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Hyderabad

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

Southwest monsoon was vigorous over Jammu Kashmir, Rajasthan and Delhi during last week. During 1 June -16 Aug 2015, the country as a whole received 540 mm rainfall, which is 10% less than the normal (598 mm). The region-wise Southwest Monsoon rainfall status is: East and Northeast India (13% deficit), Northwest India (1% excess), Central India (9% deficit) and South peninsula (21% deficit). Out of 36 meteorological sub divisions in the country, 15 are facing deficit rainfall condition; 16 are under normal rainfall condition and 5 are with excess rainfall condition. Districts which received rainfall less than 50% of normal during 1 June to 16 August were identified and depicted in figure 1. The following is the amount of rainfall received during June 1 - 16 August and contingency measures that are to be followed for the crops/cropping systems in the states mentioned.

A) Deficit rainfall areas

1. Karnataka

South Karnataka

Rainfall situation: North interior Karnataka received 45% deficit rainfall, while coastal Karnataka and south interior Karnataka received 24% and 12% deficit rainfall, respectively.

Progress in sowing: out of the targeted sowing area, 51% of cereals, 56% of pulses, 68% of oilseeds have already been sown. Out of the total targeted area of 73 lakh hectare, 44.75 lakh hectare has been covered (56 %) as on 12 August.

Following are the recommendations

- Maize – Deccan-103, Vijaya composite and Ganga-11
- Sunflower: Modern, KBSH-1, KBSH-41, KBSH-42 and KBSH-44.
- Cowpea: TVX-944, KBC-1, KM-5 and PKB-4 (vegetable purpose)

North Interior Karnataka (NIK)

The total area sown in North Interior Karnataka is 24.59 lakh ha (As on 4th August 2015) and this accounts for 74% of the normal sowing area of 32.36 lakh ha till the date. Only upto 50% of the Normal area has been covered in Bellary, Raichur, Gulbarga, Bijapur and Yadgir districts.

Contingency measures for NIK

- There is no scope for taking up any sowing operation in view of rainfall forecast of poor rainfall.
- Withhold top-dressing till soil moisture conditions improve.

- Keep the crops free from weeds.
- Open conservation furrow after two rows in wider spaced crops and after every 8th row in narrow spaced crops.
- Take up foliar spraying of 0.5 % Potassium Nitrate so as to induce drought resistance in crops.
- Fodder crops should be given preference.

2. Maharashtra

Rainfall situation: Marathwada is facing 48% deficit rainfall; Konkan & Goa-30% deficit, Madhya Maharashtra - 32% deficit; Vidarbha - 5% deficit.

Progress in sowing: 85% of normal kharif sown area is covered in the state as a whole under all the crops as on 14 August. Sugar crops (42%) and cereals (61%) are the least sown crops so far.

Crop contingency measures

Marathwada

- Continue weeding in cotton and soybean.
- Undertake light hoeing or mulching with crop residue to conserve soil moisture in long duration crop like cotton.
- Apply protective irrigation (drip or sprinkler method) to crops like soybean, cotton and sorghum in view of prevailing moisture stress condition.
- Farmers are advised to spray 2% KNO₃ / 2% Urea in cotton crop to reduce rate of transpiration.

Madhya Maharashtra

- Maintain optimum plant population
- Use surface mulch to reduce evaporation loss
- Provide protective irrigation wherever possible

Vidarbha

- Drain out excess water from crop fields and orchards that are waterlogged.
- Unsown areas can be accommodated till this week with pigeon pea (AKT 8811, Vipula, PKV- Tara and BSMR-736 with closer 45x20 spacing
- New plantation of tree/fruit crops and nursery seed sowing for kharif vegetable seedlings (chilli, tomato, brinjal etc.) may be initiated during this period.
- Priority should be given for *in situ/ex situ* rainwater harvesting during the remainder of the season.

3. Andhra Pradesh

Rainfall situation: while Coastal Andhra Pradesh has received 13% surplus rainfall so far, Rayalaseema region is facing 38% deficit rainfall condition.

Progress in sowing: The total area sown in the state of Andhra Pradesh accounts for 47% of the normal kharif season area as on 12 August.

Contingency Crop plan for Andhra Pradesh

- Ananthapuramu and Kurnool districts: In rainfed light soils, farmers can go for sowing of jowar, pearl millet, foxtail millet, pigeon pea, horsegram, castor, cowpea, cluster bean, field bean in the month of August. In rainfed heavy soils, foxtail millet, castor, cotton, chilli up to end of August.
- Chittoor, Nellore and Kadapa districts: Farmers can go for sowing of pigeon pea, jowar, black gram, green gram, castor, cowpea, field bean, sunflower and finger millet (Chittoor) up to end of August in rainfed light soils and Horse gram, Pillipesara and Sunnhemp in rainfed heavy soils.
- Prakasam district rainfed light soils, after receipt of sufficient rainfall in August month farmers can go for pigeon pea, castor and pearl millet crops. In rainfed heavy soils they can go for sowing of cotton, castor, pigeon pea, sunflower and chilli.
- In all the districts, wherever rainfall is received, farmers can go for top dressing of nitrogen fertilizers for cotton (30 kg N/ha), castor (15kg N/ha), sorghum (30 kg N/ha), pearl millet (30 kg N/ha) and foxtail millet (20 kg N/ha) crops.

4. Uttar Pradesh

Rainfall situation: Eastern UP has received 36% deficit rainfall and Western UP has received 27% deficit rainfall so far.

Progress in *kharif* sowing: The total area sown in the state of Uttar Pradesh is 91.71 lakh ha (As on 7 August 2015) and this accounts for 96% of the normal *kharif* season area.

Contingency Crop plan for Central part of Uttar Pradesh

East UP

- Direct sowing of drought resistant paddy varieties like NDR-97, NDR-80, Pant dhan-4, NDR-2064 are advised.
- Intercultural operation in all the standing crops.
- Undertake light hoeing, mulch with crop residue to conserve soil moisture.
- Life saving irrigation can be given, wherever available.
- Sowing of pulses and oilseeds can be taken up.
- Sowing of short duration varieties of pearl millet, black gram and green gram should be done at the earliest.

West UP

- Spray 2% Urea to protect from drought condition.
- Undertake light hoeing, mulch with crop residue to conserve soil moisture.
- Undertake weeding and thinning in green gram, black gram and pigeon pea.
- Due to humid and warm weather in Kanpur region, infestation of bacterial blight and brown leaf spot in rice crops is likely to increase; spray Mancozeb @ 25 g per 10 liters of water.

B) Excess rainfall areas

1. West Bengal

Rainfall status: Gangetic West Bengal has received 34% excess rainfall; Sub-Himalayan West Bengal has received 19% deficit rainfall so far.

Progress in kharif sowing: Transplanting of *Aman* rice has been completed in more than 90% of area under rice cultivation. Crop damaged in 12 districts of West Bengal is about 10.4 lakh ha.

Contingency Crop plan for West Bengal

- All flood prone district farmers are advised to collect rice seedling from non-flooded areas and transplant or gap fill as early as possible. Collect vegetable seed and start seedbed after drainage of excess water.
- In the flood affected area: Go for replanting in the flood affected area (after flood water recedes) with short duration cultivars of rice. Farmers can choose PNR-519, Kalinga, Kalyani, Rasi and Satabdi (IET-4786).
- In flood prone area (those who have not yet planted the crop): Opt for submergence tolerance rice cultivar (e.g. Jaladhi, Jalashree, Plaban).
- Jute farmers who have rice seedling are advised to harvest jute crop and prepare main field for transplanting operation. Transplanting should be done when seedlings will be three weeks old.
- Farmers, who have grown vegetables, are advised to ensure irrigation and make proper drainage channel in the field, particularly in medium and upland.
- In vegetable fields, proper irrigation as well as drainage facility must be provided. Provision of Polythene cover should be assured for seedbed of early cabbage/ cauliflower (which are harvested in November).
- Rejuvenate the low lying areas to store rainwater for jute retting.

2. Madhya Pradesh

Rainfall status: West Madhya Pradesh has received 41% excess rainfall; East Madhya Pradesh has received 13% deficit rainfall.

Progress in kharif sowing: In Madhya Pradesh, 97 % sowing of kharif season crop is complete.

Agromet advisories

- Prepare drainage channels for removing excess water from, soybean, oilseeds, orchards, and other pulse crops.
- In paddy, apply weed control by applying post-emergent application of herbicide , Whipsuperat 250 ml/acre . Also apply nitrogenous fertilizers in paddy crops.
- In green gram and black gram crops, post-emergent application of Pursuit at 250 ml/acre for weed control.
- In soybean, insecticide application of Imidacloprid 17.8 SL at 200 ml/ha for white fly control. For controlling leaf eating caterpillar, apply Triazophos 40 EC at 80 ml/ha as spray on soybean plants.

3. Jammu & Kashmir

Rainfall status: the state has received 22% excess rainfall so far.

Progress in kharif sowing: almost 99% of normal kharif sown area has been covered so far in the state.

Agromet advisories

- To control blast in paddy spray tricyclozole @ 0.06% and to control brown spot spray mancozeb @ 0.25%.
- For control of weeds in paddy crop apply Bispyrebac @ 25-30 gm/ ha in 500 liters of water to the crop between 30-35 days after transplanting when ponded water just disappears from the field.
- Application of 2nd dose of nitrogen fertilizer as top dressing in normal sown maize crop before tassel formation as sufficient moisture is present in the soil.
- Sowing of mixed fodder i.e. legume + cereal (maize, cowpea & chari) at optimum soil moisture conditions.
- In pulse crop do not allow water to stagnate and farmer may go for intercultural operations (thinning, weeding, hoeing) keeping in view the moisture status of fields.

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) and CRIDA (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.

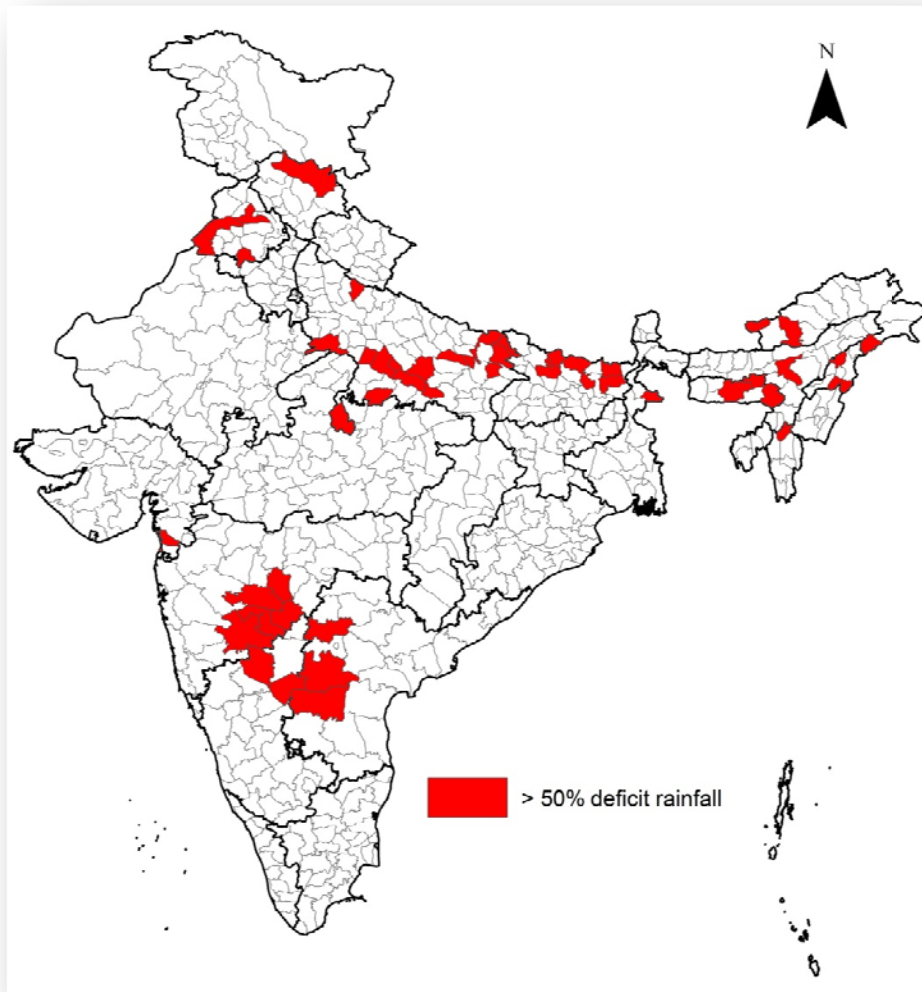


Figure 1: Districts (51) experiencing more than 50% rainfall deficit (From 1 June - 16 August, 2015)

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 16 August 2015

S.No.	State		District	ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
1.	Arunachal Pradesh	1.	East Kameng	223.7	847.4	-74	S
2.		2.	Tawang	685.0	1738.2	-60	S
3.		3.	Tirap	840.6	1710.6	-51	D
4.	Assam	1.	Nagaon	322.3	758.0	-57	D
5.	Meghalaya	1.	Jaintia Hills	1214.0	3403.2	-64	S
6.		2.	Ri Bhoi	474.2	981.6	-52	D
7.		3.	West Khasi Hills	986.0	2016.8	-51	D
8.	Nagaland	1.	Mokokchung	303.0	1279.5	-76	S
9.		2.	Phek	135.0	877.6	-85	S
10.	Mizoram	1.	Kolasib	272.0	1102.0	-75	S
11.	West Bengal	1.	Dakshin Dinajpur	327.7	778.5	-58	D
12.	Bihar	1.	Araria	414.8	902.6	-54	D
13.		2.	Madhubani	285.3	720.5	-60	S
14.		3.	Muzaffarpur	297.2	633.1	-53	D
15.		4.	Purnia	302.5	862.6	-65	S
16.		5.	Saharsa	341.5	979.9	-65	S
17.		6.	Sheohar	270.8	756.0	-64	S
18.		7.	Sitamarhi	177.8	756.0	-76	S
19.	Uttar Pradesh	1.	Ambedkar Nagar	78.0	579.0	-86	S
20.		2.	Deoria	280.3	612.3	-54	D
21.		3.	Faizabad	308.0	645.7	-52	D
22.		4.	Fatehpur	80.8	511.8	-84	S
23.		5.	Kanpur Nagar	183.8	430.5	-57	D
24.		6.	Kanpur Dehat	146.6	464.6	-68	S
25.		7.	Kaushambi	108.1	482.6	-78	S
26.		8.	Kushinagar	186.1	751.1	-75	S
27.		9.	Maharajganj	304.2	816.3	-63	S
28.		10.	Mau	304.7	623.7	-51	D
29.		11.	Rae Bareli	185.4	463.8	-60	S
30.		12.	Sant Kabir Nagar	322.5	663.0	-51	D
31.		13.	Agra	162.7	441.4	-63	S
32.		14.	Auraiya	207.8	435.2	-52	D
33.		15.	Lalitpur	276.3	614.7	-55	D
34.		16.	Mahoba	227.8	496.0	-54	D
35.		17.	Rampur	294.8	613.6	-52	D
36.	Punjab	1.	Firozpur	85.4	236.5	-64	S

S.No.	State		District	ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
37.		2.	Jalandhar	119.7	370.6	-68	S
38.		3.	Mansa	83.9	220.5	-62	S
39.	Himachal Pradesh	1.	Lahul & Spiti	85.6	295.0	-71	S
40.	Daman and Diu	1.	Daman	493.5	1655.1	-70	S
41.	Gujarat	1.	Navsari	635.8	1318.3	-52	D
42.	Maharashtra	1.	Solapur	111.5	250.4	-55	D
43.		2.	Bid	123.1	329.3	-63	S
44.		3.	Latur	163.8	471.1	-65	S
45.		4.	Osmanabad	149.2	358.3	-58	D
46.		5.	Parbhani	164.9	472.3	-65	S
47.	Andhra Pradesh	1.	Mahbubnagar	163.8	336.1	-51	D
48.		2.	Medak	203.6	485.2	-58	D
49.		3.	Kurnool	119.3	259.2	-54	D
50.	Karnataka	1.	Bijapur	81.0	229.5	-65	S
51.		2.	Raichur	91.3	256.3	-64	S