



KARNATAKA BIODIVERSITY BOARD
(Forest, Ecology and Environment Dept.)



No:KBB/Bt.B/71/11-12/42

28th May 2011

To:
The Secretary,
National Biodiversity Authority,
TICEL Bio Park, 5th Floor,
Taramani Road,
Chennai – 600 113

Sir,

Sub: Submission of factual status of progress of implementation of agreement signed between M/s. Mayhco and their collaborators in promoting Bt.Brinjal –reg

- Ref: 1. Your office letter No: NBA/Tech/13/4/2010/10-11/875 dt 28/3/11
2. This office letter No. KBB/Bt.B/77/11-12/918&919 dt 6/4/11
3. Letter from Sathguru Management Consultants (P) Ltd dt 21/4/2011
4. Letter from Mahyco dt 29/4/2011
5. Your office letter No. NBA/Tech/13/4/2010/11-12/286 dt 25/4/11
6. Letter from Director of Research UAS, Dharwad No.DR / 83/ 2011-12 dt 17/5/2011
7. Letter dated 25th June 2010 from Mahyco.

With reference to the above subject, in pursuance of your office letter cited in Ref 1 we had asked Mahyco, Sathguru Management Consultants Pvt. Ltd and UAS, Dharwad to submit a brief summary of factual status of progress of implementing the agreement in promoting Bt.Brinjal (ref-2).

In response to our letter Sathguru Management Consultants Pvt.Ltd replied vide letter cited in (ref-3). In their letter they have stated that Sathguru Company is the national coordinator for the agriculture Biotechnology Support Project (APSP-II), under which the Bt. Brinjal project was implemented. Sathguru Company has mentioned that licensing arrangement of the Bt. Brinjal project envisages receipt of technology from Mahyco to UAS Dharwad and there is no reverse flow of material or technology from UAS Dharwad to Mahyco. Mahyco has not derived any commercialization rights to the varieties developed by UAS Dharwad. The Sathguru Company maintained that their role in this project is that of the project co-ordinator only.

Mahyco has replied vide letter cited in reference (4). They have stated that UAS, Dharwad approached Mahyco in the light of their expertise and research and development facilities for Development of insect tolerant Bt. egg plant, under ABSP II. Further, Mahyco mentioned that Transfer of Technology, namely EE I event incorporating by Cry 1 AC gene, was done by conventional breeding methods. The crossing activity involving six local varieties was carried out by staff of UAS, Dharwad at Mahyco's research facility. Resultant seed carrying the technology was provided back to the UAS, Dharwad.

P.T.O

Ground Floor, "VANAVIKAS", 18th Cross, Malleshwara, BANGALORE - 03,
Ph : 080- 23448783, Fax : 080-23440535 E-mail : kbb.kar@gmail.com Website : www.kbb.kar.nic.in

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ಕಾರ್ಯನಿರ್ವಾಹಿ

In para (iii) of letter dated 25th June 2010, Mahyco has stated that "Mahyco has merely introgressed the Cry I Ac gene in the varieties provided by UAS Dharwad. Mahyco has used conventional breeding techniques for introgression of the Cry I Ac gene in the varieties provided by UAS Dharwad".

UAS, Dharwad had not replied to our letter dated 6/4/2011. Later in pursuance of your letter mentioned in reference (5) one officer from our board was deputed to UAS, Dharwad to get the factual details of the Bt.Brinjal Project.

Director of Research replied through letter cited in Ref (6) in which he stated that Bt.Brinjal technology available with Mahyco was transferred to UAS Dharwad under ABSP II. UAS, Dharwad has used six local varieties for development of Bt.Brinjal without prior approval from State Biodiversity Board / National Biodiversity Authority.

The following copies of documents are enclosed for your kind perusal

1. Your office letter No: NBA/Tech/13/4/2010/10-11/875 dt 28/3/11
2. This office letter No. KBB/Bt.B/77/11-12/918&919 dt 6/4/11
3. Letter from Sathguru Management Consultants (P) Ltd dt 21/4/2011
4. Letter from Mahyco dt 29/4/2011
5. Your office letter No. NBA/Tech/13/4/2010/11-12/286 dt 25/4/11
6. Letter from Director of Research UAS, Dharwad No.DR / 83/11-12 dt 17/5/2011
7. Letter dated 25th June 2010 from Mahyco.

The information is furnished here with for your kind reference and further action.

Thanking you,

Yours faithfully,


Chief Conservator of Forests
and Member Secretary.

UNIVERSITY OF AGRICULTURAL SCIENCES, DHARWAD
Directorate of Research

Dr. P.M. SALIMATH
Director of Research

Phone No. 27455903; 2448512 ext. 261

Email: druasd@rediffmail.com

No.DR/...83.../2011-12

Date: 17-5-2011

To,

Chief Conservator of Forests
and member Secretary
Karnataka Biodiversity Board
Ground Floor, 'VANA VIKAS'
18th cross, Malleshwara,
Bangalore-03

Sir,

Sub: Furnishing a brief summary of factual status of progress of implementation the agreement/sub-agreement between partnering institutions in development of Bt brinjal at UAS, Dharwad

Ref1 No.KBB/Bt.B/77/11-12/919 dt 6-4-2011

Ref2.VC//2009-10 dt.18-3-2010

Research on Bt brinjal development was undertaken at UAS, Dharwad in a Public Private Partnership (PPP) mode with the help of Department of Biotechnology (DBT), Govt. of India and Agriculture Biotechnology Support Project II (ABSP-II) wherein the Bt brinjal technology available with M/s Maharashtra Hybrid Seeds Company Ltd. (Mahyco) has been donated to University of Agricultural Sciences (UAS), Dharwad, Karnataka; Tamil Nadu Agricultural University (TNAU), Coimbatore, Tamil Nadu; and the Indian Institute of Vegetable Research (IIVR), Varanasi as a **royalty free license to make it available to resource constrained farmers**. Together with UAS, Dharwad all participating public institutions are developing Bt brinjal varieties, where in farmers can use the seeds from their own source and share among fellow farmers and initially UAS, Dharwad would make available the Bt brinjal varietal seeds actual cost of production without any profit.

Brinjal is prone to the most serious and destructive pest called fruit and shoot borer (FSB) *Leucinodes orbonalis* Guen. FSB larvae bore into tender shoots and fruits, retarding plant growth, rendering the fruits unsuitable for the market and unfit for human consumption. On average of 30-35 sprays are applied to control FSB in Northern plain of Karnataka, while 16-20 sprays are given in coastal belt. In addition to the financial cost associated with indiscriminate insecticide applications and its negative effects on the environment, high pesticide residues in brinjal pose serious risk to consumer's health and safety. Following regionally popular genotypes,

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maintained and tested at UAS, Dharwad, were selected for conversion programme: a) Manjari Gota; b) Udupi Gulla; c) Malapur local (S); c) Kudachi local; d) Rabkavi local and e) GO-112: These regionally popular varieties are popular among farmers and consumers of northern Karnataka, Southern most Maharashtra and Goa for their taste and longevity of preparations.

The donor of *cry1Ac*, EE-1, was crossed with local varieties and subsequently backcrossed with the respective recurrent parent till BC_3F_1 . The BC_3F_2 plants were tested for their field performance in five locations. All the six Bt brinjal varieties and their corresponding non-Bt counterparts were field evaluated at ZARS, Kolhapur (Maharashtra), ARS, Gadhinglaj (Maharashtra) and ARS, Kallolli (Karnataka). Similarly, Bt Go112 and Bt Udupi Gulla along with their non-Bt counterparts and Aruna as check were evaluated at ZARS, Brahmavar (Coastal Karnataka) and KVK, Margoa, Goa state.

At locations no shoot infestation was observed in Bt varieties. More than 95% of the fruits were found to be marketable compared to 30-45% in non Bt varieties. The requirement of insecticide spray reduced to 3-4 numbers on Bt crop. The varieties were found to similar to their non Bt counterparts in their appearance and agronomical performance except that they were resistant to FSB pest due to presence of *cry1Ac* gene. Overall, 49.02 to 74.90% yield advantage over respective non-Bt variety besides reduced sprays of insecticides and higher benefit to cost ratios was noticed. Monitoring of expression of *Cry1Ac* protein in different parts of Bt brinjal varieties such as leaf, shoot, stem, flowers, fruits and root from time to time indicated adequate expression of protein and their temporal and special dynamics. Occurrence of beneficial and non-targets insects were similar in Bt and non Bt varieties including check. Taken together, the performance of all the six Bt brinjal varieties and their non-Bt counterparts across four locations, the stability of the technology to combat the pest pressure all through the crop period was evident.

The farmers will gain increased productivity and economic and health benefits while the consumers will get access to pesticide free safe brinjal fruits. It is expected that the increased productivity will help to maintain low prices to the consumers while the farmers will gain from higher productivity

Further, in discussion with Department of Biotechnology, Govt. of India, New Delhi the programme was initiated and the required permissions from competent authorities for conducting research were obtained from time to time. Need for this research was also discussed in University NARP meetings where farmers representatives participate and contribute to the immediate research priorities of

the University. The copies of permission obtained from various agencies for this research are as follows;

- a) Department of Biotechnology, Ministry of Science and Technology, Govt. Of India letter to Vice- Chancellor regarding the Bt Brinjal programme dt 1-10-2004.
- b) ABSP-II Project proposal on Fruit and Shoot Borer resistant Brinjal proposal submission to DBT , Govt. Of India dt 04.11.2004
- c) Review Committee on Genetic Manipulation (RCGM)/ Genetic Engineering Approval Committee (GEAC) permission to obtain F1 seeds from Mahyco to UAS, Dharwad No. BT/BS/ 17/04/99-PID dt 27.06.2005.
- d) Cons/ Tran/001/06/529618 dt 16.01.2006: As per the direction contained in the above, acknowledgement certificate of reception of transgenic Brinjal seeds by National Bureau of Plant Genetic Resources (NBPGR), Govt. Of India.
- e) BT/BS/17/04/99-PID dt 23.07.2007 RCGM/GEAC Permission to conduct MLRT and generate efficacy and Baseline susceptibility data during kharif 2007.
- f) RCGM/GEAC Permission letter sent to all concerned- BT/BS/17/04/99-PID dt 15.11.2007: Copy to Chief Secretary, Karnataka, Goa, Agriculture Commissioner, Director of Research- MPKV and UAS, Bangalore and other concerning Govt. Officials of Karnataka, Goa and Maharashtra.
- g) RCGM/GEAC Permission to conduct MLRT During Kharif to Summer. Code: No/B3LEHZRC dt 9-1-2008.

Copies of these permissions have been submitted KBB, Bangalore vide ref 2. and enclosed herewith for your reference. All permissions of RCGM, Dept. of Biotechnology, Ministry of Science and Technology, Govt. of India and GEAC, Ministry of Environment and Forests, Govt. of India, are also brought to the notice of various Govt. institutions such as Ministry of Environment and Forests, Govt. of India, Secretary, Ministry of Agriculture, Govt. of India, Director General ICAR, New Delhi, the Chief Secretary and Chairman, State Biotechnology Coordination committee (SBCC), Govts. of Karnataka, Maharashtra and Goa and Commissioners of respective Agriculture Departments of Karnataka, Maharashtra and Goa. Genetic Results of the research conducted by UAS, Dharwad were submitted to RCGM, Dept of Biotechnology, Govt. of India as per the regulations governing this research

Being a public institution, the research in the University is always aimed at the welfare of the farmers in particular and society at large. With the help of Government line departments and the Directorate of Extension of the University, the technologies are made available to farmers on a non commercial basis. Whatsoever, University has no profit or commercial motto in researching on Bt brinjal, and University maintains its non-commercial mandatory intensions as a Govt. organization.


Director of Research
U.A.S. Dharwad-4



No. BT/BS/17/04/99-PID

Dated: 15.11.2007.

To

Prof. M.S. Kuruvinasetti,
HOD, Biotechnology,
University of Agricultural Sciences,
Institute of Agri Biotechnology,
College of Agriculture, Krishinagar,
Dharwad - 580 005, Karnataka.

FAK: 0826-2747627 / 2748377

Subject: Application submitted for permission to carry out replicated confined multi-location research trials (MLRT) on Bt Brinjal hybrids containing *cry1Ac* gene to generate the efficacy and baseline susceptibility data during Kharif-2007.

Gentlemen,

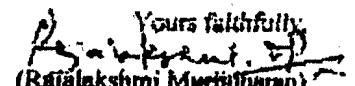
This is in continuation of this Department's letter of even no. dated 23.07.2007 on the above mentioned subject. The location details, the SOP & LOD duly verified by Advinus Therapeutics Pvt. Ltd., Bangalore; name of the lead scientists responsible for the trial and other details submitted by you vide your letter dated 03.10.2007 were noted by this Department.

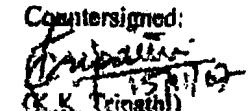
2. You are permitted to conduct the multi-location research trials (MLRT) on 6 Bt brinjal hybrids namely Malapur Local, Manjari Gotha, Kuduhi Local, Udupi Galla, 112-GO and Rabakavi Local expressing *cry1Ac* gene at 5 locations i.e. Agricultural Research Stations (ARS) Shenda Park, Kolhapur; ARS, Gadninglad, Kolhapur, MPKV, Rahuri (Maharashtra), KVK, Margosa, Deptt. of Agriculture, Goa; ARS, UAS, Kanholi, Belgaum; MARS, UAS, Dharwad and UAS, Bangalore, Udupi (Karnataka).

3. The experimental trial specifications and experimental layout design for conducting the trials are at Annexure-I & II. The name of lead scientists responsible for the trial is at Annexure-III.

4. You are directed to strictly adhere to the guidelines/ conditions conveyed vide permission letter of even No. dated 23.07.2007 (copy enclosed).

Please acknowledge the receipt of this letter.

Yours faithfully,

(Rajalakshmi Murthiwaran)
Co-Member-Secretary, RCGM &
Scientist-D, DBT

Countersigned:

(K.K. Teegathil)
Member-Secretary, RCGM &
Scientist-G, DBT

Website: <http://www.dbtindia.nic.in> <http://www.btiisat.gov.in>
दूरभाष / Telephone: 24363812, 24362323 फैक्स / Fax: 011-24362884

Copy for information and necessary action wherever applicable to:-

1. The Secretary, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, Lodi Road, New Delhi - 3.
2. The Secretary, Ministry of Agriculture, Krishi Bhawan, New Delhi - 110 001.
3. The Chairman, GEAC, MoEF, Paryavaran Bhawan, CGO Complex, Lodi Road, ND-03.
4. The Director General, Indian Council of Agricultural Research, Krishi Bhawan, New Delhi - 110 001.
5. The Chairman, MEC, National Research Centre on Plant Biotechnology (NRCPB), IARI Campus, Pusa, New Delhi - 110 012.
6. The Chief Secretary & Chairman, SBCC, Government of Maharashtra, Mumbai.
7. The Commissioner Agriculture, Maharashtra State, Central Building, Pune (Maharashtra).
8. Director of Research, Mahatma Phule Krishi Vidhyapeeth (MPKV), Rahuri, Maharashtra.
9. Director of Research, Konkarn Agriculture University, Dapoli, Maharashtra.
10. The Chief Secretary & Chairman, SBCC, Government of Goa, Panaji, Goa.
11. Commissioner Agriculture, Government of Goa, Panaji, Goa.
12. The Chief Secretary & Chairman, SBCC Government of Karnataka, Bangalore, Karnataka.
13. The Commissioner of Agriculture, Directorate of Agriculture, Sheshadri Road, Bangalore, Karnataka.
14. Director of Research, University of Agricultural Sciences (UAS), Dharwad, Karnataka.
15. Director of Research, OKVK Campus, University of Agricultural Sciences (UAS) Bangalore, Karnataka.
16. Guard file.

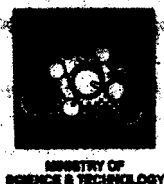
Rajalakshmi Murlidharan

(Rajalakshmi Murlidharan)
Co-Member-Secretary, RCGM &
Scientist-D, DBT

Countersigned:

K.K. Tripathi
(K.K. Tripathi)

Member-Secretary, RCGM &
Scientist-G, DBT



No. BT/BS/17/04/99-PID

Dated : 23.07.2007.

To

Prof. M.S. Kuruvinasetti,
HOD, Biotechnology,
University of Agricultural Sciences,
Institute of Agri Biotechnology,
College of Agriculture, Krishinagar,
Dharwad - 580 005, Karnataka.
Fax : 0836-2747627

Subject: Application submitted for permission to carry out replicated confined multi-location research trials (MLRT) on Bt. Brinjal hybrids containing *cry1Ac* gene to generate the efficacy and baseline susceptibility data during Kharif-2007.

Gentlemen,

This has reference to your application dated 27.03.2007 on the above mentioned subject. It is informed that your application was considered and examined by the Review Committee on Genetic Manipulation (RCGM) in its meeting held on 01.06.2007. The recommendations of RCGM were forwarded to Genetic Engineering Approval Committee (GEAC) which considered it in its 78th meeting held on 22.06.2007. Your proposal for conduct of replicated confined MLRT on Bt brinjal hybrids was approved by the GEAC. In accordance with the communication issued by the GEAC, authorizing Member Secretary, RCGM vide letter No. 13/7/2007-CS-II (GEAC) dated 16.07.2007, the Member-Secretary, RCGM is communicating the approval of GEAC to conduct of replicated confined multi-location research trials (MLRT) on 6 Bt brinjal hybrids namely Malapur Local, Manjari Gotha, Kudachi Local, Udupi Gulla, 112-GO and Rabakavi Local expressing *cry1Ac* gene along with their non-Bt counterparts and local checks to generate the efficacy and baseline susceptibility data during Kharif 2007, subject to the following conditions:

a) You are directed to develop the standard operating procedure (SOP) and a validated event specific testing protocol at an LOD of at least 0.01% to detect the event specific substances as per the orders of the Hon'ble Supreme Court, dated 8th May, 2007 in Writ Petition No. 202/2005, No. 4/2006 duly validated/ verified by ICGEB, New Delhi/ NBRI, Lucknow or any other accredited laboratory before undertaking the trial.

b) The name of the lead scientists responsible for all aspects of the trials in different locations must be submitted by the applicant for each location. You should provide the state/district wise details of locations (area, village, name of the farmer in case of lease land on long term basis (not less than 3 years etc.) before undertaking the research trials to the GEAC/ RCGM/ State Department of Agriculture/ State Agriculture Universities/ District Authorities and other field functionaries.

- c) You should further inform the respective Village Panchayat officials about full details on the transgenic crop, name of the farmer and the location(s) where field trials have been proposed/ carried out in case of leased land on long term basis (not less than 3 years), as directed by the GEAC, with a copy of such intimation and approval of Panchayat to RCGM/ GEAC/ State Department of Agriculture, before undertaking the trial.
- d) The replicated confined multi-location research trials (MLRT) shall be conducted in triplicate repeats with randomized block design (RBD) at your own premises/ research farm, long leased land (not less than 3 years) or at the SAUs/ ICAR or institutions to keep the research trials confined. MLRT should not be conducted in the farmer's field. MLRT may be conducted in minimum one location and maximum 2 locations in each State based on agro-climatic condition, suitability for brinjal cultivation and preference/ adoptability of the hybrids in the region. The applicant will submit the details of locations along with the information on farm land in specified state before undertaking the trials.
- e) You would keep full account of the transgenic materials, if any, set in the transgenic plants. All materials after experimentation including the material in the trapper rows would be fully accounted for and the information would be documented and preserved in a bound book that would be available to the Government as when requested for. The harvested crop from the ~~border rows and trapper plants and plant parts~~ from entire experimental plot shall be destroyed by burning after completion of the experiment, in the presence of the local authority.
- f) You would collect and provide all the experimental data to the Government for inspection whenever required.
- g) You would ensure that while performing the experiments, the "Recombinant DNA Safety Guidelines-1990" and "Revised Guidelines for Research in transgenic plants & Toxicity and Allergenicity evaluation of transgenic seeds, plants and plant parts" of the Government of India would be strictly adhered to. Accidents, if any, arising out of the experiments may be brought to the notice of the Government immediately.
- h) The objectives of the MLRT are to generation of data on the following:
- i) Comparison of the level of infestation of the target insect pest viz. fruit and shoot borer (*Leucinodes orbonalis*), Gram caterpillar/ fruit borer (*Helicoverpa armigera*) and stem borer (*Euzophera perticella*), fruit yield, fruit quality, economic benefits and other agronomic parameters among Bt. brinjal hybrids corresponding to their non-Bt brinjal hybrids and checks.
 - ii) Monitoring the occurrence of beneficial and non-target insects on Bt. and non-Bt. brinjal hybrids.
 - iii) Generation of data with estimation of the levels of expression of Bt. protein in different plant parts at different age starting from 30 days after transplanting up to the time of uprooting the plants on regular interval as per schedule given below during Kharif 2007 season.

Sampling schedule:

Sl.No.	Period	Days	Plant parts
1.	Vegetative phase	30 days after transplanting	L
2.	Pre-flowering phase	60 days after transplanting	L, SH, ST, FL, FR
3.	Fruiting phase	90 days after transplanting	L, SH, ST, FL, FR
4.	Fruiting phase	120 days after transplanting	L, SH, ST, FL, FR
5.	Fruiting phase	150 days after transplanting	L, SH, RT

The expression of Bt. protein shall be in milligrams of detectable protein per gram fresh weight of the plant parts. Fully expanded leaves (L), Shoot (SH), Stem (ST), Flower (FL), Fruit (FR) and Root (RT) shall be used as the plant parts.

iv) Generation of baseline susceptibility data on detectable protein on the fruit and shoot borer (*Leucinodes orbonalis*), Gram caterpillar/ fruit borer (*Helicoverpa armigera*) and stem borer (*Euzophera perticella*) population collected from the sites of trials and by rearing them at the premises of the company's bio-assay laboratory during Kharif 2007.

v) DNA fingerprinting data of the hybrid/ genotype.

i) You would provide the experimental trial specifications and experimental layout to the RCGM Secretariat before conducting the trials. An isolation distance of 200 meters from the periphery of the nearest row of transgenic Bt. brinjal would be maintained all around the experimental plot as per the Hon'ble Supreme Court order dated 8th May, 2007. In cases where the Seed Standard Certification mandates a larger isolation distance, the same shall be maintained. You shall further plant at least 5 rows of the non-Bt counterparts to act as refugia at the immediate vicinity around the periphery of the outer transgenic plant rows all around the plot to cover a distance of at least 5 meters. You would not plant any sexually compatible plant to the brinjal crop around the periphery of the outer transgenic plant rows all around the plot. You would be submitting the site plans for all the locations within 15 days to the RCGM Secretariat.

j) You would mount a Notice Board at the site of experiment indicating in the Notice Board the purpose and duration of the experiment as well as the authorization under which the experiments are being conducted.

k) You would further ensure that only company authorized personnel would be allowed to visit the experimental plot and persons visiting the experimental plot shall enter the name, designation and purpose of visiting the experimental plot in a bound book which should be made available to the Government when requested for.

l) You would provide with three photographs of experimental site, taken from a distance sufficient to indicate the transgenic plots in a single photograph; such photographs would be taken at three intervals during the season to document the start of the experiments, the mid way of the experiments and the end of the experiments. These photographs would be submitted to the Government at the conclusion of the experiments.

m) You would extend full cooperation to the authorized personnel of the GEAC/ RCGM/ MEC/ State Government Officials/ State Agriculture University or their nominee to inspect the experimental sites and to have access, for official use only, the experimental results of the above.

2. This MLRT permit is valid for Kharif Season 2007 only from the date of issue and would lapse automatically after the Kharif season-2007.

3. You are hereby directed to convey to the Co-Member Secretary/ Member Secretary, RCGM within 15 days after the receipt of this permission your unequivocal acceptance of the above conditions along with the information asked for as above. In case, you don't intend to conduct the MLRT, the same must also be intimated in writing to the RCGM Secretariat.

Please acknowledge the receipt of this letter.

Yours faithfully,

Rajalakshmi. OP

(Rajalakshmi Murtidharan)
Co-Member-Secretary, RCGM &
Scientist-D, DBT

Countersigned:

K.K. Tripathi
23/7/07

(K.K. Tripathi)
Member-Secretary, RCGM &
Scientist-G, DBT

Copy for information and necessary action wherever applicable to:

1. The Secretary, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, Lodi Road, New Delhi - 3.
2. The Secretary, Ministry of Agriculture, Krishi Bhawan, New Delhi -110 001.
3. The Chairman, GEAC, MoE&F, Paryavaran Bhawan, CGO Complex, Lodi Road, ND-03.
4. The Director General, Indian Council of Agricultural Research, Krishi Bhawan, New Delhi - 110 001.

5. The Chairman, MEC, National Research Centre on Plant Biotechnology (NRCPB),
IARI Campus, Pusa, New Delhi – 110 012.
6. Guard file.

(Copies to the concerned authorities of state Govt/ Universities will be forwarded on receipt of the location details from the applicant)

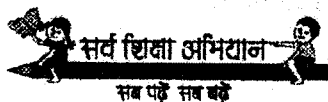
Rajalakshmi M. o P

(Rajalakshmi Murlidharan)
Co-Member-Secretary, RCGM &
Scientist-D, DBT

Countersigned:

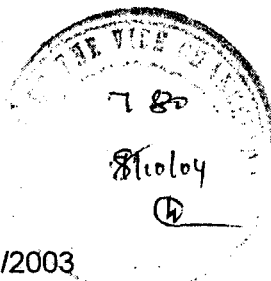
K.K. Tripathi
23/12/07

(K.K. Tripathi)
Member-Secretary, RCGM &
Scientist-G, DBT



भारत सरकार
विज्ञान और प्रौद्योगिकी मंत्रालय
बायोटेक्नोलॉजी विभाग
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GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY
Block-2, 7th Floor C.G.O. Complex
Lodi Road, New Delhi-110003

Dr. K.S. Charak
Director
Tel: 24369614
E-mail: charak@dbt.nic.in



D.O.No.BT/AB/03/Indo-US/02/2003

Dated: 01.10.2004

Dear Prof. Patil,

Please refer to the Letter dated Sep 02, 2004 from Dr. K. Vijayaraghavan, Regional Coordinator – ABSP-II addressed to you regarding the project proposal on "Research and commercialization of fruit and shoot borer resistant eggplant". A copy of the same was endorsed to the Secretary, DBT. In this context we would suggest that UAS, Dharwad may develop a full proposal from its side keeping in view the Letter of Intent. The proposal should spell out all the technical details, time schedule of activities, milestones, financial outlays for proposed period and work elements of the participating institutions from both the sides. The application format for preparing the proposal can be downloaded from our website (www.dbt.nic.in) and if needed, it can be modified suitably and used. It would be desirable that the proposal (20 copies) may be prepared at the earliest and submitted by 20th October 2004, for consideration in our forthcoming Joint Working Group (JWG) meeting. Subsequently, you are also required to make an application to this Department for seeking clearance/permission of RCGM to import the transgenic material from outside. I would advise you to initiate necessary action towards this also.

With regards

Dr. K.S. Charak
PLA

Yours sincerely

K.S. Charak
(K.S. Charak)

Prof S.A.Patil
Vice Chancellor
University of Agricultural Sciences
Dharwad – 580 005
Fax : 0836-2448349

E. Patil
9/10/04

To

Dr. Mathura Rai,
Director,
Indian Institute of Vegetable Research (IIVR),
P.O. Box 5002, BHU,
VARANASI - 221 005.

Sir,

Sub : ABSP-II Project Proposal on Fruit and Shoot borer resistant
Bringal.

Ref : 1. D.O. No. BT/AB/03/Indo/US/02/2003 dated 01-10-2004 of
DBT, New Delhi.
2. Discussion, Jaina on 14-10-2000 regarding submission of
consolidated proposal.

With reference to above, please find enclosed herewith two copies of project proposal in respect of above referred project from this University, to include in the consolidated proposal for submission to DBT, New Delhi.

Thanking you,

Encl. : As above.

Yours faithfully,


DIRECTOR OF RESEARCH

C.C. to Dr. K.S. Charak, Director, Department of Bio-technology (DBT), Block-2, 7th Floor,
CGO Complex, Lodi Road, New Delhi - 110 003, along with a copy of the proposal for kind
information.

✓ The Co-ordinator, IABT, University of Agricultural Sciences, Dharwad - 580 005.

भारत सरकार

विज्ञान और प्रौद्योगिकी मंत्रालय

बायोटेक्नोलॉजी विभाग

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

No. BT/BS/17/04/99-PID



ब्लॉक-2, 7 वां फ्लोर, सी० जी० ओ० कम्प्लेक्स
लोदी रोड, नई दिल्ली-110003
Block-2, 7th Floor C.G.O. Complex
Lodi Road, New Delhi-110003

Dated : 19.05.2009.

To

Dr. M.S. Kuruvinasetti,
Former Professor & HOD, Biotechnology,
University of Agricultural Sciences,
Institute of Agri Biotechnology,
College of Agriculture, Krishinagar,
Dharwad 580 005, Karnataka.

Subject: Visit of MEC team to replicated confined multi-location research trials (MLRT) on Bt Brinjal hybrids containing *cryIAc* gene to generate the efficacy and baseline susceptibility data during Summer-Monsoon-2009 at KVK, Goa.

Sir,

This is in response to your e-mail dated 15.05.2009 addressed to Dr. K.K. Tripathi, Adviser, DBT. Your application for permission to conduct **Multilocation Research Trial (MLRT)** on Bt Brinjal hybrids **Bt GO 112, Bt Udupi Gulla, GO 112 and Udupi Gulla** containing *cryIAc* gene at ELA Farm, Department of Agriculture, Govt of Goa during Summer- monsoon 2008 instead of at KVK Goa was considered by Review Committee on Genetic Manipulation (RCGM) in its meeting held on 27.05.2008. RCGM noted that the applicant was permitted to conduct MLRT on Bt brinjal during 2007 at KVK Goa. However, due to untimely heavy rain the crop was damaged and the trial was abandoned. In view of the above RCGM permitted the applicant to repeat the trial with change of location in Goa. The recommendation of RCGM was forwarded to GEAC for final approval. GEAC in its 88th meeting held on 13.08.2008 considered the proposal in light of the policy decision that MLRT for hybrid by hybrid field testing may be dispensed with in view of the event based approval system adopted by the GEAC and the primary focus of GM crop trials should be on the biosafety issues besides efficacy of the trait, rather than agronomic performance. GEAC noted that Bt brinjal by UAS Dharwad has been developed through technology transfer from M/s Mahyco. As the biosafety assessment of Bt brinjal developed by M/s Mahyco is still under review by the regulatory agency, the request of M/s UAS, Dharwad for hybrid evaluation under MLRT was not approved by the GEAC.

In view of the above, MEC team will not be visiting the replicated confined multi-location research trials (MLRT) on Bt Brinjal hybrids containing *cryIAc* gene to generate the efficacy and baseline susceptibility data during Summer-Monsoon-2009 at ELA Farm, Department of Agriculture, Govt. of Goa, Goa. You may submit the report on the MLRT along with details of agronomic performance, to RCGM taking into consideration the data from all locations, for further consideration.

Please acknowledge the receipt of this letter.

Yours faithfully,

Rajalakshmi Murlidharan

(Rajalakshmi Murlidharan)
Co-Member-Secretary, RCGM &
Scientist-ID, DBT

cc-To :-
H.O.D. Biotek
UASD

[Signature]

[Signature]

**Department of Biotechnology
Ministry of Science & Technology
Government of India**

View Application Status**Code Number:** B3LEHZRC**Application Title:** 61.2.11 for extension of the permission to conduct Multi Location Research Trial (MLRT) on six Bt. brinjal hybrids containing cry1Ac gene from Kharif 2007 to Summer 2008 . RCGM had permitted the applicant to conduct the MLRT during Kharif 2007.**Category:** AGRI BIOTECH (Field Crops)**Date Receipt:** 20/12/2007**Status:** Application received**Decision of Application:** Permitted



National Bureau of Plant Genetic Resources
(Indian Council of Agriculture Research)
Pusa Campus, New Delhi – 110 012



Phone: 25846268 (O), 25849208, 11, 14 (Ext. 227)
FAX: 091- 011 – 25842495

E-mail: aksingh@nbpgr.ernet.in
GRAM: GERMPLASM

Dr. Anurudh K. Singh
Head, Germplasm Conservation Division

Cons/Tran/001/06/52888
13.01.2006

16

ACKNOWLEDGEMENT CERTIFICATE

This is to acknowledge the receipt of:

1. 750 to 1000 mg of F_1 seeds of transgenic seed material of Rabhkavi local x E.E. 1; Udupi Gulla x E.E. 1; Malapur local x E.E. 1; Kudachi local x E.E. 1; 112-GO x E.E. 1; Manjari Gota x E.E. 1 with *CryIAc* gene from Professor and Head, Department of Biotechnology, College of Agriculture, UAS, DHARWAD-580 005.
2. also, the undertaking pertaining to Para 4, regarding the type of permit and instructions for use,
3. para 5, related to handling and packing instructions and
4. other conditions related to issuance of above permit,
5. as per the transfer clearance letter No. BT/BS/17/04/99-PID dated 27.06.2005, issued by Ministry of Science & Technology, Department of Biotechnology, permitting transfer of above transgenic brinjal varieties containing *CryIAc* gene from M/s Maharashtra Hybrid Seeds Company Ltd. (MAHYCO), Mahyco Life Science Research Centre, Aurangabad-Jalana Road, Jalana-431 203 to Professor and Head, Department of Biotechnology, College of Agriculture, UAS, DHARWAD-580 005 for the purpose of research & development only, subject to conditions mentioned in the clearance letter.

Anurudh K Singh

✓ Prof. M.S. Kuruvinashetti
Professor and Head,
Department of Biotechnology, College of Agriculture,
UAS, DHARWAD-580 005.

Copy to:

1. The Secretary, Ministry of Environment and Forests, Government of India, Paryavaran Bhavan, CGO Complex, Lodi Road, New Delhi-110003, for information only.
2. The Secretary, Ministry of Agriculture, Krishi Bhawan, New Delhi-110001
3. The Chairman, Genetic Engineering Approval Committee, Ministry of Environment and Forests, Government of India, Paryavaran Bhavan, CGO Complex, Lodi Road, New Delhi-110003, for information only.
4. M/s Maharashtra Hybrid Seeds Company Ltd., Aurangabad-Jalana Road, Jalana-431 203
5. The Head, Germplasm Exchange Unit, NBPGR, Pusa Campus, New Delhi-12
6. Dr. G. Randhawa, Sr. Scientist, NRC on DNA Finger Printing, NBPGR, New Delhi-110012. She is requested to collect and conserve the seed material.

No.BT/BS/17/04/99-PID

DATE OF ISSUE: 27.06.2005
DATE OF EXPIRY: 26.06.2006

TRANSFER CLEARANCE LETTER

SUBJECT: CLEARANCE TO TRANSFER THE TRANSGENIC MATERIALS OF BRINJAL VARIETIES CONTAINING *cry1Ac* GENE FROM M/s. MAHARASHTRA HYBRID SEEDS COMPANY LTD. (MAHYCO), MUMBAI TO UNIVERSITY OF AGRICULTURAL SCIENCES, DHARWAD, REG.

In accordance with the business activities allocated through the Government of India (Allocation of Business) Rules 1961, as notified through the Notification No. CD-172/86 dated 27.02.1986 and Notification No. CD-87-87 dated 31.01.1987 to the Department of Biotechnology and the powers conferred through the Sections 6,8 & 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with the Central Government Gazette Notification No. GSR 1037 (E), dated 5.12.1989 issued by the Ministry of Environment & Forests, New Delhi, the Department of Biotechnology hereby accords clearance to **University of Agricultural Sciences, Dharwad** to receive six transgenic brinjal varieties (Malpur local, Manjari gota, Kudachi local, Udupi Gulla, 112 GO and Rabkavi local) containing *cry1Ac* gene from **M/s. Maharashtra Hybrid Seeds Company Ltd. Mahyco Life Science Research Centre, Aurangabad-Jalna Road, At post Dawalwadi, Jalna - 431 203** with properties and sources indicated below for the **research & development** purpose only, subject to the conditions mentioned in the clearance letter.

1. DESCRIPTION OF THE MATERIALS:

Six transgenic brinjal varieties (Malpur local, Manjari gota, Kudachi local, Udupi Gulla, 112 GO and Rabkavi local) expressing *cry1Ac* gene for backcrossing and developing transgenic brinjal lines in local elite background. University of Agricultural Sciences, Dharwad allowed to receive seeds of 10 grams of each of six transgenic brinjal varieties expressing *cry1Ac* gene from M/s. Maharashtra Hybrid Seeds Co. Ltd., Mumbai.

2. PERMITTEE (NAME, ORGANIZATION, ADDRESS):

Dr. M. S. Kuruvinashetti, ✓
Professor and HOD Biotechnology,
Agricultural Research Station, Dharwad Farm,
University of Agricultural Sciences,
Dharwad - 580 005, Karnataka.
Fax : 0836-746810

Contd. 2/-

3. SOURCE OF MATERIAL (NAME, ORGANIZATION, ADDRESS):

Dr. Brent Zehr
M/s. Maharashtra Hybrid Seeds Company Ltd.,
Mahyco Life Science Research Centre,
Aurangabad-Jalna Road,
At post Dawalwadi, Jalna - 431 203.

4. TYPE OF PERMIT AND INSTRUCTIONS FOR USE:

Clearing the University of Agricultural Sciences, Dharwad to receive seeds of 10 grams of each of six transgenic brinjal varieties of above description from M/s. Maharashtra Hybrid Seeds Company Ltd., Mahyco Life Science Research Centre, Jalna for research purpose only. The applicant shall take all precautions to prevent the escape of genetic material into the open environment and shall follow the Recombinant DNA Safety Guidelines of the Government. No transgenic material is permitted for experimentation in open environment without prior authorization from the Competent Authority. Full account of the transgenic seeds shall be kept by University of Agricultural Sciences, Dharwad. The applicant shall not expose the transformed plants to the open environment and also not to transfer to any out side party without the approval of the Government.

5. HANDLING AND PACKING INSTRUCTION:

The transgenic brinjal seeds mentioned herein shall be handled, packaged and transported as specified in "r-DNA Safety Guidelines" and "Revised Guidelines for Research in Transgenic Plants & Guidelines for Toxicity and Allergenicity Evaluation of Transgenic Seeds, Plants and Plant Parts" of the Government of India, 1990 and 1998.

6. CONDITION(S) OF ISSUANCE:

As specified above. University of Agricultural Sciences, Dharwad shall inform the Government about the safe receipt of the above quantities of seeds within 15 days after receiving the material.

After receiving the seeds, University of Agricultural Sciences, Dharwad shall deposit 1 gm of such seeds with the Director, National Bureau of Plant Genetic Resources (NBPGR), Pusa Campus, New Delhi - 110 012 and obtain a certificate of deposit from NBPGR. A photocopy of the certificate shall be deposited by the applicant with the Department of Biotechnology for records within 15 days of deposit of the material to the NBPGR.

Contd. 3/-

7. COPY SENT TO:

1. The Secretary, Ministry of Environment & Forests, Paryavaran Bhawan, C.G.O. Complex, Lodi Road, New Delhi-110 003.
2. The Secretary, Ministry of Agriculture, Krishi Bhawan, New Delhi - 110 001
3. The Chairman, Genetic Engineering Approval Committee, Ministry of Environment & Forests, Paryavaran Bhawan, C.G.O. Complex, Lodi Road, New Delhi-110 003.
4. The Director General, Indian Council of Agricultural Research, Krishi Bhawan, New Delhi - 110 001
5. The Director, National Bureau of Plant Genetic Resources (NBPGR), Near Patel Nagar, New Delhi - 110 012.
6. Dr. M. S. Kuruvinashetti, Professor and HOD Biotechnology, Agricultural Research Station, Dharwad Farm, University of Agricultural Sciences, Dharwad - 580 005, Karnataka.
7. Dr. Brent Zehr, M/s. Maharashtra Hybrid Seeds Company Ltd., Mahyco Life Science Research Centre, Aurangabad-Jalna Road, At post Dawalwadi, Jalna - 431 203.

8. SIGNATURE & TITLE OF ISSUING OFFICER:

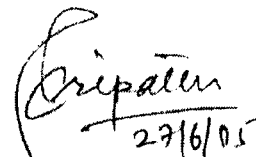


(T.V. Ramanaiah)

Scientist-F

Deptt. of Biotechnology

9. COUNTER SIGNATURE



(K.R. Tripathi)

Adviser, DBT



Maharashtra Hybrid Seeds Company Limited

Resham Bhavan, 4th Floor, 78, Veer Nariman Road, MUMBAI - 400 020 (M.S.) INDIA

Phone : (+91-22) 3027 3025, 3027 3016, 3027 3007, 3027 3031

Fax : (+91-22) 2204 7871 • E- mail : info@mahyco.com

BY SPEED POST - A/D

April 29, 2011

The Chief Conservator
of Forests and Member Secretary
Karnataka Biodiversity Board
(Forest, Ecology and Environment Dept.)
Ground Floor, "VANA VIKAS"
18th Cross, Malleshwaram
Bangalore - 03

**SUB: OBJECTIVES IN ENTERING AGREEMENTS WITH UAS,
DHARWAD IN IMPLEMENTATION OF BT. BRINJAL
PROJECT AND STAGE OF ACHIEVING THESE OBJECTIVES -
REG.**

Re: Your letter no. KBB/Bt.B/77/11-12/918 dated 4th April 2011

Dear Sir,

This has reference to your letter dated 06.04.2011 on the above subject which was received by our office on 11th April 2011. In this regard, we submit as under:

1. Maharashtra Hybrid Seeds Company Ltd. ("Mahyco") had entered into a sublicense agreement with Sathguru Management Consultants Private Ltd. (Sathguru) and University of Agricultural Sciences, Dharwad (UAS, Dharwad) dated 2nd April, 2005.
2. The purpose / objective of entering into the said agreement was as follows:
 - (i) All the parties to the said agreement perceived a common objective in development and delivery of pro-poor varieties of insect tolerant B.t. eggplant, and conceived a collaborative project with a view to facilitate technology access to resource-constrained farmers under the ABSP II project.

KARNATAKA BIODIVERSITY BOARD	
Inward No. 4263	Dated 3/5/11
Forwarded to	Dated 4



Registered Office :

Resham Bhavan, 4th Floor, 78, Veer Nariman Road, MUMBAI - 400 020 (M.S.) INDIA

Phone : (+91-22) 3027 3025, 3027 3016, 3027 3007, 3027 3031

• Email : info@mahyco.com • Fax : (+91-22) 22047871 • Website : www.mahyco.com

Agricultural Biotechnology Support Project II (ABSP II) is a project that focuses on the safe and effective development and commercialization of bio-engineered products as a complement to traditional and organic agricultural approaches in developing countries, and whose mission is to make such products available to farmers in forms they can use, to help reduce poverty and hunger and to boost food security, economic growth, environmental quality and nutrition.

- (ii) In furtherance of ABSP II's above mandate/ mission, UAS, Dharwad approached Mahyco in light of their expertise and research and development facilities for development of pro-poor varieties of eggplant that are insect tolerant and Mahyco agreed to provide access to the technology without any payment for such access.

This project was put together as a public goods delivery of bio engineered seeds for resource poor farmers with funding from ABSP II and Department of Biotechnology, Government of India. The University of Agriculture Sciences, Dharwad was funded by Department of Biotechnology, Government of India, along with other public institutions, Tamilnadu Agriculture University and Indian Institute of Vegetable Research, Varanasi.

- (iii) UAS, Dharwad became part of the ABSP II due a priority setting consultation process held in March 2003 involving national level stakeholders such as Public Research Institutions, Indian Council of Agriculture Research, Department of Biotechnology and non-government organizations carried out under the aegis of ABSPII, to determine priority crops for development and priority institutions to be involved. Based on the findings of the priority setting process, Department of Biotechnology, Government of India provided funding to UAS, Dharwad, Tamilnadu Agriculture University and Indian Institute of Vegetable Research to advance the public varieties with fruit and shoot borer resistance for making available publicly adopted varieties with resistance to fruit and shoot borer for delivery to resource poor farmers growing eggplant in the region. Department of Biotechnology funding was granted to the project due to its nature of public good engagement to benefit resource poor farmers who loose more than half of their produce due to fruit and shoot borer infestation. It is pertinent to mention here that UAS, Dharwad

was chosen by Department of Biotechnology as member of the consortium.

3. It is pertinent to mention that Mahyco has merely transferred the *cry1Ac* gene in the varieties provided by UAS Dharwad by backcrossing and Mahyco has used conventional breeding practices for such transfer. Further, no royalty fee has been charged for providing the technology. It is pertinent to mention here that Mahyco's effort to support the public partners by providing technology access was initiated on 5th April 2004, even before the Biological Diversity Rules were notified.
4. The current status of the said project / agreement is as under:
 - (i) The varieties provided by UAS Dharwad and date thereof:-
The following varieties were provided vide letter from UAS, Dharwad, dated 20th Sept 2004:
 - 1) Malpur Local
 - 2) Manjari gota
 - 3) Kudachi local
 - 4) Udupi local
 - 5) 112 GO
 - 6) Rabkavi local
 - (ii) The date/s and process of transfer of technology by Mahyco:-
Transfer of technology, namely the EE-1 event incorporating the *cry1Ac* gene, was done by conventional breeding methods. Work began on 5th October, 2004 and concluded on 13th April, 2005. The crossing activity was carried out by staff of UAS Dharwad at Mahyco's research facility. Resultant seed carrying the technology was provided back to UAS Dharwad on 26th July 2005 (pursuant to regulatory approval for the same).
 - (iii) Any other action by Mahyco in providing technical support/ services etc.:-
Training for detection of gene in plant populations and entomological training relating to the target pest was given to UAS Dharwad personnel. Stewardship support is also provided
 - (iv) Current status of trials being conducted by UAS Dharwad:-
As per our information, last held trial was a Multi Location Research Trial (MLRT) at Krishi Vigyan Kendra (KVK), Margao, Goa, concluded 17th June 2009.
 - (v) The results of the trials which have been shared by UAS Dharwad with Mahyco:-

As per our information, the MLRT held at KVK, Margao, Goa in 2009, successfully concluded and the results of the trials are available with the regulatory authorities.

5. It is pertinent to point out that UAS Dharwad is a public institution and the development of Bt Brinjal by them is for the benefit of the general public/ resource constrained farmers. Therefore, there is no question of the farmers protesting the trials on Bt Brinjal by UAS Dharwad.
6. In so far as the representations of Environment Support Group (ESG) are concerned, we had issued a letter dated 25th June, 2010, to this Authority / Board clarifying the issues raised by ESG. The contents of the said letter may be deemed to be incorporated herein and which are not being repeated for the sake of brevity. A copy of the said letter is attached herewith for ready reference.
7. In view of the afore-stated you are requested to consider / place the above facts before the fact finding committee of the National Biodiversity Board. In this regard, we also request this Authority/ Board to grant us a personal hearing to clarify our stand on the issues raised vide the letter under reply. Vide the instant letter we also seek a personal hearing before the fact finding committee of the National Biodiversity Board.

If you require any information/ clarification, we shall be glad to provide the same.

Thanking you

Yours Sincerely,
For Maharashtra Hybrid Seeds Co.Ltd.



Authorized Signatory

Maharashtra Hybrid Seeds Company Limited

Resham Bhavan, 4th Floor, 78, Veer Nariman Road, MUMBAI - 400 020 (M.S.) INDIA
Phone : (+91-22) 3027 3025, 3027 3016, 3027 3007, 3027 3031
Fax : (+91-22) 2204 7871 • E-mail : info@mahyco.com

BY REGD. POST/ SPEED POST - A/D

June 25, 2010

The Addl. Principal Chief Conservator
of Forests and Member Secretary
Karnataka Biodiversity Board
(Forest, Ecology and Environment Dept.)
Ground Floor, "VANA VIKAS"
18th Cross, Malleshwara
Bangalore - 560 003.

**SUB: VIOLATION OF BIOLOGICAL DIVERSITY ACT 2002 IN MATTERS RELATING TO
ACCESS AND UTILIZATION OF LOCAL BRINJAL VARIETIES FOR DEVELOPMENT
OF BT. BRINJAL BY M/S MAHYCO AND OTHERS AND RELATED ISSUES**

Dear Sir,

This has reference to your letter dated 28th April, 2010 and our letter dated 13th May, 2010. In this regard, we submit as under:

1. At the outset, we submit that we have not violated any of the provisions of the Biological Diversity Act, 2002. Maharashtra Hybrid Seeds Company Ltd. ("Mahyco") is a law abiding company and we comply with all the applicable laws/ rules and regulations. Mahyco is also recognised by department of Science & Technology and is recipient of many awards
2. Vide the afore-mentioned letter, you have alleged that Mahyco has accessed 6 local varieties of Brinjal as specified in your letter under reply. It has further been alleged that Mahyco has inserted Cry 1Ac gene and provided the material to University of Agricultural Sciences, Dharwad (UAS Dharwad). Further, Mahyco has been asked to revert on whether Mahyco has accessed the bio-resources as stated for commercial utilization, and if commercial utilization has indeed taken place, and whether Mahyco had provided prior intimation as required under section 7 of the Biological Diversity Act, 2002 (the Act). In response to the same, it is stated as under:
 - (i) Mahyco has been conducting activities related to research and development of transgenic crops through transformation, including insect tolerant eggplant, for several years. For the said purpose, Mahyco has been conducting research on hybrid seeds which have been developed by Mahyco itself. It is pertinent to point out that such research was duly approved under Rules for Manufacture, Use, Import, Export and Storage of Hazardous Micro Organisms, Genetically Engineered Organisms or Cells, 1989 (Rules 1989).



Registered Office :

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Maharashtra Hybrid Seeds Company Limited

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- (ii) UAS Dharwad had approached Mahyco for introgression of Cry1Ac gene by making back cross in the varieties (name of the varieties – Malpur Local, Manjari Gota, Kudachi Local, Udupi Local, 112 GO, Pakkavi Local) of Brinjal which were provided by UAS Dharwad.
- (iii) Mahyco has merely introgressed the Cry 1Ac gene in the varieties provided by UAS Dharwad. Mahyco has used conventional breeding techniques for introgression of the Cry 1Ac gene in the varieties provided by UAS Dharwad.
- (iv) Mahyco has only introgressed the Cry1Ac gene in the varieties provided by UAS Dharwad and is not engaged in commercial utilization of such seeds/ varieties. It is further pertinent to point out that Mahyco is not charging any royalty fee from UAS Dharwad in respect of any utilization of the varieties in question by UAS Dharwad for the use of resource constrained farmers. The technology provided by Mahyco to Dharwad is royalty free. It is submitted that the technology is provided to UAS Dharwad for distribution of seeds - other than by way of sale, at-cost to resource constrained farmers and not for commercialisation - and technology is provided with no payment for access and no royalty payable thereon.
- (v) It is further pertinent to point out that UAS Dharwad is a public institution and the development of Bt Brinjal by them is for the benefit of the resource constrained farmers and Mahyco has provided its technology to UAS Dharwad which is royalty free, for the benefit of the resource poor farmers.
- (vi) In view of the afore-said, Mahyco did not undertake any activity which required Mahyco to provide prior intimation to the Biodiversity Board under Section 7 of the Act.
- (vii) It is submitted that Mahyco is not in violation of any of the provisions of the Act.

In view of the afore-stated you are requested to consider the afore-mentioned submissions before taking any decision in the matter. We also request this Authority/ Board to grant us a personal hearing in the matter.

Thanking you

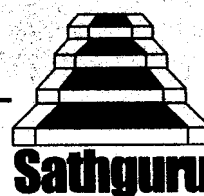
Yours Sincerely,
For Maharashtra Hybrid Seeds Co. Ltd.

Authorized Signatory



Registered Office :

Resham Bhavan, 4th Floor, 78, Veer Nariman Road, MUMBAI - 400 020 (M.S.) INDIA
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Sathguru Inc.
7982 Honeygo Blvd, #79
Baltimore, MD 21286, USA
Tel: +1 410 246 2950, 73438 95911
Fax: +1 410 246 2993

Date: 21st April 2011

To,

Chief Conservator of Forests and Member Secretary
Karnataka Biodiversity Board (Forest, Ecology and Environment Division)
Ground Floor, VANA VIKAS, 18th Cross, Malleshwaram
Bangalore, 03
Ph: (080) 23448783
Fax: (080) 23440535
Email: kbb.kar@gmail.com

SUB: Objectives in entering agreements with UAS, Dharwad in implementation of Bt. Brinjal project and stage of achieving these objectives – Reg.

Ref: Karnataka Biodiversity Authority's Letter No: KBB/Bt.B/77/11-12/918 dated: 06.04.2011

Honorable Member Secretary,

Sathguru Management Consultants Private Limited is an Indian company incorporated under the Companies Act, 1956 and is wholly owned by Indian citizens. Sathguru provides advisory services to public and private sector to integrate advancement in research for public good benefit and is the national coordinator for the Agriculture Biotechnology Support Project (ABSP II), a project that funded by Public institutions and engaging public partners to deliver technologies for public good advantage.

We present our reply in response to the letter received from the Authority as under:

The Agriculture Biotechnology Support Project II (ABSP II) is a project that focuses on the safe and effective development of bio engineered products as a compliment to traditional and organic agriculture approaches in developing countries, and whose mission is to make such products available to farmers in forms they can use, to help reduce poverty and hunger to boost food security, economic growth, environmental quality and nutrition.

In India, three public institutions namely University of Agriculture Sciences (UAS)-Dharwad, Tamil Nadu Agriculture University (TNAU), Coimbatore and Indian Institute of Vegetable Research, Varanasi (the apex vegetable research institute of ICAR) are the key partners of ABSP II. These partners are predominantly funded by Department of Biotechnology, Government of India for product development complimented by ABSP II predominantly for capacity building.

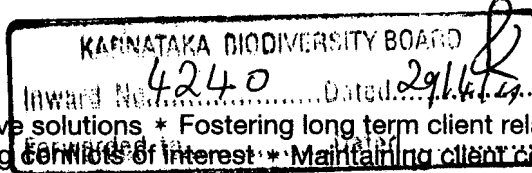
The goal of three public research institutions including UAS, Dharwad is to enhance the resistance of fruit and shoot borer susceptible Brinjal varieties that are adopted by the farmers in the region with resistance to fruit and shoot borer by transfer of genes donated by Mahyco through back cross breeding technique, which is conventionally adopted for breeding by public research institutions.

The primary objective of the effort by UAS, Dharwad is to enhance the resistance characteristics of the brinjal varieties that are popularly adopted by farmers and provide the seeds to resource poor farmers in the region not as a sale, but as a delivery of seeds for farmers to save their own seeds and use for repeat cultivation. UAS Dharwad has active seed delivery system that is meant to support resource poor farmers to source their disease free seeds.

Cont...., 2

We are committed to

- * Delivering client specific, high quality, effective solutions
- * Fostering long term client relationships
- * Ensuring integrity and mutual trust
- * Avoiding conflicts of interest
- * Maintaining client confidentiality
- * Preserving professional independence



:: 2 ::

The Public research institutions are routinely engaged in genetic enhancement of varieties in order to provide resource poor farmers the access to improved seed varieties for them to save the seed and cultivate with improved yield potential.

In accordance with the technology transfer arrangement entered into by Mahyco and UAS Dharwad, UAS Dharwad secured access to insect resistance technology for adoption in the varieties. The varieties enhanced for their resistance trait were advanced by UAS, Dharwad through their breeding program, duly observing their agronomical performance. The results of the agronomical performance were reported to the national bodies seeking approval for UAS Dharwad to make available these seeds to resource constrained farmers for them to save their seeds and cultivate them further.

The Mahyco technology transfer specifically is for UAS Dharwad to deliver seeds not for commercial purposes. UAS Dharwad is obligated and is intending to make available these seeds to resource poor farmers on a nominal cost recovery basis. However, the farmers can save their own seeds and cultivate the improved variety with resistance properties to gain from the incremental income that they will derive from saving of pesticides and increased marketable fruits that are harvested.

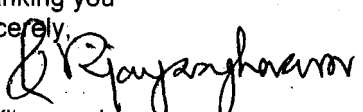
At this time, the Ministry of Environment has imposed a moratorium on the release of Bt Brinjal seeds by UAS Dharwad.

We conclude that the licensing arrangement between Mahyco and UAS Dharwad does not stipulate any commercial utilization of the gene access provided by Mahyco to UAS Dharwad and obligates UAS Dharwad to deliver seeds to resource poor farmers without any profit or commercial interest.

The farmers have their right to save the seeds for further planting on their own. We further confirm that the licensing arrangement only envisages receipt of technology from Mahyco to UAS Dharwad for developing resource poor farmer oriented varieties and there is no reverse flow of material or technology from UAS Dharwad to Mahyco. Mahyco has not derived any commercialization rights to the varieties developed by UAS Dharwad nor have received any technology under this arrangement. The development by UAS Dharwad does not contribute to "COMMERCIAL UTILIZATION" under Sec 2F of the National Biodiversity Act.

We have presented above the facts of the arrangement as envisaged by the project partners. As indicated earlier, the project is primarily funded by Department of Biotechnology, Government of India to ensure technology reach to resource poor farmers and to facilitate varieties to gain technology access in order to provide advantage to resource poor farmers to save their own seeds and cultivate them. The role of Sathguru is that of the project coordinator only.

Thanking you
Sincerely,


K. Vijayaraghavan
Director



National Biodiversity Authority



C. Achalender Reddy, I.F.S.,

Secretary

Tel : 044 2254 1071

Fax : 044 2254 1074

email: secretary@nbaindia.in

Website: www.nbaindia.org

TICEL Bio Park

5th Floor, Taramani Road,

Taramani, Chennai - 600 113

Tamil Nadu, India

NBA/Tech/13/4/2010/11-12/ 286

Dated: 25-04-11

To

Shri. K.S.Sugara IFS,
Member Secretary
Karnataka Biodiversity Board
Ground Floor, "Vanavikas"
18th Cross, Malleshwaram,
Bengaluru - 560003

Sir,

Sub: Violation of BD Act, 2002 relating to access and utilization of local brinjal varieties for development of Bt brinjal by M/s. Mahyco – reg.

Ref: 1. Your letter – No.KBB/BT.B/77/2010-11/1914 dated: 29.03.11
2. NBA's letter – NBA/Tech/13/4/2010/10-11/875 dated:28.03.11

With reference to the letter cited above, it is to inform as follows:-

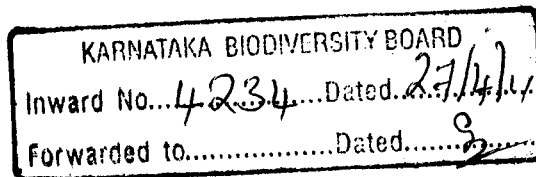
1. **Whether the permission of NBA is required or not in view of the fact that there is involvement of foreign element and the commercialization aspect of the research project?**

Reply: Certain persons as defined under sub-section (2) of Section 3 of the BD Act require prior approval of NBA for biodiversity related activities such as research or commercial utilization or bio-survey and bioutilization.

In the present case, if any research results have been transferred to M/s. Mahyco or M/s. Satguru under the sublicense agreement, University of Agriculture Science, Dharwad (UAS-D) may have been in violation of Sec.4 of the Act.

With respect to M/s. Mahyco is concerned, it is to be found whether the Bt Gene was transferred to UAS-D or the same was transferred after incorporation of the same in the local variety of Brinjals. If the Bt Gene was transferred by M/s.Mahyco after incorporating the same into the local variety of brinjal, then M/s. Mahyco is in violation of Section 3 of the Act which requires prior approval of NBA before obtaining any biological resources occurring in India. It is also to be found whether the Bt brinjal has been commercialized in any manner by M/s.Mahyco during or after entering into the sub license Agreement.

Handwritten signature and date: 27/4/11



2. Under what clause the permission of NBA is not required?

Reply: NBA's permission is not required, if the said research project falls within the exemption provided for in Section 5 of the Act.

3. As per the Section 5(1) of BD Act, Sec. 3&4 shall not apply to collaborative research project, when the collaborative research projects conform to the policy guidelines issued by the Central Government. Kindly clarify whether this research project conforms to the policy guidelines of central Government? (a copy of the policy guidelines may be supplied).

Reply: The said research project seems pirma facie fall outside the scope of guidelines issued by the Central Government. Further, the NBA has not received any application from any of the parties under Sec. 3, 4 or 6.

We would appreciate if Karnataka Biodiversity Board deputs an Officer and verify the factual details mentioned by us in our reply to the first question above and also points raised in NBA's letter cited above under reference. Awaiting your response on the matter. This may kindly be treated on TOP PRIORITY.

Yours sincerely,



(C. Achalender Reddy)
Secretary, NBA



KARNATAKA BIODIVERSITY BOARD
(Forest, Ecology and Environment Dept.)



No. KBB/Bt.B/77/11-12/918

Date:06.04.11

To,

1. Director of Research,
Maharashtra Hybrid Seeds Company Ltd.,
Resham Bhavan, 4th floor, 78, Veer Nariman Road,
Mumbai – 400 020.
2. The Director,
Sathguru Management Consultants Pvt Ltd.
15, Hindi nagar, Panjagutta,
Hyderabad – 500 034.

Sir,

**Sub: Objectives in entering agreements with UAS, Dharwad in
implementation of Bt. Brinjal project and stage of achieving these
objectives – reg.**

Ref: National Biodiversity Authority's letter No.NBA/Tech/13/4/2010/10-11/875,
dated. 28.03.2011.

With reference to the above subject, your kind attention is to drawn to the "sublicense agreement" made and entered into, by and between "MAHYCO Ltd and Sathguru Management Consultants Private Ltd, and UAS, Dharwad in implementation of Bt.Brinjal project.

UAS, Dharwad as sub licensee used six local varieties of Brinjal for development of Bt.Brinjal. This was widely opposed by NGOs and farmers across the country. UAS, Dharwad should have obtained permission from National Biodiversity Authority for using local varieties (bio-resources) of Brinjal, which is a violation of provisions of Biological diversity Act 2002. This is clearly defined in sections 3, 4, 5 & 7 of Biological diversity Act 2002.

Environment Support Group (ESG), a Bangalore based NGO had made representations to Karnataka Biodiversity Board and National Biodiversity Authority asking for clarification on violation of the Act by UAS, Dharwad.

This subject was discussed in the 16th authority meeting of National Biodiversity Authority and as it was decided in the meeting, the secretary,NBA, has written to Karnataka Biodiversity Board asking to obtain information from M/s Mahyco and M/s Sathguru regarding their objectives in entering into agreements with UAS, Dharwad and stage of achieving those goals, stating clearly about research materials and results shared so far.

Hence, you are requested to furnish the above said information as early as possible as it has to be placed before fact finding committee of National Biodiversity Board for further analysis.

Yours faithfully,

**Chief Conservator of Forests
and Member Secretary**

Ground Floor, "VANA VIKAS", 18th Cross, Malleshwaram, BANGALORE - 03.

Ph : 080- 23448783, Fax : 080-23440535 E-mail : kbb.kar@gmail.com Website : www.kbb.kar.nic.in

ದಿನಾಂಕ: 6.4.11.ರಂದು
ರವಾನಿ ಸಲ್ಲಿಸಲಾಗಿದೆ



National Biodiversity Authority

C. Achalender Reddy, I.F.S.,

Secretary

Tel : 044 2254 1071

Fax : 044 2254 1074

email: secretary@nbaindia.in

Website: www.nbaindia.org



TICEL Bio Park

5th Floor, Taramani Road,

Taramani, Chennai - 600 113

Tamil Nadu, India

NBA/Tech/13/4/2010/10-11/875

Dated: 28-03-11

To

Shri. K.S.Sugara IFS,
Member Secretary
Karnataka Biodiversity Board
Ground Floor, "Vanavikas"
18th Cross, Malleshwaram,
Bengaluru - 560003

Sir,

Sub: Violation of BD Act, 2002 relating to access and utilization of local brinjal varieties for development of Bt brinjal by M/s. Mahyco – reg.

Ref: 1. Our letter- NBA/Tech/WP/17/3/10/10-11/497 dated: 24.02.10
2. Our letter – NBA/Tech/13/4/2010/10-11/939 dated: 17.04.10
3. Your letter – No.KBB/BT.B/77/09-10/2093 dated: 12.04.10

With reference to the subject cited above, it was decided in the 16th Authority Meeting that the NBA should obtain authentic information from the concerned institutions on this issue and make it available to fact finding committee for further necessary action. In this regard, the fact finding committee has requested to provide the following information/documents for further analysis:

1. A brief summary of the factual status of progress of implementing the agreements/sub-agreements between with UAS, Dharwar with its business partners M/s. Mahyco and M/s. Satguru also information about the use of locally adapted cultivars in this programme disclosing their identities.
2. Obtain information from M/s. Mahyco and M/s. Satguru regarding their objectives in entering such agreements with the UAS, Dharwar and the stage of achieving those objectives, stating clearly about the research materials and results shared so far.

In this regard, it is requested to kindly provide the aforementioned details for onward submission to the fact finding committee for further action.

Yours sincerely,

(C. Achalender Reddy)
Secretary, NBA

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31/3/11
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31/3/11

KARNATAKA BIODIVERSITY BOARD	
Inward No. 4147	Dated 31/3/11
Forwarded to	Dated

Maharashtra Hybrid Seeds Company Limited

Resham Bhavan, 4th Floor, 78, Veer Nariman Road, MUMBAI - 400 020 (M.S.) INDIA
Phone : (+91-22) 3027 3025, 3027 3016, 3027 3007, 3027 3031
Fax : (+91-22) 2204 7871 • E-mail : info@mahyco.com

BY REGD. POST/ SPEED POST - A/D

June 25, 2010

The Addl. Principal Chief Conservator
of Forests and Member Secretary
Karnataka Biodiversity Board
(Forest, Ecology and Environment Dept.)
Ground Floor, "VANA VIKAS"
18th Cross, Malleshwara
Bangalore - 560 003.

**SUB: VIOLATION OF BIOLOGICAL DIVERSITY ACT 2002 IN MATTERS RELATING TO
ACCESS AND UTILIZATION OF LOCAL BRINJAL VARIETIES FOR DEVELOPMENT
OF BT. BRINJAL BY M/S MAHYCO AND OTHERS AND RELATED ISSUES**

Dear Sir,

This has reference to your letter dated 28th April, 2010 and our letter dated 13th May, 2010. In this regard, we submit as under:

1. At the outset, we submit that we have not violated any of the provisions of the Biological Diversity Act, 2002. Maharashtra Hybrid Seeds Company Ltd. ("Mahyco") is a law abiding company and we comply with all the applicable laws/ rules and regulations. Mahyco is also recognised by department of Science & Technology and is recipient of many awards
2. Vide the afore-mentioned letter, you have alleged that Mahyco has accessed 6 local varieties of Brinjal as specified in your letter under reply. It has further been alleged that Mahyco has inserted Cry 1Ac gene and provided the material to University of Agricultural Sciences, Dharwad (UAS Dharwad). Further, Mahyco has been asked to revert on whether Mahyco has accessed the bio-resources as stated for commercial utilization, and if commercial utilization has indeed taken place, and whether Mahyco had provided prior intimation as required under section 7 of the Biological Diversity Act, 2002 (the Act). In response to the same, it is stated as under:
 - (i) Mahyco has been conducting activities related to research and development of transgenic crops through transformation, including insect tolerant eggplant, for several years. For the said purpose, Mahyco has been conducting research on hybrid seeds which have been developed by Mahyco itself. It is pertinent to point out that such research was duly approved under Rules for Manufacture, Use, Import, Export and Storage of Hazardous Micro Organisms, Genetically Engineered Organisms or Cells, 1989 (Rules 1989).



Registered Office :

Resham Bhavan, 4th Floor, 78, Veer Nariman Road, MUMBAI - 400 020 (M.S.) INDIA
Phone : (+91-22) 3027 3025, 3027 3016, 3027 3007, 3027 3031
• Email : info@mahyco.com • Fax : (+91-22) 22047871 • Website : www.mahyco.com

*Ring an
30/6/10
at 2:30 PM*

Maharashtra Hybrid Seeds Company Limited

Resham Bhavan, 4th Floor, 78, Veer Nariman Road, MUMBAI - 400 020 (M.S.) INDIA

Phone : (+91-22) 3027 3025, 3027 3016, 3027 3007, 3027 3031

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- (ii) UAS Dharwad had approached Mahyco for introgression of Cry1Ac gene by making back cross in the varieties (name of the varieties – Malpur Local, Manjari Gota, Kudachi Local, Udipi Local, 112 GO, Pabkavi Local) of Brinjal which were provided by UAS Dharwad.
- (iii) Mahyco has merely introgressed the Cry 1Ac gene in the varieties provided by UAS Dharwad. Mahyco has used conventional breeding techniques for introgression of the Cry 1Ac gene in the varieties provided by UAS Dharwad.
- (iv) Mahyco has only introgressed the Cry1Ac gene in the varieties provided by UAS Dharwad and is not engaged in commercial utilization of such seeds/ varieties. It is further pertinent to point out that Mahyco is not charging any royalty fee from UAS Dharwad in respect of any utilization of the varieties in question by UAS Dharwad for the use of resource constrained farmers. The technology provided by Mahyco to Dharwad is royalty free. It is submitted that the technology is provided to UAS Dharwad for distribution of seeds - other than by way of sale, at-cost to resource constrained farmers and not for commercialisation - and technology is provided with no payment for access and no royalty payable thereon.
- (v) It is further pertinent to point out that UAS Dharwad is a public institution and the development of Bt Brinjal by them is for the benefit of the resource constrained farmers and Mahyco has provided its technology to UAS Dharwad which is royalty free, for the benefit of the resource poor farmers.
- (vi) In view of the afore-said, Mahyco did not undertake any activity which required Mahyco to provide prior intimation to the Biodiversity Board under Section 7 of the Act.
- (vii) It is submitted that Mahyco is not in violation of any of the provisions of the Act.

In view of the afore-stated you are requested to consider the afore-mentioned submissions before taking any decision in the matter. We also request this Authority/ Board to grant us a personal hearing in the matter.

Thanking you

Yours Sincerely,
For Maharashtra Hybrid Seeds Co. Ltd.



Authorized Signatory



Registered Office :

Resham Bhavan, 4th Floor, 78, Veer Nariman Road, MUMBAI - 400 020 (M.S.) INDIA

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