

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

**LOK SABHA**  
**UNSTARRED QUESTION NO. 404**  
TO BE ANSWERED ON 18/07/2017

**FLOOD TOLERANT SEEDS**

404. SHRI S.R. VIJAYAKUMAR:  
SHRI GAJANAN KIRTIKAR:  
SHRI ASHOK SHANKARRAO CHAVAN:  
SHRI SUDHEER GUPTA:  
SHRI BIDYUT BARAN MAHATO:  
KUNWAR HARIBANSH SINGH:  
SHRI T. RADHAKRISHNAN:

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

- (a) whether the Government has developed different environmental friendly crop/seed varieties tolerant to flood/water logging and if so, the details thereof;
- (b) the name of the States where these seeds are being used along with the results thereof; and
- (c) the details of the action plan prepared by the Government to expand the use of these seeds to all the flood prone States of the country?

**A N S W E R**

MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE AND FARMERS WELFARE  
कृषि और किसान कल्याण मंत्रालय में राज्य मंत्री  
(SHRI SUDARSHAN BHAGAT)

(a) Yes, Madam. National Agricultural Research System (NARS) comprising of ICAR, State and Central Agricultural Universities is involved in the development of environmental friendly seeds of crop varieties which are tolerant to flood/ waterlogging conditions. Such varieties help in sustainable production in the states/regions where the problem of flood/ waterlogging is recurring. With the continued concerted research efforts of NARS, total 63 varieties tolerant to flood/water logging stresses have been developed which comprise of 25 of rice, 4 of maize, 17 of sugarcane, 14 of jute and 3 of soybean (Annexure-I).

(b) During 2013-14, 2014-15, 2015-16 and 2016-17; 30.2 lakh ton, 30.4 lakh ton, 31.6 lakh ton and 32.1 lakh ton, respectively certified/quality seeds of improved varieties of different crops tolerant to abiotic stresses including flood/waterlogging were made available to the farmers of different states (Rice – Odisha, West Bengal, Assam, Uttar Pradesh, Andhra Pradesh, Tamilnadu, Kerala; Sugarcane – Tamilnadu, Andhra Pradesh, Odisha, Punjab, Haryana, Uttar Pradesh, Uttarakhand, Gujarat, Maharashtra, Karnataka, Kerala, Madhya Pradesh, Chhattisgarh; Jute – Odisha, West Bengal, Assam, Bihar, Uttar Pradesh; Maize – Haryana, Punjab, Uttar Pradesh, Madhya Pradesh, Gujarat, Andhra Pradesh, Maharashtra, Karnataka, Bihar, Jharkhand, Chhattisgarh, Odisha, West Bengal, Himachal Pradesh, Tamilnadu; Soybean – Jharkhand, Chhattisgarh, Assam, West Bengal). Adoption of these varieties has led to sustainable production under problematic areas and state average productivity of respective crop remained static even under stressed environment.

(c) The Government of India has launched several Central Sector Crop Development Schemes viz., National Food Security Mission (NFSM), Bringing Green Revolution in Eastern India (BGREI), National Mission on Oil Seeds and Oil Palm (NMOOP) and National Mission on Agricultural Extension & Technology (NMAET) - Sub-mission on Seeds & Planting Material (SMSP). These schemes are operating in all the states including flood prone/water logged states also. Government provides assistance for flood tolerant seed production @ Rs. 1000 per quintal under the schemes/ programme of BGREI and for certified seed distribution @ Rs. 1000 per quintal under NFSM and foundation seed or certified seed distribution @ 50% of seed cost for one acre per farmer and training on seed production and seed technology is provided for production of quality seeds and also to upgrade the quality of farm saved seeds under NMAET - SMSP.

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**Flood/ water logging tolerant varieties/hybrids of different crops developed under National Agricultural Research System in India**

<b>Crop</b>	<b>Varieties/hybrids</b>
<b>Rice</b>	Swarna Sub-1, Sambha Mahsuri Sub 1, Savitri Sub 1, Varshadhan, Gayatri, Sarla, Pooja, Prateeksha, Durga, Jalamani, CR Dhan 505, CR Dhan 502, Jalnidhi, Neerja, Jaladhi 1, Jaladhi 2, Hemavathi, CR Dhan 401, CR Dhan 500, Hansaswari, Jayantidhan, Chakaakhi, CR Dhan 501, CR Dhan 508, CR 1009 Sub 1
<b>Maize</b>	HM-5, Seed Tech-2324, HM-10, PMH-2
<b>Sugarcane</b>	Co 98014 (Karan 1), Co 0239, Co 0118, Co 0238, Co 0233, Co 05009, Co 0124, Co 0237, CoLk 94184 (Birendra), Co Or 03151, CoPK 05191(Pratap Ganna 1), Co 87044 (Uttara), CoA 06321(Kanakamahalakshmi), CoSnk 05104 (Sankeshwar 814), CoN 05071 (Gujarat Sugarcane 5), CoN 04131 (Gujarat Sugarcane 7), CoA 08323 (Buddhi 2003 A 255)
<b>Jute</b>	JRO 7835, JRO 878, JRO 524, JRC 321, JRC 7447, JRC 532, JRC-517, Bidhan Pat 1, S19, Tarun, JRCM 2, KJC 7, JRC 9057, AAUCJ 2
<b>Soybean</b>	JS 97 52, JS 20-38, PK 472

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