

Decision taken in the 76th Meeting of the Genetic Engineering Approval Committee held on 11.5.2007

The 76th Meeting of the Genetic Engineering Approval Committee (GEAC) was held on 11.5.2007 at 11.00 AM in Room No. 624 in the Ministry of Environment and Forests under the Chairmanship of Shri B. S. Parsheera, Additional Secretary, MoEF and Chairman GEAC.

1.0 Consideration of Proposals

Before initiating discussion on the agenda items, the Member-Secretary, briefed the Committee on the recent Hon'ble Supreme Court ruling dated 8.5.2007 in Writ Petition 260/2005 in IA No. 4/2006 filed by M/s Aruna Rodrigues vs UoI. It was informed that the Hon'ble Supreme Court order dated 22.9.2006 directing the GEAC to stop all approvals stands amended to the extent that the GEAC may accord approval for commercial release of Bt cotton hybrids expressing approved gene events (cry 1Ac (MON 531 event), cry 1Ac and cry 2Ab (MON 15985) gene, cry 1Ac event 1 and cry 1Ab + cry 1Ac GFM. Further, the Hon'ble Supreme Court has also permitted conduct of field trials of GM crops subject to the following conditions:

1. All trials should have a lead scientist's name with contact details who would be responsible for all aspects of the trials including regulatory requirements.
2. An isolation distance of 200 m would be maintained during field trials.
3. Prior to bringing out the GM material from the green house for conduct of open field trial the Company should submit a validated event specific test protocol at an LOD of at least 0.01% to detect and confirm that there has been no contamination .

After a brief discussion on the implications of the above order, the Committee requested the legal expert to examine the Hon'ble Supreme Court order in depth and advise the Committee accordingly. The Committee was also of the view that a sub Committee may be constituted to examine implications of the Hon'ble SC Order especially with respect to conduct of field trials and measures to be taken by the GEAC to ensure its compliance. Accordingly it was decided to constitute a Sub Committee comprising of the following members under the Chairmanship of Director (CICR) to examine the matter and submit its recommendation to the GEAC:

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| 1. | Dr. B. M. Khadi, Director, CICR, Nagpur | Chairman |
| 2. | Prof. Govindraj Hegde, National Law School, Bangalore | Member |
| 3. | Dr. P. Anand Kumar, Principal Scientist, NRC on Plant Biotechnology, IARI, New Delhi | Member |
| 4. | Dr Mallika Dadlani, Head, Division of Seed Science and Technology, IARI, New Delhi | Member |
| 5. | Sh. Shanmugam, Deputy Commissioner (Seeds), MoA | Member |
| 6. | Dr. K. K. Tripathi, Adviser, DBT | Member |
| 7. | Dr. R. Warriar, Director, MoEF | Member-Secretary |

1.1 Renewal of GEAC permission for commercial release of MECH-12 Bt for central zone and MECH-184 Bt cotton for central and south zone hybrids developed by M/s Mahyco.

1.1.1 The Committee noted that the present request is for renewal of GEAC permission dated 10.5.2005 for commercial cultivation of **MECH-12 Bt for central zone and MECH-184 Bt cotton for central and south zone**. The Committee considered information submitted by the applicant and comments received from the State Department of Agriculture, State Agricultural Universities and Expert members. The following points were noted:

- i) The status of compliance of GEAC conditions is satisfactory. No adverse report has been received.
- ii) The performance of MECH 12 Bt and MECH 184 Bt was satisfactory in terms of protection against bollworm and showed consistent higher yield as compared to its non Bt counterpart.
- iii) The respective State Government/State Agricultural University have recommended the renewal of the GEAC permission for commercial cultivation of MECH 12 Bt and MECH 184 Bt

1.1.2 After detailed deliberations, the Committee decided to renew the GEAC permission for commercial release of **MECH-12 Bt for central zone and MECH-184 Bt cotton for central and south zone** cotton hybrids developed by M/s Mahyco.

PROPOSALS FOR COMMERCIAL RELEASE IN NORTH ZONE

A. Bt cotton hybrids expressing *cry1Ac* gene (MON 531 event)

- 1.2 **Permission for commercialization of Ankur 2226 BG, and Jassi BG with *cry 1Ac* gene (MON 531 event) in the North Zone by M/s Ankur Seeds Ltd.**
&
- 1.3 **Permission for commercialization of PCH 917 Bt, PCH 306 Bt, and PCH 406 Bt with *cry 1Ac* gene (MON 531 event) in the North Zone by M/s Prabhat Agri Biotech Ltd**
&
- 1.4 **Permission for commercialization of Sigma Bt and Ole Bt with *cry 1Ac* gene (MON 531 event) in the North Zone by M/s Vibha Agrotech Ltd.**
&
- 1.5 **Permission for commercialization of SDS-405 Bt, SDS 1368 Bt, SDS 27 Bt, SDS 9 Bt SDS 234 Bt with *cry 1Ac* gene (MON 531 event) in the North Zone by M/s Nandi Seeds (P) Ltd.**
&
- 1.6 **Permission for commercialization of NCS 918 Bt, NCS-950 Bt and NCS-951 Bt with *cry 1 Ac* gene (MON 531 event) in the North Zone by M/s Nuziveedu Seeds Ltd.**
&
- 1.7 **Permission for commercialization of KDCHH-144 Bt and KDCHH 9810 Bt with *cry 1Ac* gene (MON 531 event) in the North Zone by M/s Krishidhan Seeds Ltd.**
&
- 1.8 **Permission for commercialization of IT 905 BG I with *cry 1Ac* gene (MON 531 event) in the North Zone by M/s Proagro Seed Company Pvt. Ltd.**
&
- 1.9 **Permission for commercialization of ACH-155-1 Bt. with *cry 1Ac* gene (MON 531 event) in the North Zone by M/s Ajeet Seeds Ltd.**
&
- 1.10 **Permission for commercialization of NAMCOT-402 Bt, with *cry 1Ac* gene (MON 531 event) in the North Zone by M/s Namdhari Seeds (P) Ltd.**
&
- 1.11 **Permission for commercialization of GK 206 Bt with *cry 1Ac* gene (MON 531 event) in the North Zone by M/s Ganga Kaveri Seeds Pvt. Ltd.**
&
- 1.12 **Permission for commercialization of 6317 Bt and 6488 Bt with *cry 1Ac* gene (MON 531 event) in the North Zone by M/s Bio seeds Research**

1.0 The Committee noted that the request in **respect of 23 Bt cotton** hybrids as contained in agenda item 4.2 to 4.12 above for commercial release and marketing of Ankur 2226 BG and Jassi BG by M/s Ankur Seeds Ltd., PCH 917 Bt, PCH 306 Bt and PCH 406 Bt by M/s Prabhat Agri Biotech Ltd, Sigma Bt and Ole Bt by M/s Vibha Agrotech Ltd, SDS-405 Bt, SDS 1368, SDS 27 Bt, SDS 9 Bt, SDS 234 Bt by M/s Nandi Seeds (P) Ltd., NCS-950 Bt, NCS-951 Bt and NCS 918 Bt by M/s Nuziveedu Seeds Ltd., KDCHH-144 Bt and KDCHH 9810 Bt by M/s Krishidhan Seeds Ltd., IT 905 BG I by M/s Proagro seeds (P) Ltd., ACH-155-1 Bt. by M/s Ajeet Seeds Ltd, NAMCOT-402 Bt by M/s Namdhari Seeds (P) Ltd., GK 206 Bt by M/s Ganga Kaveri Seeds Ltd., 6317 Bt and 6488 Bt by M/s Bio seeds Research in the North zone was considered in the GEAC meeting held on 14.3.2007. However, decision on the request was deferred in the light of the Hon'ble Supreme Court direction dated 22.9.2006.

2.0 The Committee noted that MEC in its meeting held on 22-23.1.2007 had recommended 8 hybrids namely Ankur 2226 BG, PCH 406 Bt, Sigma Bt, Ole Bt, SDS 1368 Bt, SDS 9 Bt, NCS-950 Bt, KDCHH 9810 for commercial release taking into consideration the susceptibility of the hybrid to CLCV infection, yield advantage over the recently release Bt cotton hybrids in the North Zone and other distinct features such as fibre quality, fibre strength, fibre micronaire, duration and suitability for the agricultural practices of the region.

3.0 In respect of NCS 918 Bt, KDCH 144 BG, IT 905 BG I, ACH 155-1 Bt, NAMKOT 402 Bt, GK 206 Bt, the MEC its meeting held on 22-23.1.2007 had not evaluated the performance of the hybrids in the absence of LST / ICAR data. In respect of 6317 Bt and 6488 Bt the MEC had deferred decision on the proposal for want of clarification from the State Government in its meeting held on 22-23rd January, 2007. Member Secretary, GEAC informed that subsequently, the suitability of the hybrids has been evaluated by the MEC in its meeting held on 8-9th March, 2007. The MEC based on the criteria indicated at para 2.0 above, has recommended five hybrids namely IT 905 BG I, NAMCOT-402, GK 206 Bt, 6317 Bt and 6488 Bt for commercial release in the North Zone.

4.0 The Committee noted that the hybrids recommended by the MEC and RCGM have completed the mandatory field testing and evaluation process as outlined in the sub Committee report on Bt cotton and related issues adopted by the GEAC in its meeting held on 30.6.2006.

5.0 During the deliberation, one of the expert Member pointed out that seed cotton yield is not the only criteria for evaluating the economic benefits of the hybrids as other parameters such as fibre quality, fibre strength, fibre micronaire, duration are also important. It was agreed that RCGM / MEC may prepare an index giving weightage for different parameters for evaluating the performance of the Bt cotton hybrids.

6.0 After detailed deliberations and taking into consideration the recommendations of MEC/ RCGM/ICAR the Committee recommended the following hybrids for commercial release in the North Zone for a period of three years subject to the usual conditions imposed.

1. Ankur 2226 BG, with *cry 1Ac* gene (*MON 531 Event*) by M/s Ankur Seeds Ltd.
2. PCH 406 Bt with *cry 1Ac* gene (*MON 531 Event*) by M/s Prabhat Agri Biotech Ltd
3. Sigma Bt with *cry 1Ac* gene (*MON 531 Event*) by M/s Vibha Agrotech Ltd
4. Ole Bt with *cry 1Ac* gene (*MON 531 Event*) by M/s Vibha Agrotech Ltd
5. SDS 1368 Bt with *cry 1Ac* gene (*MON 531 Event*) by M/s Nandi Seeds (P) Ltd
6. SDS 9 Bt with *cry 1Ac* gene (*MON 531 Event*) by M/s Nandi Seeds (P) Ltd
7. NCS-950 Bt with *cry 1Ac* gene (*MON 531 Event*) by M/s Nuziveedu Seeds Ltd.
8. KDCHH 9810 with *cry 1Ac* gene (*MON 531 Event*) by M/s Krishidhan Seeds Ltd.

9. IT 905 BG I with *cry 1Ac* gene(*MON 531 Event*) by M/s Pro agro seeds (P) Ltd..
10. NAMCOT-402, with *cry 1Ac* gene (*MON 531 Event*) by M/s Namdhari Seeds (P) Ltd.
11. GK 206 Bt with *cry 1Ac* gene(*MON 531 Event*) by M/s Ganga Kaveri Seeds Ltd.
12. 6317 Bt with *cry 1Ac* gene(*MON 531 Event*) by M/s Bio seeds Research
13. 6488 Bt with *cry 1Ac* gene(*MON 531 Event*) by M/s Bio seeds Research

7.0 The Committee did not approve Jassi BG, PCH 917 Bt, PCH 306 Bt, SDS 405 Bt, SDS 27 Bt, SDS 234 Bt, NCS 918 Bt, NCS 951 Bt, KDCH 144 and ACH 155 1 Bt for commercial release in the North Zone as MEC has not recommended the hybrids suitable for the region based on the MLT/SAU/LST/ICAR trials data.

B. Hybrids expressing stacked genes (*cry 1Ac* & *cry 2Ab* (MON 15985))

- 1.13 Permission for commercialization of MRC 7017 BG II and MRC 7031 BG II with *cry 1Ac* & *cry 2 Ab* (Mon 15985) gene in the North Zone by M/s Mahyco Seeds Ltd.**
- 1.14 Permission for commercialization of NCS 145 BG II with *cry 1Ac* & *cry 2Ab* (MON 15985) gene in the North Zone by M/s Nuziveedu Seeds Ltd.**
- 1.15 Permission for commercialization of ACH-33-2 BG II with *cry 1Ac* & *cry 2Ab* genes (MON 15985) gene in the North Zone by M/s Ajeet Seeds Ltd.**

1.0 The Committee noted that the request in **respect of 4 Bt cotton** hybrids as contained in agenda item 4.13 to 4.15 above for commercial release and marketing of MRC 7017 BG II and MRC 7031 BG II M/s Mahyco Seeds Ltd., NCS 145 BG II by M/s Nuziveedu Seeds Ltd and ACH-33-2 BG II by M/s Ajeet Seeds Ltd., in the North Zone was considered in the GEAC meeting held on 14.3.2007. However, decision on the request was deferred in the light of the Hon'ble Supreme Court direction dated 22.9.2006.

2.0 The Committee noted that MEC in its meeting held on 22-23.1.2007 had recommended MRC 7017 BG II, MRC 7031 BG II for commercial release in the North zone and in respect of NCS 145 BG II and ACH-33-2 BG II, the MEC has recommended the hybrids for commercial cultivation in its meeting held 8/9.3.2007 taking into consideration the criteria listed at para 2.0 of minutes of agenda items 4.2 to 4.12

3.0 The Committee noted that the hybrids recommended by the MEC and RCGM have completed the mandatory field testing and evaluation process as outlined in the sub Committee report on Bt cotton and related issues adopted by the GEAC in its meeting held on 30.6.2006.

4.0 After detailed deliberations and taking into consideration the recommendations of MEC/RCGM/ICAR, the Committee recommended the following hybrids for commercial release in the North Zone for a period of three years subject to the usual conditions imposed.

1. MRC 7017 BG II with *cry 1Ac* & *cry 2 Ab* (Mon 15985) gene by M/s Mahyco Seeds Ltd.

2. MRC 7031 BG II with *cry 1Ac* & *cry 2 Ab* (Mon 15985) gene by M/s Mahyco Seeds Ltd.
3. NCS 145 BG II with *cry 1Ac* & *cry 2Ab* (MON 15985) gene by M/s Nuziveedu Seeds Ltd.
4. ACH-33-2 BG II with *cry 1Ac* & *cry 2Ab* genes (MON 15985) gene by M/s Ajeet Seeds Ltd.

C. Hybrids expressing *cry 1Ac* (Event 1)

1.16 Permission for commercialization of JKCH 1050 Bt with *cry 1Ac* event 1 in the North Zone by M/s J.K. Agri Genetics Ltd

1.0 The committee noted that in respect of **1 Bt cotton hybrid** contained in agenda item 4.16 above namely JKCH 1050 Bt was considered by the GEAC in the meeting held on 14.3.2007. The Committee had rejected the request on the grounds that the hybrid JKCH 1050 Bt has not completed two years of LST as per the regulatory requirement. The Company's request to reconsider the above decision on the basis of the Sub Committee recommendations regarding proposal which cannot be synchronized with the new procedure was examined by the MEC in its meeting held on 17.4.2007. The MEC has recommended the hybrid for commercial release in the North Zone.

2.0 The Committee noted that JKCH 1050 Bt recommended by the MEC / RCGM/ICAR have completed the mandatory field testing and evaluation process as outlined in the sub Committee report on Bt cotton and related issues adopted by the GEAC in its meeting held on 30.6.2006.

3.0 After detailed deliberations and taking into consideration the recommendations of MEC/ RCGM/ICAR the Committee approved the following hybrid for commercial release in the North Zone for a period of three years subject to the usual conditions imposed.

1. JKCH 1050 Bt with *cry 1Ac* (Event 1) by M/s J.K. Agri Ltd

PROPOSALS FOR COMMERCIAL RELEASE IN CENTRAL ZONE

A. Hybrids expressing *cry 1Ac* gene (MON 531 event)

- 1.17 Permission for commercialization of Tulasi 9 BG I and Tulasi 117 BG I with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Tulasi seeds (P) Ltd.
- 1.18 Permission for commercialization of KCH-135 Bt, and KCH-707 Bt with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Kaveri Seeds Ltd.
- 1.19 Permission for commercialization of PRCH-31 Bt. and Rudra Bt with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Paravardhan Seeds Ltd
- 1.20 Permission for commercialization of RCH-386 BG I with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Rasi seeds (P) Ltd.
- 1.21 Permission for commercialization of Sigma, Dyna, VBCH-1009 and VBCH-1010 Bt with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Vibha seeds (P) Ltd.

- 1.22 **Permission for commercialization of SP 499 BI (Goldmine) and SP 504BI (Dhanno) Bt with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Proagro seeds Co (P) Ltd.**
- 1.23 **Permission for commercialization of SP 923 Bt with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Proagro seeds Co (P) Ltd.**
- 1.24 **Permission for commercialization of VICH-11 Bt and VICH-15 Bt cotton with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Vikram seeds Ltd.**
- 1.25 **Permission for commercialization of 6188 Bt , 322, 563 and 110 Bt cotton with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Bioseeds Research India Pvt Ltd.**
- 1.26 **Permission for commercialization of jai BG and Akka BG Bt cotton with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Ankur Seeds Pvt Ltd.**
- 1.27 **Permission for commercialization of NCS-138 Bt , NCS-929, NCS-950, NCS-951,NCS-954, and NCS-955 cotton with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Nuziveedu Seeds Ltd.**
- 1.28 **Permission for commercialization of NCHB-990, NCHB-991, NCHB-992, NCHB-940, NCHB-944 and NCHB-945 cotton with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Nuziveedu Seeds Ltd.**
- 1.29 **Permission for commercialization of PCH 115, PCH 205, PCH 923 and PCH 930 cotton with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Prabhat Agribiotech Limited.**
- 1.30 **Permission for commercialization of NSPL-405Bt, NSPL-36Bt and NSPL-45Bt cotton with *cry 1Ac* gene (MON 531 event) in the Central Zone by M/s Nandi Seeds Pvt. Limited.**
- 1.31 **Permission for commercial release of ABCH-1165 Bt and ABCH-1220 Bt 0with *cry 1Ac* gene MON 531 event) for central zone by M/s Amar Bio tech Ltd.**
- 1.32 **Permission for commercialization of ACH-21-1 BG I with *cry 1Ac* gene (MON-531 event) in the Central Zone by M/s Ajeet Seeds Ltd.**
- 1.33 **Permission for commercialization of NSPL-999 BG I, NSPL-9 BGI. NSPL-207 BGI, with *cry 1Ac* gene (MON-531 event) in the Central Zone by M/s Nandi seeds Pvt. Ltd.**

1.0 The recommendations of MEC/RCGM/ICAR in respect **of 47 Bt cotton hybrids** as contained in the proposals at agenda 4.17 to 4.33 above expressing *cry 1Ac* gene (MON-531 event) namely Tulasi 9 BG I and Tulasi 117 BG I by M/s Tulasi seeds (P) Ltd, KCH-135 Bt and KCH-707 Bt by M/s Kaveri Seeds Ltd., PRCH-31 Bt and Rudra Bt by M/s Paravardhan Seeds Ltd, RCH-386 BG I by M/s Rasi seeds (P) Ltd., Sigma Bt and Dyna Bt by M/s Vibha seeds (P) Ltd., VBCH-1009 Bt and VBCH-1010 Bt by M/s Vibha seeds (P) Ltd., SP 499 BI (Goldmine) Bt, SP 923 Bt and SP 504 Bt (Dhanno) by M/s Proagro seeds Co (P) Ltd., VICH-11 Bt and VICH-15 Bt by M/s Vikram seeds Ltd., 6188 Bt, 322 Bt, 563 Bt and 110 Bt by M/s Bioseeds Research India Pvt Ltd, Jai BG and Akka BG by M/s Ankur Seeds Pvt Ltd., NCS-138 Bt, NCS-929 Bt , NCS-950 Bt, NCS-951 Bt, NCS-954 Bt, NCS-955 Bt, NCHB-990 Bt, NCHB-991 Bt, NCHB-992 Bt, NCHB-940 Bt, NCHB-944 Bt and NCHB-945 Bt by M/s Nuziveedu Seeds Ltd, PCH 115 Bt, PCH 205 (PCH 207) Bt, PCH 923 Bt and PCH 930 by M/s Prabhat Agribiotech Limited, NSPL-405 Bt, NSPL-36 Bt and NSPL-45 Bt by M/s Nandi Seeds Pvt. Limited., ABCH-1165 Bt, and ABCH-1220 Bt by M/s Amar Bio tech Ltd., ACH-21-1 BG I by M/s Ajeet Seeds

Ltd., NSPL-999 BG I, NSPL-9 BGI and NSPL-207 BGI by M/s Nandi seeds Pvt. Ltd were placed before the Committee.

2.0 The Committee noted that the MEC has recommended the commercial release of Tulasi 9 BG I, KCH-135 Bt, KCH-707 Bt, PRCH-31 Bt, Rudra Bt, Sigma Bt, Dyna Bt VBCH-1009 Bt, VBCH-1010 Bt, SP 504 Bt (Dhanno) Bt, VICH-15 Bt 322 Bt, 110 Bt, Jai BG, Akka BG, NCS-954 Bt, NCHB-992 Bt, PCH 115 Bt, PCH 205 (PCH 207) Bt, NSPL-405 Bt and NSPL-36 Bt, ABCH-1165 Bt, NSPL-999 BG I for commercial release in the Central zone.

3.0 The Committee noted that hybrids recommended by the MEC and RCGM have completed the mandatory field testing and evaluation process as outlined in the sub Committee report on Bt cotton and related issues adopted by the GEAC in its meeting held on 30.6.2006. During the deliberations it was noted that RCH 386 Bt has completed two years of LST and two years of ICAR trials. The hybrid had also for substantial increase in yield over the Bt and non Bt check under the LST as well as ICAR trials. The Committee sought clarification from MEC Chairman on the justification for rejecting RCH 386 Bt. It was informed that it was an oversight and the matter will be re-looked by the MEC in its next meeting scheduled for 18.5.2007.

4.0 After detailed deliberations and taking into consideration the recommendations of MEC/RCGM/ICAR the Committee approved the following hybrids for commercial release in the Central Zone for a period of three years subject to the usual conditions imposed.

1. Tulasi 9 BG I with *cry 1Ac* gene (MON 531 event) by M/s Tulasi seeds (P) Ltd.
2. KCH-135 Bt with *cry 1Ac* gene (MON 531 event) by M/s Kaveri Seeds Ltd.
3. KCH-707 Bt with *cry 1Ac* gene (MON 531 event) by M/s Kaveri Seeds Ltd.
4. PRCH-31 Bt with *cry 1Ac* gene (MON 531 event) by M/s Paravardhan Seeds Ltd
5. Rudra Bt with *cry 1Ac* gene (MON 531 event) by M/s Paravardhan Seeds Ltd
6. Sigma Bt with *cry 1Ac* gene (MON 531 event) by M/s Vibha seeds (P) Ltd.
7. Dyna Bt with *cry 1Ac* gene (MON 531 event) by M/s Vibha seeds (P) Ltd.
8. VBCH-1009 Bt with *cry 1Ac* gene (MON 531 event) by M/s Vibha seeds (P) Ltd.
9. VBCH-1010 Bt with *cry 1Ac* gene (MON 531 event) by M/s Vibha seeds (P) Ltd.
10. SP 504BI (Dhanno) Bt with *cry 1Ac* gene (MON 531 event) by M/s Proagro seeds Co (P) Ltd.
11. VICH-15 Bt cotton with *cry 1Ac* gene (MON 531 event) by M/s Vikram seeds Ltd.
12. 322 Bt with *cry 1Ac* gene (MON 531 event) by M/s Bioseeds Research India Pvt Ltd
13. 110 Bt cotton with *cry 1Ac* gene (MON 531 event) by M/s Bioseeds Research India Pvt Ltd
14. Jai BG with *cry 1Ac* gene (MON 531 event) M/s Ankur Seeds Pvt Ltd.
15. Akka BG with *cry 1Ac* gene (MON 531 event) by M/s Ankur Seeds Pvt Ltd.
16. NCS-954 with *cry 1Ac* gene (MON 531 event) by M/s Nuziveedu Seeds Ltd
17. NCHB-992 with *cry 1Ac* gene (MON 531 event) by M/s Nuziveedu Seeds Ltd

18. PCH 115 with *cry 1Ac* gene (MON 531 event) by M/s Prabhat Agribiotech Limited.
19. PCH 205 (earlier known as PCH 207) with *cry 1Ac* gene (MON 531 event) by M/s Prabhat Agribiotech Limited.
20. NSPL-405Bt with *cry 1Ac* gene (MON 531 event) by M/s Nandi Seeds Pvt. Limited.
21. NSPL-36Bt with *cry 1Ac* gene (MON 531 event) by M/s Nandi Seeds Pvt. Limited.
22. ABCH-1165 Bt with *cry 1Ac* gene (MON 531 event) by M/s Amar Bio tech Ltd.
23. NSPL-999 BG I with *cry 1Ac* gene (MON-531 event) by M/s Nandi seeds Pvt. Ltd.

5.0 The Committee noted that the following hybrids have not been recommended by the MEC and therefore, the hybrids do not fulfill the required regulatory testing and evaluation procedure. The Committee, therefore, rejected the following hybrids

1. Tulasi 117 BG I with *cry 1Ac* gene (MON 531 event) by M/s Tulasi seeds (P) Ltd.
2. SP 499 BI (Goldmine) Bt with *cry 1Ac* gene (MON 531 event) by M/s Proagro seeds Co(P) Ltd.
3. VICH-11 Bt with *cry 1Ac* gene (MON 531 event) by M/s Vikram seeds Ltd.
4. NCS-138 Bt with *cry 1Ac* gene (MON 531 event) by M/s Nuziveedu Seeds Ltd
5. NCS-950 with *cry 1Ac* gene (MON 531 event) by M/s Nuziveedu Seeds Ltd
6. NCS-951 with *cry 1Ac* gene (MON 531 event) by M/s Nuziveedu Seeds Ltd
7. NCHB-990 with *cry 1Ac* gene (MON 531 event) by M/s Nuziveedu Seeds Ltd
8. NCHB-991 with *cry 1Ac* gene (MON 531 event) by M/s Nuziveedu Seeds Ltd
9. NCHB-940 with *cry 1Ac* gene (MON 531 event) by M/s Nuziveedu Seeds Ltd
10. NCHB-944 with *cry 1Ac* gene (MON 531 event) by M/s Nuziveedu Seeds Ltd
11. NCHB-945 with *cry 1Ac* gene (MON 531 event) by M/s Nuziveedu Seeds Ltd
12. PCH 930 with *cry 1Ac* gene (MON 531 event) by M/s Prabhat Agribiotech Limited.
13. NSPL-45Bt with *cry 1Ac* gene (MON 531 event) by M/s Nandi Seeds Pvt. Limited.
14. ABCH-1220 Bt with *cry 1Ac* gene (MON 531 event) by M/s Amar Bio tech Ltd.
15. ACH-21-1 BG I with *cry 1Ac* gene (MON-531 event) by M/s Ajeet Seeds Ltd.
16. NSPL-9 BGI with *cry 1Ac* gene (MON-531 event) by M/s Nandi seeds Pvt. Ltd.

6.0 The Committee noted that the following hybrids have not been evaluated by MEC and referred the proposal back to MEC / RCGM for their consideration.

1. RCH-386 BG I with *cry 1Ac* gene (MON 531 event) by M/s Rasi seeds (P) Ltd.
2. SP 923 Bt with *cry 1Ac* gene (MON 531 event) by M/s Proagro seeds Co (P) Ltd.
3. 6188 Bt with *cry 1Ac* gene (MON 531 event) by M/s Bioseeds Research India Pvt Ltd
4. 563 Bt with *cry 1Ac* gene (MON 531 event) by M/s Bioseeds Research India Pvt Ltd
5. NCS-929 with *cry 1Ac* gene (MON 531 event) by M/s Nuziveedu Seeds Ltd
6. NCS-955 with *cry 1Ac* gene (MON 531 event) by M/s Nuziveedu Seeds Ltd
7. PCH 923 with *cry 1Ac* gene (MON 531 event) by M/s Prabhat Agribiotech Limited.
8. NSPL-207 BGI with *cry 1Ac* gene (MON-531 event) by M/s Nandi seeds Pvt. Ltd.

B. Hybrids expressing stacked genes *cry 1AC & cry 2Ab* (Mon 15985)

- 1.34 Permission for commercialization of Tulasi -4 BG II with *cry 1AC & cry 2Ab* (Mon 15985) gene (Mon 15985) in the Central Zone by M/s Tulasi Seeds Ltd.**
- 1.35 Permission for commercialization of Ajeet 155 BG II with *cry 1AC & cry 2Ab* (Mon 15985) gene in the Central Zone by M/s Ajeet Seeds Ltd.**
- 1.36 Permission for commercialization of RCH-2 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene in the Central Zone by M/s Rasi seeds (P) Ltd.**
- 1.37 Permission for commercialization of RCH-515 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene in the Central Zone by M/s Rasi seeds (P) Ltd.**
- 1.38 Permission for commercialization MRC-7351 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene in the Central Zone by M/s Mahyco.**
- 1.39 Permission for commercialization NCS-207 with *cry 1AC & cry 2Ab* (Mon 15985) gene in the Central Zone by M/s Nuziveedu Seeds Ltd.**

1.0 The recommendations of MEC/RCGM/ICAR in **respect of 6 Bt cotton hybrids** as contained in the proposals at agenda 4.34 to 4.39 above namely Tulasi -4 BG II by M/s Tulasi Seeds Ltd.; Ajeet 155 BG II by M/s Ajeet Seeds Ltd.; RCH-2 BGII by M/s Rasi seeds (P) Ltd.; RCH-515 BGII by M/s Rasi seeds (P) Ltd.; MRC-7351 BGII by M/s Mahyco and NCS-207 by M/s Nuziveedu Seeds Ltd. expressing stacked genes *cry 1AC & cry 2Ab* (Mon 15985) was placed before the GEAC. The Committee noted that MEC in its meeting held on 8-9th March, 2007 has recommended Ajeet 155 BG II, RCH 2 BG II, RCH 515 BG II, MRC 7351 BGII and NCS 207 for commercial release in the Central Zone.

2.0 The Committee noted that the hybrids recommended by the MEC and RCGM have completed the mandatory field testing and evaluation process as outlined in the sub Committee report on Bt cotton and related issues adopted by the GEAC in its meeting held on 30.6.2006. During the deliberations Member Secretary, RCGM clarified that M/s Nuziveedu have subsequent to the MEC meeting have submitted NOC from technology provider as well as the case verification data to the RCGM.

3.0 After detailed deliberations and taking into consideration the recommendations of MEC / RCGM/ ICAR, the Committee approved the following hybrids for commercial release in the Central Zone for a period of three years subject to the usual conditions imposed.

1. Ajeet 155 BG II with *cry 1AC & cry 2Ab* (Mon 15985) gene by M/s Ajeet Seeds Ltd.
2. RCH-2 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by M/s Rasi seeds (P) Ltd.
3. RCH-515 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by M/s Rasi seeds (P) Ltd
4. MRC-7351 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by M/s Mahyco.
5. NCS-207 with *cry 1AC & cry 2Ab* (Mon 15985) gene by M/s Nuziveedu Seeds Ltd.

4.0 In respect of Tulasi 4 BG II, the Committee noted that MEC in its meeting held on 8-9th March, 2007 has recommended 2nd year of LST. The Committee noted that the hybrid has not completed the procedural requirements of two years of LST and ICAR trials and therefore, the proposal does not merit consideration at this stage.

C. Hybrids expressing genes (*cry 1Ab -cry 1Ac*) "GFM Cry 1A"

1.40 Permission for commercialization of NCEH-3R and Kashinath with (*cry 1Ab -cry 1Ac*) "GFM Cry 1A" gene in the Central Zone by M/s Nath Seeds Ltd.

1.40 Permission for commercialization Dhruv Bt with (*cry 1Ab -cry 1Ac*) "GFM Cry 1A" gene in the Central Zone by M/s Zuari Seeds Ltd.

1.41 Permission for commercialization of Navkar 5 Bt with (*cry 1Ab -cry 1Ac*) "GFM Cry 1A" genes in the Central Zone by M/s Navkar Hybrid Pvt. Ltd.

1.0 The recommendations of MEC/RCGM/ICAR **in respect of 4 Bt cotton hybrids** as contained in the proposals at agenda 4.40 to 4.42 above namely NCEH 3R and Kashinath by M/s Nath Seeds Limited, Dhruv Bt by M/s Zuari Seeds and Navkar 5 by M/s Navkar hybrid Pvt. Ltd. expressing genes (*cry 1Ab -cry 1Ac*) "GFM Cry 1A" was placed before the GEAC. The Committee noted that MEC in its meeting held on 8-9th March, 2007 has recommended NCEH 3R, Kashinath, Dhruv Bt and Navkar 5 Bt for commercial release in the Central Zone taking into consideration the criteria listed at para 2 of minutes of agenda items 4.2 to 4.12.

2.0 The Committee noted that the hybrids recommended by the MEC and RCGM have completed the mandatory field testing and evaluation process as outlined in the sub Committee report on Bt cotton and related issues adopted by the GEAC in its meeting held on 30.6.2006. During the deliberations it was pointed out that Kashinath by M/s Nath Seeds has completed only one year of LST and one year of ICAR trial. The Member Secretary, RCGM and representative of ICAR clarified that Kashinath Bt is a centrally notified variety. The Committee directed the applicant to submit the requisite document confirming that it is a centrally notified variety to the GEAC.

3.0 The Committee noted that the hybrids recommended by the MEC and RCGM have completed the mandatory field testing and evaluation process as outlined in the sub Committee report on Bt cotton and related issues adopted by the GEAC in its meeting held on 30.6.2006.

4.0 After detailed deliberations and taking into consideration the recommendations of MEC / RCGM/ ICAR, the Committee approved the following hybrids for commercial release in the Central Zone for a period of three years subject to the usual conditions imposed.

1. NCEH-3R with (*cry 1Ab -cry 1Ac*) "GFM Cry 1A" gene by M/s Nath Seeds Ltd.
2. Kashinath with (*cry 1Ab -cry 1Ac*) "GFM Cry 1A" gene by M/s Nath Seeds Ltd subject to submission of the document notifying the hybrid as a centrally notified variety.
3. Dhruv Bt with (*cry 1Ab -cry 1Ac*) "GFM Cry 1A" gene by M/s Zuari Seeds Ltd.
4. Navkar 5 Bt with (*cry 1Ab -cry 1Ac*) "GFM Cry 1A" genes by M/s Navkar Hybrid Pvt. Ltd.

D. Hybrids expressing cry 1Ac (Event -1)

1.43 Permission for commercialization of JKCH-99 Bt, JKCH-666 Bt, JKCH-226Bt and JK Durga with *cry 1Ac* (Event 1) gene in the Central Zone by M/s JK Agri Genetics Ltd.

1.0 The recommendations of MEC/RCGM/ICAR in respect of **4 Bt cotton hybrids** as contained in agenda item 4.43 namely JKCH 99 Bt, JKCH 666 Bt, JKCH 226 Bt and JK Durga expressing *cry 1Ac* (Event 1) was placed before the GEAC. The Committee noted that MEC in its meeting held on 8-9th March, 2007 has recommended JKCH 99 Bt and in its meeting held on 17.4.2007 has recommended JKCH 666 Bt and JKCH 226 Bt for commercial release in the Central Zone taking into consideration the criteria listed at para 2 of minutes of agenda items 4.2 to 4.12.

2.0 The Committee noted that the hybrids recommended by the MEC and RCGM have completed the mandatory field testing and evaluation process as outlined in the sub Committee report on Bt cotton and related issues adopted by the GEAC in its meeting held on 30.6.2006.

3.0 After detailed deliberations and taking into consideration the recommendations of MEC / RCGM/ ICAR, the Committee approved the following hybrids for commercial release in the Central Zone for a period of three years subject to the usual conditions imposed.

1. JKCH-99 Bt with *cry 1Ac* (Event 1) gene by M/s JK Agri Genetics Ltd.
2. JKCH-666 Bt with *cry 1Ac* (Event 1) gene by M/s JK Agri Genetics Ltd.
3. JKCH-226Bt with *cry 1Ac* (Event 1) gene by M/s JK Agri Genetics Ltd.

4.0 The Committee noted that the hybrid JK Durga has completed only one year of MLT and SAU trials. As the hybrid has not completed requisite two years of LST and ICAR trials testing, the Committee was of the view that the proposal does not merit consideration at this stage.

2.0 PROPOSALS FOR LARGE SCALE TRIALS IN NORTH ZONE

A. Bt cotton hybrid expressing stacked gene *cry 1AC* & *cry 2Ab* (Mon 15985)

- 2.1 **Permission for Large Scale Trials and seed production of BG-II of cotton hybrid 2510- II, 2113-II, 6317-II, 6488-II with *cry 1AC & cry 2Ab* (Mon 15985) gene in North Zone by M/s Bioseed Research India Pvt Ltd.,**
- 2.2 **Permission for Large Scale Trials and seed producing of BG-II of cotton hybrid NCS 851 Bt2, NCS 853 Bt2 and NCS 854 Bt2 with *cry 1AC & cry 2Ab* (Mon 15985) gene in North Zone by Nizuvedu Seeds Ltd. In North Zone**
- 2.3 **Permission for Large Scale Trials seed producing of BG-II of cotton hybrid PCH 2171 Bt 2, PCH 2270Bt2, PCH 930 Bt2 and PCH 923 Bt2 with *cry 1AC & cry 2Ab* (Mon 15985) gene in North Zone by Prabhat Agri Biotech Ltd.**
- 2.4 **Permission for Large Scale Trials and seed producing of BG-II of cotton hybrids SDS-405, SDS-36, SDS-27, SDS-9, & SDS-6003 with *cry 1AC & cry 2Ab* (Mon 15985) gene by M/s Nandi Seeds Pvt. Ltd**
- 2.5 **Permission for Large Scale Trials and seed producing of BG-II of cotton hybrids TULASI 45 BGII, TULASI 118 BGII & TULASI 18 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene in North Zone by Tulasi Seeds Pvt. Ltd.**
- 2.6 **Permission for Large Scale Trials and seed producing of of BG-II of cotton hybrids VBCH- 1501, VBCH-1502 VBCH-1503 & VBCH-1504 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene in North Zone by Vibha Agrotech Ltd.**
- 2.7 **Permission for for Large Scale Trials and seed producing of BG II of cotton hybrid ANKUR-8120 & ANKUR-5642 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene in North Zone by Ankur Seeds Pvt. Ltd.**
- 2.8 **Permission for Large Scale Trials and seed producing of BG II cotton hybrid KCH-707 & KCH -9999 BGII with *cry 1AC & cry 2Ab* (Mon 15985) in North Zone by Kaveri Seed Co. Ltd.,**
- 2.9 **Permission for Large Scale Trials and seed production of hybrid cotton seeds of BG-II, GK-211 & GK -212 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene in North Zone by Ganga Kaveri Seeds Pvt. Ltd.**
- 2.10 **Permission for Large Scale Trials and seed production of hybrid cotton seeds of BG-II, VICH-BG 11 & VICH-9 BGII with *cry 1AC & cry 2Ab* (Mon 15985) in North Zone by Vikram Seeds Ltd.,**
- 2.11 **Permission for Large Scale Trials and seed production of hybrid cotton seeds of BG-II, MLCH-318 & EGCH1417 BGII containing Cry1Ac and Cy2Ab (MON 15985) in North Zone by Emergent Genetic India Pvt. Ltd.,**
- 2.12 **Permission for Large Scale Trials and seed producing of BG II of cotton hybrid KDCHH-144 & KDCHH-9810 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene in North Zone by Krishidhan Seeds Limited**
- 2.13 **Permission for Large Scale Trials and seed producing of BG II of cotton hybrid VCH-601 & VCH-603 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene in North Zone by Vikki`s Agrotech Pvt.Ltd.**
- 2.14 **Permission for Large Scale Trials and seed producing of BG II of cotton hybrid RCH-566 BGII RCH-569 BGII and RCH-572 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene in North Zone by Rasi Seeds Pvt.Ltd.**

2.15 Permission for Large Scale Trials and seed production of cotton hybrids MRC-7041 BGII and MRC-7045 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene in North Zone by Mahyco .

1.0 The Committee considered the request in respect of **42 Bt cotton hybrids** as contained in the proposals at agenda 5.1 to 5.15 above for large scale trials in the North zone namely 2510-II, 2113-II, 6317-II, 6488-II by M/s Bioseed Research India Pvt Ltd.; NCS 851 Bt2; NCS 853 Bt2 and NCS 854 Bt2 by Nizuvedu Seeds Ltd. In North Zone; PCH 2171 Bt 2; PCH 2270Bt2; PCH 930 Bt2 and PCH 923 Bt2 by Prabhat Agri Biotech Ltd. SDS-405; SDS-36; SDS-27; SDS-9 and SDS-6003 by Nandi Seeds Pvt. Ltd; TULASI 45 BGII, TULASI 118 BGII and TULASI 18 BGII by Tulasi Seeds Pvt. Ltd.; VBCH-1501 BG II, VBCH-1502 BGII; VBCH-1503 BGII and VBCH-1504 BGII by Vibha Agrotech Ltd; ANKUR-8120 BGII and ANKUR-5642 BGII by Ankur Seeds Pvt. Ltd., KCH-707 BGII and KCH -9999 BGII by Kaveri Seed Co. Ltd., GK-211BGII and GK -212 BGII by Ganga Kaveri Seeds Pvt. Ltd., VICH-BG 11 and VICH-9 BGII by Vikram Seeds Ltd., MLCH-318 BGII and EGCH1417 BGII by Emergent Genetic India Pvt. Ltd., KDCHH-144 BGII by Krishidhan Seeds Limited, VCH-601 BGII and VCH-603 BGII by Vikki`s Agrotech Pvt.Ltd, RCH-566 BGII, RCH-569 BGII and RCH-572 BGII by Rasi Seeds Pvt.Ltd. MRC-7041 BGII and MRC-7045 BGII by Mahyco expressing stacked gene *cry 1AC & cry 2Ab* (Mon 15985)

2.0 The Committee noted that the above mentioned hybrids have completed the multi-locational field trials under RCGM. The field trials have been evaluated by the MEC and the results discussed in the MEC meeting held on 22-23.1.2007. It was noted that out of the 42 Bt cotton hybrids tested under multi-locational trials, MEC has recommended 24 Bt cotton hybrids namely for LST in the North zone. It was also noted that the report of the MEC has been considered in the RCGM meeting held on 31.1.2007. The RCGM has endorsed the recommendations of MEC.

3.0 After detailed deliberations and taking into consideration the findings of the multi-location trials and recommendations made by MEC and RCGM the following decisions were taken:

A. The GEAC found the following hybrids suitable for large scale trials in the North zone.

1. 2510-II with *cry 1AC & cry 2Ab* (Mon 15985) gene by M/s Bioseed Research India Pvt Ltd.,
2. 2113-II with *cry 1AC & cry 2Ab* (Mon 15985) gene by M/s Bioseed Research India Pvt Ltd.,
3. NCS 851 Bt2 with *cry 1AC & cry 2Ab* (Mon 15985) gene by Nizuvedu Seeds Ltd. In North Zone
4. NCS 853 Bt2 with *cry 1AC & cry 2Ab* (Mon 15985) gene by Nizuvedu Seeds Ltd. In North Zone
5. PCH 2270Bt2 with *cry 1AC & cry 2Ab* (Mon 15985) gene by Prabhat Agri Biotech Ltd.
6. PCH 930 Bt2 with *cry 1AC & cry 2Ab* (Mon 15985) gene by Prabhat Agri Biotech Ltd.
7. SDS-36 with *cry 1AC & cry 2Ab* (Mon 15985) gene by Nandi Seeds Pvt. Ltd
8. SDS-9 with *cry 1AC & cry 2Ab* (Mon 15985) gene by Nandi Seeds Pvt. Ltd
9. TULASI 45 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by Tulasi Seeds Pvt. Ltd.
10. VBCH-1501 BG II with *cry 1AC & cry 2Ab* (Mon 15985) gene by Vibha Agrotech Ltd.

11. VBCH-1503 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by Vibha Agrotech Ltd.
12. VBCH-1504 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by Vibha Agrotech Ltd.
13. ANKUR-8120 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by Ankur Seeds Pvt. Ltd.
14. ANKUR-5642 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by Ankur Seeds Pvt. Ltd.
15. KCH-707 BGII with *cry 1AC & cry 2Ab* (Mon 15985) by Kaveri Seed Co. Ltd.,
16. GK -212 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by Ganga Kaveri Seeds Pvt. Ltd.
17. VICH-BG 11 with *cry 1AC & cry 2Ab* (Mon 15985) by Vikram Seeds Ltd.,
18. VICH-9 BGII with *cry 1AC & cry 2Ab* (Mon 15985) by Vikram Seeds Ltd.,
19. EGCH1417 BGII with Cry1Ac and Cy2Ab (MON 15985) by Emergent Genetic India Pvt. Ltd.,
20. KDCHH-144 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by Krishidhan Seeds Limited
21. VCH-601 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by Vikki`s Agrotech Pvt.Ltd.
22. RCH-569 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by Rasi Seeds Pvt.Ltd.
23. MRC-7041 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by Mahyco
24. MRC-7045 BGII with *cry 1AC & cry 2Ab* (Mon 15985) gene by Mahyco.

B. GEAC did not approve 6317-II, 6488-II, NCS 854 Bt2, PCH 2171 Bt 2, PCH 923 Bt2, SDS-405, SDS-27, SDS-6003, TULASI 118 BGII, TULASI 18 BGII, VBCH-1502 BGII, KCH -9999 BGII, GK-211BGII, MLCH-318 BGII, VCH-603 BGII, RCH-566 BGII, RCH-572 BGII, as the MEC did not recommend the hybrids suitable for the North zone based on the MLT and case verification data.

B. Hybrids expressing genes (*cry 1 Ab – cry Ac*) "GFM Cry 1A"

- 2.16 Permission for Large Scale Trials and seed production of cotton hybrid of NCEH-9, NCEH-26 and NCEH-31 BG I with (*cry 1 Ab – cry Ac*) "GFM Cry 1A" gene in the North Zone by M/s Nath Seeds Ltd.**
- 2.17 Permission for Large Scale Trials and seed production of cotton hybrid of ACH-1005 Bt BG I with (*cry 1 Ab – cry Ac*) "GFM Cry 1A" gene in the North Zone by M/s Navkar Seeds Private Ltd.**
- 2.18 Permission for Large Scale Trials and seed production of cotton hybrid of ZCH-50003 Bt., ZCH-50023 Bt & ZCH-50064 (Dhruv) with (*cry 1 Ab – cry Ac*) "GFM Cry 1A" gene in the North Zone by M/s Zuari Seeds Ltd .**

2.19 Permission for Large Scale Trials and seed production of cotton hybrid of UPLHH-1Bt, UPLHH-4Bt &UPLHH-11Bt with (*cry 1 Ab – cry Ac*) "GFM Cry 1A" gene in the North Zone by M/s Uniphos Enterprises Ltd.

2.20 Permission for Large Scale Trials of cotton hybrid SBCH-286 Bt with (*cry 1 Ab – cry Ac*) "GFM Cry 1A" gene in the North Zone by M/s Safal Seeds & Biotech Ltd.

1.0 The Committee considered the request in respect of **11 Bt cotton hybrids** as contained in agenda item 5.16 to 5.20 above for large scale trials in the North zone namely NCEH-9, NCEH-26 and NCEH-31 BG I by M/s Nath Seeds Ltd.; ACH-1005 Bt BG I by M/s Navkar Seeds Private Ltd.; ZCH-50003 Bt, ZCH-50023 Bt and ZCH-50064 (Dhruv) by M/s Zuari Seeds Ltd . ; UPLHH-1Bt, UPLHH-4Bt and UPLHH-11Bt by M/s Uniphos Enterprises Ltd. and SBCH-286 Bt by M/s Safal Seeds & Biotech Ltd. expressing genes (*cry 1 Ab – cry Ac*) "GFM Cry 1A"

2.0 The Committee noted that the above mentioned hybrids have completed the multi-locational field trials under RCGM. The field trials have been evaluated by the MEC and the results discussed in the MEC meeting held on 22-23.1.2007. It was noted that out of the 11 Bt cotton hybrids tested under multi-locational trials, MEC has recommended 7 Bt cotton hybrids namely for LST in the North zone. It was also noted that the report of the MEC has been considered in the RCGM meeting held on 31.1.2007. The RCGM has endorsed the recommendations of MEC.

3.0 After detailed deliberations and taking into consideration the findings of the multi-location trials and recommendations made by MEC and RCGM the following decisions were taken:

A. The GEAC found the following hybrids suitable for large scale trials in the North zone.

1. NCEH-26 with (*cry 1 Ab – cry Ac*) "GFM Cry 1A" gene by M/s Nath Seeds Ltd.
2. NCEH-31 BG I with (*cry 1 Ab – cry Ac*) "GFM Cry 1A" gene by M/s Nath Seeds Ltd.
3. ACH-1005 Bt BG I with (*cry 1 Ab – cry Ac*) "GFM Cry 1A" gene by M/s Navkar Seeds Private Ltd.
4. ZCH-50003 Bt with (*cry 1 Ab – cry Ac*) "GFM Cry 1A" gene by M/s Zuari Seeds Ltd
5. ZCH-50023 Bt with (*cry 1 Ab – cry Ac*) "GFM Cry 1A" gene by M/s Zuari Seeds Ltd .
6. UPLHH-1Bt with (*cry 1 Ab – cry Ac*) "GFM Cry 1A" gene by M/s Uniphos Enterprises Ltd.
7. SBCH-286 Bt with (*cry 1 Ab – cry Ac*) "GFM Cry 1A" gene by M/s Safal Seeds & Biotech Ltd.

B. The GEAC did not approve NCEH-9, ZCH-50064 (Dhruv), UPLHH-4 Bt and UPLHH-11 Bt the MEC did not recommend the hybrids suitable for the North zone based on the MLT and case verification data.

C. Hybrid expressing *cry 1 Ac* (Event -1)

2.21 Permission for Large Scale Trials and seed production of cotton hybrid of JKCH-1923 JKCH-1145, JKCH-1115, JKCH-1945 & JKCH-N 22 Bt. with *cry 1 Ac* (Event -1) gene in the North Zone by M/s J.K.Agri Genetics Ltd.

1.0 The Committee considered the request in respect of **5 Bt cotton** hybrids as contained in agenda item 5.21 above for large scale trials in the North zone namely of JKCH-1923 JKCH-1145, JKCH-1115, JKCH-1945 & JKCH-N 22 Bt. by M/s J.K.Agri Genetics Ltd. expressing genes (*cry 1 Ab – cry Ac*) "GFM Cry 1A"

2.0 The Committee noted that the above mentioned hybrids have completed the multi-locational field trials under RCGM. The field trials have been evaluated by the MEC and the results discussed in the MEC meeting held on 22-23.1.2007. It was noted that out of the 5 Bt cotton hybrids tested under multi-locational trials, MEC has recommended 2 Bt cotton hybrids namely for LST in the North zone. It was also noted that the report of the MEC has been considered in the RCGM meeting held on 31.1.2007. The RCGM has endorsed the recommendations of MEC.

3.0 After detailed deliberations and taking into consideration the findings of the multi-location trials and recommendations made by MEC and RCGM the following decisions were taken:

A. The GEAC found the following hybrids suitable for large scale trials in the North zone.

1. JKCH-1923 Bt. with *cry 1 Ac* (Event -1) gene by M/s J.K.Agri Genetics Ltd.
2. JKCH-1145 Bt. with *cry 1 Ac* (Event -1) gene by M/s J.K.Agri Genetics Ltd.

B. GEAC did not approve JKCH-1115 Bt, JKCH 1945 Bt and JKCH N 22 Bt as the MEC did not recommend the hybrids suitable for the North zone based on the MLT and case verification data.

PROPOSALS FOR LARGE SCALE TRIALS IN THE CENTRAL ZONE

A. Hybrid expressing stacked genes *cry1 Ac* & *cry 2Ab* genes (MON 15985)

2.22 Permission for Large Scale Trials and seed production of cotton hybrids NAMCOT 606 BGII, NAMCOT 607 BGII, NAMCOT 608 BGII, NAMCOT 609 BGII, and NAMCOT 610 BGII containing *cry1 Ac* & *cry 2Ab* genes (MON 15985) in Central Zone by Namdhari Seeds Pvt.Ltd.,

2.23 Permission for Large Scale Trials and seed production of cotton hybrids GK-205 Bt BGII and GK-215 Bt BGII,, with *cry1Ac* and *cry 2Ab* gene (MON 15985) in Central Zone by Ganga Kaveri Seeds Pvt. Ltd.

2.24 Permission for Large Scale Trials and seed production of cotton hybrids KCH-135 Bt BGII, KCH-707 BGII and KCH-234 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) gene in Central Zone by KaveriSeeds Co. Pvt.Ltd.,

2.25 Permission for Large Scale Trials and seed production of cotton hybrids VCH 602 BGII,VCH 603 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Vikki's Agrotech Private Ltd., in Central Zone

2.26 Permission for Large Scale Trials and seed production of cotton hybrids VICH-5 BGII, VICH-9 BGII and VICH-15 BGII, with *cry1 Ac* & *cry 2Ab* genes (MON 15985) in Central Zone by Vikram Seeds

- 2.27 Permission for Large Scale Trials and seed production of cotton hybrids Tulasi -9 Bt BGII Tulasi -45 BGII, Tulasi -118 BGII, Tulasi -36 BGII and Tulasi -7 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) in Central Zone by Tulasi Seeds Pvt. Ltd.**
- 2.28 Permission for Large Scale Trials and seed production of cotton hybrids MRC-7918 BGII and MRC-7929 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) in Central Zone by Mahyco**
- 2.29 Permission for Large Scale Trials and seed production of cotton hybrids RCH-578 BGII, RCH-581, BGII RCH-584 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) in Central Zone by Rasi Seeds Pvt. Ltd.**
- 2.30 Permission for Large Scale Trials and seed production of cotton hybrids RCHB-711 BGII, RCHB-717 BGII ,RCHB-720 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) in Central Zone by Rasi Seeds Pvt. Ltd.**
- 2.31 Permission for LST and producing of hybrid cotton seeds of BG-II and cotton hybrid VBCH-1501, VBCH-1502 VBCH-1503 & VBCH-1505 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Vibha Agrotech Ltd. in Central Zone.**

1.0 The Committee considered the request in respect of **32 Bt cotton hybrids** as contained in agenda item 5.22 to 5.31 for large scale trials in the Central zone namely NAMCOT 606 BGII, NAMCOT 607 BGII, NAMCOT 608 BGII, NAMCOT 609 BGII and NAMCOT 610 BGII by Namdhari Seeds Pvt.Ltd., GK-205 Bt BGII and GK-215 Bt BGII with by Ganga Kaveri Seeds Pvt. Ltd., KCH-135 Bt BGII, KCH-707 BGII and KCH-234 BGII by Kaveri Seeds Co. Pvt.Ltd., VCH 602 BGII and VCH 603 BGII by Vikki's Agrotech Private Ltd., VICH-5 BGII, VICH-9 BGII, and VICH-15 BGII, by Vikram Seeds, Tulasi -9 Bt BGII , Tulasi -45 BGII, Tulasi -118 BGII, Tulasi -36 BGII and Tulasi -7 BGII by Tulasi Seeds Pvt. Ltd; MRC-7918 BGII and MRC-7929 BGII by Mahyco, RCH-578 BGII, RCH-581 BGII, RCH-584 BGII, RCHB-711 BGII, RCHB-717 BGII and RCHB-720 BGII by Rasi Seeds Pvt. Ltd. VBCH-1501 BGII, VBCH-1502 BGII, VBCH-1503 BGII and VBCH-1505 BGII by Vibha Agrotech Ltd expressing stacked genes *cry1 Ac* & *cry 2Ab* genes (MON 15985)

2.0 The Committee noted that the above mentioned hybrids have completed the multi-locational field trials under RCGM. The field trials have been evaluated by the MEC and the results discussed in the MEC meeting held on 8-9.3.2007. It was noted that out of the 32 Bt cotton hybrids tested under multi-locational trials, MEC has recommended 18 Bt cotton hybrids namely for LST in the Central zone. It was also noted that the report of the MEC has been considered in the RCGM meeting held on 31.1.2007. The RCGM has endorsed the recommendations of MEC.

3.0 After detailed deliberations and taking into consideration the findings of the multi-location trials and recommendations made by MEC and RCGM the following decisions were taken:

A. The GEAC found the following hybrids suitable for large scale trials in the Central zone.

- 1. NAMCOT 609 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Namdhari Seeds Pvt.Ltd.,
- 2. GK-205 Bt BGII with *cry1Ac and cry 2Ab gene* (MON 15985) by Ganga Kaveri Seeds Pvt. Ltd.
- 3. GK-215 Bt BGII with *cry1Ac and cry 2Ab gene* (MON 15985) by Ganga Kaveri Seeds Pvt. Ltd.

4. KCH-135 Bt BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) gene by KaveriSeeds Co. Pvt.Ltd
5. KCH-707 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) gene by KaveriSeeds Co. Pvt.Ltd.
6. VCH 603 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Vikki's Agrotech Private Ltd.,
7. VICH-5 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Vikram Seeds
8. VICH-15 BGII, with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Vikram Seeds
9. Tulasi -9 Bt BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Tulasi Seeds Pvt. Ltd.
10. Tulasi -118 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Tulasi Seeds Pvt. Ltd.
11. MRC-7918 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Mahyco
12. MRC-7929 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Mahyco
13. RCH-578 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Rasi Seeds Pvt. Ltd.
14. RCH-584 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Rasi Seeds Pvt. Ltd.
15. RCHB-720 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Rasi Seeds Pvt. Ltd.
16. VBCH-1501 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Vibha Agrotech Ltd.
17. VBCH-1503 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Vibha Agrotech Ltd.
18. VBCH-1505 BGII with *cry1 Ac* & *cry 2Ab* genes (MON 15985) by Vibha Agrotech Ltd.

B. GEAC did not approve NAMCOT 606 BGII, NAMCOT 607 BGII, NAMCOT 608 BGII, NAMCOT 610 BGII, KCH-234 BGII, VCH 602 BGII, VICH-9 BGII, Tulasi -45 BGII, Tulasi -36 BGII, Tulasi -7 BGII, RCH-581 BGII, RCHB-711 BGII, RCHB-717 BGII and VBCH-1502 BGII as the MEC did not recommend the hybrids suitable for the Central zone based on the MLT and case verification data.

B. Hybrids expressing genes (*cry 1 Ab* – *cry 1Ac*) "GFM Cry 1A"

- 2.32 Permission for Large Scale Trials of ZCH-50072 Bt., ZCH-50005 Bt and ZCH-50007Bt BG I with (*cry 1 Ab* – *cry 1Ac*) "GFM Cry 1A" gene in the Central Zone by M/s Zuari Seeds Ltd.**
- 2.33 Permission for Large Scale Trials of Yashoda -751 Bt and Mansoon Bt with (*cry 1 Ab* – *cry 1Ac*) "GFM Cry 1A" gene in the Central Zone by M/s Yashoda Hybrids Seeds Ltd.**

2.34 Permission for Large Scale Trials of cotton hybrid GBCH 01 and GBCH 03 Bt with (cry 1 Ab – cry 1Ac) "GFM Cry 1A" gene in the Central Zone by M/s Green Gold Seeds Ltd.

1.0 The Committee considered the request in respect of **7 Bt cotton hybrids** as contained in agenda item 5.32 to 5.34 above for large scale trials in the Central zone namely ZCH-50072 Bt BG I, ZCH-50005 Bt BG I, ZCH-50007Bt BG I by M/s Zuari Seeds Ltd., Yashoda -751 Bt and Monsoon Bt by M/s Yashoda Hybrids Seeds Ltd., GBCH 01 Bt and GBCH 03 Bt by M/s Green Gold Seeds Ltd. expressing genes (*cry 1 Ab – cry 1Ac*) "GFM Cry 1A"

2.0 The Committee noted that the above mentioned hybrids have completed the multi-locational field trials under RCGM. The field trials have been evaluated by the MEC and the results discussed in the MEC meeting held on 8-9.3.2007. It was noted that out of the 7 Bt cotton hybrids tested under multi-locational trials, MEC has recommended 6 Bt cotton hybrids namely for LST in the Central zone. It was also noted that the report of the MEC has been considered in the RCGM meeting held on 31.1.2007. The RCGM has endorsed the recommendations of MEC.

3.0 After detailed deliberations and taking into consideration the findings of the multi-location trials and recommendations made by MEC and RCGM the following decisions were taken:

A. The GEAC found the following hybrids suitable for large scale trials in the Central zone.

1. ZCH-50072 Bt BG I with (*cry 1 Ab – cry 1Ac*) "GFM Cry 1A" gene by M/s Zuari Seeds Ltd.
2. ZCH-50005 Bt BG I with (*cry 1 Ab – cry 1Ac*) "GFM Cry 1A" gene by M/s Zuari Seeds Ltd.
3. ZCH-50007Bt BG I with (*cry 1 Ab – cry 1Ac*) "GFM Cry 1A" gene by M/s Zuari Seeds Ltd.
4. Monsoon Bt with (*cry 1 Ab – cry 1Ac*) "GFM Cry 1A" gene by M/s Yashoda Hybrids Seeds Ltd.
5. GBCH 01 Bt with (*cry 1 Ab – cry 1Ac*) "GFM Cry 1A" gene by M/s Green Gold Seeds Ltd.
6. GBCH 03 Bt with (*cry 1 Ab – cry 1Ac*) "GFM Cry 1A" gene by M/s Green Gold Seeds Ltd.

B. GEAC did not approve Yashoda -751 Bt as the MEC did not recommend the hybrids suitable for the Central zone based on the MLT and case verification data.

C. Hybrid expressing synthetic *cry 1c* gene (event 9124)—New gene event

2.35 Permission for Large Scale Trials and seed production of cotton hybrids 5174 Bt, 3134 Bt & 5125 Bt BGI with synthetic *cry 1c* gene (event 9124)in Central Zone by Metahelix Life Science Pvt. Ltd.,

2.35.1 The Committee considered the request for large scale trials in respect of **2 Bt cotton** hybrid as contained in agenda item 5.35 above in the Central zone namely 5174 Bt, 3134 Bt & 5125 Bt BGI expressing synthetic *cry 1c* gene (event 9124) by Metahelix Life Science Pvt. Ltd.,

2.35.2 The Committee noted that the above mentioned hybrids have completed the multi-locational field trials under RCGM. The field trials have been evaluated by the MEC and the results discussed in the MEC meeting held on 8-9.3.2007. The MEC has recommended 5174 Bt for LST in the Central Zone. The RCGM has endorsed the recommendations of MEC.

2.35.3 The Committee noted that the biosafety studies in respect of the new gene event, has not been completed. Further, recommendation of RCGM on the safety and efficacy of the product is a pre requisite for considering the request by GEAC for LST and ICAR trials. The Committee directed the applicant in the first instance, in accordance with the Hon'ble Supreme Court order dated 8.5.2007, to submit the entire dossier on biosafety data to the GEAC along with the protocols and procedures prescribed by the RCGM.

3.0 Other items

3.1 Renewal of Permission for LST and Seed production with Navkar 5 Bt in the North Zone & South Zone

3.1.1 The Committee noted that the GEAC in its meeting held on 1.6.06 had approved conduct of large scale field trials with Navkar 5 Bt expressing encoding fusion genes (cry 1Ab + cry Ac) 'GFM' in the North, Central and South Zones. As Navkar 5 is a centrally notified variety, the GEAC had approved one year LST and one year ICAR trial during Kharif 2006. Permission for 100 ha seed production was also granted. However, the trials could not be conducted in the North and South Zone. As the approval for LST is valid only for Kharif 2006, the applicant has requested the GEAC to renew its earlier permission and allow conduct of LST and ICAR trials in the North and South Zones during Kharif 2007 season.

3.1.2 The Committee approved the request for the renewal of the GEAC permission dated 9.6.2006 for conduct of LST with Navkar 5 in the North and South Zones during Kharif 2007.

3.2 Bt cotton seed – Conducting multi locational field trials, large scale trials and seed production – Certain clarifications

3.2.1 The Committee considered the clarification sought by the Andhra Pradesh, the State Department of Agriculture, Govt. of Andhra Pradesh on the following issues:

- Whether seed production can be carried out in suitable areas of seed production irrespective of the zone where LST and seed production are permitted by the GEAC.
- Issuance of permission for seed production / LST to seed companies simultaneously with MLTs may lead to incomplete evaluation of a particular variety in terms of its adaptability and agronomic performance.
- Regulation to be taken up on storage of Bt cotton seed production based on GEAC permission but still awaiting approval for commercial release and providence of such seed produce in the event of non approval of GEAC for commercial release for considerable period.

3.2.2 The Member Secretary, GEAC clarified the above issues as follows:

- The GEAC approval for conducting MLT/LST is specific for a particular zone. However, GEAC approval does not restrict the applicant to take up seed production in the same zone where MLT/LST is being conducted. It may be taken up in any suitable area of seed production. The restriction which is imposed by the GEAC is related to quantity of seed production.

- Conduct of MLT and recommendations of MEC/RCGM is a pre requisite for consideration of the proposal by the GEAC for LST. Therefore, LST / MLT are not conducted simultaneously. Only 0.5 ha seed production is permitted during MLT. Subsequently, during LST 10 ha seed production is permitted during first year LST and 100 ha seed production in the 2nd year LST. In case of notified varieties only one year of LST and one year of ICAR trials in tandem is mandatory. In such cases 100 ha seed production is permitted during the first year LST
- No separate regulation / approval is necessary to take up storage of Bt cotton seed produced based on GEAC approval. However, the approval granted by GEAC is subject to the condition that the seed generated shall not be sold or diverted for commercial purpose without the approval of the GEAC. The responsibility of ensuring safe custody of the seeds lie with the applicant. In case of any violation punitive action under EPA, 1986 can be undertaken.
- In the event of non approval of GEAC for commercial release the State Department through its SBCC/DLC notified under Rules, 1989 may direct the applicant to destroy the seeds by burning in the presence of any field functionaries under the Seed Act. It may be mentioned that the Seed Inspectors / Seed Analysts/ Laboratories notified under the Seed Act and Seed Order have also been empowered under the EPA, 1986 through 6 Gazette Notification in September, 2006.

3.2.3 After a brief discussion on the matter the Committee requested the Member Secretary, GEAC to forward the clarification to State Government for necessary action.
