

**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 19 July 2017. During 1 June – 23 July, country as a whole received 388 mm rainfall, which is 3% surplus compared to the normal rainfall of the country for the same period (376 mm). Districts which received rainfall less than 50% of normal during June 1- July 23 were identified and depicted in Figure 1, Table 2 & 3.

2. Progress in *kharif* sowing (Source: Press Information Bureau and Ministry of Agriculture and Farmers' Welfare, Govt. of India)

The total sown area of major crops as on 21st July, 2017 (as per reports received from states), stands at 685 lakh hectare as compared to 673 lakh hectare, as on this date last year (Table 1). Area under cotton, rice and pulses has increased and area under oil seeds has decreased substantially during the current year compared to last year.

Table 1: Progress in *kharif* sowing in India as on 21st July 2017 (Area in Lakh hectare)

Crop	Area sown in 2017	Area sown in 2016
Rice	177.04	169.23
Pulses	96.36	90.33
Coarse Cereals	130.90	129.41
Oilseeds	123.55	144.82
Sugarcane	49.15	45.22
Jute & Mesta	7.02	7.54
Cotton	104.29	86.86
Total	685.31	673.41

3. Agromet Advisories

A. Excess rainfall condition

Gujarat

Heavy rainfall is continuing in Gujarat. Eleven out of 21 districts under Gujarat meteorological sub-division received more than 50 mm rainfall yesterday. Gandhinagar and Khera districts recorded 110 and 94 mm rainfall, respectively. Some of the contingency measures/advisories are:

- Drain out excess water from fields.
- In case of damage or loss of *kharif* crops due to flood, re-sowing is recommended. Sowing of pulses and below listed crops is advised.
 - Sorghum (grain purpose): GJ-38, GJ-39, GJ-40, GJ-41

- 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
- Transplanting of paddy is recommended. In case of non-availability of seedling and beds are filled with water, broadcasting of pre-germinated paddy is recommended after puddling.

Assam

The state has so far received 770 mm rainfall, which is 17% deficit, compared to the normal rainfall for the same period (925 mm). However, flood situation prevails in many parts of the state. Lakhimpur, Biswanath, Barpeta, Morigaon, Nagaon, Golaghat, Jorhat, Sivasagar and Karimganj districts are worst affected.

Contingency measures to be taken under flood

- Suitable paddy cultivars for flood prone area: Luit
- Suitable paddy cultivars tolerant to submergence for 15 days: Swarna Sub-1, Jalashree, Jalkunwari, Plaban
- Suitable paddy cultivars for delayed transplanting with aged seedling: Padumoni, Prafulla, Gitesh
- Suitable paddy cultivars for normal planting: Ranjit, Bahadur, Maniram, Kushal, Piolee, Pankaj, Lakhimi
- Suitable medium duration paddy cultivars: Satyaranjan, Basundhara

Post-flood condition

- After receding of flood water, go for wet seeding of sprouted rice, wherever possible, with short duration cultivars.
- Otherwise, plan for sowing of green gram, lentil, early rabi vegetables etc.

B. Deficit rainfall condition

Karnataka

South Interior Karnataka has received 224 mm (27% deficit), North Interior Karnataka received 199 mm (exactly equal to normal) and Coastal Karnataka received 1546 mm (12% deficit) of rainfall during June 1- July 23.

South Interior Karnataka

- Since there is a deficit rainfall during this month, protective irrigation may be given for the crop sown in the pre-monsoon shower.
- Postpone sowing operation until soaking/sufficient rainfall received.
- Wherever, the long duration crops like Redgram, and Castor has been sown, undertake earthing up
- Make use of farm pond water for protective irrigation of crops during the prevailing dry spell

Kerala

The state so far has received 919 mm rainfall, which is 24% deficient compared to the normal (1208 mm).

- Paddy: There is a chance of case worm infestation in paddy field. To control this 25 kg sawdust or rice husk ash mixed with 1 litre kerosene per acre can be spread after draining the field.
- Vegetables: Apply tobacco decoction or 2% neem oil-garlic-soap emulsion for control of aphids in cowpea.
- Cardamom: As a prophylactic measure to control rhizome rot drench the soil with 2-3 liters of copper oxy chloride (0.25%) solution.

Maharashtra

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

Vidarbha – 362 mm (9% deficit); Marathwada – 258 mm (4% deficit); Madhya Maharashtra- 411 mm (27% surplus) and Konkan- 1789 mm (17% surplus)

Vidarbha

- Remaining unsown areas can be accommodated with suitable crops/crop varieties/intercropping (as mentioned below)-
 - Early maturing soybean varieties (JS 9560, JS 9305) may be sown up to 25 July.
 - Pigeonpea cultivars AKT 8811 and Vipula with 60x30 cm spacing; PKV- Tara and BSMR-736 with 90x20 spacing.
 - Intercropping systems: 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.
- Undertake intercultural operations (hand weeding/hoeing) in early sown crops for timely control of weeds.

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 Department of Agriculture Cooperation & Farmers' Welfare, Government of India (www.agricoop.nic.in) and CRIDA (www.crida.in) for further details.

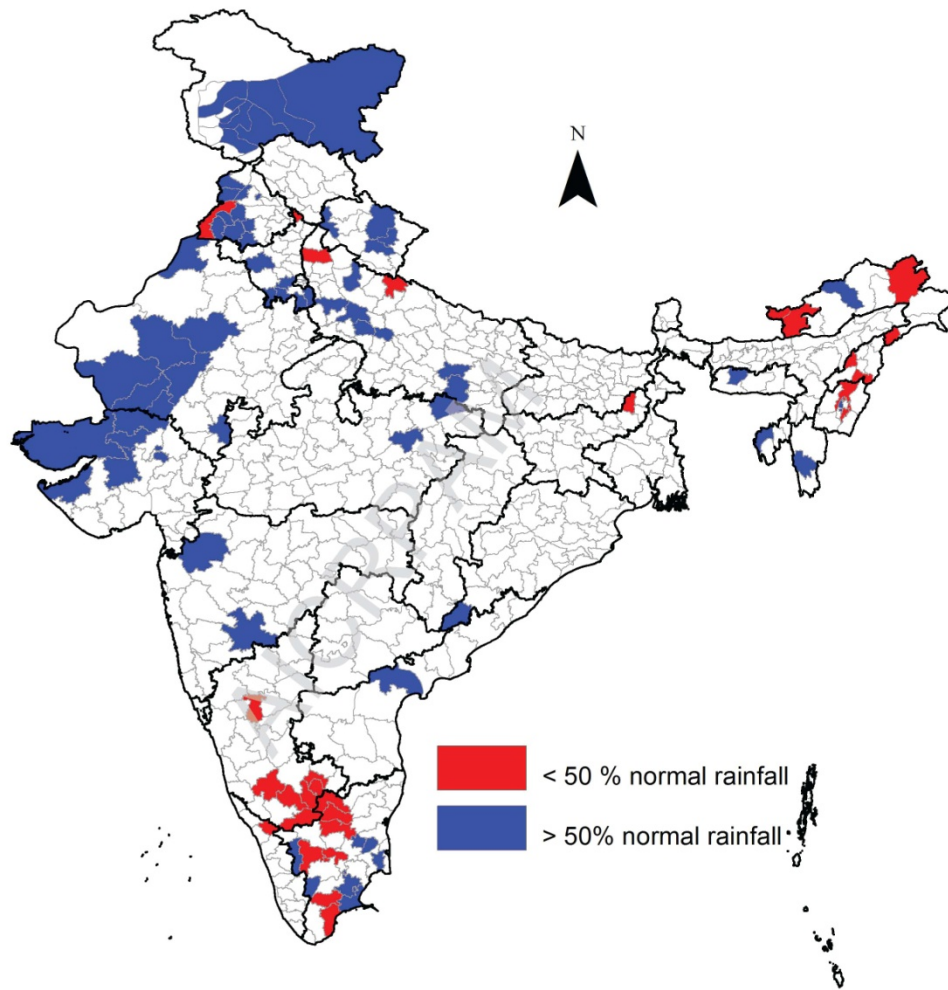


Figure 1: Districts received > 50% deficit and excess rainfall compared to normal during 1 June - 23 July 2017 (Prepared by AICRPAM based on the data provided by IMD)

Table 2: Districts which received more than 50% deficit rainfall compared to normal (1 June to 23 July 2017) (Source: IMD)

Subdivision	District	Actual (mm)	Normal (mm)	Deviation (%)
Arunachal Pradesh	Dibang valley	69	582.8	-88
	East kameng	301.8	630.6	-52
	Tawang	84	1238.9	-93
	Tirap	528.6	1248.7	-58
	West kameng	557.8	1238.9	-55
NMMT	Phek	99	572.9	-83
	Wokha	329	829.1	-60
	Senapati	75	644.9	-88
	Thoubal	53	463.9	-89
	Saiha	154	703.6	-78
West Bengal	Dakshin dinajpur	266.3	566.5	-53
Jharkhand	Garhwa	95.4	326.1	-71
West UP	Muzafarnagar	102.5	259.6	-61
	Pilibhit	143.8	340.3	-58
Har Cha Del	Panchkula	93.8	338.4	-72
Punjab	Firozpur	39.5	126.6	-69
Jammu & Kashmir	Lahul&spiti	75.3	167.7	-55
Tamilnadu & Pondi	Dharampuri	27.5	108.2	-75
	Karur	12.2	44.3	-72
	Krishnagiri	24.3	109.6	-78
	Namakkal	40.6	92.3	-56
	Salem	35.1	135	-74
	Tiruchirappalli	30.4	70.5	-57
	Tiruppur	15.1	42.1	-64
	Tuticorin	3.1	16.7	-81
	Virudhunagar	10.2	47.4	-79
SI Karnataka	Bangalore rural	60.3	133.6	-55
	Banglore urban	61.8	138.7	-55
	Chamarajanagar	29.4	113.3	-74
	Ramnagar	53.1	132.6	-60
Kerala	Wayanad	725.7	1548.1	-53

Table 3: Districts which received more than 50% surplus rainfall compared to normal (1 June to 23 July 2017) (Source: IMD)

Subdivision	District	Actual (mm)	Normal (mm)	Deviation (%)
Arunachal Pradesh	Lower dibang valley	1473.7	582.8	153
	Upper subansiri	840	410.3	105
Assam & Meghalaya	East garo hills	1318.6	861.6	53
NMMT	Dimapur	760.8	340.7	123
	Imphal west	1083.5	518.4	109
	Lunglei	1563.5	848.3	84
	West tripura	1102.9	728.4	51
Odisha	Ganjam	475.4	310.9	53
East UP	Pratapgarh	459	296.4	55
	Sahuji maharaj nagar	458.7	300.9	52
West UP	Kanshiramnagar	331	215.9	53
Uttarakhand	Bageshwar	585.7	343.2	71
	Chamoli	508	319	59
Har Cha Del	Jhajjar	299.7	149.9	100
	New delhi	368.3	221.9	66
Punjab	Amritsar	299.9	190.7	57
	Kapurthala	349	160.9	117
	Moga	192.6	119.5	61
	Muktsar	194.9	121.8	60
Jammu & Kashmir	Bandipore	150	61.6	144
	Baramula	243.4	110.7	120
	Doda	331.6	174.7	90
	Ganderwal	144.6	76.5	89
	Kargil	37.2	12.2	205
	Kulgam	193.4	101.3	91
	Leh and ladakh	21.3	13.5	57
	Pulwama	136	55.3	146
	Ramban	264	157.4	68
	Riasi	857.9	384.7	123
	Shopian	185	97.1	91
Srinagar	137.8	76.5	80	
West Rajasthan	Barmer	205.5	92	123
	Jaiselmer	119.9	63.4	89
	Jalor	355.4	146	143
	Jodhpur	234.4	106.9	119
	Pali	325.4	168.2	93
East Rajasthan	Rajsmand	315.9	193.7	63
	Sirohi	511.5	297.7	72
	Udaipur	348.8	222.9	56
East Madhya	Katni	678.2	372.4	82

Subdivision	District	Actual (mm)	Normal (mm)	Deviation (%)
Pradesh	Rewa	609.5	337.9	80
Gujarat	Daman	1475.1	957.8	54
	Banaskantha	398.8	218.4	83
	Gandhinagar	492.3	283.9	73
	Patan	446.7	206.9	116
Saurashtra & Kutch	Dadar & nagar haveli	1764.4	957.8	84
	Botad	333.3	211.5	58
	Devbhoomi dwarka	386	238.3	62
	Jamnagar	487	247.5	97
	Kachchh	309.8	159.8	94
	Morbi	631.6	234.5	169
	Rajkot	531.7	272.3	95
	Surendranagar	600	221.6	171
Konkan & Goa	Diu	684.8	390.7	75
	Palghar	1758.9	1159.1	52
Madhya Maharashtra	Nasik	658	381.3	73
	Pune	690	389.2	77
Chhattisgarh	Balod	709.9	420.4	69
	Sukma	894.6	472.3	89
Tamilnadu & Pondi	Coimbatore	121.6	67.3	81
	Sivaganga	192.6	90.6	113
	Teni	70.2	46.3	52