

**All India Coordinated Research Project on Agrometeorology (AICRPAM)  
ICAR-Central Research Institute for Dryland Agriculture  
Santoshnagar, Hyderabad-500059**

**Status of Monsoon, *Kharif* Sowing and Agromet Advisories for Some Deficit/Excess  
Rainfall Areas**

**1. Status of southwest monsoon**

During June 1- August 21, country as a whole received 630 mm rainfall, which is 1% less than the normal rainfall of the country for the same period (639 mm). Districts which received rainfall less than and more than 50% of normal during 1 June to 21 August were identified and depicted in Figure 1 and Tables 2 and 3. Flood situation prevails in Eastern parts of Bihar, West Madhya Pradesh and Eastern Uttar Pradesh.

**2. Progress in *kharif* sowing (Source: Press Information Bureau, Govt of India)**

The total sown area of crops as on 19<sup>th</sup> August, 2016 as per reports received from States, stands at 993 lakh hectare as compared to 938 lakh hectare, as on this date last year (Table 1).

Table 1: Progress in *kharif* sowing in India as on 19<sup>th</sup> August 2016 (Source: Press Information Bureau & Ministry of Agriculture, Govt of India)

<b>Crop</b>	<b>Area sown in 2016-17</b>	<b>Area sown in 2015-16</b>
Rice	346	334
Pulses	136	100.6
Coarse Cereals	180	168
Oilseeds	175	168.5
Sugarcane	45.5	49.6
Jute & Mesta	7.6	7.7
Cotton	101.5	110
<b>Total</b>	<b>993</b>	<b>938</b>

(Area in Lakh hectare)

### 3. Agromet Advisories

The following Agromet advisories were issued during the week for the crops/cropping systems of the below mentioned states.

#### Kerala

The state so far has received 1202 mm rainfall, which is 29% deficit compared to the normal (1688 mm).

- Paddy: First paddy crop is in panicle initiation stage. Since light rainfall with high day temperature is forecasted, there is a chance for attack of rice thrips. For controlling the attack of rice thrips, apply 250 ml of DDVP 100 EC/AF formulation per litre.
- Banana: There is a chance for yellowing in banana. Examine the sucker and make sure that it is Erwinia rot, it can be controlled by mixing 25 gm of Kocide and 6 gm of Streptocycline in 25 ml of water and apply 5 litre of solution to each banana basin.
- Ginger and Turmeric: During rainy season, there is a chance of rhizome rot. To control this, dig out the affected plants and apply Kocide 2gm/1 litre water.

#### Gujarat

Saurashtra & Kutch region has received 289 mm rainfall (20% deficit), while rest of the regions has received 487 mm (27% deficit) so far in the season. 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

#### Jharkhand

The state as a whole has received 743 mm rainfall so far in the season (2% deficit).

- In case of intercropping viz. Pigeon pea + Sorghum (1:1), Pigeon pea + Gora rice (1:3), Pigeon pea + Maize (1:1), Pigeon pea + Groundnut (1:3), Pigeon pea + Soybean (1:2), Pigeon pea + Black gram/Green gram (1:2) and Pigeon pea + Okra (1:1) should be maintained and fertilizer should be applied accordingly.
- To maintain the proper moisture level in soil profile, farmers are advised to divert runoff rainwater coming from higher slope to their main fields.
- Maize: Likely to occur more and more rain in coming days. Hence, to protect the crop from water logging prepare channel for draining excess water.

#### Bihar

The state has received 595 mm rainfall so far, which is 16% deficit compared to the normal. However, flood situation prevails in many parts of Eastern Bihar due to over flowing Ganges.

- In the upland areas where rice could not be transplanted due to poor rainfall, pigeon pea (Bahar, Narendra pigeon pea-1) black gram (T-9, Navin, Pant black gram-19) could be sown.
- If good rainfall occurs till 25 August, short duration rice varieties such as Turanta, Prabhat, Richhariya, Saroj, Dhanlakhmi can be transplanted in medium land situation.

- Yambean, vegetables like cauliflower, radish, brinjal and black gram can be grown profitably in vacant fields.
- Provide life saving irrigation to the standing rice crop.
- Do not graze cattle in the areas (Falgu and Sone river basin in south Bihar) from where flood water has just receded.
- Weeding is advised in the standing rice.

### **Rajasthan**

Due to heavy rainfall received during last fortnight, flood situation exists in many parts of East Rajasthan. East Rajasthan has received 684 mm rainfall (51% surplus) while West Rajasthan has received 232 mm (17% surplus) so far during the season.

- Provide adequate drainage in heavy rainfall areas.
- Drain out excess rain water from field crops as soon as possible.
- Avoid top dressing of urea in maize and other cereal crops till rain water receded, in the areas where heavy rainfall occurred.
- Procure improved varieties of fodder crops like guar, bajra and sorghum for sowing in areas where the crops are damaged due to heavy rainfall as and when the field comes to normal condition.

*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](http://www.agricoop.nic.in)) and CRIDA ([www.crida.in](http://www.crida.in)) for further details.*

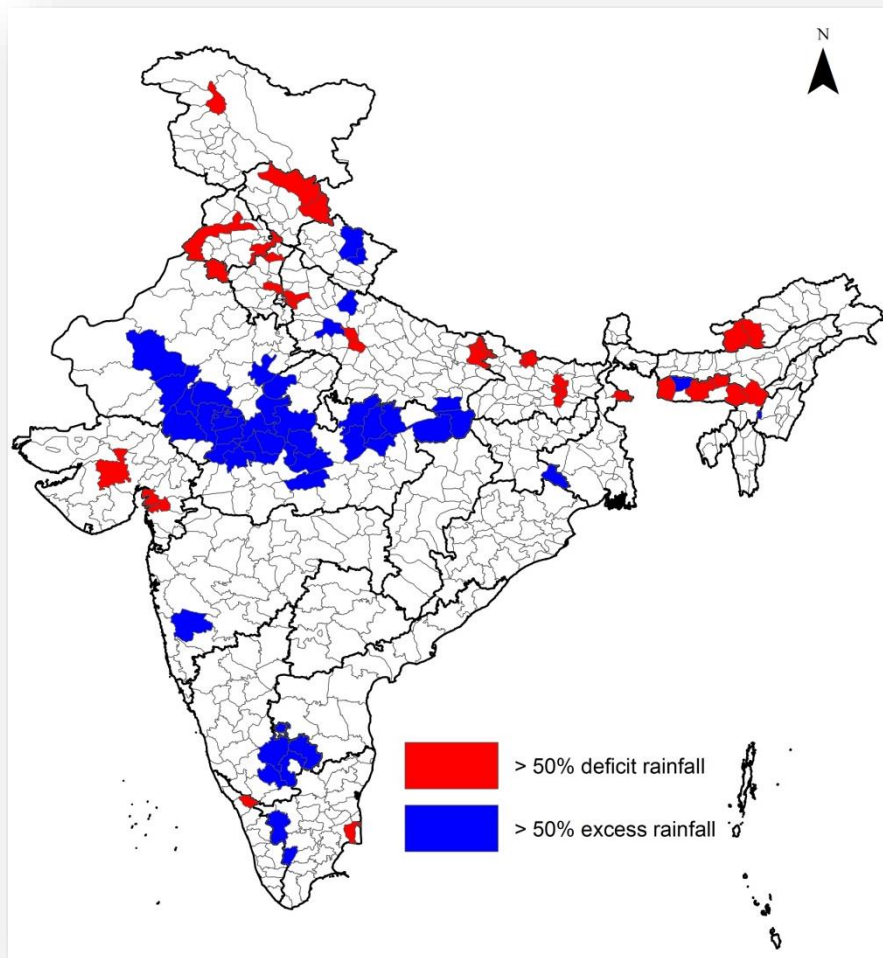


Fig. 1: Districts received > 50% deficit (35) and excess (44) rainfall compared to normal during 1 June-21 August 2016

**Table 2:** Districts which received more than 50% deficit rainfall compared to normal (1 Jun to 21 August 2016) (Source: IMD)

S.No	State/ Division	ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
	<b>Arunachal Pradesh</b>				
1.	East Kameng	381.50	880.60	-57	D
2.	West Kameng	857.50	1833.10	-53	D
	<b>Assam</b>				
3.	N.C Hills	320.40	729.10	-56	D
	<b>Meghalaya</b>				
4.	Jaintia Hills	98.00	3525.70	-97	S
5.	Ri Bhoi	519.10	1053.00	-51	D
6.	South Garo Hills	135.00	1230.10	-89	S
7.	West Khasi Hills	592.00	2101.90	-72	S
	<b>West Bengal</b>				
8.	Dakshin Dinajpur	399.00	822.90	-52	D
	<b>Bihar</b>				
9.	Khagaria	347.30	706.00	-51	D
10.	Munger	287.80	655.00	-56	D
11.	Saharsa	437.80	1012.80	-57	D
12.	Sheohar	307.00	792.20	-61	S
13.	Sitamarhi	350.60	792.20	-56	D
	<b>Uttar Pradesh</b>				
14.	Deoria	273.20	652.30	-58	D
15.	Farrukhabad	211.30	522.50	-60	S
16.	Kannauj	250.20	524.60	-52	D
17.	Kushinagar	213.10	806.90	-74	S
18.	Gautambudhnagar	86.00	391.30	-78	S
19.	Ghaziabad	177.50	438.40	-60	S
	<b>Haryana</b>				
20.	Kurukshetra	127.00	414.50	-69	S
21.	Panchkula	339.50	686.30	-51	D
22.	Sirsa	65.30	179.60	-64	S
23.	Sonipat	191.80	390.50	-51	D

	<b>Delhi (Ut)</b>				
24.	East Delhi	158.00	465.60	-66	S
	<b>Punjab</b>				
25.	Ferozpur	49.60	255.30	-81	S
26.	Jalandhar	182.20	396.10	-54	D
27.	Patiala	204.50	446.40	-54	D
	<b>Himachal Pradesh</b>				
28.	Kinnaur	79.80	170.50	-53	D
29.	Lahul&Spiti	66.00	315.90	-79	S
	<b>Jammu &amp; Kashmir</b>				
30.	Kupwara	100.00	203.00	-51	D
	<b>Gujarat</b>				
31.	Bharuch	256.30	573.80	-55	D
32.	Surendranagar	156.50	368.10	-57	D
	<b>Tamil Nadu</b>				
33.	Thiruvarur	73.70	155.10	-52	D
34.	Karaikal	66.10	159.40	-59	D
	<b>Kerala</b>				
35.	Wayanad	932.50	2259.20	-59	D

*(D = Deficient and S= Scanty)*

**Table 3:** Districts which received more than 50% excess rainfall compared to normal (1 Jun to 21 August 2016) (Source: IMD)

S.No	State/ Division	ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
	<b>Meghalaya</b>				
1.	East Garo Hills	2146.00	1253.60	71	E
	<b>Manipur</b>				
2.	Imphal West	1290.40	751.50	72	E
	<b>Jharkhand</b>				
3.	Purbi Singhbhum	1296.70	746.80	74	E
	<b>Uttar Pradesh</b>				
4.	Banda	1051.80	591.30	78	E
5.	Mirzapur	1062.60	590.50	80	E
6.	Sonbhadra	974.20	626.10	56	E
7.	Bareilly	1013.60	587.20	73	E
8.	Etah	681.70	425.80	60	E
	<b>Uttarakhand</b>				
9.	Bageshwar	978.50	639.90	53	E
10.	Chamoli	984.80	646.60	52	E
	<b>Rajasthan</b>				
11.	Jodhpur	331.30	206.30	61	E
12.	Pali	669.10	331.50	102	E
13.	Baran	1079.00	595.80	81	E
14.	Bhilwara	792.10	432.90	83	E
15.	Chittaurgarh	1148.70	510.80	125	E
16.	Jhalawar	982.10	616.10	59	E
17.	Rajsmad	615.00	370.10	66	E
18.	Swaimadhampur	769.60	511.30	51	E
19.	Udaipur	679.80	424.40	60	E
	<b>Madhya Pradesh</b>				
20.	Bhopal	1239.20	705.70	76	E
21.	Guna	1188.20	673.10	77	E
22.	Hoshangabad	1809.90	890.30	103	E
23.	Mandsaur	892.60	560.00	59	E
24.	Nimach	910.20	536.00	70	E
25.	Raisen	1279.30	793.00	61	E
26.	Rajgarh	1204.30	640.80	88	E
27.	Ratlam	1097.20	609.90	80	E
28.	Sehore	1281.30	747.80	71	E
29.	Shajapur	1082.70	630.00	72	E
30.	Ujjain	941.20	579.30	62	E
31.	Vidisha	1351.20	734.50	84	E
32.	Chhatrapur	1259.90	686.20	84	E

S.No	State/ Division	ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
33.	Damoh	1362.50	778.50	75	E
34.	Katni	1132.70	752.60	51	E
35.	Panna	1526.90	754.00	102	E
36.	Satna	1452.70	679.10	114	E
37.	Sidhi	1055.80	687.50	54	E
	<b>Maharashtra</b>				
38.	Satara	834.00	537.30	55	E
	<b>Tamil Nadu</b>				
39.	Coimbatore	247.90	105.40	135	E
40.	Teni	118.10	76.90	54	E
	<b>Karnataka</b>				
41.	Bangalore Rural	411.70	239.40	72	E
42.	Kolar	314.20	201.20	56	E
43.	Mandhya	218.70	134.80	62	E
44.	Tumkur	288.40	186.00	55	E