

GOVERNMENT OF INDIA  
MINISTRY OF AGRICULTURE AND FARMERS WELFARE  
DEPARTMENT OF AGRICULTURAL RESEARCH & EDUCATION

**LOK SABHA**  
**UNSTARRED QUESTION NO. 3304**  
TO BE ANSWERED ON 16/03/2021

**HIGH-YIELDING VARIETIES OF SEEDS**

3304. SHRI KANAKMAL KATARA:

Will the Minister of AGRICULTURE AND FARMERS WELFARE  
कृषि और किसान कल्याण मंत्री be pleased to state:

- (a) whether the Government proposes to develop such varieties of high-yielding seeds which are effective in various types of agri-environmental regions with a view to check the adverse impact on farming;
- (b) if so, the details thereof;
- (c) the names of the high-yielding seeds including seeds of paddy, wheat, potato, onion, corn, moong, etc. developed to check the problems emerging due to global environmental changes; and
- (d) the details of the research being done in this regard?

**A N S W E R**

THE MINISTER OF AGRICULTURE AND FARMERS WELFARE  
कृषि और किसान कल्याण मंत्री (SHRI NARENDRA SINGH TOMAR)

**(a) & (b):** Yes, National Agricultural Research System under the aegis of Indian Council of Agricultural Research has developed more than 5700 varieties of different field and horticultural crops since 1969. During 2014 till January 2021, total 1575 varieties of 70 field crops have been developed which include 770 of cereals, 235 of oilseeds, 236 of pulses, 170 of fibre crops, 104 of forage crops, 52 of sugarcane and 8 of other crops. In addition, 288 varieties of horticultural crops have also been released and notified. These varieties are released at central and state levels after multilocation trials over years in different agroclimatic conditions of the country.

(c) Total 262 abiotic stress tolerant varieties of different crops have been developed to check the problems emerging due to global environmental changes which include Flood/Water submergence tolerant varieties (41), Drought/moisture stress/water stress tolerant varieties (158), Salinity/Alkalinity/ Sodic soils tolerant varieties (31), Heat stress/high temperature tolerant varieties (25) and Cold/Frost/ winter chilling tolerant field crop varieties (7) (*Annexure I*).

(d) In addition to development of climate resilient varieties, demonstrations of climate resilient technologies is being taken up in 151 climatically vulnerable districts and 446 villages. The efforts of National Innovations on Climate Resilient Agriculture (NICRA) led to making of 26 villages as residue burning free villages adjoining the NICRA villages, in the states of Punjab and Haryana. Village level institutional mechanisms such as Village Level Climate Risk Management Committees (VCRMC), custom hiring centres are created for managing infrastructure created and to improve the timeliness of operations during the limited window periods of moisture availability in rainfed areas and to promote small farm mechanization for adoption of climate resilient practices. In the last nine years, 16958 training programs were conducted throughout the country under NICRA project to educate stakeholders on various aspects of climate change and resilient technologies, covering 514816 different stakeholders including farmers so as to enable wider adoption of climate resilient technologies and increase in yields. As per latest Assessment Report 5 of Intergovernmental Panel on Climate Change (IPCC) on risk assessment, 109 districts are considered to very high risk and 201 districts as high risk. Developed agricultural contingency plans for 650 districts to address extreme weather conditions besides issuing agro advisories twice in a week.

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**Climate resilient varieties (262) developed to check problems emerging due to global environmental changes during May 2014 till date**

<b>Crops and no. of varieties</b>	<b>Name of varieties</b>
<b>A. Flood/ water submergence/water logging tolerant varieties (41)</b>	
Rice (25)	CR Dhan 505; Samba Sub-1 (IET 21248); Tanmayee (OR2339-8) (IET20262); CR 1009 Sub 1; CR Dhan 508 (IET 23601); Bheema (Dheera) (MTU 1140); Rajdeep CN 1039-9 (IET 17713) (CNR 4); CR Dhan 506 (IET 23053); CR Dhan 408 (IET 20265) Chakaakhi; CR Dhan 507 (IET 22986); CR Dhan 409 (IET 23110); CO 43 Sub-1 (IET 25676); DRR Dhan 50 (IET 25671); Bahadur Sub-1; Ranjit Sub-1; Ashutosh (OR 2331-14) (IET 21341); Tripura Jala -1; CR Dhan 801 (IET 25667) (IR 96322-34-223-B-1-1-1-CR3955-2); CR Dhan 510 (IET 23895) (CR2593-1-1-1-1); Ksheera (IET 24495) (MTU 1172); CR Dhan 802 (Subhas) (IET 25673) (CR3925-22-7); CAU-R4 (Eenotphou) (IET 22469); IR 64 – Sub 1 (IET 21247); NDR 9930111 (IET 19117); Sabour Sampanna Dhan (IET 25960)
Maize (2)	Jawahar Maize 218; Pusa Jawahar Hybrid Maize-1
Jute (4)	JRO 2407 Samapti (Tossa Jute); Ishani (JRC-9057) White Jute; NCJ-28-10 AAUCJ-2 (Kkhyati); JRCJ-11
Rice bean (1)	Bidhan Rice Bean-3 (KRB-19)
Sugarcane (9)	Sankeshwar 814 (Co Snk 05104); Sankeshwar 049 (Co Snk 05103); Gujarat Sugarcane 5 (CoN 05071); Gujarat Sugarcane 7 (CoN 04131); Buddhi 2003 A 255 (CoA 08323); CoLK 09204 (Ikshu-3); CoA 11321 (Sri Mukhi); CoLK 12207 (Ikshu-6); Ranga (2009 V 127 (Co V 15-356)
<b>B. Drought/moisture stress /water stress tolerant varieties (158)</b>	
<b>CEREALS (83)</b>	
Rice (37)	Drt I (IET 22836); Birsa Vikas Dhan 111; Birsa Vikas Dhan 203; Sabour Shree (RAU 724-48-33); Kalachampa; DRR Dhan 44 (IET 22081); DRR Dhan 43 (IET 22080); ADV 8301 (IET22410) Hybrid; CR Dhan 101 (Ankit) (IET 21627); DRR Dhan 46; JRH 19 Hybrid; PAC 129 (Arize 6129) Hybrid; BS 129G (Arize 6129 Gold) Hybrid; Nandyala Sona (IET 23715); Daksha (KMP-175); DRR Dhan 50 (IET 25671); DRR Dhan 47; CAU-RI (IET 23544); Him Palam Lal Dhan-1; Tripura Hakuchuk – 2; Tripura Khara – 2; Tripura Khara -1; Tripura Hakuchuk – 1; Tripura Aush -1; ADT 51 (AD 09367) (IET 23617); CR Dhan 801 (IET 25667); DRR Dhan 52 (IET 23354); Ratnagiri-8 (IET 25493); CR Dhan 802 (IET 25673); VNR-2111 PLUS (IET 24075); Uttar Sona UBKVR-1 (IET 24171); MP 3030 (IET 25764); CR Dhan 102 (IET 25121); CO 53 (IET 24057); PNP 24; DRR Dhan 54 (IET25653); Sabour Sampanna Dhan (IET 25960)
Wheat (19) – Rainfed/ Restricted irrigation	WH 1124; DBW 107; WH 1142; UAS 347; Chhattisgarh Genhu 4 (CG 1015); Sabour Nirjal (BRW 3723); DBW 173; Pusa Wheat 1612 (HI 1612); Pusa Wheat 8777 (HI 8777); HUW 669 (Malviya 669); AAI-W9 (SHIATS-W9); AAI-W10 (SHIATS-W10); Karan Shriya (DBW 252); Pusa Wheat 1621 (HI 1621); DDW 47; Gujarat Wheat 1346 (GW 1346); Pusa Wheat 8802 (HI 8802); Pusa Wheat 8805 (HI 8805); UAS-466

Maize (8)	KMH-7148 Hybrid; Candy (KSCH-333) Hybrid; D2244 (DAS-Maharashtra-501) Hybrid; PMH 7 (JH 3956) Hybrid; GK 3150 Hybrid; DRONA (KMaharashtra-2589) Hybrid; MAH-14-5; Pusa Jawahar Hybrid Maize-1
Sorghum (6)	CSV 32F (SPV 2128); Phule Rohini (RPASV3); Phule Madhur (RSSGV 46); RVICSH 28 (Hybrid); CSV 42(SPV 2423); Palem Pacha Jonna 1 (PYPS-2)
Pearl Millet (8)	NBH 5061 (MH 1812) Hybrid; NBH 5767 (MH 1785) Hybrid; PBH – 306 (MH 1962) Hybrid; AHB 1200 Fe (AHB 1200) hybrid; PB 1705 (MH 2008) Hybrid; BHB-1202 (Bikaner Hybrid Bajra-1202); MH 2224 (PB 1852); Proagro Marutej (XMT 1358)
Little millet (2)	Jawahar Kutki 4 (JK 4); TNPsu 177
Kodo millet (1)	Jawahar Kodo 137
Finger Millet (2)	Vakula (PPR 2700); Chhattisgarh Ragi-2 (BR-36)
<b>OILSEEDS (12)</b>	
Soybean (3)	Pant Soybean 24 (PS 1477); Shalimar Soybean – 1 (AGR/538); NRC 136
Groundnut (3)	GKVK 5; Kadiri Amaravathi (K1535); Dh 256
Sesame (1)	CUMS-17 (Suprava)
Indian Mustard (3)	RGN-298; GM-3 (Gujarat Mustard-3); DRMR 1165-40
Toria (2)	Raj VijayToria 1; Tapeswari (TK 06-1)
<b>PULSES (23)</b>	
Urdbean (1)	IPU 11-02 - 81st 2018
Pigeonpea (13)	Prakash (IPA 203); Gujarat Junagadh Pigeonpea-1 (GJP-1); Ujwala (PRG 176); Mannemkonda Kandi (ICPH 2740) Hybrid; GT-102; RG 5; Amaravathi (LRG-52); BDN 716 (BDN 2008-7); GRG 811 (Dharamaraj); Warangal Kandi-1 (WRGE-97); Krishna (LRG 105); Tirupati Kandi 59 (TRG-59); Gujarat Til 5 (GT-105: Janki)
Horse gram (2)	Phule Sakas (SHG 0628-4); Bilasa Kulthi (BSP 15-1)
Cluster bean (1)	Karan Guar 1 (RGr-12-1)
Chickpea (3)	Pusa 3043 (BG 3043); Pusa Chickpea 10216 (BGM 10216); Super Annigeri-1 (MABC-WR-SAI)
Lentil (2)	Kota Masoor 2 (RKL 14-20); Kota Masoor 3 (RKL 605-03)
Mothbean (1)	RMO-2251 (Marudhar)
<b>FIBER CROPS (7)</b>	
Cotton (5)	GN.Cot.25; SVPR 1 (TSHH-0629) Hybrid; Nirmal-433 (NACH-433); Raj Vijay Kapas 67 (RVK 67); LAHB Cotton – 1
Roselle (2)	Sampurna (CRIJAFR 8); Central Roselle Ratna (CRIJAF R-5)
<b>FORAGES (12)</b>	
Pearl Millet (1)	Moti Bajra (APFB-09-1)
Forage Sorghum (1)	Fodder Sorghum CO 31 (TNFS 0952)
Cowpea (1)	CO 9
Fescue (1)	Palam Fescue Grass-2 (Hima 14)
Guinea Grass (2)	Bundel Guinea -4 (JHGG 08-1); Dharwad Guinea Grass1(DGG-1) (RSDGG-1)
Rice bean (2)	JRBJ 05-2; Shyamalima (JCR-7-20)
Marvel Grass (1)	Phule Govardhan -(Marvel -2008-1)
Anjan Grass (1)	CAZRI Anjan-358 (CAZRI 358)
Forage Sewan Grass (1)	CAZRI Sewan-1 (CAZRI 30-5)
Setaria Grass (1)	Him Palam Setaria Grass 2 (S 25)

<b>SUGARCROPS (18)</b>	
Sugarcane (18)	CoBIn 02173(22/94) D01YANG; CO 0212; Gujarat Sugarcane 5 (CoN 05071); Gujarat Sugarcane 7 (CoN 04131); Co 09004 (Amritha); CoVSI 03102; CoVC 99463; Ikshu - 4 (CoLk 11206); Sugarcane CO 06022; CoOr 10346 (Charchika); SNK 07680 (CoSnk 13103) Hiranyakeshi; SNK 632 (CoSnK 03632); Uphar (Co 10026); CoLk 12209 (Ikshu-7); Phule-10001 (MS 10001); VSI 12121 (VSI 08005); Swarnamukhi (2005T16); Co 13013 (Akshaya)
<b>Vegetables (3)</b>	
Potato (3)	Kufri Thar I; Kufri Thar II; Kufri Thar III
<b>C. Salinity/Alkalinity/Sodic soils tolerant varieties (31)</b>	
Rice (11)	Chinsurah Nona 1 (IET 23403); CARI Dhan 5 (IET 16885) (BTS 24); GNR-5 (NVSR-6137); CSR-46 (CSR 2K 262); CSR 56 (IET 24537); CSR 60 (IET 25378); Ratnagiri-8 (RTN 28-1-5-3-2) (IET 25493); Chinsurah Nona - 2 (Gosaba-6) (IET 21943); Pandu Ranga (MCM 100) (IET 22611); CSR 49 (IET 20329); CSR 52 (IET 23206)
Wheat (2)	KRL 283; Karan Shriya (DBW 252)
Barley (2)	RD 2794; RD 2907
Indian Mustard (3)	CS-58 (CS 1100-1-2-2-3); CS-60 (CS2800-1-2-3-5-1); JK Samriddhi Gold (JKMS 2)
Lentil (2)	PSL-9; 2. PDL-1
Sesbania (1)	Gujarat Dhanicha-1 (Vasynthara)
Sugarcane (10)	Sankeshwar 814 (Co Snk 05104); CO 0212; Co 09004 (Amritha); CoG 6 (G 2005 019); Uphar (Co 10026); Phule-10001 (MS 10001); VSI 12121 (VSI 08005); Swarnamukhi (2005T16); Ranga (2009 V 127 (Co V 15-356); Co 13013 (Akshaya)
<b>D. Heat stress/ high temperature tolerant varieties (25)</b>	
<b>Cereals (15)</b>	
Rice (3)	DRR Dhan 52 (IET 23354); DRR Dhan 47 (IET 23356); NLR 40024
Maize (2)	GK 3150 Hybrid; PMH 7 (JH 3956) Hybrid
Wheat (10)	<b>Tolerant to higher terminal heat/ temperature (4):</b> WH 1124; DBW 107; AAI-W (SHIATS-W9); AAI-W10 (SHIATS-W 10) <b>Heat tolerant (6):</b> Chhattisgarh Genhu 4 (CG 1015); DBW 173; Pusa Wheat 1612 (HI 1612); Pusa Wheat 8777 (HI 8777); HD 3293; CG 1029 (Kanishika)
<b>Oilseeds (4)</b>	
Sesame (1)	CUMS-17 (Suprava)
Indian Mustard (3)	DRMR 1165-40; RGN-298; GM-3 (Gujarat Mustard-3)
<b>Pulses (3)</b>	
Chickpea (1)	Pusa 3043 (BG 3043)
Lentil (2)	Kota Masoor 2 (RKL 14-20); Kota Masoor 3 (RKL 605-03)
<b>Fiber Crop (1)</b>	
Cotton (1)	SVPR 1 (TSHH-0629) Hybrid
<b>Vegetable crops (2)</b>	
Potato (2)	Kufri Surya, HT/7-1329
<b>E. Cold tolerant/Frost/ winter chilling tolerant field crop varieties (7)</b>	
<b>Cereals (4)</b>	
Rice (3)	BRRD Dhan 69 (WTR 1) (IET 24461); JGL 11118 (Anjana); JGL 1700 (Prathyumna)
Maize (1)	GK 3150 Hybrid
<b>Pulses (1)</b>	
Lentil (1)	Shalimar Masoor - 3
<b>Forage Crops (2)</b>	
Setaria Grass (1)	Him Palam Setaria Grass 2 (S 25)
Fescue Grass (1)	Palam Fescue Grass-2 (Hima 14)

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