

Decisions of the 117th meeting of the Genetic Engineering Appraisal Committee (GEAC) held on 22.3.2013

The 117th meeting of the GEAC was held on 22.3.2013 in the Ministry of Environment & Forests under the chairmanship of Shri Hem Pande, Additional Secretary, MoEF and Chairman, GEAC.

The deliberations and decisions taken in the GEAC meeting in respect of Agenda items 5 to 7 are as follows:

Agenda item No 5: Review of the pendency of new applications referred to the GEAC by RCGM.

5.1 The Member Secretary informed that the GEAC has received 53 applications recommended by RCGM for GM crop field trials expressing new events (event selection, BRL-I and BRL-II) for its consideration. It was informed that 5 applications of M/s E.I. DuPont India Pvt. Ltd have been withdrawn. It was informed that all reconsideration cases and requests for revalidation of the GEAC approval/ requests for additional location to undertake field trials have been listed under Agenda items 6 and 7. In respect of new applications, it was decided to consider the same in the next meeting so as to provide the Members adequate time to review the proposals.

Agenda item No 6: Application submitted to the GEAC for reconsideration.

6.1. Request for conducting pollen flow study on homozygous parents of the GlyTol® cotton (*Gossypium hirsutum*) by M/s. Bayer Bio-Science Pvt. Ltd., Gurgaon.

6.1.1 The Committee noted that decision on the proposal was deferred in the GEAC meeting held on 11.4.2012 as the Committee observed that the request is for conduct of pollen flow study with homozygous parent of the GlyTol® cotton which is different to the earlier permission given by the GEAC in its meeting held on 6.7.2011 to conduct pollen flow study of GlyTol® cotton hybrid namely SP499G containing *2mEPSPS gene* (Event GHB614) at Yavatmal, Maharashtra.

6.1.2 The Committee considered the fresh application for conduct of pollen flow study of Glyphosate tolerant GlyTol® cotton containing *2mEPSPS gene* with homozygous parent of the GlyTol® cotton at one of the locations (Yavatmal, Maharashtra: Surendranagar, Gujarat and Guntur, A.P).

6.1.3 The Committee noted that the main objective of the trial is to measure the distance of pollen flow of herbicide tolerant cotton containing 2mEPSPS gene (Event GHB614) under confined field trial.

6.1.4 The Committee also considered details of the experiment field trial design as given below:

- i. The plot will be 12m x 12m block of 112 rows seeded with glyphosate tolerant GHB614 cotton events, and will be surrounded by border rows of a non –transgenic mix of two commercial conventional cotton lines in concentric rows in order to provide concurrent

flowering periods. Immediately adjacent to, i.e 1 m apart with a non transgenic cotton as a pollen trap. Additionally at a distance of 10 m to 50 m from the transgenic block, 9 concentric rows 5 m apart will be grown with the conventional cotton.

- ii. The transgenic seeds will be sown in the centre of the plot covering an area of 144 sq m. And surrounded by non-transgenic cotton on all four sides as pollen trap up to 50 meter all around the transgenic plot. 50 meter reproductive isolation distance for cotton as specified under DBT guidelines would be maintained.
- iii. Total area (including transgenic and non transgenic cotton) for the experiment would be 12544 m²

6.1.5 The Members discussed the basis of taking 50 m radius as pollen trap for the study and requested the representative of the Company to clarify the same. It was informed that the distance for measuring pollen dispersal has been decided on the basis of existing seed production isolation requirements. However, in light of a recent report on pollen dispersal in cotton, the members suggested that additional CMS pollen flow line should be planted for monitoring pollen dispersal in an area of 50 m, after the proposed pollen trap. They also suggested that for covering larger pollen dispersal area, random batches of clearly demarcated CMS plants should be sown around the trial site at 500 m distance from the GlyTol test plot.

6.1.6 In view of the above stated facts, the Committee approved the request to conduct pollen flow study on homozygous parents of the GlyTol® cotton (*Gossypium hirsutum*) during any appropriate season as per the revised protocol recommended by the Committee subject to submission of NOC from the state Government where the trials will be conducted.

6.2 Permission to conduct event selection trials on 45 transgenic rice (*Oryza sativa*) four events containing dual Bt (*cry1Ab* & *cry1Ca*) and *bar* gene; 17 events with dual Bt and *LLRice 62* with *bar* and 23 events containing *cry1Ab*, *cry1C* and *cry2Ad* gene at North Zone, Central Zone and South Zone by M/s. Bayer Bioscience Pvt. Ltd., Gurgaon

6.2.1 The Committee noted that decision on the proposal was deferred in the GEAC meeting held on 11.4.2012 due to certain anomalies found in the applications. In 'plasmid description' the applicant had indicated that two genes are inserted by the T-DNA being transferred to the plant genome by the Agrobacterium whereas in the application, the 'event selection trials' are with six genes.

6.2.2 The Committee also noted that the M/s. Bayer BioScience Pvt. Ltd vide their letter dated 15.5.2012 has clarified that six genes are present in different pair wise combinations in the constructs used to develop the 45 different events that are part of this Bt rice event selection trial application.

6.2.3 It was also noted that the genetic elements of the constructs and their plasmid vectors and also the corresponding event names have been provided by the applicant. The exception to the above information is one event, LLRICE62, which contains the *bar* gene only.

6.2.4 During the deliberations, one of the Members opined that the gene combinations provided by the applicant reflects only four genes instead of six. The Committee requested the

representative of the Company to provide clarity on the six genes that have been used in the various combinations. It was informed that the six genes used in the various combinations include *Cry1Ab*, *Cry1Ca* and *bar* (Bayer events) and *Cry1Ab*, *Cry1C* and *Cry1Ad* (DuPont events)

6.2.5 In view of the above stated facts, the Committee approved the request to conduct event selection trials on 45 transgenic rice (*Oryza sativa*) expressing four events containing dual Bt (*cry1Ab* & *cry1Ca*) and *bar* gene; 17 events with dual Bt and LLRice 62 with *bar* and 23 events containing *cry1Ab*, *cry1C* and *cry2Ad* gene at one location each in the North Zone (Rajasthan/ UP); Central Zone (Gujarat/ Maharashtra/MP) and South Zone (Andhra Pradesh/ Tamil Nadu/ Orissa/ Kerala) during any appropriate season subject to submission of NOC from the respective State Governments where the trials will be conducted.

6.3 Permission to conduct field trials of GlyTol® cotton to assess bio efficacy and residual analysis of the Glyphosate 41% SL herbicide by M/s. Bayer BioScience Pvt. Ltd., Gurgaon

6.3.1 The Committee noted that the GEAC in its meeting held on 11.4.2012 had decided to defer decision on the above application as the purpose of the trial as indicated in the application is to generate data for submission to Central Insecticide Board & Registration Committee for herbicide registration of glyphosate 41% on Glytol cotton which does not fall under the mandate of GEAC.

6.3.2 The Committee considered the revised proposal for conducting field trials to evaluate the bio-efficacy of Glyphosate 41% SL in transgenic GlyTol® cotton, Glyphosate 41% SL for Phytotoxicity, Residue analysis in transgenic GlyTol® cotton soil and effect of left over residues on succeeding Crops. It was noted that the trials will be conducted in a plot size of 25 sq m (5m x 5m) in four Replicated Randomized Complete Block Design at CCS hau, Hisar/PAU, Ludhiana/MPUAT, Udaipur in the North Zone; AAU, Anand/MPKV Rahuri in the Central Zone and TNAU, Coimbatore/UAS, Dharwad/ ANGRAU, Hyderabad in the South Zone.

6.3.3 The Committee noted that consent letters from various SAU's to undertake the trials and consent letters from National Research Centre for Grapes, (NRCG) Pune have been obtained by the Company to evaluate residue analysis studies of Glyphosate 41% SL. It was further noted that various physico-chemical and biological properties in soil samples from the trial plots will be evaluated by the International Institute for Biotechnology and Toxicology (IIBAT), Chennai.

6.3.4 The Members suggested that for bio-efficacy, phytotoxicity, residue analysis in soil and effect of left over residue on succeeding crop; the untreated control without any weeding should be GlyTol and its isogenic line (i.e the corresponding non-transgenic counterpart).

6.3.5 In view of the above stated facts, the Committee approved the request to conduct field trials of GlyTol® cotton to assess bio efficacy and residual analysis of the Glyphosate 41% SL herbicide by M/s. Bayer BioScience Pvt. Ltd., Gurgaon during any appropriate season as per the revised protocol recommended by the GEAC subject to submission of NOC from the State Government where the trials will be conducted.

Agenda item No 7: Review of applications for extension of validity period /change of location /additional location:

7.1 Extension of validity of GEAC approval for conduct of event selection trial on castor (*Ricinus communis* L.) events namely AMT-1, NBRI-1, AK1304 PB-1, 804-1, Control (DCS-9) containing *Cry1EC and Cry1Aa* genes at DSR, Rajendranagar, Hyderabad during Kharif 2013 by Directorate of Oilseeds Research (ICAR).

7.1.1 The Committee noted that the GEAC in its meeting held on 6.7.2011 had accorded approval to conduct event selection trial on castor (*Ricinus communis* L.) events namely: AMT-1, NBRI-1, AK1304 PB-1, 804-1, Control (DCS-9) containing *cry1Ec and cry1Aa genes* at DSR-ICAR organization (within the institutional research farm) during 2011-2012 subject to submission of NOC from the State Government.

7.1.2. The Committee also noted that the applicant has informed that the NOC from the State Government was received late (December, 2011) and therefore, they could only take up sowing for seed multiplication/ generation. The current request is to conduct event selection trials during Kharif 2013 for selection of the events with high expression of the protein

7.1.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 112th meeting held on 24.4.2012, the Committee decided to extend the validity for conduct of event selection trial on castor (*Ricinus communis* L.) events namely AMT-1, NBRI-1, AK1304 PB-1, 804-1, Control (DCS-9) containing *Cry1EC and Cry1Aa* genes at DSR, Rajendranagar during any appropriate season subject to submission of NOC from the State Government where the trials will be conducted.

7.2 Request for conduct of event selection trials in additional locations and extension of validity with 12 nitrogen use efficient cotton (*Gossypium hirsutum* L) events namely; MAH-11501 to MAH-11512 containing the *AlaAt gene* by M/s. Maharashtra Hybrid Seeds Co. Ltd. (MAHYCO), Mumbai.

7.2.1 The Committee noted that the GEAC in its 115th meeting held on 8.2.2012 had accorded approval for conduct of event selection trials with 12 nitrogen use efficient cotton (*Gossypium hirsutum* L) events namely; MAH-11501 to MAH-11512 containing the *AlaAt gene* at Company's own research farm at Jalna, Maharashtra/Kavaguda Village, Shamshabad, Rang Reddy District (Andhra Pradesh) subject to submission of NOC from the respective States Governments where the trials would be conducted

7.2.2 The Committee also noted that the present request is for additional location for conduct of trials at Distt Ranga Reddy, Andhra Pradesh is in addition to approved location at Jalna, Maharashtra. The company has informed that they are in the process of obtaining NOC from the State of Maharashtra for 2013-2014. The applicant has also requested to extend the validity of GEAC approval for conduct of trials at Jalna and also allow the trial in Ranga Reddy district in Andhra Pradesh.

7.2.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM, the Committee approved the request for additional locations and extension of validity for conduct of event selection trials with 12 nitrogen use efficient cotton (*Gossypium*

hirsutum L) events namely; MAH-11501 to MAH-11512 containing the *AlaAt gene* during appropriate season subject to submission of NOC from the state Government where the trials will be conducted.

7.3 Revised Protocol for conducting event selection trials on 12 nitrogen use efficient carbon (*Gossypium hirsutum* L.) events namely MAH-11501 to MAH-11512 containing *alaAt gene* and to use water efficient cotton (*Gossypium hirsutum* L.) events namely MAH-10001 to MAH-10010 containing *ipt gene* by M/s. Maharashtra Hybrid Seeds Company Ltd. (Mahyco).

7.3.1 The Committee noted that the GEAC in its meeting held on 8.2.2012 had accorded approval to M/s. Mahyco, to conduct the following event selection trials with the condition that the trial design should be split block with three replicates as recommended by the RCGM.

- 12 nitrogen use efficient cotton (*Gossypium hirsutum* L) events namely; MAH-11501 to MAH-11512 containing the *AlaAt gene*, and;
- 10 water use efficient cotton (*Gossypium hirsutum* L) events namely; MAH-10001 to MAH-10010 containing the *ipt gene*.

7.3.2 The Committee also noted that the revised protocols (trial design) for the both the applications submitted by Mahyco has been approved by the RCGM in its 111th meeting held on 20.3.2012. The Committee noted that the revised protocol is in order.

7.3.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM, the Committee approved the revised protocols for conduct of event selection trials on (i) 12 nitrogen use efficient carbon (*Gossypium hirsutum* L.) events namely MAH-11501 to MAH-11512 containing *alaAt gene* and (ii) to use water efficient cotton (*Gossypium hirsutum* L.) events namely MAH-10001 to MAH-10010 containing *ipt gene* during appropriate season subject to submission of NOC from the state Government where the trials will be conducted.

7.4 Request for additional location to conduct Elite Event Selection trials with 168 events of transgenic rice and F1 hybrid seed production (two cycles/year), Andhra Pradesh by M/s BASF India Ltd.

7.4.1 The Committee noted that the GEAC in its meeting held on 08.02.2012 had accorded approval for conduct of Elite Event Selection trials and F1 hybrid seed production (two cycles/year) with 168 events of transgenic rice at BASF owned land at Bellathi, Coimbatore, subject to submission of NOC from the State Government.

7.4.2 The Committee noted that the present request is to conduct event selection trials at Eluru A.P, at SynTech Research Inc., Andhra Pradesh in addition to Bellathi, Coimbatore due to difficulty in getting NOC from the State Governments. The Committee also noted that the RCGM has recommended the request in its 113th meeting held on 22.5.2012.

7.4.3 The Committee opined that outsourcing of field trials is not allowed and the responsibility of conducting the field trials and associated liability should solely rest with the

applicant. Accordingly, the Committee decided to seek clarification on the contract agreement between the applicant and SynTech Research Inc. for allowing event selection trials in the research farm of the institute at Eluru.

7.5 Request for including an additional locations in the state of Punjab for conduct of BRL-1 trials on transgenic maize (*Zea mays L.*) expressing MON 89034 event by M/s Monsanto India Limited, New Delhi

7.5.1 The Committee noted that the GEAC in its 115th meeting held on 8.2.2012 had accorded approval to conduct BRL-I trials with insect resistant transgenic maize containing Event MON 89034 at three locations namely; Andhra Pradesh, Maharashtra, Gujarat, Haryana, Karnataka and Tamil Nadu subject to submission of NOC from the respective State Governments.

7.5.2 The Committee noted that the present request for inclusion of additional location in the State of Punjab for conduct of BRL-1 trials on transgenic maize. is with a view to have some flexibility as the applicant is finding difficulties in obtaining NOC from the State Governments.

7.5.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 114th meeting held on 26.6.2012, the Committee approved the additional locations in the State of Punjab for conduct of BRL-1 trials on transgenic maize (*Zea mays L.*) expressing MON 89034 event during appropriate season subject to submission of NOC from the State Government where the trials will be conducted.

7.6 Request for extension of the validity period with changed nomenclature for conduct of event selection trials on 7 (seven) transgenic cotton (*Gossypium hirsutum*) variety namely ILK-Bt 77 (ILK-Bt 77-1 to ILK-Bt 77-7) containing *cry1Ac* gene for bollworm resistance by Central Institute for Cotton Research (CICR), Nagpur

7.6.1 The Committee noted that the GEAC in its meeting held on 29.9.2010 had accorded permission to conduct event selection trials on transgenic cotton variety namely ILK-Bt 77 (ILK-Bt 77-1 to ILK-Bt 77-7) containing *cry1Ac* gene at Nagpur and subsequently renewed its permission in the meeting held on 14.12.2011 subject to submission of NOC from the State Government.

7.6.2 The Committee also noted that CICR could not conduct event selection trials during 2011-2012 as they have not received NOC from the State of Maharashtra. The applicant has therefore requested the GEAC to further extend the validity period from 2011-2012 to 2012-2013 to conduct event selection trials on transgenic cotton variety.

7.6.3 The Committee also considered the request of the CICR to change the nomenclature of the approved transgenic cotton (*Gossypium hirsutum*) variety namely ILK-Bt 77 (ILK-Bt 77-1 to ILK-Bt 77-7) containing *cry1Ac* gene as per details given below:

<u>Old Name</u>	<u>New Name</u>

ILK-Bt77-1	CICR-Anjali-1Ac-1
ILK-Bt77-2	CICR-Anjali-1Ac-2
ILK-Bt77-3	CICR-Anjali-1Ac-3
ILK-Bt77-4	CICR-LRA-1Ac-1
ILK-Bt77-5	CICR-LRA-1Ac-2
ILK-Bt77-6	CICR-Suraj-1Ac-1
ILK-Bt77-7	CICR-Suraj-1Ac-2

7.6.4 The trials would be carried out at one location in an area of <0.4 ha at CICR, Panjari Farm, Wardha Road, Nagpur.

7.6.5 In view of the above stated facts and taking in to consideration recommendations of the RCGM in its 114th meeting held on 26.6.2012, , the Committee approved the extension of the validity period with changed nomenclature for conduct of event selection trials on 7 (seven) transgenic cotton (*Gossypium hirsutum*) variety namely ILK-Bt 77 (ILK-Bt 77-1 to ILK-Bt 77-7) containing *cry1Ac* gene during any appropriate season subject to submission of NOC from the State Government where the trials will be conducted

7.7 Request for extension of the validity period with changed nomenclature to conduct event selection trials on two transgenic cotton (*Gossypium hirsutum*) namely; Anjali-FBt-1 and Anjali-FBt-2 containing *cry1F* gene for bollworm resistance by Central Institute for Cotton Research (CICR), Nagpur.

7.7.1 The Committee noted that the GEAC in its meeting held on 15.11.2010 had accorded permission to conduct event selection trials on two events of transgenic cotton (*Gossypium hirsutum*) namely; Anjali-FBt-1 and Anjali-FBt-2 containing *cry1F* gene at CICR, Panjari Farm, Wardha Road, Nagpur and subsequently renewed its permission in the meeting held on 14.12.2011 subject to submission of NOC from the State Government.

7.7.2 The Committee also noted that the CICR could not conduct event selection trials during 2011-2012 as they have not received NOC from the State of Maharashtra. The applicant has requested the GEAC to further extend the validity period from 2011-2012 to 2012-2013 to conduct event selection trials on transgenic cotton variety.

7.7.3 The Committee also considered the request of CICR to change nomenclature of the approved transgenic cotton (*Gossypium hirsutum*) namely; namely; Anjali-FBt-1 and Anjali-FBt-2 containing *cry1F* gene as per details given below:

Name of the old events	Name of the new events
Anjali-FBt-1	CICR-Anjali-FBt-1

Anjali-FBt-2	CICR-Anjali-FBt-2
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7.7.4 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 114th meeting held on 26.6.2012, the Committee approved the extension of the validity period with changed nomenclature to conduct event selection trials on two transgenic cotton (*Gossypium hirsutum*) namely; Anjali-FBt-1 and Anjali-FBt-2 containing *cry1F gene* during any appropriate season subject to submission of NOC from the State Government where the trials will be conducted.

7.8 Request for extension of the validity with the changed nomenclature to conduct event selection trials on ten events of transgenic cotton (*G. arboreum*) varieties viz. RG-822-Bt (4 events) and PA255-Bt (6 events) containing *cry1Ac gene* by Central Institute for Cotton Research (CICR), Nagpur.

7.8.1 The Committee noted that the GEAC in its meeting held on 15.11.2010 had accorded permission to conduct event selection trials on transgenic cotton variety namely RG-822-Bt (4 events) and PA255-Bt (6 events) containing *cry1Ac gene* at Nagpur.

- i RG-822 Bt - Desi Bt G-822(Desi Bt G822-1 to Desi Bt G822- 4) ;and
- ii PA-255 Bt - CICR Bt Desi (CICR Bt Desi-1 to CICR Bt Desi-6)

7.8.2 The Committee also noted that the GEAC in its meeting held on 14.12.2011 had renewed the permission to conduct event selection trials on transgenic cotton variety namely; RG-822-Bt (4 events) and PA255-Bt (6 events) containing *cry1Ac gene* subject to submission of NOC from the State Government.

7.8.3 The Committee further noted that CICR could not conduct event selection trials during 2011-2012 as they have not received NOC from the State of Maharashtra. The applicant has therefore requested the GEAC to further extend the validity period from 2011-2012 to 2012-2013 to conduct event selection trials on transgenic cotton varieties.

7.8.4 The Committee also considered the request of CICR to change nomenclature of the approved transgenic cotton (*G.arboreum*) varieties viz. RG-822-Bt (4 events) and PA255-Bt (6 events) containing *cry1Ac gene*.

7.8.5 The Committee took note that the trials would be carried out at one location in an area of <0.4 ha at CICR, Panjari Farm, Wardha Road, Nagpur.

7.8.6 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 114th meeting held on 26.6.2012, the Committee approved the extension of the validity with the changed nomenclature to conduct event selection trials on ten events of transgenic cotton (*G. arboreum*) varieties viz. RG-822-Bt (4 events) and PA255-Bt (6 events) containing *cry1Ac gene* during any appropriate season subject to submission of NOC from the State Government where the trials will be conducted.

7.9 Request for including additional locations in the states of Andhra Pradesh, Gujarat and Rajasthan for conduct of BRL-1 trials on transgenic maize (*Zea mays L.*) expressing MON NK 603 event by M/s Monsanto India Limited, New Delhi

7.9.1 The Committee noted that the GEAC in its 111th meeting held on 06.07.2011 had accorded approval to conduct BRL-I trials with transgenic maize namely Hishell & 900M Gold containing Event MON NK603 at any three locations in the States of Punjab, Haryana, Uttar Pradesh, Maharashtra, Madhya Pradesh, Karnataka and Tamil Nadu subject to submission of NOC from the respective State Governments.

7.9.2 The Committee also noted that the company is finding difficulty in obtaining NOC from the State Governments and has therefore requested for additional locations in the States of Andhra Pradesh, Gujarat and Rajasthan for conduct of BRL-1 trials on transgenic maize.

7.9.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM request in its 115th meeting held on 28.8.2012, the Committee approved the additional locations in the States of Andhra Pradesh, Gujarat and Rajasthan for conduct of BRL-1 trials on transgenic maize (*Zea mays L.*) expressing MON NK 603 event during any appropriate season subject to submission of NOC from the State Government where the trials will be conducted.

7.10 Request to extend the validity of pollen flow trials on Glyphosate tolerant Roundup Ready (RR) wheat line containing the *cp4epsps* gene (event MON 71800) by Mahyco.

7.10.1 The Committee noted that the GEAC in its 114th meeting held on 14.12.2011 had accorded approval for conduct pollen flow trials on Glyphosate tolerant Roundup Ready (RR) wheat line containing the *cp4epsps* gene (event MON 71800) at company's research farm in Jalna during 2012, subject to submission of NOC from the State Government.

7.10.2 The Committee also noted that the applicant is finding difficulty in obtaining NOC from the State Government; and therefore they have requested the GEAC to extend the validity period from 2012 to 2013 for conduct for pollen flow trials.

7.10.3 In view of the above stated facts the Committee approved the extension of the validity of pollen flow trials on Glyphosate tolerant Roundup Ready (RR) wheat line containing the *cp4epsps* gene (event MON 71800) during any appropriate season subject to submission of NOC from the State Government where the trials will be conducted.

7.11 Request to extend the validity of event selection trials on transgenic rice events namely; MW-01 to MW-25 containing *AlaAT* gene by Mahyco.

7.11.1 The Committee noted that the GEAC in its meetings held on 14.12.2011 and 08.2.2012 respectively had accorded approval for event selection trials on transgenic rice events namely; MW-01 to MW-25 containing *AlaAT* gene at Andhra Pradesh/ Maharashtra during appropriate season in 2012 subject to submission of NOC from the respective State Governments

7.11.2 The Committee also noted that the applicant is finding difficulty in obtaining NOC from the State Governments and therefore they have requested the GEAC to extend the validity period from 2012 to 2013 to conduct event selection trials on MW-01 to MW-25 containing *AlaAT* gene

7.11.3 In view of the above stated facts, the Committee approved the extension of the validity of event selection trials on transgenic rice events namely; MW-01 to MW-25 containing *AlaAT* gene during any appropriate season subject to submission of NOC from the State Government where the trials will be conducted.

7.12 Request to extend the validity of event selection trials on transgenic cotton events namely; MAH - 11501 to MAH-11512 containing *AlaAT* gene by Mahyco.

7.12.1 The Committee noted that the GEAC in its 115th meeting held on 08.2.2012 had accorded approval for event selection trials on transgenic cotton events namely; MAH - 11501 to MAH-11512 containing *AlaAT* gene at company's own farm at Jalna, during the appropriate season in 2012 subject to submission of NOC from the State Government

7.12.2 The Committee also noted that the applicant is finding difficulty in obtaining NOC from the State Government and therefore they have requested the GEAC to extend the validity period from 2012 to 2013 for conduct for event selection trials on MAH - 11501 to MAH-11512 containing *AlaAT* gene.

7.12.3 In view of the above stated facts the Committee approved the extension of the validity of event selection trials on transgenic cotton events namely; MAH - 11501 to MAH-11512 containing *AlaAT* gene during any appropriate season subject to submission of NOC from the State Government where the trials will be conducted

7.13 Request to extend the validity of event selection trials on salt tolerant transgenic rice events namely; OsN-1 to OsN-25 containing *OSnhx1* gene by Mahyco

7.13.1 The Committee noted that the GEAC in its 114th meeting held on 14.12.2011 had accorded approval for event selection trials on salt tolerant transgenic rice events namely; OsN-1 to OsN-25 containing *OSnhx1* gene at SAU's research farm at Panvel, Raigad, Maharashtra during the appropriate season in 2012-2013 subject to submission of NOC from the respective State Department of Agriculture where the trials would be conducted.

7.13.2 The Committee also noted that the applicant is finding difficulty in obtaining NOC from the State Government and therefore, they have requested the GEAC to extend the validity period from 2012 to 2013 for conduct for event selection trials on salt tolerant transgenic rice events namely; OsN-1 to OsN-25 containing *OSnhx1* gene

7.13.3 In view of the above stated facts the Committee approved the extension of the validity of event selection trials on salt tolerant transgenic rice events namely; OsN-1 to OsN-25 containing *OSnhx1* gene during any appropriate season subject to submission of NOC from the state Government where the trials will be conducted

7.14 Request to extend the validity of Elite Event Selection Trials with 140 events of transgenic rice lines from constructs RPD 5 to RPD 11 by M/s. BASF India Limited, New Delhi.

7.14.1 The Committee noted that the GEAC in its 104th meeting held on 15.11.2010 approved the event selection trials of 140 events of transgenic rice at Tamil Nadu Agriculture University by BASF India Ltd. during the appropriate season in 2012-2013 subject to submission of NOC from the State Government.

7.14.2 The Committee also noted that the request to extend the validity of GEAC approval was earlier approved by the GEAC in the 114th meeting held on 14.12.2011. The applicant has further requested for extension of the validity period till December 2013 as NOC from the State Government is awaited.

7.14.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 116th meeting held on 25.9.2012, the Committee approved the extension of the validity of elite event selection trials with 140 events of transgenic rice lines from constructs RPD 5 to RPD 11 during any appropriate season subject to submission of NOC from the State Government where the trials will be conducted.

7.15 Request to extend the validity of Elite Event Selection Trials with 168 events and seed production of transgenic rice lines from constructs RPD 5 to RPD 17 by M/s. BASF India Limited, New Delhi

7.15.1 The Committee noted that the GEAC in its 115th meeting held on 08.02.2012 and accorded approval to conduct Event Selection trials and F1 hybrid seed production (two cycles per year) with 168 events with RPD5-RPD17 at BASF owned site at Bellathi, Coimbatore, TNAU during the appropriate season in 2012-2013 subject to submission of NOC from the State Government

7.15.2 The Committee also noted that NOC from the State Government is still awaited and therefore, they have requested the GEAC to extend the validity period from 2012 to 2013 for conduct of elite event selection trials with 140 events of transgenic rice lines from constructs RPD 5 to RPD 17.

7.15.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 116th meeting held on 25.09.2012, the Committee approved the elite event selection trials with 168 events and seed production of transgenic rice lines from constructs RPD 5 to RPD 17 during any appropriate season subject to submission of NOC from the state Government where the trials will be conducted.

7.16 Request for extension of permission for TwinLink® cotton BRL-1 trial in Central and South zone by M/s. Bayer BioScience Pvt. Ltd., Gurgaon.

7.16.1 The Committee noted that the GEAC in its 116th meeting held on 11.04.2012 and accorded approval to conduct BRL-1 trial on TwinLink® cotton during appropriate season in 2012 to 2014 at North, Central and South zone at one location in each subject to submission of NOC from the respective State Governments.

7.16.2 The Committee also noted that NOC from the State Governments is still awaited and therefore the applicant has requested the GEAC to extend the validity period from 2012-2014 to 2013- 2015 for conduct of BRL-1 trial on TwinLink® cotton at Central and South zone

7.16.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 120th meeting held on 30.01.2013, the Committee approved the extension for TwinLink® cotton BRL-1 trial in Central and South zone during any appropriate season subject to submission of NOC from the State Government where the trials will be conducted.

7.17 Request for extension of permission for pollen flow study of TwinLink® cotton by M/s. Bayer BioScience Pvt. Ltd., Gurgaon.

7.17.1 The Committee noted that the GEAC in its 116th meeting held on 01.04.2012 and accorded approval to conduct pollen flow study trial at Rajkot/Yavatmal/Rangareddy during the appropriate season in 2012 subject to submission of NOC from the respective State Governments.

7.17.2 The Committee also noted that NOC from the State Government is awaited and therefore the applicant has requested the GEAC to extend the validity period from 2012 to 2013 for conduct pollen flow study of TwinLink® cotton

7.17.3 The Committee further noted that the RCGM in its 120th meeting held on 30.01.2013 has recommended the request.

7.17.4 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 120th meeting held on 30.01.2013, the Committee approved the extension for pollen flow study of TwinLink® cotton during any appropriate season subject to submission of NOC from the state Government where the trials will be conducted.

7.18 Request for extension of permission for conducting experimental seed production (0.5 acre) of TwinLink®cotton hybrids with stacked events namely GHB119 (*cry2Ae/PAT*) & T304-40 (*cry1Ab/PAT*) containing *cry1Ab*, *cry2Ae* and *bar* genes in the South zone during 2013 and 2014 by M/s. Bayer BioScience Pvt. Ltd., Gurgaon

7.18.1 The Committee noted that the GEAC in its 116th meeting held on 11.04.2012 had accorded approval to conduct experimental seed production at Andhra Pradesh during appropriate season in 2012 to 2014 subject to submission of NOC from the State Government.

7.18.2 The Committee also noted the applicant is finding difficulty in obtaining NOC from the State Government of Andhra Pradesh, they have requested the GEAC to extend the validity period from 2012-2014 to 2013- 2015 for conduct of trial on experimental seed production (0.5 acre) of TwinLink® cotton at Andhra Pradesh.

7.18.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 120th meeting held on 30.01.2013, the Committee approved the extension for conducting experimental seed production (0.5 acre) of TwinLink® cotton hybrids with stacked events namely GHB119 (*cry2Ae/PAT*) & T304-40 (*cry1Ab/PAT*) containing *cry1Ab*,

cry2Ae and *bar* genes in the South zone during any appropriate season subject to submission of NOC from the State Government where the trials will be conducted.

7.19. Request for extension of validity of permission for GlyTol® cotton BRL-1 trial in South Zone by M/s. Bayer BioScience Pvt. Ltd., Gurgaon

7.19.1 The Committee noted that the GEAC in its 114th meeting held on 14.12.2014 had accorded approval for conduct of BRL-1 trial on GlyTol® cotton at Andhra Pradesh during the appropriate season in 2012-2014 subject to submission of NOC from the State Government.

7.19.2 The Committee also noted NOC from the State government is still awaited and therefore the applicant has requested the GEAC to extend the validity period from 2012 – 2014 to 2013-2015 for conduct of BRL-1 trial in South zone.

7.19.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 120th meeting held on 30.1.2013, the Committee approved extension the validity period for GlyTol® cotton for conducting BRL-1 trial in South Zone during any appropriate season subject to submission of NOC from the state Government where the trials will be conducted

7.20 Request for extension of permission to conduct pollen flow study of GlyTol® cotton in homozygous parental lines carrying GHB614 event during 2013 to measure the distance of pollen flow of herbicide tolerant cotton containing 2mEPSPS gene by M/s. Bayer BioScience Pvt. Ltd., Gurgaon

7.20.1 The Committee noted that the GEAC in its 116th meeting held on 11.04.2012 had accorded approval to conduct pollen flow study trial at Gujarat/Andhra Pradesh/Maharashtra during the appropriate season in 2012 subject to submission of NOC from the respective State Governments.

7.20.2 The Committee also noted that NOC from the State Governments is awaited and therefore the applicant has requested the GEAC to extend the validity period from 2012 to 2013 for conduct pollen flow study of GlyTol® cotton

7.20.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 120th meeting held on 30.1.2013, the Committee approved the extension of permission to conduct pollen flow study of GlyTol® cotton in homozygous parental lines carrying GHB614 event to measure the distance of pollen flow of herbicide tolerant cotton containing 2mEPSPS gene during any appropriate season subject to submission of NOC from the State Government where the trials will be conducted

7.21 Request for extension of permission for experimental seed production (0.5 acre) of herbicide tolerant GlyTol® cotton hybrids containing 2mEPSPS gene in South zone during 2013 by M/s. Bayer BioScience Pvt. Ltd., Gurgaon

7.21.1 The Committee noted that the GEAC in its 114th meeting held on 14.12.2014 had accorded approval to conduct experimental seed production on GlyTol® cotton at Andhra

Pradesh during the appropriate season in 2012-2014 subject to submission of NOC from the State Government.

7.21.2 The Committee further noted that NOC from the State Government is awaited and therefore the applicant has requested the GEAC to extend the validity period from 2012 – 2014 to 2013-2015 for conduct of experimental seed production in South zone.

7.21.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 120th meeting held on 30.1.2013, the Committee approved the extension for experimental seed production (0.5 acre) of herbicide tolerant GlyTol® cotton hybrids containing *2mEPSPS* gene in South zone during any appropriate season subject to submission of NOC from the state Government where the trials will be conducted

7.22 Request for extension of the permission for confined field trials of GlyTol® cotton carrying GHB614 event (*2mEPSPS* gene) to assess bioefficacy and residual analysis of the Glyphosate 41% SL herbicide by M/s. Bayer BioScience Pvt. Ltd., Gurgaon

7.22.1 The Committee noted that the GEAC in its 114th meeting held on 14.12.2014 discussed to conduct GlyTol® cotton carrying GHB614 event (*2mEPSPS* gene) to assess bioefficacy and residual analysis of the Glyphosate 41% SL herbicide during 2013 -2014 in Central & South zones subject to submission of NOC from the respective State Governments.

7.22.2 The Committee also noted that NOC from the State Government is still awaited and therefore the applicant has requested the GEAC to extend the validity period from 2012 – 2014 to 2013-2015 for conduct of BRL-1 trial in South zone.

7.22.3 In view of the above stated facts and taking in to consideration the recommendations of the RCGM in its 120th meeting held on 30.1.2013, the Committee approved the extension for confined field trials of GlyTol® cotton carrying GHB614 event (*2mEPSPS* gene) to assess bioefficacy and residual analysis of the Glyphosate 41% SL herbicide during any appropriate season subject to submission of NOC from the state Government where the trials will be conducted
