

**All India Coordinated Research Project on Agrometeorology (AICRPAM)
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Status of monsoon, Progress in *Kharif* Sowing and Agromet Advisories for Some Deficit/Excess Rainfall Areas

1. Status of southwest monsoon

Southwest monsoon has covered the entire country on 13 July (two days ahead of normal date, ie. 15 July). During June 1- July 31, country as a whole received 454.7 mm rainfall, which is almost equal to the normal rainfall of the country for the same period (452.8 mm). Districts which received rainfall less than and more than 50% of normal during 1 June to 31 July were identified and depicted in Figure 1 and Table 2. Assam, Bihar, parts of Uttar Pradesh is reeling under flood conditions.

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

The total sown area of crops as on 29th July, 2016 as per reports received from States, stands at 799 lakh hectare as compared to 752 lakh hectare, as on this date last year (Table 1).

Table 1: Progress in kharif sowing in India as on 29th July 2016 (Source: Press Information Bureau & Ministry of Agriculture, Govt of India)

Crop	Area sown in 2016-17	Area sown in 2015-16
Rice	231.9	225.0037
Pulses	110.3	78.2
Coarse Cereals	150.8	144.8
Oilseeds	159.8	148
Sugarcane	46.8	45.9
Jute & Mesta	7.5	7.7
Cotton	92.3	102
Total	799.5	752.2

(Area in Lakh hectare)

3. Agromet Advisories

The following Agromet advisories may be followed for the crops/cropping systems of the above mentioned states.

Kerala

The state so far has received 1037 mm rainfall, which is 25% deficit compared to the normal (1376 mm).

- Paddy: First paddy crop is in tillering stage. Weather conditions may favor bacterial blight and Leaf folder in paddy. To control leaf folder attack, unfold the leaves by rolling thorny wires/twigs over the canopy. If the attack is severe spot spraying of Takumi @ 3g/10L of water is also advised.
- 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- 20g per 1 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.

Andhra Pradesh

Rayalaseema has received 260 mm (60% excess) and Coastal Andhra Pradesh has received 311 mm (18% excess) rainfall so far.

- Utilizing the rainfall received during last two days and expected next three days, Farmers of Ananthapuramu district are advised to complete groundnut sowings by the end of this month as there will reduction in if sown during August month.
- Farmers are advised to open dead furrows at 3.6m interval in rainfed crops for in-situ conservation of rainwater.
- Incidence of Helicoverpa is also noticed in early sown groundnut crop. Spraying of Quinolphos @ 2ml/l is recommended for control.

Maharashtra

Rainfall received in major meteorological sub-divisions of the state are as follows:

Vidarbha – 653 mm (36% surplus); Marathwada – 433 mm (31% surplus); Madhya Maharashtra- 419 mm (8% surplus) and Konkan- 2119 mm (17% surplus)

Vidarbha

- Delayed/unsown areas can still be accommodated with adopting suitable crops/crop varieties:- Pigeonpea (AKT 8811, Vipula, PKV- Tara and BSMR-736 with closer 60x20 cm spacing). Intercropping systems include sunflower + pigeonpea (2:1) or 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).
- Undertake weeding/hoeing in earlier sown growing kharif crops. Timely plant protection measures specific to the pest infestation be followed.

- Apply top dressing of fertilizers (30 DAE) to earlier sowings of cotton and sorghum.

Assam

The state so far has received 779 mm rainfall (26% deficit). However, flood condition exist in many parts of the state.

Contingency measures to be taken under flood

- 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

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.

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.

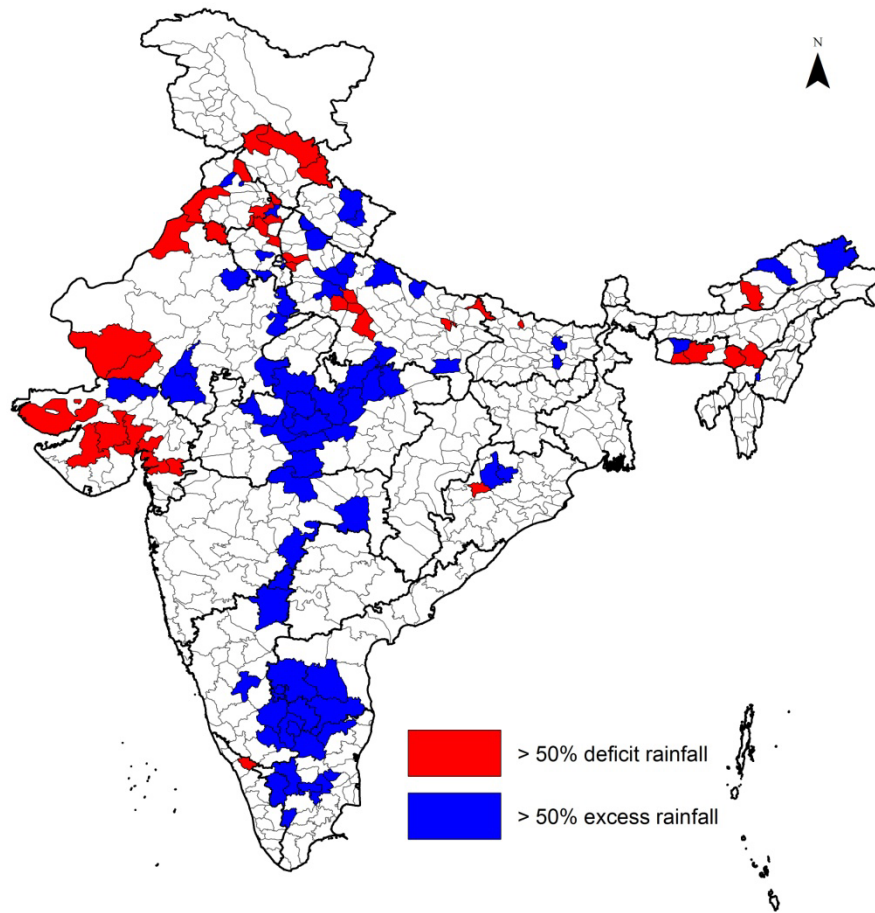


Fig. 1: Districts received > 50% deficit (45) and excess (61) rainfall compared to normal during 1 June -31 July 2016

Table 2: Districts which received more than 50% deficit and excess rainfall compared to normal (1 Jun to 31st July 2016)

S.No.	State/District	ACTUAL (mm)	NORMAL (mm)	DEP. (%)
	Arunachal Pradesh			
1.	Lower Dibang Valley	2250	646	248
2.	Upper Subansiri	722	446	62
3.	East Kameng	309	714	-57
	Assam	710	881	-19
4.	N.C Hills	274	598	-54
	Meghalaya			
5.	Jaintia Hills	84	2907	-97
6.	South Garo Hills	103	969	-89
7.	West Khasi Hills	584	1702	-66
8.	East Garo Hills	2116	997	112
	Manipur			
9.	Imphal West	1127	572	97
	Uttar Pradesh			
10.	Banda	655	353	85
11.	Kheri	679	429	58
12.	Mirzapur	687	379	81
13.	Shrawasti	795	491	62
14.	Badaun	498	322	55
15.	Bareilly	750	391	92
16.	Bijnor	688	434	58
17.	Etah	484	254	91
18.	Ambedkarnagar	145	420	-65
19.	Farrukhabad	123	320	-61
20.	Kannauj	132	303	-57
21.	Kanpur Dehat	151	308	-51
22.	Kushinagar	191	552	-65
23.	Gautambudhnagar	76	219	-65
24.	Ghaziabad	122	258	-53
25.	Mainpuri	134	273	-51
	Odisha	443	551	-20
26.	Deogarh	325	645	-50
27.	Sambalpur	329	645	-49
28.	Subarnapur	270	559	-52
	Uttarakhand			
29.	Bageshwar	770	432	78
30.	Chamoli	672	398	69

31.	Haridwar	708	438	62
	Delhi			
32.	South Delhi	498	281	78
33.	West Delhi	455	281	62
34.	North East Delhi	140	281	-50
	Punjab			
35.	Kapurthala	324	203	59
	Haryana			
36.	Rewari	276	183	51
37.	Ambala	211	413	-49
38.	Kaithal	79	171	-54
39.	Kurukshetra	76	269	-72
40.	Panchkula	200	433	-54
41.	Panipat	106	231	-54
42.	Rohtak	124	244	-49
43.	Sirsa	49	123	-60
	Rajasthan			
44.	Baran	562	369	52
45.	Bharatpur	383	225	70
46.	Jhunjhunun	344	206	67
47.	Karauli	419	271	54
48.	Rajsmand	377	245	54
49.	Udaipur	434	281	54
50.	Barmer	44	116	-62
51.	Ganganagar	36	105	-66
52.	Jalor	90	196	-54
	Punjab	193	230	-16
53.	Firozpur	41	160	-74
54.	Hoshiarpur	140	351	-60
55.	Patiala	140	291	-52
	Himachal Pradesh	293	402	-27
56.	Chamba	318	700	-54
57.	Kinnaur	40	112	-64
58.	Lahul&Spiti	32	217	-85
	Madhya Pradesh			
59.	Betul	670	428	57
60.	Bhopal	811	450	80
61.	Guna	681	424	61
62.	Hoshangabad	1217	557	119
63.	Raisen	837	502	67

64.	Sehore	871	475	83
65.	Shajapur	621	395	57
66.	Videsha	739	467	58
67.	Chhatarpur	718	412	74
68.	Damoh	957	482	99
69.	Narshimapura	710	467	52
70.	Panna	835	471	78
71.	Sagar	799	480	66
72.	Satna	843	426	98
	Maharashtra			
73.	Nanded	632	402	57
74.	Amaravati	606	391	55
75.	Chandrapur	851	555	53
	Rayalaseema			
76.	Ananthapur	205	120	71
77.	Chittoor	291	167	74
78.	Cuddapah	271	171	59
	Tamilnadu			
79.	Coimbatore	222	80	178
80.	Dharampuri	221	132	68
81.	Erode	115	66	73
82.	Karur	95	56	71
83.	Perambalur	139	83	68
84.	Teni	110	55	101
85.	Tiruchirappalli	148	85	75
86.	Vellore	302	173	74
	Karnataka			
87.	Bidar	494	328	51
88.	Gulbarga	431	269	60
89.	Bangalore Rural	374	163	130
90.	Bangalore Urban	352	166	113
91.	Davangere	284	182	56
92.	Kolar	304	140	118
93.	Mandhya	218	98	122
94.	Tumkur	286	131	118
	Bihar	485	512	-5
95.	Munger	235	471	-50
96.	Saharsa	386	765	-50
97.	Sheohar	251	597	-58
	Kerala			

98.	Wayanad	745	1809	-59
	Gujarat			
99.	Kachchh	58	197	-71
100.	Rajkot	142	313	-55
101.	Surendranagar	107	269	-60
102.	Ahmadabad	136	306	-56
103.	Anand	139	397	-65
104.	Banaskantha	145	283	-49
105.	Bharuch	166	419	-60
106.	Narmada	270	570	-53