



National Agromet Advisory Service Bulletin

based on

Extended Range Weather Forecast

Valid for 7th to 20th August, 2015

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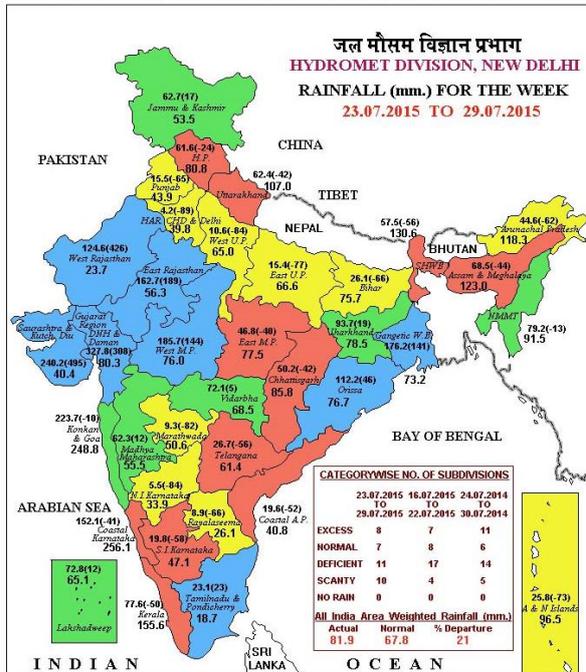
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Indian Council of Agricultural Research
AICRPAM, CRIDA, Hyderabad

Realized Rainfall

(23rd July to 5th August 2015)

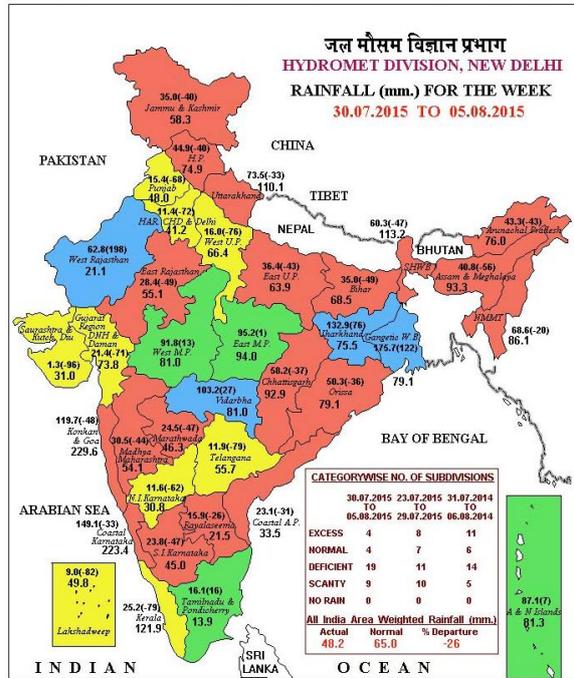
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



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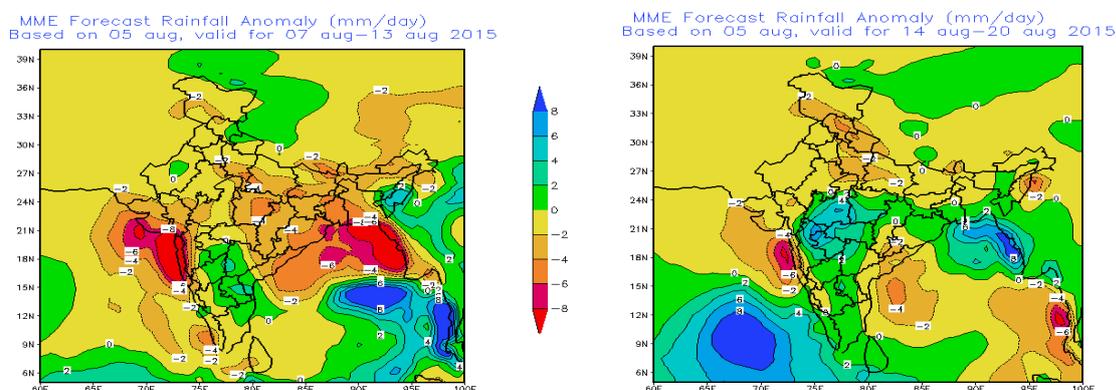
NOTES:
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 (b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
 Percentage Departures of Rainfall are shown in Brackets.

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

Extended Range Forecast System

Subdivisionwise rainfall forecast map for the next 2 weeks (IC = 5 August)

Forecast Rainfall Anomaly (mm/day) (7 – 20 August, 2015)



- Most parts of central India and NW India are likely to receive deficient rainfall, whereas, NE India may get normal rainfall with pockets of above normal belt over some regions during Week 1 (7-13 Aug).
- During week 2 (14-20 Aug), subdued rainfall over NW India may continue. There is also some indication of improvement of rainfall over central India during the week.

Strategic Agricultural Planning based on rainfall during next two weeks till 20th August

Good rainfall occurred mainly over West Rajasthan, West Madhya Pradesh, Vidarbha, Gangetic West Bengal, Odisha, Jharkhand and Tamil Nadu during last fortnight. Even though, due to deficient rainfall during earlier weeks, crops experienced moisture stress situation upto third week of July over the regions like **Gujarat** and **Madhya Maharashtra** and upto end of July over some districts of **West Vidarbha (Buldhana, Washim and Yavatmal districts)**, the situation improved due to good rainfall during last fortnight. Whereas, over the regions like **North Interior Karnataka, Telangana, Rayalaseema and Marathwada**, crops have been still experiencing moisture stress situation due to deficient rainfall during last few weeks. There are reports of floods in **Assam** during end of July and in **Gangetic West Bengal, Odisha and Manipur** during first week of August due to heavy to very heavy rainfall.

Deficient rainfall is likely to occur over most parts of central India and NW India and possibility of normal rainfall over NE India with pockets of above normal belt over some regions during Week 1 (07-13 Aug). During week 2 (14-20 Aug), subdued rainfall over NW India may continue, whereas, there is some indication of improvement of rainfall over central India during the week.

In view of improvement of situation due to occurrence of good rainfall during last week of July in Gujarat State and Madhya Maharashtra and first week of August in some districts of West Vidarbha (Buldhana, Washim and Yavatmal districts), following agricultural activities are suggested.

Gujarat

Gujarat Region

- Sowing of cluster bean (GC-2) and castor (GAUCH-2, GCH-4 and GCH-7), fodder sorghum (S-1049, GFS-4 and GFS-5) and fodder maize (African Tall) and transplanting of fennel, brinjal, tomato, chillies and other vegetables in North Gujarat Zone. Carry out resowing of these crops over the areas where already sown crops have been affected due to recent heavy rainfall.
- Maintenance of 5 cm water level and gap filling in transplanted rice field in Middle Gujarat Zone.
- Plantation of different fruit crops in North Gujarat Zone.
- Drain out excess water from the fields.
- Transplanting of paddy can be undertaken, as sufficient moisture is available in the field.
- Land preparation can be taken up for castor and tobacco.

Saurashtra & Kutch

- Sowing of cluster bean (GC-2) and castor (GAUCH-2, GCH-4 and GCH-7) in Kachchh district. Carry out resowing of these crops over the areas where already sown crops have been affected due to recent heavy rainfall.

Madhya Maharashtra

- Completion of 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, coriander and moth bean. However, sowing of contingent crops in Ahmednagar, Satara, Sangli and Solapur districts with receipt of sufficient rain.
- Transplanting of rice in Western Ghat region.
- Sowing of fodder crops like jowar (Ruchira, Phule Amruta, Phule Godhan), maize (African Tall, Karveer, Rajshree) and bajra (Nutrifed).
- Light hoeing, weeding and mulching with crop residues in early sown jowar and soybean to conserve soil moisture.
- Thinning to maintain plant population.
- Maintenance of 2-3 cm water level in rice nurseries in Western Ghat region (Sangli, Satara, Kolhapur, Pune, Ahmednagar, Dhule, Nandurbar and Nasik districts).
- Weeding and mulching in newly planted orchards.

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), sesame (AKT-64 and JLT-7) and sunflower + pigeon pea (2:1), sesame + pigeon pea (4:1) intercropping systems in west Vidarbha, especially in Buldhana, Washim and Yavatmal districts.
- Nursery sowing for *kharif* vegetable seedlings (chilli, tomato, brinjal etc.).
- Completion of transplanting of rice in east Vidarbha.
- Maintenance of 2-3 cm water level in already transplanted rice field in east Vidarbha.

In view of continuous deficient rainfall situation during last few weeks, following agricultural activities are suggested for Marathwada, North Interior Karnataka, Telangana, Rayalaseema and Uttar Pradesh.

Marathwada

- Sowing of contingent crops like castor, sunflower and sesame and adoption of intercropping of bajara + tur after receipt of sufficient rain.

- Foliar spray of 8% Kaolin in orchards like banana, pomegranate and sweet lime and also spray of 2% Potassium Nitrate (KNO₃) on *kharif* jowar and soybean in Latur and Osmanabad districts).

North Interior Karnataka

- Long dry spell has resulted in severe depletion of soil moisture, hampering the growth of seedlings of the sown crops. Sowing of contingency crops may be undertaken after receipt of sufficient rainfall. Following contingency measures are suggested:
 - Thinning out of excess and weak seedlings by removing alternate rows as the moisture stress is noticed.
 - Light hoeing and mulching with crop residues.
 - Intercultivation and weeding in standing crops.
 - Light irrigation wherever moisture stress is prevailing.
 - Opening conservation furrows after two rows in wider spaced crops and after every 8th row in narrow spaced crops.
 - Spraying of 1% Potassium Nitrate (KNO₃) to already sown crops where soil moisture is available so as to induce drought resistance in the crops and to prevent wilting of crops.
 - Adoption of drought resistance and moisture conservation measures in crops to be sown.
 - Sowing of fodder crops on preference.
 - Select short duration, drought resistant crops and varieties. Prefer crops like sunflower (Modern, KBSH-1, 41, 44, RSFH-1, 130), horse gram (GPM-6), foxtail millet (HMT-100-1), cowpea (C-152) and pigeon pea (pragathi).
 - Sowing of crops in wider rows to overcome moisture stress.

Telangana

- Light hoeing, weeding and mulching in early sown jowar, soybean, green gram and black gram for conservation of soil moisture.
- Foliar spray of 2% KNO₃ to prevent wilting of crops.
- Supplementary irrigation by using micro-irrigation (sprinkler) in earlier sown crops.
- Application of irrigation in sugarcane.
- Frequent intercultivation in rainfed crops to control weeds and to conserve soil moisture.
- Sowing of contingency crops like red gram (Maruti, Lakshmi, PRG 158 etc.) adopting spacing of 90 x 30 cm, sunflower and castor in Southern Telangana Zone after receipt of sufficient rain.
- Sowing of sunflower (KBSH-1, NDSH-1, DRSH-1, APSH-66 hybrids), red gram (PRG-158, Asha, LRG-41 varieties up to 2nd week of August, spacing 60 X 20 cm in red soils); intercropping of red gram with jowar / bajra @ 1:2 ratio in the Northern Telangana Zone after receipt of sufficient rain.
- Maintenance 5 cm water level in rice fields.

Rayalaseema

- Mulching in already sown crops for conservation of soil moisture.
- Maintenance of 2-3 cm water level in rice field.
- Protective irrigation in earlier sown groundnut, red gram and castor with sprinklers; spraying of 2% urea solution to prevent wilting, running a dead furrow for every 12 rows i.e. for every 3.6 meters, intercultivation in groundnut in Anantpur and Kurnool districts.
- Sowing of contingency crops, as mentioned below, after receipt of sufficient rain.
 - Sowing of contingency crops like pearl millet (ICTP 8203, PBH 3), jowar (CSH-9, CSH-13, CSH-14, PSV-15, PSV-19), green gram (LGG 407 LGG 450 LGG 460 MGG 295 ML 267), castor, cluster bean, field bean (TFB-1 TFB-5), cowpea (C 152

GC3 C0-4 CO-5), sunflower (NDSH1 KBSH1 KBSH 44 DRSH 1), korra (Prasad, Krishnadevaraya, Narashimharaya, Srilakshmi, Surya Nandi) and cotton upto 15th August; sowing of horse gram, fodder jowar and bajra after 15th August in Anantpur district.

- Sowing of red gram (black soils: LRG-41, ICPL-85063 and red soils: PRG-158, PRG-100); intercropping of korra + red gram @ 5:1 ratio in rainfed tracts of Kurnool district.
- Sowing of crops like red gram, castor, cowpea, sorghum, bajra and horse gram in Cuddepah district.
- Sowing of groundnut or red gram or intercropping of groundnut and red gram in 7:1 or 11:1 ratio in areas of Chittoor district upto 15th August in light soil where rainfall has been received.
- Spraying of 2% urea solution + 10 g MgSO₄ / litre of water followed by DAP 15-20 g + 10 g Potassium Nitrate (KNO₃) / litre of water at weekly interval to control wilting in rainfed cotton in Cuddepah district.

Uttar Pradesh

- Spray 2% urea to protect crops from moisture stress situation.
- Light hoeing, mulching with crop residue to conserve soil moisture.
- Undertake weeding and thinning in green gram, black gram and pigeon pea.
- Due to humid and warm weather in Kanpur region, infestation of bacterial blight in rice crops is likely to increase; spray Mancozeb @ 25 g per 10 liters of water. Also for control of leaf folder and stem borer pest spray Thiomethoxan @ 4 g per 10 litres of water or Quinalphos 1.5% solution.
- Gap filling through old seedling or tillers should be used to maintain plant population of rice during this week.

In view of occurrence of floods in Assam during end of July and in Gangetic West Bengal, Odisha, Madhya Pradesh and Manipur during first week of August due to heavy to very heavy rainfall, following agricultural activities are suggested.

West Bengal

- In Gangetic West Bengal, crop damage is reported in transplanted *aman* rice fields due to flooding; re-transplanting upto 20th August with available nurseries or direct sowing with sprouted seeds, if the damage is more than 50% and gap filling after recession of flood water if the damage is less than 30%.
- For nursery raising for flood affected areas, short duration varieties of rice, which will mature within 95 to 110 days (e.g. Annada, MTU-1010, Gontra, PNR-519 and Satabdi (IET-4786) etc.). Preparation of nursery bed in the premises of own house, using polythene sheet spreading two inches thick soil with high organic matter over polythene bed.
- In flood prone area (those who have not yet planted the crop) transplanting of submergence tolerant rice cultivar like Jaladhi, Jalashree and Plaban.
- In Hill Zone, transplanting of *aman* rice and sowing of soybean with seed rate 70-75 kg/ha and planting distance of 4-5 cm.

Odisha

- In Mayurbhanj, Keonjhar, Jajpur, Bhadrak and Balasore districts of Odisha, due to floods there are chances of damage in rice nurseries and transplanted rice; drain out excess water from rice nurseries, transplanted rice fields and standing *kharif* crop fields to avoid water stagnation and after recession of flood water undertake sowing of sprouted rice seeds.
- Direct seeding of rice varieties like Sahabhazi, Khandagiri in medium land, Lalat, Prijat,

Surendra, Kharavela in medium low and Swarna, Mahanadi, Prachi, Ramachandi, Indravati, Jagabandhu and scented varieties like Kalajeera, Pimpudibas, Gangabal in deep low lands.

Madhya Pradesh

- Soybean and other pulses: incidence of white fly that enhance the occurrence of yellow mosaic disease is observed. Rogue out the mosaic plants from the field. Apply insecticide for controlling white fly after consulting an entomologist from the nearest KVK.
- Weeding in rice, maize and soybean crops is essential at this stage.
- Apply insecticide and herbicide in no rainfall situation.
- Due to good rainfall observed in the last week, drain excess water from pulse crops including soybean. In rice field, prepare bunds to reduce run off of water.

Assam

- In North Bank Plain Zone of Assam, in flood affected areas collection of short duration HYV of rice like Luit, Kapili, Kolong, Dishang etc. These varieties can be transplanted or sown upto 1st week of September. Transplanting of long duration cultivars like Monohar Sali and Gitesh with 60 days seedlings.
- In Lower Brahmaputra Valley Zone of Assam, contingency plan for rice in flood affected area:
 - Raising of community nursery for late planting with old seedlings of the varieties like Profulla and Gitesh (If more than 50% damaged).
 - Nursery raising of the photo insensitive short duration varieties like Luit for replanting (in case of total damage).
 - Wet seeding of sprouted seeds (@75-80 kg/ha of short to medium duration varieties like Disang, Luit, (100 days) Kapili, Kalong (120 days).
 - Late and staggered planting with the old seedlings (50-60 days old seedlings) of the varieties like Profulla and Gitesh (If the field is heavily damaged).
 - Direct seeding with the photo insensitive short duration variety like Luit.
 - Adoption of submergence tolerance varieties like Jalashree and Jalkuwari for repeat flood prone areas.
 - In partially affected fields, drain out excess water and apply 1/3rd N + 50% K₂O as top dressing during the tillering stage.

Manipur

Due to heavy rain during last week, low lying areas in many districts got flooded. Crops like rice, ginger and turmeric were affected due to water logging.

- Draining out excess water.
- Gap filling of rice seedlings.
- Transplanting with old seedlings of rice (40-45 days old) @ 4 to 5 seedlings per hill.
- For flood affected areas, raising contingency rice nurseries (late variety RC Maniphou 7).
- Nursery raising for cauliflower and tomato.
- Planting of banana after recession of flood water.

Normal agricultural activities are continued over remaining parts of the country in view of receipt of good rainfall during the season.