



National Agromet Advisory Service Bulletin

Friday 7th July 2017
(For the period 7th to 11th July 2017)



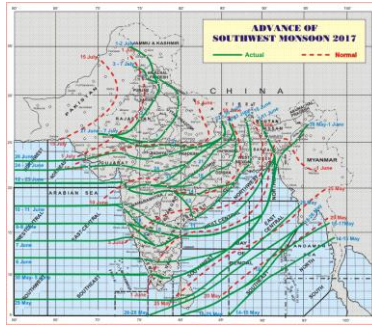
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National Agrometeorological Advisory Service Centre,
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India Meteorological Department, Shivajinagar, Pune.

Weblink For

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

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

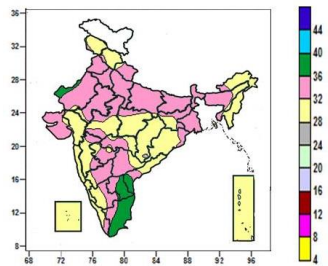
Monsoon watch dated 07.07.17



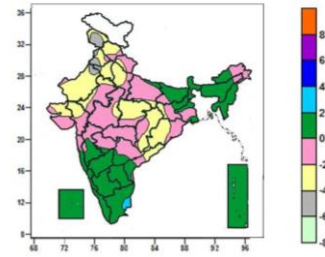
- The Northern Limit of Monsoon (NLM) continues to pass through Lat. 26.0°N/Long. 70.0°E, Barmer, Sikar, Sonipat, Shimla, Una, Jammu and Lat.32.5°N/Long. 74.5°E.

Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 05.07.2017

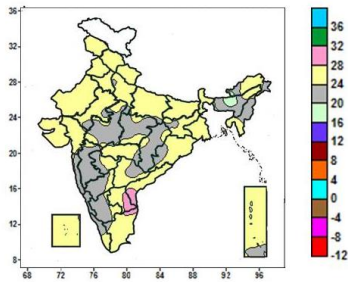
Actual Mean Maximum Temperature (°C) in India for the week ending 05.07.2017



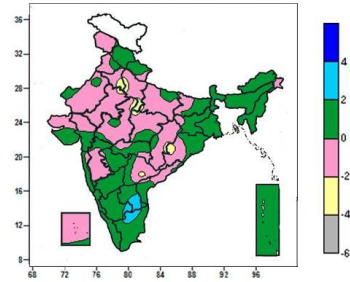
Mean Maximum Temperature (°C) Anomaly in India for the week ending 05.07.2017



Actual Mean Minimum Temperature (°C) in India for the week ending 05.07.2017

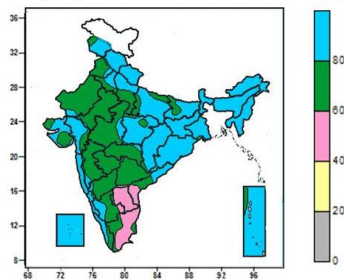


Mean Minimum Temperature (°C) Anomaly in India for the week ending 05.07.2017

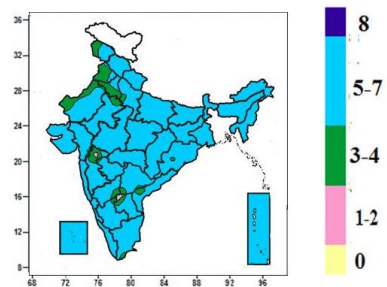


Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending 05.07.2017

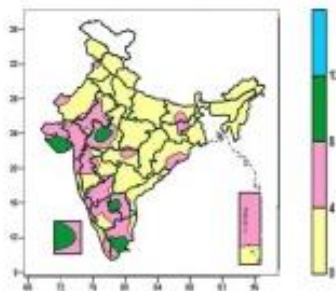
Relative Humidity (%) over India for the week ending 05.07.2017



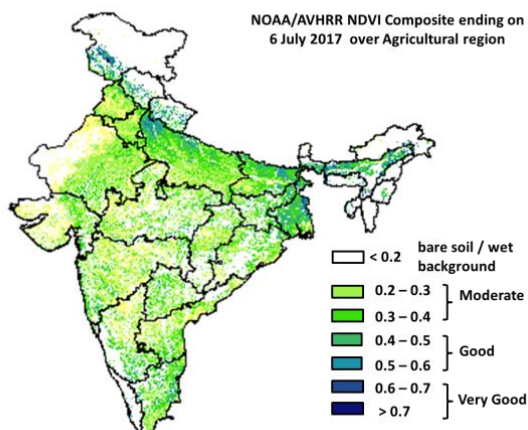
Cloud amount (okta) over India for the week ending 05.07.2017



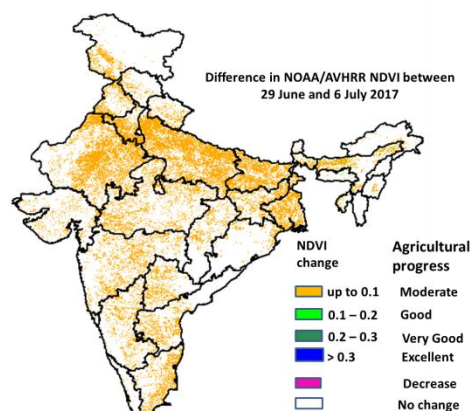
Wind speed (knots) over India for the week ending 05.07.2017



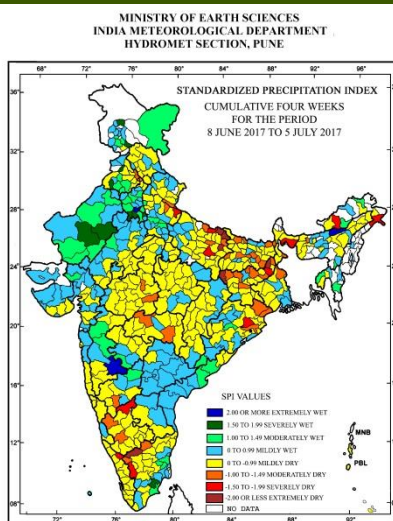
NOAA/AVHRR NDVI composite ending on 6th July 2017 over Agricultural regions of India



Difference in NOAA/AVHRR NDVI between 29th June and 6th July 2017



Standardised Precipitation Index Four Weekly for the period 8th June to 5th July 2017



Weather Forecast for next 5 days valid upto 0830 hours of 12th July 2017

- No significant change in maximum temperatures over most parts of the country during next 3-4 days.

Weather Warning during next 5 days

- 07 July (Day 1):** Heavy to very heavy rain very likely at isolated places over East Uttar Pradesh and Assam & Meghalaya; heavy rain very likely at isolated places over Uttarakhand, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura.
- 08 July (Day 2):** Heavy to very heavy rain very likely at isolated places with extremely heavy at isolated places over Assam & Meghalaya; heavy to very heavy rain very likely at isolated places over Sub-Himalayan West

Bengal & Sikkim, Arunachal Pradesh and heavy rain very likely at isolated places over Uttarakhand, East Uttar Pradesh, Odisha and Nagaland, Manipur, Mizoram & Tripura.

- **09 July (Day 3):** Heavy to very heavy rain very likely at isolated places with extremely heavy at isolated places over Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya; heavy rain very likely at isolated places over Uttarakhand, East Uttar Pradesh, Bihar, Jharkhand, Odisha, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura.
- **10 July (Day 4):** Heavy to very heavy rain very likely at isolated places over Uttarakhand, East Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya; heavy at isolated places over Jammu & Kashmir, Himachal Pradesh, Bihar, Jharkhand, Gangetic West Bengal, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura.
- **11 July (Day 5):** Heavy to very heavy rain very likely at isolated places over Himachal Pradesh, Uttarakhand, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya; heavy at isolated places over Jammu & Kashmir, East Uttar Pradesh, Bihar, Gangetic West Bengal and Nagaland, Manipur, Mizoram & Tripura.

Weather Outlook for subsequent 2 days from 12th to 14th July 2017

- Rain very likely at most places along west coast and over northeastern states and at many places over Western Himalayan region & East India and at a few places over Central India and Uttar Pradesh.
- Rain very likely at isolated to few places over rest parts of the country.

Meteorological sub-division wise detailed 5 day rainfall forecast (Mid day) 7th July 2017

Met-Sub-Division	07-Jul Today	08Jul Sat	09Jul Sun	10Jul Mon	11Jul Tue
1. Andaman & Nicobar Islands	WS	WS	FWS	FWS	FWS
2. Arunachal Pradesh	WS	WS	WS	WS	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	WS
6. Gangetic West Bengal	FWS	FWS	WS	WS	WS
7. Odisha	FWS	WS	WS	WS	FWS
8. Jharkhand	FWS	FWS	WS	WS	WS
9. Bihar	FWS	FWS	WS	WS	WS
10. East Uttar Pradesh	WS	WS	WS	WS	WS
11. West Uttar Pradesh	FWS	SCT	SCT	SCT	FWS
12. Uttarakhand	WS	WS	WS	WS	WS
13. Haryana, Chd & Delhi	SCT	ISOL	ISOL	SCT	SCT
14. Punjab	ISOL	ISOL	ISOL	SCT	FWS
15. Himachal Pradesh	SCT	SCT	FWS	WS	WS
16. Jammu & Kashmir	SCT	SCT	FWS	WS	WS
17. West Rajasthan	DRY	DRY	ISOL	ISOL	ISOL
18. East Rajasthan	ISOL	ISOL	ISOL	ISOL	SCT
19. West Madhya Pradesh	ISOL	ISOL	ISOL	ISOL	SCT
20. East Madhya Pradesh	SCT	SCT	SCT	SCT	SCT
21. Gujarat Region	ISOL	ISOL	ISOL	SCT	SCT
22. Saurashtra & Kutch	ISOL	ISOL	ISOL	SCT	SCT
23. Konkan & Goa	WS	WS	FWS	WS	WS
24. Madhya Maharashtra	SCT	SCT	SCT	SCT	SCT
25. Marathwada	ISOL	ISOL	ISOL	SCT	SCT
26. Vidharbha	ISOL	ISOL	ISOL	ISOL	ISOL
27. Chhattisgarh	SCT	SCT	FWS	FWS	SCT
28. Coastal Andhra Pradesh	FWS	SCT	SCT	SCT	FWS
29. Telangana	FWS	SCT	SCT	SCT	SCT
30. Rayalaseema	SCT	SCT	ISOL	SCT	SCT
31. Tamilnadu & Puduchery	ISOL	ISOL	ISOL	ISOL	SCT
32. Coastal Karnataka	FWS	WS	WS	WS	WS
33. North Interior Karnataka	SCT	SCT	SCT	SCT	FWS
34. South Interior Karnataka	FWS	SCT	SCT	SCT	FWS
35. Kerala	WS	FWS	FWS	WS	WS
36. Lakshadweep	WS	WS	FWS	FWS	FWS

% 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		

Salient Advisories

- Utilising the realised and expected rainfall:
- Continue sowing of soybean, jowar, bajra, urad, moong and sesame in **East Madhya Pradesh** and continue nursery sowing of rice. In **West Madhya Pradesh**, continue and sowing of soybean, jowar, bajra, urad, moong after receipt of sufficient rainfall. Undertake transplanting of rice.
 - In **East Uttar Pradesh**, undertake transplanting of rice. Continue land preparation and direct sowing of rice in low land areas. Continue sowing of long duration varieties of maize and arhar after current spells of heavy rain. In **West Uttar Pradesh**, in Bundelkhand Zone, undertake sowing of *kharif* crops like maize, jowar, groundnut, arhar, urad, mung and linseed. Continue sowing of maize, bajra and guar in Western Plain Zone.
 - Complete nursery sowing of medium duration varieties of rice and continue land preparation and sowing of maize and minor millets in **Bihar**.
 - In Sub Humid and Sub Tropic Zone of **Uttarakhand**, continue nursery sowing of rice and continue sowing of maize. In Udham Singh district of Bhabar and Tarai Zone, undertake transplanting of rice, continue direct sowing of rice, sowing of maize, cowpea and early maturing varieties of pigeon pea after current spells of heavy rain.
 - In **Punjab, Haryana, Delhi and Himachal Pradesh** undertake transplanting of rice. Continue sowing of cotton in Western Zone of Punjab.
 - In Western Zone of **Haryana**, continue sowing of guar, bajra, maize. Continue transplanting of rice.
 - In **New Delhi**, continue transplanting of rice seedling in prepared fields. Continue sowing of maize, guar, bajra.
 - In **Gujarat**, drain out excess water from rice nurseries and already sown crop fields in South Gujarat Heavy Rainfall Zone and in South Gujarat Zone and continue sowing of soybean, pigeon pea, cotton at optimum soil moisture conditions. Continue sowing of pulses like green gram, black gram, pigeon pea and vegetables crops in middle and North Gujarat.
 - In **East Rajasthan**, continue sowing of groundnut, pearl millet, sorghum, maize, mung bean, cluster bean, moth and cowpea. Continue nursery sowing of rice in Southeastern Humid Plain Zone. In **West Rajasthan**, continue sowing of pearl millet, cluster bean, mung bean, moth bean etc. In Irrigated North Western Plain Zone, Hanumangarh, continue transplanting of rice.
 - In **Jharkhand**, continue nursery sowing of rice and sowing of maize, urad and arhar.
 - In **West Bengal**, continue main field preparation and transplant the seedlings of rice. Undertake sowing of direct seeded long duration rice varieties. In Laterite and Red Soil Zone, complete nursery sowing of rice crop under upland and lowland condition. Provide adequate drainage in already sown jute fields and vegetable fields.
 - In **Odisha**, continue land preparation and direct sowing of *kharif* rice in medium and low lands and land preparation and sowing of red gram in East and South East Coastal Plain Zone. Continue sowing of *kharif* maize, red gram and groundnut crops in North eastern and Western Plateau Zone.
 - Continue sowing of soybean, maize, jowar and groundnut in **Chhattisgarh**. Continue nursery sowing of *kharif* rice in south Chhattisgarh. In North Hill Zone, continue transplanting of rice.
 - In **Coastal Andhra Pradesh**, in Krishna Godavari Zone, continue nursery sowing of rice, sowing of maize, black gram, green gram and red gram.
 - Continue sowing of *kharif* crops like cotton, jowar, groundnut, red gram, green gram, black gram in **Telangana**.
 - In **Konkan**, continue transplanting of 20 to 25 days old rice seedlings. Also maintain 2-3 cms water level in transplanted rice fields.
 - In **Madhya Maharashtra**, continue transplanting of 20 to 25 days old rice seedlings in Western Ghat region. Continue sowing of *kharif* crops like soybean, tur, cotton, groundnut and sunflower in all districts except Solapur and Sangli districts. Undertake intercultural operation like hoeing and weeding in standing crops to conserve soil moisture in Sangli and Solapur districts.
 - In **Coastal Karnataka**, continue transplanting of rice.
 - In **South Interior Karnataka**, continue sowing of pulses like cowpea, green gram, black gram, horse gram and field bean. In the Eastern Dry Zone, continue land preparation and sowing of *kharif* crops like red gram, ragi, groundnut and maize.
 - In **North Interior Karnataka**, continue sowing of jowar, pearl millet, red gram, black gram, maize, groundnut, soybean, sunflower, sesame.

- In **Assam**, continue nursery sowing of Sali rice after current spells of heavy rain. Provide adequate drainage in rice nurseries, jute and vegetable fields. In Flood affected areas, if rice nurseries are damaged, undertake nursery sowing of short duration/submergence tolerant varieties of rice like Swarna Sub-1/Ranjit Sub-1 or undertake nursery preparation for long duration/late transplanting varieties like Manohar Sali/Gitsh.
 - In **Meghalaya**, continue nursery sowing rice after current spells of rain. Provide adequate drainage in ginger/turmeric fields. Continue land preparation for transplanting of Sali rice/kharif rice.
 - In **Arunachal Pradesh**, continue transplanting of finger millet and nursery sowing of rice, sowing of cowpea, French bean and soybean after current spells of heavy rain. In **Nagaland**, undertake transplanting of TRC/WRC rice.
 - In **Manipur**, continue sowing of *kharif* maize, soybean, groundnut and black gram and planting of ginger/turmeric. Raise community nursery in upland area so that it may be least affected with the heavy rains. Continue main field preparation for transplanting of rice. In **Mizoram**, continue transplanting of rice.
- In view of the subdued rainfall, apply protective irrigation by sprinkler in soybean, cotton, maize, groundnut etc. and vegetable crops in **Marathwada**. In fallow lands, undertake sowing of *kharif* crops after receipt of sufficient rainfall. In **Vidarbha**, prepare field for transplanting of rice in East Vidarbha. Apply protective irrigation by sprinkler in soybean, cotton, maize etc. and vegetable crops. In fallow lands, undertake sowing of *kharif* crops after receipt of sufficient rainfall. In **Rayalaseema**, undertake sowing of rainfed groundnut, red gram, Korra after receipt of sufficient rainfall.

Detailed Zonewise Agromet Advisories

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

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala except Thiruvananthapuram, in East & West Godavari and Vishakapatnam districts of Coastal Andhra Pradesh, Adilabad and Khammam districts of Telangana, all districts of Coastal Karnataka, in Belagavi and Haveri districts of North Interior Karnataka, Chikkamagaluru, Kodagu and Shivamogga districts of South Interior Karnataka during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Kerala:**
 - In the Northern Zone, continue transplanting of rice.
 - In the Southern Zone, provide propping for bunched nendran banana plants and construct channels in the field for proper drainage. In view of heavy rains take necessary steps for proper drainage in coconut fields, prevent soil erosion and adopt a comprehensive management package against the mid-whorl yellowing in coconut.
 - In the Problem Area Zone, continue planting of new coconut seedlings with moderate soil wetness and undertake all sprayings to the crops early in the morning or evening to get a gap of 2 hours before rain.
 - In the High Altitude Zone, undertake planting of cardamom and continue planting of coconut, pepper and arecanut.
 - In the Central Zone, there is chance of quick wilt disease in nutmeg/pepper due to high relative humidity. Apply Trichoderma or pseudomonas culture in soil after current spells of rain.
 - In the Northern Zone, in the hilly tracts, there are chances of occurrence of 'yellowing of coconut leaves' and bud rot disease in weak palms. Apply Lime @ 2 kg/palm and 500g of Ayar (R) (micro nutrient mixture) along with the recommended dose of NPK fertilizers, two weeks after lime application after current spells of rain.
 - In the Problem Area Zone, cut and remove all affected tissues of the coconut crown to control bud rot incidence. Apply Bordeaux paste and protect it from rain until normal shoot emerges. Burn all removed disease affected tissues. For control of leaf rot incidence, apply @ Contaf 2 ml/300 ml water/tree in crown and leaf after current spells of rain.
 - In the Southern Zone, continuous rains may favour the spread of fungal diseases and incidence of sheath blight in rice. In order to control sheath blight in one month old plants, spray Pseudomonas culture 10 g/litre of water after current spells of rain.
 - **Karnataka:**
 - In Coastal Zone of Karnataka, continue transplanting of rice in Coastal Zone. Maintain optimum water level in transplanted rice. In Hill Zone, complete nursery sowing and undertake transplanting of rice. Continue planting of arecanut seedlings and sowing of turmeric and ginger.
 - In Central Dry Zone, continue sowing of groundnut and red gram, across the slope, where sufficient rainfall is received; undertake sowing of crops in remaining areas after receipt of sufficient rainfall. Continue intercultural operations in green gram, sesamum and maize and hand weeding in onion.
 - In Southern Transition Zone, continue of nursery sowing of rice and sowing of maize, red gram with realised

rainfall.

- In Southern Dry Zone, continue nursery sowing of ragi. Undertake earthing up in turmeric and zinger crops at sprouting stage. Provide protective irrigation in cowpea, green gram and black gram in Chamrajnagar, Mandya, Mysuru districts.
- In the Eastern Dry Zone, continue sowing of ragi, maize, groundnut under double cropping and sowing of red gram, castor under monocropping under sufficient moisture condition.
- In North East Dry Zone, continue sowing of red gram, cotton, bajra, castor and maize with available soil moisture. Make furrows in sugarcane and apply one bag urea/acre. Make basins and give chemical fertilizer to the fruit crops. Take up fresh plantation of fruit trees.
- In North Dry Zone, complete sowing of green gram, sunflower, maize, Bt. cotton, red gram, bajra, sorghum, sesamum, navane and groundnut (bunch type) with available soil moisture in Vijayapura and Bagalkote districts and after receipt of sufficient rainfall in Gadag district. To make efficient use of available soil and water resources and to get higher returns, adopt intercropping systems in light and medium black soils; bajra + groundnut(bunch) in 2:4 row proportion ; bajra + red gram in 2:1 row proportion; groundnut (bunch) + red gram in 3:1 or 4:2 row proportion, red gram + sesamum in 1:2 or 2:4 row proportion. Use short duration varieties of red gram for sowing; use wilt resistant variety TS-3R of red gram. Sow the crops in rows across the slope.
- In North Transition Zone, continue sowing of green gram, soybean, groundnut, cotton and maize under sufficient soil moisture condition.
- In North East Transition Zone, continue sowing of soybean, green gram, black gram, jowar and pigeon pea crops with proper spacing utilising available soil moisture.
- Due to wet condition as well as relatively higher RH in some parts of Bidar district, incidence of minor pest i.e., millipede is found on cotyledon/seedlings of soybean; to control this, go for hand picking and destroy them, undertake heaping of farm waste at two to three corner, near the bunds and make it wet; undertake localized drenching of Lambda Cyhalothrin 10 EC @ 2 ml/litre around 2 to 3 crop rows near bounds after current spells of rain.
- **Andhra Pradesh:**
 - In the North Coastal Zone, undertake nursery sowing of rice, seed treatment for dry rice nursery with Carbendazim @ 2.0g/kg seed and for wet nurseries @ 1.0g carbendazim/litre of water after current spells of rain. Undertake sowing of green manure crops like sunnhemp or dhaincha. Continue planting of rainfed sugarcane.
 - In the Krishna Godavari Zone, continue land preparation for sowing of cotton, field preparation and nursery preparation of chillies, nursery sowing of paddy, sowing of maize, black gram, green gram and red gram.
 - In the Scarce Rainfall Zone of Rayalaseema, continue sowing of maize under irrigated conditions after seed treatment with Kaptan @ 3.0 gm/one kg of seed, sowing of castor, korra, rainfed red gram, planting of ber and pomegranate in Anantapur and Kurnool districts. Undertake sowing of rainfed groundnut in Anantapur and Kurnool districts and continue sowing of sunhemp and dhaincha as in-situ green manure crops preceding rice in Kurnool district.
 - In the East Godavari Zone, continue nursery preparation for *kharif* rice, sowing of cotton and other green manure crops(sesamum and green gram).
 - In Rayalaseema, undertake sowing of rainfed groundnut, red gram, Korra after receipt of sufficient rainfall.
 - In the Southern Zone, in Chittoor and Kadapa districts, continue sowing of *kharif* groundnut only enough sowing moisture in the soil. Undertake sowing of red gram in Chittoor and Nellore districts and go for either monocropping (@ 4-5 kilo seed/acre) or intercropping with red gram + groundnut in 7:1 ration or 11:1ratio.
 - In the Krishna Godavari Zone, due to prevailing rainy weather conditions, incidence of white mite may occur in sugarcane (vegetative to ripening stage). To control, spray Malathion @ 3 ml/litre of water after current spells of rain and undertake foliar application of liquid fertilizers to overcome waterlogging/excess moisture.
- **Telangana:**
 - In South Telangana Zone, continue sowing of rainfed crops like jowar, bajra, maize, soybean, green gram, cotton, red gram etc. in ridge and furrow method. Sow red gram as inter crop in cotton or maize fields. Take up rice nurseries using medium duration varieties after seed treatment with Mancozeb @ 2.5 g/ kg of seed. Undertake frequent inter cultivation in cotton fields to control weeds and conserve soil moisture. In areas where inter cultivation is not possible due to recent rains, take up post emergence application of Quizalofop-P-Ethyl @ 400 ml per acre for control of grasses and Pyriithiobac Sodium @ 250 ml/acre for control of broad leaved weeds after current spells of rain.
 - In North Telangana Zone, continue land preparation for sowing of cotton and for sustainable cotton production, take up inter cropping in cotton with greengram / blackgram / soybean / cluster bean in 1:2 or 1:3 ratio and redgram 4:1 / 6:1 / 8:1. Raise nursery bed for sowing of vegetables and provide adequate drainage. Continue sowing red gram as inter crop in cotton or maize fields, rainfed crops like jowar, bajra and black gram, red gram, maize, green gram and soybean and planting of turmeric.
 - In South Telangana Zone, spray Monocrotophos @ 1.6 ml/ litre of water as prophylactic spray to 12-15 days old maize crop to prevent incidence of stem borer and apply Carbofuran 3G @ 800g in 200 sq.mt. area nursery to control stem borer incidence noticed in rice nurseries after current spells of rain.

▪ **Tamil Nadu:**

- In the Cauvery Delta Zone, undertake preparation for transplanting of Kuruvai and SRI cultivated rice. Since high wind speed with light rainfall is expected in coming days, give support for banana.
- In the Western Zone, since heavy wind speed (>20 km/hr) is anticipated, early season sugarcane and five months old banana crops may be propped against lodging. Considering the prevailing weather, root feeding of TNAU coconut tonic 200ml/tree is advised for arresting button shedding in coconut.
- In the High Rainfall Zone, as heavy winds (20 - 22 kmph) coupled with rainfall is expected, provide staking to young rubber, banana and fruit trees.
- In the Cauvery Delta Zone, occurrence of thrips is noticed in Kuruvai paddy nursery. To control, spray Chloripyriphos @ 2.5 ml/litre of water.
- In the Southern Zone, prevailing weather condition is congenial for incidence of pink stem borer in sorghum. To control, spray Phosalone @ 35% EC every 20 days.
- In the South Zone, for managing mealy bug in cotton which is noticed due to prevailing weather condition, keep the field weed free. Destroy the infected crop plants and weeds and spray Chlorpyrifos @ 5 ml/litre of water at 15 days interval.
- In the North Western Zone, due to change in weather, occurrence of stem rot and wilting of whole plant is observed in tapioca. To control, undertake foliar spray of Difenconazole @ 1 ml/litre of water on a non rainy day.
- In the High Altitude Zone, to control thrips and other sucking insect pest in hilly vegetable crops, undertake foliar spray of Imidacloprid 200 SL @ 1.5 ml/litre of water on a non rainy day.

• **Animal Husbandry**

- In the Central Zone of Kerala, due to lack of sufficient light in the monsoon, there is chance of decrease in egg production. To avoid this, provide light by fluorescent lights for 16 hrs/day.
- In the Northern Zone of Kerala, ephemeral fever is noticed in cattle during the onset of rainy seasons. Consult the nearest veterinary surgeon and provide immediate treatment to maintain the blood circulation and avoid permanent muscle damage.
- In the Cauvery Delta Zone of Tamil Nadu, undertake water splashing, showering, sprinkling and fogging of water on animals, inside the shed 3-4 times during hottest part of the day (11 am to 4 pm). To avoid overcrowding of birds 10% extra floor space should be provided in summer.
- In Southern Dry Zone and Eastern Dry Zone of Karnataka, maintain optimum room temperature in sericulture, poultry and dairy unit. Keep the animal habitation dry to avoid hoof infection & to prevent fly breeding.

• **Integrated Farming System (IFS)**

- In Eastern Dry Zone of Karnataka, fish culture can be undertaken in the rainwater storage structure like farm pond, check dam and nala bund by releasing the fingerlings.

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

- **Realised Rainfall:** Rainfall occurred in Changlang, East Kameng, East Siang, Lohit, Lower Dibang Valley, Papumpara, Tirap, Upper Siang, Upper Subansari, West Kameng and West Siang districts of Arunachal Pradesh, Baksa, Barpeta, Bongaigaon, Cachar, Chirang, Dhemaji, Dhubri, Dibrugarh, Goalpara, Golghat, Hailakandi, Jorhat, Kamrup(Rural), Kamrup(Metro), Karbi Anglong, Karimganj, Kokrajhar, Lakhimpur, Morigaon, N.C.Hills, Nowgaon, Nalbari, Sonitpur, Sibsagar, Tinsukia and Udalgiri districts of Assam, East Garo Hills, East Khasi Hills, Ri-Bhoi and West Garo Hills districts of Meghalaya, Aizwal, Lunglei and Serchhip districts of Mizoram, Imphal East and Imphal West districts of Manipur, Dimapur, Kohima and Wokha districts of Nagaland and all districts of Tripura during the week and weather remained mainly dry over rest of the region.

• **Advisories:**

▪ **Assam, Arunachal Pradesh and Meghalaya:**

- In the Barak Valley Zone of Assam, undertake transplanting of banana and lemon trees. In flood affected areas if rice nurseries are damaged, undertake nursery sowing of short duration/submergence tolerant varieties of rice like Swarna Sub-1, Ranjit Sub-1, Bahadur Sub-1, Luit and Dishang or undertake nursery preparation for long duration/late transplanting varieties like Manohar Sali/Gitish after current spells of heavy rain.
- In Karbi Anglong and NC Hills districts of Hill Zone of Assam, continue nursery sowing of Sali rice. Undertake harvesting of sesame, maize, vegetables and continue sowing of arhar after current spells of heavy rain. Provide adequate drainage in already sown crop fields and vegetable fields.
- In Upper Bramhaputra Valley Zone of Assam, continue transplanting of seedlings of Sali rice in the main field and sowing of sesame.
- In Nagaon and Marigaon districts of Central Bramhaputra Valley Zone of Assam, continue nursery bed preparation/main field preparation for Sali rice. Continue land preparation and sowing of arhar after current spells of heavy rain. Undertake harvesting and retting of Capsularis jute preferably at pre-flowering stage (120 days after sowing) to get better quality fibre. At present the water temperature in the retting tanks is ideal for retting of jute. 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 after current spells of heavy rain.

- In Dhemaji, Darrang, Lakhimpur, Sonitpur and Udalgiri districts of North Bank Plain Zone of Assam, undertake transplanting of Sali rice in main field. In flood affected areas if rice nurseries are damaged, undertake nursery sowing of short/medium duration varieties of rice. Continue harvesting of Ahu rice after current spell of heavy rain. Provide adequate drainage in summer vegetable fields.
- In East Garo Hills, East Khasi Hills, Jaintia Hills, Ri-Bhoi, South Garo Hills, West Garo Hills and West Khasi Hills districts of Meghalaya, continue nursery bed preparation for *Sali/kharif* rice. Continue main field preparation for transplanting for *Sali/kharif* rice. Provide bamboo structure to bottle gourd, ash gourd and pumpkin plants. Undertake sowing of soybean.
- In Arunachal Pradesh, continue raising of low-land rice nursery. Continue sowing of finger millet and soybean after current spells of heavy rain. Maintain proper drainage in already sown crop fields.
- In Lower Brahmaputra Valley Zone of Assam, to control stem borer attack in Sali rice, use resistant varieties like Jaya, IR 20, IR26 and TKM6, clip the tip of seedlings before transplanting to eliminate egg masses, collect and destroy egg masses set up light traps to attract and kill moths. Apply *Bacillus thuringiensis* var *kurstaki* (2.5 gm/ml) and neem seed kernel extract (1%) in combination. Spray jute plants with Carbendazim @ 1g/litre or Mencozeb @ 3g/litre of water and to control root rot anthracnose after current spells of rain.
- In Upper Brahmaputra Valley Zone of Assam, due to high humidity and rainfall in the last few days, there is chance of Gummosis disease in the citrus orchard. To control the disease, the affected portion should be scraped out with a small portion of healthy tissue without injuring the wood and smear with Bordeaux paste. Maintain proper drainage facilities.
- In Barak Valley Zone of Assam, spray Carbendazim + Mancozeb @ 2.5 gm per liter of water to control brown spots and blights in Sali rice nursery beds after current spells of rain.
- In Central Brahmaputra Valley Zone of Assam, apply Bordeaux mixture in clear weather to control rotting in beetle vine and wilting of black pepper after current spells of rain.
- In Dhemaji, Darang, Lakhimpur, Sonitpur and Udalgiri districts of North Bank Plain Zone of Assam, provide proper drainage to control red rot disease of sugarcane. Drench the affected area with 0.3% Mencozeb 75 WP @ 2g/litre of water and provide proper drainage to prevent rhizome rot in ginger and turmeric after current spells of rain.
- In Arunachal Pradesh, spray Dichlorvos 76 EC @ 3ml/litre water along with sticker @ 1ml/litre water against true armyworm attack in jhum rice at tillering stage after current spells of rain.
- In Meghalaya, high humidity with intermittent rain is favourable for development of shoot fly/cob borer/stem borer incidence in maize crop. Apply Carbofuran 3G granules @ 2-3 granule to each whorl of maize plant at tasselling/cob formation stage after current spells of rain. Destroy tomato plants affected with pinworm to prevent further damage.
- **Nagaland, Manipur, Mizoram and Tripura:**
 - In Dimapur, Kephire, Kohima, Longleng, Mokochung, Mon, Paren, Phek, Tuensang, Wokha and Zunheboto districts of Nagaland, undertake transplanting of TRC/WRC rice.
 - In Manipur, continue field preparations for transplanting of *kharif* rice. Apply Carbofuran 3G @ 2 kg/hactare a week before uprooting the seedling. Undertake harvesting of matured pre-kharif rice after current spells of rain.
 - In Mizoram, continue transplanting of pre-kharif rice. Maintain proper drainage in the ginger/turmeric, cowpea, okra and maize fields.
 - In Nagaland, there is chance of attack of blast disease in jhum rice at tillering stage. Spray Tricyclazole 0.1% after current spells of rain and repeat at 12-15 days interval. Remove the infested plants to control stem borer in maize. Maintain proper drainage to manage soil borne root diseases in green gram field at flowering stage. Destroy infected plants of okra, cucurbits, brinjal and Naga King chilli to prevent further spread of disease.
 - In Tripura, continue sowing of *Aman* rice. Complete sowing of maize at the earliest.
 - In Mizoram, spray Monocrotophos @ 1.5 ml/litre of water or Imidachloroprid 1.5 ml/litre of water for effective control of rice stem borer and leaf folder in *ghum* rice. Also apply insecticide like Imidacloprid 0.5 ml or Phosolone 1.5 ml or Acephate 1.0 g or Dimethoate 2 ml per litre of water to control leafroller in okra crop after current spells of rain.
 - In Manipur, to prevent leaf spot disease in ginger/turmeric at vegetative stage, apply Bordeaux mixture (5:5:50) after 4–5 weeks of sowing or Captan @ 1.5 g/litre of water after current spells of rain.
 - In Tripura, temperature above 30°C with humidity over 80 percent is highly favourable for the fungal disease like brown spot, rice blast in the nursery bed of *Aman* rice. To manage the attacks apply Carbendazim+ Mancozeb @ 2.5gm per litre of water into the seedbed after current spells of rain. Field sanitation along with removal of hosts and infected debris from the field also would be helpful to manage the attack. Also there is infestation of sheath blight due to humid weather in jhum rice at panicle initiation. Spray Surf @ 1gm per litre of water after current spells of rain.
- **Animal Husbandry**
 - In Northeastern states, farmers are advised to keep animals in sheds during heavy rain fall period. Carry out immunization against FMD, Hemorrhagic Scepcaemia and Black Quarter in cattle & buffaloes and swine-fever in pigs during monsoon season. Undertake immunization of mature sheep and goat against Enterotoxaemia. Vaccinate

6-9 months calves against Brucellosis. Bleaching powder may be spread near farm premises. Avoid fungal infested feed. Use dry litter material in the shed; if moist apply lime powder @ 1kg per 100 ft² area. Vaccinate one week old chicks against Ranikhet disease and two weeks old chicks against Gamboro disease. Keep the poultry shed clean. Provide balanced feed and sufficient water with 1% salt and mineral mixture.

- **Fishery**

- In Assam, check the PH of the pond water. Apply 50 kg of lime per hectare if the PH of water is found below 6.5. Undertake rearing of fingerlings of carp in the rearing tanks and nurseries at the rate of 25-30 fry per square meter.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa, Kolhapur, Nandurbar, Nashik, Pune, Satara districts of Madhya Maharashtra, all districts of Vidarbha except Amraoti, Buldhana and Washim, all districts of Gujarat State during the week and weather remained mainly dry over rest of the region.

- **Advisories:**

- **Maharashtra:**

- In Konkan, continue transplanting of 20 to 25 days old rice seedlings. Also maintain 2-3 cms water level in transplanted rice fields. Continue plantation of horticultural crops like mango, sapota, kokum, coconut and arecanut. Complete the sowing of *kharif* groundnut as early as possible. Continue land preparation for planting of biennial forage crops like Paragrass, Napier and Gajraj.
- In Madhya Maharashtra, continue transplanting of 20 to 25 days old rice seedlings in Western ghat region. Also maintain 2-3 cm water level in transplanted rice fields. Continue sowing of *kharif* crops like soybean, tur, cotton, groundnut and sunflower in all districts except Solapur and Sangli districts. Undertake intercultural operation like hoeing and weeding in standing crops to conserve soil moisture in Sangli and Solapur districts. For the control of sucking pests, plantation of corn, cowpea and foxtail millet should be done as intercropping with cotton.
- In Marathwada, in view of the subdued rainfall, apply protective irrigation by sprinkler in *kharif* crops like soybean, cotton, maize, groundnut etc. In fallow lands, undertake sowing of *kharif* crops after receipt of sufficient rainfall. Dust mulching and weeding should be done in *kharif* crops and vegetables. Undertake spray of 1 to 1.5% Potassium Nitrate (100 to 150 g per 10 litres of water) in soyabean crop to reduce transpiration.
- In Vidarbha, in fallow lands, undertake sowing of *kharif* crops after receipt of sufficient rainfall. Apply protective irrigation by sprinkler to *kharif* and vegetable crops. Prepare field for rice transplanting in East Vidarbha.
- In Madhya Maharashtra, to protect vegetables from powdery mildew, spray 80% WS (water soluble sulphur) @ 20 g per 10 litres of water. In cucurbitious crops spray Hexaconazole @ 10 ml per 10 litres of water on a non rainy day.

- **Gujarat:**

- In Gujarat, drain out excess water from rice nurseries and other crop fields (pre-sown groundnut, cotton etc.).
- In Middle Gujarat Zone, continue nursery sowing of rice. Continue sowing of pearl millet, groundnut, cowpea etc. utilising realised rainfall. Carry out intercultural operation, weeding and gap filling in earlier sown cotton crop.
- In South Gujarat Zone, continue sowing of maize, bajra, soybean, pigeon pea, cotton with realised rainfall.
- In Bhal and Coastal Zone of Gujarat, undertake sowing of green gram, groundnut, cotton with realised rainfall and continue transplanting of vegetable crops.
- In North Gujarat Zone, continue sowing of groundnut, cotton, pearl millet, sesame, maize, green gram, sorghum, etc. with realised rainfall. In North Gujarat Zone and North West Zone of Gujarat, continue transplanting of vegetable crops; continue harvesting of matured fruits of jamun, lemon etc. and budding in mango, aonla and ber.
- In South Saurashtra Zone, continue sowing of *kharif* groundnut, cotton, green gram, black gram, cowpea, pigeon pea, soybean with realised rainfall. Undertake intercultural operations and hand weeding in sugarcane and irrigated groundnut. Undertake relay intercropping of castor, 30 days after sowing of soybean.
- In North West Zone of Gujarat, continue sowing of groundnut, cotton, pearl millet, sesame utilising the realised rainfall.
- In North Saurashtra Zone of Gujarat, continue sowing of cotton, groundnut, sesame, pearl millet, black gram, green gram, cowpea and pigeon pea with realised rainfall. Continue nursery preparation for tomato, chilli, brinjal and early cauliflower; continue transplanting of brinjal, chilli and early cauliflower where seedlings are ready. Continue sowing of cucurbits, lady's finger, cluster bean, kidney bean and amranthus. Undertake sowing of fodder sorghum and fodder maize.
- In South Gujarat Heavy Rainfall Zone, complete land preparation and undertake transplanting of rice. Continue sowing of pulses like green gram, black gram, pigeon pea and vegetables crops like bottle gourd, ridge gourd, sponge gourd, bitter gourd, cucumber. Complete nursery sowing of chilli and brinjal or use pro tray.

- **Animal Husbandry**

- In Gujarat, keep animal shed hygienic and clean to avoid flies and mosquitoes. Avoid water logging in and around the sheds. For the control of tick and other parasites, spray Deltamethrin or Aemitez @ 2 ml in 1 litre of water. Keep animals in shed during rainfall.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands, all districts of Gangetic West Bengal; all districts of Sub Himalayan West Bengal & Sikkim except South Dinajpur, all districts of Bihar except Arwal, Aurangabad, Begusarai, Buxar, East and West Champaran, Gaya, Monghyr, Muzaffarpur, Nalanda, Nawada, Patna, Rohtas, Samastipur and Sitamarhi, all districts of Jharkhand except Bokaro, Chatra, Deogarh, Garwa, Giridh, Godda, Koderma, Latehar, Palamau and Ranchi, all districts of Odisha during the week.
- **Advisories:**
 - **Odisha:**
 - In East and South Eastern Coastal Plain Zone, continue land preparation and sowing of direct seeded rice in medium and low lands and continue sowing of arhar and maize in medium/uplands. Undertake sowing of groundnut, planting of fruit crops like mango, coconut, citrus, guava, sapota, papaya, banana, litchi and pineapple in uplands and in marginal lands. Undertake sowing of cotton, sesamum, ragi and cowpea under rainfed condition in areas receiving good soaking rain. Undertake nursery raising of rice for transplanting in medium and low lands instead of direct sowing, since nursery raising requires less water and it is expected to have sufficient moisture for transplanting at that time.
 - In Eastern Ghat High Land Zone, complete sowing of direct seeded paddy in low land and medium low land. Undertake sowing of medium duration (around 120 days duration or more) non-paddy crops like groundnut, arhar, cotton in rainfed uplands. Continue sowing of pigeon pea and vegetables.
 - In South Eastern Ghat Zone, undertake sowing of maize in North Central Plateau Zone, undertake planting of ginger and turmeric and in West Central Table Land Zone, undertake sowing of arhar.
 - In Western Undulating Zone, undertake land preparation and sowing of pulses and maize in uplands.
 - In North Central Plateau Zone, undertake sowing of maize.
 - In East and South Eastern Coastal Plain Zone, due to abrupt rise and fall in temperature, the problem of sucking pests like White fly will aggravate in vegetables. To control these pests spray Imidacloprid @ 4ml/10 litres of water after current spells of rain.
 - **West Bengal:**
 - In Laterite and Red Soil Zone, provide proper drainage to remove excess water in low-land nursery. Undertake main field land preparation.
 - In the Hill Zone of West Bengal, continue planting of large cardamom and harvesting of beans after current spells of heavy rain. Provide proper drainage in the fields of maize, ginger, turmeric and Mandarin orange.
 - In the Old Alluvial Zone, carry out earthing up operation in ginger and turmeric fields and apply appropriate dose of fertilizer after current spells of rain.
 - In Terai Zone, undertake main field preparation and transplant the seedlings of rice after cutting the tips as far as possible. Treat seedlings with solution of 100 ppm Streptocyclin for 20 minutes before transplanting. Continue harvesting of legume vegetables after current spells of heavy rain.
 - In the New Alluvial Zone, make proper drainage channels in Aman rice seed bed. Undertake land preparation for planting of banana suckers.
 - In Coastal Saline Zone, undertake sowing of seeds in the seed beds for Aman paddy. Undertake seed bed preparation for *kharif* onion cultivation.
 - In the Hill Zone, spray neem oil @ 2ml per litre of water to control jassid infestation in bhindi crop after current spells of rain.
 - In the Laterite and Red Soil Zone, to control fruit borer in bhindi, collect and destroy the affected fruits and spray neem oil @ 30 ml per lit at clear weather condition after current spells of rain.
 - In the Terai Zone, uproot mosaic affected legume vegetable plants and follow it up by spraying Thiomethoxam 0.3 SG @ 1 gm per 3 litres of water or Acetamiprid 20 SP @ 1 gm per 1 litre of water. Apply Spiromesifen (Pyromite) 1 ml/lit. of water to control red mite and (Matalaxyl + Mancozeb) @ 2 gm/litre or Azoxystrobin @ 1 ml/litre of water to control downy mildew in cucurbits after current spells of rain.
 - In the New Alluvial Zone, the prevailing weather is congenial for attack of mite control in jute crop, apply Dichlorvas @ 3 ml per 4 litres of water or Endosulfan @ 2 ml per litre of water. Spray 5% Fipronil @ 1.5 ml per litre to control leaf curl in chilli crop. Undertake plant protection methods after current spells of rain.
 - In the Coastal Zone of West Bengal, apply 1% Bordeaux mixture at the base at 1 month interval to control Phytophthora root rot in Betel vine after current spells of rain.
 - **Andaman and Nicobar Islands:**
 - In North, Middle and South Andaman, prepare main field of rice by levelling and cleaning of bunds. Maintain bund height at 25 to 30 cm. Provide drainage facility in the vegetable field as good amount of rainfall is expected.
 - In the Nicobar Islands, clean the crown of coconut tree, cut them into pieces and go for composting.
 - **Bihar:**
 - In North East Alluvial Zone, complete nursery sowing of long duration paddy. Continue sowing of maize and minor millets. Continue sowing of *kharif* vegetable such as lady's finger, pumpkin, cucumber, sponge gourd, bottle gourd

etc..

- In North West Alluvial Plain Zone, continue nursery sowing for medium duration of rice varieties and sowing of *kharif* vegetables such as lady's finger, pumpkin, cucumber, sponge gourd, bottle gourd. Undertake sowing of direct seeded early and medium duration rice varieties. Complete the planting of turmeric, ginger and elephant foot yam at the earliest. Continue planting of turmeric and ginger. Continue land preparation and sowing of *kharif* maize.
- In South Bihar Alluvial Zone, continue nursery sowing of paddy seeds in nurseries.
- In North East Alluvial Zone of Bihar, to control brinjal fruit & shoot borer or tomato fruit borer, apply Indoxacarb 15.8 EC @ 1ml/litre of water after current spells of rain.
- **Jharkhand:**
 - In Jharkhand, continue nursery sowing of rice and sowing of maize, urad and arhar.
 - In Central and North Eastern Plateau Zone, continue planting of turmeric, ginger and yam.
 - In Western Plateau Zone, continue sowing of ginger, yam and turmeric with improved variety.
 - In South Eastern Plateau Zone, continue sowing of direct seeded upland rice.
 - In South Eastern Plateau Zone, if cloudy weather appears, spray Sulfex WP @ 3 g per liter of water to check the occurrence of disease in mango. New shoots have emerged in mango trees and leaf galls are more prone to attack on the newly emerged leaves hence, spray Metasistox 1 ml or Imidacloprid 0.5 ml should be done. Spray Malathion 50 percent @ 2 ml along with half gram Carbendazim per litre of water to control the insects attack and anthracnose disease after current spells of rain.
- **Animal Husbandary**
 - In the Terai Zone of West Bengal, undertake routine vaccination of cattle, buffalo and goat for Foot and Mouth disease (FMD). Vaccinate poultry birds against New Castle Disease.
 - In Andaman and Nicobar Islands, keep the piglet under brooding condition by providing light as moderate to heavy rainfall is expected during next five days. Provide clean and hygienic water treated with potassium permanganate (1 ppm) to the poultry birds to avoid gastrointestinal infection.
- **Fishery**
 - In the Laterite and Red Soil Zone of West Bengal, undertake putting fingerling of carp in the pond. Supply food during night in tiger prawn cultivation. Stir pond water with wheel in case of oxygen deficiency. Apply lime for cleaning water.
 - In A & N Islands, do breeding of carps by using hormones during rainy days and prepare nursery ponds for stocking spawns. In A & N Islands, prepare nursery ponds by cleaning weeds and aquatic insects to stocks IMC spawns.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rainfall occurred in all districts of East Madhya Pradesh, all districts of West Madhya Pradesh except Bhopal, Burhanpur, Dewas, Guna, Indore, Khargone, Mandsaur, Neemuch, Rajgarh, Sehore, Shajapur and Ujjain, all districts of Chhattisgarh during the week.
- **Advisories:**
 - **Madhya Pradesh:**
 - In West Madhya Pradesh continue sowing of *kharif* crops after receipt of sufficient rainfall.
 - In Kymore Plateau and Satpura Hill Zone, continue nursery sowing of rice and sowing of red gram. Continue sowing of soybean.
 - In Satpura Plateau Zone, continue nursery sowing of rice, sowing of soybean, maize, red gram and moong. Continue nursery preparation for tomato, chilli, brinjal and early cauliflower. Continue sowing of cotton with proper drainage facility.
 - In Gird Zone, undertake transplanting of rice, continue nursery sowing of *kharif* vegetables. Continue sowing of red gram, urad, moong, bajra and soybean after receipt of sufficient rainfall.
 - In Malwa Plateau Zone, continue sowing of *kharif* crops like soybean, pigeon pea, urad, moong, maize, sorghum and cotton after receipt of sufficient rainfall. Continue transplanting rainy season vegetables like brinjal, tomato, *kharif* onion, early cauliflower, chilli etc. and fruit plants.
 - In Jhabua Hill Zone, undertake transplanting of rice and continue sowing of maize, soybean and black gram after receipt of sufficient rainfall. Undertake transplanting of rainy season vegetables.
 - In Central Narmada Valley Zone, continue nursery preparation for tomato, chilli, brinjal and early cauliflower. Continue nursery bed preparation for rice. Continue sowing of soybean, red gram and maize after receipt of sufficient rainfall.
 - In Bundelkhand Zone, continue seed bed preparation for sowing of *kharif* onion. Continue nursery preparation for rice. Continue sowing of soybean, maize, moon, urad, sesame and groundnut. Undertake sowing of vegetables like okra, bottle gourd, cucurbits, sponge gourd, bitter gourd and beans after receipt of sufficient rainfall.
 - In Vindhya Plateau Zone, undertake transplanting of rice. Continue sowing of red gram and soybean after receipt of sufficient rainfall.
 - **Chhattisgarh:**

- In North Hill Zone, continue transplanting of rice. Continue transplanting of rainy season vegetables. Continue line sowing of rice. Undertake planting of horticultural crops like papaya, mango, guava etc.
- In Bastar Plateau Zone, continue nursery preparation of vegetables like tomato, brinjal, and chilly. Continue nursery sowing and line sowing of rice. Continue sowing of soybean, groundnut and sesame. Continue nursery preparation for papaya and custard apple.
- In Chhattisgarh Plain Zone, continue direct sowing of rice and nursery sowing of rice. Continue sowing of *kharif* crops like soybean, arhar, sesame and maize. Continue transplanting of vegetables. Continue planting of banana.
- **Animal Husbandry**
- In Madhya Pradesh, undertake vaccination to protect the animals from mouth and Jahari fever disease and to develop the immunity power.
- In Chhattisgarh, undertake vaccination of animals against the Black Quarter and Anthrax disease.

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

- **Realised Rainfall:** Rainfall occurred in Anantnag, Bandipore, Doda, Jammu, Kathua, Kulgam, Ramban, Reasi, Samba, Udhampur districts of Jammu & Kashmir, all districts of Himachal Pradesh except Kinnaur, Lahaul & Spiti, in all districts of Uttarakhand, all districts of Punjab except Ferozpur, Moga, Sangrur, Mohali, Taran Taran, in all districts of Harayana except Bhiwani, Chandigarh, Fatehabad, Panchkula, Sirsa, in New Delhi, North Delhi, South Delhi, South West Delhi districts of Delhi, in all districts of East Uttar Pradesh except Mau, Sant Ravidas Nagar, in all districts of West Uttar Pradesh except Lalitpur, in all districts of East Rajasthan of except Bhilwara, Bundi, Chittorgarh, Dausa, Kota, Pratapgarh, Rajsamand, in all districts of West Rajasthan except Bikaner, Jaisalmer, Sriganganagar during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Jammu & Kashmir:**
 - In Sub Tropical Zone, Intermediate Zone and Valley Temperate Zone, continue transplanting of rice seedlings. Plant 2-3 seedlings per hill at 3 to 5 cm deep in the soil. Strengthen and raise the dike height of field bunds during the preparation of land to retain rain water as much as possible.
 - In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, continue sowing of maize, moong and mash during clear weather conditions. Undertake direct seed sowing of rice in areas where farmers could not prepare nursery of rice.
 - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, complete sowing of maize. Undertake land preparation/sowing of mash crop.
 - In Valley Temperate Zone of Jammu and Kashmir, undertake weeding, hoeing and earthing up wherever maize is at knee high stage on a non rainy day. Continue harvesting of onion, garlic and pran.
 - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, to control red pumpkin beetle apply Imidachloprid 1 ml/3 liter of water or Dichlorvos 30 EC @ 2 ml/ liter of water after current spells of rain.
 - In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, to control yellow vein mosaic in okra and mosaic in mungbean & chilli, remove virus infected plants followed by spraying with Imidacloprid @ 0.03% during clear weather conditions after current spells of rain.
 - **Uttarakhand:**
 - In Sub Humid and Sub Tropic Zone of Uttarakhand, continue nursery sowing of basmati rice, sowing of maize and groundnut. Undertake sowing of pigeon pea and nursery sowing of onion. Continue transplanting of rice if nursery seedling is about 20-25 days old after current spells of heavy rain.
 - In Udham Singh district of Bhabar and Tarai Zone, undertake transplanting of seedlings of paddy. Undertake sowing of late varieties of pigeon pea after current spells of heavy rain.
 - In Nainital district of Bhabar and Tarai Zone, complete transplanting of rice at the earliest. Complete sowing of moong and urad in the first week of July.
 - In the Sub humid and Sub-tropic Zone, undertake transplanting of 20-25 days old rice seedlings.
 - In Bhabar and Tarai Zone, apply Carbofuran 3CG @ 33kg /ha in the soil at the time of sowing to control stem borer in maize crop. Spray Fipronil 5 SC @ 1liter/ 500 liter of water per hectare to control insects in paddy nursery. Apply Chlorpyrifos @ 20-25Kg/Ha before or after the irrigation to control shoot borer in sugarcane crop after current spells of rain.
 - **Himachal Pradesh:**
 - In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, continue transplanting of paddy nursery in main field and sowing of early okra, spinach, coriander, fenugreek, raddish, turnip after current spells of heavy rain. Continue nursery sowing of tomato, brinjal, chillies and capsicum crops in poly house. In High hills regions undertake interculture operation in peas, French bean, ogla, palak, raddish, turnip and carrot in addition to transplanting of cabbage, cauliflower, broccoli and exotic vegetables after current spells of heavy rain.
 - In High Hills Temperate Dry Zone of Himachal Pradesh, in Kinnaur and Lahaul & Spiti, continue transplanting of

tomato/cabbage/cauliflower in main field. Spray micronutrient on apple trees at fruit setting stage after current spells of rain.

- In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Solan, Shimla, Bilaspur, Sirmaur districts, present weather is conducive for attack of fruit borer in tomato, chillies, brinjal at vegetative growth/ flowering/ fruit development stage, for control spray Endocascrab 14.5 EC @ 11ml or Karente @ 18.75 ml in 15 litres of water after current spells of rain.
- In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Solan, Shimla, Bilaspur, Sirmaur districts, present weather is conducive for attack of leaf spot disease in Pomegranate, for control spray Mancozeb @ 600 gram and Carbendazim @ 100 gram in 200 litres of water after current spells of rain.
- In Mild Hills Sub-Humid Zone of Himachal Pradesh, in Kullu and Mandi districts, present weather is conducive for attack of aphid in pomegranate, for control spray Imidacloprid @ 60ml per 200 litres of water after current spells of rain.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of cut worms and white grubs in maize crop, for control spray Chloropyriphos 20 EC @ 2 litres mixed with 25 kg sand per hectare after current spells of rain.
- **Punjab, Haryana and Delhi:**
 - Undertake weeding operation in maize in Western Plain Zone of Punjab. Use atrazine 50 WP as pre-emergence application @ 500g per acre on light textured soils and @ 800 g per acre on heavy textured soils. Complete sowing of summer moong.
 - Complete transplanting of rice during the first fortnight of July in Western Zone of Punjab. Undertake sowing of bottle gourd, sponge gourd, bitter gourd, ash gourd and round melon by using 2 kg seed per acre. Undertake transplanting of cauliflower at 45 x 30 cm spacing.
 - In Central Plain Zone of Punjab, undertake transplanting of rice. Undertake weeding in sugarcane crop. Undertake sowing of okra, bottle gourd, sponge gourd, bitter gourd, ash gourd and cowpea-263.
 - Continue sowing of guar, bajra, maize and cluster bean in Western Zone of Haryana. Continue transplanting of rice.
 - Undertake transplanting of 25-30 days old seedlings of rice in Eastern Zone of Haryana. Withdraw water from the field after 6-10 days of transplanting for better establishment of the seedlings.
 - Continue transplanting of rice seedling in prepared field in New Delhi. Continue sowing of maize. Start sowing of rainy season cucurbits like bottle gourd, bitter gourd, pumpkin and ridge gourd etc. Continue sowing of guar, bajra, spinach, amaranths and ladies finger. Continue sowing of baby corn and sweet corn.
 - Spray Bavistin 400 g in 400 litres of water to control Anthracnose in grapes due to humid weather in Western zone of Punjab. Also spray Bayleton 40 g in 100 litres water to control powdery mildew in grapes.
 - Prevailing weather is favourable for development and spread of fruit rot in chilli in Central Plain Zone of Punjab. Farmers are advised to give 3-4 sprays of Indomil M-45 or Blitox 50 WP @ 750 g/acre on a non rainy day and repeat at 10 days interval.
- **Uttar Pradesh:**
 - In Central Plain Zone of Uttar Pradesh, continue early sowing of *kharif* hybrid maize. Undertake transplanting of paddy nursery in main field. Undertake sowing of sorghum. Continue sowing of arhar after current spells of heavy rain.
 - In Eastern plain Zone of Uttar Pradesh, continue transplanting of 20 to 25 days old rice nursery in main field. Continue sowing of early maturing variety of arhar in irrigated areas. Undertake sowing of long duration varieties of maize. Undertake transplanting of cauliflower, brinjal, tomato nursery in main field after current spells of heavy rain.
 - In Bundelkhand Zone of Uttar Pradesh, undertake sowing of *kharif* crops like maize, jowar, groundnut, arhar, urad, mung, linseed and fodder crops. Continue nursery sowing of rice. Continue nursery sowing of rainy season cauliflower, cabbage, tomato, chilli, brinjal. Undertake sowing of dhaincha for green manuring.
 - In Western Plain Zone of Uttar Pradesh, Continue sowing of maize, seed rate 20 kg/ha. Farmers are advised to do proper drainage in the nurseries of brinjal, tomato, chilli and early cauliflower. Continue nursery sowing of paddy. Continue sowing of guar, bajara, maize, cluster bean, spinach, amaranths and bhindi.
 - In Western Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of blast and brown spot in paddy nurseries, for control spray Carbendezim @ 2.0 gram per litre of water after current spells of rain.
- **Rajasthan:**
 - In East Rajasthan, continue sowing of groundnut, pearl millet, sorghum, sesame, maize, mung bean, cluster bean, moth and cowpea. Continue nursery sowing of rice in Southeastern Humid Plain Zone.
 - In West Rajasthan, continue sowing of pearl millet, cluster bean, mung bean, moth bean etc. Use improved varieties for sowing of bajra, mung, moth and guar crops. In Sriganganagar, continue sowing of guar (RGC-936, RGC-986, RGC-1002, RGC-1017, HG-365, HG-563 and HG-2-20). In Irrigated North Western Plain Zone, Hanumangarh, continue transplanting of rice.
 - In Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, continue deep ploughing by MB plough in vacant field to conserve the rain water in soil for kharif crops.

Continue nursery sowing of brinjal, tomato, rainy onion, cauliflower and chilli. Continue sowing of groundnut, maize. Continue transplanting of nursery plants of papaya in field.

- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, keep inputs ready for sowing of *kharif* crops like pearl millet, sorghum, maize & cluster bean, greengram, cowpea and go for sowing after receipt of sufficient rainfall.
- In Jaisalmer and Bikaner districts of Arid Western Plain Zone, undertake sowing of pearl millet, cluster bean, mung bean, moth crops, guar crops. For pearl millet apply seed @ 4kg/ha after treating with Thiram @ 3g/kg seed and Chloropyrifos @4 ml/kg. In Barmer, Churu, Jalore, Jodhpur, Pali districts of Arid Western Plain Zone, undertake sowing of lentil, mung, bajra, moth, guar crops.
- In Southeastern Humid Plain Zone, in Jhalawar, Kota, Bundi, Baran districts, continue nursery sowing of rice. Continue transplanting of three weeks old rice nursery in main field. Continue sowing of soybean, mung, urad, maize.
- In Alwar, Bharatpur, Dhaultpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, undertake sowing of bajra, sesame. Continue sowing of sorghum. Continue sowing of dhacha for green manuring.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, undertake sowing of guar, bajra, sesame, mung, moth in rainfed areas on receiving of monsoon rain. Undertake transplanting 25 to 30 days old seedlings of rice & maintain the plant to plant distance of 15 cm.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, prevailing weather condition is congenial for attack of white fly in narma cotton, when white fly population reach above economic threshold level (8-12 white fly/leaf), for control spray Nimbecidine @ 5 ml + liquid soap @ 1 ml per litre of water.

- **Horticulture**

- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of fruit borer in litchi, for control spray Cypermethrin 10 EC @ 1 ml per litre of water at 15 days interval after current spells of rain. Ensure moisture in litchi basin or apply mulch to ensure moisture to avoid the fruits cracks in Litchi. Ensure moisture in citrus, mango and Kinow orchards.

- **Floriculture:**

- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, continue earthing up operation in gladiolus and disbudding in carnation, transplant the bulbs of gladiolus and rajnigandha. It is optimum time for raising nursery of summer annuals like gladiolus, portulaca, gomphrina and china aster etc. Complete pinching and staking in carnation.
- In East Rajasthan, in Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, undertake planting of fruit crops like mango, plum, pomegranate, aonla etc may be done. 50-100 gm Quinalphos 1.5% per pit may be added before planting.

- **Apiculture**

- In Himachal Pradesh, insert the brood chamber without frame for ensuring aeration. Dust sulphur on sealed brood in the colony and not on larvae to control mites attack on honeybees. Also insert empty frame /combs for egg laying to the queen as the population starts builds up.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, keep colonies in shade or cover with wet gunny bags. Provide adequate space to the colonies for brood rearing and storage of nectar. To control mite, dust sulphur on top bars @ 1g/frame /oxalic acid treatment @ 3.5%/litre water.

- **Animal Husbandry**

- In Himachal Pradesh, monitor the animals for FMD and advised Vaccination. Ecto-parasite attack is expected in this weather, for control, spary Butox @ 2ml per litre in cow shed and give mixture of hay & green fodder.
- Hot and humid climate in Punjab may lead to conditions of ring worm in animals, so keep the animals clean and dry.

- **Fishery**

- In Himachal Pradesh, maintain water level of five feet in fish ponds. Add supplementary feed (rice/wheat bran & mustard oil cake and rice/wheat bran) @ 2-3% of total fish biomass on daily basis.

- **Poultry**

- In Himachal Pradesh, replace the poultry houses with fresh litter and keep the houses clean and ensure plenty of drinking water to the birds. Normal feeding schedule should be continued. For precautionary measures spray Formaline 40% @ 1litre in 9 litres of water in outside or surrounding of farm. Increase protein by 2% in poultry diet.

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