



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

Valid for 5th August to 18th August, 2016

Date of Issue: 5th August, 2016

Issued by

**Earth System Science Organisation
India Meteorological Department**

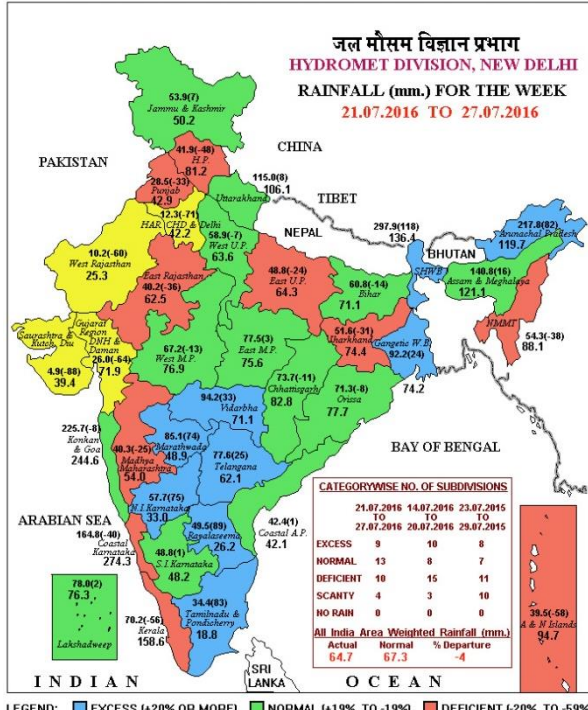
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**Indian Council of Agricultural Research (ICAR)
All India Coordinated Research Project on Agricultural Meteorology (AICRPAM),
Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad**

* National AAS Bulletin based on ERFS is available at <http://www.imdagrimet.gov.in/erfsview15>

Realized Rainfall (21st July to 4th August 2016)

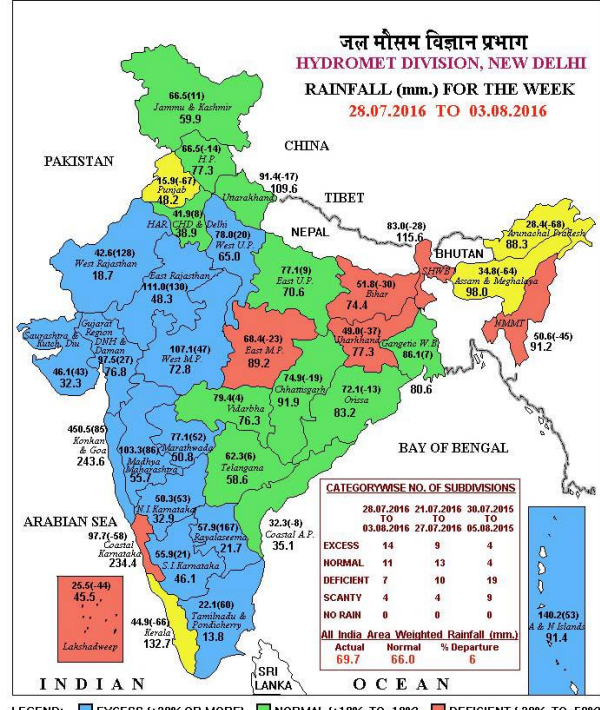
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



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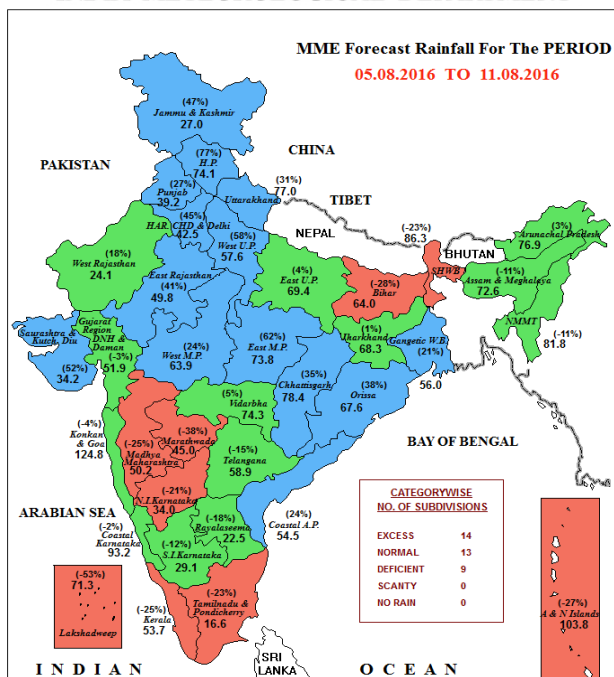
- Normal or above normal rainfall occurred during last two weeks in Jammu & Kashmir, Uttarakhand, West Uttar Pradesh, Gangetic West Bengal, Odisha, West Madhya Pradesh, Konkan & Goa, Marathwada, Vidarbha, Chhattisgarh, Telangana, Rayalaseema, Coastal Andhra Pradesh, South Interior Karnataka, North Interior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

Extended Range Forecast System

Subdivisionwise rainfall forecast map for the next 2 weeks (IC =04 August)

Rainfall forecast (mm/day) (05 – 18 August, 2016)

**भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT**

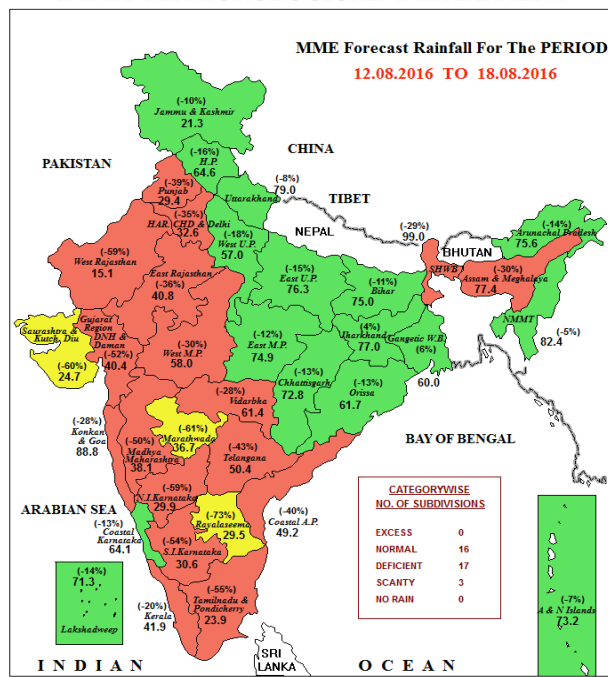


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 (c) Percentage Departures of Rainfall are shown in Brackets.

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

Strategic Agricultural Planning based on rainfall during next two weeks till 18th August

- During week 1 (05-11 August), rainfall activity is likely to be active over northern/northwestern regions along with the region of central India adjoining the monsoon trough. However, the region of southern peninsula, western parts of the country and Bihar is likely to be experiencing below normal rainfall.
- During week 2 (12- 18 August), Overall, the country will experience below normal rainfall except some regions of northern and eastern parts of the country.

In view of the above, following advisories are issued. State-wise crop varieties are given in Annexure I.

Major advisories for *kharif* crops

Kerala

Deficient/scanty rainfall occurred during last fortnight. Deficient rainfall is likely to occur during next fortnight.

- Completion of direct sowing of rice (Uma, Jyothy, Vyttila-6 varieties) in Alappuzha and Kottayam districts with realised rainfall.
- Weather conditions may favour bacterial blight and leaf folder attack in paddy. To control bacterial blight mix 20 g cow dung in 1 litre of water and take the clear solution and spray or spray *Pseudomonas* (2%) 20 g/litre on the leaves.
- Proper drainage in Kasargod and Ernakulam districts.
- Maintenance of water level of 3-5 cm in transplanted rice.
- Coconut: Spray neem oil – garlic emulsion (20 ml neem oil + 20 g garlic paste in 1 litre of water) as prophylactic measure against coconut eryophid mites. While spraying avoid the young inflorescence.
- Banana: Due to the changing weather pattern, there is a chance of *Sigatoka* disease in banana. Spray *Pseudomonas* 10- 20 g /liter of water.
- Rubber: Take care of tapping panels in rain guarded plants. Pink disease in rubber can be controlled by chiseling out the affected bark and apply Bordeaux paste.
- Nutmeg: During rainy season, there is a chance for fruit rot disease in nutmeg and splitting of fruit before ripening due to the deficiency of Potassium and Boron. To control this, apply 1% Bordeaux mixture.

Karnataka

Coastal Karnataka

Deficient rainfall occurred during last fortnight. Normal rainfall is likely during next fortnight.

- Continuation of transplanting of rice in Uttar Kannada district of Hill Zone with realised rainfall.
- Maintenance of 3-5 cm water level in transplanted rice.
- Intercultural operations in maize and cotton crop in Uttar Kannada district.
- Rain water harvesting.

South Interior Karnataka

Normal/excess rainfall occurred during last fortnight. Normal rainfall is likely to occur during first week and deficient during second week of next fortnight.

- Completion of sowing of short duration varieties of ragi by first week of August in Chitradurga, Davengere and Tumakuru districts of Central Dry Zone with realised rainfall. Intercultural operations and mulching in already sown crops to conserve soil moisture.
- Continuation/Completion of transplanting of ragi and rice in Chickamagaluru, Hassan and Shivamogga districts of Southern Transition Zone and also direct sowing of ragi. Intercultural operations in already sown maize, groundnut and red gram crop fields.
- Continuation of transplanting of rice and ragi in Kodagu, Mandya, Mysuru and Chamrajnagar districts of Southern Dry Zone. Intercultural operations in already sown cowpea and maize crops to control the weeds and to conserve soil moisture in Mandya, Mysuru and Chamrajnagar districts. New planting of pepper in Kodagu district.
- Completion of direct sowing of ragi in Chikaballapura and Kolar districts by second week of August, continuation of sowing of maize, ragi and cowpea in Bengaluru Rural, Bengaluru Urban, Ramnagara, sowing of maize in Chikaballapura and Kolar districts of Eastern Dry Zone with realised rainfall.
- Intercultural operations in already sown crops to conserve soil moisture, earthing up operation wherever the long and medium duration crops like red gram, castor and maize have been sown in Bengaluru Rural, Bengaluru Urban, Ramnagara, Chikaballapura and Kolar districts.

North Interior Karnataka

Excess rainfall occurred during last fortnight. Deficient rainfall is likely to occur during next fortnight.

- Completion of sowing of bajra, sunflower, cotton, relay cropping of cotton in groundnut and fodder crops in medium black to deep black soils and sowing of bajra, pigeon pea, groundnut, setaria (Navane), horsegram, groundnut + pigeon pea (4:2), bajra + pigeon pea (2:1) in shallow and red soils in Vijayapura and Bagalkote districts of North Dry Zone.
- Completion of sowing of pearl millet, sunflower, castor, Bt. Cotton, horsegram, Savi/navane, sunflower + castor and fodder crops in shallow to medium black and sand mixed red soils and sowing of desi cotton in medium deep, deep black soils and sand mixed loamy soils in Gadag district of North Dry Zone.
- Repeated intercultural operations in pre-sown crops to conserve soil moisture. Prepare ridges and furrows and compartment bunds in the lands reserved for *rabi* sowing.
- Completion of transplanting of rice in Bidar district of North East Transition Zone with realised rainfall by first fortnight of August.
- Intercultural operations in already sown soybean, green gram, black gram, sorghum, maize, cotton and groundnut crops, application of irrigation in sugarcane crop once in 10 days in Dharwad, Belagavi and Haveri districts of North Transition Zone. Foliar Spray of 0.5 % Ferrous Sulphate / 0.5 % Zinc Sulphate to correct Iron / Zinc deficiency respectively in groundnut crop.
- Completion of transplanting of rice in Kalaburgi, Koppal, Raichur, Yadgir and Ballari districts of North East Dry Zone with realised rainfall by 20th August.

Andhra Pradesh

Coastal Andhra Pradesh

Normal rainfall occurred during last fortnight. Excess rainfall is likely to occur during first week and deficient during second week of next fortnight.

- Continuation of nursery sowing and direct sowing of rice, and planting of rainfed sugarcane in Srikakulam, Vizianagaram and Vishakapatnam districts. Undertake pre-emergence spraying of Pretilachlor with safener @ 400 ml/acre within three days of sowing to control weed problem in direct sown rice.
- Drain out excess water from rice and groundnut fields in East Godavari district.
- Completion of transplanting of rice in East Godavari district of High Altitude Tribal Zone with realised and expected rainfall.
- Completion of nursery sowing of rice, sowing of maize, millets, red gram, black gram, green gram and cotton in Krishna, Prakasam, Guntur and West Godavari districts of Krishna Godavari Zone with realised and expected rainfall.

Rayalaseema

Excess rainfall occurred during last fortnight. Normal rainfall is likely to occur during first week and scanty during second week of next fortnight.

- In Rayalaseema, as the cut-off date for sowing of groundnut is over by 31st July and there will be a considerable reduction in yield under delayed sowings during August month, undertake sowing of contingency crops: sorghum (CSH-9,CSH-13,CSH-14,PSV-15,PSV-19), bajra (ICTP 8203,PBH 3), korra (Prasad, Krishnadevaraya, Narashimharaya, Srilakshmi, Surya nandi), cowpea (C 152 GC3 C0-4 CO-5), sunflower (NDSH1 KBSH1 KBSH 44 DRSH 1), green gram (LGG 407 LGG 450 LGG 460 MGG 295 ML 267) and field bean (TFB-1 TFB-5).
- Transplanting of rice, continuation of sowing of red gram (L.R.G-30, L.R.G-41, T.R.G-22 varieties), either monocropping (@ 4-5 kilo seed/acre) or intercropping with red gram + groundnut in 7:1 ration or 11:1 ratio in Chittoor district.
- Intercultural operations/weeding to conserve soil moisture in July first week sown groundnut, red gram and castor crops in Anantpur district. Thinning in July first week sown castor and red gram.
- Rainwater harvesting and storing it in reservoirs for future use.
- Farmers are advised to open dead furrows at 3.6m interval in rainfed crops for in-situ conservation of rainwater.

Telangana

Excess/normal rainfall occurred during last fortnight. Normal rainfall is likely to occur during first week and deficient during second week of next fortnight.

- Nursery sowing of extra short duration varieties (Prathyumna, Varalu, Anjana) in Karimnagar, Nizamabad and Khammam districts of North Telangana Zone.
- Drain out excess water from rice fields in Nizamabad district.
- Completion of nursery sowing of short duration varieties of rice; continue sowing of red gram and castor in Mahabubnagar, Nalgonda, Medak, Rangareddy, Khammam and Warangal

districts of South Telangana Zone.

Tamil Nadu

Excess rainfall occurred during last fortnight. Deficient rain is likely during next fortnight.

- Sowing of *Samba* rice (varieties CR 1009 and ADT 50) in Ariyalur, Nagapattinam, Perambalur, Thanjavur, Thiruvarur and Trichy districts.
- Continuation of green gram sowing (Co-8, VBN-2 varieties) in Nammakal, Salem, Dharmapuri and Krishnagiri districts.
- Intercultural operation and mulching for conservation of soil moisture.
- If sowing is delayed up to second week of August 2016, sowing of short duration varieties (Indaf 9 and CO 7) finger millet is suggested in the place of long duration finger millet in Krishnagiri district.
- Crops such as varagu (Kodo millet) and cowpea are advocated instead of fallow in Pudukottai district.

Maharashtra

Konkan

Normal/excess rainfall occurred during last fortnight. Normal rainfall is likely to occur during first week and deficient during second week of next fortnight.

- Maintenance of 3-5 cm water level in early transplanted rice.
- Arrange for extensive drainage facilities from the crop fields.
- Bunding of rice fields and removal of weeds on the bund.
- Application of 2nd dose of Nitrogen 40 kg/ha to rice crop after one month of transplanting.

Madhya Maharashtra

Deficient rainfall occurred during first week and excess during second week of last fortnight. Deficient rainfall is likely to occur during next fortnight.

- Completion of transplanting of rice in Nashik, Kolhapur, Pune and Ahmednagar districts during first week of August.
- Maintenance of 3-5 cm water level in transplanted rice field.
- Completion of planting of *adsali* sugarcane in Dhule, Nandurbar, Ahmednagar districts. Recommended varieties: CO - 86032 (Nira) and Phule - 0265.
- Drain out excess water from crop fields in Nasik, Kolhapur, Pune and Satara districts.

Marathwada

Excess rainfall occurred during last fortnight. Deficient/scanty rainfall is likely during next fortnight.

- Completion of planting of *adsali* sugarcane Aurangabad, Nanded districts. Recommended varieties: CO - 86032 (Nira) and Phule - 0265.
- Monitoring of pest and diseases and taking plant protection measures.
- Drain out excess water from crop fields in Latur and Nanded districts.

Vidarbha

Excess rainfall occurred during first week and normal during second week of last fortnight. Normal rainfall is likely during first week and deficient during next fortnight.

- Completion of transplanting of *kharif* rice during first week of August in Gondia, Chandrapur and Gadchiroli districts of Eastern Vidarbha Zone utilising realised rainfall.
- Intercultural operations in cotton, soybean, black gram and green gram in Buldhana, Akola, Washim, Amravati, Wardha and Yeotmal districts on a non-rainy day.
- Provide adequate drainage in standing crop fields and orchards.
- Application of 2nd dose of Nitrogen (40 kg/ha) to rice crop after one month of transplanting in East Vidarbha region.
- Areas which are not sown so far can be accommodated with suitable crops/crop varieties (as mentioned below).
- Pigeon pea (AKT 8811 and Vipula with 60x30 cm spacing; PKV- Tara and BSMR-736 with 90x20 spacing).
- Intercropping systems include pigeon pea + soybean (1:2 / 2:4), sunflower + pigeon pea (2:1) or in soybean after every 6 or 9 rows one row of pigeon pea may be sown.
- Alternative crops include pearl millet (PKV Raj Shradha, Saburi), sesame (AKT64), sunflower (PKV SF-9, PKVSH-27, KBSH-1) and castor (AKC-1, GCH-4,5,6 & DCH-117).
- Rain water harvesting.

Gujarat

Gujarat Region

Scanty rainfall occurred during first week and excess during second week of last fortnight. Normal rainfall is likely to occur during first week and deficient during second week of next fortnight.

- Drain out excess water from standing crop fields (rice, pulses, cotton crops and banana orchards) in Navasari, Dangs, Valsad, Aravalli, Chhota Udepur, Dahod, Narmada, Panchmahals, Surat and Tapi districts.
- Maintenance of 5 cm water level in transplanted rice field in Dahod, Panchmahals, Kheda, Vadodara and Anand districts.
- Intercultural operations in green gram, red gram and black gram at vapsa condition in Dahod, Panchmahals, Kheda, Vadodara and Anand districts.
- Completion of sowing of castor, sowing of sorghum (S-1049, GFS-4 and GFS-5) in Banaskantha, Mehsana, Gandhinagar, Patan and Sabarkantha districts. Intercultural operations in cotton to conserve soil moisture.
- Rain water harvesting.

Saurashtra & Kutch

Scanty rainfall occurred during first week and excess during second week of last fortnight. Excess rainfall is likely to occur during first week and scanty during second week of next fortnight.

- Drain out excess water from crop fields in Gir Somnath, Jamnagar and Junagadh districts.
- Intercultural operations, weeding and mulching to conserve soil moisture in the areas where

sowing is completed in Kachchh and Porbandar districts of Saurashtra.

- Continuation of transplanting of rice; sowing of cotton and fodder sorghum in Bhavnagar and Ahmedabad districts with realised rainfall.
- Continuation of sowing of castor and pigeon in Amreli, Rajkot, Surendranagar and Jamnagar districts of North Saurashtra Zone with realised rainfall. Intercultural operations and mulching in pulses and pearl millet to remove weeds and to conserve soil moisture in Surendranagar district.

In case of failure of first crop due to dry spell, following crops can be adopted as mid-season corrections.

- Sorghum fodder purpose :- CSH-6, GFS-4, GFS-5, GAFS-11
- Sunflower :- EC-68414, Modern GS-1, 2 & 3
- Sesame :- Gujarat sesame –1, 2, 3 & 4
- Castor :- GAUCH-1, GCH-2, GCH-4, 5, 6 & GCH-7

Arunachal Pradesh

Excess rainfall occurred in first half and scanty in later half of last fortnight. Normal rainfall is likely to occur during next fortnight.

- Carry out weeding and cleaning in upland *Jhum* rice.
- Undertake intercultural operation and top dressing of urea in wetland rice.

Assam & Meghalaya

Normal rainfall activity was observed in first half and scanty in later half of last fortnight. Normal to deficient rainfall is likely to occur during next fortnight.

Assam

- Continue transplanting of *Sali* rice seedlings in flood unaffected areas of Dibrugarh district.
- Undertake sowing of sesame.
- For normal transplanting (July-Aug) of *Sali* rice in Kokrajhar district, farmers should maintained 2-3 seedlings per hill and 4-6 cm depth for all varieties. Replanting of death hills should be done within 7-10days of transplanting with seedlings of same age.
- Complete transplanting of *Sali* rice in Cachher district.
- Carry out measures to get rid of excess water from the arhar fields in Nagaon district. One weeding is to be done 20-25 days after sowing.

Post flood condition

- After receding of flood water go for wet seeding of sprouted rice where ever possible with short duration cultivars.
- In other case, plan for sowing of green gram, lentil, early *rabi* vegetables etc.
- Late and staggered planting with the old seedlings (50-60 days old) of the varieties like Profulla and Gitesh (if the field is heavily damaged).
- Wet seeding of sprouted seeds (@75-80 kg/ha) of short duration varieties like Disang, Luit, Kapilee (90-95 days) and Kalong (100 days) for flood affected areas.

Meghalaya

- Continue transplanting of *sali* rice in all the districts of Meghalaya.
- Maintain water level of 2-5 cm from transplanting to tillering stage. Carry out replanting of dead hills or gap filling with seedlings of similar age within 7-10 days of transplanting.

- Harvest mature maize cobs and sundry before storing.

Nagaland, Manipur, Mizoram and Tripura (NMMT):

Deficient rainfall occurred during last fortnight over Nagaland, Manipur, Mizoram and Tripura. Normal rainfall is likely to occur during next fortnight.

Manipur

- Carry out thinning in main *kharif* rice fields where plant population is high and replant in area where plants have died due to flood. Maintain optimum water level during tillering stage and drain out excess water if accumulated due to rain
- Undertake weeding in *kharif* maize on a bright sunny day.

Mizoram

- Carry out hand weeding in *kharif* rice.
- Ginger and turmeric is in vegetative stage. Remove unwanted plant near base of the plant and cut dead branches.
- In green gram, black gram and rajma, remove unwanted plant from the base of the plant.

Tripura

- Carry out weeding in 20-25 days old *Aman* rice.
- Carry out earthing up for better pod formation in groundnut.

Nagaland

- Undertake sowing of soybean.

West Bengal

Excess/normal rainfall occurred in Gangetic West Bengal during last fortnight. Excess/deficient rainfall occurred in Sub-Himalayan West Bengal in last Fortnight. Deficient rainfall is likely to occur over Sub Himalayan West Bengal and Sikkim while excess to normal rainfall is likely to occur over Gangetic West Bengal during next fortnight.

- Carry out first hand weeding in transplanted rice field in Malda district.
- Complete weeding operation in direct seeded rice in Purulia district.
- Harvest jute in Howrah district at 100 DAS if aman-rice-growers want to cultivate rice in the same field. Otherwise, jute may be harvested at 120 to 125 DAS.
- In uplands black gram (T9, Pant urd 30 and Pant urd 19), green gram (T44, Samrat), pigeon pea (Bahar, Pusa 9 and Narendra Arhar 1), groundnut (TAG 24, TG 44) and horse gram (DV 7, BR 5, BR 10, S67/26, 14, 31) can be sown with available seeds in locality/seed agencies.
- Priority should be given for *in situ/ex situ* rainwater harvesting during the remainder of the season.
- There is a chance for stem fly infestation in vegetables due to low rainfall and partly cloudy weather. Spray Chloropyriphos @ 25 ml per 10 litres of water.
- Prevailing cloudy weather is congenial for the incidence of downy mildew in cucurbits; spray Metalaxyl 8% + Mancozeb 64% @ 20 g in 10 litres of water.
- In view of excess rainfall in last fortnight in Sub-Himalayan West Bengal, continue gap filling in rice in flood affected areas. If nursery is available, undertake re-transplanting of rice seedling in more affected area or undertake direct sowing of rice by selecting short duration rice varieties.

- In Darjeeling district of Hill Zone, drain out excess water from turmeric, ginger, cardamom and in mandarin orange gardens. Avoid water stagnation in round chilli. Continue transplanting of rice at optimum water level.

Odisha

Normal rainfall occurred during last fortnight. Excess rainfall is likely to occur in first half and normal in later part of next fortnight.

- Postpone spraying operation in Angul district as more rain is expected during the next five days.
- Wet nursery for transplanted rice should be taken up as soon as possible taking the advantage of recent rainfall.
- Irrigation to the standing crops of vegetables etc. should be stopped as there will be rain.
- Undertake transplanting of rice seedlings in Malkangiri district.
- Undertake sowing of black gram and green gram in Malkangiri district.

Bihar

Normal / deficient rainfall occurred during last fortnight. Deficient rainfall is likely to occur in first half and normal in second half of next fortnight.

- Undertake transplanting of 45-55 days old onion seedlings in Madhubani district at a planting distance of 15X10 cm. Light irrigation is suggested after transplanting.
- Carry out first hand weeding at 20-25 days after transplanting *kharif* rice in Khagaria district followed by fertilizer application.

Jharkhand

Deficient rainfall occurred during last fortnight and normal rainfall is likely to occur during next fortnight.

- In Deogarh, Dhanabad and Dumka districts, continue transplanting of 15 days old seedlings of rice.
- Carry out weeding, followed by fertilizer application followed by earthing up in 30 days old maize crop in Bokaro district.
- Complete transplanting of rice.
- Undertake weeding in 20-25 days transplanted finger millet.

Madhya Pradesh

East Madhya Pradesh

Normal rainfall occurred in first week and deficient rainfall occurred in second week of last fortnight. Excess/normal rainfall is likely to occur during next fortnight.

- Carry out intercultural operation in early sown in maize, soybean, urd and moong crop in Chhindwara district.
- Drain out excess water from crop fields in Dindori and Singrauli.

West Madhya Pradesh

Normal/excess rainfall occurred in last fortnight. Excess rainfall is likely to occur in first week and deficient rainfall is likely to occur in second week of next fortnight.

- Carry out intercultural operation in early sown in maize, soybean, urd and moong crop in

Betul district.

- For the control of weed in soybean use Imezathapyr 10 % @ 100 gram/ha in 600 litres of water and apply split dose of nitrogen in maize crop in Mandsaur, Ratlam, Ujjain, Dewas, Indore, Shajapur, Rajgarh and Neemuch districts of Malwa Plateau Zone. Carry out hand weeding in maize and soybean crop.
- Drain out excess water from crop fields.

Chhattisgarh

Normal rainfall occurred in last fortnight and excess / normal rainfall is likely to occur in next fortnight.

- Complete transplanting of rice in North Hill Zone. In the transplanted rice field maintain water level up to 5 cm. If the seedlings are over aged (more than 30 - 35 days) then, at the time of transplanting reduce the dose of fertilizer than normal dose and plant 4 to 5 seedlings at a distance of 15 cm (row to row) and 10 cm (plant to plant) at a lesser depth.
- To control weeds in line sown rice crop, apply pre-emergence herbicides like Pendimethalin @ 3.0 liter / ha dissolved in 500 litres of water within 3 days after sowing. 10. In transplanted rice to control narrow leaf weeds, apply Butachlor @ 3.0 litres/ha+500 litres of water or Oxadygril @ 80 gram a.i. or Pyrazosulfuron (10% WP) @ 25 gram a.i. +500 litres of water within 3 to 7 days of planting.

Jammu & Kashmir

Normal rainfall occurred in last fortnight. Excess/normal rainfall is likely to occur during next fortnight.

- In rice field, strengthen and raise the height of field bunds to retain rain water in Jammu, Kathua and Reasi districts of Sub Tropical Zone. In maize crop, do not allow rain water to stagnate in fields. Apply 2nd dose of nitrogenous fertilizer when weather gets clear.
- Apply first top dressing of urea where the rice crop is at mid tillering stage in Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone. Apply first top dressing of urea in maize crop, where the crop is at knee height stage (30- 35 DAS) and second before tassel formation i.e. about two months after sowing. Apply fertilizer during fair weather condition only. Farmers are advised to do weeding at regular intervals to keep the crop free of weeds at least up to 40 days after sowing to avoid yield loss.
- Arrange for drainage facility in crop fields in Jammu and Udhampur districts.

Uttarakhand

Normal rainfall occurred in last fortnight. Excess/normal rainfall is likely to occur during next fortnight.

- Undertake sowing of black gram and green gram. Continue sowing of short duration Sankul variety of Maize like Kanchan, Gaurav, Surya, Vivek Sankul-11, 31, 35 and Prakash in Udham Singh Nagar district of Bhabar and Tarai Zone. Carry out weeding and hoeing in the maize crop sown in the month of June after 15 and 30 days of sowing and dose of Nitrogen may be given as top dressing when crop attained the height of \approx 2 feet.
- Carry out weeding and hoeing in the paddy field, sown in the last month in Nainital district of Bhabar and Tarai Zone. Apply 1.25 Kg/nail urea as top dressing in the Chetki/ Jethi variety of Paddy.
- Farmers are advised for making drainage channel in maize, rice, sugarcane and vegetable fields in Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone. Avoid stagnation of water in pulse crops.

- Carry out weeding in paddy, barnyard millet, soybean, urd, rice bean, ginger, pigeon pea & vegetable crops in Uttarkashi, Chamoli, Redraprayag, Tehri, Almora, Champawat, Bageswar and Pithoragarh districts of Hill Zone. Apply one packet of Blue Green Algae (BGA) per acre should be used for increasing nitrogen in the paddy field. Conserve rain water in the paddy fields by making broad and elevated bunds. In other crops (Maize, Pulses, Vegetables) water logging should be avoided by doing proper drainage in the fields.
- Drain out excess water from crop fields.

Himachal Pradesh

Normal rainfall occurred in second week of last fortnight. Excess/normal rainfall is likely to occur during next fortnight.

- Undertake transplanting of onion in Solan, Simla and Sirmaur districts of Mid Hills Sub-Humid Zone.
- Drain out excess water from crop fields.

Haryana & Delhi

Normal rainfall occurred in second week of last fortnight. Excess rainfall is likely to occur in first week and deficient rainfall is likely to occur in second week of next fortnight.

Haryana

- Complete sowing of green gram in Western Zone.

Delhi

- Complete sowing of green gram and black gram.

Punjab

Deficient/scanty rainfall occurred in last fortnight. Excess rainfall is likely to occur in first week and deficient rainfall is likely to occur in second week of next fortnight.

- In direct seeded rice (DSR) apply second and third dosage of about 43 kg urea/acre each at 5 and 9 weeks of sowing in Moga, Bhatinda, Mansa, Muktsar, Sangrur and Barnala districts of Western Zone. Undertake transplanting of onion seedling.
- In rice crop, apply last dose of nitrogen (37 kg urea/acre) if already not given in Ferozpur and Faridkot districts of Western Plain Zone. Undertake sowing of hybrid maize.

Uttar Pradesh

East Uttar Pradesh

Normal rainfall occurred in second week of last fortnight. Normal rainfall is likely to occur in next fortnight.

- Complete transplanting of rice in Allahabad, Fatepur, Chitrakut districts of Central Plain Zone. Complete sowing of sorghum.
- Complete transplanting of scented rice and carry out weeding in arhar and green gram in Faizabad, Gorakhpur, Sultanpur districts of Eastern Plain Zone.
- Undertake sowing of sorghum, pearl millet. Continue sowing of green gram and black gram in Kanpur, Sitapur, Unnao, Lucknow districts of Central Plain Zone.
- Carry out weeding in black gram, green gram, pigeon pea and sesame.

Rajasthan

East Rajasthan

Excess rainfall occurred in second week of last fortnight. Excess rainfall is likely to occur in first week and deficient rainfall is likely to occur in second week of next fortnight.

- Carry out weeding and maintain plant population by thinning in timely sown crop like sorghum, pearl millet, sesame and groundnut on clear days in Bharatpur, Alwar, Karauli districts of Flood Prone Eastern Plain Zone.
- Carry out hoeing & weeding in 3-4 weeks crops of pearl millet, maize & sorghum pomegranate in Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone.
- Drain out excess water from crop fields.

West Rajasthan

Excess rainfall occurred in second week of last fortnight. Normal rainfall is likely to occur in first week and deficient rainfall is likely to occur in second week of next fortnight.

- Carry out weeding in desi & American cotton in Sriganganagar and Hanumangarh districts of Irrigated North Western Plain Zone.
- Application of 30 kg nitrogen per hectare in tomato crop at flowering stage in Churu, Barmer, Jalore, Jodhpur and Pali districts of Arid Western Plain Zone.

Advisories for other crops

Kerala

- Ensure complete field sanitation in banana and black pepper fields and continue planting of banana cultivars like Poovan, Palayankodan, Robusta etc.in Kasaragod, Kannur, Malappuram and Kozhikode districts.
- Continue intercropping with banana, colocasia and vegetables etc. in coconut gardens in Thiruvananthapuram district.
- Continue crown cleaning, provision for proper drainage and regulation of shade to prevent mid-whorl yellowing in coconut in Thiruvananthapuram district.
- Continuation of tapping of rubber in Thiruvananthapuram district.
- Take care to avoid water logging at the base of banana plant especially in low lying areas in Kollam district.
- Arecanut: apply 1% Bordeaux mixture as a prophylactic measure to control mahali and bud rot diseases.
- Banana: there is a chance of aphid infestation. Spray verticillium solution 5 ml/L as a control measure against aphid.

Karnataka

Coastal Karnataka

- Hand weeding in maize and cotton crops in Uttar Kannada district.
- Completion of planting of pineapple, black pepper, arecanut; provide drainage in turmeric and ginger in Uttar Kannada district.

North Interior Karnataka

- Completion of sowing of fodder sorghum, maize (African tall), cowpea and short duration bajra in Ballari, Kalaburgi, Koppal, Raichur and Yadgir district of North East Dry Zone.
- Completion of fresh plantation of fruit trees, teak, neem, tamarind, acacia or other trees on the bunds,

uncultivated and marginal land in North East Dry Zone.

Andhra Pradesh

- Prevailing weather condition (partially cloudy with light to moderate rains in Cuddepah district is congenial for incidence of viral diseases in banana and papaya; to control, spray Dimethioate @ 2 ml or Metacystox @ 2 ml or Imidachloprid @ 0.3 ml/litre of water.

Tamil Nadu

- To correct micronutrient deficiency in irrigated turmeric spray each 375 gram of Ferrous Sulphate, Zinc Sulphate, Borax and Urea mixed in 250 litres of water per hectare to control the deficiency in Coimbatore, Tiruppur, Erode districts.
- Transplanting of tomato seedlings in Nammakal, Salem, Dharmapuri and Krishnagiri districts.
- Provide pot irrigation / hose irrigation for newly planted seedlings and newly planted banana trees in Kanyakumari district, since there is no significant rainfall during the coming five days

Maharashtra

Konkan

- Drain out excess water from mango, cashew, sapota, coconut and arecanut orchards.
- Maintenance of adequate drainage in vegetable crops (Bhindi and cluster bean).
- Plantation of horticultural crops like mango and sapota. During plantation of Alphonso mango include 15 to 20 per cent grafts for Keshar and Ratna.

Madhya Maharashtra

- Completion of cultivation of fodder sorghum, bajra, maize, cowpea and hybrid napier for livestock.

Marathwada

- Gap filling in vegetable crops like brinjal, chilli, lady's finger and cluster bean in Nanded, Parbhani and Aurangabad districts.
- Completion of sowing of fodder crops like maize, jowar and bajra.

Vidarbha

- Completion of cultivation of vegetables like bitter gourd, tinda, cluster bean, cowpea and gourds in Buldana, Nagpur, Akola, Washim, Amravati, Wardha and Yeotmal districts.

Gujarat

- Completion of transplanting of vegetable crops like chilli and brinjal, sowing of bhindi, cluster bean and cowpea.
- Completion of planting of fruit crops.

Arunachal Pradesh

- Remove excess sucker from pineapple gardens.
- Undertake weeding and earthing up in ginger and turmeric in vegetative stage.

Assam

- Undertake land preparation and sowing of radish in Karbi Anglong district.
- Newly planted black pepper vines make rapid growth. The vine should be tied to the support at 30 cm interval. Branches in lower portion of the vine up to 90 cm should be removed and kept clean.
- Remove old and dry leaves of sugarcane in Kokrajhar district. Provide mechanical support to the canes to prevent lodging.

Meghalaya

- Undertake weeding and hoeing in tomato.
- Undertake first hand weeding in groundnut at flower initiation stage.

Manipur

- Carry out earthing up in turmeric and ginger at least twice in the growing period.
- Undertake sowing of *bhindi*.

Tripura

- Cloudy and humid weather is conducive for the attack of Leaf Curl disease in summer brinjal, chilly etc. To manage the attack, apply Imidachloprid @ 2ml per liter of water.

Nagaland

- Maintain proper drainage and carry out timely earthing up in ginger.
- Maintain proper staking in cowpea and undertake timely harvesting.

West Bengal

- Keep the large cardamom field weed free in Darjeeling district.

Odisha

- Undertake sowing of ginger, turmeric and colocasia in Bhadrak district.
- Drain out excess water from maize field in Sundergarh district.
- Carry out intercultivation in groundnut and pulses as the soil is moist.

Bihar

- Undertake sowing of radish in Madhubani district.
- Undertake planting of mango saplings and healthy suckers of banana in Madhubani district.
- Undertake transplanting of brinjal, tomato, chilli, cauliflower and cabbage seedlings on raised beds in Bhojpur district.

Jharkhand

- Undertake sowing of black gram.
- Undertake sowing of til.

Madhya Pradesh**East Madhya Pradesh**

- Complete sowing of vegetables like- ladyfinger, bottle guard, cucurbits, spong guard, bitter guard and beans in Chhatarpur and Tikamgarh districts.

West Madhya Pradesh

- Complete sowing of vegetables like- ladyfinger, bottle guard, cucurbits, spong guard, bitter guard and beans in Datia districts.
- Undertake transplanting of brinjal, tomato and onion in Gwalior, Bhind, Morena, Shivpuri, Guna, Ashoknagar, Sheopur districts of Grid Zone.

Chhattisgarh

- Continue planting of papaya, mango, guava etc. in North Chhattisgarh. Continue nursery sowing of brinjal, early tomato, chilli and onion in the upland areas.

Jammu & Kashmir

- To avoid wilting in chillies, tomato and brinjal farmers are advised to avoid water logging conditions in the field in Rajouri, Ramban, Poonch and Udhampur districts of in Intermediate Zone.

Uttarakhand

- Continue transplanting of chilly in Udham Singh Nagar district of Bhabar and Tarai Zone.
- Undertake sowing of radish, spinach and coriander in Uttarkashi, Chamoli, Redraprayag, Tehri, Almora, Champawat, Bageswar and Pithoragarh districts of Hill Zone.

Himachal Pradesh

- Undertake nursery sowing of cabbage in Solan, Simla and Sirmaur districts of Mid Hills Sub-Humid Zone. Continue plantation of evergreen plants like mango, litchi, guava, citrus, laquat and amla.
- In mid hill region undertake nursery sowing of Chinese cabbage and direct sowing of raddish, carrot, broccoli and lettuce in Una, Hamirpur, Kangra and Chamba districts of Sub-Montane and Low Hills Sub-Tropical Zone. Undertake nuesday sowing of cauliflower and transplanting of cabbage.

Haryana

- Continue planting of mango, banana, jamun, pomegranate, papaya, amla, phalsain Western Zone.

Delhi

- Complete transplanting of Chilli, Brinjal and Early Cauliflower.
- Prepare marigold nursery (PusaNarngi) in net house.
- Prepare nursery of cauliflower for mid-season (Nov.-Dec.)
- Continue transplanting of onion seedling in the prepared fields.
- Continue planting of mango, citrus and guava.

Punjab

- Prepare nursery of mid-season cauliflower in Moga, Bhatinda, Mansa, Muktsar, Sangrur and Barnala districts of Western Zone districts.

Uttar Pradesh

- Start transplanting of early varieties of Brinjal, Chilies early cauliflower and onion crops in Allahabad, Fatepur, Chitrakut districts of Central Plain Zone. Apply 40 Kg nitrogen (87 kg/urea) as top dressing in Sunflower crop after 25-30 days after sowing.
- Undertake planting of mango, guava and banana in Faizabad, Gorakhpur, Sultanpur districts of Eastern Plain Zone.

Rajasthan

- Continue planting of fruit crops like mango, plum and pomegranate in Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone.
- Start planting new seedlings of kinnow in already prepared pit in the field in Sriganganagar and Hanumangarh districts of Irrigated North Western Plain Zone.

Annexure –I

State-wise Varieties of different crops for *Kharif* Season

State	Subdivision	Crop	Varieties
Karnataka	South Interior Karnataka	Red gram	TTB-7, BRG-1, 2, 4, 5, Hyd-3c.
		Ragi	Indaf -9, ML-365
		Cowpea	TVX-944, KBC-1
		Castor	DCS-9 (Jyothi), DCH-177 & 32
	North Interior Karnataka	Pigeon pea	BSMR 736, TS-3R
		Maize	Hybrids –DMH-2, Arjun and Private hybrids, GH-0727, Renuka (G-25).

Andhra Pradesh	Coastal Andhra Pradesh	Rice	BPT-5204, vijetha, IR-64 and Bavapurisannaalu, MTU 1010, MTU 1075, NLR 34449, Pushyami, Sridruti, Sridruthi, Pushkala, Sri Satya.
		Maize	DCH-111, DCH-113, DCH-115, Maandhuri& Priya (sweet varieties), DHM 111, DHM 117, DHM-119, KH 510, Bio 9637, KH 9541, MCH 2, Kohinoor, Prabhal and Bisco 855.
		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.
		Cotton	Cotton Dorasannaalu
		Ragi	Bharati, Srichaitanya, Vaula.
		Groundnut	Kadiri-7 Bold, Kadiri-8, Bold, kadiri-6 Kadiri-9, KadiriHarithandra, KadiriAnantha.
		Sesame	Hima and Sarada (YLM 66)
	Rayalaseema	Rice	MTU 1010, Nellore Masuri in Nellore district.
		Groundnut	Narayani, Abhaya, Dharani, Grishma, TPT-4, Kadiri-6, Kadiri-9 and dharani.
		Redgram	L.R.G-30, L.R.G-41, T.R.G-22,LRG-41, PRG-158, PRG-176, Lakshmi, and Asha.
		Bajra	P.H.B-3, I.C.M.H-356, Dhanashakthi.
		Korra	Prasad,SIA-3085, Krishnadevaraya,Suryanandi, Narasimharaya, Srilakshmi and SIA 3156.
		Castor	PCH-111, PCH-222, Haritha, Kiran.
	Telangana	Rice	RNR15048, kuruvai, ADT 36, ADT 43, ADT 45 and ADT 47.
		Maize	DHM-101, 103,107 and other private hybrids
		Red gram	LRG 30, ICPL 8863, 332,87119, 85063.
Maharashtra	Konkan	Groundnut	KonkanGaurav and TrombayKonkan (Tapora), high yielding varieties: TG-26, TAG-24 and TPG-41.
	Madhya Maharashtra	Soybean	PhuleKalyani, PhuleAgrani (KDS 344), JS 335, MACS 11188, JS 335, PhuleKalyani (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	PhuleMorana, PhulePragati, PhuleVyas, PhuleUnnati, Phule RHRG 6021, SB11, TPG41, TG26.
		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.
	Marathwada	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
		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 Fodder crops: African Tall, Ganga-5, Vijay and Manjari.
	Vidarbha	Red gram	ICPL- 87119 (Asha), C-11
		Black gram	PKV-15, TAU-1, TAU-2 and TPU-4.
		Green gram	PKV- green gold, PKV mug -8802, TARM-18
		Sorghum	early duration- CSH-14 and CSH-17, medium duration- CSH-9 SPH-388 and improved- SPV-669.
		Cotton	desi cotton: AKA-5, 7, 8, American improved varieties: AKH – 081, PKV-Rajat, AKH-8828, hybrid varieties: PKV-DH- 1
Gujarat	Gujarat Region	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), GR-8,9 and Gurjari.
		Groundnut	semi-spread GG.20 or erect GG.2, GG.5, GG.7 and TG-26.
		Pearl millet	Late maturity GBH-558, GBH-732 and for moderate

			maturity GBH-744, GBH-905 and for early maturity GHB-757, GHB-719, GHB- 538.
		Maize	G.maize-1, 2, 4, 6, and Ganga safed-Ganga-11.
		Cluster bean	Gujarat Guar-2.
		Green gram	G.Mung-4 and K-851, Meha.
		Black gram	T-9, Guj. Udid-1.
		Cow Pea	G. Cowpea-4, G. Cowpea-5, PusaFalguni
		Sunflower	Modern, EC 68414
	Saurashtra & Kutch	Groundnut	GG-20 & 22, GUG-10, GG-2,11,13, TAG- 24 & 37, TPG-41, TLG-45.
		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.
		Cow pea	Gujarat Cowpea-1,2,4, PusaFalguni.
		Black gram	T-9, GU-1.
		Green gram	GM-4, K-85.
		Pearl millet	GHB-558, 77, 538, 719, 732,744.
		Castor	GAUCH-1, GCH-4,5,6,7, GC-2, 3.
		Soybean	Guj. Soya. 1, 2, 3.
		Pigeonpea	BDN-2, Vaishali, GTH-1, GT-100.
		Sesame	Guj.Til-1,2,3,10, GT-2 or GT-3.
Assam		Sali Rice	Ranjit, Bahadur, Peoli, Moniram, Pankaj, Kushal, for typical lowland rice area, medium duration varieties: Satya and Basundhara T.T.B.-404, Mulagabharu, Kanaklata, Joymoti, IR-36, IR-64. for flood prone area: Luit, Jalashree, Plaban.
Meghalaya		Sali rice	Shahsarang -1, Lampnah, IR 64, Ranjit, RCPL 1-412, RCPL 1-410, RCPL 1- 411 & local varieties like Mendri, Manipuri

Tripura		Aman rice	Gomati, Ranjeet, Swarna, Naveen
Nagaland		Rice	CAU R1, CAU R3, RCM-9 and RCM-1.
West Bengal		Aman rice	medium duration MTU-7029, MTU1001, Pratiksha and for long duration CR1017, CR1018,
		dry seeded long duration rice	Sabita Foundation, Swarna sub-1 certified, IR-64, Hira T.L.
Odisha		Rice	Early varieties: Jogesh, Siddant, Hazaridhan, Mandakini, Jyotirmayee, Virendra, Sahabhagi, Medium varieties: Pratikshya, Manaswini, Tapaswini MAS, Konark, Surendra, Kharavela, Naveen, Abhisek, Late varieties: Varshadhan, Ranidhan, Pooja, Mrinalini, RGL-2837, Moti, Ketakijoha, Padmini, Kanchana, Mahanadi, Jagabandhu. Hybrid varieties: CR Dhan 701, NK 5251, JKRH 401, Ajay, Rajalaxmi, Arize 6444G. short duration varieties: Sahabhagi, Khandagiri, Udaigiri, Kalinga-3, Jyotirmayee, Mandakini etc.
Bihar		Rice	Long duration rice- Rajshree, Rajendrasweta, RajendraMansuri, BPT-5204, Swarna, Satyam and Kishori), medium duration rice- Seeta, Santosh, Saroj, Rajshri, Prabhat, Rajendrasuvasni, Rajendrakasturi.
Jharkhand		Rice	Direct seeded upland rice; improved varieties: Vandana, BirsaVikasDhan -109 & BirsaVikasDhan - 110, medium land rice improved varieties: Anjali, Sahbhagi, Naveen, Lalat, Birsamati, Sugandha, BR-10, Pro-Agro 6444, IR-36, IR-64, low land rice improved varieties Swarna (MTU-7029), Rajshree, SambhaMahsuri (BPT-5204), BirsaDhan- 202, Birsamati, Pro-Agro 6444.
Madhya Pradesh		Rice	Very early maturing: JawaharDhan (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, Pusa Sugandha-3, Pusa Sugandha-5, Pusa basmati-1, MTU 1010. Long duration: Mahsuri, Swarna
		Green Gram	JM-721, TARM-1, LAM-410, HUM-1, HUM-16
		Arhar	TJT-501, ICPL-87
Chhattisgarh		Rice	Upland: CR-40, Purnima, Danteswari, Shabagi, Midland: MTU1010, Samleswari, Rajeswari, Low land : MTU 1001, Suwarna ,Mahamaya, JalDube ,Hybrid : Arice 6444, US 312.
		Soybean	J.S. 335, Indira soya-9, J.S. 80-21, J.S. 93-05.
		Groundnut	SB -11 (J 11), ICGS-37, ICGS-44, T.A.G.-24, T.A.G.-28.

		Til	T.K.G. -21, T.K.G-22, T.K.G-55, and T.K.G - 8.
		Tomato	Pusa early dwarf, Sweet 72, Pusa rubi, Pusa Gurab, Mangala, Naveen, Laxmi 5005 & NS 815.
		Brinjal	Punjab Shadabahr, K S 331, P H 5, P H 6 ,KS 224 ,A R B H -543.
Jammu & Kashmir		Rice	Basmati 370 and Ranbir Basmati
Uttarakhand		Rice	Sharbati, Pusa 1121, Pusa 1, Pusa 44, NDR 359 etc.
		Pigeon pea	Pant Arhar-3, Pant Arhar-291, UPAS-120, Pusa-992
		Maize	Tarun, Navin, Kiran, Navjot, Pratap maize-1, Pusa sankul-3 & 4.
Uttar Pradesh		Arhar	Prabhat and UPAS-120 fast-ripening and late-ripening varieties- Narendra Tur- 1 and Malviya -15
Punjab		Rice	Basmati 370 and Basmati 386; direct sowing: basmati variety Pusa Basmati 1121.
		Maize	PMH 1, PMH 2 and Parbhat.
		Brinjal	BH-2, PBH-3, Punjab Barsati, Punjab SadaBahar, Punjab Nagina and Punjab Neelam
		Okra	Punjab-8 and Punjab-7
		Kharif onion	Agrifound Dark Red
Delhi		Rice	Hybrid varieties: - K. R. H 2, PHB 71, Pant hybrid Dhan 1, Narendra hybrid dhan 1, P R H 10, High yielding varieties- Pusa 44, Pant Dhan-4, Pant Dhan-10, Pusa-834, Pusa basmati-1, Pusa basmati-1509, Pusa, Improved basmati, Pusa sugandha-5, Pusa sughanda-4 (Pusa 1121), Ranvir basmati and Taravadi basmati
		Guar	Pusa Navbahar, DurgaBahar
		Bajra	Pusa Composite-443, Pusa Composite-383, HSB -67
		Cluster bean	Pusa Komal
		Beans	Pusa Sem 2, Pusa Sem 3
Rajasthan		Pearl millet	RHB-121, HHB-67, HHB-60, Raj-171, GHB-538, Pusa-605, RHB-177.
		Maize	HQPM-1, HQPM-5, PEHM-1, PEHM-2, Pratap Hybrid-1, Bio-9681, Bio-9637, Navjot, MahiKanchan, Pratap Makka-5.