

**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 24, country as a whole received 385 mm rainfall, which is equal to the normal rainfall of the country for the same period (386 mm). Districts which received rainfall less than 50% of normal during 1 June to 24 July were identified and depicted in Figure 1 and table 2.

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

The total sown area of crops as on 22nd July, 2016 as per reports received from States, stands at 693 lakh hectare as compared to 671 lakh hectare, as on this date last year (Table 1).

Table 1: Progress in *kharif* sowing in India as on 22nd July 2016 (Source: Press Information Bureau & Ministry of Agriculture, Govt of India)

Crop	Area sown in 2016-17	Area sown in 2015-16
Rice	183	182.4
Pulses	90.2	64.7
Coarse Cereals	130.8	126.3
Oilseeds	149.2	143
Sugarcane	45.4	47.4
Jute & Mesta	7.5	7.7
Cotton	86.8	99.5
Total	693	671

(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 992 mm rainfall, which is 19% deficit compared to the normal (1231 mm).

- Paddy: leaf folder attack is reported in some parts of the state. Use trichogramma cards @ 2CC per acre. Cut the card in to small pieces and fix in different locations of the paddy field.
- Banana: there is a chance of aphid infestation. Spray verticillium solution 5 ml/L as a control measure against aphid. If there is incidence of pseudostem weevil, swab the pseudostem and fill the leaf axils with diluted Acephate+ wetting agent (Acetaf 75SP @ 2g + wetting agent 1ml per litre of water).
- Arecanut: apply 1% Bordeaux mixture as a prophylactic measure to control mahali and bud rot diseases.

Karnataka

South Interior Karnataka received 308 mm (1% deficit), North Interior Karnataka received 249 mm (21% surplus) and Coastal Karnataka received 1633 mm (9% deficit) during June 1- July 24.

South Interior Karnataka

- Postpone sowing operation until soaking/sufficient rainfall received.
- Apply the recommended top dress fertilizer to Pigeon pea and Maize crops.
- Undertake interculture operation to control the weeds and to increase the moisture availability to crops. Interculture operation creates soil mulch thereby conserving the soil moisture to the advantage of crop plants.
- Wherever, the long duration crops like Pigeon pea, and Castor has been sown, undertake earthing up operation in addition to the above agronomic measures. Earthing up makes a better availability of soil moisture to the crop rows through conversion of the land into ridges and furrow system.

North Interior Karnataka

- Wherever sufficient profile-wetting rainfall is received, the following contingent measures are suggested to be taken up based on soil type and district concerned.
 - ✓ Sowing of onion, sesamum, maize, soybean, sunflower, niger, castor, pearl millet, groundnut (spreading), pigeon pea, cotton, horsegram, tobacco or cowpea may be taken up. Suitable varieties suggested for respective agroclimatic zone need to be selected.
- To reduce effects of extreme weather situations/ to reduce crop loss risk, the following intercrops are advised.
 - ✓ Pearl millet + Pigeon pea (2:1); Maize + Pigeon pea (4:2), Kharif sorghum + pigeon pea (5:1), Pigeon pea + sesamum (1:2 or 2:4); pigeon pea + horsegram (2:1) or chilli + desi cotton.

Maharashtra

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

Vidarbha – 567 mm (38% surplus); Marathwada – 345 mm (24% surplus); Madhya Maharashtra- 380 mm (15% surplus) and Konkan- 1917 mm (23% surplus)

Vidarbha

Un-sown areas can be accommodated with suitable crops/crop varieties (as mentioned below).

- Early soybean varieties JS 9560 and JS 9305 may be sown up to 25 July.
- 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 + pigeonpea (2:1) or in soybean after every 6 or 9 rows one row of pigeonpea 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).

Assam

The state so far has received 700 mm rainfall (26% deficit). However, flood condition exist in Lakhimpur district.

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.

West Bengal

Gangetic West Bengal has received 444 mm rainfall (12% deficit), while Sub-Himalayan West Bengal received 1149 mm (18% surplus).

- Harvest jute at 100 DAS if aman-rice-growers want to cultivate rice in the same field. Otherwise, jute may be harvested at 120 to 125 DAS.
- In case of late sown jute crop, this time attack of Bihar hairy caterpillar and semilooper may be prevalent. For both insects, apply 1.5 ml Chlorpyrifos per lt of water.

- Due to humid and warm weather, infestation of blight in vegetable crops is likely to increase; spray Mancozeb @ 2 g per liters of water.

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.

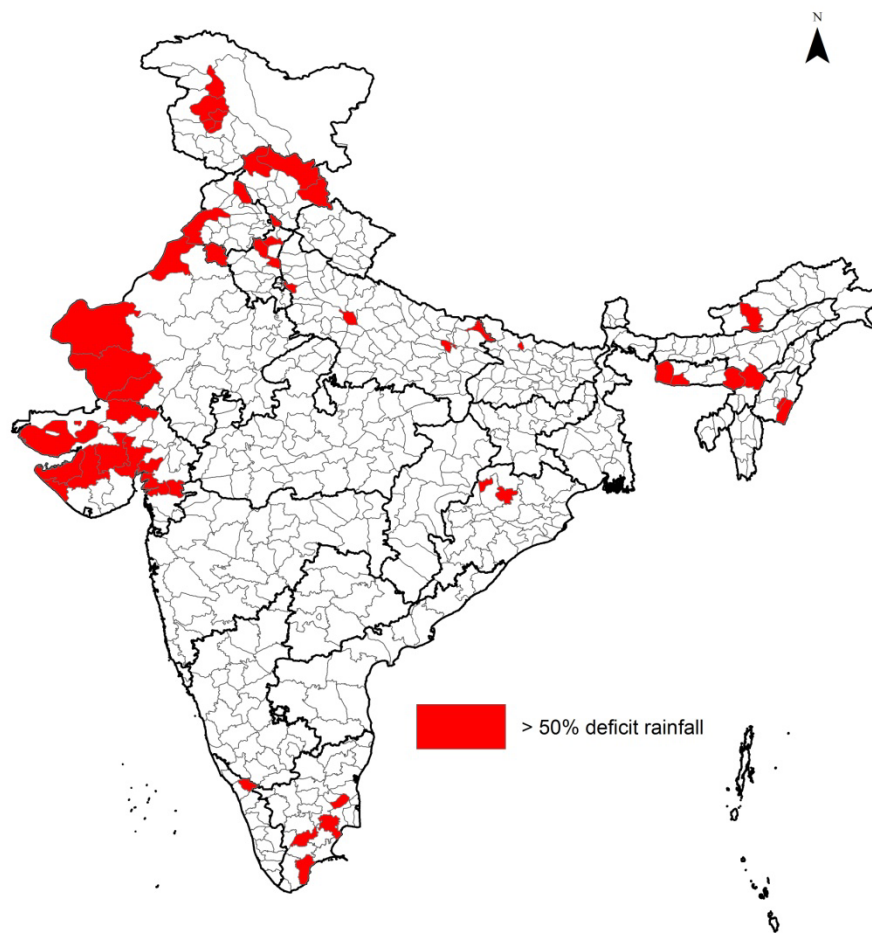


Figure 1: Districts (50) with > 50% rainfall deficit (From 1 June - 24 July 2016)

Table 1: Districts with > -50% rainfall deficit (1 June to 24 July 2016)

S NO	Met. Subdivision/Ut/State/District	ACTUAL (mm)	NORMAL (mm)	DEP. %	CAT .
	Arunachal Pradesh				
1.	East Kameng	260.2	643.3	-60	S
	Assam				
2.	N.C Hills	261.8	540.2	-52	D
	Meghalaya				
3.	Jaintia Hills	80	2576.1	-97	S
4.	South Garo Hills	96	861	-89	S
5.	West Khasi Hills	571	1488.1	-62	S
	Manipur				
6.	Chandel	33	1029	-97	S
7.	Thoubal	58	468.8	-88	S
	Odisha				
8.	Deogarh	241.4	547.1	-56	D
9.	Jharsuguda	264.6	543.5	-51	D
10.	Bihar				
11.	Sheohar	212.6	487.8	-56	D
	Uttar Pradesh				
12.	Ambedkarnagar	96	341.4	-72	S
13.	Farrukhabad	105.4	262.6	-60	S
14.	Kushinagar	166.5	473.7	-65	S
15.	Gautambudhnagar	59	182.7	-68	S
	Haryana				
16.	Kaithal	58.7	139.3	-58	D
17.	Kurukshetra	62.1	228	-73	S
18.	Panchkula	163.1	351.9	-54	D
19.	Panipat	63.2	195.1	-68	S
20.	Sirsa	49.3	100.4	-51	D
	Delhi (Ut)				
21.	North East Delhi	55	229.9	-76	S
	Punjab				
22.	Firozpur	39.6	130.4	-70	S
23.	Hoshiarpur	125.1	286.2	-56	D
	Himachal Pradesh				
24.	Chamba	236.2	550.7	-57	D
25.	Kinnaur	34.4	94.1	-63	S

S NO	Met. Subdivision/Ut/State/District	ACTUAL (mm)	NORMAL (mm)	DEP. %	CAT .
26.	Lahul&Spiti	23.4	174.2	-87	S
	Jammu & Kashmir				
27.	Badgam	35.3	74.2	-52	D
28.	Baramula	46.3	114.2	-60	S
29.	Kupwara	52.7	113.1	-53	D
30.	Pulwama	23.6	56.8	-58	D
31.	Srinagar	21.4	78.9	-73	S
	Rajasthan				
32.	Barmer	23.1	95.2	-76	S
33.	Ganganagar	16.8	90.6	-81	S
34.	Jaisalmer	25.5	66.2	-62	S
35.	Jalor	46.2	149.8	-69	S
	Gujarat				
36.	Ahmadabad	106.6	258.1	-59	D
37.	Anand	98.7	331.4	-70	S
38.	Banaskantha	87.1	223.7	-61	S
39.	Bharuch	132	351.9	-62	S
40.	Narmada	201.3	469.2	-57	D
41.	Jamnagar	103.7	247.9	-58	D
42.	Kachchh	46.6	164.4	-72	S
43.	Porbandar	183.4	398.4	-54	D
44.	Rajkot	107.2	262.4	-59	D
45.	Surendranagar	88.3	234.6	-62	S
	Tamil Nadu				
46.	Ariyalur	44.9	107.6	-58	D
47.	Madurai	39.9	97.9	-59	D
48.	Pudukkottai	48.6	107.4	-55	D
49.	Tuticorin	4.3	17.7	-76	S
	Kerala				
50.	Wayanad	692.5	1578.1	-56	D

[D- Deficit (-20 to -59%); S- Scanty (-60 to -99%)]