

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

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

**1. Status of southwest monsoon**

Southwest monsoon has almost covered the entire country, except few parts of West Rajasthan and Kutch region of Gujarat. During June 1- July 10, country as a whole received 255 mm rainfall, which is 1% more than the normal rainfall of the country for the same period (252 mm). Districts which received rainfall less than 50% of normal during 1 June to 10 July were identified and depicted in figure 1 and table 1. The following Agromet advisories may be followed for the crops/cropping systems of the above mentioned states.

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

- The total sown area as on 8<sup>th</sup> July, 2016 as per reports received from States, stands at 406.27 lakh hectare as compared to 431.82 lakh hectare, as on this date last year.
- It is reported that rice has been sown/transplanted in 81.93 lakh ha, pulses in 45.94 lakh ha, coarse cereals in 75.02 lakh ha, oilseeds in 82.28 lakh ha, sugarcane in 45.78 lakh hectare and cotton in 67.89 lakh ha.

The details of the area covered so far and area that was covered by 8<sup>th</sup> July 2015 (Area in lakh hectare):

<b>Crop</b>	<b>Area sown in 2016-17</b>	<b>Area sown in 2015-16</b>
<b>Rice</b>	<b>81.9</b>	<b>77.3</b>
<b>Pulses</b>	<b>45.9</b>	<b>36.4</b>
<b>Coarse cereals</b>	<b>75</b>	<b>77.8</b>
<b>Oil seeds</b>	<b>82.3</b>	<b>101</b>
<b>Sugarcane</b>	<b>45.8</b>	<b>43.7</b>
<b>Jute &amp; Mesta</b>	<b>7.4</b>	<b>7.6</b>
<b>Cotton</b>	<b>67.9</b>	<b>87.8</b>
<b>Total</b>	<b>406.3</b>	<b>431.8</b>

### **3. Agromet Advisories**

#### **Kerala**

The state so far has received 777 mm rainfall, which is 15% deficit compared to the normal (915 mm).

- Paddy: First crop of paddy is in transplanting stage. Due to high relative humidity, there is a chance of sheath blight, sheath rot, leaf spot diseases in paddy. These diseases can be controlled to an extent by dipping the roots of seedlings in pseudomonas solution by mixing 20 g pseudomonas culture in one litre of water for 30 minutes before transplanting.
- Coconut: Eryophid mite is seen in the coconut. Spray neem oil – garlic emulsion (20 ml neem oil+ 20 g garlic paste in 1 litre of water) as prophylactic measure. Spraying on young inflorescence to be avoided.
- Coffee: Leaf rust disease may become severe due to increase in relative humidity. Apply 0.5% Bordeaux mixture or plant wax 20 EC @1-2 ml per litre to control the disease.

#### **Karnataka**

South Interior Karnataka received 250 mm (16% surplus), North Interior Karnataka received 170 mm (18% surplus) and Coastal Karnataka received 1328 mm (7% surplus) during June 1- July 10.

#### **South Interior Karnataka**

- Wherever, the long duration crops like Pigeon pea and Castor were sown, undertake earthing up operation in addition to the normal agronomic measures. Earthing up facilitates better availability of soil moisture to the crop rows through conversion of the land into ridges and furrow system.
- Make use of farm pond water and this may be used for protective irrigation during the prevailing dry spell.
- Wind speed is high; Protection to tomato and other vegetables through staking are important.

#### **Andhra Pradesh**

Coastal Andhra Pradesh has received 216 mm (42% surplus) so far while Rayalaseema region received 136 mm (49% surplus) rainfall so far.

- If continuous dry spell conditions prevail, farmers should watch for incidence of sucking pests like leaf miner, thrips in groundnut, thrips in Green gram and Black gram and sucking pests in cotton.
- In some parts of Ananthapuramu district (Kalyandurg, Kothacheruvu, OD Cheruvu, Bukkapatnam mandals in early sown groundnut, incidence of aphids is noticed. Spraying of Dimethoate @ 2ml/l or Acephate @ 1.5g/l of water is recommended for control.
- 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 – 376 mm (43% surplus); Marathwada – 224 mm (13% surplus); Madhya Maharashtra- 217 mm (3% deficit) and Konkan- 1323 mm (24% surplus)

### **Vidarbha**

- In areas where sowing of cotton was delayed (at the most up to 15 July), prefer early varieties of American (AKH-8828, PKV Rajat, AKH-081) and Deshi (AKA-5, AKA-7, AKA-8) cotton, use 20 % more than recommended seed rate and reduce intra-row spacing. Early *Bt* cotton varieties may also be preferred.

### **Madhya Maharashtra**

- Sunflower + Pigeon pea (2:1), Pigeon pea: BSMR- 736, 853, BDN- 708, Phuleraleshwari, vipula; Sunflower- Modern, Phuleraviraj, Bhanu etc.
- Pearl millet + Pigeon pea (2:1), Soybean + Pigeon pea (2:1), Pearl millet: Shradha, Saburi, Shanti; Pigeon pea: BSMR- 736, 853, BDN- 708, Phuleraleshwari, Vipula; Soybean: JS- 335, DS-228, JS- 9305.
- Pigeon pea + Green gram (1:3), Pigeon pea: BSMR- 736, 853, BDN- 708, Phuleraleshwari, Vipula; Green gram: TAU-1, T-9, Phule M-2, J-781.

### **Gujarat**

Saurashtra and Kutch region has received 61 mm (58% deficit) and Gujarat region received 101 mm (58% deficit) rainfall so far.

Contingency may arise in some parts of the state with further delay in sufficient rainfall for *kharif* sowing. Region wise crop and cultivars are suggested as below for sowing on sufficient receipt of rainfall or by irrigation.

#### **South and Middle Gujarat region:**

- Paddy: GR-8,9 and Gurjari can be transplanted.
- Fodder sorghum: S-1049, C-10-2
- Sunflower: Modern, EC 68414
- Cotton: Guj. Hy. Cotton-6, 8, 10, 12 and *Desi* cotton
- Early maturing *Bt*. Hybrid cotton and Intercropping: pearl millet + pigeon pea (2:1) are advised.

#### **North Gujarat region:**

- Sunflower: Modern, EC 68414
- Black gram: T-9, Guj. Udid-1
- Green gram: GM-4, K-851, Meha

#### **Saurashtra region:**

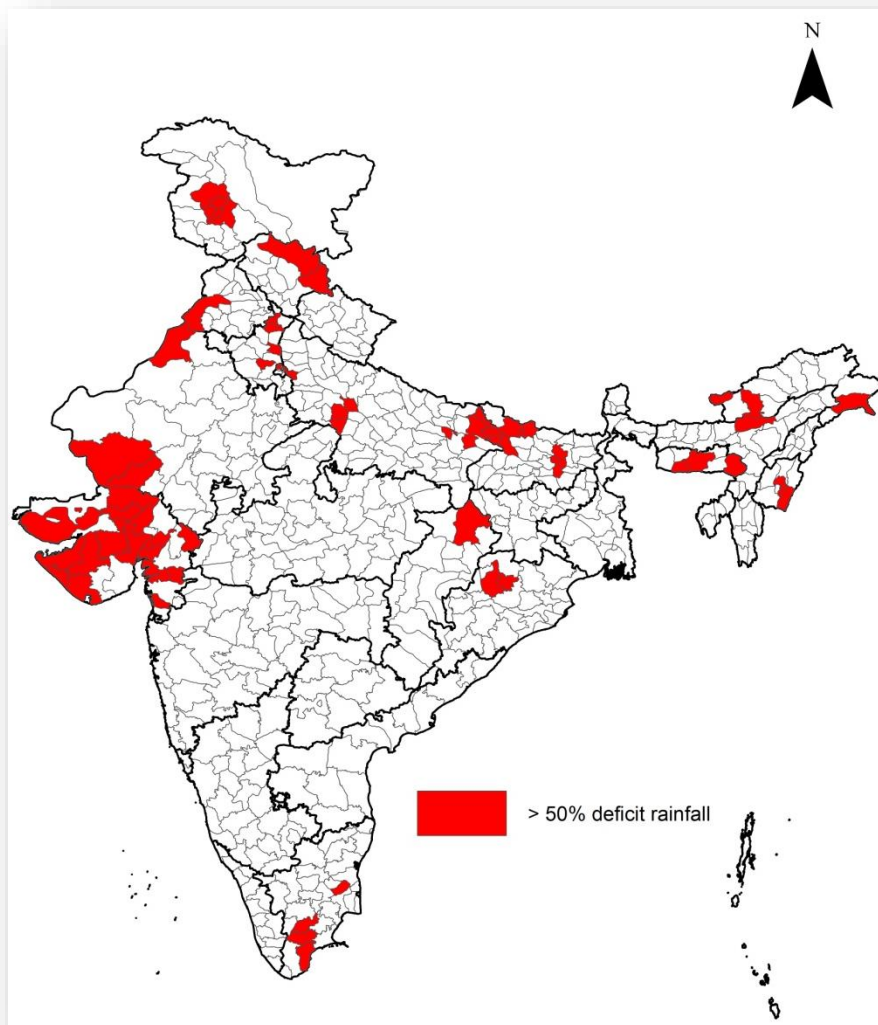
- Groundnut: GG-2, 5,7, TG-26, TG-38, GJG-9
- Sunflower: Modern, EC 68414

#### **General advisories for Gujarat**

- One life saving irrigation is advised in the regions experiencing dry spell immediately after sowing of crops.
- Tillage/inter-culturing operation and mulching may be carried out for various rain fed crops to conserve soil moisture.

- Roughing of weak and diseased plants is recommended during early vegetative growth stage.
- Top dressing application of fertilizers should be avoided during raining.

*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.*



**Figure 1: Districts (68) with > 50% rainfall deficit (From 1 June - 10 July 2016)**

**Table 1: Districts > -51% rainfall deficit (1 June to 10 July 2016)**

	State	ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
	<b>Arunachal Pradesh</b>				
1.	Changlang	301	687	-56	D
2.	East Kameng	176	461	-62	S
3.	Tawang	405	915	-56	D
	<b>Assam</b>				
4.	Sonitpur	238	496	-52	D
	<b>Meghalaya</b>				
5.	Jaintia Hills	43	1964	-98	S
6.	South Garo Hills	83	647	-87	S
7.	West Khasi Hills	170	1161	-85	S
	<b>Manipur</b>				
8.	Chandel	33	786	-96	S
9.	Imphal East	240	486	-51	D
10.	Thoubal	58	382	-85	S
	<b>Odisha</b>				
11.	Deogarh	120	367	-67	S
12.	Sambalpur	155	367	-58	D
	<b>Bihar</b>				
13.	Gopalganj	109	259	-58	D
14.	Khagaria	146	297	-51	D
15.	Munger	15	273	-94	S
16.	Purba Champaran	121	268	-55	D
17.	Saharsa	186	445	-58	D
18.	Saran	105	248	-58	D
19.	Sheohar	62	333	-81	S
20.	Sitamarhi	132	333	-60	S
21.	Siwan	69	246	-72	S
	<b>Uttar Pradesh</b>				
22.	Ambedkarnagar	52	184	-72	S
23.	Deoria	61	224	-73	S
24.	Farrukhabad	57	140	-59	D
25.	Kushinagar	74	294	-75	S
26.	Mau	90	205	-56	D
27.	Etawah	55	119	-54	D
28.	Gautambudhnagar	28	85	-67	S
29.	Mainpuri	26	122	-79	S
	<b>Haryana</b>				
30.	Ambala	95	199	-52	D
31.	Kurukshetra	35	125	-72	S
32.	Panipat	38	103	-63	S
33.	Rohtak	46	94	-52	D
	<b>Delhi (Ut)</b>				
34.	East Delhi	3	114	-97	S

35.	North East Delhi	22	114	-81	S
36.	North West Delhi	54	114	-53	D
	<b>Punjab</b>				
37.	Ferozpur	11	64	-83	S
	<b>Himachal Pradesh</b>				
38.	Kinnaur	17	56	-70	S
39.	Lahul&Spiti	19	95	-80	S
	<b>Jammu &amp; Kashmir</b>				
40.	Anantnag	40	91	-57	D
41.	Badgam	22	48	-55	D
42.	Baramula	38	81	-53	D
43.	Pulwama	12	36	-67	S
44.	Srinagar	19	52	-63	S
	<b>Rajasthan</b>				
45.	Barmer	22	53	-58	D
46.	Ganganagar	13	46	-72	S
47.	Jalor	30	82	-63	S
	<b>Gujarat</b>				
48.	Ahmadabad	32	163	-80	S
49.	Anand	32	207	-85	S
50.	Banaskantha	26	135	-81	S
51.	Bharuch	59	235	-75	S
52.	Dahod	94	198	-52	D
53.	Khera	66	203	-67	S
54.	Mahesana	46	160	-71	S
55.	Narmada	71	299	-76	S
56.	Navsari	253	551	-54	D
57.	Patan	24	122	-80	S
58.	Jamnagar	42	148	-72	S
59.	Junagarh	147	310	-52	D
60.	Kachchh	14	87	-84	S
61.	Porbandar	78	260	-70	S
62.	Rajkot	70	158	-56	D
63.	Surendranagar	55	150	-63	S
	<b>Chhattisgarh</b>				
64.	Surguja	116	314	-63	S
	<b>Tamil Nadu</b>				
65.	Ariyalur	28	67	-58	D
66.	Madurai	10	67	-85	S
67.	Tuticorin	4	11	-65	S
68.	Virudhunagar	7	32	-78	S

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