

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

**1. Status of southwest monsoon**

During June 1- September 5, country as a whole received 726 mm rainfall, which is 3% less than the normal rainfall of the country for the same period (749 mm). Districts which received rainfall less than or more than 50% of normal during 1 June to 5 September were identified and depicted in Figure 1 and Tables 2 and 3.

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

The total sown area of crops as on 2 September, 2016 as per reports received from States, stands at 1034 lakh hectare as compared to 997 lakh hectare, as on this date last year (Table 1).

Table 1: Progress in kharif sowing in India as on 2 September 2016 (Source: Press Information Bureau & Ministry of Agriculture and Farmers Welfare, Govt of India)

<b>Crop</b>	<b>Area sown in 2016-17</b>	<b>Area sown in 2015-16</b>
Rice	373	364
Pulses	142	107
Coarse Cereals	184	176
Oilseeds	180	179
Sugarcane	45.8	49.6
Jute & Mesta	7.6	7.7
Cotton	102	114
<b>Total</b>	<b>1034</b>	<b>997</b>

(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 has received 1283 mm rainfall so far, which is 30% deficit compared to the normal.

- Cashew: Stem borer is seen in Cashew. To control the disease, chisel out the grubs and swab the tree trunk with Acephate @ 4g/L of water. Swabbing (adult trees only) with coal tar kerosene mixture at 1:2 proportion is also recommended.
- Ginger: To control soft rot, drench the soil with 1% Bordeaux mixture or 0.3% mancozeb.
- Leaf fall disease is noticed in nutmeg. To control, remove the infected leaves from field and apply Kocide 2g per one liter of water.
- Black Pepper is in berry development stage. There is a chance for Pollu beetle during rainy season. Apply 2 ml quinalphos in one liter of water.

#### Andhra Pradesh

Coastal Andhra Pradesh has received 472 mm (6% surplus) and Rayalaseema has received 309 mm (10% surplus) rainfall so far during the season. Pink boll worm incidence is noticed in Ananthapuramu, Kurnool, Kadapa districts. It has crossed ETL level in Ananthapuramu district. The following measures are suggested for control of pink boll worm

- Pheromone traps should be installed immediately at the field level for monitoring the incidence levels on community basis.
- Observation of rosette flowers and sampling of green bolls should be done regularly for monitoring the intensity of the disease incidence.
- Destroy rosette flowers and remove the dropped squares, dried flowers and pre-matured bolls periodically to suppress the pest population at the initial stage. Prophylactic spray of 5 % NSKE or neem oil at flowering stage to prevent egg laying.
- Need based use of insecticides, if it crosses ETL (8 moths/trap/day for 3 consecutive days or 1 larva/10 flowers or 10 green bolls) : Spraying of insecticides like thiodicarb 75 WP @ 1.5 g/l or profenophos 50 EC @ 2 ml/l or quinalphos 25 EC @ 2.5 ml/l or chlorpyrifos 20 EC @ 2.5 ml/l at 15 days interval.

#### Mahrashtra

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

Vidarbha – 837 mm (1% surplus); Marathwada – 548 mm (1% deficit); Madhya Maharashtra- 653 mm (8% surplus) and Konkan- 2985 mm (12% surplus)

#### Vidarbha

- At last hoeing, open the furrow between two rows of cotton by tying the ropes to hoe for effective *in-situ* conservation of rainwater during remainder rainy season.
- Apply foliar spray of 2% Urea (200 g Urea +10 litre water) at flowering stage and 2% DAP at boll development stage.
- Subdued rainfall activity has increased sap sucking pest infestation in cotton. For control of it, undertake application of Azadirachtin 300 ppm @ 50 ml or Acetameprid 20% SP@ 1.5g or Thiamethoxam 25 wg @ 2.0 g per 10 litres of water.

- Dry and cloudy weather caused incidence of army worm in rice crop in eastern Vidarbha districts. For control of it, spraying with 10 EC Cypermethrin (6 ml/10 litres of water) in the field is advisable.

## **Gujarat**

Saurashtra & Kutch region has received 360 mm rainfall (14% deficit) so far, while rest of the region in the state has received 608 mm (24% deficit) rainfall so far during the season.

Following crops can be considered for sowing.

- Sesame : Guj-1, 2, 10
- Safflower : Bhima, Tara
- Sunflower : EC-68414, modern
- Green gram: GM-4, K-851, Meha

General advisories

- Leaf spot disease can be prevented in groundnut by spray of Hexaconazole 10 ml or Tebuconazole 7 ml in 10 liters of water under clear sky.
- Frequent light inter-culturing operation should be done to avoid the evaporation losses of soil moisture

## **Himachal Pradesh**

The state as a whole has received 586 mm rainfall so far (19% deficit) during the season.

- Sow nursery (of mid-season cauliflower, Chinese cabbage and cabbage) in poly houses in mid-hill and lower regions.
- In mid-hill regions, direct sowing of radish, carrot, broccoli, lettuce and transplanting of ageti, cauliflower and cabbage seedlings is advised.
- In high-hill regions, in peas, after undertaking intercultural operations, apply second dose of nitrogen and also keep fields weed free for higher yields.

***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.***

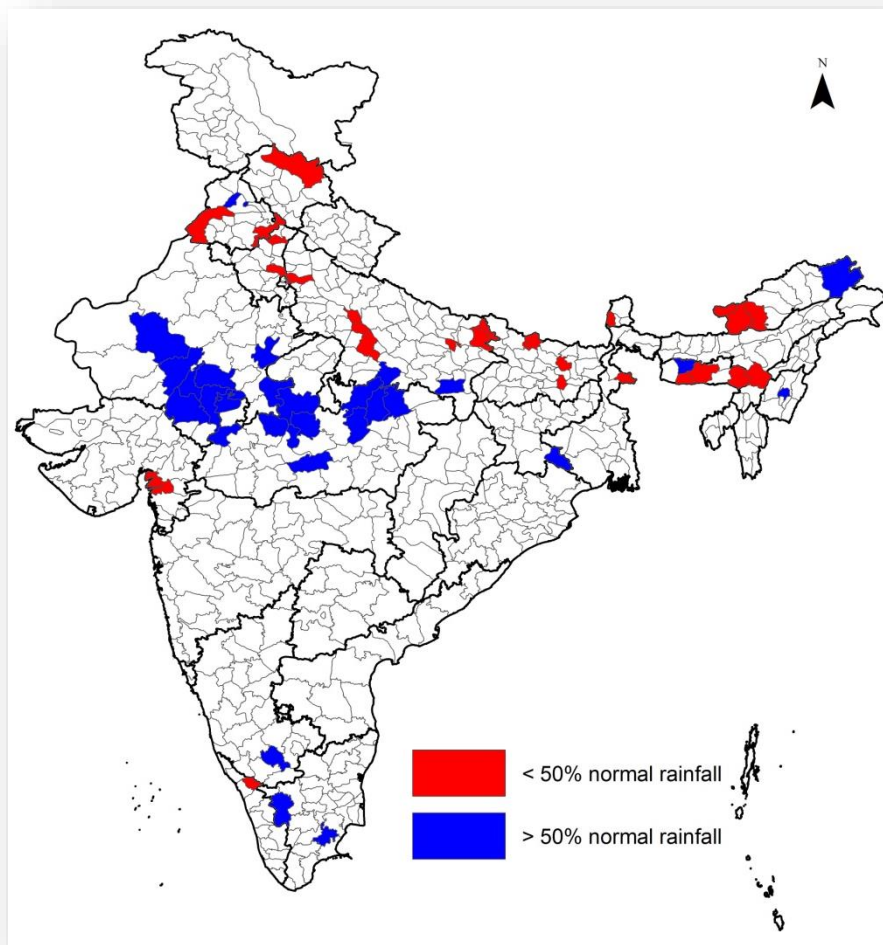


Fig. 1: Districts received > 50% deficit (30) and excess (29) rainfall compared to normal during 1 June-5 September 2016

**Table 2:** Districts which received more than 50% deficit rainfall compared to normal (1 Jun to 5 September 2016) (Source: IMD)

S.No.	State/District	ACTUAL (mm)	NORMAL (mm)	DEP. %	CATEGORY
	Arunachal Pradesh				
1.	East Kameng	436	1018	-57	D
2.	Tawang	974	2065	-53	D
3.	West Kameng	845	2065	-59	D
	Assam				
4.	N.C Hills	391	849	-54	D
	Meghalaya				
5.	Jaintia Hills	659	4019	-84	S
6.	South Garo Hills	139	1401	-90	S
7.	West Khasi Hills	652	2407	-73	S
	Sikkim				
8.	West Sikkim	644	1508	-57	D
	West Bengal				
9.	Dakshin Dinajpur	469	949	-51	D
	Bihar				

S.No.	State/District	ACTUAL (mm)	NORMAL (mm)	DEP. %	CATEGORY
10.	Munger	371	780	-52	D
11.	Saharsa	556	1162	-52	D
12.	Sheohar	349	936	-63	S
13.	Sitamarhi	447	936	-52	D
	Uttar Pradesh				
14.	Ambedkarnagar	338	739	-54	D
15.	Deoria	331	786	-58	D
16.	Farrukhabad	239	632	-62	S
17.	Kannauj	258	644	-60	S
18.	Kanpur Dehat	274	631	-57	D
19.	Kushinagar	228	954	-76	S
20.	Ghaziabad	238	546	-56	D
	Haryana				
21.	Kurukshetra	180	492	-63	S
22.	Panchkula	374	820	-54	D
23.	Sonipat	219	474	-54	D
	Delhi (Ut)				
24.	East Delhi	158	562	-72	S
25.	North East Delhi	243	562	-57	D
	Punjab				
26.	Firozpur	105	303	-66	S
27.	Patiala	241	525	-54	D
	Himachal Pradesh				
28.	Lahul&Spiti	86	379	-77	S
	Gujarat				
29.	Bharuch	303	671	-55	D
	Kerala				
30.	Wayanad	1002	2457	-59	D

(D = Deficient and S= Scanty)

**Table 3:** Districts which received more than 50% excess rainfall compared to normal (1 Jun to 5 September 2016) (Source: IMD)

S.No.	State/District	ACTUAL (mm)	NORMAL (mm)	DEP. %
	Arunachal Pradesh			
1.	Lower Dibang Valley	2867	831	245
	Meghalaya			
2.	East Garo Hills	2309	1408	64
	Manipur			
3.	Imphal West	1629	848	92
	Jharkhand			
4.	Purbi Singhbhum	1533	885	73
	Uttar Pradesh			
5.	Banda	1112	721	54
6.	Mirzapur	1202	710	69
	Punjab			

S.No.	State/District	ACTUAL (mm)	NORMAL (mm)	DEP. %
7.	Kapurthala	660	362	82
	<b>Rajasthan</b>			
8.	Jodhpur	403	243	66
9.	Pali	849	398	113
10.	Baran	1148	712	61
11.	Bhilwara	907	521	74
12.	Chittaurgarh	1290	634	103
13.	Rajsmand	797	448	78
14.	Swaimadhopur	915	599	53
15.	Udaipur	842	519	62
	<b>Madhya Pradesh</b>			
16.	Bhopal	1396	856	63
17.	Guna	1251	829	51
18.	Hoshangabad	1916	1094	75
19.	Nimach	1050	649	62
20.	Rajgarh	1301	784	66
21.	Ratlam	1259	737	71
22.	Videsha	1401	889	58
23.	Chhatarpur	1370	850	61
24.	Damoh	1456	928	57
25.	Panna	1594	915	74
26.	Satna	1531	808	90
	<b>Tamil Nadu</b>			
27.	Coimbatore	272	127	115
28.	Sivaganga	339	213	59
	<b>Karnataka</b>			
29.	Mandhya	271	168	61