

**GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA**

UNSTARRED QUESTION NO:3442
ANSWERED ON:15.12.2006
GENETIC ENGINEERING
Lagadapati Shri Rajagopal

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) whether any Non-Governmental Organizations (NGOs) have demanded that the performance of Bt. Cotton varieties must be reviewed to determine their suitability to the Indian conditions ;
- (b) if so, the details thereof and the action taken thereon ;
- (c) whether the Genetic Engineering Approval Committee (GEAC) has approved new varieties of Bt. Cotton for some States despite objections raised in the matter ; and
- (d) if so, the details thereof and the reasons therefore ?

Answer

MINISTER OF SCIENCE & TECHNOLOGY AND MINISTER OF EARTH SCIENCES(KAPIL SIBAL)

(a)&(b) No, Sir. No Non-Governmental Organization (NGO) has demanded review of performance of Bt. Cotton varieties to determine their suitability to the Indian conditions. However, NGOs like the Center for Sustainable Agriculture, Bharat Krishak Samaj, Gene Campaign and Greenpeace have submitted representations to Genetic Engineering Approval Committee (GEAC), Ministry of Environment & Forests, Government of India alleging failure of the crop due to poor yield, inability to provide protection from bollworm attack, susceptible to other insects such as sucking pests, jassids, poor germination, genetic purity etc. and most of them were specific to Warangal Distt of Andhra Pradesh. The representations of the above NGOs were considered in the GEAC meetings and clarifications were sought from various state governments and also from Central Institute for Cotton Research (CICR), Nagpur who reported that the performance of Bt cotton varieties were good and no susceptibility to bollworm developed. The Bt gene has been introduced in Cotton specifically to control bollworm infestation. The success of a Bt variety, therefore, has to be measured in terms of its effectiveness against bollworm only. There has been an overall increase in the cultivation of Bt cotton during 2002-2004 in India. Reports received from CICR, Nagpur indicates that the bollworm infestation in Bt. cotton crops has been generally below the Economic Threshold Level (ETL) of damage.

(c)&(d) The GEAC has approved in total 62 Bt cotton hybrids for environmental release and commercial use by private sector companies and the details are given at Annexure. The hybrids approved for environmental release has been tested for its safety, efficacy agronomic advantage and economic viability prior to its release through a rigorous testing procedure. The Bt seeds were extensively tested in the contained and multi-locational trials under supervision of the Review Committee on Genetic Manipulation (RCGM) as per the detailed guidelines and procedures framed for the purpose. Subsequent to this, Bt seeds were put under the large scale field trials as approved by the GEAC under the Indian Council of Agriculture & Research (ICAR) testing system. The GEAC has taken into consideration the recommendations of the Monitoring-cum-Evaluation Committee (MEC) and ICAR with respect to findings of the biosafety studies and agronomic evaluation while approving the Bt hybrids for commercial cultivation.

ANNEXURE

Bt Cotton varieties approved for commercial cultivation in the various zones during 2002-2006.

S.No Name of Hybrids Name of Company Gene Event Zone
April 2002

1. MECH 12 Bt M/s Mahyco cry1Ac (MON Central (renewed)
531 Event)

2. MECH 162 Bt M/s Mahyco cry 1 Ac (MON Central & South
531 Event) (renewed)

3. MECH 184 Bt M/s Mahyco cry 1 Ac (MON Central & South
531 Event) (renewed)

April 2004

4. RCH 2 Bt M/s Rasi Seeds cry 1 Ac (MON Central & South
Ltd 531 Event)

April- June 2005

5. NCS - 207 Mallika M/s Nuziveedu cry 1 Ac (MON Central & South
Seeds Ltd. 531 Event)

6. NCS - 145 Bunny M/s Nuziveedu cry 1 Ac (MON Central & South
Seeds Ltd - 531 Event)

7. RCH -144 Bt M/s Rasi Seeds Ltd cry 1 Ac (MON Central
531 Event)

8. RCH -118 Bt M/s Rasi Seeds Ltd cry 1 Ac (MON Central
531 Event)

9. RCH - 138 Bt M/s Rasi Seeds Ltd cry 1 Ac (MON Central
531 Event)

10. RCH - 20 Bt M/s Rasi Seeds Ltd cry 1 Ac (MON South
531 Event)

11. RCH - 368 Bt M/s Rasi Seeds Ltd cry 1 Ac (MON South
531 Event)

12. RCH - 134 Bt M/s Rasi Seeds Ltd cry 1 Ac (MON North
531 Event)

13. RCH - 317 Bt M/s Rasi Seeds Ltd cry 1 Ac (MON North
531 Event)

14. MRC - 6322 Bt M/s Mahyco cry 1 Ac (MON South

531 Event)

- 15. MRC - 6918 Bt M/s Mahyco cry 1 Ac (MON 531Event) South
- 16.MRC - 6301 Bt M/s Mahyco cry 1 Ac (MON 531Event) Central & North
- 17.MRC - 6304 Bt M/s Mahyco cry 1 Ac (MON 531Event) North

18.Ankur - 651 Bt M/s Ankur cry 1 Ac (MON 531 Event)Central&North
Seeds Ltd

19.Ankur 2534 Bt M/s Ankur cry 1 Ac (MON 531 Event) North
Seeds Ltd

20.Ankur - 09 M/s Ankur cry 1 Ac (MON 531 Event) Central
Seeds Ltd

April-July, 2006

- 21.MRC-6025 Bt. M/s Mahyco cry 1 Ac (MON 531 Event) North Zone
- 22.MRC 6029 Bt. M/s Mahyco cry 1 Ac (MON 531 Event) North
- 23.NCS-913 Bt. M/s Nuziveedu cry 1 Ac (MON 531 Event) North/Central/
Seeds Ltd South Zone

24. NCS 138 Bt. M/s Nuziveedu cry 1 Ac (MON 531 Event) North
Seeds Ltd

- 25. RCH 308 Bt. M/s Rasi Seeds Ltd. cry 1 Ac (MON 531 Event) North
- 26. RCH 314 Bt. M/s Rasi Seeds Ltd. cry 1 Ac (MON 531 Event) North
- 27. RCH 377 Bt. Ms/ Rasi Seeds cry 1 Ac (MON 531 Event) CentralZone
- 28. RCH 111 BG I M/s Rasi Seeds Ltd. cry 1 Ac (MON 531 Event) SouthZone
- 29. RCH-371 BG I M/ Rasi Seeds Ltd. cry 1 Ac (MON 531 Event) SouthZone
- 30. RCHB-708BG I M/s Rasi Seeds Ltd. cry 1 Ac (MON 531 Event) SouthZone
- 31. GK 205 Bt. M/s Ganga Kaveri cry 1 Ac (MON 531 Event) CentralZone
Seeds Pvt. Ltd.

32.GK 204 Bt. M/s Ganga Kaveri cry 1 Ac (MON 531 Event)Central Zone
Seeds Pvt.Ltd.

- 33.GK-209 Bt. M/s Ganga Kaveri cry 1 Ac (MON 531 Event)South Zone
- 34.GK-207 Bt. M/s Ganga Kaveri cry 1 Ac gene (Event 1)South Zone
- 35.KDCHH 9810 Bt. M/s Krishidhan cry 1 Ac (MON 531 Event)Central&South
Seeds Pvt.Ltd. Zone

36.KDCHH 9632 Bt. M/s Krishidhan cry 1 Ac (MON 531 Event) Central&South
Seeds Pvt.Ltd. Zone

37KDCHH 9821 Bt. M/s Krishidhan cry 1 Ac (MON 531 Event) CentralZone
Seeds Pvt.Ltd.

- 38 ACH-33-1 Bt. M/s Ajeet Seeds cry 1 Ac (MON 531 Event)Central&South
Ltd. Zone
- 39 ACH-155-1 M/s Ajeet Seeds cry 1 Ac (MON 531 Event)Central&South
Ltd. Zone
- 40Tulasi 4 Bt. M/s Tulasi Seeds cry 1Ac(MON 531 Event) Central&South
Pvt.Ltd. Zone
- 41Tulasi 117 Bt. M/s Tulasi Seeds cry 1 Ac(MON 531 Event)Central&South
Pvt.Ltd. Zone
- 42 NPH 2171 Bt. M/s Prabhat Seeds cry 1 Ac (MON 531 Event)Central&South
Ltd. Zone
- 43 Brahma Bt. M/s Emergent cry 1 Ac (MON 531 Event) Central & South
Genetics Zone
- 44VICH 5 Bt. M/s Vikram Seeds
Pvt.Ltd.
- 45 VICH 9 Bt. M/s Vikram Seeds cry 1 Ac(MON 531 Event)CentralZone&
Pvt.Ltd. South Zone
- 46 PRCH-102 Bt. M/s Pravardhan cry 1 Ac (MON 531 Event)Central Zone
Pvt.Ltd.
- 47 PCH-2270 Bt. M/s Prabhat Seeds cry 1 Ac gene (Event 1)South Zone
Ltd.
- 48 VCH-111 Bt. M/s Vikki Agrotech cry 1 Ac (MON 531 Event)Central Zone
Pvt.Ltd
49. MRC 7301 BG II M/s Mahyco cry 1 Ac and Cry 2 Ab Central Zone
(MON 15985 Event)
50. MRC-7326 BG II M/s Mahyco cry 1 Ac and Cry 2 Ab Central Zone
(MON 15985 Event)
51. MRC-7347 BG II M/s Mahyco cry 1 Ac and Cry 2 Ab Central Zone
(MON 15985 Event)
- 52.MRC-7351 BG II M/s Mahyco cry 1 Ac and Cry 2 Ab South Zone
(MON 15985 Event)
53. MRC 7201 BG II M/s Mahyco cry 1 Ac and Cry 2 Ab South Zone
(MON 15985 Event)

54. KDCHH-441 BG II M/s Krishidhan cry 1 Ac and Cry 2 Ab Central Zone
Seeds Pvt.Ltd. (MON 15985Event)

55. ACH-11-2 BG II M/s Ajeet Seeds cry 1 Ac and Cry 2 Ab CentralZone
Ltd. (MON 15985 Event)

56. JKCH 1947 Bt M/s J.K.Agri cry 1 Ac gene (Event 1) North Zone
Genetics Pvt.Ltd.

57. JK Varun Bt. M/s J.K.Agri cry 1 Ac gene (Event 1) Central Zone
Genetics Pvt.Ltd.

58. JK Durga Bt M/s JK Agri cry 1 Ac gene (Event 1) South Zone
Genetics Ltd.

59. JKCH-99 Bt M/s JK Agri cry 1 Ac gene (Event 1) South Zone
Genetics Pvt.Ltd.

60. NCEH-6R M/s Nath Seeds Ltd. (cry 1 Ab + Cry Ac) GFM North Zone

61. NCEH-2R M/s Nath Seeds Ltd. (cry 1 Ab + Cry Ac) GFM Central Zone

62. NCEH-3 R M/s Nath Seeds Ltd. (cry 1 Ab + Cry Ac) GFM South Zone

States covering each zone: Central Zone (Madhya Pradesh, Maharashtra & Gujarat)
South Zone (Andhra Pradesh, Karnataka & Tamil Nadu) and North Zone (Punjab,
Rajasthan & Haryana).

Approval not renewed for Andhra Pradesh.