

**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 – 30 July, country as a whole received 455 mm rainfall, which is 2% surplus compared to the normal rainfall of the country for the same period (444 mm). Districts which received rainfall less than 50% of normal during June 1- July 30 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 28<sup>th</sup> July, 2017 (as per reports received from states), stands at 791 lakh hectare as compared to 766 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 (nearly 14 lakh hectares during the current year compared to last year).

Table 1: Progress in *kharif* sowing in India as on 28<sup>th</sup> July 2017 (Area in Lakh hectare)

<b>Crop</b>	<b>Area sown in 2017</b>	<b>Area sown in 2016</b>
Rice	216.23	211.20
Pulses	114.88	107.44
Coarse Cereals	150.19	145.40
Oilseeds	142.31	156.65
Sugarcane	49.15	45.22
Jute & Mesta	7.03	7.55
Cotton	111.15	92.33
<b>Total</b>	<b>791.34</b>	<b>765.79</b>

**3. Agromet Advisories**

**A. Excess rainfall condition**

**Gujarat**

Heavy rainfall was received in northern districts of Gujrat state last week. Dangs, Banaskantha, Navsari and Valsad districts received more than 1000 mm rainfall during the season so far. Some of the contingency measures/advisories suggested for excess rainfall are:

- Drain out excess water from the fields to avoid water stagnation and crop damage
- In Bhal and Coastal Zone of Gujarat, carry out hand weeding in sesame, pearl millet, cotton to conserve soil moisture at vasma condition. After current spells of heavy rain,

undertake sowing of black gram, green gram, cow pea, castor, cluster bean; transplanting of vegetable crops and planting of saplings of new orchards.

- In Middle Gujarat Zone, drain out excess water from the low land areas to facilitate aeration to the crops. Conserve runoff water in farm pond or use for recharging wells.
- After current spells of heavy rain, continue sowing of pearl millet (variety GHB-744 of medium duration and GHB-558, GHB-538, GHB-719 of early maturing) crop. Take green gram, pigeon pea, guar as an intercrop in pearl millet for getting more income.

### **Rajasthan**

Severe flood conditions prevail in southern parts of Rajasthan due to heavy rainfall during last week. Sirohi, Jalore, Pali are the worst affected due to flood. Sirohi district has so far received 1640 mm rainfall, which is 320% excess compared to the normal for the same period (390 mm). Mount Abu received 730 mm rainfall on 25 July 2017, which was highest during the last 100 years.

- Drain out excess rain water, where water logging condition prevailed in the field due to heavy rainfall.
- Perform weeding in kharif crops by uprooting the weeds as fields are not under workable condition for hoeing due to continuous rainfall.
- In soybean, weed management to be taken up, where the crop is of 15-20 days old, by manual weeding or application of herbicides. The recommended herbicides for the control of weeds in soybean are Imazethapyr @ 100g/ha or Quizalofop ethyl @ 50g/ha.

### **West Bengal**

Districts of Gangetic West Bengal received heavy rainfall during last week. Purulia, Birbhum and Bankura districts are worst affected due to floods. Gangetic West Bengal has received 678 mm rainfall so far during the season (20% surplus), whereas Sub-Himalayan West Bengal has received 871 mm rainfall so far (19% deficit).

- Due to heavy rainfall vegetable crops, which faced inundated condition for few days are severely infected by rotting and other fungal infections. Spray mixture of Carbendazim and Mancozeb @ 2 g per liter of water, if the weather is sunny.
- Maintain proper drainage channel for vegetable field as good amount of rainfall was received during last week and also light rainfall forecast is there for coming five days.
- Jute should be harvested as early as possible. Prevailing water logging in low lying areas will deteriorate the quality of the Jute.

### **Assam**

Flood situation has improved in the state. Districts affected by flood are now mainly confined to Lakhimpur and Jorhat. The state has so far received 770 mm rainfall, which is 17% deficit, compared to the normal rainfall for the same period (925 mm).

Agromet advisories for post-flood condition are:

- Late and staggered planting with the old seedlings (50-60 days old seedlings) of the varieties like Profulla and Gitesh (If the field is heavily damaged) of Sali rice.
- Direct seeding with the photo insensitive short duration varieties like Luit, Kapilee (90-95 days). The sprouted seeds of these varieties can be directly seeded to the field by broadcasting method
- Post flood management of sugarcane: hoeing between lines for aeration in root zone after flood
- Control measures should be taken against attack of armyworm in flood affected areas using insecticides as well as bird trapping

## **B. Deficit rainfall condition**

### **Karnataka**

South Interior Karnataka has received 234 mm (33% deficit), North Interior Karnataka received 209 mm (11% deficit) and Coastal Karnataka received 1641 mm (18% deficit) of rainfall during June 1- July 30.

#### **South Interior Karnataka**

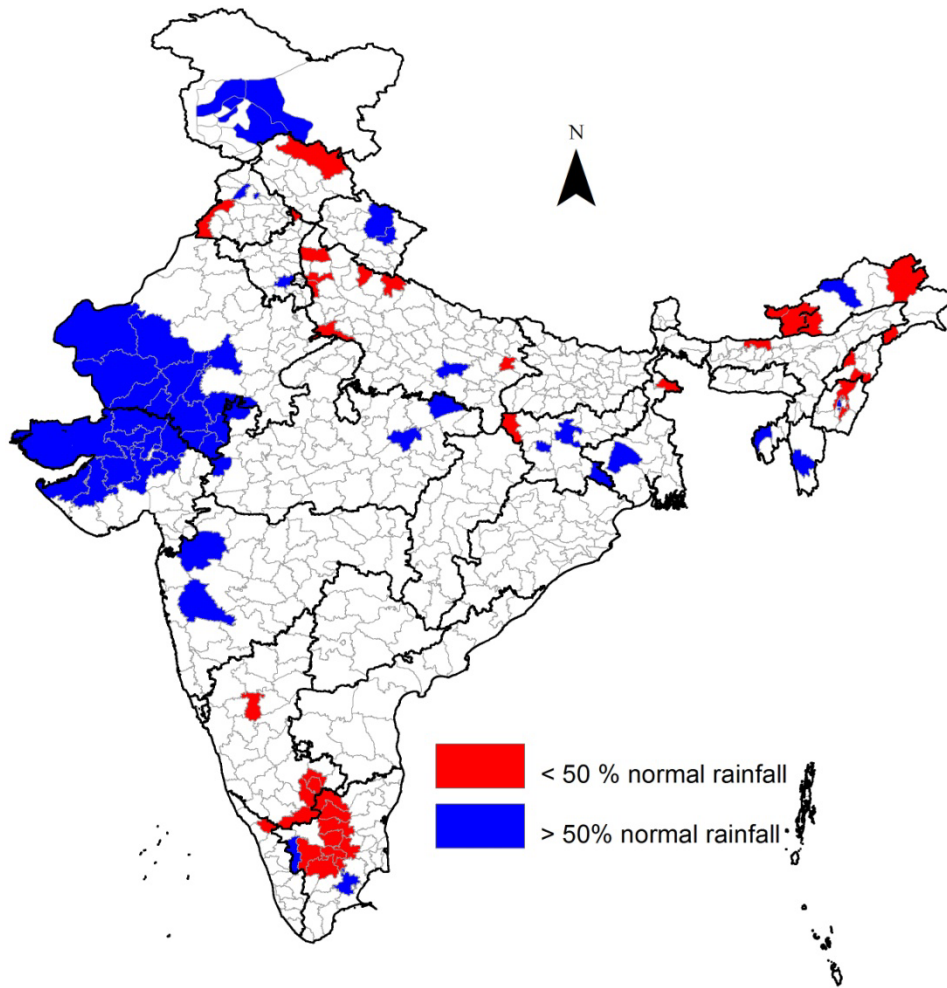
- In Eastern Dry Zone, postpone sowing of crops till soaking/ sufficient rainfall is received. Undertake intercultural operations to control weeds and to increase moisture availability to crops. Wherever, the long duration crops like red gram, and castor has been sown, undertake earthing up operation
- Since deficit rainfall condition is prevailing over the region, make use of farm pond water to provide protective irrigation to crops
- Postpone sowing operation until soaking/sufficient rainfall is received
- As normal rainfall is forecasted during 4-10 August, sowing of groundnut and redgram can be continued

### **Kerala**

The state so far has received 957 mm rainfall, which is 30% deficient compared to the normal (1358 mm).

- As dry weather is prevailing in the state and the same is forecasted in the coming week, infestation of Eriophyid mite in coconut may occur. 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. Care should be taken to see that the sprayed fluid reaches the perianth region of the buttons.
- Banana: Farmers are advised to provide propping to standing banana crop as there is chance of high wind speed in the coming dates.

*Note: The above is a general overview for the states. However, for further details, district level contingency plans prepared by ICAR-CRIDA [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](http://www.agricoop.nic.in)) and CRIDA ([www.crida.in](http://www.crida.in))] may be referred.*



**Figure 1: Districts received > 50% deficit and excess rainfall compared to normal during 1 June - 30 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 30 July 2017) (Source: IMD)**

Sub Division	District	Actual	Normal	Deviation
Arunachal Pradesh	Dibang Valley	69	641.6	-89
	East Kameng	336.2	705.1	-52
	Tawang	84	1390.6	-94
	Tirap	553.6	1450.8	-62
	West Kameng	580.6	1390.6	-58
Assam & Meghalaya	Baksa	690.2	1439.2	-52
	Ri Bhoi	368.2	749.6	-51
NMMT	Phek	99	663.1	-85
	Wokha	329	903.4	-64
	Senapati	75	721.2	-90
	Thoubal	53	508.4	-90
	Saiha	154	817.5	-81
SHWB & Sikkim	Dakshin Dinajpur	307.9	649.8	-53
Jharkhand	Garhwa	159.4	405.4	-61
East Uttar Pradesh	Mau	218	447	-51

Sub Division	District	Actual	Normal	Deviation
West Uttar Pradesh	Agra	123.8	275.1	-55
	Gautambudhnagar	97	211.4	-54
	Ghaziabad	107.2	251.7	-57
	Muzafarnagar	120.8	323.1	-63
	Pilhibhit	152.8	429.3	-64
	Rampur	195.6	424.4	-54
Har. Chd. & Delhi	Panchkula	113.4	418.7	-73
Punjab	Ferozpur	39.5	154.8	-74
Himachal Pradesh	Lahul&Spiti	80.2	212.9	-62
Tamil Nadu & Pondichery	Dharampuri	29.9	129.3	-77
	Dindigul	43.4	95.5	-55
	Karur	14	54.7	-74
	Krishnagiri	24.8	129.8	-81
	Namakkal	46.3	110.2	-58
	Salem	38.7	159.1	-76
	Tiruchirappalli	32.9	83.9	-61
	Tiruppur	23	48.7	-53
	Tuticorin	3.1	22.7	-86
N. I. Karnataka	Gadag	74.5	152.8	-51
S. I. Karnataka	Bangalore Rural	63.7	158.5	-60
	Banglore Urban	72.8	162	-55
	Chamarajanagar	31.4	128.7	-76
	Ramnagar	55	154.4	-64
Kerala	Wayanad	762.9	1783	-57

**Table 3:** Districts which received more than 50% surplus rainfall compared to normal (1 June to 30 July 2017) (Source: IMD)

Sub Division	District	Actual	Normal	Deviation
Arunachal Pradesh	Lower Dibang Valley	1568.1	641.6	144
	Upper Subansiri	863.8	445.1	94
NMMT	Dimapur	822.3	387.7	112
	Imphal West	1229.2	567.1	117
	Lunglei	2114	958.5	121
	West Tripura	1264.2	812.8	56
Gangetic West Bengal	Bankura	871.3	510.5	71
Jharkhand	Hazaribagh	766.7	486.8	57
	Lohardaga	755.4	479.7	57
	Purbi Singbhum	809.8	509.6	59
	Ramgarh	1074.2	522.8	105
East Uttar Pradesh	Pratapgarh	562.3	362.8	55
Uttarakhand	Bageshwar	664.3	421.8	57
	Chamoli	609.6	387.4	57
	Jhajjar	308.8	187	65
Punjab	Kapurthala	380	196.9	93

<b>Sub Division</b>	<b>District</b>	<b>Actual</b>	<b>Normal</b>	<b>Deviation</b>
Jammu & Kashmir	Bandipore	170	75.8	124
	Baramula	268.4	128.7	109
	Doda	353.2	213.4	66
	Ganderwal	165.6	91.4	81
	Kargil	39.6	17	133
	Kulgam	193.4	119.2	62
	Pulwama	145.6	65.8	121
	Ramban	289.2	190.8	52
	Riasi	1110.2	498.3	123
	Shopian	201	125.6	60
Srinagar	146.5	91.4	60	
West Rajasthan	Barmer	414.5	113.5	265
	Jaisalmer	195.1	76.8	154
	Jalor	838.2	191.9	337
	Jodhpur	333.5	133.1	151
	Pali	661.3	211.8	212
Est Rajasthan	Ajmer	318.6	209.2	52
	Banswara	560.9	367.1	53
	Chittaurgarh	499.6	311.6	60
	Dungarpur	511.5	296.8	72
	Pratapgarh	722	376	92
	Rajsmant	536.4	237.7	126
	Sirohi	1639.9	390.3	320
West Madhya Pradesh	Jhabua	538.3	339.4	59
	Nimach	508	338.4	50
East Madhya Pradesh	Katni	756.8	450.7	68
	Rewa	681.5	420.5	62
Gujarat region	Ahmadabad	577.1	313.9	84
	Aravalli	677.3	384	76
	Banaskantha	1007.3	277.1	264
	Gandhinagar	959	347.2	176
	Khera	620.1	397.6	56
	Mahesana	707.5	313.5	126
	Mahisagar	605.1	365.5	66
	Patan	782.7	257	205
	Sabar Kantha	750.3	357.4	110
Dadar & Nagar Haveli	2033	1146.3	77	
Saurashtra & Kutch	Botad	412.3	255.6	61
	Jamnagar	504.8	292.4	73
	Kachchh	353.7	194.1	82
	Morbi	736	274.7	168
	Rajkot	586.9	326.5	80
	Surendranagar	681	258.4	164
	Daman & Diu (Ut)	1345.4	895.5	50
Diu	714.8	444.5	61	
Madhya	Nasik	802.5	457.7	75

<b>Sub Division</b>	<b>District</b>	<b>Actual</b>	<b>Normal</b>	<b>Deviation</b>
Maharashtra	Pune	775.9	460	69
Chhattisgarh	Sukma	923.2	556.3	66
Tamil Nadu & Pondichery	Coimbatore	128.7	79.2	63
	Sivaganga	206.9	112.6	84
	Puduchery	195.1	128.9	51