Decisions taken in the 65th Meeting of the Genetic Engineering Approval Committee held on 4.04.2006.

The 65th Meeting of the Genetic Engineering Approval Committee (GEAC) was held on 4th April 2006 in the Ministry of Environment and Forests under the Chairmanship of Shri B S Parsheera Additional Secretary, MoEF and Chairman GEAC.

Decisions

I. COMMERCIAL REALEASE IN NORTH ZONE

1.1 Permission for commercial release of Bt Cotton hybrid MRC-6025 Bt and MRC-6029 Bt containing cry 1Ac gene Mon 531 event by M/s Mahyco, Mumbai.

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1.2 Permission for commercial release of Bt Cotton hybrid NCS-913 Bt and NCS-138 containing cry 1Ac gene Mon 531 event by M/s Nuziveedu Seeds Ltd, Secundrabad.

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1.3 Permission for commercial release of Bt Cotton hybrid RCH-308 Bt and RCH-314 Bt containing cry 1Ac gene Mon 531 event by M/s Rasi Seeds Ltd.

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1.4 Permission for commercial release of Bt Cotton hybrid JKCH-1947 Bt containing Cry 1Ac gene (event 1) by M/s J.K. Agri Seeds Ltd.

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1.5 Permission for commercial release of Bt Cotton hybrid NCEH-6 Bt containing encoding fusion genes (cry 1Ab+Cry 1 Ac) ` GFM by M/s Nath Seeds.

1.0 The Committee noted that the request for commercial release and marketing of MRC-6025 Bt and MRC-6029 Bt by M/s Mahyco, NCS-913 Bt and NCS-138 by M/s Nuziveedu Seeds Ltd, RCH-308 Bt and RCH-314 Bt by M/s Rasi Seeds Ltd, JKCH-1947 Bt by M/s J.K. Agri Seeds Ltd and NCEH-6 R Bt by M/s Nath Seeds in the North zone was considered by the GEAC in its meeting held on 8.3.2006 wherein it was noted that ICAR had given its recommendation in respect of only three hybrids taking into consideration the increase in yield over the best Bt check. It was also noted that ICAR had not given its considered opinion in respect of the CLCUv.

2.0 The Chairman invited Dr B M Khadi, Director CICR and representative of ICAR to give his views on the findings of ICAR trials. He explained that in case of non-transgenic crops only those hybrids which have a yield advantage of 20% or more over the best check is recommended. He informed that the same norm has been applied while evaluating the Bt cotton trials under AICCIP trials. According to this norm performance of only three hybrids namely RCH 314 Bt (36 %), RCH 308 (25 %) and MRC 6029 (20 %) are considered superior as they exhibit a yield advantage of 20% or more over the best Bt check (RCH 134 Bt). In respect of other hybrids under consideration it was noted that the MRC-6025 Bt, NCS-138 and NCS-913 Bt exhibited a yield advantage of 14%, 11% and 9% respectively over the best Bt Check whereas the yield of JKCH-1947 Bt and NCEH-6 Bt was below that of Bt check by 5% and 9% respectively.

3.0 Views were also expressed that yield cannot be the only criteria for deciding the promising hybrid. It was suggested that parameters such as level of protein expression, staple length, susceptibility to diseases, etc should also be taken into consideration while selecting promising hybrids.

4.0 In terms of other parameters it was noted all eight Bt hybrids under consideration were on par in respect of bollworm damage (which was very low in all cases), number of pesticide sprays, fibre quality, susceptibility to Jassids and susceptibility to CLCUv except for MRC 6029 Bt which recorded higher Disease Index during 2004-05. However during 2005-06, it was disease free.

5.0 During the deliberations, it was also pointed out that some of the hybrids which have not been recommended by ICAR have performed better or are equal to Bt cotton hybrids approved for

commercial release by the GEAC during 2002-2005. Views were also expressed that in case of Bt cotton, there is a need for introducing market competitiveness to make the Bt seeds affordable to small farmers.

6.0 The Committee further noted that the recommendation of ICAR and MEC/RCGM are at variance. It was pointed out that results of ICAR trials are based on field trials at 5 locations and that of MEC is at 80 locations. Also the protocols for ICAR trials and LST under GEAC are different. Besides the LST data are recorded by the Company and the ICAR trials is conducted through a public institutional mechanism. The need for strengthening the monitoring mechanism for evaluation of LST and ICAR trials was emphasized by the Members.

7.0 The Member Secretary GEAC informed that all eight hybrids under consideration for commercial release in the north zone have completed one year of LST and two years of ICAR trials.

8.0 Members opined that yield per se is a combination of several factors such as genetic potential of germplasm, agricultural practices adopted and the environment. As these are variable factors, yield cannot be constant even for the same hybrid across the locations. Members also opined that there should be flexibity while taking yield as the parameter for considering the introduction of Bt technology. It was suggested by one of the Members that a threshold for yield over /below the Bt check be fixed so as to ensure uniformity in the GEAC decision.

9.0 After detailed deliberations and taking into consideration the need for introducing diversity in the gene as well as germplasm as a tool to contain the development of insect résistance and other economic consideration, it was decided that in case of released event, hybrids having a yield upto less than 5% of the best Bt check and in case of new technology, hybrids having a yield upto less than 10% of the best Bt check may be acceptable.

10. In light of the above discussion and decisions, the GEAC accorded approval of the for commercial cultivation of the following hybrids in the North zone for a period of three years;

1. MRC-6025 Bt containing cry 1Ac gene Mon 531 event by M/s Mahyco,
2. MRC-6029 Bt containing cry 1Ac gene Mon 531 event by M/s Mahyco,
3. NCS-913 Bt containing cry 1Ac gene Mon 531 event by M/s Nuziveedu Seeds Ltd,
4. NCS-138 containing cry 1Ac gene Mon 531 event by M/s Nuziveedu Seeds Ltd,
5. RCH-308 Bt containing cry 1Ac gene Mon 531 event by M/s Rasi Seeds Ltd,
6. RCH -314 Bt containing cry 1Ac gene Mon 531 event by M/s Rasi Seeds Ltd,
7. JKCH-1947 Bt containing Cry 1Ac gene (event 1) by M/s J.K. Agri Seeds Ltd and
8. NCEH-6 R Bt containing encoding fusion genes (cry 1Ab+Cry 1 Ac) ' GFM by M/s Nath Seeds

II. LARGE SCALE TRIALS IN NORTH ZONE

(Large Scale Trials subsequent to RCGM trials and MEC evaluation)

a. Hybrids Containing Cry 1 Ac gene (MON 531 Event)

1.6 Permission for large scale trials and seed production of transgenic cotton hybrids-GK 206 Bt and GK 210 Bt. containing Cry 1Ac gene (MON-531 event) by M/s Ganga Kaveri Seeds Pvt Ltd. Hyderabad.

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1.7 Permission for large scale trials and seed production of transgenic cotton hybrids-ACH-33-1, ACH-155-1, ACH-Gaurav-1 containing Cry 1Ac gene (MON-531 event) by M/s Ajeet Seeds Ltd. Aurangabad.

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1.8 Permission for large scale trials and seed production of transgenic cotton hybrids-6317 Bt and 563 Bt containing Cry 1Ac gene (MON-531 event) by M/s Bio-seeds Research India Pvt. Ltd, Hyderabad.

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1.9 Permission for large scale trials and seed production of transgenic cotton hybrids – NAMCOT 401 Bt and NAMCOT 402 (Mon-531) by M/s Namdhari Seeds Pvt. Ltd. Bangalore

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1.10 Permission for large scale trials and seed production of transgenic cotton hybrids IT-903 and IT 905 containing Cry 1Ac gene (MON-531 event) by M/s Proagro Seeds Company Pvt. Ltd.

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1.11 Permission for large scale trials of transgenic cotton hybrids Tulasi 9, Tulasi 5, Tulasi 18 containing Cry 1Ac gene (MON-531 event) by M/s Tulasi Seeds Pvt. Ltd.

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1.12 Permission for large scale trials and seed production of transgenic cotton hybrids Sigma Bt and Ole Bt containing Cry 1Ac gene (MON-531 event) by M/s Vibha Agrotech Ltd. Hyderabad. Ltd.

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1.13 Permission for large scale trials and seed production of transgenic cotton hybrids NCS-914 Bt, NCS-918 Bt containing Cry 1Ac gene (MON-531 event) by M/s Nuziveedui Seeds Pvt. Ltd.

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1.14 Permission for large scale trials and seed production of transgenic cotton hybrids PCH-917 Bt, PCH-923 Bt PCH- 927 Bt, PCH-930 Bt containing Cry 1Ac gene (MON-531 event) by M/s Prabhat Agri Biotech Ltd.

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1.15 Permission for large scale trials and seed production of transgenic cotton hybrids Ankur 2226 BG, Jassi BG and Ankur 1286 BG containing Cry 1Ac gene (MON-531 event) by M/s Ankur Seeds Pvt. Ltd.

1.0 The Committee noted that a number of proposals seeking approval of the GEAC for large scale trials with GK 206 Bt and GK 210 Bt. containing Cry 1Ac gene (MON-531 event) by M/s Ganga Kaveri Seeds Pvt Ltd. , ACH-33-1, ACH-155-1, ACH-Gaurav-1 containing Cry 1Ac gene (MON-531 event) by M/s Ajeet Seeds Ltd., 6317 Bt and 563 Bt containing Cry 1Ac gene (MON-531 event) by M/s Bio-seeds Research India Pvt. Ltd, NAMCOT 401 Bt and NAMCOT 402 (Mon-531) by M/s Namdhari Seeds Pvt. Ltd., IT-903 and IT 905 containing Cry 1Ac gene (MON-531 event) by M/s Proagro Seeds Company Pvt. Ltd., Tulasi 9, Tulasi 5, Tulasi 18 containing Cry 1Ac gene (MON-531 event) by M/s Tulasi Seeds Pvt. Ltd. Sigma Bt and Ole Bt containing Cry 1Ac gene (MON-531 event) by M/s Vibha Agrotech Ltd. Hyderabad. Ltd, NCS-914 Bt, NCS-918 Bt containing Cry 1Ac gene (MON-531 event) by M/s Nuziveedui Seeds Pvt. Ltd, PCH-917 Bt, PCH-923 Bt PCH- 927 Bt, PCH-930 Bt containing Cry 1Ac gene (MON-531 event) by M/s Prabhat Agri Biotech Ltd., Ankur 2226 BG, Jassi BG and Ankur 1286 BG containing Cry 1Ac gene (MON-531 event) by M/s Ankur Seeds Pvt. Ltd in the North zone was considered by the GEAC in its meeting held on 8.3.2006. However in view of the GEAC decision to set up a sub-committee, decision on the proposals was deferred. Subsequently in view of the reconstitution of the GEAC, the meeting of the Sub-committee was deferred.

2.0 In view of the seasonality involved, the above proposals were considered by the GEAC. 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 February 27-28, 2006. It was noted that out of the 25 Bt cotton hybrids tested under multi-locational trials, MEC has recommended 16 Bt cotton hybrids namely GK 206 Bt, GK 210 Bt, ACH-33-1, ACH-155-1, 6317 Bt, 563 Bt , NAMCOT 402 , IT 905, Sigma Bt, Ole Bt, NCS-914 Bt, NCS-918 Bt, PCH-917 Bt, PCH-923 Bt, Ankur 2226 BG and Jassi BG. It was also noted that the report of the MEC has been considered in the RCGM meeting held on 2.3.2006. The RCGM has endorsed the recommendations of MEC.

3.0 The Committee also considered the 'Protocol for Large Scale Trials'. The Member Secretary GEAC informed the Committee that during Kharif 2005, the GEAC had constituted a sub-Committee to suggest a protocol for LST. Subsequently the matter has been reviewed by the Dr Nagarajan Committee on 'Bt Cotton and Related Issues'. After extensive consultation with all stakeholders, the protocol for LST has been rationalized and a field note book for data recording comprising of three parts namely Part A on pest-dynamics information and that of natural enemies of boll worm, Part B on

plant morphology and yield related information and Part C related to fiber/seed oil quality has been prepared. She requested the GEAC to decide which of the two protocols should be followed by the Company for conducting LST during Kharif 2006. During the deliberations, the Committee noted that the Dr Nagarajan Committee report has not been formally adopted. However its recommendation in respect of protocol for LST merits consideration as it has evolved through an extensive consultation process. After detailed deliberations, it was decided that the revised protocol recommended by the Dr Nagarajan Committee should be followed while conduct of large-scale trials during Kharif 2006..

4.0 During the deliberations, the duration of large-scale trials was also discussed. It was agreed that the LST and ICAR trials should be conducted in tandem. Accordingly for notified varieties one year LST and one year ICAR trials would be applicable whereas for non-notified varieties, two years of LST and two years of ICAR trials would be conducted.

5.0 The Committee also considered the issue regarding the number of locations for LST. The Committee was of the view that the present requirement of conducting LST at 80 locations is too large and needs to be optimized taking into consideration the area under cotton cultivation and the type of hybrids cultivated in each zone. After detailed deliberations, views were expressed that the numbers of locations for LST as suggested by Dr Nagarajan Committee merits consideration and may be followed for Kharif 2006. After detailed deliberations the Committee agreed with the above suggestion and it was decided that the number of locations for LST for each zone would be as follows:-

Cotton Hybrids**	**Zones**		
	Southern	**Central**	**Northern**
H x B	10	10	--
a x a	20	30	15
H x H	40	60	40
H x a	10	30	--

***** H – hirsutum; B – barbadance; h – herbaceum; a – arborium***

6.0 The Committee also deliberated the issue of seed production. It was agreed that in cases where two years of LST and ICAR trials are applicable, seed production in an area of 10 ha during first year LST and in an area of 100 ha during second year of LST may be permitted.

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

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

- GK 206 Bt and GK 210 Bt. containing Cry 1Ac gene (MON-531 event) by M/s Ganga Kaveri Seeds Pvt Ltd. ,
- ACH-33-1, ACH-155-1, containing Cry 1Ac gene (MON-531 event) by M/s Ajeet Seeds Ltd.,
- 6317 Bt and 563 Bt containing Cry 1Ac gene (MON-531 event) by M/s Bio-seeds Research India Pvt. Ltd,
- NAMCOT 402 (Mon-531) by M/s Namdhari Seeds Pvt. Ltd.,
- IT 905 containing Cry 1Ac gene (MON-531 event) by M/s Proagro Seeds Company Pvt. Ltd.,
- Sigma Bt and Ole Bt containing Cry 1Ac gene (MON-531 event) by M/s Vibha Agrotech Ltd. Hyderabad. Ltd,
- NCS-914 Bt and NCS-918 Bt containing Cry 1Ac gene (MON-531 event) by M/s Nuziveedui Seeds Pvt. Ltd,

- PCH-917 Bt and PCH-923 Bt containing Cry 1Ac gene (MON-531 event) by M/s Prabhat Agri Biotech Ltd.,

- Ankur 2226 BG I and Ankur Jassi BG I containing Cry 1Ac gene (MON-531 event) by M/s Ankur Seeds Pvt. Ltd.

b. However the representative of ICAR informed that the maximum numbers of hybrids that can be included in the AICCIP trials are about 25 per zone including the checks He further suggested that GEAC, while according approval for LST may inform the applicants about the same. It was therefore decided to advice the applicant to forward only one of their best Bt hybrid for testing under ICAR trials. The hybrid so selected by the Company would enter ICAR and LST during Kharif 2006.

c. The LST would be conducted at 40 locations in the North Zone for a period of 2 years as per the protocol recommended at para 3.0 above.

d. The GEAC also approved seed production in an area of 10 ha during first year LST and in an area of 100 ha during second year LST.

III. LARGE SCALE TRIALS IN NORTH ZONE

(Large Scale Trials subsequent to RCGM trials and MEC evaluation)

b. Hybrids Containing New Genes

1.16 Permission for large scale trials and seed production of transgenic cotton hybrids ACH 155 2, ACH- 33— 2 and ACH-21 containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Ajeet Seeds Ltd. Aurangabad.

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1.17 Permission for large scale trials and seed production of transgenic cotton hybrids-NCS-145 (Bunny), NCS-138 Bt II and NCS-913 B G II containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Nuziveedu Seeds Ltd. Secunderabad.

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1.18 Permission for large scale trials of Bt Cotton hybrid RCH – 134 BG II, RCH-539 BG II and RCH- 542 BG II containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II for North Zone by M/s Rasi Seeds Ltd.

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1.19 Permission for large scale trials and seed production of transgenic cotton hybrids-6317-2 Bt and 6488-2 containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Bio- seeds Research India Pvt. Ltd. Hyderabad.

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1.20 Permission for large scale trials and seed production of transgenic cotton hybrids MLCH-315 BGII and Krishna –BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Emergent Genetics India Pvt. Ltd.

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1.21 Permission for large scale trials of transgenic cotton hybrids Tulasi 4 BGII, Tulasi 9 BGII, Tulasi 117 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Tulasi Seeds Pvt. Ltd.

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1.22 Permission for large scale trials and seed production of transgenic cotton hybrids Ankur 2226 BGII, Jassi BGII and Ankur 651 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Ankur Seeds Pvt. Ltd

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1.23 Permission for large scale trials and seed production of transgenic cotton hybrids-KDCHH-441 BGII and KDCHH-621 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Krishidhan Seeds Ltd.

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1.24 Permission for large scale trials and seed production of Bt Cotton hybrid JKCL-1050 Bt and JK-1945 Bt containing Cry 1Ac gene (event 1) by M/s J.K.Agri Seeds Ltd.

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1.25 Permission for large scale trials and seed production of Bt Cotton hybrid NCEH -9Bt and NCEH 19 Bt containing encoding fusion genes (cry 1Ab+Cry Ac) ` GFM by M/s Nath Seeds.

1.0 The Committee noted that a number of proposals seeking approval of the GEAC for large scale trials with ACH 155 2, ACH- 33— 2 and ACH-21 containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Ajeet Seeds Ltd., NCS-145 (Bunny), NCS-138 Bt II and NCS-913 B G II containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Nuziveedu Seeds Ltd., RCH – 134 BG II, RCH-539 BG II and RCH- 542 BG II containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Rasi Seeds Ltd., 6317-2 Bt and 6488-2 containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Bio- seeds Research India Pvt. Ltd., MLCH-315 BGII and Krishna –BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Emergent Genetics India Pvt. Ltd., Tulasi 4 BGII, Tulasi 9 BGII, Tulasi 117 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Tulasi Seeds Pvt. Ltd., Ankur 2226 BGII, Jassi BGII and Ankur 651 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Ankur Seeds Pvt. Ltd., KDCHH-441 BGII and KDCHH-621 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Krishidhan Seeds Ltd. , JKCL-1050 Bt and JK-1945 Bt containing Cry 1Ac gene (event 1) by M/s J.K.Agri Seeds Ltd., NCEH -9Bt and NCEH 19 Bt containing encoding fusion genes (cry 1Ab+Cry Ac) ` GFM by M/s Nath Seeds in the North zone was considered by the GEAC in its meeting held on 8.3.2006. However in view of the GEAC decision to set up a sub-committee, decision on the proposals was deferred. Subsequently in view of the reconstitution of the GEAC, the meeting of the Sub-committee was deferred.

2.0 In view of the seasonality involved, the above proposals were considered by the GEAC. 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 February 27-28, 2006. It was noted that out of the 25 Bt cotton hybrids tested under multi-locational trials, MEC has recommended 21 Bt cotton hybrids namely ACH 155 -2, ACH-33— 2, NCS-145 (Bunny), NCS-138 Bt II, NCS-913 B G II , RCH – 134 BG II, RCH-539 BG II, RCH-542 BG II, 6317-2 , 6488-2, MLCH-315 BGII, Tulasi 4 BGII , Tulasi 9 BGII, Ankur 2226 BGII, Jassi BGII, KDCHH-441 BG II, KDCHH-621 BG II, JKCL-1050 Bt, JK-1945 Bt NCEH -9 Bt and NCEH 19 Bt. It was also noted that the report of the MEC has been considered in the RCGM meeting held on 2.3.2006. The RCGM has endorsed the recommendations of MEC.

3.0 After detailed deliberations and taking into consideration the findings of the mulit-location trials and recommendations made by RCGM and MEC and in accordance with the deliberations and decisions taken under Agenda item 5.6 to 5.15, para 3.0 to 6.0 the following decisions were taken:

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

- ACH 155 -2 and ACH- 33— 2 containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Ajeet Seeds Ltd. Aurangabad.

- NCS-145 (Bunny), NCS-138 Bt II and NCS-913 B G II containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Nuziveedu Seeds Ltd. Secunderabad.

- RCH – 134 BG II, RCH-539 BG II and RCH- 542 BG II containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II for North Zone by M/s Rasi Seeds Ltd.

- 6317-2 and 6488-2 containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Bio- seeds Research India Pvt. Ltd.

- MLCH-315 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Emergent Genetics India Pvt. Ltd.

- Tulasi 4 BGII and, Tulasi 9 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Tulasi Seeds Pvt. Ltd.

- Ankur 2226 BGII and Jassi BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Ankur Seeds Pvt. Ltd

- KDCHH-441 BG II and KDCHH-621 BG II containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Krishidhan Seeds Ltd.

- JKCL-1050 Bt and JK-1945 Bt containing Cry 1Ac gene (event 1) by M/s J.K.Agri Seeds Ltd.

- NCEH -9 Bt and NCEH 19 Bt containing encoding fusion genes (cry 1Ab+Cry Ac) ` GFM by M/s Nath Seeds.

b. Since ICAR has informed that the maximum numbers of hybrids that can be included in the AICCIP trials are about 25 per zone including the checks, it was decided to advice the applicant to forward only one of their best Bt hybrid for testing under ICAR trials. The hybrid so selected by the Company would enter ICAR and LST during Kharif 2006.

c. The LST would be conducted at 40 locations in the North Zone for a period of 2 years as per the protocol recommended at para 3.0 above.

d. The GEAC also approved seed production in an area of 10 ha during first year LST and in an area of 100 ha during second year LST.

IV. COMMERCIAL REALEASE IN CENTRAL ZONE

1.26 Permission for commercial release of transgenic cotton hybrids-GK 204 and GK 205 Bt containing Cry 1Ac gene (MON-531 event) by M/s Ganga Kaveri Seeds Pvt Ltd. Hyderabad.

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1.27 Permission for commercial release transgenic cotton hybrids-ACH-33-1 (Ajeet -33) Bt and ACH -155-1 (Ajeet -155) Bt containing Cry 1Ac gene (MON-531 event) by M/s Ajeet Seeds Ltd. Aurangabad.

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1.28 Permission for commercial release of transgenic cotton hybrids Tulasi 4 Bt, Tulasi 117 Bt, containing Cry 1Ac gene (MON-531 event) by M/s Tulasi Seeds Pvt. Ltd

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1.29 Permission for commercial release of transgenic cotton hybrids VICH – 5 Bt & VICH 9 Bt containing Cry 1Ac gene (MON-531 event) by M/s Vikram Seeds Pvt. Ltd. Ahmedabad.

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1.30 Permission for commercial release of transgenic cotton hybrids NPH-2171 Bt (PCH 2171 Bt) containing Cry 1Ac gene (MON-531 event) by M/s Prabhat Agri Biotech Ltd. Hyderabad.

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1.31 Permission for commercial release of transgenic cotton hybrids Brahma BG containing Cry 1Ac gene (MON-531 event) by M/s Emergent Genetics.

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1.32 Permission for commercial release of transgenic cotton hybrids VICH-111 Bt containing Cry 1Ac gene (MON-531 event) by M/s Vikki Agrotech Pvt Ltd.

&

1.33 Permission for commercial release of transgenic cotton hybrids NCS-913 Bt containing Cry 1Ac gene (MON-531 event) by M/s Nuziveedu.

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1.34 Permission for commercial release of transgenic cotton hybrids RCH-377 Bt containing Cry 1Ac gene (MON-531 event) by M/s Rasi Seeds

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1.35 Permission for commercial release of transgenic cotton hybrids KDCHH- 9632 Bt, KDCHH-9810 Bt, KDCHH-9821 Bt containing Cry 1Ac gene (MON-531 event) by M/s Krishidhan Seeds Ltd.

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1.36 Permission for commercial release transgenic cotton hybrids PRCH-102 Bt containing Cry 1Ac gene (MON-531 event) by M/s Pravardhan Seeds Ltd.

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1.37 Permission for commercial release of transgenic cotton hybrids KDCHH-441 BGII, and KDCHH-621 BG II, containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Krishidhan Seeds Ltd

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1.38 Permission for commercial release of transgenic cotton hybrids JK Varun Bt and JKCH-99 Bt containing Cry 1Ac gene (event -1) by M/s J.K. Seeds Ltd

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1.39 Permission for commercial release of transgenic cotton hybrids NCEH-2R, containing encoding fusion genes (cry 1Ab+Cry 1 Ac) ` GFM, by M/s Nath Seeds Ltd.

1.0 The Committee considered the request for commercial release and marketing of GK 204 and GK 205 Bt containing Cry 1Ac gene (MON-531 event) by M/s Ganga Kaveri Seeds Pvt Ltd, ACH-33-1 (Ajeet -33) Bt and ACH -155-1 (Ajeet -155) Bt containing Cry 1Ac gene (MON-531 event) by M/s Ajeet Seeds Ltd, Tulasi 4 Bt, Tulasi 117 Bt, containing Cry 1Ac gene (MON-531 event) by M/s Tulasi Seeds Pvt. Ltd, VICH – 5 Bt & VICH 9 Bt containing Cry 1Ac gene (MON-531 event) by M/s Vikram Seeds Pvt. Ltd, NPH-2171 Bt (PCH 2171 Bt) containing Cry 1Ac gene (MON-531 event) by M/s Prabhat Agri Biotech Ltd, Brahma BG containing Cry 1Ac gene (MON-531 event) by M/s Emergent Genetics, VICH-111 Bt containing Cry 1Ac gene (MON-531 event) by M/s Vikki Agrotech Pvt Ltd, NCS-913 Bt containing Cry 1Ac gene (MON-531 event) by M/s Nuziveedu, RCH-377 Bt containing Cry 1Ac gene (MON-531 event) by M/s Rasi Seeds Ltd, KDCHH- 9632 Bt, KDCHH-9810 Bt, KDCHH-9821 Bt containing Cry 1Ac gene (MON-531 event) by M/s Krishidhan Seeds Ltd, PRCH-102 Bt containing Cry 1Ac gene (MON-531 event) by M/s Pravardhan Seeds Ltd, KDCHH-441 BGII, and KDCHH-621 BG II, containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Krishidhan Seeds Ltd, JK Varun Bt and JKCH-99 Bt containing Cry 1Ac gene (event -1) by M/s J.K. Seeds Ltd, NCEH-2R, containing encoding fusion genes (cry 1Ab+Cry Ac) ` GFM, by M/s Nath Seeds Ltd in the Central zone.

2.0 The Member Secretary GEAC informed that the 22 Bt cotton hybrids under consideration for commercial release in the Central zone have completed the LST during Kharif 2005. The LST have been evaluated by the MEC. Based on the results of the field trials, MEC in its meeting held on 22-23 March 2006 has recommended 20 Bt cotton hybrids for commercial cultivation in the central zone namely GK 204, GK 205 Bt, ACH-33-1 Bt , ACH -155-1 Bt, Tulasi 4 Bt, Tulasi 117 Bt, VICH 5 Bt, VICH 9 Bt, NPH-2171 Bt (PCH 2171 Bt) , Brahma BG, VCH-111 Bt, NCS 913 Bt, RCH-377 Bt, KDCHH 9810 Bt, PRCH-102 Bt, KDCHH-441 BGII, KDCHH 621 BG-II, JK Varun Bt and JKCH-99 Bt, NCEH-2R subject to completion of the regulatory requirements.

3.0 It was further noted that out of the 22 Bt cotton hybrids approved by MEC for Central zone VICH 5 Bt, VICH 9 Bt, NCS 913 Bt, KDCHH 9810 Bt, KDCHH 621 BG-II and JKCH 99 have not completed two years of ICAR trials Member Secretary GEAC explained that VICH 5 Bt and VICH 9 Bt are centrally notified varieties and as per the policy decision taken by ICAR during Kharif 2005, only one year of ICAR trial is necessary for the centrally notified varieties.

4.0 The Chairman invited Dr B M Khadi, Director CICR and representative of ICAR to give his views on the findings of ICAR trials. He explained that 26 Bt cotton hybrids have been tested under the two year ICAR trials. Under irrigated conditions only 4 hybrids under consideration recorded 5 % yield advantage over the Bt check (RCH 2 Bt) namely GK 205 Bt (23%), RCH 377 Bt (21 %), ACH 155-1 (6%) and NCS-145 Bt (5 %). Under rainfed conditions, GK 205 Bt and RCH 377 Bt recorded a yield of 14 % over the Bt Check (RCH 2 Bt).

5.0 In terms of other parameters it was noted all Bt hybrids under consideration were on par in respect of bollworm damage (which was very low in all cases), number of pesticide sprays, fibre quality, susceptibility to Jassids and susceptibility to bacterial blight.

6.0 During the deliberations, it was also pointed out that the hybrids under consideration have exhibited a yield advantage and have performed better or are equal to Bt cotton hybrids approved for commercial release by the GEAC during 2002-2005.

7.0 In light of the discussion in respect of agenda item 5.1 to 5.5 under para 3.0 to 9.0 and decisions taken by the GEAC in respect of commercial release of Bt cotton hybrids for the North zone, the Committee was of the view that Bt cotton hybrids fulfilling the following criteria may be considered for commercial release in the Central zone.

a. Hybrid has completed one year LST.
b. Hybrid has been recommended by MEC for cultivation in the Central zone
c. Hybrid has completed two years of ICAR trials and in case of notified varieties one year of ICAR trials.
d. Hybrid containing released gene event recording a yield upto 5 % less than the best Bt check under irrigated/rainfed conditions.
e. Hybrid containing new gene event recording a yield upto 10 % less than the best Bt check under irrigated/rainfed conditions

8.0 In light of the above discussion and decisions the following decisions were taken by the GEAC:

A. GEAC accorded approval for commercial cultivation of the following hybrids in the Central zone for a period of three years:-

a. Under Rainfed and Under Irrigated conditions:

- GK 205 Bt containing Cry 1Ac gene (MON-531 event) by M/s Ganga Kaveri Seeds Pvt Ltd.
- RCH-377 Bt containing Cry 1Ac gene (MON-531 event) by M/s Rasi Seeds

b. Under Irrigated conditions:

- ACH-33-1 Bt containing Cry 1Ac gene (MON-531 event) by M/s Ajeet Seeds Ltd.
- ACH -155-1 containing Cry 1Ac gene (MON-531 event) by M/s Ajeet Seeds Ltd.
- Tulasi 4 Bt, containing Cry 1Ac gene (MON-531 event) by M/s Tulasi Seeds Pvt. Ltd
- Brahma BG containing Cry 1Ac gene (MON-531 event) by M/s Emergent Genetics.
- VICH-111 Bt containing Cry 1Ac gene (MON-531 event) by M/s Vikki Agrotech Pvt Ltd.
- JK Varun Bt containing Cry 1Ac gene (event -1) by M/s J.K. Seeds Ltd

c. Under Rainfed conditions:

- VICH – 5 Bt containing Cry 1Ac gene (MON-531 event) by M/s Vikram Seeds Pvt. Ltd.
- VICH 9 Bt containing Cry 1Ac gene (MON-531 event) by M/s Vikram Seeds Pvt. Ltd.
- PRCH-102 Bt containing Cry 1Ac gene (MON-531 event) by M/s Pravardhan Seeds Ltd.

- NCEH-2R, containing encoding fusion genes (cry 1Ab+Cry Ac) ` GFM, by M/s Nath Seeds Ltd.

B. GEAC did not approve Tulasi 117 Bt and NPH 2171 Bt as the yield of the hybrid was 5% less than that of the Bt check.

C. In respect of NCS 913 Bt, KDCHH 9810 Bt, KDCHH 621 BG-II and JKVH 99 , the Committee was of the view that the request for commercial release is pre-mature as it has not completed the requirement of two years ICAR trials.

D. In respect of KDCHH 441 BG-II, it was noted that M/s Krishidhan is a sub-licensee of M/s Mahyco and the hybrid contains the stacked genes (Bollgard –II) which is not a released gene event. M/s Mahyco was required to present the biosafety data in respect of Bollgard-II in this meeting. However, they have requested the GEAC to defer their case to the next meeting. In view of the above, decision on KDCHH 441 was deferred.

V. LARGE SCALE TRIALS IN CENTRAL ZONE

(Large Scale Trials subsequent to RCGM trials and MEC evaluation)

a. Hybrids Containing Cry 1 Ac gene (MON 531 Event)

1.40 Permission for large scale trials and seed production of transgenic cotton hybrids NAMCOT 403 Bt and NAMCOT 405 containing Cry 1 Ac gene Mon 531 event by M/s Namdhari Seeds Pvt. Ltd. Bangalore.

&

1.41 Permission for large scale trials and seed production of transgenic cotton hybrids-VICH-11 Bt and VICH-15 containing Cry 1 Ac gene Mon 531 event by M/s Vikram Seeds Pvt. Ltd. Ahmedabad.

&

1.42 Permission for large scale trials and seed production of transgenic cotton hybrids-containing Cry 1 A(c) gene on HXB Cotton hybrid NCHB 940Bt, NCHB 944 Bt and NCHB 945 Bt containing Cry 1 Ac gene Mon 531 event by M/s Nuziveedui Seeds Pvt. Ltd.

&

1.43 Permission for seed production and large scale trials of transgenic cotton hybrids NCS-918 Bt, NCS-922 Bt and NCS-929 Bt containing Cry 1 A(c) gene (Mon-531) by M/s Nuziveedui Seeds Pvt. Ltd.

&

1.44 Permission for large scale trials of transgenic cotton hybrids Sigma, Dyna, and Grace Bt containing Cry 1 A(c) gene (Mon-531) by M/s Vibha Seeds Pvt. Ltd.

&

1.45 Permission for large scale trials and seed production of transgenic cotton hybrids PCH- 917 Bt, PCH 923 Bt, PCH-927 Bt and PCH 930 Bt containing Cry 1 A(c) gene (Mon-531) by M/s Prabhat Agri Biotech Ltd.

&

1.46 Permission for large scale trials and seed production of transgenic cotton hybrids KCH-135 Bt, KCH-707 Bt and KCH-119 Bt containing Cry 1 A(c) gene (Mon-531) by M/s Kaveri Seeds Company Ltd.

&

1.47 Permission for large scale trials and seed production of transgenic cotton hybrids 563 Bt and 322 Bt containing Cry 1 A(c) gene (Mon-531) in central zone by M/s BioSeeds Research India Pvt.Ltd.

&

1.48 Permission for large scale trials and seed production of transgenic cotton hybrids Ankur 2226 BG, Akka BG and Jai BG containing Cry 1 A(c) (MON- EVENT 531) by M/s Ankur Seeds Pvt. Ltd.

&

1.49 Permission for large scale trials and seed production of transgenic cotton hybrids Nandi-405 Bt (Sandeep), Nandi-36 (Ratna) Bt, Nandi-45 Bt. Containing Cry 1 A(c) (MON-EVENT 531) by M/s Nandi Seeds Pvt. Ltd.

&

1.50 Permission for large scale trials and seed production of transgenic cotton hybrids IT 921 and IT 923 containing Cry 1Ac gene (MON-531 event) by M/s Proagro Seeds Company Pvt. Ltd.

1.0 The Committee considered the request for large scale trials in the Central zone with NAMCOT 403 Bt and NAMCOT 405 containing Cry 1 Ac gene Mon 531 event by M/s Namdhari Seeds Pvt. Ltd, VICH-11 Bt and VICH-15 containing Cry 1 Ac gene Mon 531 event by M/s Vikram Seeds Pvt. Ltd, HXB Cotton hybrid NCHB 940Bt, NCHB 944 Bt and NCHB 945 Bt containing Cry 1 Ac gene Mon 531 event by M/s Nuziveedui Seeds Pvt. Ltd, NCS-918 Bt, NCS-922 Bt and NCS-929 Bt containing Cry 1 A(c) gene (Mon-531) by M/s Nuziveedui Seeds Pvt. Ltd, Sigma, Dyna, and Grace Bt containing Cry 1 A(c) gene (Mon-531) by M/s Vibha Seeds Pvt. Ltd, PCH- 917 Bt, PCH 923 Bt, PCH-927 Bt and PCH 930 Bt containing Cry 1 A(c) gene (Mon-531) by M/s Prabhat Agri Biotech Ltd, KCH-135 Bt, KCH-707 Bt and KCH-119 Bt containing Cry 1 A(c) gene (Mon-531) by M/s Kaveri Seeds Company Ltd, 563 Bt and 322 Bt containing Cry 1 A(c) gene (Mon-531) in central zone by M/s BioSeeds Research India Pvt Ltd, Ankur 2226 BG, Akka BG and Jai BG containing Cry 1 A(c) (MON- EVENT 531) by M/s Ankur Seeds Pvt. Ltd, Nandi-405 Bt (Sandeep), Nandi-36 (Ratna) Bt, Nandi-45 Bt containing Cry 1 A(c) (MON- EVENT 531) by M/s Nandi Seeds Pvt. Ltd, IT 921 and IT 923 containing Cry 1Ac gene (MON-531 event) by M/s Proagro Seeds Company Pvt. Ltd.

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 March 22-23, 2006. It was noted that out of the 30 Bt cotton hybrids tested under multi-locational trials, MEC has recommended 20 Bt cotton hybrids namely VICH-11 Bt, VICH-15, NCHB 940 Bt, NCHB 944 Bt, NCHB 945 Bt, NCS-918 Bt, NCS-929 Bt, Sigma Bt , Dyna Bt, PCH 923 Bt, PCH 930 Bt, KCH-135 Bt, KCH-707 Bt, 563 Bt, 322 Bt , Ankur Jai BG, Nandi-405 Bt, Nandi-36 Bt, Nandi-45 Bt and IT 923 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 27.3.2006. The RCGM has endorsed the recommendations of MEC.

3.0 After detailed deliberations and taking into consideration the findings of the mulit-location trials and recommendations made by RCGM and MEC and in accordance with the deliberations and decisions taken under Agenda item 5.6 to 5.15, para 3.0 to 6.0 the following decisions were taken:

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

- VICH-11 Bt and VICH-15 containing Cry 1 Ac gene Mon 531 event by M/s Vikram Seeds Pvt. Ltd,
- NCHB 940 Bt, NCHB 944 Bt and NCHB 945 Bt containing Cry 1 Ac gene Mon 531 event by M/s Nuziveedui Seeds Pvt. Ltd.
- NCS-918 Bt and NCS-929 Bt containing Cry 1 A(c) gene (Mon-531) by M/s Nuziveedui Seeds Pvt. Ltd.
- Sigma Bt , Dyna Bt containing Cry 1 A(c) gene (Mon-531) by M/s Vibha Seeds Pvt. Ltd.
- PCH 923 Bt and PCH 930 Bt containing Cry 1 A(c) gene (Mon-531) by M/s Prabhat Agri Biotech Ltd.
- KCH-135 Bt, KCH-707 Bt containing Cry 1 A(c) gene (Mon-531) by M/s Kaveri Seeds Company Ltd.

- 563 Bt and 322 Bt containing Cry 1 A(c) gene (Mon-531) in central zone by M/s BioSeeds Research India Pvt.Ltd.

- Ankur Jai BG containing Cry 1 A(c) (MON- EVENT 531) by M/s Ankur Seeds Pvt. Ltd.

- Nandi-405 Bt, Nandi-36 Bt, Nandi-45 Bt. Containing Cry 1 A(c) (MON- EVENT 531) by M/s Nandi Seeds Pvt. Ltd.

- IT 923 containing Cry 1Ac gene (MON-531 event) by M/s Proagro Seeds Company Pvt. Ltd.

b. Since ICAR has informed that the maximum numbers of hybrids that can be included in the AICCIP trials are about 25 per zone including the checks, it was decided to advice the applicant to forward only one of their best Bt hybrid for testing under ICAR trials. The hybrid so selected by the Company would enter ICAR and LST during Kharif 2006.

c. The LST would be conducted at 60 locations in the Central Zone for a period of 2 years as per the protocol recommended at page 8, para 3.0 of Agenda Items 5.6 to 5.15 .

d. The GEAC also approved seed production in an area of 10 ha during first year LST and in an area of 100 ha during second year LST.

VI. LARGE SCALE TRIALS IN CENTRAL ZONE

(Large Scale Trials subsequent to RCGM trials and MEC evaluation)

b. Hybrids Containing New Genes

1.51 Permission for large scale trials and seed production of transgenic cotton hybrids Tulasi 4 BGII, Tulasi 9 BGII, Tulasi 117 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Tulasi Seeds Pvt. Ltd.

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1.52 Permission for large scale trials and seed production of transgenic cotton hybrids RCH-2 BGII, RCH-548 BGII and RCH-551 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Rasi Seeds Pvt. Ltd.

&

1.53 Permission for large scale trials and seed production of transgenic cotton hybrids NCS-145(Bunny) BGII, NCS-207 (Mallika) BGII and NCS-138 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Nuziveedui Seeds Pvt. Ltd.

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1.54 Permission for large scale trials and seed production of transgenic cotton hybrids 557-2 Bt and 322 -2 Bt containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Bioseeds Research India Pvt Ltd.

&

1.55 Permission for large scale trials and seed production of transgenic cotton hybrids Ankur 2534 BGII, Akka BGII and Ankur 651 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Ankur Seeds Pvt. Ltd.

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1.56 Permission for large scale trials and seed production of transgenic cotton hybrids NCEH 3R Bt , NCEH 14 Bt and NCEH 19 Bt containing encoding fusion genes (cry 1Ab+Cry Ac) ` GFM by M/s Nath Seeds Ltd.

1.0 The Committee considered the request for large scale trials in the Central zone with new gene event namely Tulasi 4 BGII, Tulasi 9 BGII, Tulasi 117 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Tulasi Seeds Pvt. Ltd, RCH-2 BGII, RCH-548 BGII and RCH-551 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Rasi Seeds Pvt. Ltd, NCS-145(Bunny) BGII, NCS-207 (Mallika) BGII and NCS-138 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Nuziveedui Seeds Pvt. Ltd, 557-2 Bt and 322 -2 Bt containing

stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Bioseeds Research India Pvt Ltd, Ankur 2534 BGII, Akka BGII and Ankur 651 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Ankur Seeds Pvt. Ltd, NCEH 3R Bt , NCEH 14 Bt and NCEH 19 Bt containing encoding fusion genes (cry 1Ab+Cry Ac) ' GFM by M/s Nath Seeds Ltd

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 March 22-23, 2006. It was noted that out of the 16 Bt cotton hybrids tested under multi-locational trials, MEC has recommended 12 Bt cotton hybrids namely Tulasi 4 BGII, Tulasi 117 BGII, RCH-2 BGII, RCH-548 BGII, NCS-145 BG II, NCS-207 BG II , 557-2 Bt, 322 -2 Bt, Ankur 2534 BG II, Ankur Akka BG II, NCEH 3R Bt , NCEH 14 Bt 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 27.3.2006. The RCGM has endorsed the recommendations of MEC.

3.0 After detailed deliberations and taking into consideration the findings of the mulit-location trials and recommendations made by RCGM and MEC and in accordance with the deliberations and decisions taken under Agenda item 5.6 to 5.15, para 3.0 to 6.0 the following decisions were taken:

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

- Tulasi 4 BGII, Tulasi 117 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Tulasi Seeds Pvt. Ltd.

- RCH-2 BGII, RCH-548 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Rasi Seeds Pvt. Ltd.

- NCS-145(Bunny) BGII, NCS-207 (Mallika) BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Nuziveedui Seeds Pvt. Ltd.

- 557-2 Bt and 322 -2 Bt containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985)—BG-II by M/s Bioseeds Research India Pvt Ltd.

- Ankur 2534 BGII, Ankur Akka BGII and containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Ankur Seeds Pvt. Ltd.

- NCEH 3R Bt , NCEH 14 Bt containing encoding fusion genes (cry 1Ab+Cry Ac) ' GFM by M/s Nath Seeds Ltd.

b. Since ICAR has informed that the maximum numbers of hybrids that can be included in the AICCIP trials are about 25 per zone including the checks, it was decided to advice the applicant to forward only one of their best Bt hybrid for testing under ICAR trials. The hybrid so selected by the Company would enter ICAR and LST during Kharif 2006.

c. The LST would be conducted at 60 locations in the Central Zone for a period of 2 years as per the protocol recommended at page 8, para 3.0 of Agenda Items 5.6 to 5.15 .

d. The GEAC also approved seed production in an area of 10 ha during first year LST and in an area of 100 ha during second year LST.

VII. REQUEST FOR SECOND YEAR LST IN THE CENTRAL ZONE

1.57 Permission for 2nd year large scale trials and seed production of transgenic cotton hybrids RCH-386 BGI containing Cry 1 A(c) gene MON 531 event by M/s Rasi Seeds Pvt. Ltd.

&

1.58 Permission for 2nd year large scale trials and seed production of transgenic cotton hybrids RCH-515 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Rasi Seeds Pvt. Ltd.

&

1.59 Permission for 2nd year large scale trials and seed production of transgenic cotton hybrids MRC 7347 BGII and MRC-7351 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Mahyco.

1.0 The Committee considered the request for conduct of second year LST with RCH-386 BGI containing Cry 1 A(c) gene MON 531 event by M/s Rasi Seeds Pvt. Ltd, RCH-515 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Rasi Seeds Pvt. Ltd and MRC 7347 BGII and MRC-7351 BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) by M/s Mahyco at 40 locations in the central zone .

2.0 The Committee noted that the GEAC in its meeting held on 3.5.2006 had approved large scale trials of RCH-386 BG-I, RCH-515 BGII, MRC 7347 BGII and MRC-7351 BGII at 80 locations in Central Zone during Kharif 2005 based on the recommendations of RCGM and MEC. The first year LST as recommended by GEAC have been completed. The field trials have been monitored by MEC. The MEC and RCGM have recommended both the hybrids for commercial release. However, the Company has chosen not to promote these hybrids during Kharif 2006 and have requested permission to repeat the LST during Kharif 2006.

3.0 In view of the above stated facts, the GEAC approved the conduct of second year LST with RCH-386 BG-I, RCH-515 BGII, MRC 7347 BGII and MRC-7351 BGII in the Central zone at 60 locations during Kharif 2006.

4.0 The GEAC also approved seed production in an area of 100 ha during second year LST.

VIII Additional Agenda

1.60: Permission for large scale trials and seed production of transgenic cotton hybrids Tulasi 9 Bt, Tulasi 5 Bt and Tulasi 18 Bt containing Cry1 Ac (event MON 531) in central zone by M/s Tulasi Seeds Pvt. Ltd.

1.0 The Committee considered the request for LST in the Central zone with Tulasi 9 Bt, Tulasi 5 Bt and Tulasi 18 Bt containing Cry 1 Ac gene Mon 531 event.

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 March 22-23, 2006. It was noted that out of the 3 Bt cotton hybrids tested under multi-locational trials, MEC has recommended Tulasi 9 Bt and Tulasi 5 Bt 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 27.3.2006. The RCGM has endorsed the recommendations of MEC.

3.0 After detailed deliberations the following decisions were taken by the GEAC:

a. The GEAC found Tulasi 9 Bt and Tulasi 5 Bt suitable for large scale trials in the Central zone:

b. Since ICAR has informed that the maximum numbers of hybrids that can be included in the AICCIP trials are about 25 per zone including the checks, it was decided to advice the applicant to forward only one of their best Bt hybrid for testing under ICAR trials. The hybrid so selected by the Company would enter ICAR and LST during Kharif 2006.

c. The LST would be conducted at 60 locations in the Central Zone for a period of 2 years as per the protocol recommended at page 8, para 3.0 of Agenda Items 5.6 to 5.15 .

d. The GEAC also approved seed production in an area of 10 ha during first year LST and in an area of 100 ha during second year LST.

1.61: Permission for large scale trials and seed production of transgenic cotton hybrids MLCH 315 BG II, Bramha BG II in irrigated tracts and Chetana BGII and Atal BGII rainfed tracts containing Cry1 Ac and Cry 2 Ab (event MON 15985) in central zone by M/s Emergent Genetics India Pvt Ltd.

1.0 The Committee considered the request for LST in the Central zone with MLCH 315 BGII, Bramha BGII in irrigated tracts and Chetana BGII and Atal BGII containing stacked genes Cry1 Ac and Cry 2Ab (event MON 15985) in the Central zone.

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 March 22-23, 2006. It was noted that out of the 4 Bt cotton hybrids tested under multi-locational trials, MEC has recommended MLCH 315 BGII and Atal BGII 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 27.3.2006. The RCGM has endorsed the recommendations of MEC.

3.0 After detailed deliberations the following decisions were taken by the GEAC:

a. The GEAC found MLCH 315 BGII and Atal BGII suitable for large scale trials in the Central zone:

b. Since ICAR has informed that the maximum numbers of hybrids that can be included in the AICCIP trials are about 25 per zone including the checks, it was decided to advice the applicant to forward only one of their best Bt hybrid for testing under ICAR trials. The hybrid so selected by the Company would enter ICAR and LST during Kharif 2006.

c. The LST would be conducted at 60 locations in the Central Zone for a period of 2 years as per the protocol recommended at page 8, para 3.0 of Agenda Items 5.6 to 5.15 .

d. The GEAC also approved seed production in an area of 10 ha during first year LST and in an area of 100 ha during second year LST.

2.0 Consideration of Proposals related to pharmaceutical sector

2.1 Adoption of Mashelkar Committee report.

1.0 The Member Secretary informed the Committee that, Government of India has decided to adopt the recommendations of the Task Force on r-pharma w.e.f 1st April 2006.

2.0 As per the revised procedure, approval of GEAC is not required for indigenous product development, manufacture and marketing of pharmaceutical products derived from LMOs under risk category I and II (Protocol I) Further proposals involving the import of and marketing of products where the end product is not a LMO (Protocol V), do not fall under the purview of GEAC. It was proposed that applicants whose proposals are pending GEAC consideration and falling under Protocol-I (risk group I & II) and Protocol V may be advised to approach DCGI for the requisite clearances.

3.0 While the Committee endorsed the above suggestion, it was found necessary that, before informing the applicants, MoEF may first notify the categories of r-pharma products exempted from the GEAC clearance before informing the applicants. It was also suggested that MoEF may inform DCGI accordingly. Specific comments received from the Experts in respect of individual applications may also be forwarded to the DCGI.

3.0 Any other Item with the permission of the Chair.

3.1 Policy issues related to Bt cotton

1.0 The Member Secretary informed that, in the previous GEAC meeting held on 8.3.2006, it was decided to set up a sub-Committee under the Chairmanship of Dr R P Sharma with the following TOR:

i. To recommend the period of Large Scale Trials and seed production for transgenic cotton for CVRC notified and un-notified varieties in both released gene /event & new gene/event in respect of Bt cotton.
ii. To recommend the period of Large Scale Trials and seed production for new gene in new crops.
iii. Mechanism to monitor the performance of Bt cotton.
iv. Recommendations to implement ant the Alternate Monitoring Mechanism
v. Review of GEAC compliance conditions in respect of refugia, IRM practice, IPM strategy, appropriate packaging practice etc.
vi. Parameters and benchmark for deciding the superiority of the hybrids evaluated under MEC / ICAR system.
vii. Any other recommendation on related aspects.

2.0 It was explained that, the meeting of the sub-Committee was not held since the GEAC was reconstituted. During the deliberations, it was noted that some of the issues related to period of LST, seed production and number of years of LST was resolved. Views were expressed that the sub-Committee constituted by RCGM may examine the other pending issues. Member Secretary RCGGM informed that the sub-Committee constituted by RCGM was specifically to consider the suggestion relating to 'event based approval' for Bt cotton.

3.0 In view of the above, it was decided to set up a separate sub-Committee to address issues mentioned at para at 1.0 (ii to vii). Initially it was agreed that the sub-Committee may be constituted under the Chairmanship of Dr C D Mayee, Chairman ASRB. However since Dr Mayee was not present during the meeting, it was felt that it would not be appropriate to nominate him as the Chairman of the sub-Committee as he was not properly briefed on the matter. Also in view of his seniority as Chairman ASRB and as Co-Chair of the GEAC, it was felt that it would be more appropriate if he reviews the recommendations of the sub-Committee. In view of the above and taking into consideration the urgency in the matter, it was decided to set up a sub-Committee with the following composition and TOR as listed in para 1.0 (ii to vii) above:

1. Dr Akhilesh Tyagii, Chairman
2. Dr Uday Kumar, Member
3. Dr P Anand Kumar, Member
4. Dr B M Khadi, Member
5. Dr T V Ramaniah, Member
6. Representatives of State Govts (to be co-opted by the sub- Committee)
7. Dr R Warrier, Member Secretary

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