



National Agromet Advisory Service Bulletin

Friday 26th June 2020
(For the period 26th to 30th June 2020)



Issued by
India Meteorological Department

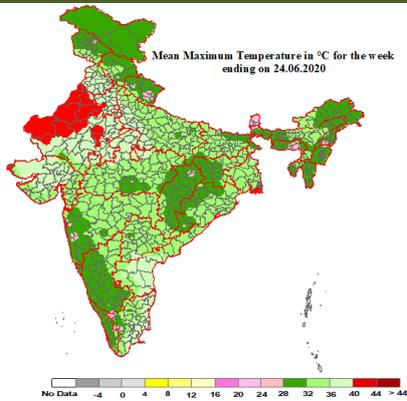
Weblink For

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

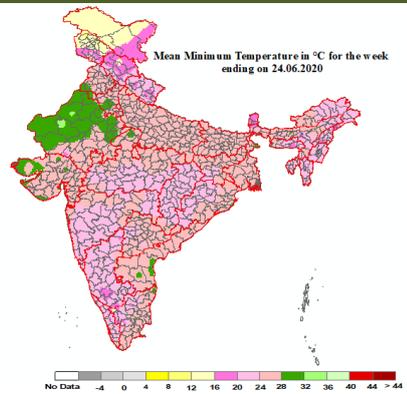
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

spatial distribution of weather parameters for the week ending on 24.06.2020

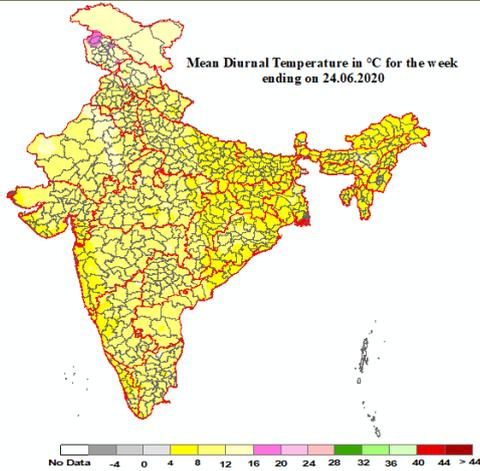
Mean Maximum Temperature (°C) for the week ending on 24.06.2020



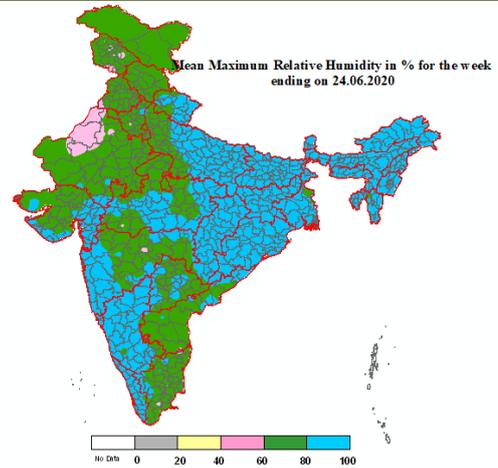
Mean Minimum Temperature (°C) for the week ending on 24.06.2020



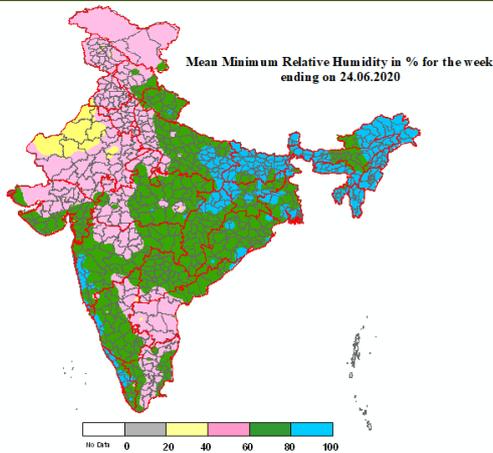
Mean Diurnal Temperature Variation (°C) for the week ending on 24.06.2020



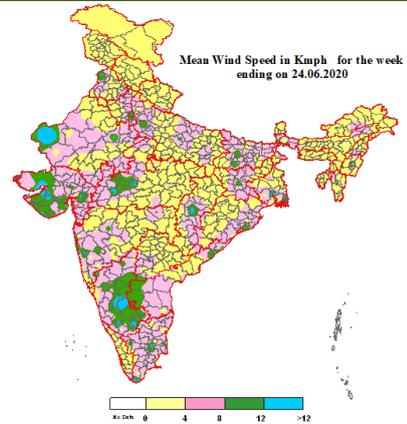
Mean Maximum Relative Humidity (%) for the week ending on 24.06.2020



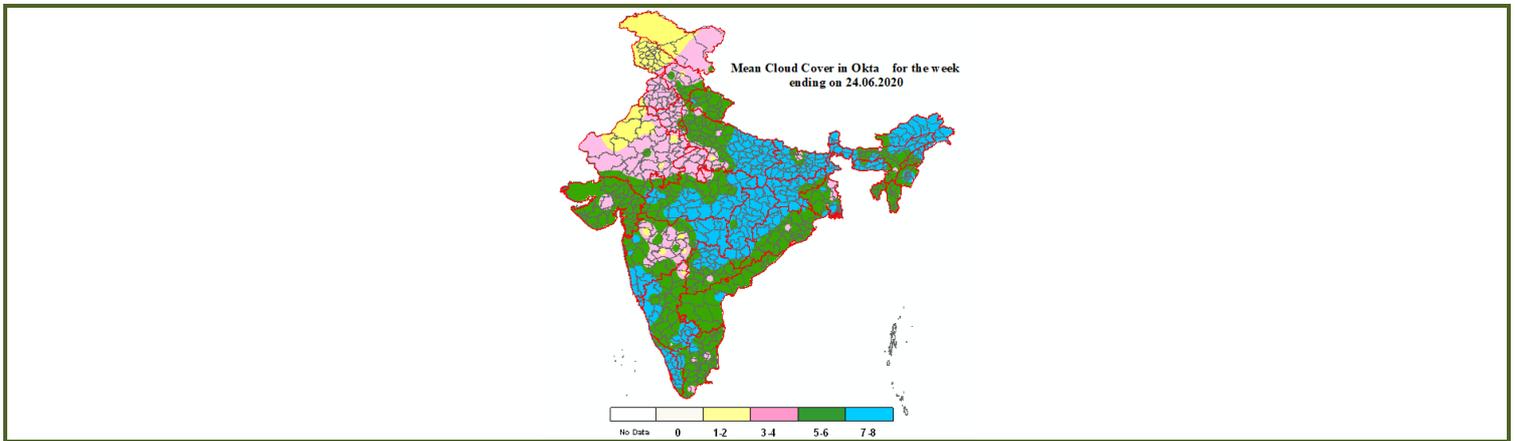
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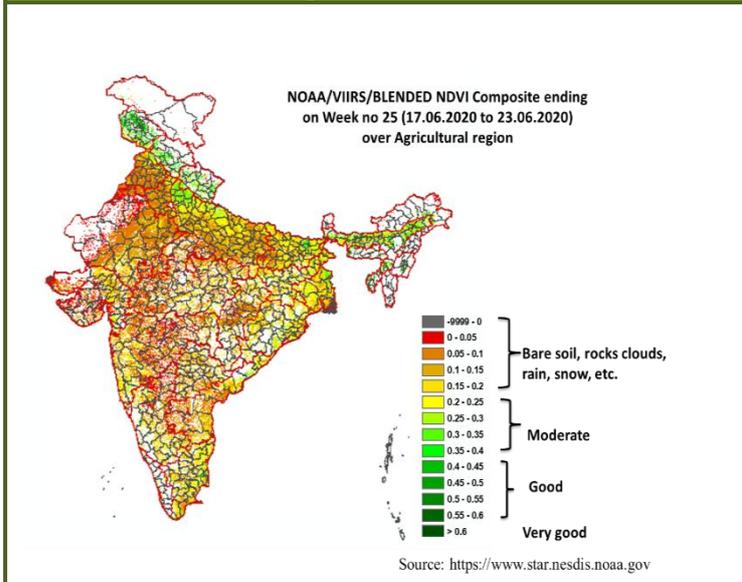
Mean Wind Speed (km/hr) for the week ending on 24.06.2020



Mean Cloud Cover (okta) for the week ending on 24.06.2020

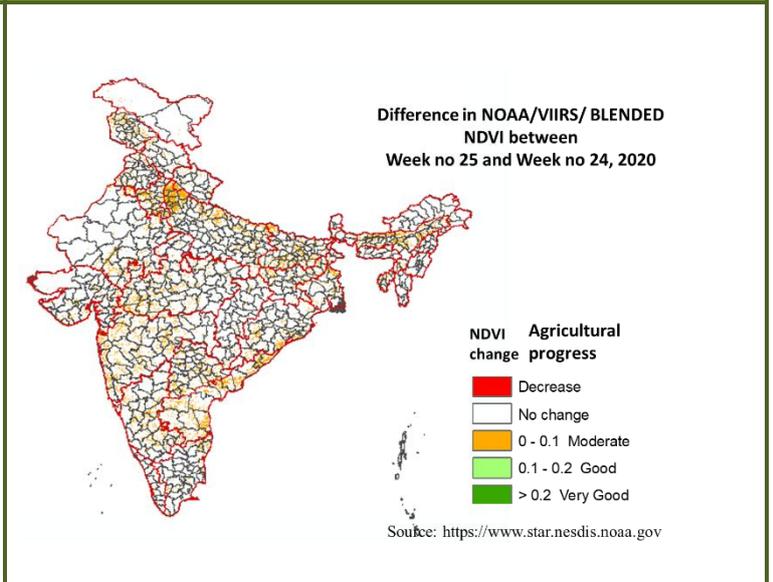


NOAA/VIIRS/BLENDED NDVI composite for the week number 25(17.06.2020 to 23.06.2020) over Agricultural regions of India



Agricultural vigour was good at many places of Jammu & Kashmir ; at a few palces of Himachal Pradesh, & North Eastern states and at isolated places of Uttarakhand, Subhimalayan West Bengal and Sikkim. Rest of the country NDVI could not be captured due to cloud cover as well as land preparation / sowing for khariff season is under progress

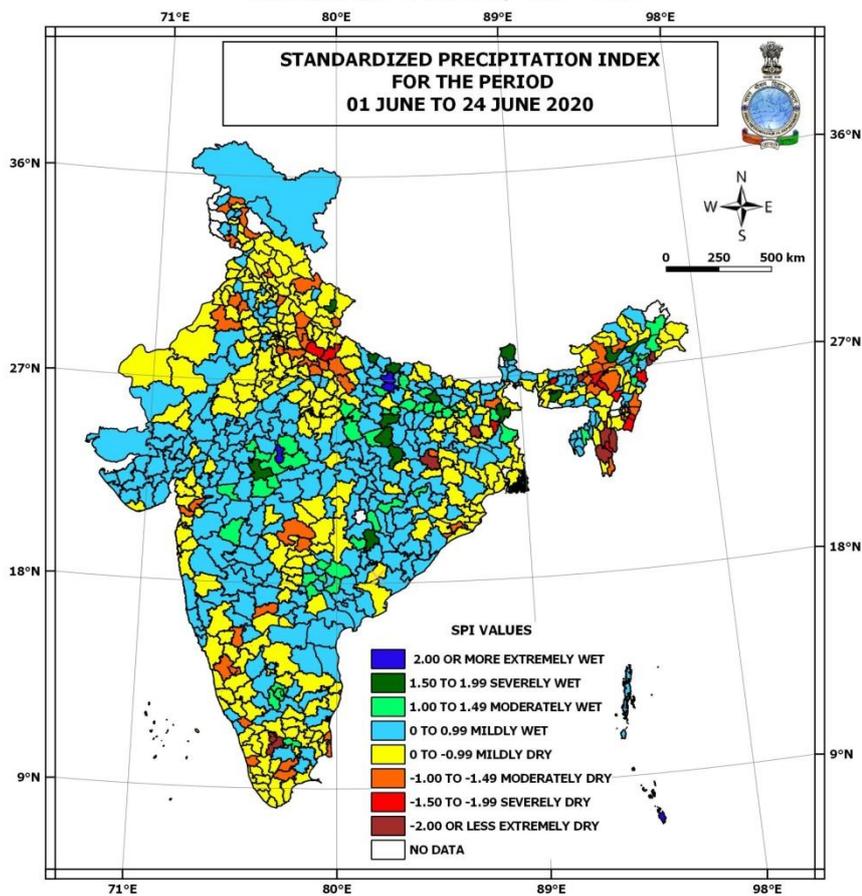
Difference in NOAA/VIIRS/BLENDED NDVI between week number 25, 2020 and week number 24, 2020



Good difference in agricultural vigour was observed over isolated places of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, and North Eastern states

Standardised Precipitation Index Cumulative 4 weeks for the period 1st June to 24th June 2020

**MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, CRS PUNE**



- Extremely/ Severely wet conditions exist in Papumpara district of Arunachal Pradesh; Dhemaji district of Assam; Saran district of Bihar; Bhopal, Dewas, Singrauli districts of West Madhya Pradesh; East Garo Hills district of Meghalaya; Ambedkar Nagar, Basti, Mirzapur, Siddharth Nagar, Shrawasti Nagar districts of Uttar Pradesh; Malda district of West Bengal; Nicobar district of Andaman & Nicobar Islands; North Sikkim district of Sikkim; Bageshwar district of Uttarakhand; Surajpur, Kondagaon districts of Chhatisgarh.
- Extremely/Severely dry conditions exist in Tirap district of Arunachal Pradesh; Darrang, Nagaon, Bongaigaon districts of Assam; Chandel district of Manipur; Aizwal, Champhai, Lunglei, Serchhip districts of Mizoram; Tuensang, Paren districts of Nagaland; Tirupur district of Tamilnadu; Daman districts of Union Territory; Badaun, Shahjahanpur, Shamli districts of Uttar Pradesh; Deoghar, Gumla, Pakur districts of Jharkhand; South Delhi district of Delhi.
- Moderately wet to moderately dry conditions were experienced in remaining districts in the country.

Weather Forecast for next 5 days valid upto 0830 hours of 01st July, 2020

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.
- ◆ No significant change in maximum temperatures very likely over most parts of the country during next 3-4 days.

Met-Sub-Division	26-Jun Today	27Jun Sat	28Jun Sun	29Jun Mon	30Jun Tue
1. Andaman & Nicobar Islands	WS	WS	WS	WS	WS
2. Arunachal Pradesh	WS	WS	FWS	FWS	FWS
3. Assam & Meghalaya	WS	WS	WS	WS	WS
4. N. M. M. & T.	WS	WS	WS	WS	WS
5. S.H. West Bengal & Sikkim	WS	WS	WS	WS	FWS
6. Gangetic West Bengal	FWS	FWS	WS	WS	FWS
7. Odisha	ISOL	SCT	SCT	SCT	SCT
8. Jharkhand	WS	WS	WS	FWS	FWS
9. Bihar	WS	WS	WS	WS	FWS
10. East Uttar Pradesh	WS	WS	WS	WS	FWS
11. West Uttar Pradesh	SCT	SCT	SCT	FWS	FWS
12. Uttarakhand	SCT	SCT	WS	WS	WS
13. Haryana, Chd & Delhi	SCT	ISOL	ISOL	SCT	SCT
14. Punjab	SCT	ISOL	SCT	SCT	SCT
15. Himachal Pradesh	ISOL	ISOL	SCT	SCT	FWS
16. J & K and Ladakh	ISOL	ISOL	ISOL	SCT	SCT
17. West Rajsthan	ISOL	ISOL	ISOL	ISOL	ISOL
18. East Rajsthan	SCT	ISOL	ISOL	ISOL	SCT
19. West Madhya Pradesh	SCT	SCT	SCT	SCT	SCT
20. East Madhya Pradesh	SCT	SCT	FWS	FWS	FWS
21. Gujarat Region	ISOL	ISOL	ISOL	ISOL	ISOL
22. Saurashtra & Kutch	ISOL	ISOL	ISOL	ISOL	ISOL
23. Konkan & Goa	WS	WS	WS	WS	WS
24. Madhya Maharashtra	WS	FWS	FWS	FWS	FWS
25. Marathawada	WS	WS	FWS	FWS	FWS
26. Vidharbha	SCT	SCT	SCT	SCT	SCT
27. Chhattisgarh	SCT	SCT	FWS	FWS	FWS
28. Coastal A. P. & Yanam	SCT	SCT	SCT	FWS	FWS
29. Telangana	SCT	FWS	FWS	FWS	FWS
30. Rayalaseema	SCT	FWS	FWS	FWS	FWS
31. T.N.,Puducherry & Karaikal	SCT	ISOL	ISOL	ISOL	ISOL
32. Coastal Karnataka	WS	WS	WS	WS	WS
33. North Interior Karnataka	FWS	WS	WS	WS	WS
34. South Interior Karnataka	WS	WS	WS	WS	WS
35. Kerala & Mahe	WS	WS	WS	WS	FWS
36. Lakshadweep	WS	WS	WS	WS	FWS

% Station Reporting Rainfall

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

Weather Warning during next five days:

26 June (Day 1):

- ◆ **Heavy to very heavy rainfall** at a few places **with extremely heavy falls** at isolated places very likely over Sub-Himalayan West Bengal & Sikkim; **heavy rainfall** at a few places **with very heavy to extremely heavy falls** at isolated places likely over Kerala & Mahe; **heavy to very heavy rainfall** at isolated places **with extremely heavy falls very likely** over Assam & Meghalaya and Bihar; **heavy to very heavy rainfall** at isolated places over East Uttar Pradesh, Arunachal Pradesh, Coastal & South Interior Karnataka and

Tamilnadu, Puducherry & Karaikal and **heavy rainfall** at isolated places over East Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, Gangetic West Bengal, Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Konkan & Goa, Rayalaseema, North Interior Karnataka and Lakshadweep.

- ♦ **Thunderstorm accompanied with lightning** very likely at a few places over East Uttar Pradesh, Bihar and Jharkhand and at isolated places over Haryana, Chandigarh & Delhi, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Rayalaseema and Karnataka.
- ♦ **Strong Wind** (wind speed reaching 50-60 kmph) very likely over Southwest & Westcentral Arabian Sea. **Squally Weather** (wind speed reaching 40-50 kmph) over north Andaman Sea, Southeast & Eastcentral Arabian Sea and along & off Lakshadweep areas and Kerala-Karnataka coasts. Fishermen are advised not to venture into sea over these areas.

27 June (Day 2):

- ♦ **Heavy to very heavy rainfall** at a few places **with extremely heavy falls** at isolated places very likely over Sub-Himalayan West Bengal & Sikkim; **Heavy rainfall** at a few places **with very heavy to extremely heavy falls** at isolated places very likely over Kerala & Mahe; **heavy to very heavy rainfall** at isolated places **with extremely heavy falls very likely** over Assam & Meghalaya and Bihar; **Heavy rainfall** at a few places **with very heavy falls** at isolated places very likely over East Uttar Pradesh; **heavy to very heavy rainfall** at isolated places over Arunachal Pradesh and Coastal & South Interior Karnataka and **heavy rainfall** at isolated places over Chhattisgarh, Jharkhand, Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Konkan & Goa, Telangana, North Interior Karnataka, Tamilnadu, Puducherry & Karaikal and Lakshadweep.
- ♦ **Thunderstorm accompanied with lightning** very likely at a few places over East Uttar Pradesh, Bihar and Jharkhand and at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh, West Bengal & Sikkim, Odisha, Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Karnataka.
- ♦ **Strong Wind** (wind speed reaching 50-60 kmph) very likely over Southwest & Westcentral Arabian Sea. **Squally Weather** (wind speed reaching 40-50 kmph) over north Andaman Sea, Southeast & Eastcentral Arabian Sea and along & off Lakshadweep areas and Kerala-Karnataka coasts. Fishermen are advised not to venture into sea over these areas.

28 June (Day 3):

- ♦ **Heavy rainfall** at a few places **with very heavy falls** at isolated places very likely over Bihar; **heavy to very heavy rainfall** at isolated places over Uttar Pradesh, Assam & Meghalaya and Coastal Karnataka and **heavy rainfall** at isolated places very likely over Uttarakhand, Chhattisgarh, Jharkhand, Gangetic West Bengal, Andaman & Nicobar Islands, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Telangana, Rayalaseema, Interior Karnataka and Kerala & Mahe.
- ♦ **Thunderstorm accompanied with lightning** very likely at a few places over East Uttar Pradesh, Bihar and Jharkhand and at isolated places over West Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal Odisha, Assam & Meghalaya, Coastal Andhra Pradesh & Yanam, Rayalaseema and Karnataka.
- ♦ **Strong Wind** (wind speed reaching 50-60 kmph) very likely over Southwest & Westcentral Arabian Sea; (wind speed reaching 40-50 kmph) very likely over north Arabian Sea and along & off Gujarat coast. **Squally Weather** (wind speed reaching 40-50 kmph) very likely over north Andaman Sea. Fishermen are advised not to venture into sea over these areas.

29 June (Day 4):

- ♦ **Heavy to very heavy rainfall** at isolated places likely over North Interior Karnataka and **heavy rainfall** at isolated places likely over Uttarakhand, Uttar Pradesh, Madhya Pradesh, Bihar, Andaman & Nicobar Islands, Assam & Meghalaya, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Rayalaseema, Coastal & South Interior Karnataka and Kerala & Mahe.

- ♦ **Thunderstorm accompanied with lightning** likely at a few places over East Uttar Pradesh, Bihar and Jharkhand and at isolated places over West Uttar Pradesh, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ♦ **Strong Wind** (wind speed reaching 50-60 kmph) likely over Southwest & Westcentral Arabian Sea; (wind speed reaching 40-50 kmph) likely over north Arabian Sea and along & off Gujarat coast. **Squally Weather** (wind speed reaching 40-50 kmph) likely over north Andaman Sea. Fishermen are advised not to venture into sea over these areas.

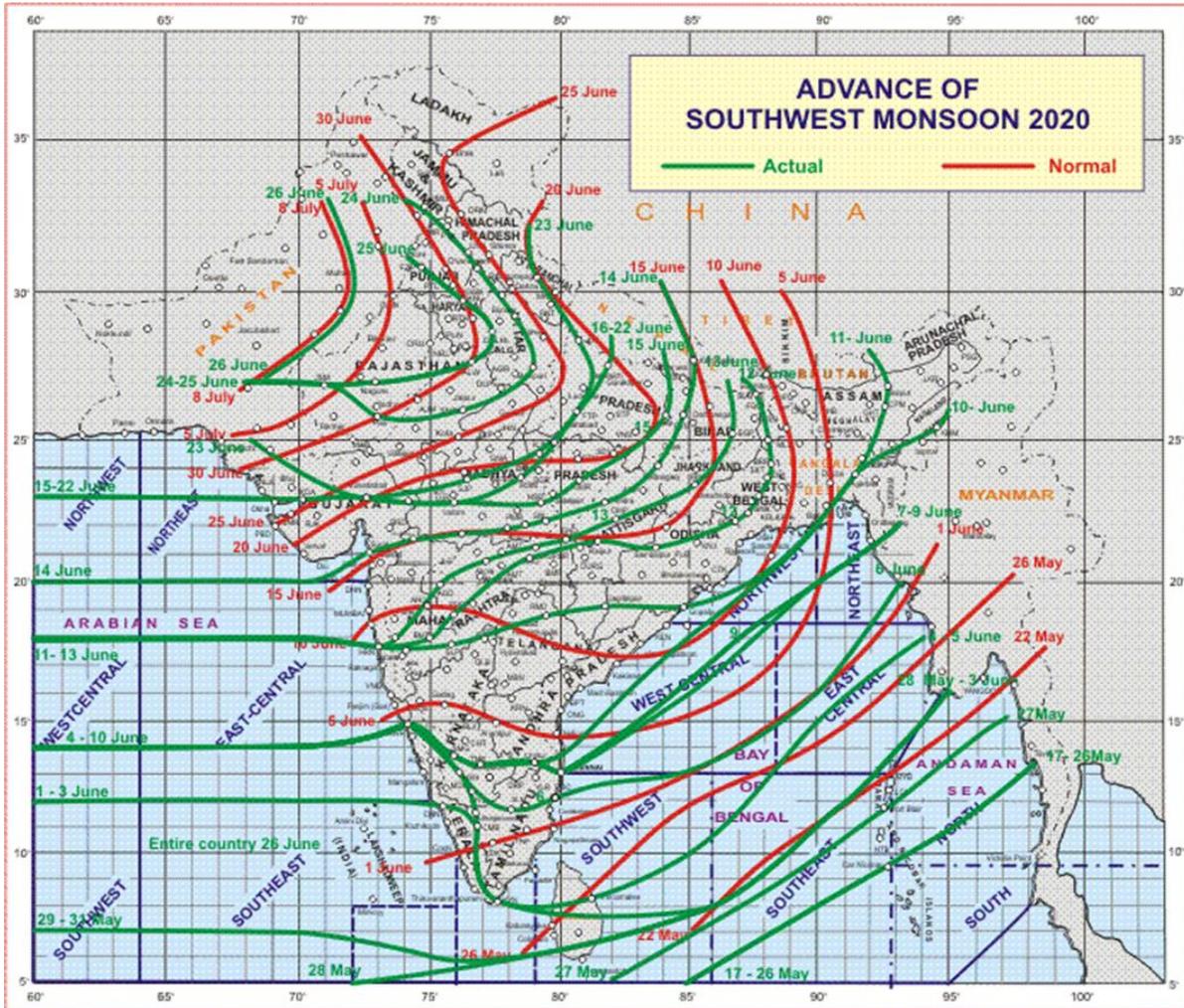
30 June (Day 5):

- ♦ **Heavy rainfall** at isolated places likely over East Rajasthan, Madhya Pradesh, Andaman & Nicobar Islands, Assam & Meghalaya, Konkan & Goa, Coastal Andhra Pradesh & Yanam and Karnataka.
- ♦ **Thunderstorm accompanied with lightning** likely at a few places over Bihar and Jharkhand and at isolated places over Rayalaseema.
- ♦ **Strong Wind** (wind speed reaching 50-60 kmph) likely over Southwest & Westcentral Arabian Sea. **Squally Weather** (wind speed reaching 40-50 kmph) likely over north Andaman Sea. Fishermen are advised not to venture into sea over these areas.

Weather Outlook for subsequent 2 days from 01st to 03rd July, 2020

- ♦ Fairly widespread to widespread rain/thundershowers with isolated heavy rainfall likely over Northeast & adjoining East India.
- ♦ Scattered to fairly widespread rainfall with isolated heavy falls likely over parts of central India, along the west coast and Islands. Isolated to scattered rainfall likely over interior Maharashtra, south Peninsular India, Western Himalayan region & plains of northwest India and Odisha and Coastal Andhra Pradesh.

Advance of SouthWest Monsoon 2020



◆ Southwest Monsoon has further advanced into remaining parts of Rajasthan, Haryana and Punjab and thus it has covered the entire country today, the 26th June 2020.

- **Strong Wind** (wind speed reaching 50-60 kmph) very likely over Southwest & Westcentral Arabian Sea during the period and (wind speed reaching 40-50 kmph) very likely over north Arabian Sea and along & off Gujarat coast on 28th & 29th and likely over Southwest & West-central Arabian Sea on 30th with **Squally Weather** (wind speed reaching 40-50 kmph) very likely over north Andaman Sea, Southeast & East-central Arabian Sea and along & off Lakshadweep areas and Kerala-Karnataka coasts on 26th & 27th, very likely over north Andaman Sea on 28th and likely over north Andaman Sea on 29th & 30th, fishermen are advised not to venture into sea over these areas.

Salient advisories

- **Thunderstorm accompanied with lightning** very likely at a **few places** over East Uttar Pradesh from 26th to 29th and over Bihar and Jharkhand from 26th to 30th and at **isolated places** over Haryana, Chandigarh & Delhi, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Rayalaseema and Karnataka on 26th, over Madhya Pradesh, Vidarbha, Chhattisgarh, West Bengal & Sikkim, Odisha, Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Karnataka on 27th, over West Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Odisha, Assam & Meghalaya, Coastal Andhra Pradesh & Yanam, Rayalaseema and Karnataka on 28th, over West Uttar Pradesh, Coastal Andhra Pradesh & Yanam and Rayalaseema on 29th and over Rayalaseema on 30th, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm/dust storm.
- As **rain/thundershowers** likely at **most places** over Madhya Maharashtra on 26th, over Arunachal Pradesh and Marathwada on 26th & 27th, over Jharkhand from 26th to 28th, over Sub-Himalayan West Bengal, Bihar, East Uttar Pradesh, Kerala & Mahe and Lakshadweep from 26th to 29th, over Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland Manipur Mizoram & Tripura, Konkan & Goa, Coastal Karnataka and South Interior Karnataka from 26th to 30th, over North Interior Karnataka from 27th to 30th, over Gangetic West Bengal on 28th & 29th and over Uttarakhand from 28th to 30th; **at many places** over North Interior Karnataka on 26th, over Gangetic West Bengal on 26th, 27th & 30th, over Madhya Maharashtra, Telangana and Rayalaseema from 27th to 30th, over Arunachal Pradesh, East Madhya Pradesh, Chhattisgarh and Marathwada from 28th to 30th, over Jharkhand, West Uttar Pradesh and Coastal Andhra Pradesh & Yanam on 29th & 30th and over Sub-Himalayan West Bengal, Bihar, East Uttar Pradesh, Himachal Pradesh, Kerala & Mahe and Lakshadweep on 30th, along with **Heavy to very heavy rainfall** at a few places **with extremely heavy falls** at isolated places very likely over Sub-Himalayan West Bengal & Sikkim on 26th & 27th, **heavy rainfall** at a few places **with very heavy to extremely heavy falls** at isolated places likely over Kerala & Mahe on 26th & 27th, **heavy to very heavy rainfall** at isolated places **with extremely heavy falls very likely** over Assam & Meghalaya and Bihar on 26th & 27th, **Heavy rainfall** at a few places **with very heavy falls** at isolated places very likely over East Uttar Pradesh on 27th and over Bihar on 28th, **heavy to very heavy rainfall** at isolated places over East Uttar Pradesh and Tamil Nadu, Puducherry & Karaikal on 26th, over Arunachal Pradesh and South Interior Karnataka on 26th & 27th, over Coastal Karnataka from 26th to 28th, over Uttar Pradesh and Assam & Meghalaya on 28th and over North Interior Karnataka on 29th and **heavy rainfall** at isolated places over East Rajasthan on 26th & 30th, over Madhya Pradesh on 26th, 29th & 30th, over Chhattisgarh, Jharkhand, Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura and North Interior Karnataka from 26th to 28th, over Andaman & Nicobar Islands on 26th & 28th to 30th, over Madhya Maharashtra and Marathwada on 26th & 27th, over Konkan & Goa from 26th to 30th, over Rayalaseema on 26th, 28th & 29th, over Lakshadweep on 26th & 27th, over Telangana on 27th & 28th, over Tamilnadu, Puducherry & Karaikal on 27th, over Uttarakhand and Kerala & Mahe on 28th & 29th, over Uttar Pradesh, Bihar and Coastal & South Interior Karnataka on 29th, over Assam & Meghalaya and Coastal Andhra Pradesh & Yanam on 29th & 30th and over Karnataka on 30th, arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. Avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.
- **Undertake the following operations:**

- new planting of arecanut and black pepper in Coastal Karnataka and nursery preparation of rice in North Interior Karnataka.
- transplanting of coconut seedlings in North Zone of Kerala.
- nursery sowing of long duration rice in Srikakulam district of Andhra Pradesh.
- sowing of red gram, cotton, jowar, soybean, green gram, etc. in Telangana.
- sowing of pigeon pea and sesame in Lower Brahmaputra Valley Zone of Assam.
- field land preparation for nursery sowing of rice in Odisha.
- land preparation for pigeon pea and sowing of sesame and kharif vegetables in Bihar
- land preparation for transplanting kharif rice in Sub-Himalayan West Bengal.
- nursery bed preparation for raising seedlings of kharif vegetable crops like chilli, tomato, brinjal, etc. in North Gujarat.
- preparation of rice nursery in Bundelkhand and Kymore Plateau Zones of Madhya Pradesh.
- sowing/transplanting of rice using SRI or biasi method in Chhattisgarh.
- transplanting of rice, tomato, capsicum and chilli seedlings in Jammu & Kashmir.
- land preparation for transplanting of rice seedlings in Sub Montane and Low Hills Sub Tropical Zone of Himachal Pradesh.
- transplanting of rice seedlings in Punjab.
- field preparation for sowing of guar, bajra, maize, cluster bean, pulse crops in Western Zone of Haryana.
- transplanting of kharif onion, early cauliflower and cabbage as well as sowing of loki, torai, pumpkin, khira in West Uttar Pradesh.
- transplanting of rice seedlings and sowing of cabbage, cauliflower, broccoli and knol khol in Bhabar & Tarai Zone of Uttarakhand.
- sowing of kharif crops like cotton, soybean and pigeon pea, groundnut and soybean in Maharashtra.

Detailed Agromet Advisories

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

Realised Rainfall: Significant rainfall occurred in Krishna district of Andhra Pradesh and in J. Bhupalpally, Kamareddy, Kumaram Bheem, Mahabubnagar, Mancherial, Nizamabad, and Warangal_Rural districts of Telangana, in all districts of Coastal Karnataka, in Kalaburgi district of North Interior Karnataka and in Chikkamagaluru, Kodagu and Shivamogga districts of South Interior Karnataka; in all districts of Kerala except Thiruvananthapuram; in Coimbatore, Nilgiris, Puducherry, Thiruvallur and Vellore districts of Tamil Nadu, Puducherry & Karaikal.

Advisories:

- **As Thunderstorm accompanied with lightning & gusty wind (speed reaching 30-40 kmph)** very likely at isolated places over Telangana on 19th & 20th **with lightning** at isolated places over Coastal Karnataka on 19th & 20th, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm/dust storm.
- As **rain/thundershowers** likely **at most places** over Coastal Karnataka and Lakshadweep from 19th to 23rd, over Kerala & Mahe from 20th to 23rd, **at many places** over Kerala & Mahe on 19th, over Telangana

from 20th to 23rd, over Rayalaseema on 21st, over Coastal Andhra Pradesh & Yanam and South Interior Karnataka from 21st to 23rd and over North Interior Karnataka on 22nd & 23rd, along with **Heavy to very heavy rainfall** at isolated places over Kerala & Mahe on 21st & 22nd and over Coastal Karnataka on 22nd & 23rd; **heavy rainfall** at isolated places over Coastal Karnataka on 19th to 21st, over Kerala & Mahe on 20th & 23rd, over Rayalseema on 21st, over Tamilnadu, Puducherry & Karaikal from 21st to 23rd, over Coastal Andhra Pradesh & Yanam and South Interior Karnataka on 22nd & 23rd and over Telangana on 23rd, arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. Avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

Karnataka

- In Coastal Karnataka, undertake new planting of arecanut and black pepper and sowing of maize, drill sowing of rice and cotton dibbling. Continue sowing of ginger and turmeric.
- In North Interior Karnataka, undertake sowing of green gram, black gram, soybean, maize, sorghum, red gram crops where sufficient moisture condition is available/after receipt of sufficient rain. In shallow black soil and red soils, sowing of green gram, red gram, bajra, sesamum, Niger, Navane and groundnut (bunch type), horse gram, castor may be taken up on preference. In medium deep and deep black soils, sowing of green gram, red gram, bajra, Navane and groundnut (bunch type), castor, onion, chili may be taken up on preference. To make efficient use of available soil and water resources and to get higher returns, intercropping systems of bajra + groundnut (bunch) in 2:4 row proportion; bajra + red gram; bajra + castor; bajra + groundnut (bunch type) may be taken up. Undertake nursery preparation of rice.
- In South Interior Karnataka, under sufficient moisture condition, undertake sowing of cowpea, green gram, black gram, horse gram, field bean, maize, groundnut crops, tomato, chilli, brinjal, radish, ladies finger, beans, watermelon, carrot, onion and planting of mango, banana, sapota & guava. Under mono cropping, the long duration crops red gram, castor and maize and under double cropping, the medium to short duration crops groundnut, cowpea and black gram are suggested.

Kerala

- In High Altitude Zone, weather is congenial for soft rot in ginger, drench the soil with 1% Bordeaux mixture or 0.3% Mancozeb. Apply green leaf mulching to prevent soil erosion and to increase the organic matter content in the soil.
- In Problem Areas Zone, to control the root rot diseases of leguminous crops, prepare cow dung, neem cake and trichoderma mixture at 90:10:1 ratio and apply 200 gm of above mixture for each pit.
- In Northern Zone, undertake transplanting of coconut seedlings; make pits of size 1m x 1m x 1m; in laterite soils 1.2m x 1.2m x 1.2m sized pits are required.
- In Central Zone, undertake paddy transplanting at 4 to 5 leaf stage; soak the roots of seedlings for 30 minutes in a solution of Pseudomonas culture @ 10g per one litre of water for one kg of seeds; this would help to control sheath blight, sheath rot, leaf spot disease, etc.

Andhra Pradesh

- In Srikakulam district, undertake nursery sowing of long duration rice with MTU-1061, MTU-1064, MTU-1190 and RGL-2537 utilizing the realized rainfall. Continue sowing of sorghum, bajra, groundnut, maize, redgram, ragi and maize.
- In Vizainagaram district, weather is congenial for incidence of whitefly (sucking pest) in pulses which are at flowering stage; spray with Dimethoate @ 2 ml per liter of water.
- In East Godavari district, continue nursery sowing of rice.
- In West Godavari district, in flood prone areas, cultivate non-lodging and submergence tolerant paddy

varieties like MTU 1161, MTU 1064, MTU 1140, MTU 1172, Swarna sub –1.

- In YSR Cuddepah district, adopt the alternate methods of sowing and transplanting methods for rice viz., direct seeding (20 kg/acre), or mechanized transplanting (10-12kg/acre) instead of transplanting (30 kg/acre) to increase production without losing season in labour scarce areas.
- In Nellore district the present weather conditions are favourable for stem borer and gall midge in transplanted paddy. To control, apply Carbofuran 3G granules @ 10 kg/ acre after 10 to 15 days of transplanting (or) spray Chlorpyrifos @ 2.5 ml (or) Acephate @ 1.5 grams/litre of water.

Telangana

- By utilizing the already received and forecasted rainfall for next five days, farmers are advised to take-up sowing of red gram, cotton, jowar, soybean, green gram etc., as rainfed crops.
- Farmers are advised to raise rice nurseries of long duration varieties wherever sufficient water is available.
- By taking advantage of the present rains, take-up sowing of sunhemp and dhaincha as in-situ green manure crop preceding rice. Sow green gram as catch crop preceding rice depending on the availability of release of water.
- Don't sow the paddy nurseries using Telangana Sona (RNR 15048) in the month of June.
- Do not sow cotton and soybean in light soils under rainfed conditions.
- Sow green gram and soybean after seed treatment with Carbendazim @ 2.5 g and Carbosulfan @ 30 g per kg of seed.
- Take-up sowing of red gram + cotton (1:4 or 1:6) ratio and red gram + jowar (1:4) ratio and red gram + soybean (1:7) ratio as intercrop.

Tamil Nadu

- In Cauvery Delta Zone, to control thrips in rice nursery, apply Thiamethoxam 25WG @ 40g/ acre.
- In Western Zone, undertake sowing of tomato in raised bed for nursery seedlings; carry out seed treatment with Trichoderma viride @ 4g/kg or Pseudomonas fluorescens @ 10g/kg seeds; seed treatment must be done 24 hours before sowing of seeds
- In South Zone, undertake sowing of paddy; prevailing weather is favorable for leaf webber incidence; to control, pest spray Imidachloprid 2ml (or) Dimethoate 2 ml (or) neem oil @ 3 ml/litre of water.
- In High Altitude Hilly Zone, disease resistant potato variety kufri girdhari may be chosen for planting to avoid disease incidence during June - July monsoon period.

Animal Husbandry

- In Karnataka, during monsoon, keep chicks & birds in relatively warmer places or make the place warm by using electrical bulbs. For all age groups of poultry birds including local, broiler and layers give one dose of vaccine against Newcastle/Raniket disease in drinking water (Lasota/ F-1 vaccine). Maintain free circulation of air in poultry shed.
- In Southern Zone of Kerala, proper care should be taken to control the symptoms like lumpy skin disease caused by Capripox virus in cattles; the disease, commonly seen in cross bred cows, is spread by the external parasites like flies; high fever, considerable reduction in milk production, anorexia, swelling of lymph nodules, secretions from eyes and nose etc. are the primary symptoms of this disease.

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

Realised Rainfall: Rainfall occurred in all districts of Meghalaya; in all districts of Arunachal Pradesh except Tirap, in all districts of Assam except Darrang, Sonitpur, Morigaon and Nagaon; in Kolasib, Lawngtlai, Mamit and Saiha districts of Mizoram; in all districts of Manipur except Chandel; in all districts of Nagaland except Paren and in all districts of Tripura except North Tripura. Weather remained mainly dry over the rest of the

region.

Advisories:

- As **rain/thundershowers** likely at **most places** over Arunachal Pradesh, Assam & Meghalaya, Nagaland Manipur Mizoram & Tripura from 19th to 23rd, along with **Heavy to very heavy rainfall with extremely heavy falls** at isolated places very likely over Meghalaya on 19th; **Heavy to very heavy rainfall** at isolated places over Assam on 19th; **heavy rainfall** at isolated places over Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura from 19th to 23rd, over Assam & Meghalaya from 20th to 23rd, arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. Avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

Arunachal Pradesh

- In Arunachal Pradesh, continue field preparation for sowing/transplanting of rice. Ensure proper runoff management in the slopes through construction of contour bunds, ridges; also ensure proper crop cover and crop residue management in rice field. For management of leaf blast, spray Carbendazim @ 2 gram per litre of water during clear/dry days. Repeat the spray for three times at 10 days interval. Keep the periphery of the field/ nursery clean and weed-free. Spray Azadirachtin @ 6ml/litre of water preferably during clear/dry days or use proper stickers against leaf eating insects attack in lady's finger crop. Undertake harvesting of matured cobs of maize.

Assam & Meghalaya

- In Hill Zone of Assam, continue planting of ginger, papaya, pineapple and banana and sowing of fodder crops (bajra, sorgum maize, lobia). Continue sowing of cotton and nursery sowing of cauliflower. Spray Phosphamidon @ 400-500 ml/ ha in 800 litres of water against stem borer infestation in sugarcane when sky remains clear.
- In Lower Brahmaputra Valley Zone, complete nursery seed bed preparation of Sali rice for timely transplanting and proper utilization of the rainfall; undertake main field preparation. Complete sowing of soybean at the earliest. Undertake sowing of pigeon pea and sesame.
- In Upper Brahmaputra Valley Zone, continue sowing of *Sali* rice in the nursery beds and main field preparation for transplanting of *Sali* rice seedlings. To control infestation of stem borers, hoppers etc. in the *Sali* rice seedlings in the nurseries, spray Chlorpyrifos 20 EC @ 1 ml per litre of water under fair weather condition. Undertake sowing of sesame.
- In Barak Valley Zone, continue main field preparation and complete the preparation of nursery bed at the earliest. To control Shoot borer and leaf roller in ginger, spray Dimethoate 0.05% at evening or morning hours on clear days only; to control leaf spot disease apply 1% Bordeaux mixture or 0.2% Thiram; for controlling Rhizome (soft) rot disease, improve the drainage system.
- In Central Brahmaputra Valley Zone, undertake main field preparation for transplanting of *Sali* paddy in very low lying areas if sufficient water is accumulated in the field. For low lying areas, undertake transplanting of seedlings when its height becomes 15 cm with 3 to 4 leaves. Carry out land preparation/sowing of Arhar. Undertake harvesting matured cobs of maize. Undertake harvesting and retting of Capsularis jute preferably at pre-flowering stage (120 days after sowing) to get better quality fibre.
- In North Bank Plain Zone, undertake main field preparation for transplanting of Sali rice; seedlings become ready for transplanting upon attaining height of 15 cm with 3 to 4 leaves. Undertake land preparation/sowing of jute seeds for seed crop of jute. Present weather condition is favorable for shoot borer attack in sugarcane crop; to control the pest, burying or burning of the infested canes along with proper earthing up is

advocated.

- In Meghalaya, continue nursery sowing of *Sali* rice and main field preparation for transplanting of *Sali* rice. Ensure proper drainage system in the ginger/turmeric and vegetable crop field. Spray Azadirachtin 1500 ppm @ 5ml/ litre of water inside the whorls against Fall Army Worm incidence in maize when weather is clear.

Manipur, Mizoram, Tripura and Nagaland

- In Manipur, continue sowing of soybean, *kharif* maize, groundnut, black gram and rice bean; continue planting of ginger. Continue nursery raising of *kharif* rice; maintain 5-8 cm water level at Pre-*kharif* rice field at flowering stage. Spray Chloropyriphos 20EC/ Thiamethoxam 25%WG/ Fipronil 5%SC @ 2ml/ litre of water against stem borer or leaf folder or plant hoppers in *kharif* rice at milky dough to maturity stage after rains. To control Fall Army worm in maize, manual destruction of egg masses and caterpillars may be done. Pheromone traps @ 4/ha for monitoring and 10/ ha for mass trapping of adult insects may be done. Spray Emamectin Benzoate 5% SG @6/15 litre water if infestation is above ETL. Spray Dichlorovos 76% EC @ 1ml/ litre of water if hairy caterpillar infestation in soybean/ groundnut is above ETL after current spell rain.
- In Mizoram, undertake repairing of the bunds of main field for maintaining the proper water level (10-15 cm) in the rice field. Undertake transplanting of low land rice seedlings. Farmers are advised not to transplant huge area of land in same rice variety. Farmers should not pluck out the whole seedling stock in sowing time; at least 20% of the seedling must keep as contingency measure. Undertake gap filling in groundnut and turmeric. Undertake planting of banana.
- In Tripura, continue nursery raising of *Aman* rice and sowing of groundnut in upland and medium upland. Complete the sowing of maize in upland and medium upland. Complete sowing of *Aus* rice; maintain 2-3 cm of water in the field; field to field irrigation should be avoided; after 30 days of transplanting, maintain 2 to 5cm of water.
- In Nagaland, continue nursery sowing of rice. Undertake field preparation and sowing of soybean and groundnut. Cover tubers of potato by a layer of soil to protect tubers against greening.

Animal Husbandry

- In Arunachal Pradesh, close herding and wet-humid condition during rainy season may cause outbreak of infectious diseases. Keep the animal shed clean and dry. Injuries, wounds, lesions etc. should be dressed regularly using proper disinfectant. Ensure schedule vaccination under vet supervision.
- In Lower Brahmaputra Valley Zone of Assam, during monsoon season, the calves are infected more by the worms. It is advised to give Piperzine or Mebendazole in recommended doses in consultation with veterinary doctor.

Fishery

- In Upper Brahmaputra Valley Zone of Assam, as water has already started to accumulate in the ponds, go for stocking with fingerlings or carried over seeds of 15 cm size @ 5000 per hectare of water surface area.
- In Central Brahmaputra Valley Zone of Assam, apply cow dung at the rate of 500 gm per sq m. at least 15 days prior to releasing fingerlings into the tanks. Farmers may release fish prawn in the ponds during this period.

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

Realised Rainfall: Significant rainfall occurred in all districts of Andaman & Nicobar Islands, in all districts of Bihar except Sheikhpura; in all district of Jharkhand except Deoghar, Godda, Gumla, Khunti and Lohardaga; in

all districts of Odisha except Balasore, Cuttack, Gajapati, Ganjam, Jagatsingpur, Kendrapara, Khurda, Nayagarh & Puri and in all districts of West Bengal & Sikkim. Weather remained dry/mostly dry over the rest of the region.

- **Advisories: As Thunderstorm accompanied with lightning** very likely at isolated places over Bihar from 19th to 22nd and over Jharkhand from 19th to 23rd, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm/dust storm.
- As **rain/thundershowers** likely at **most places** over Andaman & Nicobar Islands, over Bihar & Jharkhand from 19th to 22nd, over Gangetic West Bengal from 19th to 21st, over Odisha on 21st & 23rd, **at many places** over Odisha on 19th, 20th & 23rd and over Gangetic West Bengal on 22nd & 23rd, along with **Heavy to very heavy rainfall** at isolated places over Sub-Himalayan West Bengal & Sikkim on 19th, over Bihar, Jharkhand and Odisha on 20th & 21st; **heavy rainfall** at isolated places over Gangetic West Bengal, Odisha, on 19th, over Bihar, Jharkhand on 19th & 22nd, over West Bengal & Sikkim on 20th & 21st, over Odisha and Andaman & Nicobar Islands on 22nd and over Sub-Himalayan West Bengal & Sikkim on 22nd & 23rd, arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. Avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

Odisha

- In Western Undulating Zone, undertake land preparation for nursery sowing of paddy; sow the pre-germinated seeds in seed beds of 1m breadth and 15cm height with convenient length as per availability; keep drainage channels in between the beds to facilitate the water management; an area of 400sq. m. is sufficient to raise seedlings for 1acre transplanting. The direct seeded rice is at germination stage; drain out water from the crop field. Prepare land for sowing groundnut. Cotton crop is at sowing to germination stage; drain out water from the crop field. Postpone sowing of maize for the time being and resume after the rain stops.
- In West Central Table Land Zone, undertake for nursery bed preparation for transplanted rice and complete the sowing of direct seeded rice. Prepare field for maize cultivation.
- In North Eastern Coastal Plain Zone, taking advantage of recent rain, complete the sowing of groundnut as soon as possible.

Bihar

- In North East Alluvial Zone, keeping in view of the possibility of heavy to moderate rain for the next five days, farmers are advised to wait for sowing paddy in nursery.
- In North West Alluvial Plain Zone, undertake direct seeding of rice where there is stagnant water in field. Carry out land preparation for pigeon pea and sowing of sesame and kharif vegetables such as lady's finger, pumpkin, cucumber, sponge gourd, bottle gourd, etc.
- In South Bihar Alluvial Zone, undertake sowing of certified seeds of medium duration kharif rice with seed treatment of Bavistin @ 2g/kg and seed rate @ 20kg/ha. Prepare land and procure certified seeds of kharif maize. Prepare seed bed for kharif onion.

Jharkhand

- In North and Central Eastern Plateau, complete the sowing of various kharif crops, except rice, by 30th June using ridge and furrow method. Sow crops having less water requirement like pigeon pea (arhar), urad (black gram), finger millet (marua), sorghum (jowar), etc. in upland. Crops like rice, maize,

groundnut, soybean, etc. may be sown in medium land.

- In South Eastern Plateau Zone, taking advantage of rainfall received during previous days, start land preparation and simultaneous timely (15 to 30 June) sowing of direct seeded upland rice; incorporate well rotted FYM or compost @ 2 tonnes per acre. In low land, carry out nursery bed preparation for sowing of long duration rice varieties. Prepare land for sowing of pigeon pea, maize, green gram, black gram and groundnut.

West Bengal

- In Hill Zone, undertake nursery bed preparation for raising kharif rice; soak the seeds in water for 24 hrs and treat them with Bavistin @ 2 g per kg of seeds.
- In Old Alluvial Zone, prepare main land for transplanting kharif paddy; immediately complete sowing of rice seeds in seedbed; keep the main seedbed 4 feet wide and conveniently long; thinly sprinkle the sprouted seeds and, 3 hours after the sowing, apply 1 inch of water; as the seedlings grow, the water level should be increased to 2 inches.

Gangetic West Bengal:

- In Coastal Saline Zone, undertake sowing of seeds in the seed bed for medium/long duration Aman paddy cultivation (0.3 decimal area per bigha); before sowing, seeds should be treated by Dithane M-45 properly. Drain out excess water from okra field at flowering to fruiting stage; apply Acephate@1g/litre of water to control white fly.
- In Undulating Red and Laterite Soil Zone, complete the final land preparations in upland and give proper bunding to hold the water in the paddy field; complete sowing of rice crop by end of this week; apply 4.4kg Urea, 25kg SSP and 6.4kg MOP per bigha in the final land preparation; treat seeds with Carbendazim @3g/kg seeds before sowing. In low land, raise paddy nursery by using treated seeds at seed rate 5.5-6 kg for one bigha; provide proper drainage channels to remove the excess water from nursery area.

Andaman & Nicobar Islands

- Close the bunds and maintain a thin film of water in paddy nursery. Make pits of 60 cm size away from base tree (arecanut) and transplant black pepper vines grown in nursery bed or polythene bags; fill the pits with compost or farm yard manure. Transplant pineapple suckers in upland area or embankment of pond/ BBF by digging 25 to 30 cm depth and maintaining 90 cm plant to plant distance.

Animal Husbandry

- In West Bengal, feed only dry food to the animals; keep the shed clean and dry; disinfect the shed with bleaching powder; don't allow the cattle to graze in submerged field; if wound is seen at foot and mouth, wash the wound with Potassium permanganate solution.
- Remove wet litter from poultry shed and put dry fresh litter for enhanced production and avoid growth of pathogens.

Fishery

- In West Bengal, drain out excess water and keep the pond water clean; use Terramycin tablets to control bacterial diseases.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Realised Rainfall: Rainfall occurred in all districts of Kokan, Kolhapur, Pune Satara, Parbhani, Amravati, Bhandara, Gadchiroli, Gondia, Nagpur districts of Maharashtra; Devbhoomi Dwarka, Gir Somnath, Junagadh, Kutch and Porbandar districts of Saurashtra & Kutch.

Advisories:

- **As Thunderstorm accompanied with lightning** very likely at isolated places over Gujarat state on 19th & 20th, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up

in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm/dust storm.

- As **rain/thundershowers** likely **at most places** over Konkan & Goa from 19th to 23rd, **at many places** over Madhya Maharashtra on 19th, 22nd & 23rd, over Vidarbha on 21st and over Marathwada on 22nd & 23rd, along with **Heavy to very heavy rainfall** at isolated places over Konkan & Goa on 19th; **heavy rainfall** at isolated places over Madhya Maharashtra on 19th, over Konkan & Goa from 20th to 23rd, over over Vidarbha 21st to 23rd, arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. Avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

Maharashtra

- In Konkan, continue transplanting of 21-25 days old rice seedlings. Continue sowing of groundnut.
- In Madhya Maharashtra, undertake sowing of kharif crops like cotton, soybean and pigeon pea in Pune, Solapur & Jalgaon districts and continue sowing of kharif crops like cotton, soybean, pigeon pea, groundnut, black gram and green gram in Ahmednagar & Nandurbar districts. Farmers are advised to wait for sowing in Shirur taluka of Pune district and Bhusaval, Bodhavad, Dharangaon, Erandol, Jamner talukas of Jalgaon districts in Ahmednagar district (Parthadi, Shevgaon, Shrigonda, Karjat talukas), Nandurbar district (Navapur and Akrani talukas) and Dhule district till receipt of sufficient rainfall.
- In Marathawada, wait for sowing of *kharif* in (Ahmednagar district : Parthadi, Shevgaon, Shrigonda, Karjat talukas, Nandurbar district : Navapur and Akrani talukas) and Dhule district till receipt of sufficient rainfall. Continue transplanting of 21-25 days old rice seedlings. Continue sowing of *kharif* crops like groundnut and soybean.
- In Vidharbha, wait for sowing of *kharif* crops like cotton, pigeon pea, green gram and black gram till receipt of sufficient rainfall. Continue nursery sowing of rice, cotton, pigeon pea and soybean. To reduce soil moisture stress in early sown rice nurseries (emerged/emerging seedlings), apply protective irrigation.

Gujarat

- In Middle Gujarat, continue nursery preparation for rice and vegetable (chili, brinjal and tomato) crops. Continue land preparation for sowing of pearl millet. Carry out harvesting of matured fruits of mango, citrus fruits and jamun.
- In North Gujarat, Continue land preparation for sowing of pearl millet, green gram groundnut, maize, pigeon pea, cowpea, hybrid cotton & B.T. cotton. Prepare nursery bed for raising seedlings of kharif vegetable crops like chilli, tomato, brinjal, etc. Carry out threshing operation in groundnut and pearl millet and store at safe place. Continue new plantation of horticultural crops.
- In Saurashtra and Kutch, continue sowing of groundnut, cotton, sesame, pearl millet, green gram, black gram and cowpea, wherever sufficient rainfall for sowing is received. Apply DAP @ 87 kg per hectare as basal. Procure good quality seeds for sowing of pigeon pea (in July). Continue nursery preparation for tomato, chilli, brinjal and early cauliflower and sowing of cucurbits, ladyfinger, cluster bean, kidney bean, cowpea, tur, Amranthus, fodder maize and fodder sorghum.
- In South Gujarat, continue nursery preparation of rice, brinjal, tomato and sowing of cucurbits. For controlling of white fly in okra, foliar spray of Neem oil @ of 40 ml/15 litre of water is recommended.

Animal Husbandry

- In Gujarat, for control of ticks and mites, spray Deltamethrin or Amitral 2 ml/litre of water. Give stored fodder with mineral mixture to animals.

CENTRAL INDIA [M.P., CHHATTISGARH]

Realised Rainfall: Rainfall occurred in all districts of Chhattisgarh and in all districts of Madhya Pradesh except Alirajpur, Barwani, Bhind, Burhanpur, Chhatarpur, Damoh, Datia, Dhar, Gwalior, Indore, Jabalpur, Jhabua, Khandwa, Khargone, Morena, Panna, Ratlam, Sheopur Kalan and Tikamgarh. Weather remained mainly dry over rest of the region.

- **Advisories: As Thunderstorm accompanied with lightning** very likely at isolated places over Madhya Pradesh and Chhattisgarh on 19th & 20th, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm/dust storm.
- As **rain/thundershowers** likely **at most places** over Chhattisgarh from 20th to 23rd, over East Madhya Pradesh from 21st to 23rd, **at many places** over Chhattisgarh on 19th, over East Madhya Pradesh on 19th & 20th and over West Madhya Pradesh from 21st to 23rd, along with **Heavy to very heavy rainfall** at isolated places over Chhattisgarh on 20th, over East Madhya Pradesh on 21st; **heavy rainfall** at isolated places over Madhya Pradesh, Chhattisgarh on 19th, 22nd & 23rd, over East Madhya Pradesh on 20th and over West Madhya Pradesh on 21st, arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. Avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

Madhya Pradesh

- In Jhabua Hills Zone, undertake sowing of maize, black gram and soybean crops. Give timely irrigation in ginger/turmeric and vegetable fields. Prepare field for cultivation of rainy season vegetables in raised furrow and poly-mulching method.
- In the Nimar Valley Zone, prepare fields for Kharif maize crop; procure good quality seeds from certified sources; keep the seed rate at 20 kg/ha. In case of early yellowing and drying of cotton plant, apply drenching of Carbendazim 1gm/litre of water.
- In Kymore Plateau Zone, undertake preparation of paddy nursery; treat seeds before sowing; carry out transplanting when seedlings are 20-21 days old. Undertake sowing of short/medium duration soybean and early maturing/medium term pigeon pea.
- In Bundelkhand Zone, farmers having sufficient irrigation facilities may start sowing seeds in paddy nursery after proper seed treatment. Continue sowing of ginger and colocasia crops; select improved varieties and treat the seeds with fungicide before sowing. Continue preparing the seed bed of tomato, chilli, brinjal, etc. for kharif season. Carry out digging of pits for establishing new orchards.

Chhattisgarh

- In Northern Hill Zone, continue sowing of kharif crops like pigeonpea, soybean, maize, groundnut, etc. Undertake nursery preparation for paddy; treat seeds with fungicide Carbendazim (2 gm/kg of seeds) before sowing in nursery. Carry out intercultural operation in tomato, brinjal, chilli, okra and other vegetable crops.
- In Bastar Plateau Zone, undertake sowing/transplanting of rice using SRI or biasi method. Undertake sowing of maize up to the first fortnight of July. Carry out planting of tuber crops like colocasia, jimikand, ginger and turmeric by the end of June. Prepare vegetable nursery on a 15cm high raised bed; sow the seeds after seed treatment against rotting diseases; provide thin net around the nursery as a protection against vector diseases. Continue sowing of minor millet (Kodo) and finger millet.
- In Chhattisgarh Plain Zone, continue sowing of rice using common practices like biasi and transplanting; in

addition, SRI technique and rice crop line seeding can also be adopted. Treat seeds with Saaf super @ 2 g/Kg of healthy seeds. Prepare field for sowing of soybean, maize and arhar crops. Undertake sowing of minor millets like Ragi, Kodo, Kutki and barnyard millet.

Animal Husbandry

- Carry out vaccination of animals against the Black Quarter, Anthrax and other disease as per advice of animal experts. Vaccinate poultry birds to prevent Ranikhet disease (first F-1 in age of 7 days & second R2B in age of 8 week).

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

Realised Rainfall : Significant rainfall occurred in Chamba, Kangra and Mandi districts of Himachal Pradesh; in Rajouri, Reasi and Udhampur districts of Jammu & Kashmir and in all the districts of Uttarakhand except Chamoli, Dehradun, Haridwar and Uttarkashi; in Chandigarh, in Fatehgarh Sahib and Gurdaspur districts of Punjab and in New Delhi and North Delhi districts of Delhi; Baran, Jhalawar and Kota districts in East Rajasthan; in all district except Farrukhabad, Fatehpur, Hardoi, Jaunpur, Kannauj, Kanpur City, Kanpur Dehat, Kaushambi, Lucknow, Sitapur and Unnao districts of East Uttar Pradesh; in Bareilly, Etawah, Firozabad, Pilibhit and Rampur districts of West Uttar Pradesh.

Advisories

- **As Thunderstorm accompanied with lightning & gusty wind (speed reaching 30-40 kmph)** very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad on 19th, 20th & 23rd, over Uttarakhand on 19th & 20th, over Punjab, Haryana, Chandigarh & Delhi from 19th to 23rd, over East Rajasthan from 20th to 23rd and over West Uttar Pradesh on 22nd & 23rd, **with lightning** at isolated places over Himachal Pradesh on 19th & 23rd, over Uttar Pradesh from 19th to 21st and over East Uttar Pradesh on 22nd & 23rd, **along with Duststorm/Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over East Rajasthan with **Duststorm** at isolated places over West Rajasthan on 19th along with **Dust storm/ Thunderstorm** over West Rajasthan on 22nd & 23rd, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm/dust storm.
- **As Heat wave** conditions very likely at a few places over West Rajasthan and in isolated pockets over East Rajasthan on 19th and over West Rajasthan on 20th, apply irrigation to summer vegables and cotton crop at regular intervals and increase the frequency of irrigation at critical growth stages; carry out mulching with straw/polythene to conserve soil moisture.
- **As rain/thundershowers** likely **at most places** over Uttarakhand on 22nd & 23rd, **at many places** over over Uttarakhand on 20th & 21st, over East Uttar Pradesh on 22nd & 23rd and over West Uttar Pradesh and Himachal Pradesh on 23rd, along with **Heavy to very heavy rainfall** at isolated places over Uttarakhand on 23rd; **heavy rainfall** at isolated places over East Uttar Pradesh on 19th & 20th, over East Rajasthan on 19th & 23rd, over Uttarakhand on 21 & 22nd, over Uttar Pradesh on 23rd, arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. Avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

Jammu & Kashmir

- In Valley Temperate Zone, carry out hand weeding in rice, 18 to 20 days after transplanting. Carry out weeding in 25-30 days old kharif pulses. Undertake land preparation for fresh plantation of saffron. Hand pollination may be done in bottle gourd to improve yield. Regular weeding should be done to maintain weed free conditions in all vegetable crop fields.

- In Sub-Tropical Zone, carry out weeding in rice. Undertake sowing of maize after receipt of rain. Undertake transplanting of tomato, capsicum and chilli seedlings. Undertake sowing of okra.
- In Intermediate Zone, undertake transplanting of rice. Provide mechanical support for better crop stand in young plants of tomato and cucurbits to avoid losses from gusty winds.

Himachal Pradesh

- In Mild Hills Sub Humid Zone, apply mulch in pear orchards to conserve soil moisture. Install pheromone traps @ 3-4 traps per acre for monitoring of the pest population for diamond-back moth in cole crops, pod borer in pea and fruit borer in tomatoes.
- In Mid Hills Sub Humid Zone, apply first dose of Nitrogen in ginger @ (10kg CAN/bigga) and second dose of Nitrogen in cucumber and bitter gourd @ (10kg CAN/ bigga).
- In Sub Montane and Low Hills Sub Tropical Zone, undertake land preparation for transplantation of rice seedlings. Continue sowing of fodder crops like maize, cowpeas and soybean in irrigated areas.
- In High Hill Temperate Dry Zone, carry out weeding in barley and apply irrigation. To control leaf miner and thrips in pea, spray 75ml Cypermethrin (7 EC) or 50ml Dichlorvos (Nuvan 76 EC) in 100 litres of water on the crops at any time when insects are visible.

Punjab, Haryana, Delhi

- In Western Zone of Punjab, undertake transplanting of rice in the main field. Avoid irrigation in cotton crop during the period; drain out excess water from field. Regularly monitor cotton crop for infestation of whitefly; if population reaches 6 whiteflies per leaf in the upper canopy, spray with 80g Ulala 50 WG (flonicamid) or 200g Polo in 125-150 litres of water/acre before 10 AM. Spray Proclaim 5 SG @80g or Coragen 18.5 SC @ 80ml in 100-125 litres of water per acre to control fruit and shoot borer in brinjal.
- In Western Plain Zone of Punjab, undertake transplanting of rice. Undertake sowing of nursery of direct seeded of basmati rice. Apply need based irrigation of cotton crop and remove weeds.
- In Undulating Plain Zone of Punjab, continue transplanting of paddy with PAU recommended varieties. Avoid irrigating basmati nursery and direct-seeded rice fields during the period. Avoid irrigation in sugarcane crop during the period; remove excess rain water immediately after heavy rainfall.
- In Central Plain Zone of Punjab, undertake transplanting of rice. Undertake sowing of okra and cucurbits such as cucumber, bottle gourd, sponge gourd, pumpkin, etc. To control maize borer, spray 30ml Coragen 18.5SC in 60 litres of water per acre.
- In Western Zone of Haryana, due to possibility of variable weather/rainfall conditions, farmers are advised to withhold application of irrigation and chemical spray in existing crops during this period and withhold sowing of kharif crops. Prepare field for sowing of guar, bajra, maize, cluster bean, pulse crops keeping in mind of light to moderate rain or changing weather. Looking at the possibility of rain, farmers are advised not to start the sowing of guar, bajra, maize. Due to possibility of rain, do not apply the irrigation in planted vegetable crops and fruits plants. Carry out transplanting of fruit crops after rain in consultation with the officers of Horticultural Dept. If locust is visible in your field or nearby area, immediately inform the nearest Agricultural Officer or Krishi Vigyan Kendra as soon as possible.
- In Eastern Zone of Haryana, maintain social distancing during agricultural operations. Monitor constantly rice nurseries against attack of bakanae disease; spray Carbendazim @ 2.0 gram per litre of water. Prepare fields for maize crop. This is suitable time to grow fodder sorghum, cucurbits etc.. Undertake transplanting of brinjal if seedlings are ready. Keeping the weather in mind, carry out weeding in sugarcane crop. To control shoot and fruit borer in tomato crops, infected fruits and shoots should be collected and buried inside the soil.
- In Delhi, maintain social distancing during picking of vegetables and other agricultural operation in all crops. Monitor constantly paddy nurseries against attack of bakanae disease; spray Carbendazim @ 2.0

gram per litre of water. Prepare fields for maize crop and undertake preparation of nursery for chilli, brinjal and early cauliflower and transplanting of brinjal, chilli and early cauliflower if seedlings are ready.

Uttar Pradesh:

- **In East Uttar Pradesh**, undertake preparation of paddy nurseries; for one hectare of crop field 800-1000 square metre nursery is sufficient; before sowing, treat seeds with Captan 2g /kg of seeds; monitor paddy nurseries for the attack of bakanae disease; carry out transplanting of 20-25 days old rice seedlings in the main field. Undertake nursery rising of kharif onion with varieties like Agrifound, Dark red, N-23 at seed rate of 8-10 kg seeds/ha; prepare nursery bed that is raised 15 cm from the surface. Undertake sowing of pigeon pea, green gram and black gram and Maize. Farmers are advised to avoid irrigation & spraying of herbicides, pesticides or any other chemicals in sugarcane field during this week as rainfall is forecast. Avoid irrigation and maintain drainage facilities in all vegetable crops. This is most suitable time to grow fodder sorghum varieties like Pusa chari-9, Pusa chari-6 or other hybrids.
- **In West Uttar Pradesh**, prepare field for raising paddy nursery with seeds of improved varieties. Prepare field for transplanting of kharif onion, early cauliflower and cabbage. Undertake sowing of loki, torai, pumpkin, khira in kharif season; apply bio pesticides like neem oil, jeevamrit and neemastra to control pest and diseases in the vegetable crops. Take proper care of all the standing vegetable crops like spinach, okra, chilli, tomato, brinjal, beans, beet root, coriander and cucurbits like loki, torai, pumpkin, musk melon, water melon, cucumber, etc. For prevention of fall army moth in sugarcane crop, spray 800 ml of Quinalfos 25 EC or 750 ml of Profenophos 40% + Cypermethrin 4% in 625 liters of water per hectare on clear days. Undertake planting litchi orchards.

Uttarakhand

- In Sub Humid Sub Tropic Zone, undertake transplanting of rice. Avoid irrigation to sugarcane and vegetables.
- In Hill Zone, continue harvesting of onion and garlic. Continue transplanting of brinjal, tomato, capsicum and chilli. Continue harvesting of matured tomatoes. Carry out gap filling 10 days after transplanting of rice.
- In Bhabar and Tarai Zone, undertake transplanting of rice seedlings. Complete sowing of soybean. Undertake nursery sowing of cabbage, cauliflower, broccoli and knol khol.

Rajasthan

- In Flood Prone Eastern Plain Zone, make necessary field preparation for timely sowing of kharif crops; prepare field by deep ploughing; procure certified and good quality seeds, fertilizers, agro-chemicals and other inputs in advance.
- In Semi Arid Eastern Plain Zone, arrange seeds, manure and chemicals in advance for sowing kharif crops like millet, jowar, maize and guar etc. for timely sowing of these crops at the beginning of monsoon.
- In Arid Western Plain Zone, arrange certified seeds for the sowing of kharif crops like pearl millet, mung, moth, groundnut, etc.
- In Irrigated North Western Plain Zone, this is the optimum time of sowing of guar crop. On appearance of early stem borer and root borer in sugarcane crop, use Furodon dust 3% @ 6 kg per bigha or Phorate 10% @ 4 kg per bigha; repeat the spray after 40 to 50 days.
- In Sub Humid Southern Plain and Aravali Hill Zone, undertake sowing of maize.

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