL 432 BG II	4.3	3.5	2.3	16.0	6.5
ACH 232-1 BG II	6.0	2.9	2.7	14.5	6.5
UPLHH 10 (Fusion)	5.0	2.6	3.5	18.0	7.3
PRCH 333 BG II	6.2	2.8	3.7	12.5	6.3
NCEH 24 (Fusion)	6.4	3.9	3.2	11.5	6.3
KDCHH 9821 BG II	5.1	2.0	3.2	8.5	4.7
LC (H)	4.5	2.1	3.7	20.0	7.6

Table 72. Mealy bug/10cm terminal shoot

Entry	Yavatmal	Bharuch	Mean
NCS 860 Bt 2	3.0	10.3	6.6
ABCH 147 BG II	2.9	12.0	7.5
SP 1170 B2	10.6	12.8	11.7
PCH 882 Bt 2	6.4	16.7	11.5
RCH 377 BG II	7.8	9.5	8.7
MRC 7377 BG II	7.0	13.3	10.1
Bunny Bt (C)	3.6	13.7	8.6
VBCH 1521 BG II	4.1	14.5	9.3
SWCH 4715 BG II	5.4	17.3	11.4
Tulasi 162 BG II	22.4	12.5	17.5
557-2	17.6	12.0	14.8
Ankur 651 (C)	8.7	11.5	10.1
Ankur 3028 BG II	4.1	15.0	9.6
NSPL 432 BG II	2.3	11.8	7.1
ACH 232-1 BG II	3.4	10.3	6.9
UPLHH 10 (Fusion)	2.9	14.5	8.7
PRCH 333 BG II	3.6	14.8	9.2
NCEH 24 (Fusion)	7.2	11.7	9.5
KDCHH 9821 BG II	8.9	13.5	11.2
LC (H)	4.1	21.0	12.5

Table 73. Predators

Entry	Akola	Yavatmal	Nagpur	Mean
NCS 860 Bt 2	1.0	3.9	9.9	4.9
ABCH 147 BG II	0.9	3.0	6.6	3.5
SP 1170 B2	1.1	3.3	7.1	3.8
PCH 882 Bt 2	1.0	3.8	8.9	4.5
RCH 377 BG II	1.2	2.9	10.7	4.9
MRC 7377 BG II	1.7	3.2	5.0	3.3
Bunny Bt (C)	1.6	3.3	9.3	4.7
VBCH 1521 BG II	1.2	2.9	7.1	3.7
SWCH 4715 BG II	1.2	3.4	5.7	3.4
Tulasi 162 BG II	1.2	3.9	6.2	3.8
557-2	1.4	3.4	7.6	4.1
Ankur 651 (C)	1.3	3.3	8.6	4.4
Ankur 3028 BG II	1.1	3.6	8.3	4.3
NSPL 432 BG II	1.0	3.9	8.6	4.5
ACH 232-1 BG II	1.4	3.8	8.8	4.6
UPLHH 10 (Fusion)	1.4	3.6	7.8	4.2
PRCH 333 BG II	1.1	3.8	7.7	4.2
NCEH 24 (Fusion)	0.9	3.8	8.1	4.3
KDCHH 9821 BG II	1.6	3.7	7.4	4.2
LC (H)	1.1	4.8	6.9	4.2



Table 74. Spotted bollworm, *Earias* spp. (No. of Larvae / 5 plants)

Entry	Akola	Yavatmal	Nagpur	Mean
NCS 860 Bt 2	0.0	0.1	0.0	<b>0.0</b>
ABCH 147 BG II	0.0	0.0	0.0	<b>0.0</b>
SP 1170 B2	0.1	0.3	0.0	<b>0.1</b>
PCH 882 Bt 2	0.0	0.2	0.0	<b>0.1</b>
RCH 377 BG II	0.0	0.2	0.0	<b>0.1</b>
MRC 7377 BG II	0.0	0.1	0.0	<b>0.0</b>
Bunny Bt (C)	0.0	0.3	0.0	<b>0.1</b>
VBCH 1521 BG II	0.0	0.1	0.0	<b>0.0</b>
SWCH 4715 BG II	0.0	0.1	0.0	<b>0.0</b>
Tulasi 162 BG II	0.0	0.0	0.0	<b>0.0</b>
557-2	0.0	0.1	0.0	<b>0.0</b>
Ankur 651 (C)	0.8	0.0	0.0	<b>0.3</b>
Ankur 3028 BG II	0.0	0.0	0.0	<b>0.0</b>
NSPL 432 BG II	0.0	0.2	0.0	<b>0.1</b>
ACH 232-1 BG II	0.0	0.1	0.0	<b>0.0</b>
UPLHH 10 (Fusion)	0.0	0.1	0.0	<b>0.0</b>
PRCH 333 BG II	0.1	0.1	0.0	<b>0.1</b>
NCEH 24 (Fusion)	0.1	0.2	0.0	<b>0.1</b>
KDCHH 9821 BG II	0.0	0.0	0.0	<b>0.0</b>
LC (H)	0.2	2.9	0.0	<b>1.0</b>

Table 75. Number of Pink Boll worm larvae / 20 green bolls

Entry	Akola	Yavatmal	Nagpur	Mean
NCS 860 Bt 2	2.8	0.8	0.0	<b>1.2</b>
ABCH 147 BG II	2.0	1.2	1.3	<b>1.5</b>
SP 1170 B2	2.7	1.2	2.7	<b>2.2</b>
PCH 882 Bt 2	4.8	1.3	1.3	<b>2.5</b>
RCH 377 BG II	1.8	1.7	0.0	<b>1.2</b>
MRC 7377 BG II	1.7	1.2	0.0	<b>1.0</b>
Bunny Bt (C)	2.3	1.3	0.0	<b>1.2</b>
VBCH 1521 BG II	1.0	1.0	1.3	<b>1.1</b>
SWCH 4715 BG II	1.7	1.2	0.0	<b>1.0</b>
Tulasi 162 BG II	2.0	1.3	0.0	<b>1.1</b>
557-2	5.0	1.2	1.3	<b>2.5</b>
Ankur 651 (C)	10.5	1.0	1.3	<b>4.3</b>
Ankur 3028 BG II	1.5	1.1	0.0	<b>0.9</b>
NSPL 432 BG II	2.3	1.4	0.0	<b>1.3</b>
ACH 232-1 BG II	1.2	1.3	0.0	<b>0.8</b>
UPLHH 10 (Fusion)	2.7	1.2	0.0	<b>1.3</b>
PRCH 333 BG II	2.3	1.2	0.0	<b>1.2</b>
NCEH 24 (Fusion)	0.8	1.1	0.0	<b>0.6</b>
KDCHH 9821 BG II	1.7	1.4	1.3	<b>1.5</b>
LC (H)	11.3	1.7	2.7	<b>5.2</b>

Table 76. Open boll and locule damage (%)

Entry	Open boll damage (%)					Locule damage (%)				
	Akola	Yavatmal	Nagpur	Bharuch	Mean	Akola	Yavatmal	Nagpur	Bharuch	Mean
<b>NCS 860 Bt 2</b>	0.0	4.4	0.0	1.6	<b>1.5</b>	0.0	4.0	0.0	1.1	<b>1.3</b>
<b>ABCH 147 BG II</b>	0.0	3.7	0.0	1.3	<b>1.3</b>	0.0	3.3	0.0	1.0	<b>1.1</b>
<b>SP 1170 B2</b>	0.0	3.3	0.0	3.0	<b>1.6</b>	0.0	4.6	0.0	2.7	<b>1.8</b>
<b>PCH 882 Bt 2</b>	0.0	3.6	0.0	1.7	<b>1.3</b>	0.0	4.6	0.0	2.1	<b>1.7</b>
<b>RCH 377 BG II</b>	0.0	3.6	0.0	0.9	<b>1.1</b>	0.0	4.5	0.0	0.7	<b>1.3</b>
<b>MRC 7377 BG II</b>	0.0	4.1	0.0	1.7	<b>1.4</b>	0.0	4.7	0.0	1.6	<b>1.6</b>
<b>Bunny Bt (C)</b>	0.0	3.8	0.0	1.0	<b>1.2</b>	0.0	4.7	0.0	1.1	<b>1.4</b>
<b>VBCH 1521 BG II</b>	0.0	3.0	2.7	1.4	<b>1.8</b>	0.0	4.1	1.8	2.1	<b>2.0</b>
<b>SWCH 4715 BG II</b>	0.0	3.9	8.3	1.1	<b>3.3</b>	0.0	3.2	4.2	0.7	<b>2.0</b>
<b>Tulasi 162 BG II</b>	1.1	3.5	44.4	0.1	<b>12.3</b>	0.3	4.0	15.3	0.2	<b>4.9</b>
<b>557-2</b>	2.2	3.1	37.5	2.8	<b>11.4</b>	0.7	4.4	11.5	1.2	<b>4.4</b>
<b>Ankur 651 (C)</b>	63.3	3.5	15.0	10.4	<b>23.1</b>	27.4	4.9	10.0	2.5	<b>11.2</b>
<b>Ankur 3028 BG II</b>	0.0	3.4	16.7	1.5	<b>5.4</b>	0.0	5.0	6.3	1.5	<b>3.2</b>
<b>NSPL 432 BG II</b>	0.0	3.7	8.3	1.2	<b>3.3</b>	0.0	3.8	4.2	2.0	<b>2.5</b>
<b>ACH 232-1 BG II</b>	0.0	3.6	4.2	1.1	<b>2.2</b>	0.0	4.2	1.0	0.8	<b>1.5</b>
<b>UPLHH 10 (Fusion)</b>	0.0	3.3	0.0	0.8	<b>1.0</b>	0.0	4.0	0.0	0.8	<b>1.2</b>
<b>PRCH 333 BG II</b>	0.0	3.3	13.9	0.9	<b>4.5</b>	0.0	4.3	6.9	0.9	<b>3.0</b>
<b>NCEH 24 (Fusion)</b>	1.1	3.2	0.0	7.6	<b>3.0</b>	0.2	4.1	0.0	5.2	<b>2.4</b>
<b>KDCHH 9821 BG II</b>	1.1	4.2	0.0	0.2	<b>1.4</b>	0.3	3.5	0.0	0.4	<b>1.0</b>
<b>LC (H)</b>	55.6	6.3	8.3	12.6	<b>20.7</b>	21.4	6.7	2.1	11.1	<b>10.3</b>

## INTERSPECIFIC BT COTTON HYBRID TRIALS (2008 - 09)

The first year interspecific ( *G.hirsutum* x *G.barbadense* ) hybrid trial was undertaken at Indore and Banswara centres in Central zone under irrigated conditions with twenty four test hybrids and MRC 6918 Bt as Bt check hybrid and DCH 32 as non-Bt check hybrid. The general conditions of growing were as standardized in earlier years with recommended package of practices and methods of evaluation.

The germination percentage and final plant stand were optimum and the data are presented in Table 77. As regards mean boll weight, it was seen that most of the interspecific hybrids had more or less the same as seen in check hybrids with the range being 2.5 g – 3.4 g. (Table 78). The mean ginning out turn ranged between 30 – 33 %, with PRCHB 405 BGI recording 35.2%.

Most of the test hybrids had seed index of 9.2 – 10.5, while the lint index was around 3.7 to 4.8. The test hybrid SWCH 5017 BG II had less seed index (9.2) and lint index (3.7) ( Table 79). As regards seed cotton yield is concerned, it was seen that all the test hybrids, except MLBCH 6 BG II exhibited higher seed cotton yield, with increase ranging from 17 to 77 % over non-Bt check hybrid DCH 32, while none of them was found superior to Bt check hybrid MRC 6918 Bt. (Table 80). The lint yield also followed a near similar trend, with only PRCHB having higher lint yield over MRC 6918 by 11% (Table 81).

The mean fibre quality attributes of the test entries are presented in Table 82. While most of the test entries had more or less similar fibre quality attributes like that of both non-Bt and Bt interspecific check hybrids, the low micronaire values have been noticed in case of certain interspecific hybrids like Tulasi 888 BG II, ACHB 907-1 BG I, MCHB 7945 BG II (Table 82).

Entomological data set reveal higher levels of sap sucking pests and moderate levels of bollworm incidence. Occurrence of *H.armigera* was also noted on all test entries. The higher levels of square damage and on intact bolls and later revealed through open boll and loculi damage among all test entries indicated the relatively higher susceptibility of interspecific hybrids. The narrow differences between open boll damage on boll and loculi basis revealed the higher damage due to pink bollworm. Three and two round of chemical pesticide interventions in respect of sucking pests and bollworms too had lesser effect towards reducing sucking pest infestation and boll damage (Table 83 & 84).

**Summary Table: Inter-specific Hybrids Trial**

Entry	Germination (%)	Boll weight (g)	Ginning Out Turn (%)	Lint index (g)	Seed index (g)	Lint yield (kg/ha)	Seed cotton yield (kg/ha)
MRC 6918 (Bt-CC)	94.3	2.9	31.1	4.0	9.8	465	1497
PRCHB 405 BG I	96.5	3.0	35.2	4.8	9.9	518	1468
Ankur HB 2104 BG II	98.6	3.1	30.7	4.0	10.0	456	1445
Ankur HB 2110 BG II	99.0	3.2	29.6	4.2	11.0	439	1440
SWCH 5017 BG II	96.5	2.9	31.0	3.7	9.2	443	1424
JKCHB 212 (Event 1)	92.8	3.4	31.3	4.1	10.1	439	1405
Tulasi 888 BG II	96.9	2.7	30.9	4.1	9.8	430	1370
JKCHB 2250 (Event 1)	89.6	3.2	31.8	4.1	10.1	425	1344
MCHB 7941 BG II	98.0	2.9	30.7	4.1	10.3	408	1317
ABCH 137 BG I	99.5	2.7	30.9	4.3	10.5	398	1272
MCHB 7945 BG II	99.7	2.9	30.0	4.0	10.0	384	1252
ABCH 140 BG I	97.6	2.6	33.2	4.3	9.5	409	1206
ACHB 907-1 BG I	97.3	2.8	32.2	4.3	10.0	386	1184
NSPL 63 BG II	94.6	2.9	31.6	4.3	10.6	369	1179
VICHB 502 BG II	89.3	2.9	31.1	4.4	10.7	357	1142
JK Chamundi	93.2	2.8	33.6	4.1	9.4	379	1125
PRCHB 402 BG I	93.1	2.8	32.8	4.7	10.6	365	1088
SP 911 B2	96.7	2.8	33.0	4.3	9.7	355	1069
NCHB 990 Bt 2	96.1	2.7	31.4	4.3	10.2	339	1064
JKCHB 229	95.8	2.7	32.7	4.4	10.2	344	1040
VBCHB 1525 BG II	94.3	3.0	31.7	4.6	10.6	329	1021
NCHB 991 Bt 2	96.9	2.5	33.4	4.4	9.7	340	1001
VBCHB 1526 BG II	99.0	3.3	31.4	3.8	9.4	312	995
DCH 32 (Non Bt -C)	97.0	2.7	32.2	4.1	9.6	273	847
MLBCH 6 BG II	95.4	2.6	32.8	4.2	9.4	256	763
LC	92.6	2.7	33.2	4.3	9.7	253	757

Note: Hybrids are arranged according to descending order of Seed Cotton Yield

Table 77. Germination (%) and Plant Stand at harvest

Entry	Germination %			Stand at harvest (number of plants)	
	Indore	Banswara	Mean	Indore	Banswara
Tulasi 888 BG II	96.5	97.3	<b>96.9</b>	46.3	64.3
MCHB 7941 BG II	97.9	98.0	<b>98.0</b>	47.0	63.0
DCH 32 (Non Bt -C)	98.6	95.3	<b>97.0</b>	47.0	65.3
NCHB 990 Bt 2	95.1	97.0	<b>96.1</b>	45.7	64.0
SP 911 B2	95.8	97.7	<b>96.7</b>	45.7	60.0
NSPL 63 BG II	96.5	92.7	<b>94.6</b>	46.3	60.7
Ankur HB 2104 BG II	97.9	99.3	<b>98.6</b>	47.0	61.0
SWCH 5017 BG II	97.9	95.0	<b>96.5</b>	47.0	71.7
JKCHB 212 (Event 1)	100.0	85.7	<b>92.8</b>	48.0	61.3
MRC 6918 (Bt-CC)	98.6	90.0	<b>94.3</b>	47.3	57.0
VBCHB 1526 BG II	98.6	99.3	<b>99.0</b>	47.3	52.0
JKCHB 2250 (Event 1)	87.5	91.7	<b>89.6</b>	42.0	37.7
VICHB 502 BG II	98.6	80.0	<b>89.3</b>	47.3	51.7
VBCHB 1525 BG II	99.3	89.3	<b>94.3</b>	47.7	62.3
PRCHB 402 BG I	94.4	91.7	<b>93.1</b>	45.3	62.3
ACHB 907-1 BG I	98.6	96.0	<b>97.3</b>	47.3	56.0
ABCH 137 BG I	99.3	99.7	<b>99.5</b>	47.7	59.0
MCHB 7945 BG II	99.3	100.0	<b>99.7</b>	47.7	57.7
Ankur HB 2110 BG II	100.0	98.0	<b>99.0</b>	48.0	61.3
ABCH 140 BG I	98.6	96.7	<b>97.6</b>	47.3	68.7
PRCHB 405 BG I	97.9	95.0	<b>96.5</b>	47.0	63.7
NCHB 991 Bt 2	95.1	98.7	<b>96.9</b>	45.7	57.3
MLBCH 6 BG II	93.8	97.0	<b>95.4</b>	45.0	53.0
JK Chamundi	100.0	86.3	<b>93.2</b>	47.7	53.3
JKCHB 229	92.4	99.3	<b>95.8</b>	44.3	43.3
LC	98.6	86.7	<b>92.6</b>	47.3	56.7

Table 78. Mean boll weight (g) and Ginning outturn (%)

Entry	Mean boll weight (g)			Mean Ginning Out Turn (%)		
	Indore	Banswara	Mean	Indore	Banswara	Mean
Tulasi 888 BG II	2.2	3.1	<b>2.7</b>	28.8	33.0	<b>30.9</b>
MCHB 7941 BG II	2.6	3.2	<b>2.9</b>	29.4	31.9	<b>30.7</b>
DCH 32 (Non Bt -C)	2.3	3.1	<b>2.7</b>	31.7	32.7	<b>32.2</b>
NCHB 990 Bt 2	2.2	3.1	<b>2.7</b>	30.3	32.6	<b>31.4</b>
SP 911 B2	2.6	3.0	<b>2.8</b>	32.3	33.8	<b>33.0</b>
NSPL 63 BG II	2.9	2.9	<b>2.9</b>	32.7	30.6	<b>31.6</b>
Ankur HB 2104 BG II	2.5	3.7	<b>3.1</b>	27.8	33.6	<b>30.7</b>
SWCH 5017 BG II	2.5	3.4	<b>2.9</b>	30.2	31.7	<b>31.0</b>
JKCHB 212 (Event 1)	3.7	3.1	<b>3.4</b>	31.6	31.1	<b>31.3</b>
MRC 6918 (Bt-CC)	2.8	3.1	<b>2.9</b>	30.2	32.0	<b>31.1</b>
VBCHB 1526 BG II	3.3	3.2	<b>3.3</b>	30.7	32.0	<b>31.4</b>
JKCHB 2250 (Event 1)	3.0	3.4	<b>3.2</b>	31.8	31.8	<b>31.8</b>
VICHB 502 BG II	2.7	3.1	<b>2.9</b>	28.9	33.4	<b>31.1</b>
VBCHB 1525 BG II	2.4	3.6	<b>3.0</b>	29.1	34.3	<b>31.7</b>
PRCHB 402 BG I	2.5	3.2	<b>2.8</b>	30.2	35.3	<b>32.8</b>
ACHB 907-1 BG I	2.1	3.4	<b>2.8</b>	30.8	33.7	<b>32.2</b>
ABCH 137 BG I	2.1	3.3	<b>2.7</b>	29.1	32.7	<b>30.9</b>
MCHB 7945 BG II	2.6	3.2	<b>2.9</b>	26.8	33.2	<b>30.0</b>
Ankur HB 2110 BG II	2.4	3.9	<b>3.2</b>	26.7	32.6	<b>29.6</b>
ABCH 140 BG I	2.3	2.9	<b>2.6</b>	30.9	35.5	<b>33.2</b>
PRCHB 405 BG I	2.7	3.3	<b>3.0</b>	34.3	36.1	<b>35.2</b>
NCHB 991 Bt 2	2.3	2.7	<b>2.5</b>	31.3	35.4	<b>33.4</b>
MLBCH 6 BG II	2.3	3.0	<b>2.6</b>	30.3	35.2	<b>32.8</b>
JK Chamundi	2.4	3.2	<b>2.8</b>	32.9	34.3	<b>33.6</b>
JKCHB 229	2.5	2.8	<b>2.7</b>	31.1	34.3	<b>32.7</b>
LC	2.5	3.0	<b>2.7</b>	32.6	33.9	<b>33.2</b>

Table 79. Seed index and Lint index (g)

Entry	Seed index (g)			Lint index		
	Indore	Banswara	Mean	Indore	Banswara	Mean
Tulasi 888 BG II	8.7	11.0	<b>9.8</b>	2.7	5.4	<b>4.1</b>
MCHB 7941 BG II	11.8	8.9	<b>10.3</b>	4.0	4.2	<b>4.1</b>
DCH 32 (Non Bt –C)	8.6	10.7	<b>9.6</b>	3.0	5.2	<b>4.1</b>
NCHB 990 Bt 2	8.6	11.8	<b>10.2</b>	2.9	5.7	<b>4.3</b>
SP 911 B2	9.0	10.5	<b>9.7</b>	3.2	5.3	<b>4.3</b>
NSPL 63 BG II	10.9	10.4	<b>10.6</b>	4.0	4.6	<b>4.3</b>
Ankur HB 2104 BG II	10.4	9.5	<b>10.0</b>	3.2	4.8	<b>4.0</b>
SWCH 5017 BG II	8.9	9.4	<b>9.2</b>	3.0	4.4	<b>3.7</b>
JKCHB 212 (Event 1)	9.4	10.7	<b>10.1</b>	3.3	4.8	<b>4.1</b>
MRC 6918 (Bt-CC)	9.5	10.1	<b>9.8</b>	3.2	4.7	<b>4.0</b>
VBCHB 1526 BG II	8.9	9.9	<b>9.4</b>	3.0	4.7	<b>3.8</b>
JKCHB 2250 (Event 1)	9.6	10.5	<b>10.1</b>	3.4	4.9	<b>4.1</b>
VICHB 502 BG II	11.2	10.2	<b>10.7</b>	3.6	5.1	<b>4.4</b>
VBCHB 1525 BG II	10.0	11.3	<b>10.6</b>	3.3	5.9	<b>4.6</b>
PRCHB 402 BG I	10.3	10.8	<b>10.6</b>	3.5	5.9	<b>4.7</b>
ACHB 907-1 BG I	9.7	10.4	<b>10.0</b>	3.3	5.3	<b>4.3</b>
ABCH 137 BG I	10.3	10.7	<b>10.5</b>	3.3	5.2	<b>4.3</b>
MCHB 7945 BG II	10.4	9.7	<b>10.0</b>	3.1	4.8	<b>4.0</b>
Ankur HB 2110 BG II	11.9	10.1	<b>11.0</b>	3.6	4.9	<b>4.2</b>
ABCH 140 BG I	9.3	9.7	<b>9.5</b>	3.2	5.4	<b>4.3</b>
PRCHB 405 BG I	8.9	10.9	<b>9.9</b>	3.4	6.2	<b>4.8</b>
NCHB 991 Bt 2	9.6	9.9	<b>9.7</b>	3.3	5.5	<b>4.4</b>
MLBCH 6 BG II	9.3	9.5	<b>9.4</b>	3.1	5.2	<b>4.2</b>
JK Chamundi	9.6	9.2	<b>9.4</b>	3.5	4.8	<b>4.1</b>
JKCHB 229	9.7	10.6	<b>10.2</b>	3.4	5.5	<b>4.4</b>
LC	8.9	10.5	<b>9.7</b>	3.2	5.4	<b>4.3</b>

Table 80. Seed cotton yield (kg/ha)

Entry	Indore	Banswara	Mean	% Increase over DCH 32 (C)	% Increase over MRC 6918 (C)	% Increase over LC (H)
MRC 6918 (Bt-CC)	1595	1400	<b>1497</b>	77	0	98
PRCHB 405 BG I	1265	1672	<b>1468</b>	73	-2	94
Ankur HB 2104 BG II	1010	1880	<b>1445</b>	71	-3	91
Ankur HB 2110 BG II	1024	1856	<b>1440</b>	70	-4	90
SWCH 5017 BG II	1217	1631	<b>1424</b>	68	-5	88
JKCHB 212 (Event 1)	1243	1567	<b>1405</b>	66	-6	86
Tulasi 888 BG II	1002	1737	<b>1370</b>	62	-9	81
JKCHB 2250 (Event 1)	1318	1370	<b>1344</b>	59	-10	78
MCHB 7941 BG II	968	1666	<b>1317</b>	55	-12	74
ABCH 137 BG I	986	1559	<b>1272</b>	50	-15	68
MCHB 7945 BG II	925	1578	<b>1252</b>	48	-16	65
ABCH 140 BG I	845	1567	<b>1206</b>	42	-19	59
ACHB 907-1 BG I	944	1424	<b>1184</b>	40	-21	56
NSPL 63 BG II	781	1577	<b>1179</b>	39	-21	56
VICHB 502 BG II	1064	1221	<b>1142</b>	35	-24	51
JK Chamundi	924	1325	<b>1125</b>	33	-25	49
PRCHB 402 BG I	777	1399	<b>1088</b>	28	-27	44
SP 911 B2	795	1343	<b>1069</b>	26	-29	41
NCHB 990 Bt 2	726	1403	<b>1064</b>	26	-29	41
JKCHB 229	844	1237	<b>1040</b>	23	-31	37
VBCHB 1525 BG II	817	1224	<b>1021</b>	21	-32	35
NCHB 991 Bt 2	714	1288	<b>1001</b>	18	-33	32
VBCHB 1526 BG II	874	1116	<b>995</b>	17	-34	31
DCH 32 (Non Bt –C)	775	919	<b>847</b>	0	-43	12
MLBCH 6 BG II	508	1017	<b>763</b>	-10	-49	1
LC	583	931	<b>757</b>	-11	-49	0
CD @ 5 %	86	355				
CV %	6	15				

Table 81. Lint yield (kg/ha)

Entry	Indore	Banswara	Mean	% Increase over DCH 32 (C)	% Increase over MRC 6918 (C)	% Increase over LC (H)
<b>PRCHB 405 BG I</b>	434	603	<b>518</b>	90	11	105
<b>MRC 6918 (Bt-CC)</b>	482	448	<b>465</b>	70	0	84
<b>Ankur HB 2104 BG II</b>	281	631	<b>456</b>	67	-2	80
<b>SWCH 5017 BG II</b>	368	518	<b>443</b>	62	-5	75
<b>JKCHB 212 (Event 1)</b>	392	487	<b>439</b>	61	-6	74
<b>Ankur HB 2110 BG II</b>	273	606	<b>439</b>	61	-6	74
<b>Tulasi 888 BG II</b>	288	572	<b>430</b>	58	-7	70
<b>JKCHB 2250 (Event 1)</b>	419	432	<b>425</b>	56	-8	68
<b>ABCH 140 BG I</b>	261	557	<b>409</b>	50	-12	62
<b>MCHB 7941 BG II</b>	285	532	<b>408</b>	50	-12	61
<b>ABCH 137 BG I</b>	287	510	<b>398</b>	46	-14	57
<b>ACHB 907-1 BG I</b>	291	480	<b>386</b>	41	-17	52
<b>MCHB 7945 BG II</b>	248	520	<b>384</b>	41	-17	52
<b>JK Chamundi</b>	304	455	<b>379</b>	39	-18	50
<b>NSPL 63 BG II</b>	255	483	<b>369</b>	35	-21	46
<b>PRCHB 402 BG I</b>	235	494	<b>365</b>	34	-22	44
<b>VICHB 502 BG II</b>	307	407	<b>357</b>	31	-23	41
<b>SP 911 B2</b>	257	454	<b>355</b>	30	-24	40
<b>JKCHB 229</b>	263	425	<b>344</b>	26	-26	36
<b>NCHB 991 Bt 2</b>	224	456	<b>340</b>	25	-27	34
<b>NCHB 990 Bt 2</b>	220	457	<b>339</b>	24	-27	34
<b>VBCHB 1525 BG II</b>	238	420	<b>329</b>	20	-29	30
<b>VBCHB 1526 BG II</b>	268	356	<b>312</b>	14	-33	23
<b>DCH 32 (Non Bt -C)</b>	245	301	<b>273</b>	0	-41	8
<b>MLBCH 6 BG II</b>	154	358	<b>256</b>	-6	-45	1
<b>LC</b>	190	316	<b>253</b>	-7	-46	0
<b>CD @ 5 %</b>	27	117				
<b>CV %</b>	6	15				

Table 82. Mean Fibre quality attributes at Banswara

Entry	2.5%Span Length (mm)	Uniformity Ratio	Micronaire Value	Bundle Strength
<b>Tulasi 888 BG II</b>	34.6	45	2.6	30.3
<b>MCHB 7941 BG II</b>	35.1	45	2.9	26.9
<b>DCH 32 (Non Bt -C)</b>	35.6	47	3.0	31.1
<b>NCHB 990 Bt 2</b>	35.7	47	2.9	30.2
<b>SP 911 B2</b>	34.9	50	3.5	27.9
<b>NSPL 63 BG II</b>	35.8	45	3.4	31.1
<b>Ankur HB 2104 BG II</b>	35.9	46	3.0	30.9
<b>SWCH 5017 BG II</b>	32.5	46	2.8	28.9
<b>JKCHB 212 (Event 1)</b>	37.0	46	3.1	32.1
<b>MRC 6918 (Bt-CC)</b>	35.2	49	3.0	30.8
<b>VBCHB 1526 BG II</b>	37.0	46	3.0	31.4
<b>JKCHB 2250 (Event 1)</b>	35.4	49	2.9	27.5
<b>VICHB 502 BG II</b>	37.3	47	3.1	33.7
<b>VBCHB 1525 BG II</b>	36.3	45	2.9	31.9
<b>PRCHB 402 BG I</b>	35.9	46	2.9	31.6
<b>ACHB 907-1 BG I</b>	36.8	48	2.7	31.4
<b>ABCH 137 BG I</b>	37.4	46	3.1	28.0
<b>MCHB 7945 BG II</b>	38.1	46	2.7	32.5
<b>Ankur HB 2110 BG II</b>	35.6	41	3.0	29.6
<b>ABCH 140 BG I</b>	36.5	45	3.2	29.5
<b>PRCHB 405 BG I</b>	36.3	47	3.2	29.9
<b>NCHB 991 Bt 2</b>	36.3	45	3.3	25.7
<b>MLBCH 6 BG II</b>	35.9	46	3.0	31.0
<b>JK Chamundi</b>	35.8	44	3.4	29.2
<b>JKCHB 229</b>	36.9	48	3.2	30.8

Table 83. Entomological observation at Banswara

Entry	Jassid/ plant	Whitefly/ plant	Predators	Spotted bollworm, <i>Earias spp.</i> (No of Larvae / 5plants)	<i>Helicoverpa armigera</i> (No of Larvae / 5 plants)	PBW Larvae / 10 green bolls
Tulasi 888 BG II	12.9	25.8	2.1	2.2	1.7	3.5
MCHB 7941 BG II	14.2	26.9	2.4	2.8	2.2	4.0
DCH 32 (Non Bt –C)	20.7	35.3	1.9	5.7	3.2	5.0
NCHB 990 Bt 2	15.8	31.7	2.4	2.0	1.8	4.7
SP 911 B2	17.4	31.5	2.5	2.3	2.2	5.2
NSPL 63 BG II	15.1	27.7	2.4	2.8	2.2	4.3
Ankur HB 2104 BG II	13.0	23.8	2.4	1.8	1.7	3.0
SWCH 5017 BG II	14.5	26.8	2.1	2.0	1.5	3.8
JKCHB 212 (Event 1)	16.9	28.8	2.2	3.0	2.5	4.0
MRC 6918 (Bt-CC)	17.4	31.3	2.4	2.2	1.8	4.8
VBCHB 1526 BG II	19.2	33.3	2.1	4.7	2.7	5.0
JKCHB 2250 (Event 1)	18.8	32.3	2.3	4.7	2.3	5.0
VICHB 502 BG II	18.2	31.8	2.5	3.0	2.2	5.5
VBCHB 1525 BG II	18.3	31.7	2.4	2.5	1.8	5.0
PRCHB 402 BG I	17.8	30.2	2.1	2.2	1.8	4.7
ACHB 907-1 BG I	17.0	29.9	2.4	2.3	2.2	4.7
ABCH 137 BG I	16.3	28.0	2.3	2.8	2.0	4.3
MCHB 7945 BG II	16.4	27.3	2.5	3.0	2.2	4.2
Ankur HB 2110 BG II	13.4	23.9	2.6	2.0	1.8	3.7
ABCH 140 BG I	16.5	28.4	2.3	3.0	1.7	4.5
PRCHB 405 BG I	14.8	25.4	2.5	2.5	1.8	4.0
NCHB 991 Bt 2	18.5	29.7	2.4	3.0	2.5	5.8
MLBCH 6 BG II	19.6	33.9	2.1	4.7	3.0	5.0
JK Chamundi	18.8	30.4	2.4	3.0	2.5	5.2
JKCHB 229	17.1	31.3	2.3	3.0	2.7	5.7
LC	21.9	34.4	2.2	5.3	2.8	6.5

Table 84. Entomological observation at Banswara

Entry	% square damage by Bollworms	Intact boll damage (%) by Bollworms	Open boll damage (%)	Locule damage (%)	No. of spray for Sucking pests	No. of spray for Bollworms
Tulasi 888 BG II	21.7	12.9	24.2	26.4	3.0	2.0
MCHB 7941 BG II	23.9	16.9	25.4	30.6	3.0	2.0
DCH 32 (Non Bt –C)	34.2	26.3	33.4	37.2	3.0	2.0
NCHB 990 Bt 2	26.8	21.8	26.4	32.2	3.0	2.0
SP 911 B2	31.4	21.3	28.1	33.6	3.0	2.0
NSPL 63 BG II	28.3	18.4	26.1	30.4	3.0	2.0
Ankur HB 2104 BG II	21.4	11.6	18.4	15.4	3.0	2.0
SWCH 5017 BG II	25.4	20.9	25.4	30.4	3.0	2.0
JKCHB 212 (Event 1)	29.1	22.3	28.3	31.6	3.0	2.0
MRC 6918 (Bt-CC)	31.6	23.6	28.7	32.4	3.0	2.0
VBCHB 1526 BG II	34.3	22.5	30.4	35.2	3.0	2.0
JKCHB 2250 (Event 1)	30.4	22.0	29.9	34.6	3.0	2.0
VICHB 502 BG II	32.3	22.2	28.2	32.4	3.0	2.0
VBCHB 1525 BG II	32.5	22.4	29.4	34.1	3.0	2.0
PRCHB 402 BG I	32.2	23.5	29.2	33.4	3.0	2.0
ACHB 907-1 BG I	30.7	21.8	28.3	32.4	3.0	2.0
ABCH 137 BG I	30.5	20.5	26.2	29.8	3.0	2.0
MCHB 7945 BG II	28.4	19.6	27.5	30.4	3.0	2.0
Ankur HB 2110 BG II	23.3	12.4	24.4	28.4	3.0	2.0
ABCH 140 BG I	28.3	21.1	27.2	30.5	3.0	2.0
PRCHB 405 BG I	23.3	15.4	27.4	30.5	3.0	2.0
NCHB 991 Bt 2	32.6	25.3	30.2	33.4	3.0	2.0
MLBCH 6 BG II	32.8	23.5	31.4	35.4	3.0	2.0
JK Chamundi	15.3	24.2	30.4	33.1	3.0	2.0
JKCHB 229	29.4	25.8	28.0	30.4	3.0	2.0
LC	36.0	29.8	39.2	42.4	3.0	2.0