



National Agromet Advisory Service Bulletin
based on
Extended Range Weather Forecast (ERFS)

Valid for 10th to 23rd June, 2016

Date of Issue: 10th June, 2016

Issued by

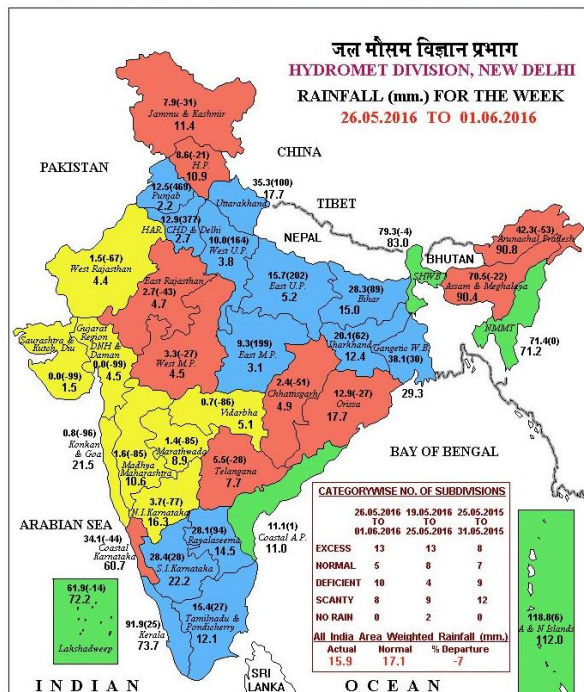
**Earth System Science Organisation
India Meteorological Department**

&

**Indian Council of Agricultural Research (ICAR)
All India Coordinated Research Project on Agricultural Meteorology (AICRPAM),
Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad**

Realized Rainfall (26th May to 8th June 2016)

भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



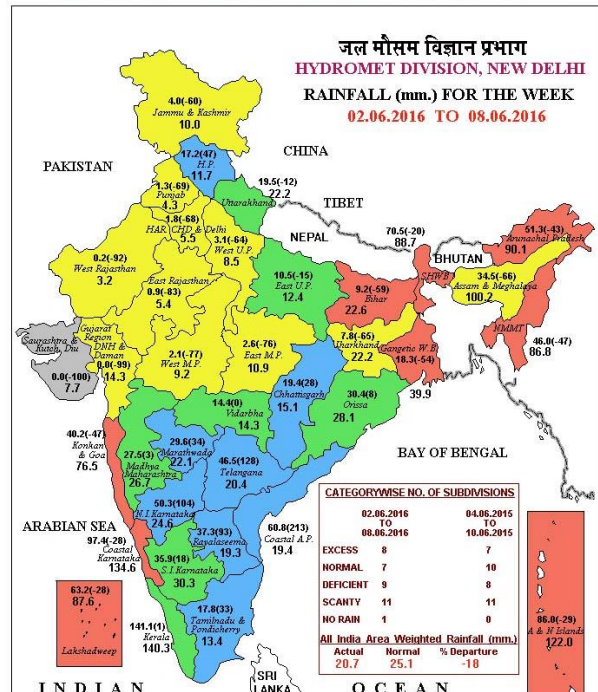
LEGEND: ■ EXCESS (+20% OR MORE) ■ NORMAL (+19% TO -19%) ■ DEFICIENT (-20% TO -59%)
■ SCANTY (-60% TO -99%) ■ NO RAIN [-100%] ■ NO DATA

NOTES:

(a) Rainfall figures are based on operational data.

(b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
Percentage Departures of Rainfall are shown in Brackets.

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Percentage Departures of Rainfall are shown in Brackets.

- Normal or above normal rainfall occurred during last two weeks in Uttarakhand, East Uttar Pradesh, Andhra Pradesh, South Interior Karnataka, Kerala and Tamil Nadu.
- Normal or above normal rainfall occurred in either of the last two weeks in Punjab, Haryana & Delhi, Himachal Pradesh, West Uttar Pradesh, Bihar, Jharkhand, West Bengal and Sikkim, Odisha, East Madhya Pradesh, Chhattisgarh, Nagaland, Manipur, Mizoram, Tripura, Madhya Maharashtra, Marathwada, Vidarbha, North Interior Karnataka and Telangana.
- Below normal rainfall or no rain occurred in the last two weeks over Jammu & Kashmir, Rajasthan, West Madhya Pradesh, Arunachal Pradesh, Assam & Meghalaya, Gujarat State, Konkan & Goa and Coastal Karnataka.

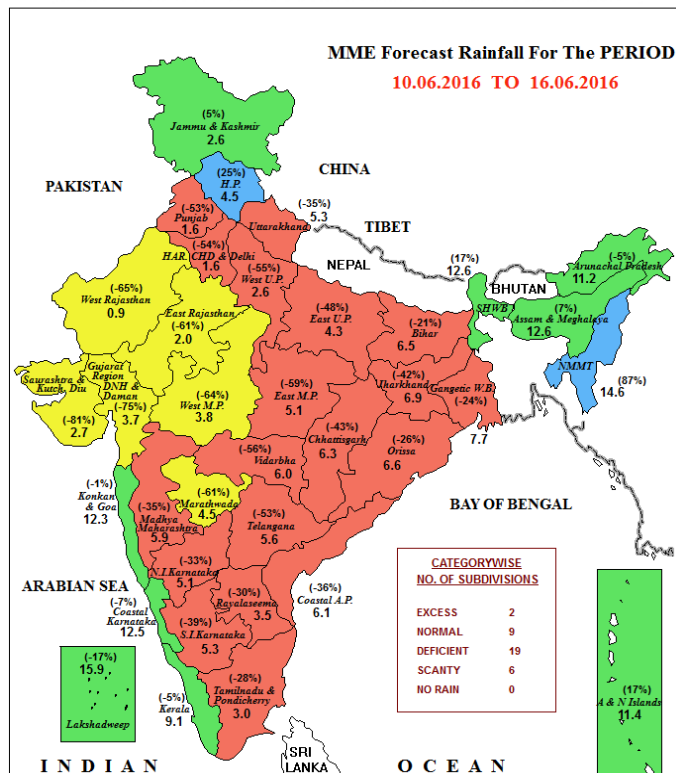
Extended Range Forecast System

Subdivision wise rainfall forecast map for the next 2 weeks (IC = 8 June)

Rainfall forecast (mm/day) (10 June – 23 June, 2016)

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INDIA METEOROLOGICAL DEPARTMENT

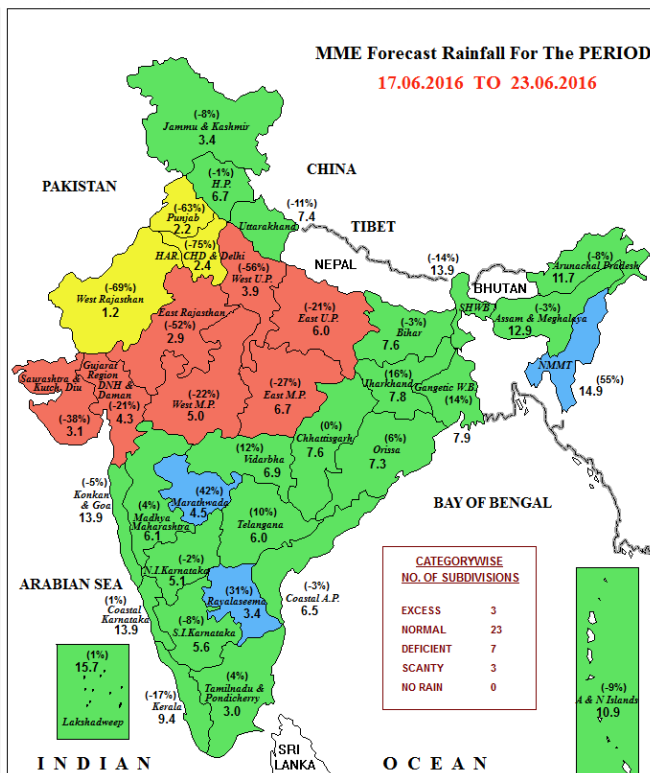
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- (c) Percentage Departures of Rainfall are shown in Brackets



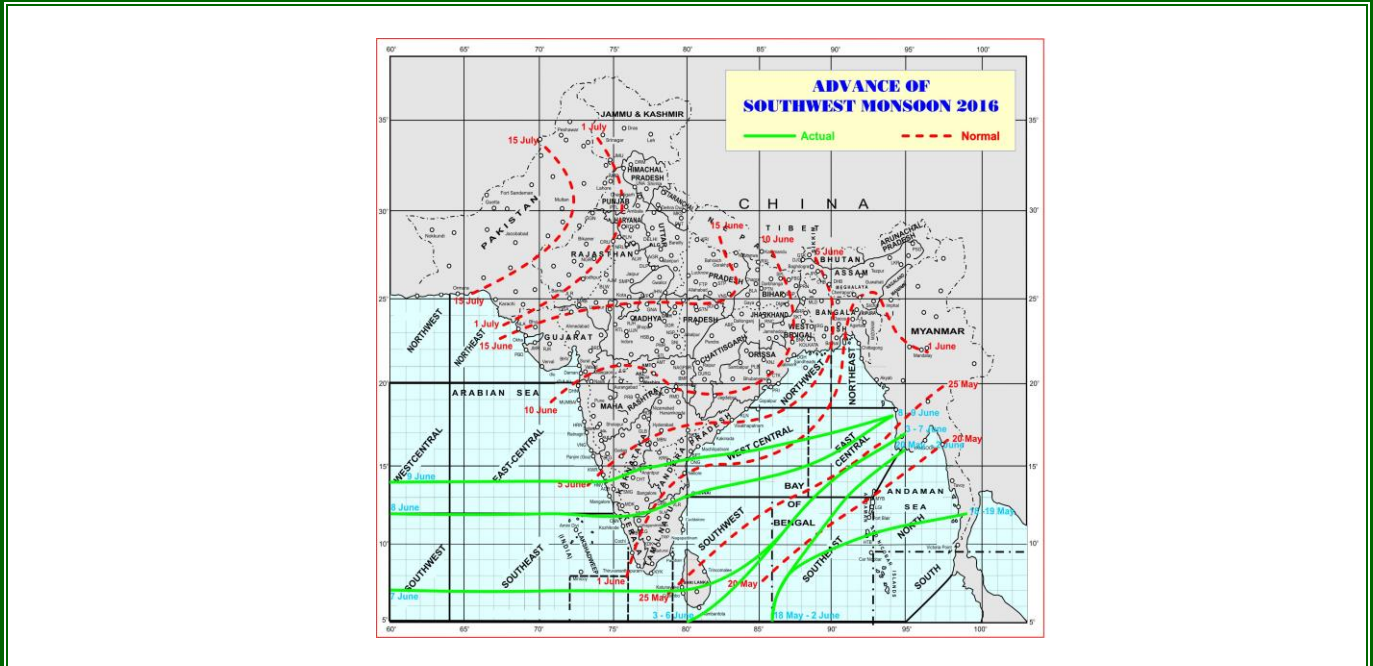
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Notes:

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- (b) Bold figures indicate forecast Normal rainfall (mm/day)
- (c) Percentage Departures of Rainfall are shown in Brackets

- Normal or above normal rainfall is likely to occur during next fortnight over Jammu & Kashmir, Himachal Pradesh, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura, Konkan & Goa, Coastal Karnataka and Kerala.
- Normal or above normal rainfall is likely to occur in either of the next two weeks in Uttarakhand, Bihar, Jharkhand, Gangetic West Bengal, Odisha, Chhattisgarh, Madhya Maharashtra, Marathwada, Vidarbha, Telangana, Coastal Andhra Pradesh, Rayalaseema, Interior Karnataka and Tamil Nadu.
- Below normal rainfall is likely to occur during the next two weeks over Punjab, Haryana & Delhi, Uttar Pradesh, Rajasthan, Gujarat State and Madhya Pradesh.

Advance of Southwest Monsoon – 2016 (as on 10th June, 2016)



- The Southwest Monsoon has set in over Kerala on 8th June, 2016.
- The Southwest Monsoon has further advanced into some parts of central Arabian sea, remaining parts of Kerala, Tamilnadu, most parts of coastal Karnataka, some more parts of South Interior Karnataka, some parts of Rayalaseema & Coastal Andhra Pradesh & some more parts of central Bay of Bengal.
- The Northern Limit of Monsoon (NLM) passes through Lat. 14.0°N/ Long.60.0°E, Lat. 14.0°N/ Long.70.0°E, Honavar, Anantapur, Ongole, Lat.16.0°N/ Long. 85.0°E, Lat. 17.0°N/ Long.90.0°E and Lat. 18.0°N/ Long.94.0°E.
- Conditions are favourable for further advance of southwest monsoon over some more parts of central Arabian sea, remaining parts of Coastal & South Interior Karnataka, some parts of south Konkan & Goa, north interior Karnataka, some more parts of Rayalaseema, coastal Andhra Pradesh, central Bay of Bengal during next 48 hours.

Strategic Agricultural Planning based on rainfall during next two weeks till 23rd June

Salient Agromet Advisories

- Southwest monsoon has advanced over Kerala, Tamil Nadu, most parts of South Interior Karnataka, Coastal Karnataka, some parts of South Andhra Pradesh. Conditions are favourable for further advance of southwest monsoon over remaining parts of Coastal & South Interior Karnataka, some parts of south Konkan & Goa, North Interior Karnataka, some more parts of Rayalaseema, coastal Andhra Pradesh during next 48 hours.
- Kerala, parts of South Interior Karnataka and Coastal Karnataka received good monsoon showers during last couple of days. This facilitates sowing of *kharif* crops in Kerala, South Interior Karnataka Coastal Karnataka.
- Rainfall occurred over Southern peninsula during previous fortnight and over Maharashtra

except Konkan, Chhattisgarh and Odisha during last week.

- Rainfall activity is likely over Northeast States and along west coast and parts of extreme north India during the period 10 - 16 June with improvement in rainfall activity over south Peninsula, southern parts of Central India and eastern states of India during the period 17-23 June.
- Prevailing weather conditions are suitable to continue agricultural activities like sowing in North-eastern states, Kerala, Karnataka and Konkan and land preparation / sowing of *kharif* crops in Gujarat, Bihar, Jharkhand, Odisha, West Bengal, Andhra Pradesh, Telangana, Madhya Pradesh and Chhattisgarh and remaining parts of Maharashtra.
- Heat wave / high temperature conditions prevailed in parts of Northwest India, Central India, Vidarbha and Gujarat State. Maximum temperatures are likely to be normal to above normal over many parts of central India with anomaly exceeding about 3 to 4°C over Odisha, Jharkhand, Chhattisgarh, Telangana, East Uttar Pradesh, East Madhya Pradesh, West Madhya Pradesh, adjoining Maharashtra during the period 10-16 June and slightly above normal over most parts of central and Northwest India during 17-23 June.
- In view of prevailing heat wave / high temperature conditions, apply irrigation through sprinkler to summer vegetables, sugarcane and orchards in the above States/regions during evening hours. Also undertake soil mulching or mulching with straw or polythene to conserve soil moisture.

The following advisories are issued for Kerala, Karnataka, Andhra Pradesh, Telangana, North-eastern States, Maharashtra, Gujarat State, West Bengal, Bihar, Jharkhand, Odisha, Madhya Pradesh and Chhattisgarh.

Kerala

Kerala State received good rainfall during May and first week of June and rainfall activity is likely to continue during next fortnight.

Major advisories for *kharif* crops

- Continuation of nursery sowing of *Virippu* rice in Southern Zone. Proper drainage should be given near to the seed bed as there is a chance for high rainfall.
- Continuation of direct sowing of rice in Problem Area Zone and Northern Zone.
- Nursery sowing of rice (variety: Jyothi and Kanchana) in Central Zone.
- Continuation of transplanting of vegetables like bhindi, brinjal and chilli in Problem Area Zone and Southern Zone.
- Continuation of transplanting of *kharif* vegetables like bhindi and brinjal in Southern Zone.
- Provide adequate drainage facility for vegetables and orchards to avoid water stagnation.

Other Advisories

- Planting of new pepper cuttings in Pathanamthitta district. Drench the soil and with 0.2 % Copper oxy chloride and spray the aerial part with 1% Bordeaux mixture as a prophylactic measure to control quick wilt and *pollu* disease.
- Continuation of planting of ginger and turmeric with adequate drainage facility in Central Zone.
- Continuation of planting of coconut, arecanut, pepper and cardamom in the High Altitude Zone.
- Arecanut: Apply 500 grams of lime per plant. Spray 1% Bordeaux mixture as a prophylactic

measure to control *mahali* and *bud rot* diseases.

- Completion of planting of coconut and rubber in Southern Zone; avoid water stagnation in the pits/ basins.
- Provide adequate drainage in nutmeg, sugarcane in Southern Zone.
- Continuation of cultivation of ginger, turmeric, banana, mulberry and tuber crops as intercrops along with coconut.
- Continue tapping in rubber.
- **Karnataka**

Good rainfall occurred over South Interior Karnataka from middle of May and rain is likely to occur in later part of next fortnight. Deficient rainfall activity observed over Coastal Karnataka during previous fortnight however, rainfall is likely to occur during next fortnight. In North Interior Karnataka rainfall occurred in third week of May and during first week of June and rain is likely to occur in later part of next fortnight.

Major advisories for *kharif* crops

Coastal Karnataka

- Nursery sowing of rice (varieties for low land: Intan, Abhilash and Hemavati and for upland: Amrut or Prasanna) in Hill Zone, Coastal Zone and sowing of groundnut with realised and expected rainfall.
- Sowing of *kharif* maize, cotton with realised and expected rainfall.
- Transplanting of arecanut seedlings.

South Interior Karnataka

- Nursery sowing of rice and sowing of red gram, groundnut, sorghum, sunflower, cotton and maize in Central Dry Zone with realised and expected rainfall.
- Sowing of red gram (TTB-7, BRG-1, 2, 4, 5), maize, groundnut (TMV-2, JL-24, KCG-6) and ragi (Indaf -9, ML-365) in Eastern Dry Zone with realised and expected monsoon showers.
- Sowing of sesame (Navile-1, T-7), green gram (PS-16, PDM-84,178), black gram (Karagao-3, T-9, Rashmi), cowpea (TVX-944, KBC-1) and castor (DCS-9 (Jyothi), DCH-177 & 32) in Bengaluru Rural, Bengaluru Urban, Kolar districts of Eastern Dry Zone with realised and expected monsoon showers.
- Nursery sowing of rice, sowing of red gram, groundnut, sorghum, sunflower, maize, cotton and ragi in Southern Transition Zone utilising realised and expected rainfall.
- Sowing of pulses like cowpea, green gram, black gram, horse gram, field bean etc., ragi, sorghum and maize in Mandya and Chamrajnagar districts which received rain and land preparation for sowing of groundnut in Southern Dry Zone with realised and expected rainfall.

North Interior Karnataka

- Land preparation and nursery sowing of rice (Jaya, Rasi, BPT-520) in North East Transition Zone with realised and expected monsoon showers.
- Sowing of green gram, sunflower, maize, Bt. cotton, red gram (short duration varieties and wilt resistant variety TS-3R), bajra, sorghum, sesamum, navane and groundnut (bunch type) in Vijayapura and Bagalkote districts of North Dry Zone with realised and expected monsoon showers.

- Intercropping of bajra + groundnut (bunch) in 2:4 row proportion; bajra + red gram in 2:1 row proportion; groundnut (bunch) + red gram in 3:1 or 4:2 row row proportion, red gram + sesamum in 1:2 or 2:4 row proportion in light and medium black soils is suggested in North Dry Zone to make efficient use of available soil and water resources and to get higher returns.
- Sowing of red gram, black gram, green gram, cotton, maize in North East Dry Zone with realised and expected monsoon showers.
- Making ridges and furrows or compartment bunding so as to conserve rain water.

Other Advisories

South Interior Karnataka

- Continuation of planting of ginger and turmeric.
- Continuation of planting of coffee, cardamom, arecanut and banana in Kodagu district of Southern Dry Zone.
- Provide adequate drainage facility in arecanut fields.
- Ploughing across the slope and land levelling which helps in conserving more rain water in the soil.
- Strengthen the bunds to facilitate conservation of rainwater.

North Interior Karnataka

- New plantation of fruit trees, teak, neem trees on the bunds, uncultivated and marginal lands in North East Dry Zone,
- Repairing of bunds and check dam so as to reduce the runoff and to check the soil erosion.
- Sowing of crops in rows across the slope to facilitate better conservation of moisture in the soil.

Andhra Pradesh

Rainfall occurred over Andhra Pradesh during last fortnight and rain is likely to occur during later part of next fortnight.

Coastal Andhra Pradesh

Major advisories for *kharif* crops

- Continuation of land preparation for sowing of rice (BPT-5204, vijetha, IR-64 and Bavapuri sannaalu), millets, maize (DCH-111, DCH-113, DCH-115, Maandhuri & Priya (sweet varieties), red gram (LRG- 38, LRG- 41, laksmi, Abhaya, Asha, Maruthi and PRG-158,LRG 52), black gram (LBG-752, LBG-20, T-9, LBG-623, PU-31, LB-402, LBG-709 and LBG-787 , TBG 1,GBG 104), green gram (LGG-407, LGG-460, LGG-450, LGG-410, TM-96-2) and cotton (cotton dorasannaalu) in Krishna Godavari Zone and sowing in third week of June after receipt of sufficient rainfall.
- Nursery sowing of rice (early *kharif* plantings: Pushkala, Rasi, IR64), ragi (Bharati, Srichaitanya, Vaula); sowing of maize (medium duration hybrids/varieties: DHM 111, DHM 117, DHM-119, KH 510, Bio 9637, KH 9541, MCH 2, Kohinoor, Prabhal and Bisco 855), groundnut (Kadiri-7 Bold, Kadiri-8, Bold, kadiri-6 Kadiri-9, Kadiri Harithandra, Kadiri Anantha), red gram, green gram and black gram in High Altitude Tribal Zone.
- Continuation of land preparation for sowing *kharif* crops like bajra, red gram, green gram, black gram in North Coastal Zone.

- Continuation of planting of rainfed sugarcane in North Coastal Zone.
- Procure good quality seeds from reputed firms.

Other Advisories

- Intercultivation in main and ratoon crops of sugarcane in between rows in North Coastal Zone.

Rayalaseema

Major advisories for *kharif* crops

- Nursery sowing of rice (MTU 1010, Nellore Masuri in Nellore district), continuation of sowing of *kharif* groundnut (Narayani, Abhaya, Dharani, K-6, Grishma, TPT-4, K-6), undertake sowing of black gram, red gram, sesame, sunflower and castor in Southern Zone.
- Sowing of *kharif* crops like red gram (LRG-41, PRG-158, PRG-176, Lakshmi, and Asha), black gram, sunflower, sorghum, castor (PCH-111, PCH-222, Haritha, Kiran) etc. in Anantpur and Kurnool districts of Scarce Rainfall Zone.
- Keep inputs ready for *kharif* sowing.

Telangana

Major advisories for *kharif* crops

- Nursery raising of rice; soak the rice seeds for 24 hours and incubate for 24-36 hours and sow the sprouted seeds in the raised nursery beds in North Telangana Zone.
- Continuation of land preparation and sowing of jowar (CSH 6,9,10,11,CSV -15, PNV-1), maize (DHM-101, 103,107 and other private hybrids), green gram (ML-267, LGG 407,410,450,460), black gram(T-9, LGG-20, 623, PBG-1), red gram(LRG 30, ICPL 8863, 332,87119, 85063) and soybean (JS 335, MACS-13,58) and soybean in Northern Telangana Zone.
- Land preparation for sowing of black gram, red gram, soybean, castor, sunflower, sesame, Bt. cotton, sorghum (in Mahabubnagar, Medak, Rangareddy districts), maize (in Mahabubnagar, Medak, Warangal districts) in Southern Telangana Zone.
- Procurement of seeds and other inputs for sowing of rainfed crops in Southern Telangana Zone.

Other Advisories

- Continuation of digging of pits for new planting orchards in Northern Telangana Zone.
- Continuation of sowing of green manure crops like sunnhemp, dhaincha, pillipesara, clusterbeans and Sesbania rostrata and incorporate into the soil after sufficient growth. It improves soil structure, increases water holding capacity and decreases soil loss by erosion in North Telangana Zone.
- Continuation of harvesting of matured vegetables in Northern Telangana Zone.

Tamil Nadu

Rainfall occurred during previous weeks and likely in later part of next fortnight.

Major advisories for *kharif* crops

- Nursery sowing for *kuruvai* rice and SRI cultivation (varieties ADT 36, ADT 43, ADT 45 and ADT 47) in Cauvery Delta Zone.

- Sowing of small millets in the foothills of western ghat areas in the Western Zone.

Other Advisories

- Cultivation of small onion in the North Western Zone, utilizing the realized rainfall.
- Adequate drainage facility in all irrigated crops in Western Zone.
- Covering the root zone of horticulture crops with coir pith to conserve moisture in the North Eastern Zone.

Maharashtra

Rainfall occurred over Madhya Maharashtra, Marathwada and Vidarbha during last week and is likely to occur over Maharashtra in later part of next fortnight. As monsoon is approaching fast, keep inputs ready for *kharif* sowing in Madhya Maharashtra, Marathwada and Vidarbha.

Konkan

Major advisory for *kharif* crops

- Continuation of nursery sowing of *kharif* rice and finger millet in North Coastal Konkan Zone. Start transplanting of rice when the seedlings of proper age are ready.
- Completion of sowing of *kharif* crops like rice, nagli and vari in Sindhudurg district.
- Continuation of sowing of *kharif* vegetables like okra (sowing on ridges and furrows), cucumber, bitter gourd, snake gourd, ridge gourd (on soil mounts).
- Sowing of *kharif* groundnut.

Other Advisories

- Continuation of new planting of mango, cashew, coconut and arecanut.
- Mulching with black 25 micron polythene in between two trenches or beds of fruit crop nurseries to control weeds, increase soil temperature and for soil water conservation.
- Planting of biennial forage crops like Paragrass, Napier, Gajraj etc.
- Harvesting and transportation (during night hours) of matured mango fruits.
- Protect the animals and poultry birds during rains.

Madhya Maharashtra

Major advisories for *kharif* crops

- Nursery raising for *kharif* rice on raised bed / direct sowing in Sangli, Satara and Kolhapur districts.
- Sowing of soybean, jowar, groundnut, pearl millet in Sangli, Satara and Kolhapur districts with receipt of monsoon rainfall.
- Sowing of pearl millet, groundnut, pigeon pea, sunflower, soybean and sowing of groundnut, Bt. cotton in Central Maharashtra Plateau Zone with receipt of monsoon rainfall.
- Completion of preparatory tillage for sowing of *kharif* red gram, green gram and black gram.
- As monsoon is approaching fast, keep inputs ready for *kharif* sowing. Improved varieties:

Soybean: Phule Kalyani, Phule Agrani (KDS 344), JS 335, MACS 11188, JS 335, Phule Kalyani (DS-228).

Sorghum: Hybrid varieties: CSH 5, CSH 9, CSH 13, CSH 14, CSH 16, CSH 21, CSH 25.

Improved varieties: SPV 462, CSV 13, CSV 15, CSV 17 and CSV 23.

Sweet sorghum: SSV 84, CSV 24 SS, CSV 19 SS.

Groundnut: Phule Morana, Phule Pragati, Phule Vyas, Phule Unnati, Phule RHRG 6021, SB11, TPG41, TG 26.

Rice: Halava: Karjat 184, Ratnagiri 1, Karjat 4, Ratnagiri 711, Phule Radha

Nimgarva: Jaya, Phule Maval, Phule samruddhi, Phule R G –N-6

Garva: Ratnagiri 2, Karjat 2, Daranna, Suvarna

Scented rice: Basmati 370, Indrayani, Prabhavati, Sughandha.

Hybrid: Sahyadri 1, Sahyadri 2, Sahyadri 3, Sahyadri 4, Sahyadri 5, K R H 2.

Pearl Millet: Shraddha, Saburi, Phule Shanti or ICTP 8203, ICMV 155.

Pigeon pea: ICPL 87, Vipula, BSMR-853, BSMR-736.

Sunflower: EC 68414, SS 56, Bhanu.

Advisories for other crops

- Continuation of nursery sowing of *kharif* vegetable crops like tomato, chilli and bitter gourd.
- Nursery preparation for *kharif* onion & tomato crops in Nashik district.
- New planting of orchards mango, banana, papaya and pomegranate.
- Land preparation for cultivation of ginger and turmeric where irrigation facility is available.
- Earthing up in *suru* sugarcane crop.
- Cultivation of sorghum, bajra, maize, cowpea and hybrid napier as green fodder for livestock.

Marathwada

Major advisory for *kharif* crops

- Land preparation / sowing of cotton, pigeon pea (rainfed: BDN-2, BDN-708 (Amol), BDN-711, BDN-716; irrigated: BSMR-853, BSMR-736), green gram (BM-4, Kopargaon, BPMR-145, BM-2002-01, BM-2003-2), black gram (BDU-1, TU-1), groundnut (JL-24, LGN-2 (Manjra), TLG-45, LGN-1, LGN-123) and maize (early varieties: Paras, Arun, Kiran, Surya; mid late varieties: Navjot, Manjra, DMH-107, KH-9451, MHH), late varieties: Prabhat, Deccan-103, K-2492, Bio-9381, Maharaja) and also for soybean with receipt of monsoon rainfall.
- Intercropping of Cotton + Pigeon pea (6:1 or 8:2), Cotton + Soybean (1:1), Cotton + Green gram (1:2), Cotton + Black gram (1:1) serve as an insurance against crop failures and as a preventive against soil erosion.
- Continuation of nursery cultivation of *kharif* vegetable crops like brinjal, chilli and tomato seed on raised bed.

Advisories for other crops

- Land preparation for floriculture crops.
- Continuation of sowing of fodder crops like African Tall, Ganga-5, Vijay and Manjari.
- Preparing pits for planting of mango and custard apple crops.
- Mulching with farm waste, dry grass, leaves and twigs in orchards and vegetable crops.

Vidarbha

Major advisory for *kharif* crops

- Nursery sowing of *kharif* rice in Bhandara, Gondia, Chandrapur, Gadchiroli districts utilising realised rainfall.
- Completion of preparatory tillage for sowing of *kharif* jowar, soybean, cotton, green gram, red gram and black gram.
- Keep inputs ready for sowing of *kharif* crops like red gram (ICPL- 87119 (Asha), C-11), cotton (desi cotton: AKA-5, 7, 8, American improved varieties: AKH – 081, PKV-Rajat, AKH-8828, hybrid varieties: PKV-DH-1), soybean, green gram, black gram, sorghum etc.
- Recommended sorghum varieties are early duration- CSH-14 and CSH-17, medium duration- CSH-9 SPH-388 and improved- SPV-669.
- Recommended green gram varieties are PKV- green gold, PKV mug -8802, TARM-18 and for black gram PKV-15, TAU-1, TAU-2 and TPU-4.
- Feasible risk minimizing intercropping systems include cotton + green gram/black gram (1:1), pigeon pea + green gram / black gram/soybean (1:2 / 2:4) , sorghum + green gram/pigeon pea (3:3) and Soybean + sorghum + pigeon pea (6:2:1). Also in soybean after every 6 or 9 rows one row of pigeon pea may be sown.

Advisories for other crops

- Land preparation for turmeric in Eastern Vidarbha Zone with realised rainfall.
- Completion of sowing of vegetables like bitter gourd, tinda, ridge gourd, smooth gourd, bottle gourd, cowpea, cluster bean, coriander etc. in Central Vidarbha Zone.
- Tree basins of fruit crops should be mulched to conserve moisture. Juvenile/young plantation should be protected from heat with thatches and mulching of basins. Thatches may be made of cotton/pigeon pea stalks/green shade net, etc. Apply light and frequent irrigations to summer crops/orchards preferably during evening hours.

Gujarat

No significant rain occurred during last week and no significant rain is likely in next fortnight.

Gujarat Region

Major advisories for *kharif* crops

- Continuation of land preparation for *kharif* rice (NAUR-1, GNR-2 (Costal area), GNR-3 (N/V), GNR-4 (long duration), Jaya, Ghujari, GR-5, 7, 8, 9, IR-28 and GAR-13), nursery sowing of ragi. Wait for sowing till the receipt of monsoon rain in South Gujarat Heavy Rainfall Zone.
- Continuation of land preparation for sowing of *kharif* crops like pearl millet, groundnut, green gram, black gram, maize etc. in North Gujarat Zone.
- Continuation of land preparation for *kharif* crops like cotton, pearl millet, green gram in Bhal and Coastal Zone and for groundnut in Middle Gujarat Zone.
- Keep seeds and other inputs ready for sowing.

Other Advisories

- Preparation for new plantation of horticultural crops (mango, sapota, lemon, pomegranate, ber, guava).

- Make necessary arrangements for water harvesting in the fields.

Saurashtra & Kutch

Major advisories for *kharif* crops

- Continuation of land preparation for sowing of *kharif* cotton (Bg-II GCH-8, 12 Jay Bt, Solar-66, 76, Sarju, Bg- II GCH-6, Mallika), groundnut (GG-20 & 22, GUG-10, GG-2,11, 13, TAG- 24 & 37, TPG-41) in South Saurashtra Zone.
- Preparatory tillage for *kharif* crops.
- Continuation of land preparation for sowing of pearl millet, groundnut, pulses (green gram, black gram, cow pea, pigeon pea), sesame, cotton in North Saurashtra Zone and sowing after receipt of monsoon rain.
- Keep the seeds ready for sowing of *kharif* crops like pearl millet (GHB-558,577,538,719,732,744), groundnut (semi spreading: GG-20, bunch: GG-2, GG-5, TAG-24, TG-37 A, TPG-41, TLG-45), pulses (green gram: GM-4, K-85, black gram: T-9, GU-1, cowpea: Gujarat cowpae-1,2,4, Pusa Falguni, pigeon pea: BDN-2, GT-100, GTH-1), sesame (GT-2 or GT-3 variety.), cotton (early: Bg-II GCH-8, Agritop-333, 777, 444, Jay, Beejdhan-2, Sarju, Atom, Bhakti, medium late: Bg-II GCH-6, Agritop-444, Solar-76, Swapna, Mallika) in North Saurashtra Zone.
- Continuation of land preparation for sowing of *kharif* crops like pearl millet, groundnut, green gram, black gram, maize etc. in North West Zone.

Arunachal Pradesh

Subdued rainfall activity observed during last fortnight. Rainfall is likely to occur during next fortnight.

Major advisories for *kharif* crops

- Nursery sowing and transplanting of rice.
- Sowing / transplanting of summer vegetables like cucumber, sponge gourd, bottle gourd and ladies finger.

Assam

Subdued rainfall activity observed during last fortnight. Rainfall is likely to occur during next fortnight.

Major advisories for *kharif* crops

- Completion of transplanting of normal *ahu* rice.
- Sowing of *boro* rice in Lower and Central Bramhaputra Valley Zone. (Varieties: Maguri, Kekua Bao, Negheri Bao, Tara Bao for Nagaon and Morigaon districts).
- Nursery raising of *sali* rice (varieties: Ranjit, Bahadur, Peoli, Moniram, Pankaj, Kushal etc. for typical lowland rice area, medium duration varieties: Satya and Basundhara T.T.B.-404, Mulagabharu, Kanaklata, Joymoti, IR-36, IR-64).
- Suitable paddy cultivars for flood prone area: Luit, Jalashree, Plaban.
- Land preparation and sowing of groundnut (Varieties: TG-1A, JL-24) in Lower Bramhaputra Valley Zone.

Advisories for other crops

- Land preparation and sowing of turmeric and ginger in Central Bramhaputra Valley Zone.

- Mulching, weeding and earthing up in ginger plant in Hill zone.
- Sowing of bottle gourd and planting of lemon in Lower Brahmaputra Valley Zone.
- Planting of okra in Barak valley Zone.
- Planting of papaya (varieties: Ranchi, Washington, Halflong, Coorg Honeydew). in Central Brahmaputra Valley Zone
- Planting of tapioca in Hill Zone.
- Planting of pineapple in North Bank Plain Zone and Hill Zone.
- Completion of sowing of jute (varieties: *Olitorious*) and mesta (varieties: HC 583 and AMC 108) in Central and Lower Brahmaputra Valley Zone.
- Sowing of *Colocasia* (varieties: Kaka Kachu, White Gaurya, Panchamukhia, Nadia, Ahinia Kachu and Birbhum) in Lower Brahmaputra Valley Zone.
- Sowing of fodder crops like Hybrid Napier, Setaria and Guinea etc. may be planted at a spacing of 45 cm in Upper Brahmaputra Valley Zone.
- Sowing of pigeon pea (T-21) in Lower Brahmaputra Valley Zone.
- Planting of okra in Barak Valley zone.

Meghalaya

Major advisories for *kharif* crops

- Nursery raising of *sali* rice (varieties: Shahsarang -1, Lampnah, IR 64, Ranjit, RCPL 1-412, RCPL 1-410, RCPL 1- 411 & local varieties like Mendri, Manipuri)
- Sowing of groundnut (varieties: ICGS76 and JL 24)
- Sowing of soybean (varieties: JS 335, Bragg, Ankur, Pusa Soybean-1 and Local JS 2.)
- Sowing of *kharif* pulses Green gram, Black gram and Rajma.

Advisories for other crops

- Planting of High Yielding Varieties of ginger/turmeric (varieties: turmeric- Lakadong, RCT-1, ginger- Nadia, Poona, Riodegenerio etc.).

Rainfall is likely to occur over Nagaland, Manipur, Mizoram and Tripura during next fortnight.

Manipur

Major advisories for *kharif* crops

- Land preparation for nursery sowing of *kharif* rice and sowing of groundnut and black gram.

Major advisories for *kharif* crops

- Transplanting of papaya, tree bean, mango.

Mizoram

Major advisories for *kharif* crops

- Nursery sowing of rice.
- Sowing of *kharif* green gram, black gram and rajma.

Advisories for other crops

- Transplanting of brinjal and chilli in the main fields.
- Sowing of maize, okra, French bean, cowpea, Colocasia, planting of ginger and turmeric and also new planting of orchard crops like passion fruit, Khasi mandarin and acid lime.
- Sowing of Khasi Mandarin and acid lime.

- Transplanting of *kharif* rice.

Tripura

Major advisories for *kharif* crops

- Sowing of groundnut (varieties: TAG 24, TG 37A, ICGS 76), Maize (Varieties: DMH-849, 117, HQPM 1 and BQPM 9 etc) in upland and medium upland regions.

West Bengal

Rainfall occurred during last week of May over West Bengal & Sikkim and likely to continue over Sub-Himalayan West Bengal during next fortnight and over Gangetic West Bengal during later part of next fortnight.

Major advisories for *kharif* crops

- Land preparation for nursery sowing of *aman* rice.
- Continue transplanting of Aus-rice in Laterite and Red Soil zone.
- Sowing of bitter gourd as *kharif* crop.
- Start sowing of dry seeded long duration rice (varieties: Sabita Foundation, Swarna sub-1 certified, IR-64, Hira T.L) in Coastal Saline Zone.

Advisories for other crops

- Land preparation and planting of ginger and turmeric in Terai Zone.
- Selection of high land, preparation of field with well drained channel, seed treatment (Carbendazime 1gm + Mancozed 2 gm) / kg of rhizome, and drying in shadow place. Seed Rate For Ginger-250 kg/bigha and Turmeric -300 kg/bigha in Tarai zone.
- In Hill Zone, undertake land preparation for new plantation of large cardamom.
- Completion of transplanting of chilli in the main field and planting of ginger in Hill Zone.
- Undertake harvesting of matured sesame in Laterite and Red Soil zone.
- Deep summer ploughing should be done in harvested boro paddy field to destroy eggs and pupa of insects.
- Land preparation and sowing of fruits like guava (Varieties: Himsagar, Mallicka, Langra for Mango; Safeda, L-49) and coconut (Varieties: Eastcoastal, Hazari) in Coastal Saline Zone.

Andaman & Nicobar

- Raising nursery of vegetable like chilli and brinjal in the upland area of Portblair.
- Prepare rice nursery and use CSR 36 for low laying area.
- Prepare the raised bed for sowing of cowpea in double row system.
- Sowing of seeds of bhendi and lobia in raised beds.

Odisha

Rainfall occurred during previous week and is likely during later part of next fortnight.

Major advisories for *kharif* crops

- Undertake sowing of rice in nursery (short duration varieties: Sahabhagi, Khandagiri, Udaigiri, Kalinga-3, Jyotirmayee, Mandakini etc. for bonded upland, medium duration rice varieties: MTU-1010, Lalat, Konarka, RGL-2538, chandan, Surendra, Nabin, MTU-1001, Manaswini, Surendra, Tapaswini, etc. in medium land and medium late duration varieties: Tejaswini, Hiranmayee, Satyakrishna, Pratikshya, Ranidhan, Mrunalini, Pooja, MTU-7029, RGL-2537, Ranjeet etc. in low land, hybrid varieties: CR Dhan 701, NK 5251, JKRH 401, Ajay, Rajalaxmi, Arize 6444G).
- Sowing of HYV cotton (varieties: Suraj, Supriya, B.S.-30, B.S.-279, Surabhi, Hybrids

varieties: Bunny, Diana, Bhaskra, Namaskara, Tulasi, Sigma, Chiruta, Takat etc). For high density Planting system (HDPS), varieties suitable are BS-30, BS-279, Suraj and Supriya. with receipt of monsoon rainfall.

- Sowing of arhar (varieties: Asha, Laxmi, UPAS-120, ICPL-88039 with receipt of monsoon rainfall.
- Sowing of maize (varieties: Shakti-1, Navjot, Decan-107, Decan-109 etc. and hybrids varieties: Megan-G, Megan, MM- 1107, Highshell, Prabal, Proagro 4643, Bio9681, Pinnacle, DMH-7705).

Advisories for other crops

- Grow yam (local variety: Shreekirti, Shreerupa, Hatikhoj, Shreeshilpi, Small yam: Shreelata, Shreekala, White yam: Shreesubhra, Shreepriya, Shreedhanya).
- Planting of ginger (varieties: Suprova, Suruchi, Suravi) in North Eastern Plateau zone.
- Sowing of Dhaincha in paddy field as green manure crop prior to two months before transplanting paddy. Accordingly start land preparation for sowing Dhaincha in paddy field taking the advantage of pre monsoon rain and sow 16kg seeds /acre.
- Planting of okra (improved high yielding varieties: Utkal Gourav, Arka Anamika, Uphar, Parvati kranti and Hybrid varieties: Varsa, Vijay, Vishal, Tara, Adhunik, Atyadhunik and Supriya).
- Land preparation and sowing for mixed cropping of fodder maize and cowpea.

Bihar

Rainfall occurred in last week of May and rainfall is likely to occur in later part of next fortnight.

Major advisories for *kharif* crops

- Complete nursery sowing of long duration rice (varieties: Rajshree, Rajendra sweta, Rajendra Mansuri, BPT-5204, Swarna, Satyam and Kishori) in North Bihar utilising realised rainfall.
- Sowing of *kharif* maize (varieties: Devki, Suwan, Shaktimaan-1, Shaktimaan-2, Rajendra Shanker Makka-3 and Ganga 11) in North Bihar utilising realised rainfall.
- Nursery preparation for sowing of *kharif* onion (varieties: *Agrifound Dark Red (ADR)*, *N-53*, *Bhima Super*, *Arka Kalyan*) utilising realised rainfall.
- Land preparation for sowing of rice (hybrid varieties: KRH 2, PHB 71, PUSA RH 10, Pant hybrid Dhan1 for low lying land, Long duration varieties: Rajendra Mehsoori 1, MTU 7029 (Swarna)) in South Bihar Alluvial Zone utilising realised rainfall.

Advisories for other crops

- Sowing of turmeric (varieties: Rajendra Sonia and Rajendra Sonali) and ginger (varieties: Maran and Nadia) in North Bihar utilising realised rainfall.
- Sowing of fodder crops such as *sorghum*, *maize* and *bajra* utilising realised rainfall.

Jharkhand

Rainfall occurred during first part of previous fortnight and is likely during later part of next fortnight.

Major advisories for *kharif* crops

- Sowing of maize (Birsa Makka-1, Birsa Makka-2, Suwan-1(Hybrid), HQPM (Hybrid)).

- Land preparation for timely sowing of direct seeded upland rice (improved varieties: Vandana, Birsa Vikas Dhan -109 & Birsa Vikas Dhan -110) in Central and North Eastern Plateau Zone and South Eastern Plateau Zone.
- Prepare rice nursery bed in 1000 sq m. for transplanting. Improved varieties for medium land rice: Anjali, Sahbhagi, Naveen, Lalat, Birsamati, Sugandha, BR-10, Pro-Agro 6444, IR-36, IR-64etc. Improved varieties for low land rice: Swarna (MTU-7029), Rajshree, Sambha Mahsuri (BPT-5204), Birsa Dhan- 202, Birsamati, Pro-Agro 6444, etc.
- Land preparation for sowing of pigeon pea (varieties: Birsa Arhar (210 days), Bahar (240 Days) and ICPH 2671 (210 days)).
- Planting of ginger (Vardhaman or Nadia) and turmeric (Rajendera Sonia).

Advisories for other crops

- Timely transplanted summer rice crop is at maturity stage. Harvest the crop in a clear weather.
- Keep the harvested produce at safer place.

Jammu & Kashmir

Rainfall is likely during next fortnight.

Major advisories for *kharif* crops

- Continue land preparation for nursery raising of rice (Basmati 370 and Ranbir Basmati) in Sub Tropical Zone. Keep the already sown nursery area free from weeds by mechanical methods or use butachlor granules 5G @ 30 kg/ha after emergence of 1st leaf. Maintain regular supply of water preferably during morning hours. Undertake land preparation for sowing of maize.
- Undertake nursery sowing of rice and prepare land for cultivation of maize crop in Intermediate Zone.

Himachal Pradesh

Rainfall occurred during last week and is likely to continue during next fortnight.

Major advisories for *kharif* crops

- Undertake nursery sowing of rice in Sub-Montane and Low Hills Sub-Tropical Zone and Mid Hills Sub Humid Zone.
- Treat the seed before sowing with Bavistin @ 2.5 g per kg of seed and sowing of maize.

Advisories for other crops

- Continue planting of ginger and turmeric in in Sub-Montane and Low Hills Sub-Tropical Zone and Mid Hills Sub Humid Zone.
- Undertake direct sowing & transplanting of tomato brinjal, chilli and capsicum.
- Continue sowing of fodder maize alongwith cowpeas and soybean in irrigated and rainfed areas. Preferably chari +Bajra crop should be taken.
- Undertake sowing of pea and planting of potato in High Hill Temperate Dry Zone.

Madhya Pradesh

No significant rain occurred during last fortnight and no significant rain is likely in next fortnight.

Major advisories for *kharif* crops

- Nursery sowing of rice (very early maturing: Jawahar Dhan (JD) 75, Vandana. early maturing: JD 201, JRH-5, JRH-8, Danteshwari, Sahbhagi. medium duration: MR-219, WGL 32100, IR

36, IR 64, Kranti, Mahamaya, PusaSugandha-3, PusaSugandha-5, Pusa basmati-1, MTU 1010. long duration: Mahsuri, Swarna) in Grid Zone.

- Land preparation for sowing of arhar (ICPL 88039, PUSA 2001, PUSA 2002 and PUSA 992).
- Continue nursery preparation for *kharif* vegetables in Malwa Plateau Zone. Keep inputs ready for sowing of *kharif* crops.
- Continue land preparation for nursery sowing of *kharif* onion and cauliflower. Undertake land preparation for sowing of maize crop.
- Continue land preparation for planting of turmeric and ginger in Central Narmada Valley Zone.
- Keep inputs ready for *kharif* sowing.
- Soybean: recommended varieties are- Short-duration: JS 93-05, JS 95-60, JS 335, JS 90-4. Medium duration: JS 97-52, JS 20-29, NRC-37, NRC-7, NRC-12.

Advisories for other crops

- Apply irrigation in moong, urad, vegetables, mango, orange and pomegranate orchards in view of high temperatures in Malwa Plateau Zone.
- Nursery preparation for marigold and other flower crops.

Chhattisgarh

Rainfall occurred during previous week and is likely during later part of next fortnight.

Major advisories for *kharif* crops

- Nursery sowing of long duration rice varieties in North Hill Zone.

Advisories for other crops

- Nursery sowing of different vegetables In North Hill Zone.
- Digging of pits for the planting of fruit crops i.e. Papaya, Guava, Mango, Litchi and Pomegranate etc.

Rajasthan

Farmers can arrange the following cultivars of pearl millet and maize for *kharif* sowing.

- Pearl millet: RHB-121, HHB-67, HHB-60, Raj-171, GHB-538, Pusa-605, RHB-177 in western and eastern Rajasthan
- Maize: HQPM-1, HQPM-5, PEHM-1, PEHM-2, Pratap Hybrid-1, Bio-9681, Bio-9637, Navjot, MahiKanchan, Pratap Makka-5 are suitable for maize growing region in the state.

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