

WRITTEN ANSWERS TO UNSTARRED QUESTIONS

Assessment of crops in different agro-ecological zones

1861. DR. K.V.P. RAMACHANDRA RAO: Will the Minister of AGRICULTURE be pleased to state:

(a) whether it is a fact that Indian Council of Agricultural Research (ICAR) undertakes comprehensive assessment of crops and traits required in different agro-ecological zones on a regular basis;

(b) if so, the details of the assessment made during last five years;

(c) the observations made therein; and

(d) the action being taken thereon?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI HARISH RAWAT): (a) Yes, Sir.

(b) Every year, in the All India Coordinated Research Projects' (AICRP) Workshops assessment on the aspects of crops and traits is done and zone-wise programmes are formulated for the ensuing season, based on the information received on the problems faced with regard to stresses/diseases/pests in different zones. Zone and location-specific technologies are generated through AICRP centres and tested for three years before making final recommendations.

(c) It has been observed that submergence, drought, cold & salinity in rice; drought and terminal heat in wheat, biotic and abiotic stresses in all major crops is causing problems in realizing yield potentials. Also, based on the suitability and profitability of the crops, cropping systems are changing in different zones, as for example, rabi maize, sorghum moongbean/urdbean are finding place in rabi rice/rice fallow areas. Single cross hybrids (SCH) are replacing the open pollinated varieties in maize on account of high productivity.

(d) Crop-wise varieties and technologies have been developed in different zones. During the last five years, 827 varieties (370 Centrally and 457 at state levels) have been released in different crops. Around 98,300 quintal of breeder seed of important varieties was produced during 2010-11. For the specific traits and stressed conditions, the details of several varieties in different crops are given in statement (See below) have been released in the past. Front Line Demonstrations (FLDs) for varieties and improved technologies developed through ICAR are conducted every year on farmers' fields through AICRP Centres located across the country. Monitoring teams are constituted for survey and surveillance for diseases and pests to take remedial steps to prevent damages from diseases and insect pests in collaboration with relevant agencies.

Statement

Crop Varieties/ Hybrids with specific traits suitable for different zones of the country Food Crops

Varieties	Traits	Zone
1	2	3
Rice		
Hybrid 6129	Resistant to Blast, brown spot and brown plant hopper	Irrigated areas of Punjab & Tamil Nadu
Improved Samba Mahsuri	Resistant to bacterial blight	Irrigated/shallow lowlands of Andhra Pradesh, Chhattisgarh, Jharkhand, Orissa, Bihar, Gujarat, Maharashtra
Improved Pusa Basmati 1	Resistant to blast	Basmati-growing areas of Delhi, Punjab, Jammu and Kashmir, Uttarakhand
Sahabhagi Dhan	Drought tolerance	Upland rice areas
Swarna Sub-1	Submergence tolerance	Flood prone shallow lands
CSR 27, CSR 30, CSR 36, Narendar Ushar, Shankar Dhan 3, Lunishri	Salinity stress tolerance	Inland Saline areas
CR Dhan 402, CR Dhan 403	Salinity stress tolerance	Coastal areas
Wheat		
PBW550	Resistant to yellow rust	Punjab, Haryana, West Uttar Pradesh (except Jhansi division)

1	2	3
VL 892	Medium fertility and restricted irrigation condition	Hills of Himachal Pradesh and Uttarakhand
HI 1544	High fertility and irrigated conditions	Madhya Pradesh, Rajasthan (Kota and Udaipur divisions) and Gujarat
PBW 527	Drought tolerance	North west plains
HI 1531, HI 1500, HI 8627	Drought tolerance	Central Zone
HD 2888	Drought tolerance	Eastern India
NIAW 34	High temperature stress tolerance	Peninsular zone late sown conditions
Raj 3765	High temperature stress tolerance	North western plain for late sown conditions
Raj 4037	High temperature stress tolerance	Peninsular India for normal sown conditions
KRL 14, KRL 19, KRL 210, KRL 213	Salinity stress tolerance	Inland saline areas
Maize		
QPM Hybrid HQPM7	Quality protein single-cross hybrids	Andhra Pradesh, Karnataka, Tamil Nadu and Maharashtra
QPM Vivek 9	Early maturing and quality protein	Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Andhra Pradesh
Buland	High temperature stress tolerance	Northern parts of India
PMH 1	High temperature stress tolerance	Irrigated areas of Punjab

PMH3	High temperature stress tolerance	Northern parts of India
HM9	High temperature stress tolerance	Bihar, Jharkhand, Orissa
Pusa hybrid Makka 1	Drought tolerance	Rajasthan, Gujarat, Madhya Pradesh
HM4	Drought tolerance	Punjab, Haryana, Uttar Pradesh, Andhra Pradesh, Maharashtra, Tamil Nadu and Goa
Pusa hybrid Makka 5	Drought tolerance	Whole of India
Sorghum		
2SH 25	Dual purpose and tolerant to grain mold diseases	Maharashtra, Andhra Pradesh, Madhya Pradesh, Karnataka and Gujarat
CSH 19 R, CSV 18	Drought tolerance	All rabi sorghum area
CSH 15 R	Drought tolerance	Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu
Pearl Millet		
HHB 67 improved, GHB 757, GHB 538	Drought tolerance	All dry areas of Western Rajasthan and Gujarat
Barley		
RD 2660, K603	Drought tolerance	North west plains region

1	2	3
Pulses		
Chickpea		
Karnal Chana	Tolerance to salinity	North West Plain Zone
CO1, ICCV 10	Drought tolerance	Southern Zone
Vijay, Vikas	Drought tolerance	Central Zone
RSG14,RSG888	Drought tolerance	North West Plain Zone
PKV Kabuli 4, IPCK 2004-29, PhuleG0517	Extra large seeded Kabuli	Central Zone
MNK 1	Extra large seeded Kabuli	South Zone
JG 6, JG 14	Resistance to wilt	Central Zone
DGP 92-3	Lodging tolerance	Central Zone
GNG 16	Lodging tolerance	North West Plain Zone
Pigeonpea		
BSMR 736, BSMR 175, Asha	Wilt/Sterility mosaic disease tolerance	Central Zone
NDA 1, MAL 13	Wilt/Sterility mosaic disease tolerance	North East Plain Zone
Pusa 992, PA 291, PAU 881	Short duration suitable for multiple cropping	North west plain Zone

Mungbean

HUM 1	Yellow mosaic virus tolerance	Central and Southern Zone
C06	Yellow mosaic virus tolerance	South Zone
IPM 02-3	Yellow mosaic virus tolerance	North East Plain Zone
Pusa Vishal	Yellow mosaic virus tolerance	North Plain Zone
Samrat, IPM 2-3, Meha, SML 668	Early maturing suitable for spring/ summer	North west plain zone and North East Plain zone
IPM2-14, TM96-2, LGG 460, LGG 410	Resistant to powdery mildew suitable for rabi/spring	South Zone

Urdbean

WBU 109, NDU 1 Azad Urd1,	Short duration suitable for multiple cropping	North East Plain zone
IPU-02-43, LBG 625, Vamban 4, WBG 26	Resistant to powdery mildew suitable for rabi/spring	South Zone
Lentil		
VL507	Resistance to wilt	North Hill Zone
HUL 57	Resistance to rust	North East Plain Zone
DPL 62, PL 6, PL7, IPL 406, IPL315	Large seeded	Central Zone and North Western plain Zone

1	2	3
Oilseeds		
Castor		
DCH519	Resistance to wilt and leaf hoppers	All castor growing zones
GC3	Resistant to wilt	Gujarat
Jwala	Tolerance to salinity and resistance to wilt	All castor growing zones
Rapeseed Mustard		
NRCDR2	High temperature tolerance	North West Plain Zone
LET-18, Pusa Mustard 21, Pusa Mustard 24, RLC1	Low erucic acid	North West Plain Zone
NRCDR 601	High temperature and salinity tolerance	North West Plain Zone
VL toria 3	Tolerance to cold	North Hill Zone
Soyabean		
JS97-52	Resistance to Yellow mosaic virus and collar rot	Central Zone and North Eastern Zone
NRC7	Pod shattering resistance	All soyabean growing zones
SL668, JS 97-52	Yellow mosaic resistance	All soyabean growing zones
NRC-7, JS 71-05	Pod shattering and drought tolerance	All soyabean growing zones
NARI 38, SSF 658	Resistant to wilt	All castor growing zones

Groundnut

Ajiya, Gimar1, TAG-24, GG20

Drought Tolerance

Central and South zone•

Gimar2, Kadiri9, Kadiri Haritandhra,
GreeshmaShort duration suitable for rabi/
spring

South Zone

Commercial Crops**Variety/Hybrid****Traits****Zone****Cotton**

HD 324

Tolerance to Fusarium wilt and
Leaf curl virus

North Zone

Hybrid Kalyan

Tolerant to Cotton Leaf curl virus

North zone

G.Cot. Hy 12

Tolerant to aphids and jassids

Central Zone

LRA5166

Tolerance to drought

Central Zone

KC3

Tolerance to drought

South Zone

Kanchana, L - 604

Resistance to whitefly

South Zone

MCU 5 VT, Surabhi

Resistance to verticillium wilt

South zone

Suraj

Long staple with jassid tolerance

South and Central zone irrigated conditions

Sugarcane

Co 94008 (Shyama)

Tolerant to drought and salinity

Peninsular Zone

Co 2001-3 (Sulabh)

Moderately resistant to red rot,
smut and wilt

Peninsular Zone

1	2	3
Co 98014(Karan-I)	Tolerant to drought, water-logging	North West Zone
CoS 96268(Mithas)	Moderately resistant to red rot and good ratooner	North West Zone
CoSe 6436(Jalpari)	Tolerant to water-logging and good ratooner	North Central Zone
Co 0233(Kosi)	Moderately resistant to red rot and smut	North Central Zone
CoC 01061	Moderately resistant to red rot.	East Cost Zone
CoLk 94184 (Birendra)	Tolerant to drought and waterlogging with good rationing	North Central Zone
Co 0118	High sucrose content and resistant to red rot, wilt and smut	Punjab, Haryana, Rajasthan, Central and Western Uttar Pradesh and Uttarakhand
Jute		
JRO 204 (Suren), JBO-2003-H (IRA)	Early sowing suitability with fine fibre quality	Tossajute belt
JRC-532 (Sashi)	Very fine fibre fineness white jute	White jute belt
JRC 80 (Mitali)	Premature flowering resistance	White jute belt
JBO 1 (Sudhangsu)	Drought tolerance	Tossajute belt of West Bengal, Assam,Bhiar & Orissa