



# *National Agromet Advisory Service Bulletin*

based on

**Extended Range Weather Forecast**

Valid for 17<sup>th</sup> to 30<sup>th</sup> July, 2015

Date of Issue: 17<sup>th</sup> July, 2015

**Issued by**

Earth System Science Organisation  
India Meteorological Department

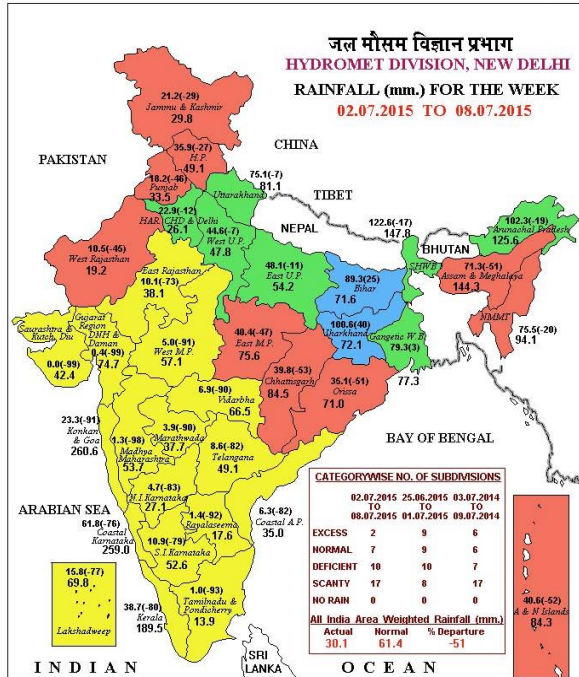
Indian Institute of Tropical Meteorology, Pune

&

Indian Council of Agricultural Research  
AICRPAM, CRIDA, Hyderabad

# Realized Rainfall (2<sup>nd</sup> to 15<sup>th</sup> July 2015)

## भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

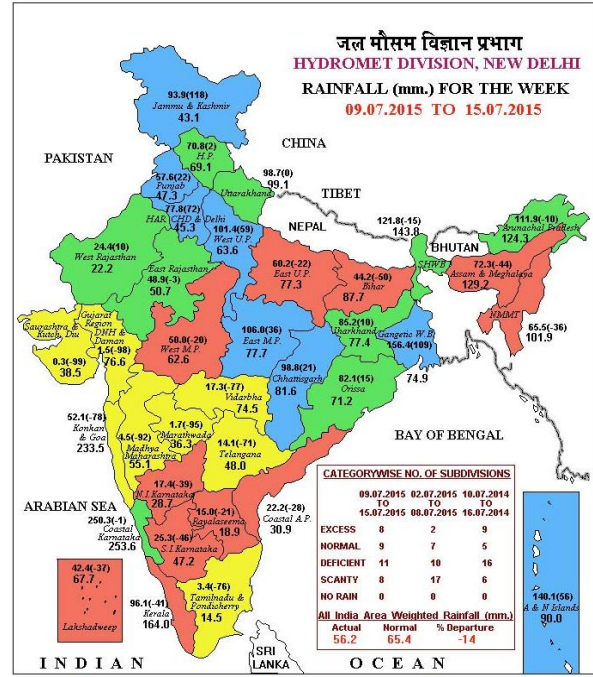


LEGEND: ■ EXCESS (+20% OR MORE) ■ NORMAL (+19% TO -19%) ■ DEFICIENT (-20% TO -59%)  
■ SCANTY [-60% TO -99%] ■ NO RAIN [-100%] ■ NO DATA

**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, West Uttar Pradesh, Haryana and Delhi, Jharkhand, West Bengal and Arunachal Pradesh.
- Normal or above normal rainfall occurred in either of the last two weeks in Jammu & Kashmir, Himachal Pradesh, Punjab, East Uttar Pradesh, Rajasthan, East Madhya Pradesh, Chhattisgarh, Bihar, Odisha and Coastal Karnataka.
- Below normal rainfall occurred in the last two weeks over Kerala, Tamil Nadu, Interior Karnataka, Andhra Pradesh, Telangana. Gujarat State, Maharashtra, West Madhya Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura.

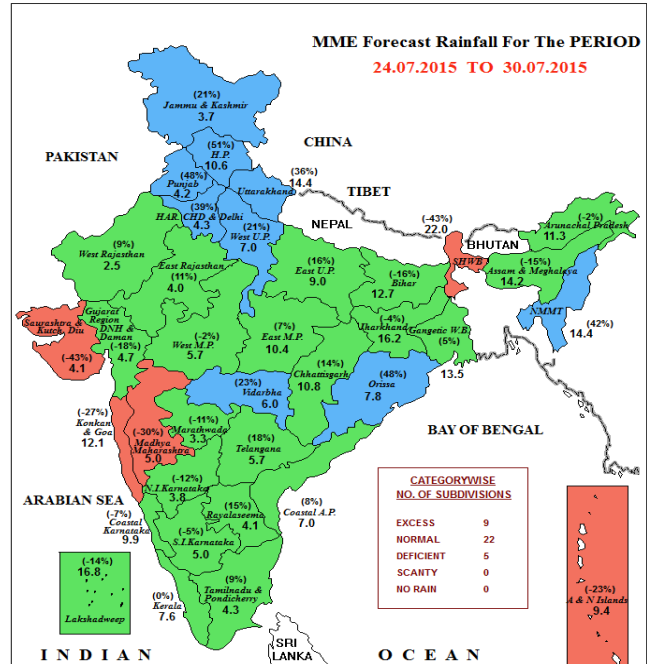
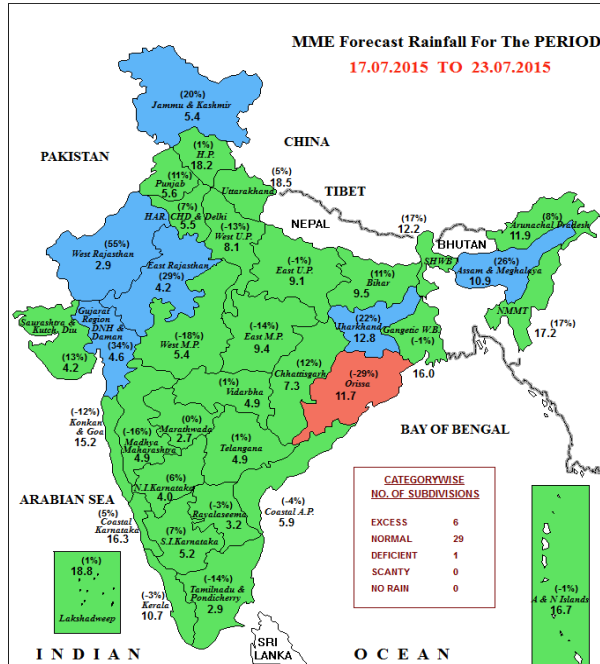
# Extended Range Forecast System

## Subdivisionwise rainfall forecast map for the next 2 weeks (IC = 15 July)

Rainfall forecast (mm/day) (17 - 30 July, 2015)

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

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

### Agromet Advisories for land preparation and sowing of *kharif* crops

Good rainfall occurred mainly over Uttarakhand, West Uttar Pradesh, Haryana and Delhi, Jharkhand, West Bengal and Arunachal Pradesh during last fortnight. Whereas, over the regions like **Gujarat, Konkan and Goa, Madhya Maharashtra, Marathwada, Interior Karnataka, Telangana and Rayalaseema**, crops might have experienced moisture stress situation due to deficient rainfall during

last few weeks. Overall rainfall situation is likely to be normal over India. However, normal/above normal rainfall is likely over eastern and northern belt and Gangetic Plains whereas below normal rainfall is likely over western parts of central India during next fortnight.

In view of above, following agricultural activities are suggested for the following regions of the country.

Information on seed selection and required inputs like seeds of crops and varieties, sources of seeds etc. can be collected from KVKs, State Departments of Agriculture in the Districts, SAUs, Kisan Call Centre, seed dealers and other NGOs or agencies.

### **North Interior Karnataka**

- Thinning out of excess and weak seedlings in a row and removal of alternate rows in case of moisture stress.
- Intercultivation and weeding in standing crops.
- Light hoeing, mulching with crop residue.
- Maintenance of 2-3 cm water level in transplanted rice field and rice nurseries.
- Arrangement of inputs for sowing of niger, foxtail millet (PSC-1, RS-118), mataki, horse gram (PHG-9, KBH-1), castor as well as intercropping of pearl millet + pigeon pea (2:1), pigeon pea + sesame (1:2 or 2:4), bajra + castor (2:1) in light and medium black soils and bajra, pigeon pea, castor, chilli, sesame, foxtail millet, onion, bajra + castor (2:1), fodder crops in medium black soils.
- Pigeon pea: the recommended variety is TS-3R where the crop is susceptible for wilt disease.
- North East Transition Zone: Contingency measures (laterite red soil and shallow to medium black soils):
  - Sowing of red gram, sesamum, horse gram, foxtail millet, bajra.
  - 25% higher seed rate in dry sowing of red gram with 90 x 20 cm spacing.
  - Transplant 25-30 days old red gram seedlings of BSMR-736 and Asha varieties.
  - Sowing of Short duration red gram varieties (Pragathi).
  - Intercropping of red gram + foxtail millet (1:5) / redgram + bajra (1:5).
- North East Dry Zone: Contingency plan
  - Rainfed red gram cropping in medium and deep black soils and red clay loam soils.
  - Adoption of dry sowing practice in red gram with ridges and furrows at 90 cm apart.
  - Adoption of medium duration red gram varieties.
  - Sowing of sunflower and castor at 90 x 20 cm.
  - Use 25 % higher seed rate in red gram with 90 x 20 cm spacing.
  - Transplanting of 25-30 days red gram old seedlings of BMSR-736 variety.
- Sowing of maize (Hybrids – DMH-2 and Arjun and private hybrids), soybean (S-335) and cotton (DHH-11, NCH-145, NHH-44, DHB-105 and Sahana) in North Transition Zone.

### **South Interior Karnataka**

- Sowing of groundnut and red gram in areas of Eastern Dry Zone which have received sufficient rainfall.
- Red gram: TTB-7, BRG-1, 2 and Hyd-3c @ 15kg/ha and treat the seeds with rhizobium culture @ 500gm/ha before sowing. Spacing of 60 cm x 23 cm is recommended.
- Groundnut: Bunch type of varieties, JL-24 and TMV-2 (Use 125 kg seeds/ha). Recommended spacing is 30 cm (Row) x 10 cm (Plant).
- Inter cultural operations in long duration red gram and castor and short duration pulse crops like cowpea, green gram, black gram and millets for conservation of soil moisture.
- Maintain 2-3 cm water level in rice nurseries.

### **Rayalaseema**

- Mulching in already sown crops for conservation of soil moisture.
- Due to less rainfall, maintenance of 2-3 cm water level in rice field.
- Sowing of red gram (PRG-158, Asha, LRG-41), castor (PCH-111, PCH-222, Kranti, GCH-4, Haritha) and rainfed groundnut (Kadiri-6, Kadiri-9, Narayani and dharani) in Anantapur district after receipt of sufficient rain.
- Sowing of contingent crops like pearl millet, cowpea, green gram, sunflower (Morden).

### **Telangana**

- Light hoeing, weeding and mulching in early sown jowar, soybean, green gram and black gram for conservation of soil moisture.
- Maintain 2-3 cm water level in rice field.
- Instead of cotton, redgram, jowar, sowing of sole red gram (Maruti, Lakshmi, PRG 158 etc.) adopting closer spacing of 90 x 30 cm.
- Foliar spray of 2% KNO<sub>3</sub> during dry spells.
- Field preparation and transplanting of rice.
- Nursery raising for short duration rice varieties.
- Deficiency of micro nutrients observed in cotton and tuber crops due to dry weather conditions. To correct the deficiency, spray micronutrients mixture on crop.

### **Maharashtra**

#### **Konkan & Goa**

- Transplanting of *kharif* rice with a spacing of 20 x 15 cm and 2.5 to 3.5 cm deep and finger millet in South Konkan.
- Irrigation in rice nurseries and ragi in North Konkan.
- Maintenance of 2-3 cm water level in transplanted rice fields and in rice nurseries.
- Weeding in rice nurseries.
- Preparation of rice seedlings by Dapog method using short and medium duration varieties in case of nursery failure.
- Direct sowing with sprouted seeds with the alternate varieties like Ratnagiri -1, 73, Karjat-184, Karjat -1, 3, 4 in North Konkan.
- Sowing of vegetables (okra, cucumber, snake gourd and ridge gourd).

#### **Madhya Maharashtra**

- Light hoeing, weeding and mulching with crop residue in early sown jowar, soybean, green gram and black gram to conserve soil moisture.
- Thinning to maintain plant population.
- Maintain 2-3 cm water level in rice nurseries.
- Weeding in rice nurseries.
- Preparation of seedlings of contingent paddy crop (Phule Radha, Indrayani, Bhogavati, Jaya Karjat 184, Karjat 4, Indrayani, R-24, Bhogawati, Phule Radha, R-1) by sprouting method.
- Sowing of contingent crops like sunflower (Morden, SS-56, LSFH-35, BSH-1), cowpea, pigeon pea (Vipula, BSMR 736, 853, BDN 708,711), horse gram and moth bean.
- Sowing of castor and sunflower crops instead of black gram, soybean and green gram to reduce the risk of crop failure.
- Sowing of fodder crops like jowar (Ruchira, Phule Amruta, Phule Godhan), maize (African Tall, Karveer, Rajshree) and bajra (Nutrifeed).

- In view of deficient rainfall situation, wait for sowing of *kharif* crops and transplanting of rice and resume sowing and transplanting after receipt of sufficient rains.
- Due to subdued rain in Western Maharashtra Scarcity Zone, early sown cotton might be affected leading to wilting. Prepare the mixture of 1.5 kg Urea + 1.5 kg P<sub>2</sub>O<sub>5</sub> / 100 litres of water and apply 150 to 200 ml of this mixture for the affected plants.

### **Marathwada**

- In view of prevailing subdued rainfall during last few weeks mulching in crops with crop residue to conserve soil moisture and protective irrigation (drip or sprinkle method) to earlier sown crops like soybean, cotton, red gram and jowar in view of prevailing water stress condition.
- Light hoeing and weeding in early sown jowar, soybean, green gram and black gram to conserve soil moisture.
- Application of irrigation to sugarcane by alternate furrow method.
- Sowing of contingent crops like guar, moth bean, horse gram and coriander in light soil.
- Adopt intercropping of soybean + red gram (4:2), jowar + red gram (4:2), bajara + tur.
- Foliar spray of 8% Kaolin in orchard crops during dry spells.

### **Vidarbha**

- Light hoeing, mulching in already sown crops like soybean, cotton, red gram and jowar in West Vidarbha for conservation of soil moisture.
- Weeding in rice nursery / transplanted field, soybean, cotton, red gram and green gram.
- Transplanting of rice in East Vidarbha.
- Sowing of contingency crops like sunflower (TAS 82, PKV SF-9, PKVSH-27, KBSH 1, castor (AKC-1, GCH-4, 5, 6, DCH-117, 32) and KBSH 44), pearl millet (PKV Raj, Shradha and Saburi), sesame (AKT-64 and JLT-7) and pearl millet + pigeon pea (2:1 or 4:2), sunflower + pigeon pea (2:1), sesame + pigeon pea (4:1) intercropping systems can be adopted in west Vidarbha.
- As normal sowing window of cotton is over, under delayed sowing conditions, early varieties of American (AKH-8828, PKV Rajat, AKH-081) and Deshi (AKA-5, AKA-7 and AKA-8) cotton are recommended.

### **Gujarat**

#### **Gujarat Region**

- Intercultural operations, weeding in groundnut, soybean, pigeon pea and vegetable crops and gap filling in cotton, to conserve soil moisture and to maintain optimum plant population.
- Mulching with crop residues.

#### **Middle Gujarat Zone**

- Sowing of sorghum (CSH-5, 6, 1, GJ-39, 40, 41), oilseed crops like sunflower (Modern, EC-68414 and Guj-1) and sesamum (Guj. Til 1, 2, 10), pulse crops like black gram (T-9, Guj. Udid-1), green gram (GM-4, K-851, Meha), cowpea (Guj. Cowpea 1, 2, 4, Pusa Falguni) and fodder sorghum (S-1049, C-10-2, Gundari, GFS 4, 5).
- Sowing of pearl millet (moderate duration varieties like GHB-744, short duration varieties like GHB 538, GHB 732, GHB 719, GHB-577), maize (GM-4, 6, Narmada Moti) and cotton (G.Cot-13, 21 and ADC-1) with intercropping of green gram, pigeon pea, guar in bajra.
- Transplanting of paddy varieties like GR-8, 9, Sathi 34-36, Ambica and Gurjari where canal water is available.

#### **Bhal and Coastal Zone**

- Sowing of short duration varieties of crops like green gram (Guj. Mungbean-4, K-851),

sesame (Purva-1), sorghum (GFS-4 & GFS-5), castor (GAU-CH-1, GCH-6), pigeon pea (BDN-2) and cotton (G-cot 13, G-cot 15, G-cot 21).

- Following the SRI technique for paddy, where tube well or canal irrigation is possible.
- Sowing of short duration varieties of cotton (Cot-13, 21 and ADC1) with higher seed rate and wider spacing.
- Sowing of castor crop (GCH-2, 4, 5, 7) in remaining fallow land / field within third week of July.
- Sowing of fodder crops like sorghum for fodder purpose with high seed rate.

### **South Gujarat Heavy Rainfall Zone**

- Transplanting of *kharif* rice, under irrigation facilities.
- Use of SRI technique for transplanted paddy in case of nursery failure.
- Use of sprouted seed technique for paddy sowing.
- Intercultural operations and hand weeding after vapsa condition in earlier sown pulse crops.
- Hand weeding and mulching using dry leaves of sugarcane to conserve soil moisture.

### **Saurashtra & Kutch**

- Intercultural operations, weeding, gap filling and mulching with wheat straw, groundnut shell and available farm residues in groundnut, cotton, sesame, pearl millet and pulses to conserve soil moisture.
- Sowing of alternate crops like groundnut bunch type (GG-2, GG-5, GG-9, TAG-24), sesamum (G.Til-3, G.Til-4), castor (GAUCH-1, GCH-4, GCH-6, GCH-7), hybrid bajra (GHB-538, GHB-558, GHB-719, GHB-732, GHB-744), green gram (K-851, G.Moong-4), black gram (T-9, G.U.-1), pigeon pea (BDN-2, G.Tur-100), cowpea (GCH-4), fodder sorghum (Gundari, GFS-4, GFS-5), maize (African tall), cotton (short duration Bt. cotton varieties, GCH-8) for the areas in Surendranagar, Jamnagar districts where sowing of crops could not be done due to less rainfall.
- In North West Zone, sowing of moderate duration variety (GHB-744) and short duration varieties (GHB- 538, GHB-719) for bajra with green gram or pigeon pea or guar as an intercrop for getting more income.

### **Assam**

Flood water is receding from most of the affected districts and the situation is improving.

- Make provisions for draining out of excess water from the fields or wait till flood recedes.
- Suitable paddy cultivar for flood prone area: Luit; Suitable paddy cultivar for 15 days submergence tolerance: Swarna Sub-1, Jalashree, Jalkunwari, Plaban; Suitable paddy cultivar for delayed transplanting with aged seedling: Padumoni, Prafulla, Gitesh; Suitable paddy cultivar for normal planting: Ranjit, Bahadur, Maniram, Kushal, Piolee, Pankaj, Lakhimi; Suitable paddy cultivar with medium duration: Satyaranjan, Basundhara.
- As time is not yet over for sowing / transplanting of *Sali* paddy, go for replanting in the flood affected area with medium to short duration cultivars of rice.
- If *Sali* paddy is in active tillering stage (30-35 days after sowing) go for 1<sup>st</sup> split dose application of nitrogen fertilizer.
- Look out for incidence of any pest/diseases.

### **West Bengal**

- Farmers should complete transplanting of rice seedlings (3-4 weeks old).
- Excess water should be drained out from vegetable fields.

- Rejuvenate the low lying areas to store rainwater for jute retting.
- A continuous vigil against disease infestation of vegetable crops is needed

**Rajasthan**

- Carry out hoeing in maize, sorghum and pulses. Keep the crops weed free. Undertake thinning in maize and maintain a plant to plant distance of 20-25 cm.
- Uprooted weeds and other crop plant material may be used as mulch in crop rows in order to minimize the evaporation losses of water from soil.
- In case crop failure due to prolonged dry spell, farmers should procure improved seeds of pulses, sesame and cluster bean for re-sowing.