



National Agromet Advisory Service Bulletin

Friday 3rd August 2018
(For the period 3rd to 8th August 2018)



Issued by
India Meteorological Department

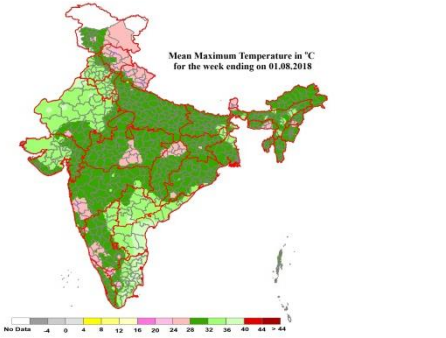
Weblink For

District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>

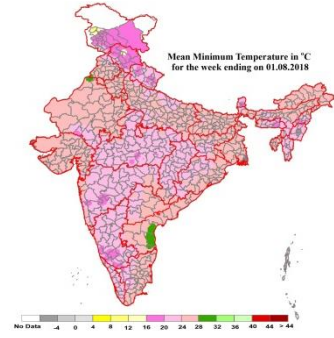
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending on 01.08.2018

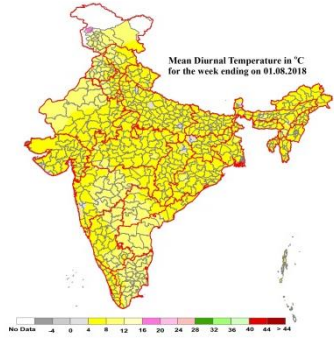
Mean Maximum Temperature (°C) for the week ending on 01.08.2018



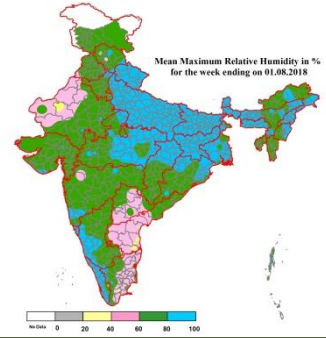
Mean Minimum Temperature (°C) for the week ending on 01.08.2018



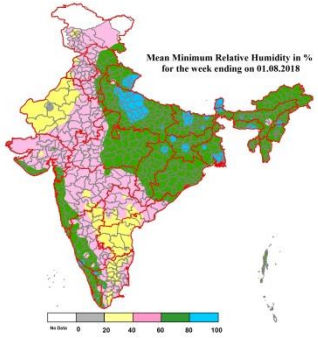
Mean Diurnal Temperature Variation (°C) for the week ending on 01.08.2018



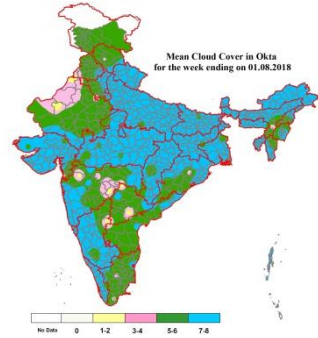
Mean Maximum Relative Humidity (%) for the week ending on 01.08.2018



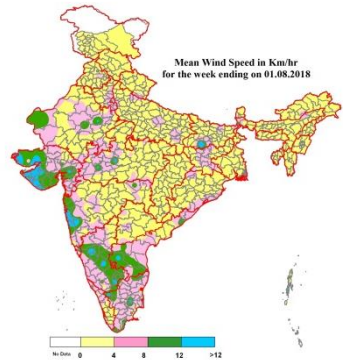
Mean Minimum Relative Humidity (%) for the week ending on 01.08.2018



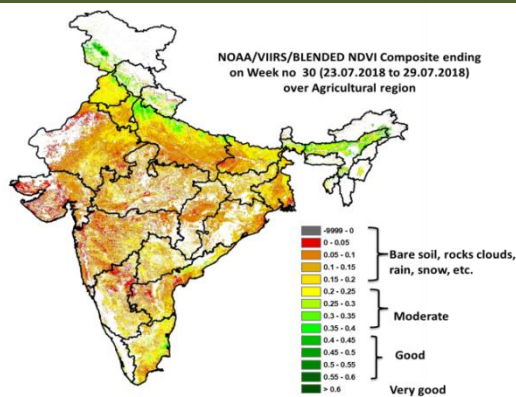
Mean Cloud Cover (okta) for the week ending on 01.08.2018



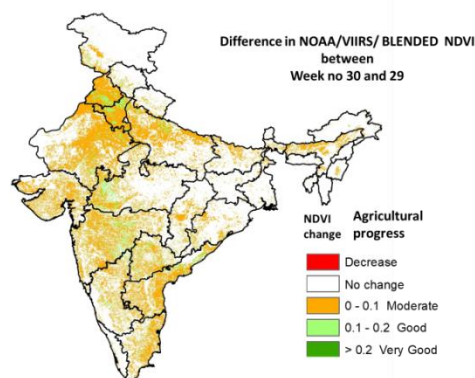
Mean Wind Speed (km/hr) for the week ending on 01.08.2018



NOAA/VIIRS/BLENDED NDVI composite for the week ending on 29th July 2018 over Agricultural regions of India



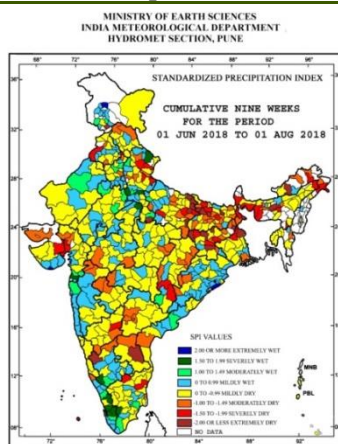
Difference in NOAA/VIIRS/BLENDED NDVI between 22nd July and 29th July 2018



- Agricultural vigour is moderate over many parts of North eastern states & Sub-Himalayan West Bengal; few places over North Coastal Andhra Pradesh, Bihar, Punjab and Haryana, Uttarakhand & adjoining Uttar Pradesh, Jammu & Kashmir & Himachal Pradesh and isolated places over Tamilnadu & adjoining Rayalaseema, Eastern Jharkhand, Gangetic West Bengal, East Rajasthan, West Madhya Pradesh, Maharashtra & Telangana and adjoining North Interior Karnataka. Due to persistent cloud cover, NDVI over crop cover could not be derived in remaining parts of Indian region.

- Good agricultural vigour was noticed in few parts of Punjab, Haryana, Jammu & Kashmir, Himachal Pradesh & Uttarakhand, isolated over Marathwada and adjoining Vidarbha, Telangana, East Rajasthan, Uttar Pradesh, Karnataka, North Coastal Andhra Pradesh, West Madhya Pradesh and Tamilnadu.

**Standardised Precipitation Index
Cumulative 9 weeks for the period 1st June to 1st August 2018**

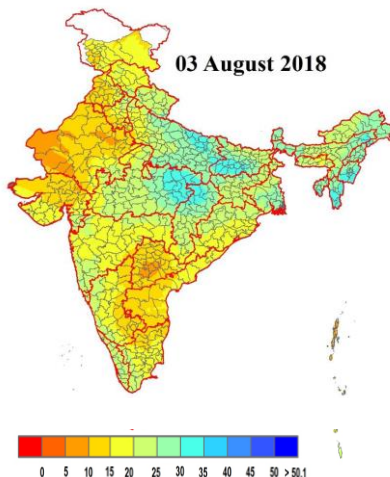


- Extremely/severely wet conditions experienced in Puri district of Odisha; Bandipore district of Jammu & Kashmir; Etah, Mathura districts of Uttar Pradesh; Chamoli district of Uttarakhand; Bhind district of Madhya Pradesh; Valsad district of Gujarat Region; Diu district of Saurashtra, Kutch & Diu; Theni district of Tamil Nadu & Puducherry; Kodagu, district of Karnataka; Ernakulam, Kottayam, Palakkad, Idukki districts of Kerala.
- Extremely/Severely dry conditions experienced in few districts of Arunachal Pradesh; Assam; West Bengal; Jharkhand; West Garo Hills district of Meghalaya; Begusarai, East Champaran, Muzaffarpur, Saharsa, Saran, Siwan, Vaishali districts of Bihar; Azamgarh, Ballia, Chandauli, Deoria, Fatehpur, Kushi Nagar, Mau, Maharajganj, Pilibhit, Rampur, Mahoba districts of Uttar Pradesh; Almora, Garhwal Pauri districts of Uttarakhand; Panchkula district of Haryana; Ferozepur district of Punjab; Udhampur district of Jammu & Kashmir; Ahmedabad district of Gujarat Region; Surendranagar district of Saurashtra, Kutch & Diu; Bastar, Kanker districts of Chhattisgarh; Cuddapah district of Andhra Pradesh; Viluppuram, Krishnagiri districts of Tamil Nadu & Puducherry; Yadgir, Shimoga districts of Karnataka; Lakshadweep district of Lakshadweep.
- Moderately dry conditions experienced in few districts of Arunachal Pradesh; Jharkhand; Bihar; Telangana; Goalpara, Bongaigaon, Morigaon districts of Assam; Aizwal district of Mizoram; Malda, Howrah districts of West Bengal; Bolangir, Nawarangpur, Nawapara districts of Odisha; Faizabad, Ghazipur, Gonda, Jaunpur, Kanpur Dehat, Sonbhadra, Ghaziabad, Jyotiba Phule Nagar districts of Uttar Pradesh; Ambala, Sonapat districts of

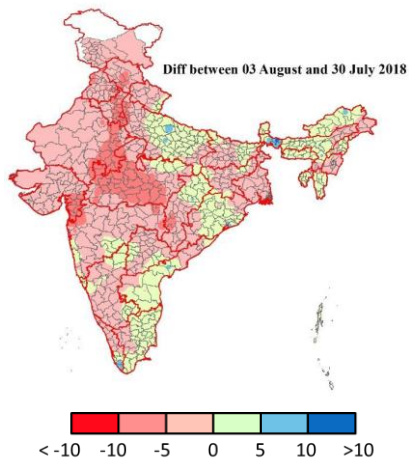
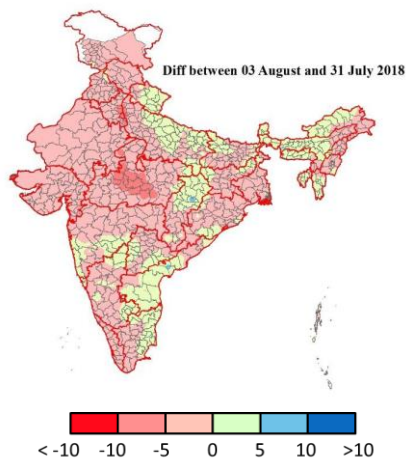
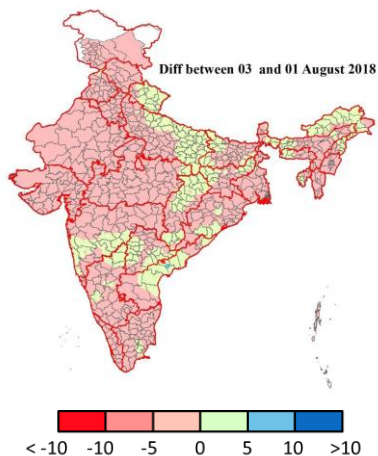
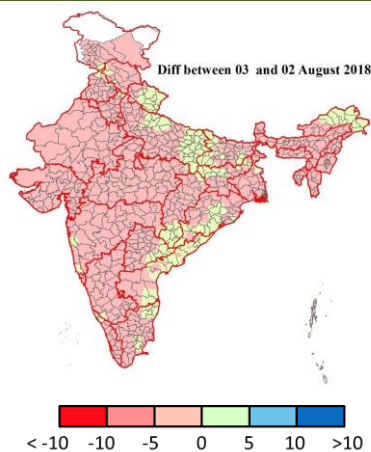
Haryana; Garhwal Tehri, Udham Singh Nagar districts of Uttarakhand; Kapurthala, Mansa districts of Punjab; Chamba, Lahaul & Spiti districts of Himachal Pradesh; Betul, Dhar, Dindori, Anuppur districts of Madhya Pradesh; Mehsana, Patan districts of Gujarat Region; Kutch district of Saurashtra, Kutch & Diu; Dhule, Nandurbar, Aurangabad, Jalna, Buldhana districts of Maharashtra; Janjgir, Jashpur, Raigarh, Rajnandgaon districts of Chhattisgarh; Prakasam, Kurnool districts of Andhra Pradesh; Nagapattinam district of Tamil Nadu & Puducherry; Haveri, Raichur, Bellary districts of Karnataka; Kasargod district of Kerala.

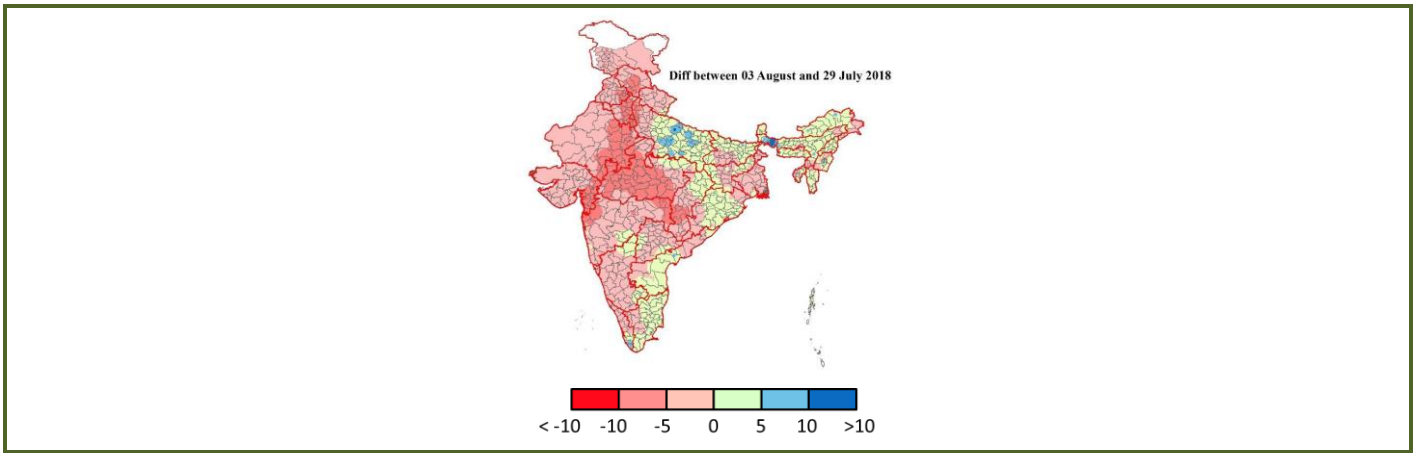
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

Daily Soil Moisture (mm) for 3rd August 2018 (ending at 0830 IST) for 60 cm depth

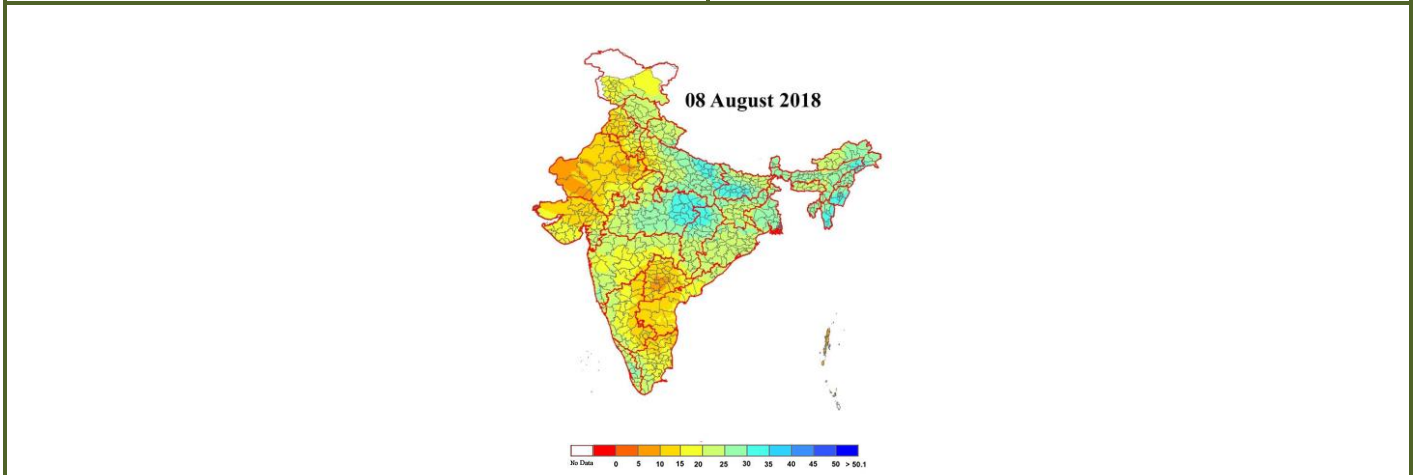
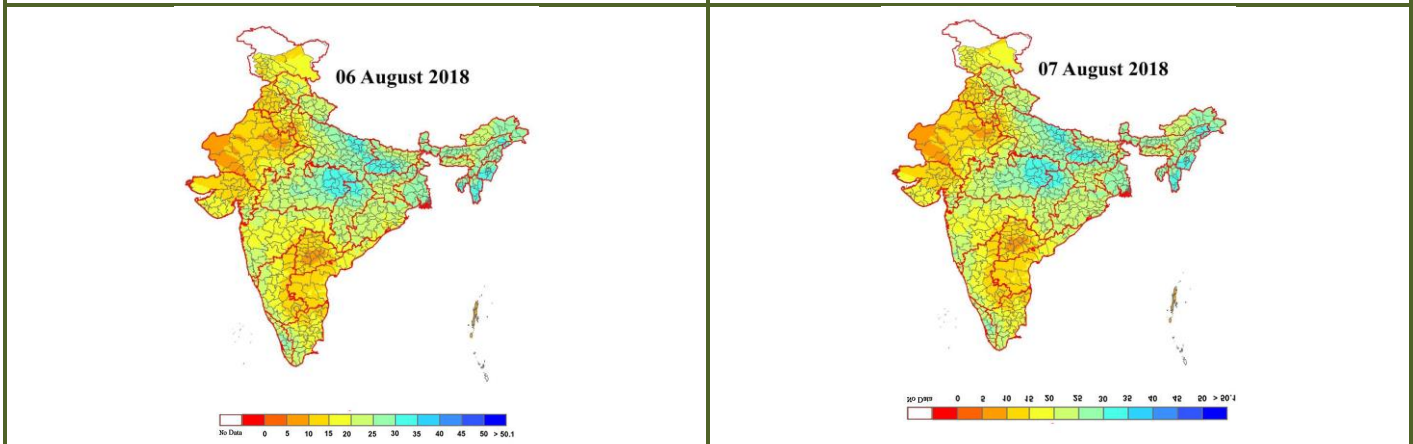
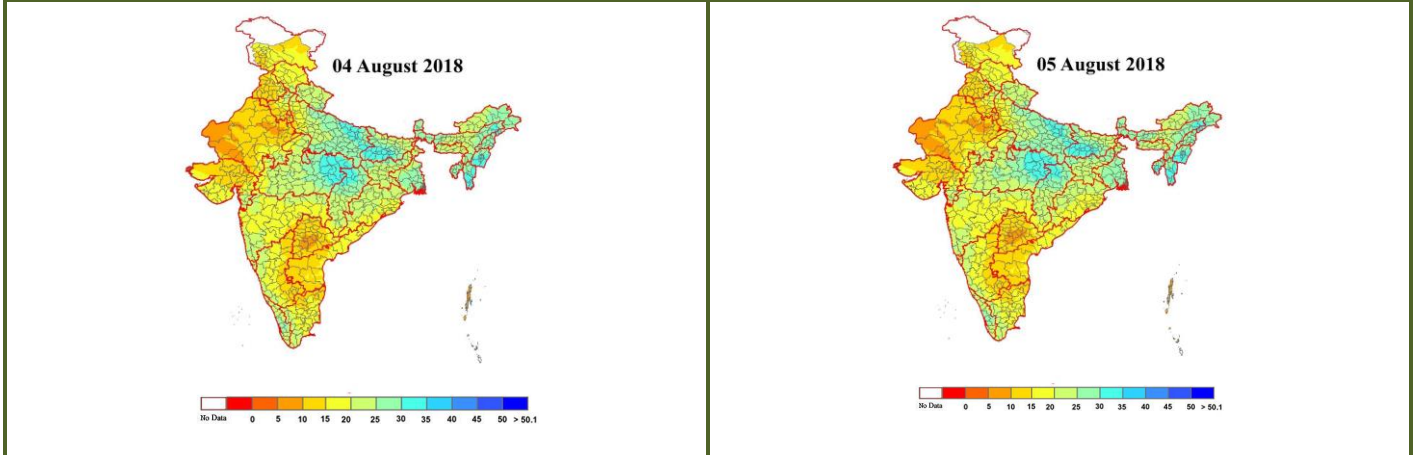


Difference of Soil Moisture (mm) for 60 cm depth





Forecasted Soil Moisture (mm) from 4th to 8th August 2018 (ending at 0830 IST) for 60 cm depth



Monsoon forecast for second half of Southwest Monsoon

- Rainfall during August, 2018 is likely to be 96±9% of LPA and expected to be higher than that predicted in June.
- Quantitatively, the rainfall for the country as a whole during the second half of the season (August & September) is likely to be 95% of LPA with a model error of ±8%.

Weather Forecast for next 5 days valid upto 0830 hours of 8th August 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- No significant change in maximum and minimum temperatures over most parts of the country during next 48 hours.

5 Day Rainfall Forecast (Mid day) 3rd August 2018

Met-Sub-Division	03-Aug Today	04Aug Sat	05Aug Sun	06Aug Mon	07Aug Tue
1. Andaman & Nicobar Islands	FWS	FWS	FWS	FWS	FWS
2. Arunachal Pradesh	WS	FWS	FWS	FWS	FWS
3. Assam & Meghalaya	FWS	FWS	FWS	FWS	WS
4. N. M. M. & T.	FWS	FWS	FWS	FWS	WS
5. S.H. West Bengal & Sikkim	WS	WS	WS	FWS	FWS
6. Gangetic West Bengal	FWS	FWS	WS	WS	FWS
7. Odisha	SCT	SCT	FWS	WS	FWS
8. Jharkhand	FWS	FWS	WS	WS	FWS
9. Bihar	WS	WS	FWS	FWS	SCT
10. East Uttar Pradesh	WS	FWS	FWS	FWS	FWS
11. West Uttar Pradesh	SCT	SCT	SCT	FWS	FWS
12. Uttarakhand	WS	WS	WS	WS	WS
13. Haryana, Chd & Delhi	ISOL	ISOL	SCT	FWS	FWS
14. Punjab	ISOL	ISOL	ISOL	SCT	FWS
15. Himachal Pradesh	ISOL	WS	FWS	WS	WS
16. Jammu & Kashmir	DRY	ISOL	SCT	FWS	WS
17. West Rajasthan	DRY	DRY	DRY	ISOL	SCT
18. East Rajasthan	ISOL	ISOL	ISOL	SCT	FWS
19. West Madhya Pradesh	ISOL	ISOL	ISOL	SCT	FWS
20. East Madhya Pradesh	ISOL	ISOL	SCT	FWS	WS
21. Gujarat Region	ISOL	ISOL	ISOL	ISOL	SCT
22. Saurashtra & Kutch	ISOL	ISOL	ISOL	ISOL	SCT
23. Konkan & Goa	WS	WS	WS	WS	WS
24. Madhya Maharashtra	SCT	ISOL	ISOL	SCT	SCT
25. Marathwada	ISOL	ISOL	ISOL	ISOL	SCT
26. Vidharbha	ISOL	ISOL	ISOL	SCT	SCT
27. Chhattisgarh	SCT	SCT	SCT	WS	FWS
28. Coastal Andhra Pradesh	SCT	SCT	ISOL	ISOL	ISOL
29. Telangana	ISOL	ISOL	ISOL	ISOL	SCT
30. Rayalaseema	ISOL	ISOL	ISOL	ISOL	ISOL
31. Tamilnadu & Puducherry	SCT	ISOL	ISOL	ISOL	ISOL
32. Coastal Karnataka	WS	WS	WS	WS	WS
33. North Interior Karnataka	SCT	ISOL	ISOL	ISOL	SCT
34. South Interior Karnataka	SCT	SCT	SCT	FWS	WS
35. Kerala	FWS	FWS	FWS	WS	WS
36. Lakshadweep	SCT	SCT	SCT	SCT	WS

% Station Reporting Rainfall

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)
No Rain	Dry		

Weather Warning during next 5 days

- **03 August (Day 1):** Heavy to very heavy rain at isolated places very likely over East Uttar Pradesh heavy rain at isolated places likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal, Jharkhand, Bihar, West Uttar Pradesh, Uttarakhand, East Madhya Pradesh and Konkan & Goa. Rough to very rough Sea conditions are likely to prevail along & off Gujarat coast. Fishermen are advised not to venture into sea over this area.
- **04 August (Day 2):** Heavy rain at isolated places very likely over Uttarakhand, Uttar Pradesh, Assam &

Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Konkan & Goa. Rough to very rough Sea conditions are likely to prevail along & off Gujarat coast. Fishermen are advised not to venture into sea over this area.

- **05 August (Day 3):** Heavy rain at a few places with very heavy at isolated places very likely over Uttarakhand and heavy rain at isolated places very likely over Himachal Pradesh, Uttar Pradesh, Jharkhand, Gangetic West Bengal, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **06 August (Day 4):** Heavy to very heavy rain at isolated places likely over Uttarakhand and Jharkhand and heavy rain at isolated places likely over Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Chhattisgarh, West Bengal, Odisha, Konkan & Goa, Coastal & South Interior Karnataka and Kerala. Rough to very rough Sea conditions are likely to prevail along & off Odisha-West Bengal coasts. Fishermen are advised not to venture into sea over this area.
- **07 August (Day 5):** Heavy rain at isolated places likely over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Rajasthan, East Madhya Pradesh, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Coastal & South Interior Karnataka and Kerala. Rough to very rough Sea conditions are likely to prevail along & off Odisha-West Bengal coasts. Fishermen are advised not to venture into sea over this area.

Weather Outlook for subsequent 2 days from 8th to 10th August 2018

- Fairly widespread to widespread rainfall likely over Western Himalayan region, northern plains, East & Northeast India and also along the west coast & Islands.
- Isolated to scattered rainfall likely over rest parts of the country.

Salient Advisories

- Rough to very rough Sea conditions are likely to prevail along & off **Gujarat coast** during 4th and 5th and along & off **Odisha-West Bengal** coasts during 6th & 7th August. Fishermen are advised not to venture into sea over these areas.
- In **Kerala**, clear drainage channels and drain out flood water from paddy fields in Kottayam, Idukki, Ernakulam, Alappuzha and Pathanamthitta districts. To control soft rot in ginger, drench the soil with 1% Bordeaux mixture or 0.3% Mancozeb.
- In **Gangetic West Bengal**, complete transplanting of Aman wet seeded paddy within the first week of August. In Coastal Saline Zone, if main field is flooded, arrange for drainage facilities to remove excess water, wait for 2-3 days till the water is drained out and then start transplanting of rice.
- Utilising the realized and expected rainfall, continue transplanting of rice with 21-25 days old seedling in **Bihar**. Complete sowing of sesame, soybean, urad bean and cowpea in uplands and transplanting of rice in **Jharkhand**. Continue transplanting of rice in **Assam** and **Arunachal Pradesh**. In **North Gujarat**, undertake sowing of castor and in **Saurashtra & Kutch**, undertake sowing of castor, sorghum and cluster bean.
- In **Royalaseema**, farmers who have not taken up groundnut sowings till now are advised to sow alternate crops like bajra, redgram, castor and korra during August after receiving the rains.
- In North Bank Valley Zone of **Assam**, farmers of flood affected areas are advised to collect short duration HYV rice varieties like Luit, Kapili, Kolong, Dishang etc. These varieties can be transplanted or sown within 1st week of September. Long duration improved cultivars with staggering ability like Gitesh can be transplanted up to 20 August. Local cultivars like Monohar Sali, Andrew Sali and improved cultivar Prafulla can also be transplanted up to 31 August with aged seedlings. (60 to 90 days).
- In **Kerala**, due to continuous rain, there is a chance of Erwinia rot disease in banana. Proper drainage should be ensured and as a precautionary measure, apply lime in the banana basin. To improve the disease resistance, drench the basin with Pseudomonas @ 20g per litre of water. Affected plants can be protected by drenching the basin with 3 g Copper oxychloride or 2g Copper hydroxide per one litre of water.

SOUTH INDIA [TAMIL NADU, TELANGANA, ANDHRA PRADESH, KARNATAKA, KERALA]

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala, all districts of Coastal Karnataka, Chikamangaluru, Kodagu and Shivamogga districts of South Interior Karnataka, Vizianagaram district of Coastal Andhra Pradesh, J. Bhupalpally district of Telangana, Kanchipuram and Kanyakumari districts of Tamil Nadu and Puducherry during the week. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most places over Coastal Karnataka during the period, at most/many places over Kerala during the period, over South Interior Karnataka on 6th and 7th, along with heavy rain at isolated places over Coastal & South Interior Karnataka and Kerala on 6th and 7th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
 - **Kerala:**
 - Clear drainage channels and drain out flood water from paddy fields in Problem Area Zone. In low lying areas strengthen the bunds to protect paddy fields from flood water. Abnormal leaf fall in rubber may reduce yields. Spray 1% Bordeaux Mixture when rain stops. Tapping can be resumed in rubber plantations. Repair damaged rain guard and take care of tapping panels.
 - Due to continuous rain and cloudy condition, there is a chance of leaf folder attack in paddy. Use 2CC trichogramma cards per acre to control leaf folder and stem borer. Cut the cards in to small pieces and fix in different parts of the field in plastic cups. If the attack is severe, spray Chlorantraniliprole 3ml per 10 litre of water. To control blast disease in paddy, apply Carbendazim (Bavistin) 1gm or Iprophenphos (Kitazin EC) 1ml/litre of water. To control soft rot in ginger, drench the soil with 1% Bordeaux mixture or 0.3% Mancozeb. There is a chance of aphids in cowpea. Apply 2% neem oil garlic emulsion.
 - Due to continuous rain, there is a chance of Erwinia rot disease in banana. Proper drainage should be ensured. As a precaution, apply lime in the banana basin. To improve the disease resistance, drench the basin with Pseudomonas @ 20g per litre of water. Affected plants can be protected by drenching the basin with 3 g copper oxychloride or 2g copper hydroxide per one litre of water. Spraying can be made more effective by adding 6g of streptomycin in 20 litre of spray solution prepared. Undertake plant protection methods after current spells of rain.
 - **Andhra Pradesh:**
 - In Coastal Andhra Pradesh, apply supplementary irrigation to red gram at sowing to vegetative stage. Carry out main field preparation, clean the field bunds and remove the grasses/stubbles, if any, on the field bund to overcome the problem of rodents. For direct sown paddy, apply 16 kg urea as first top dressing at 20 DAS.
 - In Rayalaseema, continue sowing of recommended/high yielding varieties of red gram, castor, korra and bajra after necessary seed treatment. Rainfed groundnut is at vegetative stage to pegging stage. Due to continuous dry spell and high temperatures the crop is wilting. Provide one protective irrigation with sprinklers or rain guns wherever possible and spray 2% urea solution or 0.5% 19:19:19 on the crop. Farmers who have not taken up groundnut sowings till now are advised to sow alternate crops like bajra, redgram, castor and korra in the month of August after receiving the rains.
 - Spray Monocrotophos @ 320 ml / Acephate @ 300 grams / Fipronil 400 ml per acre for management of leaf hopper/aphids/thrips infestation in BT cotton. Whiteflies in BT cotton can be effectively controlled by NSKE @ 5% or by setting up of yellow sticky traps @10 per acre. Spray Monocrotophos 320 ml or Dimethoate 400 ml or Imidachloprid @ 40 ml per acre for sucking pests in groundnut on a non rainy day.
 - **Telangana:**
 - In view of the low soil moisture content and forecast of light rains at isolated places, take up inter cultivation to conserve soil moisture in rainfed crops, postpone the top dressing of fertilizers and take control measures against sucking pests. Complete the sowing of paddy nurseries of Telangana Sona (RNR 15048) and other short duration rice varieties by 05th August. Apply Carbofuran 3 G @ 800 g /200sq.m. (2 Guntas) to rice nurseries one week before pulling nursery. Take-up nursery sowing of tomato, brinjal and chillies. Continue sowing of jowar, castor, red gram and sunflower. Take up sowing of Maize using short duration cultivars in ridge and furrow method. Time to take up raising nursery in tomato, brinjal & chilli.
 - Prevailing weather conditions are congenial for the incidence of sucking pests in cotton. To prevent the pests, apply Monocrotophos and water in 1:4 ratio with a soft brush on tender part of the stem for 30 days old crop. Prevailing weather conditions are favorable for development of leaf spot disease in bhendi, tomato and brinjal. To Control, spray Propineb @ 2g per liter of water. The prevailing weather conditions are congenial for incidence of sucking pests in vegetables. To control, spray Fipronil @ 2ml or Thiomethoxim @ 0.3g per litre of water.
 - **Tamil Nadu:**
 - Take up ploughing of paddy fields using the released water for Samba rice transplanting with long duration

varieties. Dry seeding with seed drill can also be taken up. By using release of water Sow daincha or sunhemp seeds in time and incorporate before flowering (35-40 days) stage. Provide support to banana plants and sugarcane. Considering the favorable soil moisture, land preparation and sowing may be initiated for irrigated winter Cambodia cotton. Germination of rain fed cotton is affected due to high soil moisture. Farmers are requested to raise seedlings in polythene bags and these seedlings may be transplanted to maintain the plant population at later stage. Take up sowing of black gram variety VBN-8 during this Aadi pattam under rain fed condition to control yellow vein mosaic virus and to get maximum yield. Do seed treatment with Pseudomonas before sowing to control root rot disease which occur during initial stage of the crop. Irrigate banana fields to avoid wilting.

- Occurrence of stem borer and rice hispa is being noticed in the kuruvai paddy. To control this pest, spray Chlorophyriphos @ 500 ml/200 litre of water for one acre. For maggots in Kuruvai paddy apply Catap Hydrochloride @ 7.5 kg per acre. To control the incidence of sucking pest in the vegetable crops, spray neem seed kernal extract 5%. To control leaf miner in citrus fields, spray Malathion @ 1 litre/ha. Fenvalerate 0.2ml or Dimethoate [Rogor] 2ml/1 lt or spray 50 ml NSKE/1 litre of water.

- **Karnataka:**

- In Coastal Karnataka, drain out excess water from standing crop fields. Complete transplanting of rice. Undertake intercultural operations in 25-35 days old maize and cotton crops after current spells of rain.
- In South Interior Karnataka, continue intercultural operations in green gram, groundnut, sesame, maize and red gram crop on a non rainy day. Undertake thinning operation for better availability of scarce soil moisture to the reduced population of crop plants. Continue transplanting of rice and ragi. Due to cloudy weather, there is chance of flower drop in cotton; spray Planofix @ 1.0 ml in 4.5 liters of water. Apply Zinc Sulphate @ 8kg /acre to overcome Zinc deficiency in rice growing fields. Undertake plant protection measures on a non rainy day.
- In North Interior Karnataka, continue nipping/trimming operation in pigeon pea (40-45 days old crop). Continue intercultural operations in pigeon pea, soybean and maize crops to conserve soil moisture. Apply irrigation in sugarcane as per requirement. Under drill sown paddy condition if the rain fall is scarce, apply irrigation through channel water or any other source if hair cracks are observed. Spare some land exclusively for fodder crops or give preference for grain cum fodder crops.
- In North Interior Karnataka, to manage sucking pests in cotton, pigeon pea, groundnut, spray Imidachloprid @ 0.3 ml or Thiomethoxam 0.25 g dissolved in one liter of water in clear weather.

- **Animal Husbandry**

- In Kerala, there are chances of contagious disease during monsoon season. Take vaccination from nearby veterinary clinics.
- In Tamil Nadu, to control ticks, spray Butox (2ml butox per liter of water) to avoid spread of haemoprotozoan infection in cattle. Avoid grazing of animals near ponds and lakes to avoid fluke infestation. Sheep and goat should be dewormed by using suitable anti-helminthic by consulting with local veterinary doctor. Dry fodder and feed ingredients used for the preparation of concentrate mixture should be stored in a damp proof area to avoid aflatoxin development. Coconut leaves or paddy straws may be spread over the roof of the animal shed and spray water to avoid heat stress to the animals.

NORTHEAST INDIA [ARUNACHAL PRADESH, NMM&T, ASSAM, MEGHALAYA]

Realised Rainfall: Rainfall occurred in all districts of Arunachal Pradesh except Dibang Valley, Lower Dibang Valley, Upper Subansari and West Siang, all districts of Assam except Darrang, Dhemaji, Dhubri and Morigaon, in all districts of Meghalaya, Champhai, Kolasib, Lunglei and Serchhip districts of Mizoram, Imphal East, Imphal West and Senapati districts of Manipur, Dimapur, Kohima, Mon and Wokha districts of Nagaland and in North Tripura and South Tripura districts of Tripura during the week. Weather remained mainly dry over rest of the region.

- **Advisories:**

- As rain/thundershowers likely at most/many places over Nagaland, Manipur, Mizoram & Tripura, Assam & Meghalaya and Arunachal Pradesh during the period, along with heavy rain at isolated places over Nagaland, Manipur, Mizoram & Tripura, Assam & Meghalaya from 3rd to 5th and on 7th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
- **Arunachal Pradesh:**
- Continue transplanting of rice from nursery bed to the main fields. The uprooted seedlings should be washed and then the root portion is to be dipped in 0.02% solution of Chlorpyriphos (1 ml/litre of water) along with 1% urea (10g/litre of water) for 3 hours to protect the seedlings from stem borer, gall midge and hoppers. Carry out harvesting of Jhum rice on clear sunny days.
- Spray Azadirachtin 0.15%EC @ 6ml/litre of water against Grasshoppers inb French beans at pod formation stage. Spray of Imidacloprid 17.5 SL @ 1ml/ 10 litres of water for aphids in bhindi crop at fruiting stage.

- **Assam:**
 - Continue transplanting of Sali rice seedlings in the main field. In case of short duration, high yielding varieties the age of seedlings during the time of transplanting should be 21 days and for of long duration varieties the age of seedling should be 30-40 days. Prior to transplanting, it is advised to wash the uprooted seedlings and dip the root portion in 0.02% solution of Chlorpyrifos 20 EC (1 ml/lit of water) along with 1% urea (10g/lit of water) for 3 hours as protective measure against stem borer, gall midge and hoppers.
 - In North Bank Valley Zone, farmers of flood affected areas are advised to collect short duration HYV rice varieties like Luit, Kapili, Kolong, Dishang etc. These varieties can be transplanted or sown within 1st week of September. Long duration improved cultivars with staggering ability like Gitesh can be transplanted up to 20 August. Local cultivars like Monohar Sali, Andew Sali and improved cultivar Prafulla can also be transplanted up to 31 August with aged seedlings. (60 to 90 days).
 - Undertake sowing of finger millet varieties like INR 1008, TANU-9 or other local varieties in sandy loam soil. Prepare land to sow seeds of green gram and black gram. Select high lands having sandy-loam textures for the crop. The recommended varieties of green gram are T-44, Kopergaon, K-851, ML-56, ML-131 etc. Recommended varieties of black gram are T-9, T-27, Pant U-19, T-122. Remove excess water from ginger and turmeric fields. Complete the sowing of summer bottle gourd seeds within this week. Select recommended varieties like, Pusa Summer Prolific Long, Pusa Summer Prolific Round, Pusa Meghdoot for summer crop. Carry out harvesting and retting of capsularis jute at pre-flowering stage (120 days after sowing) to get better quality fibre. Early and timely sown capsularis jute may be harvested during this week and kept in the field in standing position for 3-4 days before retting for proper defoliation. Provide mechanical support to chilli plants.
 - In view of scanty rainfall, regular scouting and monitoring of crop against leaf eating insects should be done. Against case worm and leaf folder in paddy field, apply Chlorpyrifos @ 2 ml/lit of water in fair weather. To control leaf spot disease in rice, spray of Carbendazim @ 0.5g/litre of water at first appearance after current spells of rain followed by 4 sprays at 30 days interval.
- **Meghalaya:**
 - Use 25-30 days old Sali/Kharif rice seedling for transplanting. Transplant 2-3 seedlings per hill. After transplanting maintain a thin layer of stagnating water in the field. Keep 5cm of standing water in the field. Keep the field free of weeds. Harvest chilli, brinjal and okra fruits regularly. Provide drainage and carry out weeding and earthing up in ginger, turmeric and cucurbit fields. Undertake sowing of improved varieties of French bean and cowpea.
- **Manipur:**
 - Maintain 5-8cm water level in the kharif rice field. Carry out weeding at tillering stage after the rains. Carry out weeding and earthing up and provide drainage in soybean and groundnut crops. Plant banana in newly constructed ring bands or bank of rivers/ ponds at a spacing of 2.7m x 3m for tall varieties and 1.8m x 2.4m or 1.8m x 2.4m for dwarf varieties.
 - Spray Lambdacythothrin @ 15 ml/ pump for thrips and leaf folder in kharif rice. Spray Carbendazim @ 0.5g / litre of water to control Tikka disease in groundnut. Spray Dichlorovos 76 EC 0.05% @ 0.6ml/ litre of water against hairy caterpillars in black gram and rice bean crops after current spells of rain.
- **Mizoram:**
 - Transplant 2-3 seedlings of kharif rice in one place to avoid gap filling. Spacing should be 20 cm row to row and 15 cm plant to plant. Keep some seedlings in nursery or corner of the field for gap filling Undertake raising seedlings of Khasi mandarin, acid lime, star fruit, plum and peach. Transplant seedlings in secondary bed or polythene bags at 4-6 leaves stage. Harvest mature cobs of Jhum maize. Maintain proper drainage in passion fruit, coffee, rubber and oil palm plantations and in maize, pulses and paddy fields. Undertake planting of ginger and turmeric crops after treating rhizomes with Thiram @ 4 g per kg seeds. Undertake planting of rubber at newly established place.
 - In large gardens of cucurbitous crops, apply Carbaryl 0.2 per cent or Malathion 0.15 per cent suspension containing sugar or jaggery at 10 g/litre of water at fortnightly intervals at flowering and fruit initiation against fruit fly/pumpkin beetle after current spells of rain.
- **Tripura:**
 - Carry out weeding in Aman rice field at tillering stage (three weeks after transplanting). For better pod formation in groundnut, apply two hand weedings along with earthing up at 20 and 40 days after sowing.
 - For initial stage attack of yellow stem borer in Aman rice, spray of Neem seed kernel. If the attack is more than thresh hold limit than application of insecticide is necessary. Apply Chloropyrophos/ Fipronil/ Imidachlopride. Cloudy and humid weather is conducive for the attack of Leaf Curl disease in Summer Brinjal, Chilly etc. To manage the attack, apply Imidachloprid @ 2ml per liter of water. For the attack of Gundhi Bug in Aus and Jhum rice, remove the weeds in the vicinity of paddy and collect bugs by hand netting. If infestation is more than THL, i.e. 16 bugs per 100 ear heads, apply Fipronil 1 ml per liter of water.

- **Nagaland:**

- Carry out earthing up in soybean, ginger and turmeric field. Carry out timely harvesting in cucurbits and okra.
- Remove infested okra and brinjal fruits and shoots regularly and destroy them. Monitor TRC/WRC paddy against brown spots.

- **Animal Husbandry**

- Keep the poultry house well ventilated during the day time. Change litter periodically and provide fresh and clean drinking water. Vaccinate poultry birds against Coccidiosis, Ranikhet and Gamboro diseases. De-worming chickens/ducks against Helminth parasites using Piperazine liquid @ 30-40ml for 100 birds in drinking water. Again give half of the dose on second day. Select improved variety like Kamrupa, Vanraja, Rainbow rooster etc. for backyard poultry rearing. These improved species can lay more number of eggs within a short period of time.
- De-worm pigs/piglets using Piperazine @ 3-6 ml/ 10 kg body weight orally once only. Deworm goat and sheep against Fascioliasis using Oxyclonazide @ 15 mg/ kg body weight. Vaccinate pigs against FMD & swine fever and cattle/sheep/goat against FMD, Hemorrhagic Septicaemia, Black Quarter, etc.
- Carry out periodic cleaning of cowsheds along with the feeding pans during the rainy season to prevent fungal and bacterial infections. Give Dairy animals a balanced feed so that their milk production capacity is enhanced.

- **Fishery**

- For carp culture, maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime/Green AQ for maintaining good quality water. Make culture water fresh and clean with high oxygen content. Provide feed 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral

EAST INDIA [JHARKHAND, BIHAR, ODISHA, WEST BENGAL & SIKKIM, ANDAMAN & NICOBAR ISLANDS]

- **Realised Rainfall:** Rainfall occurred in North and Middle Andaman districts of Andaman and Nicobar Islands, all districts of Bihar, all districts of Jharkhand, all districts of Odisha except Bolangir, Ganjam, Nawapara and Nawarangapur, all districts of Sub-Himalayan West Bengal & Sikkim, all districts of Gangetic West Bengal during the week. Weather remained mainly dry over rest of the region.

- **Advisories:**

- As rain/thundershowers likely at most/many places over West Bengal & Sikkim, Jharkhand and Andaman & Nicobar islands during the period, over Bihar from 3rd to 6th and at many places over Odisha from 5th to 7th August, along with heavy rain at isolated places over Sub-Himalayan West Bengal & Sikkim on 3rd & 6th, over Jharkhand on 3rd and 7th, over Bihar on 3rd and over Gangetic West Bengal and Odisha on 5th & 6th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
- Rough to very rough Sea conditions are likely to prevail along & off Odisha-West Bengal coasts on 6th & 7th August. Fishermen are advised not to venture into sea over this area.

- **Odisha:**

- Continue transplanting of rice. Apply pre-emergence weedicide Bensulfuron methyl+Pretilachlor@10kg/ha or Pyrazosulfuron Ethyl @20g a.i./ha at 3 to 4 days after transplanting.
- In North Central Plateau Zone, go for bushening of direct sown paddy in medium and low land if past 21 days stage. Apply 35 kg Urea per acre at bushening followed by weeding and gap filling. Drain out the excess water at the time of fertilizer application and pond it again after one day. Continue sowing of arhar, green gram, black gram and cowpea.
- Weed infestation is noticed in direct seeded rice at tillering stage. To control all categories of weeds at two to three leaf stage, spray Bispyribac sodium 10%SC or Penoxsulam21.7%SC @20g a.i. ha-1 in 500 litres of water on a non rainy day.
- Wrapping and propping should be done in 4-5 months old in medium and late duration varieties of sugarcane. To control early shoot borer, spray Chloropyriphos or Quinalphos @ 400 ml/ac in 200 litres of water on a non rainy day.

- **Bihar:**

- Continue transplanting of rice with seedling of 21-25 days old. Application of 132 kg DAP and 67 kg Murate of potash per hectare after final filed preparation should be given, 2-3 days after transplanting for control of weeds, apply Butachlor @ 3 lit/ha with 600-700 lit. of water or mix with sand.
- As adequate soil moisture is available in fields, undertake sowing of pulses crop (Arhar,Mung,Urd) in upland situation, seed rate 8-10 kg per ha for Arhar and var. Malviyae arhar,Narendra arhar-1,Pusa -9 , Seed rate for urd 14-15 kg / ha , var.-Pant urd 30,31,35 and shekhar , Seed rate for mung 12-15 kg /ha,var.HUM-16 should be preferred, before sowing seed of all types crop should be treated with captan or Bavistin @ 2.5 g /kg of seed or rhizobium culture should be applied.

- Continue transplanting of onion, early cauliflower, tomato, chilli and brinjal on raised bed of the field. Seed should be treated with Captan @ 2 g/kg of seed. Farmers are advised to apply 10-15 tonnes of cow dung and also apply 60 kg N, 50 kg Phosphorus and 40 kg potassium per hectare before final preparation of beds.
- Present weather condition is congenial for cut worm attack in the maize fields, apply Chlorpyrifos @ 2ml per litre of water or Furadon 4-5 granules per whorl of the maize plants if noticed after current spells of rain.
- **Jharkhand:**
- Complete sowing of groundnut, soybean, sesame, urad bean and cowpea in uplands. Undertake cultivation of sweet potato with improved varieties with ridge and furrow method. Provide adequate drainage in ginger, turmeric and yam fields.
- Direct seeded Finger millet is at vegetative stage and due to hot and humid weather, population of different leaf eating and soil borne insects are likely to increase. Monitor the crops and plant protection measures have to be ensured. Maintain adequate soil moisture level in transplanted Finger millet is at establishment or early vegetative stage. If attack of aphids are noticed, go for spraying of Dimethoate @ 1 ml per litre of water after current spells of rain.
- **West Bengal:**
- In the Sub-Himalayan West Bengal, undertake main field preparation and transplanting of rice. Use 2 ton compost per acre and mix them well while preparing the land. Apply 11kg Urea, 62.5kg SSP and 16.5 kg MOP per acre at the time of land preparation. Transplant 3-4 healthy seedlings per hill at 20 x10 cm spacing. Provide proper drainage facility in soybean, ginger and turmeric fields. Carry out weeding in large cardamom field. Harvest mature cobs of Maize and mature fruits of round chilli. Keep the Jute plants bundle submerged in fresh & flowing water with concrete or stone stack for good quality fiber.
- In Gangetic West Bengal, complete the transplanting of Aman wet seeded paddy within the first week of August. In Coastal Saline Zone, if main field is flooded, arrange for drainage facilities to remove excess water, wait for 2-3 days till the water is drained out and then start transplanting. Make arrangements for proper air circulation in the betel garden. Carry out land preparation for kharif bhindi. Undertake transplanting of chilli, brinjal and early cauliflower in raised beds. Proper drainage should be maintained in the field. Remove excess water from the vegetable fields.
- In Sub-Himalayan West Bengal, for the management of cucurbitaceous fruit fly population, use pheromone traps along. For management of brinjal fruit & shoot borer, spray Coragen 18.5% E.C @ 0.5 ml/litre of water after clipping off all the infested twigs, flowers, buds, fruits etc.. To control of chilli leaf curl, spray Imidachloropid @ 0.2ml/liter of water at evening hours after current spells of rain. For the management of rice stem borer and gall midge apply Furadon 3G @ 12 Kg per acre at the time of main field preparation. To prevent wilting in tomato, brinjal and okra, remove excess water and apply any fungicide at the base of the plants during sunny days.
- In Gangetic West Bengal, for white fly and jassids in bhindi crop, apply Acetamiprid 20% SP@1g or Thiomithoxam 0.3 SG 1g per 3litres of water after current spells of rain.
- **Andaman & Nicobar Islands:**
- Remove unwanted vegetations from the bunds of rice main field to avoid attack of pest and diseases. Protect the vegetable nursery bed by providing rain shelter and drain the excess water. Remove pest infected and fallen fruits of beans and cowpea from the field. Plant fodder sapling in the inter space of coconut, as the soil condition is conducive.
- **Animal Husbandry**
- In West Bengal, protect animals from diseases caused due to excessive rainy conditions and de-worm them at this time. If the cattle already attacked by BQ, FMD or worm infection, promptly give penicillin and Tetracyclin and inoculate these medicine at the side of wound. Wash the wound of foot and mouth disease with potassium permanganate solution. Keep the shade clean and dry. Vaccinate goat and sheep against Enterotoxemia. Vaccinate poultry birds against Ranikhet disease.
- In Bihar, animals must be vaccinated for FMD, HS and BQ namely Trivac vaccine administered dose @ 2.5-3ml S/C per animal is recommended.
- **Fisheries**
- In West Bengal, fish should be stocked @ 1,000-1,500 numbers of fish fingerlings in one bigha pond for grow out fish culture. Apply Mustard oil cake and Rice bran (1:1) as fish feed @ 3-2% body weight of total stock of fish in the pond.
- In Odisha, purchase fish seeds from a reliable fish seed producer and stock 3000 nos. of advance fingerlings of more than 8cm size per one acre of water area. In case of three species combination, the stocking numbers should be for Catla-900, Rohu-1200 and Mrigal-900. In case of six species combination, the stocking numbers should be for Catla-800, Rohu-1200, Mrigal-500, Common carp-300, Grass carp-100 and Silver carp-100. In any situation, the average water depth of the pond should not be less than 5ft level.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rainfall occurred in North Goa, Raigad, Ratnagiri and South Goa districts of Konkan & Goa, Kolhapur district of Madhya Maharashtra during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - As rain/thundershowers likely at most places over Konkan & Goa during the period, along with heavy rain at isolated places on 3rd, 4th, 6th and 7th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
 - In South Konkan, maintain water level of 5 cm by bunding rice field. If required, provide water from outside source such as wells, ponds, rivers etc. In North Konkan, maintain water level of 3-5 cm by bunding rice field. Apply one third dose of Urea @ 720 g to 870 g per Are area to vegetable crops after current spells of rain.
 - In Madhya Maharashtra, maintain 2-3 cm water level in rice fields. Apply protective irrigation to standing crops as per requirement in Sangli and Satara districts. Continue intercultural operation like weeding in transplanted rice, nagli and groundnut. If the standing *kharif* crops are in moisture stress condition, spray of 1% Potassium Nitrate or 2% urea.
 - In Marathwada, undertake intercultural operation like weeding in cotton. During moisture stress condition spray Potassium Nitrate @ 200 g per 10 litre of water in 30 days old cotton and soybean crop. Undertake intercultural operations like weeding in *kharif* sorghum, pearl millet and sugarcane. Iso irrigate standing crops as per availability of water. Apply irrigation to orchards of pomegranate and sapota in *mrug bahar*.
 - In West Vidarbha, undertake intercultural operations (hand weeding/hoeing) in soybean. Opening of conservation furrows is advisable 30 days old crop. Undertake intercultural operations (weeding/hoeing) in cotton, pigeon pea, green gram/ black gram and in early sown maize. Apply top dressing of nitrogen fertilizer @ 40 kg N/ha to 25-30 days old crop. In East Vidarbha, Maintain 2-3 cm water level in rice fields. Undertake intercultural operation like weeding in pigeonpea.
 - In South Konkan, to control downy mildew and powdery mildew in vegetables, spray Dithane M-45 or Dithane Z-78 each @ 2.5 g/litre of water after current spells of rain and repeat at an interval of 10 to 15 days.
 - In Madhay Maharashtra, to control tikka and rust disease in groundnut, spray Mancozeb @ 25 g + Bavistin @ 25 g by mixing in 10 liters of water on a non rainy day.
 - **Gujarat:**
 - Rough to very rough Sea conditions are likely to prevail along & off Gujarat coast. Fishermen are advised not to venture into sea over this area.
 - In South Gujarat, maintain 2-3 cm water level in transplanted rice field. For effective control of semi-looper, complete sowing of castor by 15th August. Undertake intercultural operations in pigeon pea, green gram, black gram, cowpea and castor crops.
 - In North Gujarat, undertake sowing of castor. Continue transplanting of tomato, brinjal, chilli and early cauliflower crops and planting of saplings of new orchards. Carry out gap filling in cotton and intercultural operations in groundnut, pearl millet, maize, pulses and sesame crops.
 - In Middle Gujarat, maintain 5 cm water level in transplanted rice field. Undertake sowing of castor, sorghum and cluster bean crops. Continue transplanting of tomato, brinjal and chilli crops. Carry out hand weeding and resume intercultural operations in black gram, green gram and cotton. Undertake gap filling in pearl millet and groundnut.
 - In Saurashtra & Kutch, undertake sowing of castor, sorghum and cluster bean crops. Carry out intercultural operations in pulses, groundnut, sesame, pearl millet crops. Complete transplanting of brinjal, chilli and early cauliflower, sowing of bhindi, cluster bean, kidney bean, cowpea, amranthus crops and planting of saplings of new orchards.
 - In Saurashtra, spray Mancozeb 27 g/10 liters of water at 15 days interval to prevent leaf spot infestation in cotton due to continuous humid weather.
 - **Animal Husbandry**
 - In Gujarat, keep animals indoors and keep fodder in safe place to avoid spoilage due to rainfall. Provide 30-35 gm mineral mixture in daily diet.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rainfall occurred in all districts of East Madhya Pradesh except Anuppur, Chhindwara, Damoh, Jabalpur, Sagar, Seoni and Shahdol, in Bhind, Datia, Guna, Gwalior, Hoshangabad, Morena, Raisen, Rajgarh, Sheopur Kalani and Shivpuri districts of West Madhya Pradesh, Balrampur, Bilaspur, Janjgir, Jashpur nagar, Korba, Korla, Raigarh, Sukma, Surajpur and Surguja districts of Chhattisgarh during the week. Weather remained mainly dry over rest of the region.

- **Advisories:**

- As rain/thundershowers likely at most/many places over East Madhya Pradesh and Chhattisgarh on 6th and 7th, at many places over West Madhya Pradesh on 7th, along with heavy rain at isolated places over East Madhya Pradesh on 3rd and 7th and over Chhattisgarh on 6th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.

- **Madhya Pradesh:**

- In West Madhya Pradesh, continue transplanting of brinjal, chilli, tomato, early cauliflower and *kharif* onion. Continue transplanting of rice. Continue intercultural operations in soybean and maize in clear weather. Apply 1/3 dose of recommended nitrogen fertilizer in form of urea in maize.
- In Malwa Plateau Zone, continue transplanting of new saplings of fruit plants. If germination of soybean and maize is poor gap filling should be done.
- In East Madhya Pradesh, complete sowing of *kharif* crops like sorghum, sesame, maize, soybean and groundnut. Continue transplanting of brinjal, chilli and tomato. Continue transplanting of rice. Undertake transplanting of onion. Undertake weeding in rice and maize crops and apply the recommended nitrogen fertilizer in clear weather.
- In Kymore Plateau and Satpura Hill Zone, continue direct sowing of rice. Continue sowing of green gram and black gram.
- In Satpura Plateau Zone, continue sowing of Kodo, Kutki and ramtil. Undertake intercultural operations and earthing up in sugarcane. Proper drainage system in the sugarcane fields should be maintained to minimize outbreaks of Pyrilla pests.
- In West Madhya Pradesh, to control stem rot disease in ginger and turmeric, spray Blitox 50 @ 2.5gm/litre solution on a non rainy day.
- In Nimar Valley Zone, remove the yellow mosaic disease infected plants & fix the Yellow Sticky Traps in soybean fields for the management of YMD in soybean.

- **Chhattisgarh:**

- Undertake intercultural operations in different *kharif* crops like rice, maize, arhar, groundnut, soybean, urad, moong, vegetables etc. After weeding, broadcast urea as per their requirement in clear weather. Complete line sowing and transplanting of rice. Undertake sowing of red gram, green gram and black gram in fallow field. Continue planting of banana, papaya, mango, guava etc. Continue nursery sowing of brinjal, early tomato, chilli and onion in upland areas.
- In Bastar Plateau Zone, earthing up should be done in colocasia, amahaldi, turmeric and elephant foot yam for effective rhizome formation and weed management.

- **Animal Husbandry**

- In Madhya Pradesh, cattle should be keep in shade and provide clean and fresh water two times a day. Vaccinate the cattle for control of FMD and HS disease.
- In Chhattisgarh, carry out vaccination of animals against Black Quarter, Anthrax and other disease. Create smoke in cattle house to prevent them from mosquitoes.

NORTH INDIA [JAMMU & KASHMIR, HIMACHAL PRADESH, UTTARAKHAND, PUNJAB, HARYANA, DELHI, UTTAR PRADESH & RAJASTHAN]

- **Realised Rainfall:** Rainfall occurred in all districts of Himachal Pradesh except Kinnaur and Lahaul & Spiti, in Amritsar, Gurdaspur, Kapurthala, Ludhiana, Moga, Nawasahar, Ropar, Sasnagar (Mohali) and Taran Taran districts of Punjab, all districts of Haryana except Bhiwani, Fatehabad, Hissar, Katihal, Rewari and Sirsa, in all districts of Delhi except East Delhi, in Bandipore, Jammu, Kupwara and Reasi districts of Jammu & Kashmir, all districts of East Uttar Pradesh, all districts of West Uttar Pradesh, all districts of Uttarakhand, in Bharatpur district of East Rajasthan during the week. Weather remained mainly dry over rest of the region.

- **Advisories:**

- As rain/thundershowers likely at most places over Uttarakhand during the period, at most/many places over East Uttar Pradesh during the period, over Himachal Pradesh from 4th to 7th, over Jammu & Kashmir on 6th and 7th, at many places over West Uttar Pradesh, Haryana, Chandigarh & Delhi on 6th and 7th, over Punjab and East Rajasthan on 7th, along with heavy rain at a few places with very heavy at isolated places very likely over Uttarakhand on 5th, heavy to very heavy rain at isolated places very likely over East Uttar Pradesh on 3rd and over Uttarakhand on 6th, heavy rain at isolated places very likely over Uttarakhand on 3rd, 4th and 7th, over Jammu & Kashmir, Haryana, Chandigarh & Delhi on 6th and 7th, over Himachal Pradesh from 5th to 7th, over Punjab on 6th, over Uttar Pradesh from 4th to 7th, over West Uttar Pradesh on 3rd and over East Rajasthan on 7th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.

- **Jammu & Kashmir:**

- Undertake second hoeing/weeding in rice where the crop is at 35 days after transplanting and apply 2nd dose of

nitrogenous fertilizer as top dressing after current spells of rain. Undertake nursery raising of cole crops and land preparation for sowing carrot seed. Undertake cultivation of *Calocybe indica* (Milky mushroom). Undertake intercultural operations in pulses and maize in clear weather. Undertake picking up of matured tomato, brinjal, capsicum, okra and broccoli in clear weather. Continue planting of new orchards and gap filling. Provide adequate drainage facility in pulses and saffron fields.

- Weather is congenial for attack of stem borer on paddy. If observed apply Carbofuron 3G @ 20 kg/ha in standing water and do not drain or irrigate the field for 72 hours after application.
- Weather is congenial for the attack of alternaria blight and phytophthora in different vegetable crops, if symptoms observed, spray of Mancozeb or Mancozeb + Metalaxil @ 2 gm/liter of water after current spells of rain.

▪ **Uttarakhand:**

- In unirrigated (rainfed) mid hilly regions, arrangement of the seeds of early variety of pea should be done for sowing in the mid of August. Provide proper drainage in *kharif* maize and vegetables fields. Continue sowing of urad, moong and okra after current spells of rain. Continue transplanting of seedlings of cabbage, broccoli and transplanting of chilli. Evergreen fruit plants like mango, guava, lemon, papaya, litchi etc. should be planted during the month. Postpone intercultural operations and application of fertilizers and pesticides till weather gets clear.

▪ **Himachal Pradesh:**

- Continue transplanting of 20-25 days old paddy seedling in prepared fields after current spells of heavy rain. Make bunds for conserving rain water in the field. Bund should be higher and wider so that more rain water can be conserved in the field.
- Undertake intercultural operations in *kharif* pulses like mung, mash soybean, cowpea and kulthi in clear weather. Continue sowing of peas, turnip, carrot, spinach etc. in high hilly regions after current spells of rain. Continue transplanting of tomato brinjal, chilli and capsicum in polyhouse.
- Weather is congenial for attack of blast and brown spot on paddy. To control spray Carbendazim @ 2 g per litre of water after current spells of rain.
- Weather is conducive for stalk rot and stem borer in maize, to control stalk rot drench maize fields with bleaching powder @ 16 kg/ha a week before tasseling and to control stem borer put pinch of Thimete granules in affected plants after current spells of rain.

▪ **Punjab, Haryana & Delhi:**

- In Punjab, in transplanted rice, apply second and third dose urea @ 37 kg per acre. Continue transplanting of early cauliflower. Continue sowing of *kharif* moong and mash. Undertake weeding and hoeing in sugarcane, maize, pulses and orchard crops. Continue sowing of radish in Western Plain Zone.
- In Haryana, complete transplanting of rice. Undertake intercultural operations in guar and bajra. Continue transplanting of vegetables. Continue intercultural operations in sugarcane in clear weather.
- In Delhi, undertake sowing of green gram and black gram. Undertake transplanting of onion. Continue transplanting of chilli, brinjal and cauliflower. Continue sowing of guar, bajra, cluster bean, spinach, radish, coriander, amaranths and lady finger. Continue sowing of baby corn and sweet corn. Drain out excess water from pulses and vegetable fields.
- In Punjab, to control leaf spots or blight disease in cotton, spray Blitox 500 g + Agrimycin 20 g or Streptocycline 3 g/acre on a non rainy day and repeat at an interval of 15 to 20 days.

▪ **Uttar Pradesh:**

- In East Uttar Pradesh, continue transplanting of onion, cauliflower, brinjal, chilli and tomato and complete transplanting of rice after current spells of heavy rain. Continue intercultural operations in moong, urad and soybean crops after current spells of rain. In Central Plain Zone, intercropping systems can be adopted in light soils for efficient use of soil and water resources. Pearl millet + Black gram in 2:4 row proportion; Pearl millet + Pigeonpea in 2:1 row proportion or Pigeon pea + Sesame in 1:2 or 2:4 row proportions on up land well drained fields.
- In West Uttar Pradesh, provide proper arrangement for drainage in vegetables, pulses and maize crop fields. Continue transplanting of rice South Western Semi Arid Zone. Continue sowing of bajra, jowar, green gram and black gram. Continue transplanting of vegetables and sowing of cucurbits and okra.

▪ **Rajasthan:**

- In East Rajasthan, undertake intercultural operations in pearl millet, sesame, groundnut, maize and sorghum in clear weather. Undertake earthing up in cotton. Undertake planting of fruit crops like mango, plum, pomegranate, aonla etc.
- In West Rajasthan, continue intercultural operations in cotton and groundnut. Apply irrigation in guar, sugarcane and rice as per requirement.
- In Arid Western Plain Zone, undertake sowing of cluster bean and moth bean instead of pearl millet as late sown crop.
- In Arid Western Plain Zone, to control infection of root/collar rot in standing crop of groundnut, apply

Carbendazim @ 2.0 kg/ha.

- **Animal Husbandry**

- In Jammu & Kashmir, mineral mixture should be supplemented in diet. Give vaccination against FMD. Provide adequate amount of fresh cool and clean drinking water. Increase protein content in animal ration by 2%.
- In Himachal Pradesh get the cattles vaccinate against the Foot and Mouth Disease (FMD) & Black Quarter and keep the animals shed dry, neat and clean. Got the cow dung test for the treatment of stomach bugs if any. Spray 5 ml Sypermethrin or Amitrar mixture (2 ml /1 litre of wtaer) on the floor and walls of the cattle sheds.
- In Uttarakhand possibility of occurrence of Langra fever in cattle, vaccinated them with consultation of veterinarian.

- **Apiculture:**

- In Jammu & Kashmir, protect bee colonies from rains. Give need based sugar feeding. Inspect colonies on a clear sunny day for infestation of wax moth or other disease. Protect bee hive from ants. Raise new frames by providing comb foundation sheets to healthy colonies. Raise new queen if needed.
- In Himachal Pradesh examine colonies for barroa mites. Dust sulphur on sealed brood in the colony and not on larvae to control mites attack on honeybees. For protection of ants put the legs of apiary into water so that ants could not attack apiary.

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