

**ICAR-Central Research Institute for Dryland Agriculture**  
**Hyderabad**

**Status of monsoon and agromet advisories/ contingency plans for some deficit/excess rainfall areas**

During 1 June - 20 Sept 2015, the country as a whole received 718 mm rainfall, which is 14% less than the normal (839 mm). The region-wise Southwest Monsoon rainfall status is: East and Northeast India: 9% deficit, Northwest India: 21% deficit, Central India: 15% deficit and South peninsula: 14% deficit. Out of 36 meteorological sub divisions in the country, 16 are facing deficit rainfall condition; 19 are under normal rainfall condition and one region is with excess rainfall condition. Districts which received rainfall less than 50% of normal during 1 June to 20 September were identified and depicted in figure 1. Rainfall received during 1 June - 20 September, progress in *kharif* sowing and contingency measures that are to be followed for deficit/excess rainfall conditions and the crops/cropping systems in different states/regions are mentioned as under:

**A) Deficit rainfall areas**

**1. Maharashtra**

Rainfall status: Marathwada region is reeling under drought conditions with 44% deficit rainfall. Madhya Maharashtra, Konkan and Vidarbha regions are also facing deficit rainfall of 38%, 34% and 19%, respectively.

*kharif* sowings: As on 12 September, 93% of normal *kharif* crop area of the state has been sown under different crops. Oil seed crops and cotton recorded highest sowing area of 120 and 114%, respectively (compared to normal sown area) and sugarcane recorded the lowest (47%) sowing due to deficit rainfall conditions.

**Marathwada**

Rainfall situation Marathwada region received 49.53 mm average rainfall against the normal rainfall of 53.8 mm. District namely Jalna recorded less than normal rain fall i.e. (31.3 mm) and the highest rainfall was received at Osmanabad district 82.5 mm rainfall followed by Latur district received 71.3 mm rainfall.

**Agromet advisories**

- On vapsa condition, undertake sowing of Rabi jowar, safflower and sunflower.
- Continue harvesting of *kharif* crops like green gram, black gram, bajra after current spells of rain.

- Keep the harvested produce in safe place.
- Preparation of field for sowing of Rabi jowar and safflower.
- For taking rabi crops, undertake compartmental bunding to conserve moisture wherever sowing is not carried out.

## **Vidarbha region**

### **Rainfall and crop situation**

In Vidarbha, Amravati division recorded 78% of normal rainfall and 95.3% (31.280 lakh ha) kharif sowing dominated by soybean (15.205 lakh ha) and cotton (9.490 lakh ha). Blackgram and greengram together recorded 1.292 lakh ha (41% of normal) sowing. Pigeonpea recorded 3.905 lakh ha (102%) sowing. Nagpur division recorded 83% of normal rainfall and 102.2% (18.773 lakh ha) kharif sowing with major paddy (7.529 lakh ha) and; soybean (3.445 lakh ha) and cotton (5.785 lakh ha) sowings. Maharashtra State recorded 93.1% (13.538 million ha) kharif sowings dominated by cotton 3.845 mha and soybean 3.755mha.

### **Contingency crop plan:**

- Rainfed crop of safflower (Bhima, AKS-207, PKV-Pink) can be sown from 4th week of September to 1st week of October. Follow seed treatment with biofungicide Trichoderma and biofertilizers Azatobacter/PSB.
- Undertake timely harvesting of matured green gram/ black gram crops with safe storage of produce.
- Apply foliar spray of 2% Urea (200 g Urea +10 liter water) to late sown soybean and cotton crops at flowering stage. Foliar spray of 2% DAP(200 g DAP +10 liter water) is advisable at boll development stage in cotton.
- Provide adequate drainage in standing crop fields/orchards that are waterlogged due to recent moderate to heavy rainfall across the region.
- Undertake timely plant protection in standing kharif crops judging a clear weather.
- Priority should be given for insitu moisture conservation during the remainder of the season in long duration crops like cotton and pigeon pea.

## **Madhya Maharashtra**

### **Rainfall situation**

During last week western Maharashtra received 70 mm rainfall as against normal rainfall of 44 mm (59 % Excess). In western Maharashtra Nashik, Dhule, Nandurbar, Jalgaon, and Ahmednagar received highest rainfall in 2nd week of September.

### **Contingency plan for Western Maharashtra**

- Rabi sorghum: Maldandi, phule yashoda, phule mauli, phule vanita, Safflower- N62-8, bhima, Chick pea- vikas, Sunflower - SL- 11

- Follow proper drainage
- Follow proper soil and water conservation practices for in-situ water conservation in rabi season

### **Konkan Region**

The total area sown in Konkan region is 4.32 lakh ha (As on 17 September 2015) and this accounts for 70.4 % of the normal Kharif season area of 6.14 lakh ha.

#### **Contingency crop plan**

- Drain out (remove) excess water from the rice fields and mango orchards.
- To control blast of rice spray of Propiconazole 10 ML or Copper Oxychloride 20 g or Tricyclazole 60 g or Carbendazim 10 g in 10 lit. of water.

### **Madhya Pradesh**

Rainfall: In west Madhya Pradesh, rain was 15.2 mm actual with 42.3 mm normal. Four districts received excess rainfall are Alirajpur, Barwani, Dhar and Khargaon districts, which are major cotton, corn, soybean belt of west M.P.

In east Madhya Pradesh rainfall was 8.77 mm actual with 58.9 mm normal.

#### **Contingency crop plan**

- **Soybean:** At pod development stage: Early maturing varieties need to be harvested. For late maturing varieties, control of hairy caterpillar by Trizophos 40 EC at 800 ml/ha.
- **Maize:** At silking stage. Green cob hybrids used for vegetables like sweet corn needs to be harvested.
- **Rice:** Late planted rice varieties needs light irrigation , and construct bunds around field to conserved water.
- **Sesame:** Leaf-spot disease control by applying Mancozeb at 1 kg/ha at 500-600 litres of water.
- **Fruits:** Apply recommended dose of fertilizers. Apply insecticides as per the recommendations in Guava, Pomegranate, and Citrus fruits for controlling leaf-eating caterpillar.
- **Vegetables:** For onion, white grub control need Thimet 10 G at 8 kg/acre.

## **Andhra Pradesh**

Out of 670 mandals in Andhra Pradesh, 165 mandals received excess rainfall, 328 mandals received normal, 172 mandals received deficit and 5 mandals received scanty rainfall. 33 mandals in Kurnool district and 46 mandals in Chittoor district are still under deficit rainfall situation.

### **Crop coverage in Andhra Pradesh**

The total area sown in the state of Andhra Pradesh is 32.52 lakh ha (86%) as against normal area of 37.76 lakh ha as on 16.09.15 and this accounts for 76% of the normal kharif season area of 42.56 lakh ha.

### **Contingency Crop plan**

- In Vizianagaram districts, clip the top leaves of the over aged rice nursery, adopt closure spacing (44 hills/m<sup>2</sup> with 4-5 plants per hill) and apply 25% higher nitrogen than recommended dose in two splits, 70% in the final puddling and 30% at Panicle initiation stage.
- Ananthapuramu district: sowing of fodder jowar, bajra, greengram, horsegram, cowpea, cluster bean, field bean. In rainfed black soils, jowar, korra, cluster bean, greengram, sunflower, field bean.
- Kurnool district: sowing of fodder jowar, bajra, greengram/blackgram, horsegram, cowpea, field bean. In rainfed black soils, maghi Jowar, korra, greengram/blackgram, sunflower, field bean.
- Kadapa district: sowing of greengram, jowar, field bean, sunflower in KC canal command areas.
- Prakasam and Guntur districts: farmers can go for sowing of Redgram, Greengram, Fodder Bajra, Jowar. In KWD canal commands farmers can go for sowing of greengram, blackgram, jowar, bajra crops.

## **West Bengal**

### **Rainfall situation**

In South Bengal, except three districts (Kolkata, Howrah and South 24 parganas) all districts received scanty rainfall (-60% or less than normal). Howrah and South 24 parganas districts received deficient (-20 to -59% normal) rainfall and only Kolkata district experienced normal rainfall. Burdwan district received 94% deficit (3.9 mm) rainfall in this week.

In North Bengal, North Dinajpur district received normal rainfall and Darjeeling district received deficient rainfall (-20% to -59% than normal). Scanty rainfall occurred in other districts.

## Contingency Crop plan

- In uplands urd (T9, Pant urd 30 and Pant urd 19), Moong (T44, Samrat), Arhar (Bahar, Pusa 9 and Narendra Arhar 1), Groundnut (TAG 24, TG 44) and Kulthi (DV 7, BR 5, BR 10, S67/26, 14,31) can be sown with available seeds in locality/seed agencies.
- Priority should be given for *in situ/ex situ* rainwater harvesting during the remainder of the season.
- Irrigation in paddy crop as to maintain proper moisture at tillering/PI stage.
- Undertake intercultural operation and mulch with crop residue to conserve soil moisture in vegetable crop field (cabbage, cauliflower, chilli, onion etc.).
- Apply protective irrigation in standing crops in case of water stress condition.
- Undertake weeding operation in crop field.
- There is a chance for stem fly infestation in vegetables due to low rainfall and partly cloudy weather. Spray Chloropyriphos @ 25 ml per 10 litres of water.
- Prevailing cloudy weather is congenial for the incidence of downy mildew in cucurbits; spray Metalaxyl 8% + Mancozeb 64% @ 20 g in 10 litres 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](http://www.agricoop.nic.in)) and CRIDA ([www.crida.in](http://www.crida.in)) for further details.*

- The following map was generated by AICRPAM, CRIDA (with the data provided by IMD), Hyderabad to identify the districts experiencing more than 50% deficit condition.

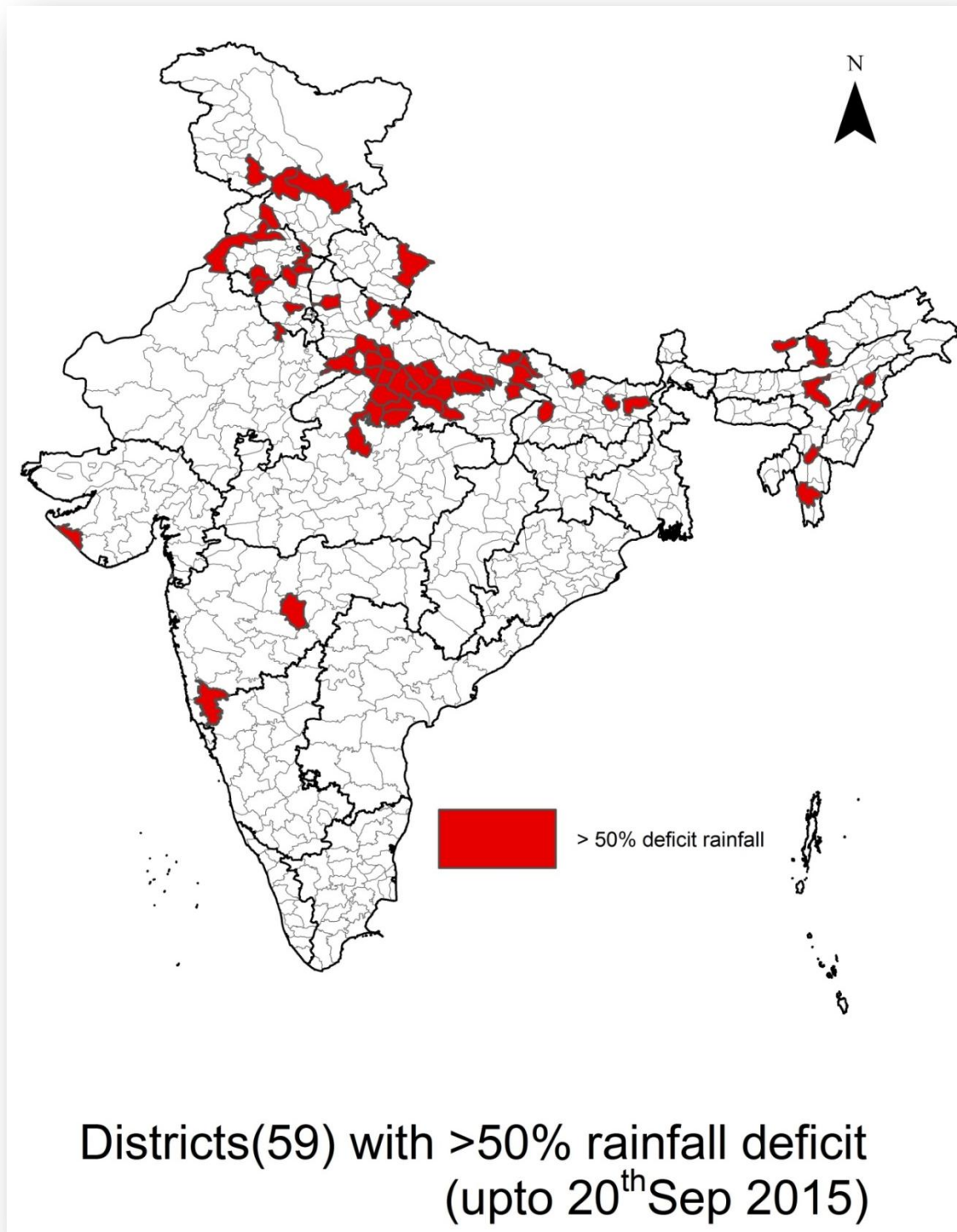


Figure 1: Districts (64) experiencing more than 50% rainfall deficit (From 1 June - 20 September, 2015)

Table 1 depicts the details of districts experiencing more than 50% rainfall deficit

**Table 1. Details of the districts experiencing more than 50% rainfall deficit from 01 June to 20 September 2015**

S.No	STATE	DISTRICT	ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
1.	Arunachal Pradesh	East Kameng	372.5	1162.9	-68	S
2.		Tawang	1048.0	2341.6	-55	D
3.	Assam	Nagaon	520.2	1060.6	-51	D
4.	Nagaland	Mokokchung	549.0	1650.8	-67	S
5.		Phek	349.0	1240.2	-72	S
6.	Mizoram	Kolasib	272.0	1588.3	-83	S
7.		Lunglei	673.0	1726.4	-61	S
8.	Bihar	Bhojpur	356.2	886.9	-60	S
9.		Purnia	532.9	1220.6	-56	D
10.		Saharsa	572.0	1330.1	-57	D
11.		Sitamarhi	449.1	1039.5	-57	D
12.	Uttar Pradesh	Ambedkar Nagar	118.0	862.9	-86	S
13.		Deoria	382.3	906.7	-58	D
14.		Faizabad	457.8	947.7	-52	D
15.		Farrukhabad	340.7	720.2	-53	D
16.		Fatehpur	97.7	783.5	-88	S
17.		Kannauj	323.7	750.1	-57	D
18.		Kanpur Nagar	233.3	667.5	-65	S
19.		Kanpur Dehat	164.0	729.5	-78	S
20.		Kaushambi	141.5	729.9	-81	S
21.		Kushinagar	240.9	1094.0	-78	S
22.		Lucknow	330.8	737.5	-55	D
23.		Maharajganj	429.2	1165.7	-63	S
24.		Mau	375.7	959.9	-61	S
25.		Rae Bareli	231.0	716.4	-68	S
26.		Sultanpur	397.4	804.0	-51	D
27.		Unnao	320.4	752.7	-57	D
28.		Agra	207.4	663.2	-69	S
29.		Auraiya	224.7	672.8	-67	S
30.		Etah	257.0	597.2	-57	D
31.		Etawah	333.5	704.2	-53	D
32.		Hamirpur	308.3	775.1	-60	S
33.		Jalaun	334.2	748.4	-55	D
34.		Jhansi	377.8	808.0	-53	D
35.		Lalitpur	321.3	916.8	-65	S

36.		Mahoba	249.8	751.4	-67	S
37.		Mainpuri	230.8	632.9	-64	S
38.		Meerut	355.1	749.5	-53	D
39.		Pilibhit	360.1	940.2	-62	S
40.		Rampur	329.8	880.5	-63	S
41.	Uttaranchal	Pithoragarh	798.2	1627.4	-51	D
42.		Ambala	357.7	867.1	-59	D
43.		Fatehabad	99.6	266.9	-63	S
44.	Haryana	Kaithal	165.4	365.8	-55	D
45.		Kurukshetra	234.4	534.7	-56	D
46.		Mahendragarh	171.5	387.0	-56	D
47.		Panchkula	370.7	911.8	-59	D
48.		Rohtak	192.3	494.2	-61	S
49.		Firozpur	91.5	332.2	-72	S
50.	Punjab	Hoshiarpur	293.2	674.6	-57	D
51.		Jalandhar	154.2	516.8	-70	S
52.		Mansa	83.9	310.3	-73	S
53.	Himachal Pradesh	Chamba	621.8	1347.2	-54	D
54.		Lahul & Spiti	88.8	423.4	-79	S
55.	Jammu and Kashmir	Udhampur	590.3	1315.7	-55	D
56.	Daman and Diu	Daman	966.8	2165.6	-55	D
57.	Gujarat	Porbandar	320.5	655.4	-51	D
58.		Kolhapur	802.6	1671.1	-52	D
59.	Maharashtra	Parbhani	342.3	708.2	-52	D

*D- Deficit; S- Scanty*