



भाग-II कृषि निविष्टि

SECTION-II Agricultural Inputs



Table 2.1: Crop-wise distribution of certified/quality seeds

(lakh q)

Year	Cereals	Pulses	Oilseeds	Fibers	Potato	Others	Total
1992-93	36.72	3.40	10.75	2.09	7.10	0.27	60.33
1993-94	38.74	3.62	11.38	2.01	6.17	0.28	62.20
1994-95	41.35	3.60	12.01	2.20	6.62	0.08	65.86
1995-96	44.03	3.58	12.64	2.58	6.85	0.24	69.92
1996-97	46.43	4.19	12.53	3.18	6.69	0.25	73.27
1997-98	51.78	3.89	12.87	3.21	6.83	0.21	78.79
1998-99	57.27	4.06	13.83	2.92	6.86	0.03	84.97
1999-00	61.14	3.87	12.98	2.93	6.89	0.17	87.98
2000-01	59.47	3.85	12.54	2.91	7.23	0.27	86.27
2001-02	65.56	4.69	12.10	2.89	6.33	0.23	91.80
2002-03	66.97	6.60	13.36	2.74	7.16	0.21	97.04
2003-04	70.82	8.17	19.39	2.78	7.01	0.23	108.40
2004-05	81.41	7.40	23.42	2.76	5.05	0.22	120.26
2005-06	86.73	7.37	24.35	2.89	5.08	0.33	126.75
2006-07	109.87	9.63	27.00	3.05	5.12	0.34	155.01
2007-08	123.80	12.57	34.33	2.63	5.35	0.37	179.05
2008-09	147.43	14.48	39.92	2.58	10.55	0.85	215.81
2009-10	165.15	19.69	50.71	2.65	18.68	0.23	257.11
2010-11	182.62	20.83	50.61	2.64	20.08	0.55	277.34
2011-12	189.96	22.26	61.49	3.09	16.68	1.64	294.85
2012-13	204.37	24.51	58.41	2.95	21.47	1.73	313.44
2013-14	183.03	27.80	61.09	2.87	24.63	1.97	301.39
2014-15	203.20	24.77	43.03	3.86	28.12	0.14	303.12
2015-16	194.95	22.71	47.44	2.49	33.88	2.57	304.04
2016-17	229.11	29.47	49.97	2.17	0.38	0.33	348.58
2017-18	238.00	23.54	57.23	2.46	30.57	0.20	352.01

Source : 1. *Agricultural Statistics at a Glance 2018*, Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare, Govt. of India. (Website: <http://eands.dacnet.nic.in>)
 2. Department of Agriculture, Cooperation & Farmers Welfare, Seeds Division.

Table 2.2: Commodity-wise indent and production of breeder seeds under AICRP-NSP (Crops) and ICAR Seed Project during 2014-15 to 2018-19

(q)

Crops	2014-15		2015-16		2016-17		2017-18		2018-19	
	Indent	Production	Indent	Production	Indent	Production	Indent	Production	Indent	Production
Cereals	45587.4	63127.8	64505.2	81996.9	49729.4	69928.1	42954.3	62336.6	39459.20	66988.5
Pulses	10781.3	11242.4	10252.1	11245.0	17670.5	18470.4	18595.6	26399.8	16470.4	20771.8
Oilseeds	28664.5	24239.4	45941.9	32963.5	35658.9	33134.2	35414.7	28596.3	27148.8	28949.5
Fibre crops	162.5	183.5	117.6	181.7	160.4	229.9	120.9	189.9	90.4	121.2
Forage crops	1096.6	1281.7	1342.9	1436.4	826.4	853.6	962.4	1143.2	523.0	940.7
Total	86292.2	100074.8	122159.6	127823.4	104045.7	122616.2	98047.9	118665.9	83691.02	117771.6

Source : ICAR-Indian Institute of Seed Science, Mau, Uttar Pradesh.

Table 2.3: List of field crop varieties/hybrids released and notified in 2019

Crop	Variety	Developed by	Recommended Zone	Salient features
CEREALS	Rice	Bhupesh (IET 23324) (CN 1752-18-1-9-MLD19)	Rice Research Station, Govt. of West Bengal, Chinsurah, Hoogly, WB	Suitable for all three seasons (<i>Pre-kharif</i> , <i>Kharif</i> and <i>Boro</i>), average yield 59.6q/ha, short bold grains, maturity 118-122 days, fertilizer responsive.
		Manisha (IET 23770) (CN-2015-5-4)	Rice Research Station, Govt. of West Bengal, Chinsurah, Hoogly, WB	Suitable for irrigated lands, average yield 55.5q/ha, long slender grains, maturity 120-126 days, moderately tolerant to bacterial leaf blight (BLB), leaf blast, and stem borer.
		GNV 10-89 (IET 24716)	UAS, Raichur	Suitable for normal, early and mid-late sown conditions, average yield 65.0 to 70.0 q/ha, medium slender grains, maturity 120-125 days, moderately resistant to leaf blast.
		GNR-6 (NVSr-2031)	Navsari Agricultural University, Navsari	Suitable for rainfed transplanted condition, average yield 40.0-45.0 q/ha, long slender grains, maturity 100-105 days, moderately tolerant to stem borer, leaf folder, sheath mite.
		GNR-7 (NVSr-6128)	Navsari Agricultural University, Navsari	Suitable for normal rice growing areas of south Gujarat, yield 57.4 q/ha, short slender grains, moderately resistant to BLB, sheath rot, stem borer, leaf folder, sheath mite and grain discoloration, tolerant to BPH
		Shalimar Rice – 4 (SKUA - 408)	Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir, Srinagar	Suitable for irrigated lower belts of Kashmir valley (≤ 1700 above MSL), average yield 75.0-80.0 q/ha, medium bold grains, maturity 135-140 days, tolerant to blast.
		Shalimar Rice – 5 (SKUA - 402)	Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir, Srinagar	Suitable for irrigated high altitudes of Kashmir valley (2000-2250 above MSL), average yield 45.0-50.0 q/ha, short bold grains, maturity 135-140 days, tolerant to blast.
		Chinsurah Nona – 2 (Gosaba-6) (IET 21943)	Rice Research Station, Chinsurah, Hooghly, West Bengal	Suitable for rainfed shallow lowland of coastal saline tract, average yield 52.0 q/ha, short bold grains, maturity 135 days, tolerant to blast, moderately tolerant to sheath rot, leaf blast and neck blast disease.
		Kalanamak Kiran (PRDF 2-14-10) (IET 24753)	Participatory Rural Development Foundation, Gorakhpur, (UP)	Suitable for irrigated medium and rainfed lowland areas of eastern UP, average yield 37.0 q/ha, medium slender grain type, maturity 140-150 days, high zinc (20ppm) content, moderately resistant to major diseases strong aroma, resistant to lodging and shattering.
		JR 206 (IET 26079)	Jawaharlal Nehru Krishi Vishwa Vidhyalaya, Jabalpur	Suitable for rainfed and irrigated ecologies, average yield 55.0-60.0 q/ha, long bold grains, maturity 120-122 days, resistant to bunt and

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
Rice	CNRH – 103 (IET 22866) (Hybrid)	Rice Research Station, Govt. of West Bengal, Chinsurah, Hooghly, WB	West Bengal	blast.
	GRH-2 (Hybrid)	Navsari Agricultural University, Vyara (Gujarat)	Gujarat	Suitable for irrigated ecology, average yield 53.0 q/ha, long slender grains, maturity 110-115 days, moderately tolerant to brown spot and leaf spot.
	LG 93.01(Hybrid)	Bisco Bio Science Pvt. Ltd., Hyderabad	Uttar Pradesh	Suitable for transplanted rice growing area of Middle and South Gujarat, average yield 60.0-65.0 q/ha, maturity 130-135 days, moderately resistant against bacterial leaf blight, leaf blast, grain discoloration and sheath rot, BPH, WBPH, leaf folder and stem borer.
	HKR 128 (HKR 06-47)	Rice Research Station, Kaul (Kaithal), Haryana	Haryana	Suitable for all ecologies of Uttar Pradesh, average yield 10.0 q/ha, maturity 120-125 days, moderately resistant to leaf and neck blast, brown spot, sheath rot and resistance against bacterial leaf blight.
	Haryana Basmati - 2 (HKR 06-443)	Rice Research Station, Kaul (Kaithal), Haryana	Haryana	Suitable for timely transplanting, irrigated paddy growing areas of Haryana, average yield 48.35 q/ha, maturity 141 days, semi-dwarf, less incidence of WBPH, BPH and leaf folder. Resistant to lodging and shattering, fertilizer responsive.
	BidhanSuruchi (IET 25701)	Directorate of Rice Research Station, BCKV, Nadia, WB	West Bengal, Odisha, Uttar Pradesh and Assam	Suitable for irrigated paddy growing areas of Haryana, average yield 53.4q/ha, maturity 143 days, resistant to stem borer, plant hopper, leaf folder, lodging and shattering.
	Uttar Sona UBKVR-1 (IET 24171)	Uttar Banga Krishi Vishwavidyalaya, Pundibari, WB	West Bengal, Bihar, Tripura and Assam	Suitable for both P – deficient and sufficient soils. Recommended for both <i>Boro</i> and <i>Kharif</i> , average yield 62.4q/ha (<i>Boro</i>), 56.0q/ha (<i>Kharif</i>), maturity 110-114 days, moderately resistant against bacterial leaf blight and moderately resistant to leaf blast disease, stem borer BPH, non-lodging, non-shattering.
	BPT 2295 (IET 22188)	Acharya NG Ranga Agricultural University, Guntur (AP)	Andhra Pradesh	Suitable for both <i>Boro</i> (irrigated) and <i>Kharif</i> (irrigated and/or rainfed) early sown conditions, average yield 60 q/ha (<i>Kharif</i>) and 60.4 q/ha (<i>Rabi</i>), maturity 120 days, resistant to lodging and shattering, tolerant to drought at seeding stage. Resistant to LB and BS, resistant to stem borer and no incidence of BPH, WBPH, GM, LF and WM.
				Suitable for irrigated lowland conditions during <i>Kharif</i> season in place of BPT 5204 in Krishna Zone, average yield 65.0 to 70.0 q/ha, maturity 150-155 days medium slender grains, non-lodging, resistant to BPH & BLB medium slender grain with excellent cooking quality.

Crop	Variety	Developed by	Recommended Zone	Salient features
Rice	Pandu Ranga (MCM 100) (IET 22611)	Acharya NG Ranga Agricultural University, Guntur (AP)	Andhra Pradesh	Suitable for <i>Kharif</i> season for entire saline coastal belt of AP, average yield 55.60 q/ha q/ha, maturity 145 days, tolerant to leaf blast, brown spot and sheath rot diseases and stem borer, non-shattering, non-lodging, medium slender grain, fertilizer responsive, salinity tolerant, deep root system.
	CSR 49 (IET 20329)	ICAR- Central Soil Salinity Research Institute, Kamal	Uttar Pradesh	Suitable for irrigated, high fertility, transplanted and high alkaline conditions, average yield 29.4 q/ha, maturity 130-135 days, moderately resistant against leaf, neck blast, brown spot and sheath rot.
	CSR 52 (IET 23206)	ICAR- Central Soil Salinity Research Institute, Kamal	Uttar Pradesh	Suitable for transplanted irrigated alkaline sodic areas, average yield 28.8 q/ha, maturity 125-135 days, moderately resistant to leaf and neck blast, brown spot and sheath spot, tolerant to hoppers (brown and green), gall midge, case worm, whorl maggot.
	Rice VGD 1 (VG 09006)	Agriculture Research Station, Tamil Nadu Agricultural University	Tamil Nadu	Suitable for irrigated samba/late samba season, average yield 60.4 q/ha, maturity 127-132 days, moderately resistant to blast and brown spot and leaf folder, aromatic variety for biryani making.
	ADT 53 (IET 23955)	Agriculture Research Station, Tamil Nadu Agricultural University	Tamil Nadu	Suitable for irrigated conditions as transplanted rice, average yield 66.8 q/ha, medium slender grain, maturity 110-119 days, moderately resistant to blast, sheath rot, brown plant hopper, and leaf folder, brown rice contains high zinc (26.06 ppm) and iron (14.70 ppm), which at par with ADT 43.
	MP 3030 (IET 25764)	Mahindra Agricultural solution Limited. (Maharashtra)	Haryana, Uttarakhnad, Maharashtra and Gujarat	Suitable for irrigated ecology, below average rain and rainfed conditions, average yield 69.1 q/ha, maturity 120-125 days, moderately resistant to leaf blast and false smut.
	Swarna Shakti Dhan (IET 25640) (RCPR-22-IR84899-B-183-20-1-1-1)	ICAR Research Complex for Eastern Region, Patna (Bihar)	Haryana, Odisha, Bihar, Jharkhand, Chhattisgarh, Gujarat and Maharashtra	Suitable for irrigated and rainfed, shallow under aerobic conditions, average yield 49.6 q/ha, maturity 115-120 days, resistant to sheath blight and false smut, and tolerant to leaf blast, neck blast and brown spot.
	Sandhya (IET 25508) (NP 9359-9)	Nuziveedu Seeds Private Ltd Secunderabad (Telangana)	Chhattisgarh and Telangana	Suitable for irrigated and rainfed, shallow under aerobic condition, average yield 54.20 q/ha, high head rice recovery with short slender grains, maturity 115-120 days, moderate resistant to leaf blast and brown spot.
	Uttar Lakshmi (IET 24173) UBKVR-15	Uttar Banga Krishi Viswavidyala, Cooch Behar (West Bengal)	West Bengal, Odisha, Tripura	Suitable for irrigated (boro) in medium land situation, average yield 57.6 q/ha, short bold grains, maturity 155-160 days, tolerant to stem borer, leaf folder, gall midge biotype 1 and whorl maggot.

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
Rice	US 380 (IET 25728)	Seed Works International Pvt. Ltd. Hyderabad	Chhattisgarh and Madhya Pradesh.	Suitable for irrigated and rainfed in aerobic conditions, average yield 56.2 q/ha, maturity 121-125 days, resistant to leaf blast and neck blast and moderate resistant to brown spot and BLB.
	US 303 (IET 25804)	Seed Works International Pvt. Ltd. Hyderabad	Chhattisgarh, Maharashtra and Madhya Pradesh	Suitable for irrigated and rainfed conditions under high and medium fertility, average yield 54.0 q/ha, maturity 130-135 days, resistant to leaf blast, RTD, sheath blight and brown spot and moderately resistant to leaf blast, glume discolouration and BLB.
	MRP 5222 MEPH (IET 25269)	Maharashtra Hybrid Seeds Company Private Limited, MH	West Bengal, Bihar Odisha and Maharashtra	Suitable for irrigated rice ecology, average yield 60.5 q/ha, maturity 145 days, moderately resistant to leaf blast, neck blast and bacterial leaf blight.
	RH 9000 Plus (IET24931)	Devgen Seeds and Technology India Limited, Hyderabad	Maharashtra	Suitable for irrigated conditions under medium to high fertility soils during kharif season, average yield 65.0 q/ha, maturity 125-128 days, moderately resistant to BLB, leaf blast, neck blast, sheath rot, glume discolouration, tolerant to lodging with strong culm.
	CR Dhan 312 (CR 3808-13) (IET 25997)	ICAR-National Rice Research Institute, Cuttaek (Odisha)	Maharashtra and Chhattisgarh	Suitable for irrigated medium, average seed yield 63.95 q/ha, maturity 135-140 days, moderately resistant to leaf blast, neck blast and tungro virus.
	Telangana Vari-I (IET 25330) (WGL-739)	Prof. Jaishankar Telangana State Agricultural University, Hyderabad (Telangana)	Odisha, West Bengal and Tamil Nadu	Suitable for irrigated conditions, average yield 60.8 q/ha, maturity 135 days, moderately resistant to leaf and neck blast.
	Pant Dhan 28 (UPR 3667-2-1-2)	G.B. Pant University of Agriculture and Technology, Pantnagar (Uttarakhand)	Uttarakhand	Suitable for irrigated transplanted conditions in Uttarakhand plains, average yield 56.6 q/ha, maturity 128-130 days, moderately resistant to leaf blight and stem borer.
	CAU-R4 (Eenothou) (IET 22469)	Central Agricultural University, Imphal (Manipur)	Manipur	Suitable for semi deep water conditions having a water level of 50 cm, average yield 38.0 -45.0 q/ha, maturity 140 days, moderately tolerant to rice blast, rice brown spots, rice stem borer and rice gall midge.
	CAU-R2 (Tomthinphou) (IET 23540)	Central Agricultural University, Imphal (Manipur)	Manipur	Suitable for rainfed direct seeded under real jhum rice agro-ecosystem of Manipur and NEH region, average yield 42.0 q/ha, maturity 125 days, tolerant to rice blast, brown spots, rice gall midge and rice stem borer.
	PR 127 (RYT 3316)	Punjab Agricultural University, Ludhiana (Punjab)	Punjab	Suitable for low land irrigated rice ecosystem, average yield 75.4 q/ha, maturity 140 days, resistant to bacterial blight.

Crop	Variety	Developed by	Recommended Zone	Salient features
Rice	MRP 5626 MEPH-134 (IET 26198)	Maharashtra Hybrid Private Company Hyderabad (Telangana)	Bihar	Suitable for dry direct seeded-aerobic conditions with need based irrigation, average yield 50.9 q/ha, maturity 114 days, resistant to leaf blast, neck blast, and false smut, less damage due to gall midge biotype 4, BPH, WBPH and plant hoppers.
	MRP 5433 MEPH-129 (IET 25793)	Maharashtra Hybrid Private Company Hyderabad (Telangana)	Maharashtra	Suitable for irrigated and transplanted conditions during kharif season, average yield 55.6 q/ha, maturity 130 days, moderately resistant to false smut, tolerant/resistant to brown plant hoppers.
	Him Palam Dhan 1 (HPR 2656)	CSKHPKV, Rice & Wheat Research Centre, Malan Kangra, (Himachal Pradesh)	Himachal Pradesh	Suitable for low and mid hills under upland conditions, average yield 21.0 – 32.0 q/ha, maturity 120-125 days, resistant to blast especially in Himachal Pradesh conditions and tolerant to leaf folder and rice hispa.
	Him Palam Dhan 2 (HPR 2880)	CSKHPKV, Rice & Wheat Research Centre, Malan Kangra, (Himachal Pradesh)	Himachal Pradesh	Suitable for low and mid hills under irrigated ecology for transplanting conditions, average yield 55.7 q/ha, maturity 120-125 days, highly resistant to leaf and neck blast and resistant to leaf folder and rice hispa.
	Pant Dhan 22 (UPR 2760-10-1-2)	G.B. Pant University of Agriculture and Technology, Pantnagar (Uttarakhand)	Uttarakhand	Suitable for irrigated transplanted condition in Uttarakhanda plains, average yield 54.5 q/ha, maturity 120-130 days, moderately resistant to leaf blight and stem borer.
	Sabour Harshit Dhan (IET 25342)	Bihar Agricultural University, Sabour (Bihar)	Bihar	Suitable for irrigated medium and medium upland condition, average yield 57.6 q/ha, maturity 120-125 days, moderately resistant to BLB, blast, and brown spot and tolerant to stem borer, leaf folder and gundhi bug.
	CAU-R3 (Mangalaphou) (IET 22833)	Central Agricultural University, Imphal (Manipur)	Manipur	Suitable for irrigated medium and medium upland condition, average seed yield 40.0 - 45.0 q/ha, maturity 95-120 days, tolerant to rice blast, rice brown spot, rice stem borer, rice gall midge and resistant to rice tungro virus.
	SAVA 134 (IET 24797)	Savannah Seeds Pvt. Ltd., Gurugram/Haryana	Haryana, Punjab, Assam and Uttarakhand	Hybrid has been notified in Bangladesh and Nepal and has been recommended for cultivation in West Bengal Assam and Tripura.

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
Maize	Shalimar (KDQH-49)	Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir, Srinagar	Jammu & Kashmir	Suitable for cultivation in <i>Kharif</i> season, specially in low to medium elevation of Kashmir valley, early maturing (135 days duration) QPM maize hybrid, it has given 58.78q/ha yield in station and 55.67 q/ha in AICRP trials. Tryphtohan content: 0.81%, Lysinecontent: 2.95%, protein: 10.71%.It has shown resistance to <i>Turicum</i> leaf blight and common rust diseases.
	Shalimar Sweet Corn-1 (KDM – 1263SC)	Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir, Srinagar	Jammu & Kashmir	Suitable for rainfed, <i>Kharif</i> , hilly regions, early maturing (105-110 days) sweet corn composite, green cobs yield: 106q/ha at station and 62.38q/ha in AICRP trials, it has 14.0% TSS and shown resistance to <i>Turicum</i> leaf blight and common rust.
	SHIATS Makka-2 (IVT DMR 262)	Sam Higginbottom University of Agriculture and Technology and Science, Allahabad	Uttar Pradesh	Suitable for <i>Kharif</i> season, average yield 35-40q/ha, maturity85-90 days, composite white seeded, resistant to maydis leaf blight, moderately resistant to <i>Turicum</i> leaf blight and to stem borer.
	PMH 12 (JH 13347)	Punjab Agricultural University, Ludhiana	Zone III (Bihar, West Bengal, Jharkhand, Parts of Uttar P and Odisha)	Suitable for irrigated conditions during <i>Kharif</i> season, average yield 71.1 q/ha., maturity 90 days, moderately tolerant to maydis leaf blight, <i>Turicum</i> leaf blight, banded stripe downey mildew and post flowering stalk rot.
	VL Sweet Corn Hybrid 2 (FSCH 75)	Vivekananda Parvatiye Krishi Anusandhan sansthan, Almora	Zone I (Jammu & Kashmir Himachal P., Uttararkhand NEH)	Suitable for rainfed agro-ecosystem in <i>Kharif</i> , average yield 103.5 q/ha, moderately tolerant to maydis leaf blight, <i>Turicum</i> leaf blight, Sheath blight, curvularia leaf spot.
	Maize VGIH 1 (VaMH 12014)	Maize Research station, Tamil Nadu Agriculture University,	Bihar, Jharkhand, Odisha, Uttar Pradesh and West Bengal	Suitable for <i>Kharif</i> season, average yield 69.4q/ha (at low plant density 66000: 64.9 kg/ha and at high plant density 83000: 135.0q/ha), resistant to <i>Curvularia</i> leaf spot and Rajashan downy mildew and moderately resistant to Maydis leaf blight, <i>Turicum</i> leaf blight, banded leaf and sheath blight, Charcolrot, Fusarium stalk rot and bacterial stalk rot, possesses good quality attributes.
	JKMH 4152 (JKMH 8008)	JK Agri Genetics Ltd. Hyderabad, Telangana	Punjab, Haryana, Delhi, Uttarakhnad, Assam and Uttar Pradesh	Suitable for irrigated condition of rainy season (<i>Kharif</i> Season), late-maturity, required 94-96 days (seed to seed). Average yield is 82.3 q/ha. Resistant to Maydis Leaf Blight and Charcoal rot. It has also shown moderately resistance to <i>Chilopartellus</i> non-shattering
Maize	PAC 751	UPL Limited (Formerly Advanta Limited)	Madhya Pradesh	Suitable of irrigated and rainfed ecosystem, average yield 71.6 q/ha., maturity 100-105 days, resistant to common rust, brown stripe, Downey mildew, moderately resistant/ tolerant to <i>Turccium</i> leaf blight, Maydis

Crop	Variety	Developed by	Recommended Zone	Salient features
				leaf blight, Polysora rust and Chiloptartellus.
	PAC 753	UPL Limited (Formerly Advanta Limited)	Madhya Pradesh	Suitable for irrigated and rainfed ecosystem, average yield 68.2 q/ha, maturity 100-105 days, resistant to common rust, Rajasthan downy mildew and <i>Curvularia</i> leaf spot, moderately resistant/tolerant to <i>Turicum</i> leaf blight, Maydis leaf blight and <i>Chiloptartellus</i> .
	Pusa HQPM-5 Improved (APQH5)	ICAR-Indian Agricultural Research Institute, New Delhi	NHZ: J&K, HP, Uttarakhand (Hill region), NE Hill Region (Meghalaya, Sikkim, Assam, Tripura, Nagaland, Manipur, Arunachal Pradesh) NWPZ: Punjab, Haryana, Delhi, Uttarakhand (Plain), Uttar Pradesh (Western region) NEPZ: Bihar, Jharkhand, Odisha, Uttar Pradesh (Eastern region), WB PZ: Maharashtra, Karnataka, AP, Telangana, Tamil Nadu CWZ: Gujarat, MP, Chattisgarh, Rajasthan	Suitable for irrigated conditions under kharif season, average yield 72.63 q/ha(NHZ); 75.10 q/ha (NWPZ); 53.45 q/ha (NEPZ); 71.2 q/ha (PZ); 51.20 q/ha (CWZ). Medium maturity in all zone: late in PZ, MAS derived hybrid, introgression of crtRB1 and lcyE gene, high Provitamin A (6.77 microgram/g) (1.02 in normal maize), lysine 4.25% and tryptophan 0.94% (Normal maize <0.6 % tryptophan <2.5% lysine).
	Pusa Vivek Improved (APH27)	ICAR-Indian Agricultural Research Institute, New Delhi	Bihar, Jharkhand, Odisha, Uttar Pradesh (Eastern region), West Bengal	Suitable for irrigated conditions under kharif season, average yield 48.5 q/ha, early maturing, MAS derived hybrid, introgression of crtRB1 gene, improved Provitamin A (5.49 microgram/g).
	Pusa HQPM-7 Improved (APQH7)	ICAR-Indian Agricultural Research Institute, New Delhi	Maharashtra, Karnataka, Andhra Pradesh, Telangana, Tamil Nadu	Suitable for irrigated conditions under kharif season, average yield 74.5 q/ha, maturity 90-95 days, MAS derived hybrid, introgression of crtRB1 and lcyE gen, high provitamin A (7.10 microgram/gram), lysine (4.19%) and tryptophan (0.93%).
Maize	Pusa Super Sweet Corn 2 (ASKH1)	ICAR-Indian Agricultural Research Institute, New Delhi	Himachal Pradesh, Haryana, Uttarakhand, Uttar Pradesh, Tamil Nadu, Karnataka,	Suitable for irrigated conditions, high fertility soils during kharif season, average green ear yield 13.2 t/ha (NHZ), 13.6 t/ha (NWPZ), 11.8 t/ha (NEPZ), 13.8 t/ha (PZ), 11.4 t/ha (CWZ), cob yield 10.0 t/ha (NHZ), 9.5

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
Sorghum	Pant Popcom 1 (DPCH-306)	G.B. Pant University of Agriculture and Technology, Pantnagar (Uttarakhand)	Chhattisgarh, Rajasthan	t/ha (NW/PZ), 8.1 t/ha (NE/PZ), 10.2 t/ha (PZ), higher sweetness (15.2% to 17.1 % brix), 50% silking 53 days, moderately to highly resistant to major diseases and pests.
	PMH 11 (JH 12063)	Punjab Agricultural University, Ludhiana (Punjab)	Jammu & Kashmir, Himachal Pradesh, Uttarakhand (Hills), Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, (North Eastern Hill Region), Tamil Nadu, Karnataka, Andhra Pradesh, Telangana, Maharashtra	Suitable for irrigated conditions of kharif season, average yield 39.8 q/ha (NHZ) and 50.0 q/ha (PZ), maturity 87-92days, moderately tolerant to <i>chilopartellus</i> under field conditions.
	CHS 39 R (SPH 1801)	Dr. Punjabrao Deshmukh Krishi Vidhyapeeth, Akola – 444 104 (MS)	Maharashtra, Karnataka, Andhra Pradesh and Gujarat	Suitable for irrigated conditions during kharif season, average yield 57.4 q/ha, maturity 96 days, moderately resistant to charcoal rot, Maydis leaf blight, bacterial stalk rot, banded leaf and sheath blight, and stem borer.
	PDKV Hurdakartiki (Wani 103)	Dr. Punjabrao Deshmukh Krishi Vidhyapeeth, Akola – 444 104 (MS)	Maharashtra	Suitable for deep soils of <i>Rabi</i> sorghum growing areas, average grain yield 27.0 q/ha and fodder yield 68.0 q/ha, dual purpose <i>Rabi</i> sorghum hybrid with good roti quality, seed to seed maturity 110 days, tall (210-215 cm) plant type, semi compact panicle, resistant to all major diseases and pests.
Sorghum	CSV-37 (SPV-2366)	UAS, Dharwad under AICRP Sorghum	Karnataka, Maharashtra, Andhra Pradesh and Tamil Nadu for kharif	Suitable for <i>Hurdakor Vantype</i> sorghum, grain yield 45 q/ha (Green <i>Hurda</i>), green fodder yield 200 q/ha, maturity 90 days, non-shattering and non-lodging.
	Nandyala Pachajonna – 15 (NJ 2446)	Regional Agriculture Research Station, Nandyal	Andhra Pradesh	Suitable for rainfed ecology, a dual purpose sorghum variety having good iron and zinc in the grain, average grain yield 37.1 q/ha and fodder yield of 141.48 q/ha, maturity 100-105 days, tolerant to grain mold disease, non-lodging type.
				Suitable for late <i>Kharif</i> - rainfed and <i>Rabi</i> seasons, average grain yield 25.0-30.0 q/ha under rainfed condition, 30.0- 32.0 q/ha. under irrigated condition and average straw yield 86.5 q/ha. under varied conditions, late maturity, moderately tolerant to leaf blast, rust diseases. Moderately tolerant to shoot fly and stem borer.

Crop	Variety	Developed by	Recommended Zone	Salient features
	Nandyala Pachajonna – 5 (NJ 2647)	Regional Agriculture Research Station, Nandyal	Andhra Pradesh	Suitable for late <i>Kharif</i> - rainfed and <i>Rabi</i> seasons, average grain yield 38.0-45.0 q/ha under rainfed conditions and 45.0-62.5 q/ha under irrigated conditions, average straw yield 85.7 q/ha. under rainfed conditions, medium maturity, moderately tolerant to leaf blast, rust, shoot fly and stem borer.
	Jaicar Nutrigraze (CSV 43 BMR/SPV 2018)	ICAR-Indian Institute of Millets Research, Hyderabad (Telangana)	Andhra Pradesh, Telangana, Karnataka, Maharashtra, Tamil Nadu, Gujarat, Madhya Pradesh, Rajasthan, Uttar Pradesh, Uttarakhand, Haryana, Jharkhand	Suitable for rainfed condition in <i>kharif</i> season, average grain yield 50.3 q/ha, crude protein 8.5%, maturity 110-113 days, resistant to grain mold, downy mildew, anthracnose, leaf blight, zonate leaf spot and tolerant to shoot fly, stem borer, aphid and head bugs.
	Telangana Jonna 1 (CSV 41/SPV 2437)	Prof. Jaishankar Telangana State Agricultural University, Hyderabad (Telangana)	Andhra Pradesh, Telangana, Tamil Nadu, Rajasthan and Gujarat	Suitable for rainfed conditions under both high/low fertility soils, average grain yield 31.8 q/ha and fodder yield 159 q/ha, protein content 9.72%, maturity 106-110 days, moderately tolerant to grain mold and moderately resistant to shoot fly and stem borer.
Pearl millet	RHB 233 (MH 2173)	Rajasthan Agriculture Research Institute through AICRP on Pearl Millet, (Sri Karan Narendra Agriculture University, Jaipur)	Rajasthan, Gujarat, Haryana, Madhya Pradesh & Delhi, Maharashtra & Tamil Nadu	Suitable for <i>Kharif</i> season, high fertility soil, average grain yield 31.6 q/ha, dry fodder yield 74.0 q/ha, maturity 80 days, bio-fortified hybrid with high iron (83 ppm) has 56.6 % and high zinc (46 ppm) has 15% content, higher degree of resistance to downy mildew and smut etc. Resistant to major insect pests such as shoot fly, stem borer, grey weevil, leaf roller, <i>Helicoverpa</i> etc.
	RHB 234 (MH 2174)	Rajasthan Agriculture Research Institute through AICRP on Pearl Millet, (Sri Karan Narendra Agriculture University, Jaipur)	Rajasthan, Gujarat, Haryana, Madhya Pradesh & Delhi, Maharashtra & Tamil Nadu	Suitable for <i>kharif</i> season, high fertility soil, average grain yield 31.7 q/ha, dry fodder yield 71.0 q/ha, maturity 81 days, bio-fortified hybrid with high iron (84 ppm) has 58.5 % and high zinc (41 ppm) has 2.5 % content, resistant to downy mildew and smut and other diseases. Resistant to major insect pests such as shoot fly, stem borer, grey weevil, leaf roller, <i>Helicoverpa</i> etc.
Pearl millet	JKBH 1326 (MH 2228)	JK Seeds	Rajasthan, Gujarat, Haryana, Madhya Pradesh, Uttar Pradesh and Punjab	Suitable for rainfed, <i>kharif</i> , both high and low fertility soils, dual purpose hybrid, average grain yield was 32.9 q/ha, fodder yield 82.0 q/ha, maturity 82 days, possesses high level of resistance to Downy mildew, rust, smut, ergot and blast, better degree of tolerance to shoot fly, stem borer, <i>Helicoverpa</i> and grey weevil.

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
	MH 2224 (PB 1852)	Bayer Bio Science Pvt. Ltd.	Rajasthan, Gujarat, Haryana, Madhya Pradesh, Uttar Pradesh, Delhi and Punjab	Suitable for low to medium rainfall (rainfed condition), low to high fertility soil during kharif season in Zone A dual purpose hybrid, average grain yield 29.8-36.5 q/ha, dry fodder yield 95.0 q/ha, maturity 82 days, grain protein 8.8 %, fat 5.8 %, high iron 56 ppm and zinc 32 ppm, lodging tolerant, suitable for early and late sowing conditions, highly resistant to Downy mildew.
	MH 2114 (DHBH 1397)	College of Agriculture, Dhule (MPKV), Maharashtra	Rajasthan, Gujarat, Haryana, Punjab, MP, UP and Delhi	Suitable in Kharif season, average grain yield 33.2 q/ha, dry fodder yield 75.0 q/ha, maturity 78 days, resistant to Downy mildew.
	HHB 311 (MH 2179)	CCS Haryana Agricultural University, Hisar (Haryana)	Rajasthan, Gujarat, Haryana, Punjab, Delhi, Maharashtra and Tamil Nadu	Suitable for <i>kharif</i> season and high fertility conditions, average grain yield 31.7 q/ha, average fodder yield 72.0 q/ha, biofortified [83 ppm], maturity 80-81 days, resistant to major diseases viz., downy mildew, smut and resistant to major insect pests viz., shoot fly, stem borer, grey weevil, leaf roller, Helicoverpa.
SMALL MILLETS				
Little millet	TNPsu 177	Agriculture Research Station, Tamil Nadu Agricultural University	Tamil Nadu	Suitable for rainfed condition during June-August, September-October, even under low fertility conditions, 15.87 q/ha of grain and 31.09 q/ha of straw yield potential under rainfed conditions, early maturity 85-90 days, bold grains with high bulk density, tolerant to drought, tolerant to grain smut and sheath blight under sick plot conditions; tolerant to shoot fly.
Proso millet	PMV 442 (GPUP 25)	University of Agricultural Sciences, GKVK, Bengaluru	AP, Bihar, Karnataka, TN, Telangana and Puducherry	Suitable for rainfed and irrigated conditions, average yield 18.6 q/ha, maturity 70-75 days, moderately resistant to brown spot diseases incident
Finger millet	Vegavathi (VR 929)	ARS, ANGRAU, Andhra Pradesh	Andhra Pradesh	Suitable for rainfed kharif season, average grain yield 36.1 q/ha, fodder yield 72.0 q/ha, maturity 115-120 days, highly resistant to brown spot, banded blight, foot rot and <i>Cercospora</i> leaf spot. Resistant to leaf, finger and neck blast, low incidence of grass hopper, <i>Myloecerus</i> weevil and ear head caterpillar, higher Zn content (199.1%) with high Fe, Ca, protein content, dietary fiber and low in tannin content.
Finger millet	GN 8	Navsari Agricultural University	Gujarat	Suitable for cultivation during <i>Kharif</i> season, yield average seed 30.7 q/ha, maturity 105-110 days, erect and non-lodging plant type, moderately resistant to leaf, neck and finger blast as well as foot rot disease under tolerant reaction to pests like stem borer and aphids.
	Trumala (PPR 1012)	Acharya N.G. Ranga Agricultural	Andhra Pradesh	Suitable for irrigated and rainfed conditions in <i>Kharif</i> , average seed yield

Crop	Variety	Developed by	Recommended Zone	Salient features
		university, Guntur		20.0-25.0 q/ha under rainfed conditions, 30.0-35.0q/ha under irrigated conditions, maturity 115-120 days, highly three types of blast viz., leaf blast, neck blast, finger blast moderately resistant to leaf blight and banded blight; resistant to grass hoppers and ear head caterpillars.
OILSEEDS				
Soybean	Shalimar Soybean - 1 (AGR/538)	Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir, Srinagar	Jammu & Kashmir	Suitable for early sown condition of the valley, average yield 20.3 to 25.6 q/ha, oil content 13.56%, maturity 144 days, very bold seeded variety, resistant to yellow mosaic virus and root rot and tolerant to drought.
	Jawahar Soybean 20-116 (JS 20-116)	Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, Madhya Pradesh	Central Zone, North Eastern Hill and Eastern Zone	Suitable for timely sown conditions under high rainfall, average yield - 23.14-23.43q/ha, oil content (%): CZ (20.22); NEHZ (16.55); EZ (16.32) maturity 97-101 days, multiple resistance against biotic stress like yellow mosaic virus, charcoal Rot, SMV, PB (ct), RAB, rust and IBB, Stem Fly, Stem borer and defoliators, it possess excellent germin ability and longevity, amenable to mechanical harvesting.
	Jawahar Soybean 20-94 (JS 20-94)	Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, Madhya Pradesh	Madhya Pradesh, Maharashtra, Rajasthan and Bundelkhand region of UP	Suitable for medium to high rainfall conditions and medium to heavy soils, especially for YMV and blight prone areas, average yield 19.4 q/ha, oil content 20.35%, maturity 94-110 days, resistant to YMV, blight, bacterial pustules, leaf spots and stem fly, suitable for both sole and inter cropping.
	AMS-1001 (PDKV Yellow Gold)	Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola	Maharashtra	Suitable for rainfed conditions, average yield 20.0 q/ha, oil content 18.93%, maturity 95-100 days, resistance to root rot, charcoal rot and yellow mosaic virus under field conditions, moderately resistant to stem fly and Girdle beetle.
	SL 955	Punjab Agriculture University, Ludhiana (Punjab)	Punjab, Haryana, Delhi, Uttar Pradesh (Except Bundelkhand) and Bihar	Suitable for normal sown irrigated conditions, average yield 22.0 q/ha, protein content 38.97%, oil content 18.85%, maturity 124-128 days, tolerant to YMV.
Soybean	SL 979	Punjab Agriculture University, Ludhiana (Punjab)	Punjab, Haryana, Delhi, Uttar Pradesh, Uttarakhnad and Bihar	Suitable for normal sown irrigated conditions, average yield 23.4 q/ha, protein content 37.9%, oil content 20.6%, maturity 124-130 days, tolerant to YMV and SMV.
	DSb 32	University of Agricultural Science (UAS), Dharwad (Karnataka)	Assam and North Eastern States	Suitable for rainfed condition, average yield 19.2 q/ha, protein content 37.8%, oil content 20.9%, maturity 102 days, moderately resistant to pod blight and resistant to multiple pest diseases.

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
	DSb 28 (DSb 28-3)	University of Agricultural Science (UAS), Dharwad (Karnataka)	Maharashtra, Karnataka, Telangana, Andhra Pradesh and Tamil Nadu	Suitable for rainfed and irrigated conditions, average yield 23.2 q/ha, protein content 38.42%, oil content 20.14%, maturity 95 days, highly resistant to soybean rust caused by <i>Phakopsora pachyrhizi</i> .
	Pant Soybean 25 (PS 1556)	G.B. Pant University of Agriculture and Technology, Pant Nagar (Uttarakhand)	Himachal Pradesh and Uttarakhand	Suitable for rainfed and irrigated conditions of kharif season, average yield 22.9 q/ha, protein content 41%, oil content 18.83%, maturity 119 days, highly resistant to YMV, SMV, bacterial pustule and bacterial blight and moderately resistant to RAB, BS, PBctand FLS.
	Pant Soybean 26 (PS 1572)	G.B. Pant University of Agriculture and Technology, Pantnagar (Uttarakhand)	Punjab, Haryana, Uttar Pradesh (except Bundelkhand region of Uttar Pradesh) and Delhi	Suitable for rainfed and irrigated conditions of kharif season, average yield 19.3 q/ha, protein content 40%, oil content 17.92%, maturity 120 days, highly resistant to YMV, SMV, bacterial pustule and BLB and moderately resistant to RAB and BS.
	Uttarakhand Black Soybean VL Bhat 202	ICAR-Vivekananda Parvitya Krishi Anusandhan Sansthan, Almora (Uttarakhand)	Uttarakhand	Timely sown rainfed organic conditions, average yield 16.0q/ha, protein content 39.19 %, oil content 16.55q/ha, maturity 110-115 days, moderately resistant against pod blight and bacterial pustules, resistant against aphids, soybean beetles and moderately resistant against white fly and defoliators, for use as pulse.
	Phule Ummati (RHRG - 6083)	Mahatma Phule Krishi Vidyapeeth Rahuri, Distt. Ahmednagar	Maharashtra	Suitable for irrigated and rainfed conditions during Summer and Kharif season, average pod yield 39.9 q/ha (Summer) and 28.5 q/ha (<i>Kharif</i>), oil content 51%, maturity 125-130 days, resistant to <i>Spodoptera</i> and rust, tolerant to late leaf spot, and stem rot.
Groundnut	Phule Dhani (JL- 1085)	Mahatma Phule Krishi Vidyapeeth Rahuri, Distt. Ahmednagar	Andhra Pradesh, Telangana, Karnataka and Tamil Nadu	Suitable for cultivation in rainfed conditions during <i>Kharif</i> season, average pod yield 33.3 q/ha and kernel yield of 23.1 q/ha, oil content 50%, maturity 109 days, highly resistant to foliar diseases (LLS & Rust) and for the combined infestation of <i>Spodoptera</i> and <i>Helicoverpa</i> .
	Gujarat Groundnut 34	Anand Agricultural University, Anand	Gujarat	Suitable for irrigated, agro-climatic variables/stresses for summer cultivation, average pod yield 37.2 q/ha, oil content 52.8%, maturity 111-125 days, tolerant to Tikka and rust diseases, and lower incidence of thrips and jassids
	Dheeraj (TCGS 1073)	ANGRAU, RARS, Tirupati, Andhra Pradesh	Andhra Pradesh	Suitable for <i>Kharif/Rabi</i> irrigated, timely sown conditions, average pod yield 19.1q/ha(<i>Kharif</i>), 28.4q/ha (<i>Rabi</i>); oil content 48.0-50%, maturity 105-110 days (<i>Kharif</i>) and 110-115 days (<i>Rabi</i>), less susceptible to LLS, rust, PBND & PSND; less susceptible to leaf miner and jassids and other

Crop	Variety	Developed by	Recommended Zone	Salient features
	BSG 0912 (INS I 2013-8) Groundnut BSR 2	ARS, TNAU, Tamil Nadu	Tamil Nadu	sucking insects Suitable for irrigated tracts, average pod yield 22.2 q/ha (<i>Kharif</i>) and 23.6 q/ha (<i>Rabi</i> -Summer), oil content 45.0%, maturity 105-110 days, moderately resistant to rust, late leaf spot diseases, aphids thrips, jassids and defoliators.
	Central-Pragati 894)	Acharya N.G. Ranga Agricultural University, Guntur (Andhra Pradesh)	Tamil Nadu, Telangana and Andhra Pradesh	Suitable for timely sown irrigated conditions during rabi season, average kernel yield 19.7 q/ha, pod yield 28.16 q/ha, oil content 48%, maturity 100-105 days.
	Dh 256	AICRP on Groundnut, MSARS, UAS, Dharwad (Karnataka)	Tamil Nadu, Andhra Pradesh, Karnataka and Telangana.	Suitable for rainfed condition during kharif season, average kernel yield 21.83 q/ha, pod yield 32.58 q/ha, oil content 50%, maturity 113 days, tolerant to mid season drought stress.
	Gujarat Anand Castor 11 (GAC 11)	AAU, Anand, Gujarat	Gujarat	Suitable for irrigated areas of middle Gujarat, average yield 32.3 q/ha, oil content 48.44%, maturity 87 days, resistant to wilt resistant.
Castor	ICH - 66	IHOR, Hyderabad	Telangana, Andhra Pradesh, Karnataka, Tamil Nadu and Odisha	Suitable for rainfed conditions, average yield 15.7 q/ha, oil content 48.6%, maturity 115-125 days, resistant to wilt and root rot, moderately resistant to leafhopper under field conditions.
	YTP 1 (YRCS 1205)	Tapioca and Castor Research Station, TNAU, Yethapur, Distt. Salem (Tamil Nadu)	Tamil Nadu	Suitable for irrigated and rainfed tracts, average yield 31.1 q/ha, oil content 49%, maturity 115-120 days, resistant to wilt, semilooper, spadoptera, thrips and capsule borer.
PULSES				
Green gram /mung bean	VGG 10-008 (VBN-4)	Tamil Nadu Agricultural University	Tamil Nadu	Suitable for irrigated and rainfed conditions, average yield 10.2 q/ha, 100 seed weight 4.0-4.5 g, maturity 65-70 days, resistant to mosaic virus and powdery mildew and leaf crinkle virus
Green gram /mung bean	Pant Mung 9 (PM 09-11)	G.B. Pant University of Agriculture and Technology, Pantnagar (Uttarakhand)	Uttarakhand	Suitable for rainfed normal sown condition for rabi season, average yield 9.6 q/ha, maturity 75 days, highly resistant to MYMV, powdery mildew and tolerant to whitefly and jassid.
	SML 1827	Punjab Agricultural University, Ludhiana (Punjab)	Punjab	Suitable for irrigated condition in spring / summer seasons, average yield 11.6 q/ha, maturity 61-71 days, resistant to YMD, CLS, BLS, anthracnose and web blight and low incidence of bean thrips.
Urdbean/	Pant Urd 10 (PU 10-23)	G.B. Pant University of Agriculture	J & K, Himachal Pradesh,	Suitable for northern hilly regions, average seed yield 12.0-15.0 q/ha, 100

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
blackgram		and Technology, Pantnagar	Tripura and Manipur	seed weight 4.5 g, protein content 25.84%, maturity 85 days, resistant to MYMV, powdery mildew and leaf crinkle virus diseases, erect type, average maturity 85 days.
	Ghantasala Minumu (GBG 1)	ANGRAU, Andhra Pradesh	Andhra Pradesh	Suitable for timely and late sown conditions during all seasons, shiny black bold seeded variety, average yield 10.94 q/ha (<i>Khariif</i>) and 13.29 q/ha (<i>Rabi</i>), 100 seed weight 4.4 g, maturity 70-75 days, resistant to YMV
	VBN 9 (VBG 12-111)	National Pulse Research Centre, Tamil Nadu Agricultural University Pudukkottai (Tamil Nadu)	Andhra Pradesh, Tamil Nadu, Karnataka and Odisha	Suitable for rice fallow conditions of south zone, average yield 12.3 q/ha, oil content 22.68%, maturity 72 days, moderately resistant to mungbean yellow mosaic virus, urdbean leaf crinkle virus, leaf curl virus and powdery mildew.
	VBN 10 (VBG 12-034)	National Pulse Research Centre, Tamil Nadu Agricultural University Pudukkottai (Tamil Nadu)	Andhra Pradesh, Tamil Nadu, Karnataka and Odisha	Suitable for rabi season, average yield 11.26 q/ha, oil content 25.28%, maturity 74 days, resistant to mungbean, yellow mosaic virus, urdbean leaf crinkle virus and leaf curl virus.
	Pant Urd 7 (PU 10-16)	G.B. Pant University of Agriculture and Technology, Pantnagar (Uttarakhand)	Uttarakhand.	Suitable for timely sown rainfed conditions, average yield 9.5 q/ha, grain protein content 23.83%, maturity 86 days, resistant to mungbean yellow mosaic virus, Cerospora leaf spot, powdery mildew and tolerant to whitefly and jassid.
Urdbean/blackgram	Pant Urd 8 (PU 11-14)	G.B. Pant University of Agriculture and Technology, Pantnagar (Uttarakhand)	Uttarakhand.	Suitable for timely sown rainfed conditions, average yield 10.8 q/ha, grain protein content 24.07%, maturity 85 days, resistant to mungbean yellow mosaic virus, bacterial leaf spot, Cerospora leaf spot, powdery mildew and tolerant to whitefly and jassid.
	Pant Urd 9 (PU 11-25)	G.B. Pant University of Agriculture and Technology, Pantnagar (Uttarakhand)	Uttarakhand.	Suitable for timely sown rainfed conditions, average yield 10.9 q/ha, grain protein content 23.90%, maturity 85 days, resistant to mungbean yellow mosaic virus, Cerospora leaf spot, powdery mildew and tolerant to whitefly and jassids.
	IPU 13-1	ICAR-Indian Institute of Pulses Research, Kanpur (Uttarakhand)	Madhya Pradesh	Suitable for cultivation across different agro-climatic regions of MP, average yield 17.0q/ha, grain protein content 26.12%, maturity 72 days, resistant to yellow mosaic virus, Cerospora leaf spot, anthracnose, leaf crinkle, powdery mildew, bacterial leaf blight, web blight and tolerant to major insect-pest.

Crop	Variety	Developed by	Recommended Zone	Salient features
Pigeonpea / Red gram	IPU 10-26	ICAR-Indian Institute of Pulses Research, Kanpur (Uttar Pradesh)	Madhya Pradesh	Suitable for cultivation across different agro-climatic regions of MP, average yield 6.0 q/ha, grain protein content 25.27%, maturity 72 days, highly resistant to yellow mosaic virus, Ceroaspera leaf spot, resistant to urdbean leaf crinkle virus, stem necrosis, web blight, bacterial leaf blight, anthracnose, powdery mildew and tolerant to major insect-pest.
	IPU 11-02	ICAR-Indian Institute of Pulses Research, Kanpur (Uttar Pradesh)	Madhya Pradesh	Suitable for cultivation across different agro-climatic regions of MP, average yield 7.2 q/ha, grain protein content 26.42%, maturity 71 days, resistant to yellow mosaic virus, Ceroaspera leaf spot, urdbean leaf crinkle virus, anthracnose, powdery mildew and tolerant to major insect-pest.
	CO 9 (CRG 2012-25)	Centre for Plant Breeding and Genetics, Department of Pulses, TNAU, Coimbatore	Tamil Nadu, Odisha, Karnataka, Andhra Pradesh and Telangana	Suitable for rainfed irrigated conditions, average yield 17.0 q/ha, weight 9.9/100g seed, protein content 23.65%, maturity 170-180 days, moderately resistant to wilt and SMD diseases, Maruca and pod fly.
	Bheema (CRG-152)	University of Agricultural Sciences, Raichur (Karnataka)	Madhya Pradesh, Maharashtra, Chhattisgarh, Gujarat,	Suitable for irrigated and rainfed areas during kharif season, average yield 19.0 q/ha, protein content 23.01%, maturity 160-165 days, resistant to wilt and sterility mosaic diseases.
	MPV-106 (RANI)	Maharashtra State Corporation Ltd., (Maharashtra)	Tamil Nadu, Karnataka, Andhra Pradesh, Telangana and Odisha.	Suitable for rainfed with high fertility for kharif season, average yield 15.5 q/ha, protein content 25.87%, maturity 165-174 days, moderately resistant to wilt diseases.
Pigeonpea / Red gram	Pant Arhar - 6 (PA 421)	G.B. Pant University of Agriculture and Technology Pantnagar (Uttarakhand)	Punjab, Delhi, Haryana and Western Uttar Pradesh	Suitable for rainfed and irrigated conditions of kharif season, average yield 16.7 q/ha, protein content 25.87%, maturity 151 days, resistant reaction for phytophthora stem blight, resistant to wilt and sterility mosaic diseases, moderately resistant to pod borer (Helicoverpa), maruca and Apionclavipes and bruchid.
	Telangana Kandi (WRGE-93)	Prof. Jaishankar Telangana State Agricultural University, Hyderabad (Telangana)	Tamil Nadu, Karnataka, Andhra Pradesh, Telangana and Odisha	Suitable for rainfed/ irrigated conditions during kharif season, average yield 17.0 q/ha, maturity 150-165 days, moderately resistant to Fusarium wilt and moderately tolerant to Helicoverpaarmigera.
	IPH 15-03	ICAR-Indian Institute of Pulses Research, Kanpur (Uttar Pradesh)	Punjab, Delhi, Haryana and Uttar Pradesh	Suitable for rainfed/ irrigated areas for normal kharif season, average yield 16.0 q/ha, maturity 153 days, resistant to Fusarium wilt, SMD and moderately resistant to phytophthora blight.

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
	AL 882 (AL 1992)	Punjab Agricultural University, Ludhiana (Punjab)	Punjab	Suitable for irrigated conditions, average yield 14.7 q/ha, maturity 132 days, tolerant to PSB and resistant to CLS and sterility mosaic.
Cow pea	BidhanSadabahar (BCCP 3)	Bidhan Chandra Krishi Vishwavidyalaya, AICRP on Vegetable Crops, Dir. of Research, WB	West Bengal	Suitable for irrigated/rainfed conditions, average pod yield 113.2 q/ha, maturity 85 days, resistant to Powdery mildew, Anthracnose, Ashy stem blight, Bacterial blight, stem fly
Horse gram	Bilasa Kulthi (BSP 15-1)	IGKV, Bilaspur	Chhattisgarh, Maharashtra, Jharkhand & Gujarat	Suitable for rainfed and low fertility conditions, average yield 10.0 q/ha, maturity 102-107 days, drought tolerant.
Rajmash/ French bean	Phule Rajmah (GRB-902)	M.P.K.V., NARP, Ganeshkhind, Pune	Maharashtra	Suitable for <i>Kharif</i> and <i>Rabi</i> season in western Maharashtra, average yield 17-19 q/ha, erect growth habit, duration 76-78 days, bold seeded (36.50g/100g seed), protein content-23.38%, carbohydrate content-63.93%, moderately resistant to <i>Fusarium</i> wilt and CBMV, moderately resistance to pod borer and white fly
COMMERCIAL CROPS				
Cotton	GN Cot. Hy-18 (GSHH-2759)	Cotton, Research Station, NAU, Surat	Gujarat	Suitable for irrigated conditions across south Gujarat and North Gujarat, average seed cotton yield is 23.6 q/ha, medium maturity (150 - 160 days), resistant to BLB, and disease free for wilt and ALS, tolerant to sucking pests
	RVK 11 (Raj Vijay Kapas 11)	RVSKVV, Indore	Tamil Nadu, Andhra Pradesh and Karnataka	Suitable for timely sowing rainfed conditions, average seed cotton yield 20.0 q/ha, lint yield 699 kg/ha, average boll/plant - 21.2, maturity 150-160 days, tolerant to sucking pests and diseases.
	PA 740	VNMKV, Parbhani	Andhra Pradesh, Karnataka and Tamil Nadu	Suitable for rainfed, kharif, medium to high fertility zones, average seed cotton yield 13.6 q/ha, maturity 150-160 days, tolerant to bacterial blight and <i>Alternaria</i> leaf spot.
Cotton	G.Cot.40 (Gujarat Cotton 40) (GSHV 172)	Navsari Agricultural University, Athwa Farm, Surat (Gujarat)	Gujarat Maharashtra and Madhya Pradesh	Suitable for high-fertility irrigated conditions during kharif season, average yield 23.3 q/ha, maturity 171-181 days, moderately resistant to BLB, <i>Alternaria</i> leaf spot and grey mildew.
	G.Cot.42 (Gujarat Cotton 42) (GSHV 180)	Navsari Agricultural University, Athwa Farm, Surat (Gujarat)	Gujarat Maharashtra and Madhya Pradesh	Suitable for high-fertility irrigated conditions during kharif season, average yield 17.4 q/ha, maturity 165-190 days, moderately resistant for grey mildew, Compact variety for high density planting system in rainfed areas.

Crop	Variety	Developed by	Recommended Zone	Salient features
	Central Cotton CCH 14-1 (Sunantha)	ICAR-Central Cotton Research Institute, Nagpur (Maharashtra)	Andhra Pradesh, Karnataka and Tamil Nadu	Suitable for irrigated tracts during kharif season, average yield 16.9 q/ha, maturity 150 days, resistant to bacterial leaf blight, and tobacco streak virus and immune to root rot, tolerant to jassids, white fly, thrips, aphids and stem weevil.
Jute	BCCC-2 Bidhan Pat 5	AINP JAF, CRJAF	West Bengal	Suitable for rainfed, mid and high land areas followed by transplanted paddy, fibre yield 29.5 q/ha or 16.4 bales/ha, maturity 120 days (fibre), and 170-175 days (seed production), tolerant to stem rot disease and semilooper, BHC, Apion.
	Central Kenaf JRHC-3	ICAR-Central Research Institute for Jute and Allied Fibres (ICAR), Barrackpore, Kolkata (West Bengal)	West Bengal, Odisha, Bihar, AP, Maharashtra and NE States especially Tripura and Assam, Tripura and Assam	Suitable for rainfed cultivation, average dry fibre yield 28.6 q/ha, maturity 160-175 days, tolerant to foot and stem rot and YVMV.
	JROMU-1	ICAR-Central Research Institute for Jute and Fibres, Kolkata (West Bengal)	West Bengal, Assam, Bihar, Odisha	Suitable for adapted jute growing belt for cultivation, average dry fibre yield 32.9 q/ha, maturity 140-150 days, tolerant to stem rot, Apion, semilooper, BHC and yellow mite.
Mesta	AMV-8 (AHS-216)	Acharya NG Ranga Agricultural University, Guntur (AP)	Andhra Pradesh, Odisha, Maharashtra, West Bengal and Bihar	Suitable for mid and highland rainfed agro-ecosystem of all mesta growing states, average fibre yield 26.6 q/ha, maturity 140-150 days, stronger (20.46g/tex) fine (3.08 tex) fibre, moderately tolerant to foot and stem rot disease. Supplement widely cultivated varieties of roselle like, AMV-5 and HS-4288 for comparatively higher yield coupled with stronger fibre (better quality) and tolerance to insect pests.
Mesta	AMV-9 (Aditya) (AHS-230)	Acharya NG Ranga Agricultural University, Guntur (AP)	Andhra Pradesh, Odisha, Maharashtra, West Bengal and Bihar	Suitable for rainfed mesta growing belt of India for cultivation from May to last week of June sowing, average fibre yield 27.4 q/ha, maturity 140-150 days, stronger (21.03g/tex) and better fibre fineness (3.05 tex), highly tolerant to foot and stem rot disease.
	Central Roselle JRHS-1	ICAR- Central Research Institute for Jute and Allied Fibres, Barrackpore, Kolkata	West Bengal	Suitable for mid and high land rainfed situation in mesta growing belt of India for mid-April to mid-May sowing, even in nutrient poor soil, average fibre yield 26.3 q/ha, maturity 180-200 days, fibre maturity 140 days, better fibre fineness (3.0 tex), tolerant to foot and stem rot disease, mealy bug, semilooper.
FORAGES				

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
Pearl Millet	Gujarat Anand Forage Bajra 4 (GAFB 4)	Anand Agricultural University, Anand	Gujarat	Suitable for Kharif season rainfed condition, green forage yield 580.8 q/ha, dry matter yield 120.3 q/ha, maturity 90-95 days, crude protein 7.66%, no incidence of Downey mildew and lower incidence of rust; lower shoot fly damage and no infestation of myllocerous weevil.
	TSFB 15-8	Prof. Jaishankar Telangana State Agricultural University, Hyderabad (Telangana)	Telangana, Tamil Nadu, Karnataka, Kerala, Puducheri	Suitable for rainfed/ irrigated conditions of red soils with medium fertility and black soils, green fodder yield 420-430 q/ha and dry fodder yield 80-90 q/ha, maturity 110-120 days, days to 50% flowering 58-62 days, moderately resistant reaction for leaf spot, leaf blight, leaf defoliators and pyricularia leaf spot, high crude protein (9.5-10%) and digestibility (55%).
	TSFB 15-4	Prof. Jaishankar Telangana State Agricultural University, Hyderabad (Telangana)	Telangana, Tamil Nadu, Karnataka, Kerala, Puducheri	Suitable for rainfed/ irrigated conditions of red soils with medium fertility and black soils, green fodder yield 410-430 q/ha and dry fodder yield 80-90 q/ha, maturity 110-120 days, days to 50% flowering 60-65 days, resistant to leaf spot and blight and leaf defoliators, high crude protein (10%) and digestibility (58%).
Forage Maize	TSFM 15-5	Prof. Jaishankar Telangana State Agricultural University, Hyderabad (Telangana)	Telangana, Tamil Nadu, Karnataka, Kerala, Puducheri	Suitable for rainfed conditions in kharif season, irrigated dry crop during rabi season, red loamy soils with medium fertility and black soils, green fodder yield 450 q/ha and dry fodder yield 101 q/ha, maturity 125-130 days, moderately resistant to leaf spot, leaf blight, leaf defoliators and pyricularia leaf spot.
Forage Sorghum	Gujarat Fodder Sorghum-6 (SRF-347)	Navsari Agricultural University	Gujarat	Suitable for Kharif under rainfed conditions, green fodder yield 343.3 q/ha, dry fodder yield 112.5 q/ha, late maturing (70-75 days), moderately resistant to foliar and leaf blight diseases.
Fescue Grass	Palam Fescue Grass-2 (Hima 14)	CSK HP Krishi Vishwavidyalaya, Palampur	Himachal Pradesh, Uttarakhand and Jammu & Kashmir	Suitable for temperate and sub-temperate grasslands and pasture, perennial multi cut grass, green fodder yield 250-300.0 q/ha in 2-3 cuttings, dry matter yield 50-60 q/ha, maturity 200-210 days, seed produced during Oct – Nov. every year, tolerant to drought, cold and frost, can be propagated by seed or rooted slips.
Anjan Grass	Bundel Anjan-4 (IG 67-365)	ICAR-Indian Grassland and Fodder Research Institute, Western Regional Research Station, Avikanagar (Rajasthan)	Gujarat, Maharashtra, Madhya Pradesh and Uttar Pradesh	Suitable for pasture land under rainfed condition as perennial grass, average green fodder yield 2.03 q/ha/day and average dry fodder yield 107.8 q/ha, maturity 75-80 days, highly responsive to fertilizers.

Crop	Variety	Developed by	Recommended Zone	Salient features
Dhaman Grass	Bundel Dhaman-1 IGFRI-96-706	ICAR-Indian Grassland and Fodder Research Institute, Western Regional Research Station, Avikanagar	Rajasthan.	Suitable for rainfed ecology Perennial herbaceous grass suitable for pasture lands, green fodder yield 300-350 q/ha and dry fodder yield 80-90 q/ha, perennial, multi cut, multi tillering propagated through seed or rooted slips, resistant to foliar diseases, perennial grass suitable for arid and semi-arid zone pastures with crude protein (7%) and digestibility (55%).
	CO 6 (TNCN 1280)	Tamil Nadu Agricultural University, Coimbatore (Tamil Nadu)	Punjab, Haryana, Rajasthan, Maharashtra, Gujarat, Uttar Pradesh, Madhya Pradesh and Chhattisgarh	Irrigated Perennial multi cut, multi tillered herbaceous grass, green fodder yield 850-1350 q/ha and dry fodder yield 175-260 q/ha, perennial, non seed setting, vegetatively propagated through stem cuttings/ rooted slips, resistant to leaf blight and moderately resistant to leaf spot and major pests.
	Bajra Napier Hybrid PBN 351	Punjab Agriculture University, Ludhiana (Punjab)	Maharashtra, Gujarat, Uttar Pradesh, Madhya Pradesh and Chhattisgarh	Suitable for irrigated ecosystem conditions, perennial/multicut multi-tillered herbaceous grass, green fodder yield 1300.0q/ha, dry fodder yield 300 q/ha, perennial, resistant to leaf blight, no incidence of pests.
	CO 2 (TND 1308)	Tamil Nadu Agricultural University, Coimbatore (Tamil Nadu)	Punjab, Rajasthan, Uttar Pradesh, Gujarat, Maharashtra, Telangana, Karnataka, Kerala, Tamil Nadu, West Bengal	Suitable for irrigated/rainfed ecology, perennial herbaceous legume, green fodder yield 400-450 q/ha and dry fodder yield 115 q/ha, seed yield 1.7-2 q/ha, perennial, Seed to seed maturity, 130 days, days to 50% flowering 70-75 days, resistant to leaf blight and root rot disease and white flies, perennial legume with high crude protein (15.5%) and digestibility (60%).
Napier Bajra Hybrid	TSHL-1 (Telangana Dasherath)	Prof. Jaishankar Telangana State Agricultural University, Hyderabad (Telangana)	Maharashtra, Gujarat, Madhya Pradesh, Chhattisgarh	Suitable for pasture land under rainfed/irrigated conditions in kharif season, perennial herbaceous legumes, average green fodder yield 400-550 q/ha and average of dry fodder yield 100-150 q/ha/, maturity perennial seed to seed 130-135 days, resistant to leaf blight and no infestation of insects, highly responsive to fertilizers, high crude protein (16%) and digestibility (68%).
	CO 2 (TNCN 265)	Tamil Nadu Agricultural University, Coimbatore, (Tamil Nadu)	Andhra Pradesh, Telangana, Karnataka, Tamil Nadu	Suitable for rainfed conditions, perennial herbaceous grass suitable for pasture lands, green fodder yield 700 q/ha and dry fodder yield 160 q/ha, Perennial propagated through seed or rooted slips, seed to seed 110 - 120days, days to 50% flowering 75-80 days, resistant to leaf blight and leaf hoppers, perennial multicut grass with crude protein (8.2%) and digestibility (55%).

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
	IGPISH as BBS Hybrid-1 (VTPH-3)	ICAR-Grassland and Fodder Research Institute, Jhansi (Uttar Pradesh)	Punjab, Haryana, Gujarat, Maharashtra, Himachal Pradesh and Assam	Suitable for rainfed in kharif season, perennial herbaceous grass, green fodder yield 320-350 q/ha and dry fodder yield 90-100 q/ha, days to 50% flowering 90-100 days, no infestation of insects, facultative apomict and preferred to be clonally propagated. Perennial multicut, multi-tillered grass with crude protein (6.5%) and digestibility (53%).
Grain	Chhattisgarh Rajgira – 1 (Ambika GA 12-1)	Indira Gandhi Vishwavidyalaya, Raipur, Chhattisgarh	Chhattisgarh	Suitable for rabi under rainfed rice fallow lands, Seed yield 18-20 q/ha, maturity- 115-120 days, plant height 100-110 cm, resistance to diseases and pests.
Sugarcane	VSI 12121 (VSI 08005)	Vasant Dada Sugar Institute, Pune	Maharashtra	Suitable for Autumn/Spring planting season under irrigated conditions, average cane yield 141.24 t/ha, sugar yield (CCS) 20.75 t/ha, mid-late maturity, moderately resistant to smut, red-rot and rust disease and less susceptible to pest internode borer, non-flowering nature in central and North-East zone, better ratooning ability, drought and salinity tolerant.
	CoLk 12207 (Ikshu-6)	Indian Institute of Sugarcane Research, Lucknow	Uttar Pradesh, Bihar, Jharkhand, West Bengal and Assam	Suitable for Autumn / Spring planting season under irrigated conditions, average cane yield 75.42 t/ha, CCS yield 8.73 t/ha, maturity 300 days (early), resistant to red rot and smut, non-lodging, non-flowering, better ratooning ability and nutrient responsive.
	CoLk 12209 (Ikshu-7)	Indian Institute of Sugarcane Research, Lucknow	Uttar Pradesh, Bihar, Jharkhand, West Bengal and Assam	Suitable Autumn/Spring planting seasons under irrigated conditions, average cane yield 77.5 t/ha, CCS yield 9.38 t/ha, maturity: 360 days (mid-late), resistant to red rot and smut, non-lodging, non-flowering, better ratooning ability and nutrient responsive least susceptible to the main insect pests.
Sugarcane	Swarnamukhi (2005T16)	ARS, Chittoor	Andhra Pradesh	Suitable for irrigated and timely sown conditions for inter cropping. Average cane yield 110 t/ha, CCS yield 10.7 t/ha, maturity maturity 300 days (early) 10 months, cultivation under drought and saline conditions, resistant to red rot pathogens, good rootner; moderately resistant against smut, wilt and pokkahboeing.
	Ranga (2009 V 127 (Co V 15-356))	ANGRAU, A.P	Andhra Pradesh	Suitable for late planting under irrigated, water logged, limited irrigated conditions with saline irrigation water and red rot prone areas average cane yield 120.0-130 t/ha, CCS yield 16.43t/ha, maturity maturity 300 days (early) 10 months, tolerant to post harvest deterioration, Moderately resistant to red rot and smut.

Crop	Variety	Developed by	Recommended Zone	Salient features
	Co 11015 (Atulya)	ICAR-Sugarcane Breeding Institute, Coimbatore (Tamil Nadu).	Tamil Nadu	Suitable for normal recommended cultural practices of Tamilnadu and Puducherry, average cane yield 142.7 tons/ha, maturity 240-360 days, resistant to prevalent races of red rot by Nobel method.
CEREALS				
Wheat	SHUATS-W 13 (AAI 13)	Sam Higginbottom University of Agriculture, Technology and Sciences, Allahabad	Uttar Pradesh	Suitable for timely sown, irrigated conditions, average yield 34.8 q/ha, maturity days 115-120 days, plant height 95-100 cm, resistant to brown rust and Karnal bunt.
	P 12499 WH 1184	Chaudhary Charan Singh Haryana Agricultural University, Hisar	Haryana	Suitable for timely sown, irrigated conditions, average yield 61.3 q/ha, maturity 144 days, plant height -99 (95-105 cm), highly resistant to yellow and brown rusts, protein content (13.02%), sedimentation value (60 ml).
	Karan Narendra (DBW 222)	ICAR-Indian Wheat and Research, (Haryana) Institute of Barley Kamal	Punjab, Haryana, Delhi, Rajasthan (excluding Kota and Udaipur division), Western Uttar Pradesh (except Jhansi division), Jammu and Kathua district of Jammu and Kashmir, Paonta Valley and Una district of Himachal Pradesh and Tarai region of Uttarakhand	Suitable for timely sown, irrigated conditions, average yield 61.3q/ha, maturity 143 days, resistant to stripe and leaf rust.
	Karan Shriya (DBW 252)	ICAR-Indian Wheat and Research, (Haryana) Institute of Barley Kamal	Eastern Uttar Pradesh, Bihar, Jharkhand, West Bengal (excluding hills), Odisha, Assam and plains of North Eastern states	Suitable for timely sown, restricted irrigation conditions and salt affected soils, average yield 36.7 q/ha, maturity 127 days, highly resistant rust and wheat blast.
Wheat	Pusa Wheat 3249 (HD 3249)	ICAR-Indian Agricultural Research Institute, New Delhi	Eastern Uttar Pradesh, Bihar, Jharkhand, West Bengal (excluding Hills), Odisha, Assam and plains of NE States	Suitable for timely sown, irrigation conditions, average yield 48.8 q/ha, maturity 122 days, highly resistant to wheat blast and resistant to leaf and brown rusts. It is a bio fortified variety with high zinc content (42.5 ppm).
	Pusa Wheat 3271 (HD 3271)	ICAR-Indian Agricultural Research Institute, New Delhi	Punjab, Haryana, Delhi, Rajasthan (excluding Kota and Udaipur division),	Suitable for late sown, irrigated conditions, average yield 32.5 q/ha, maturity 104 days(NWPZ) and 98 days (NEPZ), highly resistant to leaf rust and stripe moderate resistant to leaf blight, powdery mildew, Karnal

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
Wheat	Pusa Wheat 1621 (HI 1621)	ICAR - Indian Agricultural Research Institute Regional Station, Indore (Madhya Pradesh)	Western Uttar Pradesh (except Jhansi division), parts of Jammu and Kashmir (Kathua district), parts of Himachal Pradesh, (Una district and Paonta Valley), Uttarakhand (Tarai region), Eastern Uttar Pradesh, Bihar, Jharkhand, West Bengal (excluding hills), Odisha, Assam and plains of N.E. States	bunt and flag smut.
				Suitable for timely sown, restricted irrigation conditions, average yield 50.4 q/ha, maturity 147 days, high levels of field resistant to stripe rust, field resistant to leaf rust.
	Pusa Wheat 1628 (HI 1628)	ICAR - Indian Agricultural Research Institute Regional Station, Indore (Madhya Pradesh)	Punjab, Haryana, Delhi, Rajasthan (excluding Kota and Udaipur division), Western Uttar Pradesh (except Jhansi division), Jammu and Kathua district of J & K, Paonta Valley and Una district of HP, Tarai region of Uttarakhand	Suitable for late sown conditions, average yield 32.8 q/ha. (NEPZ) and 37.0 q/ha (NWPZ), maturity 102 days in NWPZ and 94 days in NEPZ, high levels of field resistant to stripe and leaf rust, resistant to leaf blight, Karnal bunt and head scab.
	PBW 771	ICAR-Indian Wheat and Research, (Haryana) Institute of Barley Kamal	Punjab, Haryana, Delhi, Rajasthan (excluding Kota and Udaipur division), Western Uttar Pradesh	Suitable for late sown irrigated conditions, average yield 50.3 q/ha, maturity 120 days, high degree of resistant to yellow and brown rusts, high zinc concentration (>40 ppm). A MAS derived bio fortified variety of wheat.

Crop	Variety	Developed by	Recommended Zone	Salient features
			(except Jhansi division), Jammu and Kathua district of Jammu and Kashmir, Paonta Valley and Una district of Himachal Pradesh and Tarai region of Uttarakhand	
	Him Palam Gehun 2 (HPW 368)	CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur, HP	Himachal Pradesh	Suitable for timely sown rainfed and irrigated conditions of mid and low hills of HP, average yield 26.0q/ha(rainfed) and 50.9 q/ha(irrigated), maturity 176-185 days, high level of resistant to yellow rust and resistant to powdery mildew, leaf and stripe rusts.
	DDW 47	ICAR-Indian Institute of Wheat and Barley Research, Kamal	Madhya Pradesh, Gujarat, Rajasthan and Chhattisgarh	Suitable for timely sown restricted irrigated conditions, average yield 37.3 q/ha, protein content 12.69%, maturity 121 days, resistant to black and brown rust, high yellow pigment content (7.57 ppm).
	Gujarat Wheat 1346 (GW 1346)	Anand Agricultural University, Anand (Gujarat)	Maharashtra, Karnataka and plains of Tamil Nadu	Suitable for restricted irrigated timely sown conditions, average yield 48.8 q/ha, protein content 12.36%, maturity 122 days, highly resistant to wheat blast, resistant reaction for leaf and brown rusts, Karnal bunt, powdery mildew, flag smut and leaf blight.
	Pusa Wheat 8802 (HI 8802)	ICAR - Indian Agricultural Research Institute Regional Station, Indore (Madhya Pradesh)	Maharashtra, Karnataka and plains of Tamil Nadu	Suitable for restricted irrigation and timely sown conditions, average yield 36.0 q/ha, maturity 105-110 days, high level of field resistant to stem and leaf rusts and resistant to Karnal bunt, loose smut, flag smut and foot rot.
Wheat	Pusa Wheat 8805 (HI 8805)	ICAR - Indian Agricultural Research Institute Regional Station, Indore (Madhya Pradesh)	Maharashtra, Karnataka and plains of Tamil Nadu	Suitable for restricted irrigation and timely sown conditions, average yield 35.4 q/ha, protein content 12.8%, maturity 105-110 days, high level of field resistant to stem and leaf rusts and resistant to Karnal bunt, loose smut, foot rot and better resistant to flag smut.
	UAS-466	University of Agricultural Sciences, Dharwad	Madhya Pradesh, Gujarat, Rajasthan and Chhattisgarh	Suitable for timely sown, restricted irrigation conditions, average yield 38.8 q/ha, maturity 120 days, resistant to leaf and stem rusts, better resistant to loose smut
Barley	PL 891	Punjab Agricultural University, Ludhiana (Punjab)	Punjab, Haryana, Delhi, Rajasthan (excluding Kota and Udaipur division), Western Uttar Pradesh	Suitable for irrigated, timely sown condition, average yield 36.6 q/ha, maturity 137 days, resistant to leaf blight.

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
	Karan Maltsona (DWRB 160)	ICAR - Indian Institute of Wheat and Barley Research, Kamal	(except Jhansi division), Jammu and Kathua district of Jammu and Kashmir, Paonta Valley and Una district of Himachal Pradesh, Tarai region of Uttarakhand	Suitable for irrigated, timely sown conditions, average yield 53.7 q/ha, maturity 131 days, resistant to yellow rust. It has highest malting quality score (68/90).
	Him Palam Jau 1 (HBL 713)	CSK Himachal Pradesh Krishi Vishwavidyalaya, Palampur (HP)	Punjab, Haryana, Delhi, Western Uttar Pradesh, Rajasthan (except Kota and Udaipur divisions), Western Uttar Pradesh (except Jhansi division), Jammu and Kathua district of Jammu and Kashmir, Paonta Valley and Una district of Himachal Pradesh, Tarai region of Uttarakhand	Suitable for cultivation during rabi season under timely sown rainfed conditions, average yield 30.0-35.0 q/ha, maturity 170-180 days, resistant to yellow and leaf rusts and less incidence of stem rust.
			Himachal Pradesh	
OILSEEDS				
Indian Mustard	RH 761	Oilseeds Section, Deptt. Of Genetics and Plant Breeding, CCSHAU, Hisar - 125004	Jammu, Punjab, Haryana, Delhi and Northern Rajasthan	Suitable for timely sown and rainfed conditions in <i>Rabi</i> season, average seed yield 28.6 q/ha, oil content 40.4%, maturity 141 days, moderately tolerant to white rust and <i>Alternaria</i> leaf blight on pod, low aphid infestation.
	Kesari Gold (31J3403)	Bayer Bio Science Pvt. Ltd	West Bengal	Suitable for irrigated conditions in <i>Rabi</i> season, average seed yield 17.92 q/ha, oil content 40.0-42.3%, maturity 90-100 days, resistant to lodging; moderately resistant to fungal disease and white rust; resistant to aphid infestation.
	Kesari 5111 (PCJ03-401)	Bayer Bio Science Pvt. Ltd	West Bengal	Suitable for irrigated conditions in <i>Rabi</i> season, average seed yield 14.81 q/ha, oil content 41.1-42.5%, maturity 92-105 days, resistant to lodging; moderately resistant to fungal disease and white rust and moderately resistant for aphid sin festation

Crop	Variety	Developed by	Recommended Zone	Salient features
	Bayer Mustard 5222	Bayer Bio Science Pvt. Ltd	West Bengal	Suitable for irrigated conditions in <i>Rabi</i> season, average seed yield 16.78 q/ha, oil content 38.0-39.1%, maturity 105-122 days, resistant to lodging, moderately resistant to white rust and resistant to aphid infestation.
	TBM-204 (Trombay/Bidhan Mustard-204)	BCKV, West Bengal	Bihar, Jharkhand, Odisha, Assam and Manipur	Suitable for irrigated conditions in <i>Rabi</i> /winter season, average seed yield 13.4 q/ha oil content 41.0%, maturity 110 days, moderately resistant to <i>Alternaria</i> leaf spot.
	SVJ-64	Shakti Vardhak Hybrid Seeds Pvt. Ltd., Hisar (Haryana)	Haryana	Suitable for irrigated conditions under both high and low fertility conditions, yield 31.2 q/ha, oil content 39.1%, maturity 125-130 days.
	Pant Giriya (PYS 2012-6)	G.B. Pant University of Agriculture and Technology, Pantnagar (Uttarakhand)	Uttarakhand	Suitable for timely sown irrigated conditions for Uttarakhand plains, average yield 14.4 q/ha, oil content 45.30 %, maturity 110(83-128) days, reaction against <i>Alternaria</i> blight, white rust, downy mildew and incidence of <i>Sclerotinia</i> rot.
Yellow Sarson	Shalimar Sarsaon - 2 (KBS-49)	Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir, Srinagar	Jammu & Kashmir	Suitable for irrigated conditions of J&K at 1500-1800 m above MSL, average seed yield 15.0-16.0q/ha, oil content 42.7%, maturity 205-215 days.
	Shalimar Sarsaon - 3 (KBS-3)	Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir, Srinagar	Jammu & Kashmir	Suitable for irrigated conditions of J&K at 1800-2000 m above MSL, average seed yield 15.0-17.0 q/ha, oil content 41.3%, maturity 200-210 days.
Linseed	LSL - 93	VNMKV, Oilseeds Research Station, Latur	Maharashtra	Suitable for rainfed conditions, average yield 9.6 q/ha, oil content 37.95%, maturity 105 days, moderately resistant to major disease like powdery mildew, <i>Alternaria</i> and rust.
	Surya (LCK 1404)	C.S. Azad University of Agriculture and Technology, UP	Jammu & Kashmir, Himachal Pradesh, Punjab and Haryana	Suitable for timely sown and irrigated conditions, average yield 14.3 q/ha, oil content 35.49%, maturity 155-172 days, highly resistant to rust, moderately resistant to wilt, <i>Alternaria</i> blight and powdery mildew.
	TL 99	Baba Atomatic Research Centre, Trombay, Mumbai (Maharashtra)	Uttar Pradesh, Bihar, Jharkhand, West Bengal, Assam and Nagaland	Suitable for irrigated condition, average yield 12.7 q/ha, oil content 36.56%, a low linolenic variety (4.0%) maturity 115-132 days, moderately resistant to powdery mildew, <i>Alternaria</i> blight, wilt and resistant to rust.
	HIM PALAM ALSI-I (KL-241)	CSK Himachal Pradesh Krishi Vishwavidyalaya, Kangra (HP)	Himachal Pradesh	Suitable for utera system of cultivation under assured moisture condition during <i>rabi</i> season, average yield 7.6 q/ha, oil content 36.15%, maturity 183 days, highly resistant reaction to rust, powdery mildew, wilt and resistant to bud fly.
Safflower	Pride	ICAR- Indian Institute of Oilseeds	Telangana, Andhra Pradesh,	Suitable for irrigated and rainfed conditions, average yield 12.4 q/ha

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
PULSES	(ISF-1)	Research. Hyderabad (Telangana)	Madhya Pradesh, Chhattisgarh, Karnataka and Maharashtra	(rainfed), 18.6 q/ha, (irrigated) and 16.3 q/ha (all India), oil content 30.5%, maturity 127-137 days.
	Lakshmi-Priya (ISF-764)	ICAR- Indian Institute of Oilseeds Research. Hyderabad (Telangana)	Karnataka, Maharashtra, Telangana, Andhra Pradesh, Madhya Pradesh, Uttar Pradesh, Bihar, Chhattisgarh, West Bengal, Gujarat and Odisha	Suitable for irrigated and rainfed conditions, average yield 15.8 q/ha. (rainfed), 22.7 q/ha, (irrigated) and 20.1 q/ha (all India), oil content 30.6% and maturity 123-133 days.
	SSF-12-40	Mahatma Phule Krishi Vidyapeeth. Rahuri, Distt. Ahmednagar, MH	Maharashtra, Karnataka and Telangana	Suitable for irrigated and rainfed conditions, average yield 14.8 q/ha (rainfed) and 20.7 q/ha, (irrigated), oil content 32.9%, maturity 123 days, moderately resistant to Fusarium wilt, Alternaria leaf spot and aphid.
	PULSES			
Chickpea	Raj Vijay Gram 204 (RVG 204) (RVSSG 8102)	Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Sehore (Mp)	Madhya Pradesh	Suitable for timely sown conditions and amenable to machine harvesting, desi type, average yield 19.8 q/ha, maturity 112 days, 100 seed weight 23.1 g, plant height 59 cm, tolerant to wilt.
	Raj Vijay Gram 205 (RVG 205) (RVSSG 32)	Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Sehore (Mp)	Madhya Pradesh	Suitable for timely sown irrigated conditions, green seeded chickpea variety, average yield 17.3 q/ha, 100 seed weight 20.3 g, maturity 114 days, tolerant to wilt.
	Raj Vijay Kabuli Gram 111 (RVG 111) (RVSSG 24)	Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Sehore (Mp)	Madhya Pradesh	Suitable for timely sown irrigated conditions, Kabuli type, average yield 16.7 q/ha, 100 seed weight 26.12 g, maturity 117 days, tolerant to wilt.
	Raj Vijay Kabuli Gram 151 (RVG 151) (RVSSG 37)	Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Sehore (Mp)	Madhya Pradesh	Suitable for timely sown irrigated conditions, extralarge seeded Kabuli chickpea variety, average yield 17.7 q/ha, 100 seed weight 54.4 g, maturity 113 days, tolerant to wilt.
	GNG-2299 (Purva)	ARS, Srirangannagar, Rajasthan	Assam, West Bengal, Jharkhand, Bihar, Eastern UP, Manipur	Suitable for late sown irrigated conditions of NEPZ of India, average yield 14.5 q/ha, 100 seed weight 15.9 g, maturity 116 days, tolerant against wilt (<i>Fusarium oxysporum</i>) disease
Chickpea	IPC 2006-77	ICAR-Indian Institute of pulses Research, Kanpur (Up)	Chhattisgarh, Madhya Pradesh, Gujarat, Southern parts of Rajasthan, Bundelkhand tracts of Uttar Pradesh	Suitable for late sown conditions under rice fallow, average yield 20.7 q/ha, medium small 16.5g/100 seed weight, maturity 112 days, moderately resistant to wilt, dry root rot and stunt.

Crop	Variety	Developed by	Recommended Zone	Salient features
Chickpea	PDKV Kanchan (AKG-1109)	ICAR-Indian Institute of pulses Research, Kanpur (Up)	Maharashtra	Suitable for early sown conditions, average yield 19.4 q/ha, medium bold seed, 100 seed weight 19.7g, maturity 109 days, resistant to <i>Fusarium</i> wilt
	Pusa Chickpea 10216 (BGM 10216)	ICAR-Indian Agricultural Research Institute, New Delhi	Bundelkhand region of UP, Madhya Pradesh, Maharashtra, Gujarat	Suitable for timely sown rainfed conditions, first MABB derived variety of chickpea in the country, average seed yield 14.8 q/ha, maturity 106 days, 100 seed weight 22.2 g, protein content 22.6%, drought tolerant.
	Pusa Parvati (BG 3062)	ICAR-Indian Agricultural Research Institute, New Delhi	Madhya Pradesh, Bundelkhand region of Uttar Pradesh and Southern Rajasthan	Suitable for timely sown irrigated conditions during rabi season, average yield 21.5 q/ha, grain protein content is 20.73%, maturity 108-118 days, highly resistant to wilt, dry root rot and stunt.
	Haryana Chana No 7 (HC 7) (H 12-55)	CCS Haryana Agriculture University, Hisar (Haryana)	Punjab, Haryana, Western Uttar Pradesh, Delhi, North Rajasthan, Jammu and Kashmir, plains of Himachal Pradesh and Uttarakhand	Suitable for late sown irrigated conditions during rabi season, average yield 24.1 q/ha, grain protein content 17.23%, maturity 127 days, tolerant to <i>Helicoverpa armigera</i> .
	Super Annigeri-1 (MABC-WR-SAI)	University of Agricultural Sciences, Raichur	Andhra Pradesh, Karnataka, Maharashtra and Gujarat	Suitable for timely sown rainfed/irrigated conditions, MABB derived variety of chickpea, average yield 18.6 q/ha, maturity 104 days, 100 seed weight 18.4 g, protein content 22.4%, drought tolerant.
	Phule Vikram (Phule G 08108)	Mahatma Phule Krishi Vidyapeeth, Rahuri, Distt. Ahmednagar, MH	Maharashtra, Gujarat, Madhya Pradesh, Rajasthan and Uttar Pradesh	Suitable for rainfed conditions, average yield 22.7 q/ha, maturity 110-115 days, resistant to <i>Fusarium</i> wilt.
	Pant Gram 6 (PG 119)	G.B. Pant University Agriculture and Technology Pantnagar (Uttarakhand)	Uttarakhand	Suitable for irrigated / rainfed late sown conditions, average yield 21.7 q/ha, grain protein content 22.01%, maturity 145 days, tolerant to wilt, botrytis grey mould and pod borer.
	Him Palam Chana I (DKG 986)	CSK Himachal Pradesh Krishi Vishwavidyalaya, Kangra (HP)	Himachal Pradesh	Suitable for rainfed conditions during rabi season, average yield 16.2 q/ha, maturity 151 days, resistant to <i>Ascochyta</i> blight and tolerant to wilt, root rot, stem rot and rust.
	IPC 2004-98 (Desi)	ICAR-Indian Institute of Pulses Research, Kanpur (Uttar Pradesh)	Uttar Pradesh	Suitable for normal sown conditions, average yield 14.3 q/ha, maturity 141 days, moderately resistant to wilt.
	IPC 2005-62 (Desi)	ICAR-Indian Institute of Pulses Research, Kanpur (Uttar Pradesh)	Uttar Pradesh	Suitable for late sown conditions, average yield 10.2 q/ha, grain protein content 27.25%, maturity 118 days, moderately resistant to wilt.
	Sabour Chana-I (BRC-1)	Bihar Agricultural University, Sabour (Bihar)	Bihar	Suitable for normal sowing under rainfed/ irrigated conditions, average yield 22.0- 24.0 q/ha, grain protein content 21.66%, maturity 130-135

Agricultural Inputs

Crop	Variety	Developed by	Recommended Zone	Salient features
Lentil	Shalimar Masoor – 3	Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir, Srinagar	Jammu & Kashmir	days, moderately resistant to pod borer.
	Raj Vijay Lentil 13-5	RVSKVV, RAK College of Agri. Sehere, M.P	Madhya Pradesh, Chhattisgarh and parts of Rajasthan	Suitable for timely sown conditions, average yield 44.50-12.50 q/ha, 100 seed weight 5.0-5.5 g, maturity 204 days, tolerant to frost and winter chilling
	RVL – 13-7 (Raj Vijay Lentil 13-7)	RVSKVV, Sehere, M.P.	Madhya Pradesh, Chhattisgarh & Rajasthan	Suitable for timely sown conditions, average yield 12.38 q/ha, bold seed size 3.9g/100 seed weight, maturity 106 days, resistant to moderately resistant to wilt.
	LL 1373	Punjab Agricultural University, Ludhiana (Punjab)	Western Uttar Pradesh, northern Rajasthan, Punjab, Haryana and Uttarakhnad	Suitable for timely sown irrigated conditions, average yield 15.7 q/ha, grain protein content 27.05%, maturity 124-131 days, moderately resistant to rust and wilt.
	L-4729	ICAR-IARI, New Delhi	Madhya Pradesh, Maharashtra, Chhattisgarh, Gujarat, Bundelkhand region of UP and south east parts of Rajasthan	Suitable for rainfed condition during rabi season, average yield 17.5 q/ha, grain protein content 24.91%, maturity 96-110 days, moderately resistant to wilt and root rot.
Lentil	Kota Masoor 3 (RKL 605-03)	AICRP on MULLaRP. ARS. Agricultural University, Kota	Madhya Pradesh, Maharashtra, Chhattisgarh, Gujarat, Uttar Pradesh and Rajasthan	Suitable for rainfed condition, average yield 18.8 q/ha, grain protein content 23.29%, maturity 105 days, moderately resistant to wilt, less incidence of pod borer and aphids tolerant to drought and high temperature.
	VL Masoor 148 (VL 148)	ICAR-Vivekananda Parvitya Krishi Anusandhan Sanssthan, Almora (Uttarakhand)	Himachal Pradesh, Jammu & Kashmir, Uttarakhand, Manipur and Tripura.	Timely sown rainfed conditions, average yield 11.5 q/ha, grain protein content 30.46%, maturity 155-160 days, moderately resistant to wilt and rust diseases, possess moderate resistance against pod damage and aphids
	IPL 534	ICAR-Indian Institute of Pulses Research, Kanpur (Uttar Pradesh)	Madhya Pradesh	Suitable for rainfed normal sown condition for rabi season, average yield 12.04 q/ha, grain protein content 23.3%, maturity 100-107 days, resistant to major diseases including rust, Fusarium wilt, Stemphylium blight and tolerant to black aphid and pod borer.
	Harit (IPF 16-13)	ICAR- Indian Institute of Pulses Research, Kanpur	Uttar Pradesh, Bihar, Jharkhand, Assam and WB	Timely sown rainfed conditions, average yield 17.5 q/ha, grain protein content 27%, maturity 140-145 days, resistant to powdery mildew.
Field pea				

Crop	Variety	Developed by	Recommended Zone	Salient features
	VL Matar 61 (VL 61)	ICAR-Vivekananda Parvitya Krishi Anusandhan Sunsthan, Almora (Uttarakhand)	Uttarakhand	Timely sown rainfed organic conditions, average yield 11.3 q/ha, grain protein content 28.26%, maturity/150-155 days, moderately resistant to wilt, powdery mildew, aphid, pod and leaf minor.
Lathyrus	BK-14-1 (LAT 15-6)	Bidhan Chandra Krishi Viswavidyalaya, West Bengal	West Bengal	Suitable for irrigated and rainfed conditions, average yield 15.9 q/ha, maturity 108-116 days, resistant to powdery mildew, wilt and low aphid infestation.
FORAGES				
Oat	SKO-225 (Shalimar Fodder Oats -6)	Sher-e-Kashmir Uni. Of Agril. Sci. & Tech. Jammu & Kashmir	Himachal Pradesh, Almora, Jammu & Kashmir Central zone – Jhansi, Anand, Jabalpur, Rahuri, Urukanchan	Suitable for timely sown, normal fertility and irrigated conditions and hill zone of the country, green fodder yield 315.2 q/ha, dry fodder yield 70.0 q/ha, crude protein 9.4%, suitable for single cut system. Maturity hill zone (170-175 days), Central zone (140-145 days). Moderately resistant to leaf blight and powdery mildew
	Bundel Jat-2015-1	ICAR-Grassland and Fodder Research Institute, Jhansi (Uttar Pradesh)	Himachal Pradesh and Jammu & Kashmir	Suitable for irrigated, timely sown conditions in tropical and subtropical areas during Rabi season, average green fodder yield 252.0 q/ha, dry fodder yield 56.0 q/ha, crude protein 10%, resistant to lodging, non-shattering.
Berseem	Jawahar Berseem 05-9 (JB 05-9)	Jawahar Nehru Krishi Vidyalaya, Jabalpur (Madhya Pradesh)	Rajasthan, Punjab, Haryana, and Uttarakhnad	Suitable for rainfed and irrigated under normal fertility conditions, average green fodder yield 650-680 q/ha and dry fodder yield 100 q/ha, seed to seed maturity 190-200 days, least susceptible against leaf blight, aphids/tillers and leaf defoliator, Annual multicut legume with crude protein (18%) and digestibility (65%).

Source: Division of Crop Science, Indian Council of Agricultural Research, New Delhi

Table 2.4: List of horticultural crop varieties/hybrids notified/released/identified in 2018

Name of crops	Variety	Centre/State release	Releasing centre/Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
FRUITS								
Guava	Arka Kiran	Karnataka State	ICAR-IIHR, Bengaluru	3rd year onwards	All Guava growing states	520-540	Pink pulp with soft seeded variety, Lycopene content of 7.5mg/100g, Seed hardness of 9kg/cms, TSS of 12-13%, mean fruit weight of 230g.	Kharif and Rabi
	Arka Poorna	Institute Identified	ICAR-IIHR, Bengaluru	3rd year onwards	All Guava growing states	540-550	High yielding, plants are semi vigorous in growth habit with prolific bearing, hence suitable for medium to high density planting. The fruits are round, medium to bigin size (200-230 g) with smooth, shiny pericarp. The pulp is firm, white with thick outer rind, good flavour, TSS 10-12°B), ascorbic acid (190-198 mg/100 g) medium soft seeds (10 .0 to 12.0 kg /cm ²) and keeping quality. It is a dual purpose variety suitable for both table and processing (osmotic dehydration of rind).	Kharif and Rabi
Banana	Phule Pride	State release (notified)	ICAR-AICRP on Fruits, Banana Research Station, Jalgaon, MPKV-Rahuri	330 days	Banana growing areas of Western Maharashtra and Khandesh	888	Resistance to pseudostem breaking, bunch breaking and lodging and tolerant to sigatoka leaf spot.	June, October and February planting
	Kaveri Kalki	SVRC - Tamil Nadu	ICAR-NRCB, Trichy	345 to 360 days	Tamil Nadu, Kerala, Andhra Pradesh	550-600	40% short statured than its local control (2.6m as against 4.5m). Suited to annual cropping system with 60 days earliness over its local control.	March-April
	Kaveri Sugantham	SVRC - Tamil Nadu	ICAR-NRCB, Trichy	410-415 days	Higher altitudes of Tamil Nadu like Kolli hills Shevorooy Hills, Kodai Hills	480-500	Tolerant to Foc race 4, Highly fragrant Utility in breeding, program due to its ability to set seeds upon crossing.	Feb-Mar

Name of crops	Variety	Centre/State release	Releasing centre/Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
Banana	Kaveri Saba	SVRC - Tamil Nadu	ICAR-NRCB, Trichy	350 to 370 days	etc. Tamil Nadu, Kerala, Andhra Pradesh	600-620	20% higher yield over local control, mothant, drought tolerant, salt tolerant, high market preference and fetching premium price owing to its good keeping quality with green life of 7-8 days.	Feb-Mar
VEGETABLES								
Brinjal long	DBL-175	AICRP (VC) identified	ICAR-IARI, Pusa, New Delhi	50-55 DAT	Rajasthan, Gujarat, Haryana, Delhi, M.P., Maharashtra and Goa	350-400	Average plant height is 60-65 cm. Fruits are long (18-20 cm length), cylindrical (3.5-4.5 cm diameter), shiny purple in colour with non-spiny green calyx. The average fruit weight is 100-125 g.	Rainy season (Kharif)
Brinjal round	IC-0598429	AICRP (VC) identified	IIHR-CHES, Bhubaneswar	50-60 DAT	Chhattisgarh, Orissa and A.P.	350-360	Plants are medium in height and flowering initiates around 42 days after transplanting. Fruits are solid, oval, and purple green in colour with white patches and pink tinge towards bottom of the fruit, pulp soft. Fruiting period ranges up to 90-95 days.	Rainy season (Kharif)
Bitter gourd (Hybrid)	NBIH-2009	AICRP (VC) identified	Nuzi Veedu Seeds	50-55 DOS	Punjab, Uttar Pradesh, Bihar and Jharkhand	150-200	It has vigorous plant growth habits with green to dark green foliage. Fruits dark green with sharp and dense tooting/tubercles, fruit length is 22-24 cm, 4-5 cm thickness, medium bitter in taste. Fruits are having good shine and self-life.	Rainy season (Kharif) & Spring-summer season (Zaid)
Ivy gourd [<i>Coccinia indica</i> sy. <i>C. grandis</i> (L.)]	Thar Sundari	Centre	CIAH, Bikaner	It is short-perennial (4-5 years)	Tolerant to high temperature (36-38 °C) and abiotic stress (tolerate dry climate 40-42 °C).	268.5	It is stable for sequential female flowering, fruiting and morphological traits. Plants continue flowering even when temperature reached to max. 48° C, however, slightly affecting the fruit	Spring-summer, rainy-winter season.

Agricultural Inputs

Name of crops	Variety	Centre/State release	Releasing centre/Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
Sponge gourd (<i>Luffa cylindrica</i> L.)	Thar Tapish	Centre	CIAH, Bikaner	It is short duration (110-115 days)	It is multiple-stress tolerant/ heat tolerant variety	146	size and shape. Used for vegetable. Tolerant to high temperature and abiotic stresses of hot arid agro-climate Potential for kitchen gardening. It is suitable both for rainy and summer season cultivation.	Spring summer season crop.
	Kashi Shreya	AICRP (VC) identified	ICAR-IIVR, Varanasi	50-55 DAS	Punjab, Uttar Pradesh, Bihar and Jharkhand	150-200	Plants are medium viny (3.5-5.5 m) with dark green foliage and fruiting at every node. Fruits dark green, long straight (20-25 cm on flat bed, up to 32 cm on bower) and with 3-3.75 cm diameter. It is resistant to Sponge Gourd Mosaic Virus and downy mildew disease under field condition.	Rainy season (Kharif) & Spring-summer (Zaid)
	Kashi Rakshita	AICRP (VC) identified	ICAR-IIVR, Varanasi	48-52 DOS	Punjab, Uttar Pradesh, Bihar and Jharkhand	200-250	It is medium viny (3.5-5.5 m) with dark green foliage and fruiting at every node. Fruits are dark green, long straight (20-25 cm on flat bed and may on up to 30 cm on bower) with 3-4 cm diameter. It is resistant to Sponge Gourd Mosaic Virus and downy mildew disease under field condition.	Rainy season (Kharif) & Spring-summer season (Zaid)
Palak/Spinach beet [<i>Beta vulgaris</i> var. <i>bengalensis</i> Roxb.]	Thar Harpama	Centre	CIAH, Bikaner	180 days	Higher early plant growth vigour and more number of pickings under north-western parts of Rajasthan	128.5-235.8	It produces excellent quality and bigger size tender leaves for fresh vegetable use. Good yield with limited irrigations (drip, channel).	Winter season
Chilli	Arka Khyati	Karnataka State	ICAR-IIHR, Bengaluru	180 days	Southern States	Fresh yield: 400-450 Dry Yield: 50-55	CMS based high yielding F1 hybrid for fresh market, fruits 12 X1cm; light green and turn deep red on maturity, medium pungent, fruits smooth and	Kharif, Rabi-summer

Name of crops	Variety	Centre/State release	Releasing centre/Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
Chilli (Hybrid)	2014/CHIH YB-3	AICRP (VC) identified	Private sector, Code not yet opened	55-60 DAT	Punjab, Uttar Pradesh, Bihar and Jharkhand	125-150	turn wrinkled after drying, tolerant to viruses. It has vigorous plant growth. Average fruit length ranges from 7-13 cm, fruit width 0.8-1.25 cm and fruit weight 4-4.5 g. It has an average green fruit yield of 126.13 q/ha.	Rainy season (Kharif)
Capsicum	Arka Atulya	Institute Identified	ICAR-IIHR, Bengaluru	140-150 days	Karnataka	450-500	High yielding F1 hybrid with powdery mildew tolerance, suitable for fresh green market.	Kharif and Rabi
French Bean	Arka Sharath	Karnataka State	ICAR-IIHR, Bengaluru	70 days	South and North India	185	It has round, string less, smooth pods suitable for steamed beans. Pods are crisp, fleshy with no parchment and perfectly round on cross section. Plants are bushy and photo insensitive. It gives maximum number of pods per plant (44.5).	Kharif and Rabi
Yard Long Bean	Arka Sukomal	Institute Identified	ICAR-IIHR, Bengaluru	100 days	All India	240	High yielding rust resistant pole bean variety, takes 60 days for 1st harvest. Pods stringless, oval, green and long (23 cm).	Kharif and Rabi
Onion	Arka Mangala	Karnataka State	ICAR-IIHR, Bengaluru	75-80 days	South India	250	Pole, vigorous, photo insensitive. Pods are green with smooth surface.	Kharif and Rabi
	Arka Bheem	Karnataka State	ICAR-IIHR, Bengaluru	130 days	All India	470	It is a tri-parental synthetic variety with Red to pinkish red elongated globe shaped bulbs. Average bulb weight is 120 g.	Kharif and Rabi
	Bhima Light Red (notified)	Karnataka & Tamil Nadu	ICAR-DOGR, Rajgurunagar, Pune	115 days	It is recently released variety	385	It is light red globe bulbs of about 70 g with thin neck and total soluble solids of 13%. Total weight losses after four months of storage was less	Rabi Season

Agricultural Inputs

Name of crops	Variety	Centre/State release	Releasing centre/Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
Onion	Bhima Safed (notified)	Chhatisgarh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, and TN	ICAR-DOGR, Rajgurunagar, Pune	110-120 days	3000 ha	185	than 25%. It is almost free of doubles and bolters. This variety having white, round to oval bulbs of mainly 70-80 g. It has 11-12% TSS and is thus suitable both for table and processing. It has less than 5% doubles and bolters.	Kharif Season
Garlic	Bhima Purple (notified)	Delhi, UP, Haryana, Bihar, Punjab, Maharashtra, Karnataka and AP	ICAR-DOGR, Rajgurunagar, Pune	135-140 days	900 ha	6-7 t/ha	Attractive purple skinned variety, field tolerant to thrips & foliar diseases, soft neck variety.	Rabi season
Vegetable Amaranth	Arka Samraksha	Karnataka State	ICAR-IIHR, Bengaluru	30-35 days	All India	109	It is a high yielding amaranth variety, with high antioxidant activity of 499mg (AEAC units) and minimum nitrate content of 27.3 mg and 1.34g of oxalates per 100g fresh weight of leaves. It is a pulling type amaranth variety with green leaves and stem.	Year round
	Arka Varna	Karnataka State	ICAR-IIHR, Bengaluru	30-35 days	All India	106	It is a high yielding amaranth variety, with high antioxidant activity of 417mg (AEAC units), nitrate content of 37.6 mg and 1.42 g of oxalates per 100 g fresh weight of leaves. It is a pulling type amaranth variety with green leaves and pink stem.	Year round
Muskmelon	Arka Siri	Institute	ICAR-IIHR,	70 days	North and South	250	High yielding, good quality (12-13%)	Kharif, Rabi

Name of crops	Variety	Centre/State release	Releasing centre/Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
Tomato		Identified	Bengaluru		India		TSS) musk melon variety with good shelf life (5 days).	
	Arka Abhed	Institute Identified	ICAR-IIHR, Bengaluru	140-150 days.	North and South India	700-750	Multiple disease resistant tomato hybrid, resistant to four diseases viz., ToLCD (Ty2), BW, EB and late blight. Fruits are firm oblate round, medium large (90-100g), suitable for fresh market.	Kharif, Rabi, summer
	Kashi Aman (notified)	Central release, Notified, No.- S.O.261(E), 16.01.2018	ICAR-IIVR, Varanasi	The first picking can be started within 85 days after transplanting	Punjab, Uttar Pradesh, Bihar and Jharkhand	550-600	The fruits are red in colour, round, very firm with a pericarp thickness of 0.52-0.57cm. Average fruit weight 80-110g. Resistant to ToLCV.	Rabi
	Kashi Amul (notified)	Central release, Notified, No.- S.O.261(E), 16.01.2018	ICAR-IIVR, Varanasi	The fruits mature in 85-90 days post transplanting	Karnataka, Tamil Nadu and Kerala states	500-600	Fruits attractive red in colour, round and firm with pericarp thickness 6-6.5 mm. Average fruit weight 90-115g. This variety has shown high level of resistance ToLCV.	Rabi
Tomato (ToLCV) (Resistant)	2014/TOLC VRES-5	AICRP (VC) identified	Private sector, Code not yet opened	60-70 DAT	Karnataka, Tamil Nadu, Kerala and Pondicherry	300-400	Fruits are round shape, red, medium size, fruit weight ranges from 50-70 g with good firmness.	Rainy season (Kharif)
Cowpea (Bush Type)	CP-55	AICRP (VC) identified	ICAR-IARI, Pusa, New Delhi	50-55 DAS	Rajasthan, Gujarat, Haryana and Delhi	120-150	The pods are smooth, slender, round, straight and light green in colour. The pod length ranged from 20-26 cm and pod diameter 0.6-0.8 cm.	Rainy season (Kharif) & Spring-summer season (Zaid)
Dolichos Bean (Pole Type)	DB-10	AICRP (VC) identified	ICAR-IARI, Pusa, New Delhi	100-120 DAS	M.P., Maharashtra and Goa	300-350	The pods are smooth, flat, light green in colour of 10-12 cm length, 2.2-2.5cm width with acute beak (0.5 – 1.0 cm) and 4-5 seeds per pod. This is resistant to common bean mosaic	Rainy season (Kharif)

Agricultural Inputs

Name of crops	Variety	Centre/State release	Releasing centre/Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
Cucumber	DC-83	AICRP (VC) identified	ICAR-IARI, Pusa, New Delhi	45-50 DAS	Punjab, Uttar Pradesh, Bihar and Jharkhand	200-250	virus and <i>Cercospora</i> disease. The fruits are long (15-18cm), light green in colour with mild whitish green stripes and dark green blotchy spots present near the blossom end, straight, rudimentary spines, soft skinned with tender and crispy flesh.	Rainy season (Kharif) & Summer season (Zaid)
Mustard Green	UHF VR-12-1	AICRP (VC) identified	Dept. of Vegetable Crops, College of Forestry and Hill Agriculture, Hill Campus Ranichauri-249199	45-50 DAS	Sikkim, Meghalaya, Manipur, Mizoram, Nagaland and Tripura	350-400	Plants having leaves green to purplish green, uneven in leaf size, colour and bolting time. About 3-4 times leaves can be picked in direct sown crop of rabi (Oct-April) field conditions.	Winter season (Rabi)
FLOWERS/ORCHIDS								
Gladiolus	Arka Ranjini	Institute Identified	ICAR-IIHR, Bengaluru	62-68 days	Maharashtra, Karnataka	Marketable spikes per corm - 1.82	It is having attractive floret colour i.e., Purple (78.A) middle, Red – Purple (72.A) margin with Green-Yellow (1.D) blotch, florets arranged in double rows, short spikes and early flowering. This Gladiolus variety is suitable for cut flower and bedding purpose.	Kharif and Rabi
	Arka Pratham	Institute Identified	ICAR-IIHR, Bengaluru	58-65 days	Maharashtra, Karnataka	Marketable spikes per corm - 1.59	It is having attractive violet floret colour i.e., Purple Violet (82.A) having Purple (77.A) margin and Green White (157.C) line on lower lip, upright spikes and early flowering. This is suitable for cut flower and bedding purpose.	Kharif and Rabi
Crossandra	Arka Chenna	Institute Identified	ICAR-IIHR, Bengaluru	100 days	South India	40 kgs/ week per 1000 plants	This mutant has orange red, thicker petals with strong and thicker stock, possessed moderate resistance to wilt, thrips and midges and had higher	Kharif and Rabi

Name of crops	Variety	Centre/State release	Releasing centre/Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
Rose	Arka Kinnari	Institute Identified	ICAR-IIHR, Bengaluru	120 days	Karnataka	103 flower stalks production/sq.m/year	It has shining foliage and orange flowers with 4 months maturity. Plant height is 150 cm and suitable for garden display.	Kharif and Rabi
	Arka Sharmeeeli	Institute Identified	ICAR-IIHR, Bengaluru	120 days	Karnataka	106 flower stalks/sq.m/year	Flower petal color is RG-50A and the color of base spot on inner side is YG-11D. Flower color changes from bud to bloom with a maturity of 4 months. Suitable for garden display.	Kharif and Rabi
	Arka Sinchana	Institute Identified	ICAR-IIHR, Bengaluru	120 days	Karnataka	1400 flowers /plant/year	It is a highly profoliferous floribunda rose with bright red color, small flowers and coppery green foliage. It matures in 4 months and is suitable for garden display.	Kharif and Rabi
MUSHROOM								
Button Mushroom	U3-54	Released All India	ICAR-DMR, Solan	30-32 days	5-7% of total area under button mushroom	22 kg/100 kg compost	Pure white, high yielding, compact, late veil opening.	Throughout the year under controlled conditions
SPICES								
Ginger	Suprabha PGS-35	CVRC notified	High Altitude Research Station, OUA & T, Pottangi, Odisha	230 days	Eastern plateau and hills region-Odisha	16.6 t/ha (fresh)	Plumpy rhizome, less fibre, wide adaptability, suitable for both early and late sowing.	May-June
	Suruchi PGS-19	CVRC notified	High Altitude Research Station, OUA & T, Pottangi, Odisha	218 days	Eastern plateau and hills region-Odisha	17.5 t/ha (fresh)	Plumpy rhizome, dark skinned yellow fleshed, suitable for both irrigated/rainfed, duration 225 days. 10.2% Oleoresin, 2.1% essential oil, 4.0% crude fibre, 23.6% dry recovery.	May-June

Agricultural Inputs

Name of crops	Variety	Centre/State release	Releasing centre/Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
Ginger	Suravi VIK1-3	CVRC notified	High Altitude Research Station, OUA & T, Pottangi, Odisha	223	Eastern plateau and hills region - Odisha	17.5 t/ha (fresh)	Plumpy rhizome, dark skinned yellow fleshed, suitable for both irrigated/rainfed, duration 225 days. 10.2% Oleoresin, 2.1% essential oil, 4.0% crude fibre, 23.6% dry recovery.	May-June
	Surama PTS -24	CVRC notified	High Altitude Research Station, OUA&T, Pottangi-764 039, Koraput (Dist), Odisha	253	Eastern plateau and hills region (Orissa), Southern plateau and hills region (TN), Western Himalayan Region (HP), East coast plains and hill region (AP) and West coast plains and ghat region, Kerala	20.0 t/ha	Round and plumpy rhizome, field tolerance to leaf blotch, leaf spot and rhizome scale, curcumin 6.1%, oleoresin 13.1%, essential oil 4.4% and dry recovery 26.0%.	May-June
Coriander	Suguna (LCC- 236)	CVRC notified	Regional Agrl. Research Stat., APHU, Lam, Guntur, AP	95-105	Andra Pradesh, Gujarat, Rajasthan, Tamil Nadu, UP	7.5-13.5	Suitable for growing in Andhra Pradesh, Gujarat, Rajasthan, Tamil Nadu, Uttar Pradesh.	October November
	RD 385 Rajendra Dhania	CVRC notified	Rajendra Agricultural University, DHOLI, Bihar	120-140	Middle Gangetic Plain Region All coriander growing regions of the country	14.09	Climatic resilient coriander variety with high yield (14.09 q ha ⁻¹) and high oil (0.52 %)	October November
	Chhattishgarh C Dhania-1	SVRC notified	CARS, Raigarh, IGVV	95-105	Eastern plateau and hills region.All coriander growing regions of the country	13-22	Climatic resilient coriander variety suitable for both leafy and seed purpose. This coriander variety is moderately resistant to powdery mildew and aphids.	October November
	ACr-2	CVRC notified	ICAR NRCSS Ajmer	120-140	Central plateau and hill region -	15.30	Biotic stress variety with stem gall resistance, high linalool content	October November

Name of crops	Variety	Centre/State release	Releasing centre/Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
Fenugreek	Ajmer fenugreek-5	CVRC notified	ICAR-NRC on Seed Spices, Ajmer	120-130	Central plateau and hills region Rajasthan	17.21	71.7% and early maturing type was recommended for release at national level. High seed yield, high antioxidant content (66.43mg/BHTE/ppm) suitable for green leaf production under shade net condition in summer season.	October /November
Ginger	Solan Giriganga	AICRP recommended	Dr. Y.S. Parmar University of Horticulture & Forestry, Solan	225-230	Western and Eastern Himalayan Regions and Lower Gangetic Plain Region of India.	dry matter recovery of 21.01%	Plumy and bold rhizomes with High dry matter recovery of 21.01%, essential oil -1.45%, oleoresin – 4.69%, crude fibre 4.47% and < 10% incidence of rhizome rot.	April-June
Turmeric	TCP 129 (Uttar Rangini)	AICRP recommended	Uttar Banga Krishi Viswavidyalaya, Pundibari	225-250	West Bengal, Bihar and Tamil Nadu	high dry recovery of 26.51%	Tolerant to leaf spot and leaf blotch and with curcumin content of 5.1%.	May-June
Nutmeg	Konkan Sanyukta	AICRP recommended	Dr. B.S.K.K.V, Dapoli	270	Maharashtra	500 fruits per plant per year	Monococious nutmeg bearing 500 fruits per plant per year with bold nuts (9.20 g), mace wt (1.07 g), high nut oil (2.7%) and mace oil (17.75%).	Perennial crop- Preferably monsoon up to March
Coriander	Ajmer Coriander -3	AICRP recommended	ICAR-NRC on Seed Spices, Ajmer	120-140	Rajasthan	13.09	High volatile oil (0.55 %) with high linalool (75.42 %), and stable yield.	October /November
	Rajendra Dhania 3	AICRP recommended	Dr. RPCAU, Dholi	120-140	All coriander growing regions of the country	14.09	Climatic resilient coriander variety with high yield (14.09 q ha ⁻¹) and high oil (0.52 %).	October /November
	JD (SI)-1	AICRP recommended	JNKVV, Jabalpur	120-140	Madhya Pradesh	14.14	High oil type coriander (0.67 %) with high yield potential (14.14 q ha ⁻¹).	October /November

Agricultural Inputs

Name of crops	Variety	Centre/State release	Releasing centre/Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
	Chhattisgarh Sri Chandrahansini Dhania-2	AICRP recommended	IGKV, Raigarh	95-105	All coriander growing regions of the country	12-14	Climatic resilient coriander variety suitable for both leafy and seed purpose, moderately resistant to powdery mildew and aphids.	October /November
Cumin	Gujarat Cumin 5	AICRP recommended	SDAU, Jagudan	92	All cumin growing regions of the country	57.10	High yielding wilt resistant cumin with short duration and high yield (38 % higher yield than GC 4).	October /November
Fennel	Ajmer fennel 3	AICRP recommended	ICAR-NRC on Seed Spices, Ajmer	175-180	All fennel growing regions of the country	21.43	High yielding and high oil (1.9%) fennel resistant to <i>Ramularia</i> blight.	October /November
Fenugreek	HM 425	AICRP recommended	CCSHAU, Hisar	125-130	All fenugreek growing regions of the country	20-22	High yielding powdery mildew and downey mildew resistant fenugreek.	October /November
	Narendra Richa	AICRP recommended	NDUA&T, Kumarganj	120-130	Uttar Pradesh and Andhra Pradesh	12-15	Dual purpose alkaline tolerant fenugreek with moderate resistance to powdery mildew.	October /November
PLANTATION CROPS								
Coconut	IND010S selection from Federated Malay States Tall	Identified for central release	ICAR-CPCRI, Kasaragod & AICRP (Palms)	51 months under irrigated condition	Western Ghats and coastal plains of Kerala, Karnataka and semi-arid regions of Tamil Nadu	148 nuts/ palm, 26196 nuts/ha, 27.23 kg copra/palm, 4820 kg/ ha.	Drought tolerant, dual purpose variety suitable for tender nut and copra.	-
TUBER CROPS/POTATO								
Cassava	Sree Sakthi	Central Release	ICAR-CTCRI	270-300	Tamil Nadu, Andhra Pradesh, Maharashtra and Kerala	430-550	Resistant to cassava mosaic disease, tolerant to post harvest physiological deterioration, non branching variety, cylindrical tubers with brown skin, cream rind and white flesh colour, high starch content of 29.0%.	Kharif
	Sree Suvama	Central	ICAR-CTCRI	180-240	Tamil Nadu,	350-400	Resistant to cassava mosaic disease,	Kharif

Name of crops	Variety	Centre/State release	Releasing centre/Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
Greater Yam	Chhattisgarh Ratalu-1	Central Release	IGKV, Raipur, AICRP(TC) Source ICAR-CTCRI	252	Andhra Pradesh, and Kerala		branching/top branching variety with brown stem, dark purple petiole, light brown emerging leaf, conical to cylindrical tubers with brown skin, cream rind and white flesh colour, medium starch, 25-27.0%.	
					Chhattisgarh, Gujarat	150-210	It has cylindrical long tubers with purplish white flesh colour. Tubers take very less time for cooking and have excellent cooking quality. Very good texture of tuber flesh for preparation of Chaat Tikkiya, Sabjee and Ratalu Vada. Resistant against Anthracnose disease under field condition.	Spring Summer (Feb.-March) and Kharif (May-June) planting
Potato	Kufri Ganga (released)	Centre	CPRS, Modipuram	90-110	North Indian plains	350-400	Table purpose variety, field resistance to late blight, ovoid tubers, with shallow eyes, cream flesh, acceptable aroma, mealy texture and moderate tubers dry matter (16-18%).	Rabi
	Kufri Neelkanth (released)	Centre	CPRS, Modipuram	90-110	North Indian plains	350-380	Table purpose variety, moderate resistance to late blight, dark purple black tubers, ovoid in shape with medium deep eyes, cream flesh, good storability and medium dormancy. It is a speciality potato rich in anti-oxidants with excellent flavour.	Rabi
	Kufri Lima (released)	Centre	CPRS, Modipuram	90-100	North Indian plains	300-350	Table purpose variety, possesses tolerance to hopper and mite burn and is resistant to PVY, PVX and moderately resistant to root knot nematode. The variety produces attractive, white-cream, ovoid tubers	Rabi

Agricultural Inputs

Name of crops	Variety	Centre/State release	Releasing centre/ Institute	Maturity range (days)	Area of adaptation	Average yield (q/ha)	Other traits/characteristics	Cropping season
Potato	Kufri Karan (released)	Centre	CPRI, Shimla	100-120	Indian hills and Plateau region	270-290	with shallow eyes and cream flesh. Both table and processing purpose, high resistance to late blight, viruses and moderate resistance to PCN, high dry matter (18.8%) and good keeping quality.	Kharif
	Kufri Mamik (released)	Centre	CPRS, Patna	90-100	Eastern plains of India	300-320	Field resistance to late blight, produces attractive, deep red, ovoid shaped tubers with shallow eyes and white flesh. The variety has high levels of anthocyanin (0.68µg FW), carotenoids (33.0µ/100g FW), micro nutrients (Zn, Fe, Cu, & Mn), waxy texture with good flavours and taste.	Rabi
	Kufri Sahyadri (released)	State	CPRIIRS, Ooty	110-120	Nilgiri Hills	280-350	Both table and processing use, combined resistance to PCN and late blight, tubers of the variety are oval in shape with light yellow skin, yellow flesh, shallow deep eyes and are free from after cooking discoloration.	Round the year

Source: Division of Horticultural Science, Indian Council of Agricultural Research, New Delhi.

Table 2.5: All India consumption of plant nutrients per unit of gross cropped area during 1965-66 to 2018-19

Year	Gross cropped area (000' ha)	Consumption (kg) per hectare			
		N	P ₂ O ₅	K ₂ O	Total
1965-66	155,276	3.70	0.85	0.50	5.05
1966-67	157,355	4.69	1.58	0.73	6.99
1967-68	163,736	6.32	2.04	1.04	9.40
1968-69	159,529	7.58	2.40	1.07	11.04
1969-70	162,265	8.36	2.56	1.29	12.21
1970-71	165,791	8.92	3.26	1.43	13.61
1971-72	165,186	10.88	3.38	1.82	16.08
1972-73	162,150	11.34	3.58	2.14	17.07
1973-74	169,872	10.77	3.82	2.12	16.71
1974-75	164,191	10.75	2.87	2.05	15.67
1975-76	171,296	12.54	2.73	1.62	16.89
1976-77	167,334	14.68	3.79	1.91	20.38
1977-78	172,232	16.91	5.03	2.94	24.88
1978-79	174,802	19.56	6.33	3.38	29.27
1979-80	169,589	20.63	6.79	3.58	30.99
1980-81	172,630	21.31	7.03	3.61	31.95
1981-82	176,750	23.02	7.48	3.83	34.33
1982-83	172,748	24.56	8.29	4.20	37.06
1983-84	179,560	28.98	9.64	4.32	42.94
1984-85	176,330	31.11	10.70	4.76	46.57
1985-86	178,464	31.72	11.24	4.53	47.48
1986-87	176,405	32.40	11.78	4.82	49.01
1987-88	170,738	33.48	12.81	5.16	51.45
1988-89	182,277	39.78	14.93	5.86	60.57
1989-90	182,269	40.52	16.54	6.41	63.47
1990-91	185,742	43.06	17.34	7.15	67.55
1991-92	182,241	44.15	18.22	7.47	69.84
1992-93	185,618	45.40	15.32	4.76	65.48
1993-94	186,595	47.10	14.31	4.87	66.27
1994-95	188,053	50.56	15.59	5.98	72.13
1995-96	187,471	52.40	15.46	6.17	74.02
1996-97	189,502	54.36	15.71	5.43	75.50
1997-98	189,988	57.38	20.60	7.22	85.20
1998-99	191,649	59.24	21.46	6.95	87.65
1999-00	188,396	61.53	25.47	8.91	95.91
2000-01	185,340	58.92	22.74	8.46	90.12
2001-02	188,014	60.16	23.31	8.87	92.33
2002-03	173,889	60.23	23.11	9.21	92.55
2003-04	189,661	58.40	21.75	8.43	88.57
2004-05	191,103	61.30	24.20	10.78	96.27
2005-06	192,737	66.01	27.00	12.52	105.53
2006-07	192,381	71.59	28.81	12.14	112.54
2007-08	195,223	73.86	28.25	13.50	115.61
2008-09	195,328	77.26	33.31	16.96	127.53
2009-10	189,118	82.35	38.45	19.20	140.00
2010-11*	197,683	83.76	40.72	17.78	142.26
2011-12*	195,796	88.36	40.42	13.15	141.93
2012-13*	194,246	86.60	34.25	10.61	131.46
2013-14*	200,950	83.35	28.03	10.44	121.83
2014-15*	198,360	85.45	30.75	12.77	128.96
2015-16*	198,164	87.67	35.22	12.12	135.00
2016-17*	N.A.	84.45	33.84	12.66	130.95
2017-18*	N.A.	85.58	34.59	14.03	134.20
2018-19*	N.A.	89.01	34.87	13.53	137.40

Note : 1.*: Provisional, 2. Figures of consumption and gross cropped area refer to the same year, except last three years, where gross cropped area is for the year 2015-16, 3. N.A.: Not available

Source : *Fertiliser Statistics 2018-19*, The Fertiliser Association of India, New Delhi.

Table 2.6: State-wise consumption of plant nutrients per unit of gross cropped area

(kg/ha)

Zone/State	2016-17				2017-18			
	N	P ₂ O ₅	K ₂ O	Total	N	P ₂ O ₅	K ₂ O	Total
North	121.49	40.65	8.04	170.18	127.50	39.90	8.22	175.62
Haryana	163.80	47.41	6.96	218.18	162.34	43.36	7.15	212.85
Punjab	178.30	47.20	6.66	232.17	168.70	38.08	6.54	213.31
Uttar Pradesh	104.11	40.83	8.56	153.51	116.52	43.06	8.64	168.22
Uttarakhand	138.47	24.68	7.85	171.01	124.69	20.44	6.60	151.73
Himachal Pradesh	35.17	10.84	11.48	57.49	40.78	10.90	12.47	64.15
Jammu & Kashmir	38.63	15.91	8.37	62.91	43.61	16.39	12.16	72.16
Delhi	73.66	3.11	0.00	76.77	59.49	15.71	1.62	76.82
South	97.35	45.65	23.42	166.43	94.38	41.62	24.34	160.34
Andhra Pradesh	123.56	60.24	28.27	212.07	100.60	46.32	24.17	171.08
Telangana	164.36	56.90	22.19	243.46	170.52	66.37	27.76	264.65
Karnataka	87.5	51.00	24.09	162.58	90.54	47.35	26.58	164.46
Kerala	14.98	8.23	11.18	34.38	26.83	8.41	11.74	46.97
Tamil Nadu	87.36	39.39	27.72	154.48	83.05	32.83	28.64	144.53
Puducherry	209.65	41.6	37.99	289.24	194.90	38.67	35.32	268.88
A & N Islands	61.49	65.66	39.60	166.75	7.06	7.97	5.01	20.03
East	77.00	30.26	17.82	125.07	79.62	36.12	21.41	137.15
Bihar	138.50	40.62	19.30	198.42	143.00	49.62	20.31	212.93
Jharkhand	33.53	9.35	0.73	43.62	26.32	20.09	4.16	50.58
Odisha	34.73	15.03	7.01	56.78	41.47	17.91	9.12	68.50
West Bengal	82.14	43.44	32.70	158.28	78.88	46.06	38.88	163.82
North East	25.09	6.76	6.57	38.41	38.28	12.33	11.16	61.77
Assam	27.42	6.72	7.12	41.26	50.34	16.08	14.45	80.87
Tripura	25.01	12.66	8.44	46.11	16.48	5.80	5.95	28.23
Manipur	23.74	6.52	4.42	34.67	31.69	13.54	12.81	58.04
Meghalaya	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	16.44	11.18	7.10	34.71	16.42	10.94	7.30	34.66
Arunachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	17.32	3.13	2.43	22.88	36.83	0.00	0.00	36.83
West	57.36	24.89	12.90	90.38	56.79	26.35	9.35	92.48
Gujarat	91.21	27.12	9.64	127.98	101.31	32.70	10.72	144.73
Madhya Pradesh	51.15	24.84	3.70	79.70	51.37	26.63	3.99	81.99
Chhattisgarh	58.96	33.50	9.61	102.07	52.02	26.64	8.10	86.76
Maharashtra	63.07	32.69	19.00	114.75	63.56	37.07	23.31	123.94
Rajasthan	40.48	13.82	0.64	54.93	34.45	12.65	1.00	48.10
Goa	22.21	13.64	9.66	45.51	16.48	13.00	9.43	38.91
Daman & Diu	35.90	2.56	2.56	41.03	35.99	0.00	0.00	35.99
D&N Haveli	43.13	30.00	0.00	73.13	18.66	13.06	0.00	31.72
All India	79.59	31.89	11.93	123.41	81.65	33.00	13.38	128.02

Source : *Agricultural Statistics at a Glance 2018*, Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare, Govt. of India. (Website: eands.dacnet.nic.in)

Table 2.7: All India production of straight nitrogenous fertilisers during 1973-74 to 2018-19 (April-March)

('000 t)

Year	Ammonium sulphate (20.6% N)	Ammonium sulphate nitrate (26% N)	Urea** (46%N)	Calcium ammonium nitrate (25% N)	Ammonium chloride (25% N)	Total	
						Nutrient* N (straight)	Product
1973-74	574.6	48.7	1,406.8	431.3	13.7	889.4	2,475.1
1974-75	589.4	26.7	1,734.3	406.6	10.2	1,030.1	2,767.1
1975-76	611.1	21.3	2,196.7	617.5	15.5	1,300.0	3,462.1
1976-77	586.5	2.0	2,875.3	638.2	17.6	1,608.8	4,119.6
1977-78	557.3	N.A.	3,071.8	509.3	16.7	1,659.3	4,155.1
1978-79	508.6	N.A.	3,306.0	558.3	17.9	1,769.8	4,391.3
1979-80	479.3	N.A.	3,513.5	465.3	12.7	1,834.5	4,470.8
1980-81	436.2	N.A.	3,384.2	347.4	18.9	1,758.7	4,186.7
1981-82	443.2	N.A.	5,384.3	403.8	18.9	2,673.8	6,250.3
1982-83	477.7	N.A.	6,019.9	290.0	37.2	2,938.8	6,824.8
1983-84	424.8	N.A.	6,073.8	326.4	61.6	2,973.5	6,886.6
1984-85	454.0	N.A.	6,687.9	409.2	77.2	3,291.7	7,629.0
1985-86	518.9	N.A.	7,467.3	381.1	103.8	3,663.1	8,471.1
1986-87	534.4	N.A.	9,576.6	389.5	92.3	4,635.8	10,592.8
1987-88	538.7	N.A.	9,834.8	421.3	87.2	4,763.7	10,882.0
1988-89	610.1	N.A.	11,867.1	480.2	96.7	5,728.8	13,054.1
1989-90	586.2	N.A.	12,486.0	425.2	79.9	5,990.6	13,577.3
1990-91	557.5	N.A.	12,835.9	435.9	78.8	6,148.0	13,908.1
1991-92	553.5	N.A.	12,831.3	446.3	112.5	6,156.1	13,943.6
1992-93	563.2	N.A.	13,125.9	545.5	122.2	6,320.9	14,356.8
1993-94	620.3	N.A.	13,150.2	666.2	131.4	6,376.3	14,568.1
1994-95	584.8	N.A.	14,137.1	571.9	136.5	6,800.6	15,430.3
1995-96	634.5	N.A.	15,805.6	491.1	138.9	7,558.8	17,070.1
1996-97	665.6	N.A.	15,628.7	388.5	122.1	7,454.0	16,804.9
1997-98	561.5	N.A.	18,594.5	437.7	110.4	8,806.1	19,704.1
1998-99	550.6	N.A.	19,292.2	466.4	63.4	9,120.3	20,372.6
1999-00	592.4	N.A.	19,807.7	318.2	87.5	9,335.0	20,805.8
2000-01	593.4	N.A.	19,623.8	246.5	102.4	9,236.4	20,566.1
2001-02	574.7	N.A.	19,003.1	180.7	81.5	8,925.4	19,840.0
2002-03	544.4	N.A.	18,621.2	173.3	78.9	8,740.9	19,417.8
2003-04	600.7	N.A.	19,038.3	141.2	77.8	8,936.1	19,858.0
2004-05	615.9	N.A.	20,239.2	184.4	82.4	9,503.6	21,121.9
2005-06	619.3	N.A.	20,085.1	172.8	79.8	9,429.9	20,957.0
2006-07	634.8	N.A.	20,271.2	144.3	74.4	9,510.2	21,124.7
2007-08	483.1	N.A.	19,838.8	134.6	N.A.	9,259.0	20,456.5
2008-09	554.8	N.A.	19,923.2	138.5	N.A.	9,313.6	20,616.5
2009-10	620.8	N.A.	21,120.7	102.7	N.A.	9,869.1	21,844.2
2010-11	637.0	N.A.	21,872.5	98.7	23.1	10,223.0	22,631.3
2011-12	595.4	N.A.	21,992.3	115.0	78.4	10,287.4	22,781.1
2012-13	573.2	N.A.	22,586.6	106.9	50.1	10,547.2	23,316.8
2013-14	624.1	N.A.	22,718.7	44.4	7.7	10,592.2	23,394.9
2014-15	581.5	N.A.	22,592.9	N.A.	40.4	10,522.5	23,214.8
2015-16	560.1	N.A.	24,461.3	N.A.	45.6	11,379.0	25,067.0
2016-17	632.3	N.A.	24,200.8	N.A.	40.8	11,272.8	24,873.9
2017-18	688.7	N.A.	24,026.0	N.A.	43.0	11,204.6	24,757.7
2018-19	658.4	N.A.	23,899.2	N.A.	52.2	11,142.3	24,609.8

Note : 1. *: For agricultural purposes only, 2. **: Net production of saleable urea. Excludes urea used for manufacture of complex fertilisers, 3. N.A.: Not available.

Source : *Fertiliser Statistics 2018-19*, The Fertiliser Association of India, New Delhi.

Table 2.8: All India production of straight phosphates during 1968-69 to 2018-19 (April-March)

('000 t)

Year	Single super phosphate of grade			Triple super phosphate of grade		Total	
	16 % W.S. P ₂ O ₅	Super phosphate other grades	Nutrient W.S. P ₂ O ₅	46 % W.S. P ₂ O ₅	Nutrient W.S. P ₂ O ₅	Nutrient P ₂ O ₅ (straight)	Product
1968-69	664.5	14.7	108.9	4.1	1.8	110.7	683.3
1969-70	609.0	12.4	99.4	7.5	3.4	103.2	629.3
1970-71	613.0	7.9	99.5	5.8	2.6	102.1	626.7
1971-72	773.0	2.6	124.2	7.7	3.5	127.6	783.3
1972-73	781.9	N.A.	125.1	4.9	2.2	127.3	786.8
1973-74	773.3 (10.0)	0.4	125.5	3.0	1.4	126.9	786.7
1974-75	822.8 (12.3)	N.A.	133.8	2.5	1.2	135.0	837.6
1975-76	461.3 (1.6)	1.6	74.0	2.1	1.0	75.0	466.6
1976-77	779.3 (1.8)	7.0	126.2	1.8	0.8	127.3	789.5
1977-78	987.6	N.A.	158.0	7.2	3.3	161.3	994.8
1978-79	1,081.3	34.5 #	177.8	19.6	9.0	186.8	1,135.4
1979-80	1,033.1	16.8 #	167.7	22.4	10.3	178.0	1,072.3
1980-81	1,085.0	22.1 #	176.7	41.5	20.0	196.7	1,150.8
1981-82	1,202.6	6.6 #	193.3	48.0	22.1	215.4	1,257.2
1982-83	1,320.6	N.A.	211.3	23.4	10.8	222.1	1,344.0
1983-84	1,491.7	N.A.	238.7	21.1	9.7	248.4	1,512.8
1984-85	1,898.3	N.A.	303.7	10.0	4.6	308.2	1,908.4
1985-86	2,136.1	N.A.	341.8	1.1	0.5	342.3	2,137.2
1986-87	2,006.1	N.A.	321.0	N.A.	N.A.	321.0	2,006.1
1987-88	2,483.5	N.A.	397.4	N.A.	N.A.	397.4	2,483.5
1988-89	2,944.7	N.A.	471.2	N.A.	N.A.	471.2	2,944.7
1989-90	3,137.8	N.A.	502.1	N.A.	N.A.	502.1	3,137.8
1990-91	3,650.3	N.A.	584.0	N.A.	N.A.	584.0	3,650.3
1991-92	2,984.8	N.A.	477.6	N.A.	N.A.	477.6	2,984.8
1992-93	2,329.3	N.A.	372.7	N.A.	N.A.	372.7	2,329.3
1993-94	2,257.2	N.A.	361.2	N.A.	N.A.	361.2	2,257.2
1994-95	3,010.9	13.7 #	483.7	N.A.	N.A.	483.7	3,024.6
1995-96	3,200.2	1.7 #	512.3	N.A.	N.A.	572.3	3,201.9
1996-97	3,187.0	N.A.	509.9	N.A.	N.A.	509.9	3,187.0
1997-98	3,832.5	N.A.	613.2	N.A.	N.A.	613.2	3,832.5
1998-99	3,816.1	N.A.	610.5	N.A.	N.A.	610.5	3,816.1
1999-00	3,532.7	N.A.	565.2	N.A.	N.A.	565.2	3,532.7
2000-01	2,742.2	N.A.	438.8	N.A.	N.A.	438.8	2,742.2
2001-02	2,504.6	N.A.	400.7	N.A.	N.A.	400.7	2,504.6
2002-03	2,407.7	N.A.	385.2	N.A.	N.A.	385.2	2,407.7
2003-04	2,543.4	N.A.	406.9	N.A.	N.A.	406.9	2,543.4
2004-05	2,461.1	N.A.	393.8	N.A.	N.A.	393.8	2,461.1
2005-06	2,795.2	N.A.	447.2	N.A.	N.A.	447.2	2,795.2
2006-07	2,972.0	N.A.	475.5	N.A.	N.A.	475.5	2,972.0
2007-08	2,246.3	N.A.	359.4	N.A.	N.A.	359.4	2,246.3
2008-09	2,533.6	N.A.	405.4	N.A.	N.A.	405.4	2,533.6
2009-10	3,093.0	N.A.	494.9	N.A.	N.A.	494.9	3,093.0
2010-11	3,712.8	N.A.	594.0	N.A.	N.A.	594.0	3,712.8
2011-12	4,324.0	N.A.	691.8	N.A.	N.A.	691.8	4,324.0
2012-13	4,434.9	N.A.	709.6	N.A.	N.A.	709.6	4,434.9
2013-14	4,211.6	N.A.	673.8	N.A.	N.A.	673.8	4,211.5
2014-15	4,229.6	N.A.	676.7	N.A.	N.A.	676.7	4,299.6
2015-16	4,329.6	N.A.	692.7	N.A.	N.A.	692.7	4,329.6
2016-17	4,296.8	N.A.	687.5	N.A.	N.A.	687.5	4,296.8
2017-18	3,910.2	N.A.	625.6	N.A.	N.A.	625.6	3,905.9
2018-19	4,076.3	N.A.	652.2	N.A.	N.A.	652.2	4,076.3

Note : 1. #: 14% W.S. P₂O₅, 2. (): Pelofos, 3. N.A.: Not available.

Source : Fertiliser Statistics 2018-19, The Fertiliser Association of India, New Delhi.

Table 2.9: Production and use of agricultural inputs in India

Programme	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
1. Seeds (lakh q)									
I. Production of breeder seeds	1.19	1.23	1.10	0.82	0.86	0.90	1.11	1.05	1.04
II. Production of foundation seeds	18.06	22.26	16.17	17.43	15.76	14.95	22.09	19.54	18.00
III. Distribution of certified/quality seeds	277.34	294.85	313.44	301.39	303.12	304.04	348.58	352.01	320.41
2. Consumption of chemical fertilisers (lakh t)									
I. Nitrogenous (N)	165.58	173.00	168.21	167.50	169.46	173.72	167.35	169.58	176.28
II. Phosphatic (P)	80.50	79.14	66.53	56.33	60.98	69.79	67.05	68.54	69.68
III. Potassic (K)	35.14	25.76	20.62	20.99	25.32	24.02	25.08	27.79	27.79
Total (I+II+III)	281.22	277.90	255.36	244.82	255.76	267.53	259.49	265.91	273.75
Per hectare (kg)	142.52	142.33	130.79	125.39	127.45	131.84	124.41	127.88	133.12
3. Consumption of pesticides (technical grade material) (000' t)	55.54	52.98	45.62	60.28	56.12	58.22	52.76	62.18	53.45*
4. Area covered under soil conservation cumulative (lakh ha)	7.49	4.72	5.46	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Note : 1. * : Provisional, 2. N.A. : Not available

Source : *Pocket Book of Agricultural Statistics 2019*, Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare, Govt. of India. (Website: eands.dacnet.nic.in)

**Table 2.10: Maximum retail prices of fertilisers in terms of nutrients
(exclusive of Central vat/State sales tax and local taxes)
(50 kg. packing)**

(₹/kg of nutrient)

Year/effective dates	Maximum sale price of nutrient through					
	Ammonium sulphate (20.6% N)	Urea (46% N)	Calcium ammonium nitrate (25% N)	Diammonium phosphate [@] (18% N-46% P ₂ O ₅)	Single super phosphate (16% w.s. P ₂ O ₅)	Muriate of potash (60% K ₂ O)
Nutrient	(N)	(N)	(N)	(P ₂ O ₅)	(P ₂ O ₅)	(K ₂ O)
1993-94	N.A.	6.00	N.A.	11.13-12.87	11.25-17.25	6.00-6.67
1994-95 Kharif (prior 10-6-94)	N.A.	6.00	N.A.	12.65-14.54	11.63-15.50	5.94-6.50
1994-95 w.e.f. 10-6-94	15.44	7.22	N.A.	12.18-14.07	11.63-15.50	5.94-6.50
1994-95 Rabi	15.44	7.22	N.A.	13.58-16.30	13.13-16.88	6.13-6.57
1995-96 Kharif	15.44	7.22	N.A.	16.96-18.48	14.29-17.66	6.03-7.57
1995-96 Rabi	18.45	7.22	N.A.	18.11-19.45	16.25-18.21	7.00-8.00
1996-97 Kharif	19.42	7.22	N.A.	13.64-16.18	13.93-19.25	6.19-7.17
1996-97 Rabi (prior 21-2-97)	19.42	7.22	N.A.	14.92-16.96	16.25-19.25	6.62-7.50
1996-97 Rabi w.e.f. 21-2-97)	19.42	7.96	N.A.	14.63-16.67	16.25-19.25	6.17
1997-98	19.42-20.39	7.96	N.A.	14.93	15.63-18.75	6.17
1998-99 Kharif (prior 29-1-99)	20.39-21.36	7.96	24.00#	14.93	15.63-18.75	6.17
1998-99 (w.e.f. 29-1-99)	20.39-21.37	8.70	24.00#	14.64	15.63-18.75	6.17
1999-2000 (prior 29-2-2000)	22.82-24.51	8.70	24.00#	14.64	15.63-18.75	6.17
1999-2000 (w.e.f. 29-2-2000)	22.82-24.52	10.00	24.00#	15.43	15.63-18.75	7.09
2000-01	23.54-24.51	10.00	32.00#	15.43	15.63-21.88	7.09
2001-02 (w.e.f. Feb 02)	24.07-26.33	10.50	32.00#	16.22	15.63-21.88	7.43
2002-03 (w.e.f. Feb 03)	25.58-27.45	11.02	36.00#	16.45	16.28-21.88	7.76
2002-03 (w.e.f. 12-3-03)	25.58-27.46	10.50	36.00#	16.22	16.25-21.88	7.43
2003-04	25.97-27.79	10.50	36.00#	16.22	16.25-23.94	7.43
2004-05	26.46-28.76	10.50	24.80-40.00	16.22	16.25-23.38	7.43
2005-06	28.28-30.22	10.50	25.93-31.70	16.22	16.25-26.88	7.43
2006-07	30.95-32.65	10.50	28.08-33.50	16.22	16.88-26.88	7.43
2007-08	32.65-48.83	10.50	31.58-36.10	16.22	16.88-26.88	7.43
2008-09	50.24 ^d	10.50*	37.38-44.80	16.22	21.25 ^e	7.43
2009-10	50.24 ^d	10.50*	39.28-44.80	16.22	21.25 ^f	7.43
2010-11	38.89-42.23 ^g	11.54*	40.42-49.60	17.11-18.85 ^g	20.00 ^h	8.43 ^h
2011-12	38.89-68.45 ^h	11.54*	43.56-51.60	18.85-39.61 ^h	20.00-39.29 ^h	10.00-20.13 ^h
2012-13	47.57-53.46 ^h	11.65*	52.86-62.00	47.62 ^h	43.78 ^h	28.33 ^h
2013-14	53.91-56.74 ^h	11.65*	N.A.	44.35 ^h	41.43 ^h	26.67 ^h
2014-15	59.93-65.78 ^h	11.65*	N.A.	46.96 ^h	47.54 ^h	27.50 ^h
2015-16	58.25-61.89 ^h	11.65*	N.A.	48.70 ^h	46.76 ^h	26.67 ^h
2016-17	58.25-61.89 ^h	11.65*	N.A.	43.27 ^h	45.16 ^h	18.33 ^h
2017-18	62.92 ^h	11.65*	N.A.	43.54 ^h	45.44 ^h	19.97 ^h
2018-19	60.38 ^h	11.65*	N.A.	54.14 ^h	48.47 ^h	26.67 ^h

Note : 1. @: P₂O₅ prices of DAP worked out after deducting proportionate price of N (through urea) from prices of DAP, 2. #: inclusive of all taxes, 3. d: w.e.f. July 01, 2008, 4. *: GOI allowed the manufacturers of Neem Coated Urea to charge 5% extra on basic MRP of urea. MRP of Neem Coated Urea in Rs. 12.23 per kg. N, 5. e: w.e.f. May 1, 2008, 6. f: upto September 30, 2009, W.e.f. October 1, 2009 GOI has decided to leave the selling prices of SSP open, 7. a: w.e.f. November 01, 2012, 8. \$: Nutrient Based Subsidy (NBS) on P&K fertiliser and A/S was introduced w.e.f. April 1, 2010. Under NBS, retail prices are market determined and announced by the individual companies. The prices shown for 2010-11 to 2018-19 are indicative average prices. The prices for 2017-18 and 2018-19 are inclusive of GST.

Source : *Fertiliser Statistics 2018-19*, The Fertiliser Association of India, New Delhi.

Table 2.11: State-wise consumption of pesticides (Technical Grade) in India

(t)

States/Union Territories	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Andaman and Nicobar Islands	7	NA	8	NA	NA	NA	NA
Andhra Pradesh	2803	4253	4050	2713	2015	1738	1689
Arunachal Pradesh	NA	18	18	17	18	NA	14
Assam	183	190	190	NA	306	241	385
Bihar	687	765	787	831	790	840	981
Chandigarh	NA	NA	NA	NA	NA	NA	NA
Chhattisgarh	812	1016	1589	1625	1660	1685	1398
Dadra and Nagar Haveli	NA	NA	NA	NA	NA	NA	NA
Daman and Diu	NA	NA	NA	NA	NA	NA	NA
Delhi	NA	48	NA	NA	NA	NA	NA
Goa	9	9	12	48	22	24	25
Gujarat	1210	2330	1730	1980	1713	1692	1558
Haryana	4050	4080	4070	NA	4050	4025	4015
Himachal Pradesh	325	344	379	450	341	467	407
Jammu and Kashmir	1789	1723	1921	2251	2188	2430	2459
Jharkhand	151	430	650	493	541	619	650
Karnataka	1615	1735	1793	1434	1288	1502	1458
Kerala	712	1276	910	1123	895	1067	1037
Lakshadweep	NA	NA	NA	NA	NA	NA	NA
Madhya Pradesh	846	987	696	732	694	502	540
Maharashtra	6618	10969	8663	11665	13496	15568	11746
Manipur	31	31	31	30	33	27	NA
Meghalaya	24	44	28	NA	NA	NA	NA
Mizoram	4	508	805	NA	9	NA	74
Nagaland	NA	16	20	20	20	20	NA
Odisha	606	1219	1075	723	1050	1633	1609
Puducherry	41	41	42	43	43	43	41
Punjab	5730	5723	5689	5743	5843	5835	5543
Rajasthan	2559	2736	2694	2475	2269	2307	1280
Sikkim	NA	NA	NA	NA	#	#	#
Tamil Nadu	1766	2142	2096	2096	2092	1929	462
Telangana	NA	3812	2862	2950	3436	4866	4894
Tripura	272	310	346	293	298	330	349
Uttar Pradesh	9057	10164	9736	10457	10614	10824	11116
Uttarakhand	247	174	172	217	198	210	102
West Bengal	3465	3190	3060	3712	2624	2982	3190
Total	45619	60282	56121	54121	58546	63406	57022

Note : 1. N.A.: Not available, 2. #: Organic State.

Source : Ministry of Chemical and Fertilizers, Govt. of India. (Website: www.indiaagristat.com)

Table 2.12: Zone-wise consumption of fertilisers

('000 t)

State/Zone	2014-15	2015-16	2016-17	2017-18	2018-19
South Zone	5985.38	6177.58	5788.00	5724.28	6002.83
	(176.43)	(179.46)	(164.79)	(163.62)	(169.93)
West Zone	8205.58	8382.02	8426.41	8560.03	8735.39
	(90.97)	(93.85)	(89.10)	(92.12)	(96.28)
North Zone	7634.61	7906.44	7805.66	8087.75	8289.58
	(174.42)	(174.47)	(169.48)	(175.50)	(179.50)
East Zone	3427.26	4001.47	3653.88	3923.23	4026.01
	(142.27)	(140.90)	(128.36)	(137.01)	(141.93)
North East Zone	323.29	285.09	275.20	295.61	321.39
	(50.74)	(39.01)	(63.24)	(55.63)	(63.85)
All India	25576.12	26752.61	25949.15	26590.90	27375.20
	(127.45)	(131.84)	(124.41)	(127.88)	(133.12)

Note : Figures in parenthesis indicates estimated consumption of fertiliser (NPK) in Kgs per hectare

Source : *Pocket Book of Agricultural Statistics 2019*, Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare, Govt. of India. (Website: eands.dacnet.nic.in)

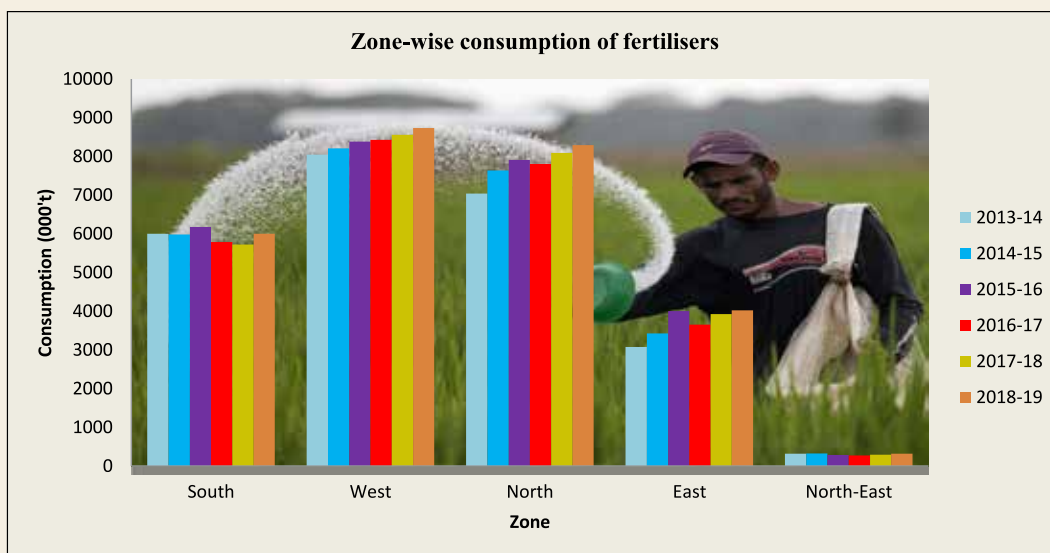


Table 2.13: State-wise area coverage under micro irrigation in India during 2018 and 2019

(Area in Ha.)

States	As on 31.03.2018			As on 31.03.2019		
	Drip	Sprinkler	Total	Drip	Sprinkler	Total
Andhra Pradesh	1150758	434191	1584949	1295658	489560	1785218
Arunachal Pradesh	613	0	613	613	0	613
Assam	373	848	1221	373	2448	2821
Bihar	10496	104080	114576	10502	104998	115500
Chattisgarh	21981	275362	297343	24751	291521	316272
Goa	1186	1129	2315	1186	1129	2315
Gujarat	636663	644473	1281136	723222	698692	1421914
Haryana	30038	564873	594911	32758	572622	605380
Himachal Pradesh	5160	4130	9290	5389	4323	9712
Jammu & Kashmir	23	57	80	23	57	80
Jharkhand	18011	14401	32412	20633	15757	36390
Karnataka	581340	705300	1286640	658171	863322	1521493
Kerala	23083	8245	31328	23610	8683	32293
Madhya Pradesh	293610	227815	521425	313887	242733	556620
Maharashtra	1089600	455769	1545369	1199963	505365	1705328
Manipur	288	30	318	358	30	388
Meghalaya	308	307	615	308	307	615
Mizoram	3064	1364	4428	3064	1364	4428
Nagaland	444	5005	5449	444	5005	5449
Odisha	23240	89409	112649	24786	97944	122730
Punjab	35375	12906	48281	35593	13195	48788
Rajasthan	228923	1607827	1836750	245301	1645431	1890732
Sikkim	6044	3042	9086	6044	3042	9086
Tamil Nadu	412370	90836	503206	487511	188140	675651
Telangana	163577	58333	221910	191722	70569	262291
Tripura	444	1651	2095	444	1651	2095
Uttar Pradesh	21960	77067	99027	25583	128530	154113
Uttarakhand	4834	3029	7863	7078	5041	12119
West Bengal	629	52688	53317	964	65723	66687
Others	15169	30636	45805	15169	30636	45805
All India	4779604	5474803	10254407	5355108	6057818	11412926

Source : 1. *Agricultural Statistics at a Glance 2018*, Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare, Govt. of India. (Website: eands.dacnet.nic.in)

2. *Pocket Book of Agricultural Statistics 2019*, Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare, Govt. of India. (Website: eands.dacnet.nic.in)

Table 2.14: Flow of institutional credit in agriculture sector

(million ₹)

Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Production (Short term) credit								
Co-operative Banks	818290	1025920	1135740	1303500	1438030	1318800	1383480	1427500
Regional Rural Banks	474010	559570	706970	893260	1015790	1050010	1195460	1256540
Commercial Banks	2669280	3149510	3641640	4157360	4199300	4525760	4970780	4838050
Other Agencies	0	0	0	0	0	0	0	0
Sub-total (A)	3961580	4735000	5484350	6354120	6653120	6894570	7549720	7522090
Medium/Long term credit								
Co-operative Banks	61340	86110	63890	81190	94920	108780	120410	95910
Regional Rural Banks	70490	77240	119560	131570	176810	182150	214130	240130
Commercial Banks	1016880	1175400	1633420	1886400	2230240	3472050	3800770	4710170
Other Agencies	0	0	0	0	0	0	0	0
Sub-total (B)	1148710	1338750	1816870	2099160	2501970	3762980	4135310	5046200
Short term + Medium/Long term credit								
Co-operative Banks	879630	1112030	1199630	1384690	1532950	1427580	1503890	1523400
Regional Rural Banks	544500	636810	826530	1024830	1192600	1232160	1409590	1496670
Commercial Banks	3686160	4324910	5275060	6043760	6429540	7997810	8771550	9548230
Other Agencies	0	0	0	0	0	0	0	0
Grand total (A+B)	5110290	6073750	7301220	8453280	9155090	10657550	11685030	12568300

Source : *Pocket Book of Agricultural Statistics 2019*, Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare, Govt. of India. (Website: eands.dacnet.nic.in)

Table 2.15: State-wise crop area insured under all insurance schemes

(lakh ha)

States/ Union Territories	2016-17			2017-18			2018-19		
	Gross Area Sown*	Area Insured	% of Area Insured	Gross Area Sown*	Area Insured	% of Area Insured	Gross Area Sown*	Area Insured	% of Area Insured
Andhra Pradesh	75.32	15.60	20.71	75.32	21.52	28.58	75.32	22.34	29.66
Andaman & Nicobar Islands	0.48	0.00	0.53	0.48	0.00	0.52	0.48	0.01	1.16
Arunachal Pradesh	3.01	0.00	0.00	3.01	0.00	0.00	3.01	0.00	0.00
Assam	40.60	0.41	1.01	40.60	0.42	1.03	40.60	0.48	1.19
Bihar	75.72	24.84	32.81	75.72	21.26	28.07	75.72	0.00	0.00
Chandigarh	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00
Chhattisgarh	56.40	24.14	42.80	56.40	22.16	39.30	56.40	22.75	40.33
Dadra & Nagar Haveli	0.23	0.00	0.00	0.23	0.00	0.00	0.23	0.00	0.00
Daman & Diu	0.03	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00
Delhi	0.58	0.00	0.00	0.58	0.00	0.00	0.58	0.00	0.00
Goa	1.57	0.01	0.35	1.57	0.00	0.25	1.57	0.00	0.17
Gujarat	115.22	30.21	26.22	115.22	26.58	23.07	115.22	26.11	22.66
Haryana	65.10	20.85	32.02	65.10	19.34	29.70	65.10	20.55	31.56
Himachal Pradesh	9.33	1.29	13.88	9.33	1.11	11.87	9.33	0.89	9.59
Jammu & Kashmir	11.59	0.00	0.00	11.59	1.53	13.16	11.59	1.10	9.50
Jharkhand	18.12	3.72	20.53	18.12	2.90	16.02	18.12	6.31	34.82
Karnataka	120.09	26.12	21.75	120.09	18.08	15.06	120.09	22.19	18.48
Kerala	26.28	0.53	2.02	26.28	0.48	1.82	26.28	0.43	1.65
Lakshdweep	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00
Madhya Pradesh	237.14	126.09	53.17	237.14	121.22	51.12	237.14	129.53	54.62
Maharashtra	234.67	72.98	31.10	234.67	58.96	25.12	234.67	88.19	37.58
Manipur	4.37	0.09	2.09	4.37	0.19	4.27	4.37	0.01	0.18
Meghalaya	3.03	0.00	0.01	3.03	0.03	1.12	3.03	0.01	0.23
Mizoram	1.88	0.00	0.00	1.88	0.00	0.00	1.88	0.00	0.00
Nagaland	5.04	0.00	0.00	5.04	0.00	0.00	5.04	0.00	0.00
Odisha	48.03	13.19	27.46	48.03	13.54	28.19	48.03	14.62	30.44
Puducherry	0.26	0.07	28.64	0.26	0.00	0.00	0.26	0.10	38.67
Punjab	78.72	0.00	0.00	78.72	0.00	0.00	78.72	0.00	0.00
Rajasthan	250.14	103.77	41.49	250.14	98.48	39.37	250.14	74.31	29.71
Sikkim	1.37	0.00	0.10	1.37	0.00	0.22	1.37	0.00	0.06
Tamil Nadu	60.74	12.30	20.24	60.74	11.66	19.20	60.74	11.10	18.27
Telangana	48.93	8.22	16.80	48.93	10.46	21.39	48.93	7.77	15.89
Tripura	4.86	0.03	0.58	4.86	0.03	0.63	4.86	0.00	0.02
Uttar Pradesh	262.03	65.11	24.85	262.03	47.08	17.97	262.03	51.34	19.59
Uttarakhand	10.83	1.32	12.22	10.83	1.16	10.75	10.83	1.09	10.07
West Bengal	98.81	19.96	20.19	98.81	16.79	17.00	98.81	18.02	18.23
Total	1970.54	570.84	28.97	1970.54	514.99	26.13	1970.54	519.25	26.35

Note : *: Latest data for Gross Area Sown (also known as Gross Cropped Area) is available till 2015-16 and the same has been used for 2016-17 to 2018-19 for estimation purpose.

Source : *Pocket Book of Agricultural Statistics 2019*, Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare, Govt. of India. (Website: eands.dacnet.nic.in)

