

**ICAR-Central Research Institute for Dryland Agriculture
Hyderabad**

**Status of monsoon and agromet advisories/ contingency plans for some deficit/excess
rainfall areas**

Southwest monsoon was active over central and north west India during last week. Madhya Pradesh, Kerala, Jharkhand and West Bengal received excess rainfall during 16-22 July. During June 1- July 26 2015, the country as a whole received 386 mm rainfall, which is 5% less than the normal (405 mm). The region-wise Southwest Monsoon rainfall status is: East and Northeast India (6% deficit), Northwest India (10% excess), Central India (7% deficit) and South peninsula (15% deficit). Out of 36 meteorological sub divisions in the country, 12 are facing deficit rainfall condition; 18 are under normal rainfall condition and 6 are with excess rainfall condition. Districts with rainfall less than 50% of normal during 1 June to 22 July were identified and depicted in figure 1. The following is the amount of rainfall received during June 1- July 26 and contingency measures that are to be followed for the crops/cropping systems in the states mentioned.

Kerala

Kerala received 957 mm rainfall (25% deficit compared to the normal).

- Paddy: irrigate the field before cracks appear in the soil. Keep the crops weed free
- In Banana crop if strong wind occurs care should be taken by Propping of banana plants, If *sigatoka* disease is a problem in Banana fields, apply Propiconazole (Tilt) 1ml/ litre on the lower side of leaves after cutting and removing the badly affected leaves. Farmers are advised to ensure that the cut leaves are not left in the field.
- Under the intermittent rainfall condition, high humidity may induce bud rot in coconut. Cut and remove the affected portion and apply Bordeaux paste. There is a chance of Mahali disease during rainy season. Apply 1% Bordeaux mixture.

Karnataka

South interior Karnataka (326 mm) received normal rainfall; North interior Karnataka (216 mm) and coastal Karnataka (1862 mm) received 42 and 25% deficit rainfall, respectively.

a) North Karnataka

- Long dry spell has resulted in severe depletion of soil moisture, hampering the growth of seedlings of the sown crops.
- Thinning out of excess and weak seedlings by removing alternate rows as the moisture stress is noticed.
- Intercultivation and earthing-up of rows.
- Sowing of Cotton crop and short duration pigeon pea (TS 3R) can be taken up in places wherever sowing rains have occurred in the districts Raichur, Kalaburgi and Yadgir.
- In cropped area wherever little rainfall has occurred potassium nitrate @1% can be sprayed to induce drought resistance to seedlings

Maharashtra

Vidarbha (389 mm) received normal rainfall; Konkan (1633 mm), Madhya Maharashtra (347 mm) and Marathwada (294 mm) regions received deficit rainfall (25%, 30% and 51% deficit rainfall respectively, compared to normal). As on July 25, 75.4% of normal *kharif* sown area has been covered in the state as a whole (10.96 m ha out of 14.53 m ha) under various crops (Source: <http://mahaagri.gov.in/cropwatch/asp/rpt1.asp>).

Madhya Maharashtra

- Remaining *kharif* sowing in rainfall deficit areas should be undertaken only upon receipt of sufficient rains.
- Apply protective irrigation during morning/evening hours for stressed crops/orchards in rainfall deficit areas. Otherwise undertake light hoeing to create soil mulch to conserve profile soil moisture.
- Fodder crops: Thin out excess and weak seedlings by removing alternate rows as the moisture stress is severe. Open conservation furrow after two rows in wider spaced crops and after every 8th row in narrow spaced crops.

Vidarbha

- Remaining *kharif* sowing in rainfall deficit areas should be undertaken only upon receipt of sufficient rains.
- Upon sufficient rains, unsown/delayed sowing areas can still be accommodated with
 - Pigeonpea: 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).

Gujarat

Gujarat region received 406 mm rainfall (38% deficit) whereas Saurashtra and Kutch region received 246 mm rainfall (20% deficit).

- Banana: Provide propping as there are chances of heavy rainfall and high wind velocity.
- Paddy: Transplanting can be done after receiving sufficient rainfall. Clipping of plants should be done before transplanting.

Bihar

The state received 458 mm rainfall so far, which is 24% deficit compared to normal.

- Paddy: transplant 22-25 days old seedlings. Application of 25-30kg/ha Nitrogen, 40 kg/ha Phosphorus , 30 kg/ha Potash and 25 kg Zinc sulphate/ha in the soil is recommended before transplanting.
- Pigeonpea: Sowing of Bahar, Pusa-9, Narendra Arher-1 varieties are recommended. Use a seed rate of 18-20 kg/ha. Seeds should be treated with thiram/Captan @ 2.5gm/kg of seed.
- Sesame: complete the sowing at the earliest. Krishna, Kaakee safed, Kalika and Pragati varieties are recommended.

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 1st split application of nitrogenous fertilizer.
- Look for incidence of any pest/diseases.

Note: The above is a general overview for the states. However, ICAR (CRIDA) has prepared district level contingency plans (covering all farming situations within the district) and placed in the websites of the Ministry of Agriculture & Cooperation, Government of India (www.agricoop.nic.in) and CRIDA (www.crida.in) for further details.

- The following figure was generated by AICRPAM,CRIDA, Hyderabad to identify the districts experiencing more than 50% deficit condition.

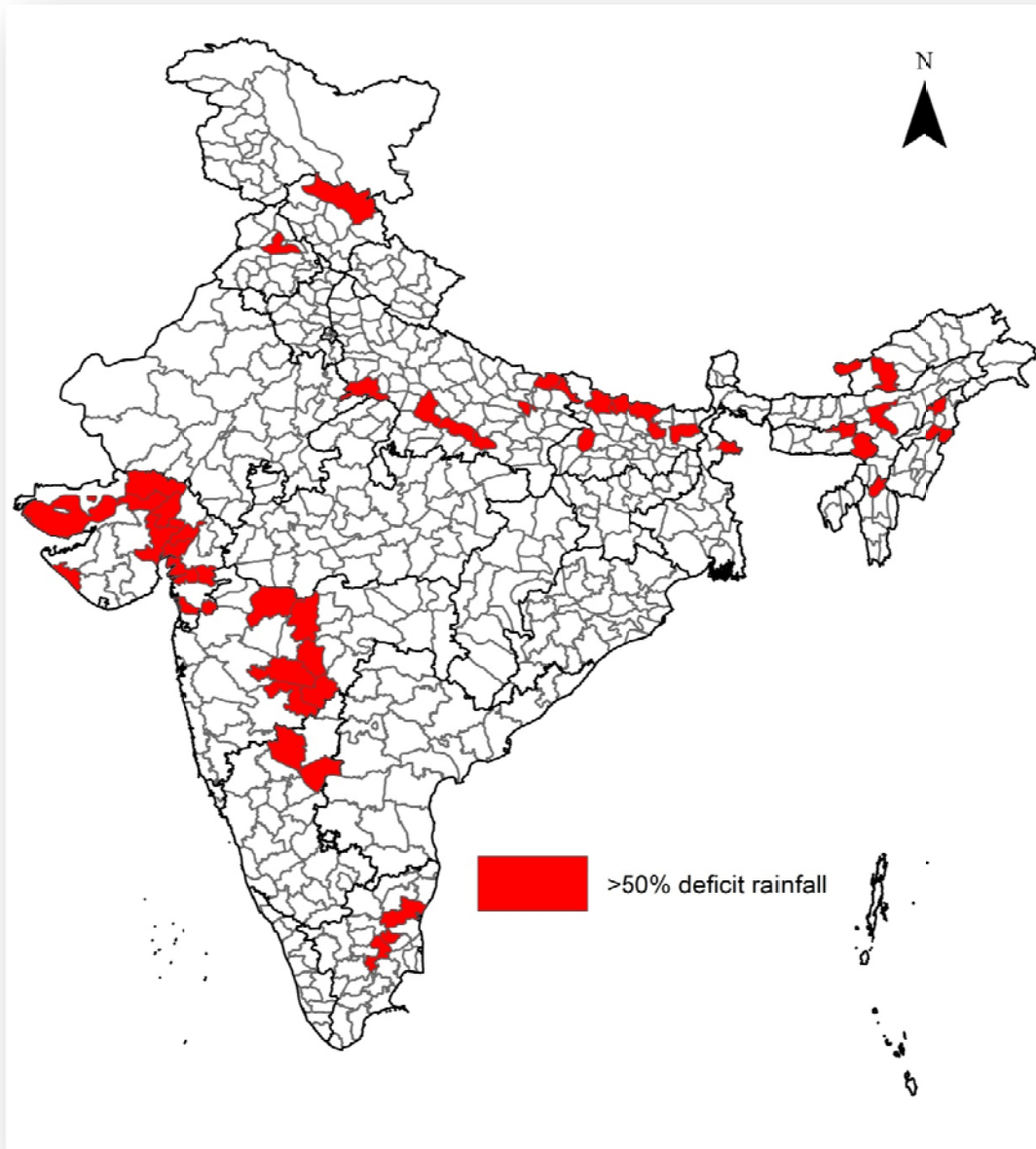


Figure 1: Districts experiencing more than 50% rainfall deficit (From 1 June - 22 July, 2015)

Table 1 depicts the details of districts experiencing more than 50% rainfall deficit

Table 1. Details of the districts experiencing more than 50% rainfall deficit from 01 June to 22 July 2015

S.No	State	District	Actual (mm)	Normal (mm)	Departure (%)	Category
1.	Arunachal Pradesh	East Kameng	170.0	614.1	-72	S
2.	Arunachal Pradesh	Tawang	507.0	1230.4	-59	D
3.	Assam	Nagaon	246.5	526.0	-53	D
4.	Bihar	Araria	303.0	591.2	-49	D
5.	Bihar	Bhojpur	129.2	351.0	-63	S
6.	Bihar	East Champaran	182.2	408.3	-55	D
7.	Bihar	Madhubani	189.5	457.3	-59	D
8.	Bihar	Purnea	251.9	572.8	-56	D
9.	Bihar	Saharsa	274.2	628.5	-56	D
10.	Bihar	Sheohar	188.0	468.2	-60	S
11.	Bihar	Sitamarhi	123.8	468.2	-74	S
12.	Gujarat	Ahmedabad	119.9	246.9	-51	D
13.	Gujarat	Anand	121.1	315.4	-62	S
14.	Gujarat	Banaskantha	66.5	214.4	-69	S
15.	Gujarat	Broach	155.4	335.4	-54	D
16.	Gujarat	Dangs	299.7	740.0	-60	S
17.	Gujarat	Gandhinagar	112.0	279.0	-60	S
18.	Gujarat	Kheda	141.4	313.2	-55	D
19.	Gujarat	Mehsana	95.7	255.1	-62	S
20.	Gujarat	Narmada	196.0	446.6	-56	D
21.	Gujarat	Navsari	332.5	828.8	-60	S
22.	Gujarat	Patan	36.3	203.7	-82	S
23.	Gujarat	Kutch	53.4	155.9	-66	S
24.	Gujarat	Porbandar	158.6	386.8	-59	D
25.	Himachal Pradesh	Lahaul & Spiti	65.2	162.0	-60	S
26.	Karnataka	Bijapur	57.1	149.4	-62	S
27.	Karnataka	Raichur	53.1	149.0	-64	S
28.	Maharashtra	Jalgaon	112.8	262.2	-57	D
29.	Maharashtra	Beed	82.7	216.8	-62	S
30.	Maharashtra	Latur	109.0	277.7	-61	S
31.	Maharashtra	Osmanabad	95.5	230.2	-59	D
32.	Maharashtra	Parbhani	106.9	290.4	-63	S
33.	Maharashtra	Buldhana	132.4	272.2	-51	D
34.	Meghalaya	Jaintia Hills	1009.0	2483.0	-59	D
35.	Meghalaya	Ri-Bhoi	289.7	644.8	-55	D
36.	Mizoram	Kolasib	201.0	734.8	-73	S
37.	Nagaland	Mokokchung	162.0	964.6	-83	S

38.	Nagaland	Phek	135.0	558.6	-76	S
39.	Punjab	Jalandhar	85.4	189.8	-55	D
40.	Tamil Nadu	Perambalur	29.0	60.4	-52	D
41.	Tamil Nadu	Trichy	26.1	67.9	-62	S
42.	Tamil Nadu	Viluppuram	35.6	100.2	-64	S
43.	Uttar Pradesh	Ambedkar Nagar	61.0	326.7	-81	S
44.	Uttar Pradesh	Fatehpur	70.7	269.4	-74	S
45.	Uttar Pradesh	Kanpur Dehat	103.1	226.2	-54	D
46.	Uttar Pradesh	Kaushambi	72.5	259.0	-72	S
47.	Uttar Pradesh	Kushi Nagar	147.0	451.6	-67	S
48.	Uttar Pradesh	Maharajganj	208.9	489.9	-57	D
49.	Uttar Pradesh	Agra	81.6	212.8	-62	S
50.	West Bengal	South Dinajpur	221.4	554.9	-60	S