



# *National Agromet Advisory Service Bulletin*

*Friday 10<sup>th</sup> May 2019*  
*(For the period 10<sup>th</sup> to 15<sup>th</sup> May 2019)*



*Issued by*  
*India Meteorological Department*

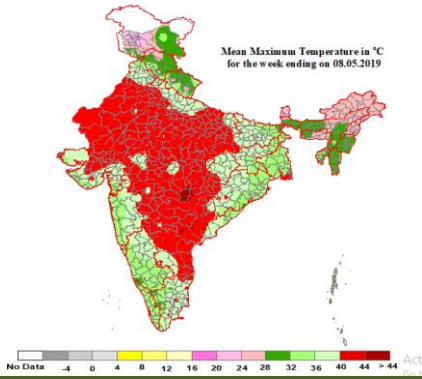
**Weblink For**

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

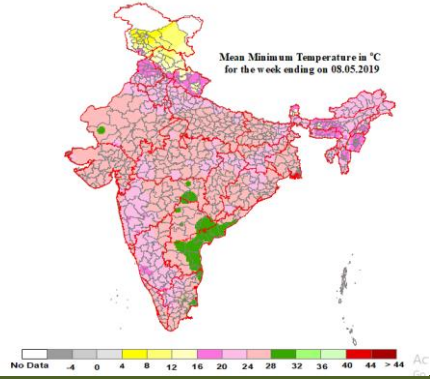
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

**Spatial distribution of weather parameters for the week ending on 08.05.2019**

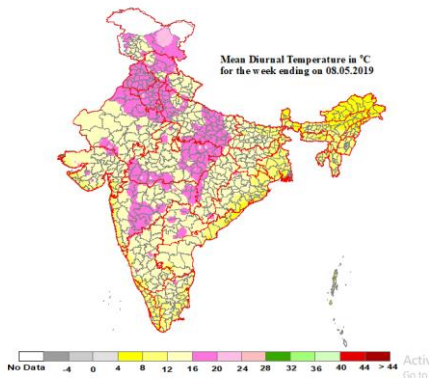
**Mean Maximum Temperature (°C) for the week ending on 08.05.2019**



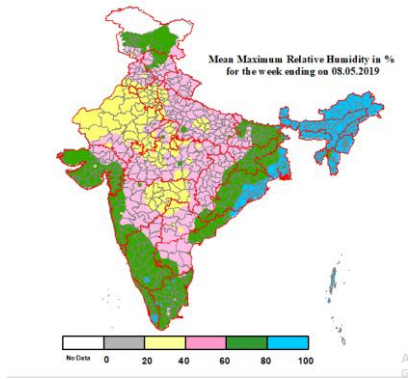
**Mean Minimum Temperature (°C) for the week ending on 08.05.2019**



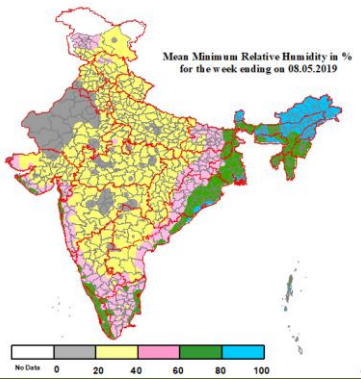
**Mean Diurnal Temperature Variation (°C) for the week ending on 08.05.2019**



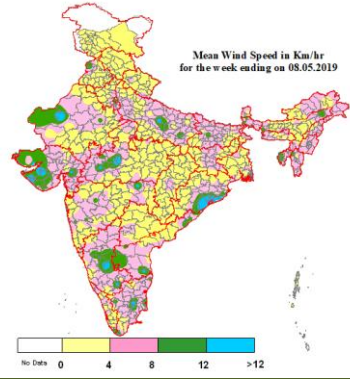
**Mean Maximum Relative Humidity (%) for the week ending on 08.05.2019**



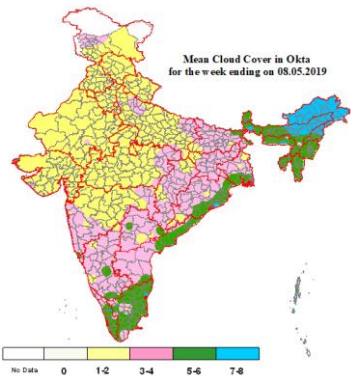
**Mean Minimum Relative Humidity (%) for the week ending on 08.05.2019**



**Mean Wind Speed (km/hr) for the week ending on 08.05.2019**

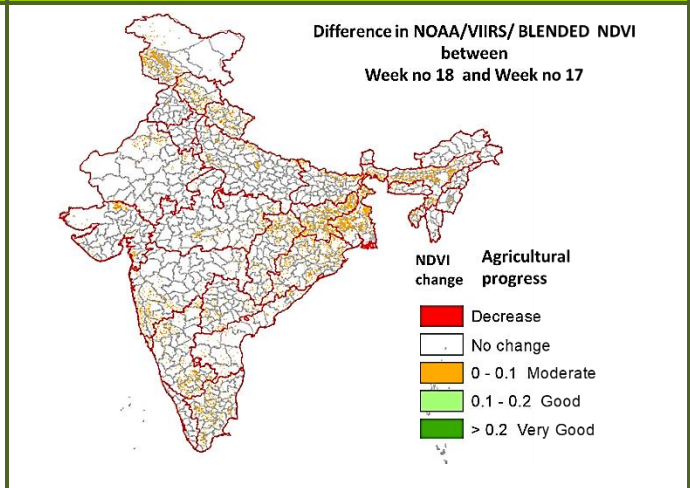
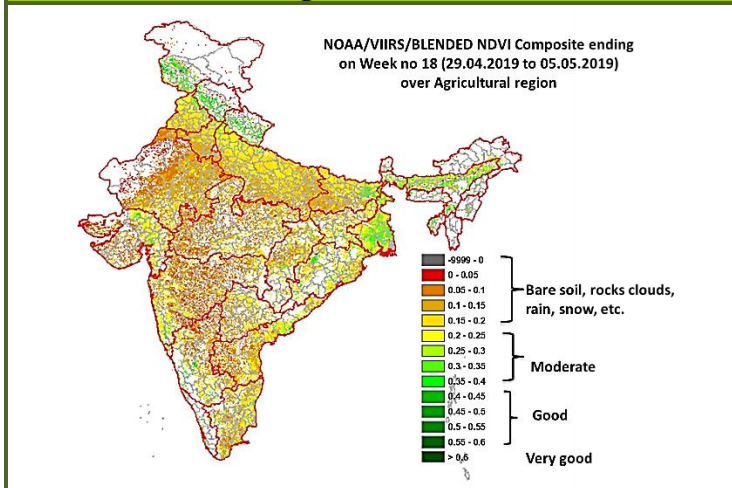


**Mean Cloud Cover (okta) for the week ending on 08.05.2019**





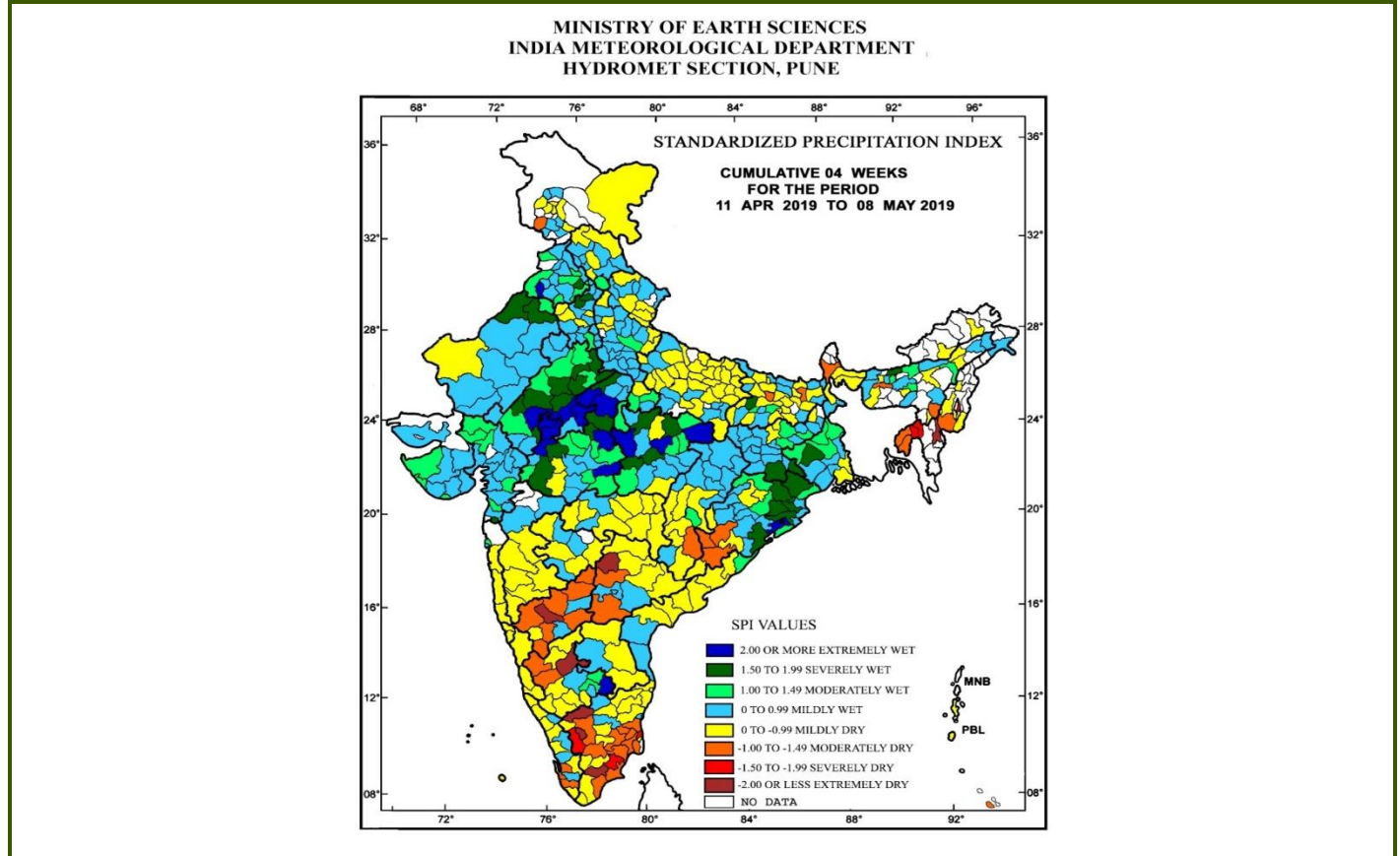
<b>NOAA/VIIRS/BLENDED NDVI composite for the week number 18 (29.04.2019 to 05.05.2019) over Agricultural regions of India</b>	<b>Difference in NOAA/VIIRS/BLENDED NDVI between week number 18 and week number 17</b>
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Agriculture vigour is good at isolated places over South Interior Karnataka (Davangari), Valley region of Jammu & Kashmir, Himachal Pradesh and Uttarakhand.

Moderate difference in agricultural vigour was noticed at many places over Jammu & Kashmir & Jharkhand, few places over Himachal Pradesh, Uttarakhand, West Bengal, North Eastern States, Odisha & adjoining Northern Chattisgarh, Konkan & Goa and South Interior Karnataka.

**Standardised Precipitation Index  
Cumulative 4 weeks for the period 11<sup>th</sup> April to 8<sup>th</sup> May 2019**



- Extremely/severely wet conditions experienced in Baksa districts of Assam; Bankura districts of West Bengal; Cuttack, Dhenkanal, Ganjam, Jajpur, Keonjhar, Khurda, Mayurbhanj districts of Odisha; East Singhbhum, West Singhbhum districts of Jharkhand; Bhojpur districts of Bihar; Kurukshetra, Kaithal districts of Haryana; Muktsar, Fatehgarh Sahib districts of Punjab; Kolar district of Karnataka.
- Extremely/Severely dry conditions experienced in many districts of Tripura; Nizamabad district of Telangana; Coimbatore, Nagapattinam, Sivaganga, Virudhunagar, Tirupur districts of TamilNadu & Puducherry; Bagalkote, Chamarajanagar, Chitradurga districts of Karnataka.
- Moderately dry conditions experienced in many districts of Tripura; few districts of TamilNadu & Puducherry; Karnataka; Cachar, Goalpara districts of Assam; Darjeeling districts of West Bengal; Kalahandi, Koraput, Nawarangpur districts of Odisha; Madhepura, Vaishali districts of Bihar; Rajouri, district of Jammu & Kashmir; Bastar districts of Chhattisgarh; Mahbubnagar, Medak districts of Telangana; Alapuzha, Kottayam, Kollam districts of Kerala

#### **Significant weather features**

- Heat Wave conditions are very likely to prevail over some parts of Vidarbha, Chhattisgarh & Telangana during next 24 hours and in isolated pockets over East Uttar Pradesh, Jharkhand, Bihar, Odisha, Gangetic West Bengal during next 48 hours.
- Due to the current Western Disturbance and ongoing moisture incursion from Arabian Sea, rainfall/thunderstorm activity very likely over many parts of northwest India from today. Rainfall/thunderstorm activity also likely to increase over Northeast & peninsular India from today. Isolated heavy rainfall is likely over Northeast India during next 4 days.

**Weather Forecast for next 5 days valid upto 0830 hours of 15<sup>th</sup> May 2019**

**Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table below.**

◆ Maximum temperatures are likely to fall by 2-3°C over Northwest & adjoining India from tomorrow. No significant change in temperatures likely over rest of the country during next 3 days.

**5 Day Rainfall Forecast (Mid-day)  
10<sup>th</sup> May 2019**

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

**% Station Reporting Rainfall**

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

**Weather Warning during next 5 days**

**10 May (Day 1):** ◆ **Thunderstorm & lightning accompanied with hail and gusty wind (40-50 kmph)** at isolated places very likely over Himachal Pradesh; with **gusty winds (40-50 kmph)** at isolated places over Jammu & Kashmir, Coastal Andhra Pradesh and with **gusty wind (30-40 kmph)** at isolated places over Tamilnadu & Pudducherry, Nagaland, Manipur, Mizoram & Tripura, Gujarat state.

◆ **Thunderstorm/Duststorm & lightning accompanied with gusty wind (40-50 kmph)** at isolated places very likely over West Rajasthan; with **gusty wind (30-40 kmph)** at isolated places over East Rajasthan, Punjab, Haryana, Chandigarh & Delhi and West Uttar Pradesh.

◆ **Heat wave conditions** in some parts very likely over Vidarbha, Chhattisgarh and Telangana and in

isolated pockets over Coastal Andhra Pradesh, East Uttar Pradesh, Tamilnadu & Puducherry, Bihar, Jharkhand, Gangetic West Bengal and Odisha.

♦ **Heavy Rain** at isolated places very likely over Arunachal Pradesh and Assam & Meghalaya.

♦ **Swell Waves** (1.5-2 m height) are likely along & off Karnataka, Kerala, Lakshadweep and south Tamilnadu coasts. Fishermen are advised not to venture into these areas. For detailed warning forecast, kindly visit the link: <https://incois.gov.in/portal/osf/hwa.jsp>

**11 May (Day 2): ♦ Thunderstorm & lightning accompanied with hail and gusty wind (40-50 kmph)** at isolated places very likely over Himachal Pradesh & Uttarakhand; with **gusty winds (40-50 kmph)** at isolated places over Jammu & Kashmir, Madhya Pradesh and with **gusty wind (30-40 kmph)** at isolated places over Vidarbha, Chhattisgarh, Odisha, Coastal Andhra Pradesh, Telangana, Tamilnadu & Puducherry, Kerala, Nagaland, Manipur, Mizoram & Tripura, Marathwada.

♦ **Thunderstorm/Duststorm & lightning accompanied with gusty wind (50-60 kmph)** at isolated places very likely over West Rajasthan; with **gusty wind (40-50 kmph)** at isolated places over East Rajasthan; with **gusty wind (30-40 kmph)** at isolated places over East Rajasthan, Punjab, Haryana, Chandigarh & Delhi and Uttar Pradesh.

♦ **Heat wave conditions** in isolated pockets likely over Vidarbha, Chhattisgarh, Telangana, Bihar, Jharkhand, Gangetic West Bengal and Odisha.

♦ **Heavy Rain** at isolated places very likely over Arunachal Pradesh and Assam & Meghalaya.

**12 May (Day 3): ♦ Thunderstorm & lightning accompanied with hail & gusty winds (30-40 kmph)** at isolated places very likely over Uttarakhand; with **gusty winds (40-50 kmph)** at isolated places over Madhya Pradesh and with **gusty winds (30-40 kmph)** at isolated places over Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Odisha, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Coastal Andhra Pradesh, Telangana, Tamilnadu & Puducherry and Kerala.

♦ **Heavy rainfall** at isolated places is likely over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Tamilnadu & Puducherry and Kerala .

**13 May (Day 4): ♦ Thunderstorm & lightning accompanied with hail & gusty winds (40-50 kmph)** at isolated places likely over Uttarakhand; with **gusty winds (40-50 kmph)** at isolated places over Jammu & Kashmir, Himachal Pradesh ; with **gusty winds (30-40 kmph)** at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Chhattisgarh, Bihar, Jharkhand, Odisha, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh, Telangana, Kerala and South Interior Karnataka.

♦ **Thunderstorm/Duststorm & lightning accompanied with gusty winds (30-40 kmph)** likely at isolated places over Rajasthan.

♦ **Thunderstorm & lightning accompanied with squall (50-60 kmph)** at isolated places likely over Gangetic West Bengal.

♦ **Heavy rainfall** at isolated places likely over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, South Interior Karnataka, Tamilnadu & Puducherry and Kerala.

**14 May (Day 5): ♦ Thunderstorm & lightning accompanied with hail & gusty winds (40-50 kmph)** at isolated places likely over Uttarakhand; with **gusty winds (40-50 kmph)** at isolated places over Jammu & Kashmir, Himachal Pradesh ; with **gusty winds (30-40 kmph)** at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Bihar, Jharkhand, Coastal Andhra Pradesh, Tamil Nadu & Puducherry and South Interior Karnataka.

♦ **Thunderstorm/Duststorm & lightning accompanied with gusty winds (40-50 kmph)** likely at isolated places over Rajasthan.

♦ **Heavy rainfall** at isolated places likely over West Bengal & Sikkim, South Interior Karnataka, Tamilnadu & Puducherry and Kerala.

### Weather Outlook for subsequent 2 days from 15<sup>th</sup> May to 17<sup>th</sup> May 2019

- Scattered to fairly widespread rainfall likely over northwest & northeast India, Bay Islands and south peninsula. Isolated to scattered rainfall likely over central & eastern India and Lakshadweep islands.
- Dry weather likely over the rest of the country.

### Advisory for fishermen

**Swell Waves** (1.5-2 m height) are likely along & off Karnataka, Kerala, Lakshadweep and south Tamilnadu coasts. Fishermen are advised not to venture into these areas.

### Salient Advisories

- As thunderstorm & lightning accompanied **with hail and gusty wind (40-50 kmph)** at isolated places very likely over **Himachal Pradesh** on 10<sup>th</sup> & 11<sup>th</sup>, 13<sup>th</sup> & 14<sup>th</sup> and over **Uttarakhand** from 11<sup>th</sup> to 14<sup>th</sup>, thunderstorm & lightning accompanied **with gusty winds (40-50 kmph)** at isolated places over **Jammu & Kashmir** on 10<sup>th</sup> & 11<sup>th</sup>, 13<sup>th</sup> & 14<sup>th</sup>, thunderstorm/Duststorm & lightning accompanied with gusty wind (**40-50 kmph**) at isolated places very likely over **West Rajasthan** on 10<sup>th</sup> & 11<sup>th</sup> and over **Rajasthan** on 13<sup>th</sup> & 14<sup>th</sup>, with gusty wind (**30-40 kmph**) at isolated places over **East Rajasthan** on 10 & 11<sup>th</sup>, over **Punjab, Haryana, Chandigarh & Delhi** and **Uttar Pradesh** on 10<sup>th</sup>, 11<sup>th</sup>, 13<sup>th</sup> & 14<sup>th</sup> May, provide mechanical support to young fruit plants and vegetables. Provide hail net for orchard crops in Himachal Pradesh and Uttarakhand to protect from mechanical damage.
- Thunderstorm & lightning accompanied **with gusty wind (40-50 kmph)** at isolated places very likely over **Madhya Pradesh** on 11<sup>th</sup> & 12<sup>th</sup>, over Coastal Andhra Pradesh on 10<sup>th</sup>, thunderstorm & lightning accompanied **with gusty wind (30-40 kmph)** at isolated places over Nagaland, Manipur, Mizoram & Tripura on 10<sup>th</sup> to 13<sup>th</sup>, over Chhattisgarh on 10<sup>th</sup> to 12<sup>th</sup>, over Vidarbha on 11<sup>th</sup>, over Odisha on 11<sup>th</sup> to 13<sup>th</sup>, over Bihar and Jharkhand from 12<sup>th</sup> to 14<sup>th</sup>, over Gangetic West Bengal 12<sup>th</sup>, over Tamilnadu & Puducherry on 10<sup>th</sup> to 12<sup>th</sup> & 14<sup>th</sup>, over Coastal Andhra Pradesh from 11<sup>th</sup> to 14<sup>th</sup>, over Telangana and Kerala from 11<sup>th</sup> to 13<sup>th</sup> and over South Interior Karnataka on 13<sup>th</sup> & 14<sup>th</sup>, thunderstorm **accompanied with squall (wind reaching 50-60 kmph)** very likely over **Gangetic West Bengal** on 13<sup>th</sup> May, provide mechanical support to young fruit plants and vegetables. Undertake propping in sugarcane Coastal Andhra Pradesh, and Tamilnadu. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm period.
- **Heat Wave Conditions** very likely in some parts over **Vidarbha** on 10<sup>th</sup> & 11<sup>th</sup>, over **Chhattisgarh** on 10<sup>th</sup> & 11<sup>th</sup>, over **Telangana** on 10<sup>th</sup> and at isolated pockets on 11<sup>th</sup>, at isolated pockets over Bihar, Jharkhand, Gangetic West Bengal and Odisha on 10<sup>th</sup> & 11<sup>th</sup>, over Coastal Andhra Pradesh and Tamilnadu on 10<sup>th</sup> May, apply light and frequent irrigation to the standing crops to cope up with the excessive evaporative demand. Do soil mulching or mulching with straw/polythene to conserve soil moisture.
- As rain/thundershowers likely over most/many places over **Arunachal Pradesh** and **Assam & Meghalaya** during the period, over Nagaland, Manipur, Mizoram & Tripura on 13<sup>th</sup> & 14<sup>th</sup> May,



along with **heavy rainfall** at isolated places very likely over **Arunachal Pradesh** and **Assam & Meghalaya** on 10<sup>th</sup> to 13<sup>th</sup> May, rain/thundershowers likely at many places over Himachal Pradesh during the period, over Uttarakhand on 11<sup>th</sup>, 13<sup>th</sup> & 14<sup>th</sup>, over Jammu & Kashmir from 10<sup>th</sup>, 11<sup>th</sup>, 13<sup>th</sup> & 14<sup>th</sup> May, over Sub-Himalayan West Bengal & Sikkim from 12<sup>th</sup> to 14<sup>th</sup> May along with **heavy rainfall** at isolated places very likely on 12<sup>th</sup> & 13<sup>th</sup>; **heavy rainfall** at isolated places very likely over West Bengal & Sikkim on 14<sup>th</sup> May, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields. Keep harvested produce at safer places.

- In view of prevailing heat wave conditions over Vidarbha, Chhattisgarh and Telangana, keep the cattle under shade/shed during noon hours and provide good ventilation in the cattle sheds. Hang wet gunny bags so as to reduce heat in the cattle shed. Provide cool water, easily digestible liquid food and silage for providing nutrient and healthy food. Add mineral mixture, salt water and integrated and concentrated feed in equal ratio for increasing potassium and sodium levels.

### *Detailed Agromet Advisories*

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

**Realised Rainfall:** Rainfall occurred in Srikakulam district of Andhra Pradesh, in Puducherry, Bangalore Rural, Bangalore Urban, Kolar districts of South Interior Karnataka during the week. Mainly dry weather prevailed over the rest of the region

#### **Advisories:**

- Heat Wave Conditions very likely in some parts over Telangana on 10<sup>th</sup> and at isolated pockets on 11<sup>th</sup>, at isolated pockets over Coastal Andhra Pradesh and Tamilnadu on 10<sup>th</sup> May, apply light and frequent irrigation to the standing crops to cope up with the excessive evaporative demand. Do soil mulching or mulching with straw/polythene to conserve soil moisture.
- As thunderstorm & lightning accompanied **with gusty wind (40-50 kmph)** at isolated places very likely over Coastal Andhra Pradesh on 10<sup>th</sup>, thunderstorm & lightning accompanied **with gusty wind (30-40 kmph)** at isolated places over Tamilnadu & Puducherry on 10<sup>th</sup> to 12<sup>th</sup> & 14<sup>th</sup>, over Coastal Andhra Pradesh from 11<sup>th</sup> to 14<sup>th</sup>, over Telangana and Kerala from 11<sup>th</sup> to 13<sup>th</sup> and over South Interior Karnataka on 13<sup>th</sup> & 14<sup>th</sup> May, provide mechanical support to young fruit plants, banana and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping in sugarcane.
- **Swell Waves** (1.5-2 m height) are likely along & off Karnataka, Kerala, Lakshadweep and south Tamilnadu coasts. Fishermen are advised not to venture into these areas.

#### **Kerala:**

- In High Altitude Zone, it is the time for land preparation for sowing of rice. Plough the field thoroughly to incorporate the weeds and straw into the soil. Ensure a smooth level field for transplanting the seedlings. Soak seeds for 12 to 16 hrs in Carbendazim 2g/kg of seed per litre of water and drain. This will protect the seedlings from blast disease upto 30 to 60 days after sowing.
- In Northern Zone, attack of red spider mite on cowpea may be there, spray Spiromecifen 0.7 ml per litre on upper and lower sides of the leaves.
- In Central Zone, provide support to banana to prevent lodging due to high wind speed. Also there is a chance of sigatoka disease in banana. As a precaution, spray 20 g Pseudomonas per one litre of water.

#### **Andhra Pradesh:**

- In North Coastal Andhra Pradesh, weather is congenial for Early Shoot Borer and Fall army worm on Sugarcane which is at formative stage. Spray Chlorpyrifos @ 2.5 ml per liter of water
- In Scarce Rainfall Zone, apply light irrigation followed by spraying of 13-0-45 @10g/lit or SOP @ 5gm/lit for improvement of fruit size in Banana plantation
- In Rayalaseem, in the present weather conditions there is possibility of incidence of sucking pests in 15-30 days summer groundnut crop. To control spray Monocrotophos @ 1.6 ml./lt. of water

#### **Telangana:**

- In southern Telangana, under take summer ploughing to control weeds, hibernating pests and disease spores that



may damage Kharif crops.

- In Northern Telangana, light irrigation may be provided to vegetables. Spray Potassium nitrate @ 5g /lit is recommended at early hours.

#### **Tamil Nadu:**

- In High Altitude Hilly Zone, to prevent wilting disease in Pepper plantation, apply 25 g Trichoderma viridi and 25 g Pseudomonas fluorescens along with 500 g Neem cake per wine.
- In Western Zone, weather is highly favourable for sucking pest in vegetables, provide prophylactic spray with 5% neem seed kernel extract.
- In High Altitude Hilly Zone, to prevent collar rot disease in beans, soil drenching with copper oxy chloride 1 g/lit of water may be followed.
- In Coastal Zone, to prevent early shedding of buds and squares in cotton spray 40 ppm NAA (40 mg of Naphthalene Acetic Acid in one litre of water) at 60 and 90 DAS on the crops.

#### **Karnataka**

- In South Interior Karnataka, sowing of cowpea, sesame, groundnut, field bean, black gram and green gram crops is recommended during May month.
- In Coastal Karnataka, avoid excess moisture in groundnut crop field during harvesting time.
- In North Interior Karnataka, continue harvesting of summer groundnut, rice crops and mango fruits. Apply irrigation in sugarcane crop.
- In North Interior Karnataka, for control of fruit borer in tomato, brinjal and chili crops spray Emamectin Benzoate at 5% S.G @ 0.2 gm per litre of water.
- In South Interior Karnataka, hybrid varieties of tomato and chili are affected with leaf curl disease; remove affected plants and spray Imidocloprid @ 0.5 ml / liter of water or Acephate @ 1 gram /liter of water.

#### **Animal Husbandry**

- In view of prevailing heat wave conditions over Telangana and coastal Andhra Pradesh, keep the cattle under shade/shed during noon hours and provide good ventilation to the cattle sheds. · Hang wet gunny bags so as to provide cool weather in the cattle shed. · Provide cool water, easily digestible liquid food and silage for providing nutrient and healthy food. · Add mineral mixture, salt water and integrated and concentrated feed in equal ratio for increasing potassium and sodium levels.
- In Tamilnadu, heat stress and heat stroke will be observed in poultry because of increase in maximum temperature. However, the chances for a summer shower are higher. To prevent egg production and egg breakage problems, farmers are advised to follow water management practices meticulously. Feed intake of the young birds (aged 25 – 30 weeks) should be above 90 gram / day/ bird and to ensure optimum energy intake, use of vegetable oil in the feed is recommended.
- In Karnataka, due to increase in day temperature (37° to 38°C) there is a probability of drop in feed intake in poultry; maintain optimum temperature in poultry by applying 4-6 inch thick hay thatch as a roofing material. Water can be used for spraying on the floor and roof of shelter periodically during peak hot hours which lowers the temperature in poultry sheds. Provide cool water for poultry birds. Add electrolytes (KCl, NaCl and NaCO<sub>3</sub>) in feed and water.

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

**Realised Rainfall:** Significant rainfall occurred in all districts of Arunachal Pradesh, Assam, Meghalaya and Tripura ; in all districts of Nagaland except Kephire, Longleng, Paren, Phek and Wokha districts; in all districts of Manipur except Imphal west. Mainly dry weather prevailed in Mizoram.

#### **Advisories:**

- As rain/thundershowers likely over most/many places over **Arunachal Pradesh** and **Assam & Meghalaya** during the period, over Nagaland, Manipur, Mizoram & Tripura on 13<sup>th</sup> & 14<sup>th</sup> May, along with **heavy rainfall** at isolated places very likely over **Arunachal Pradesh** and **Assam & Meghalaya** on 10<sup>th</sup> to 13<sup>th</sup> May, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields. Keep harvested produce at safer places.
- As thunderstorm & lightning accompanied with **gusty wind (30-40 kmph)** at isolated places very likely over Nagaland, Manipur, Mizoram & Tripura on 10<sup>th</sup> to 13<sup>th</sup> May, provide mechanical support to young fruit plants, banana and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.

#### **Arunachal Pradesh:**

- Continue sowing of Jhum rice, planting of ginger, turmeric, sugarcane and banana after current spells of heavy rain. Adopt sowing of leguminous crops like cowpea, French bean, soybean etc at 2-3 rows across the slope of Jhum field at desirable intervals or ratios with rice to prevent soil erosion and conserve moisture and fertility.

#### **Assam & Meghalaya**

- In Lower Brahmaputra Valley of Assam, propping / staking of partially lodged /uprooted fruit trees is advised. In

banana, remove lodged plant to allow one good sucker to replace the mother plant. Remove excess water from maize, green gram, black gram and plantation crop fields. Collect seeds of HYV of *Sali* rice namely Ranjit, Bahadur, Satyaranjan, Basundhara, Mahsuri, Ketekijoha etc. Select Satyaranjan and Basundhara in double cropping areas having crop duration of 130-135 days. Ranjit Sub-1, Jalashree and Jalkunwari are some suitable varieties of *Sali* rice for flood affected areas.

- In Upper Brahmaputra Valley and Barak Valley Zone of Assam, in the prevailing temperature and relative humidity, incidence of blight may be observed in the green gram and black gram crops at vegetative stage. To control this disease apply Carbendazim 0.05% @ 300-500 g in 600-700 litre of water after current spells of rain and repeat at an interval of 12-15 days.
- In Central Brahmaputra Valley of Assam, continue planting of papaya and citrus fruit plants and undertake sowing of Jute after current spells of heavy rain.
- In Meghalaya, after current spells of heavy rain, farmers are advised to make raised bed of size 1m width, 15cm height for planting of ginger/ turmeric and drainage channels for draining excess rain water. Continue sowing of maize at high and mid altitude region, transplanting of tomato, chilli, brinjal and capsicum, land preparation for new plantation of pineapple after current spells of heavy rain by ploughing or digging followed by leveling.

#### **Manipur, Mizoram, Tripura and Nagaland:**

- In Nagaland, continue sowing of green gram, nursery preparation for chilli, sowing of Jhum rice in Longleng districts and sowing of maize after current spells of heavy rain. Install yellow sticky trap for monitoring white flies and hopper in the fields of okra crop. Undertake preparation of pits of size 3ft\*3ft\*3ft (1m\*1m\*1m) for planting of fruit trees. Pits may be filled with well dried FYM/organic manure, neem powder and lime for further planting
- In Manipur, maintain 5-7 cm water level in the field of pre-kharif rice. Continue nursery raising for sowing of kharif rice and land preparation for sowing of kharif maize, soybean/ groundnut after current spells of heavy rain. Use Methyl Eugenol as trap @ 4-10 traps/ sangam against red pumpkin beetle attack in cucurbits crops.
- In Mizoram, continue sowing of Jhum rice, green gram, black gram, cucurbitaceous crops, maize, cowpea and okra after current spells of heavy rain.
- In Tripura, continue land preparation for sowing of Jhum rice. Maintain 5cm standing water in the field of Boro rice. Weather is conducive for Fruit & Shoot Borer infestation in summer brinjal and tomato. To manage the attack, apply Cypermethrin @ 1.5ml or Flubendamid 0.5 ml per litre of water after current spells of rain.

#### **Animal Husbandry:**

- In Upper Brahmaputra Valley of Assam, present weather condition is congenial for the attack of Foot and Mouth Disease in livestock. As prophylactic measure, the mouth and leg parts of healthy animals should be washed periodically with baking soda and should be timely vaccinated. Infected cows and buffaloes should be isolated and kept separately..Local veterinarian should be consulted as early as possible for proper diagnosis and immediate treatment.

#### **Fishery:**

- In Assam, with the rise of pond water level due to rain, fishery owners are advised to release fingerlings of recommended fish species according to the size of their ponds / fisheries. Farmers interested in rice fish farming should select field having capacity to hold water continuously to a depth of 30cm for several months. The land should be selected keeping in view that it will not be over flooded. Prepare the fingerling rearing tanks and nurseries by cleaning them and applying agricultural lime for raising fingerlings. Apply cow dung at the rate of 500 gm per sq m. at least 15 days ahead of releasing fingerlings into the tanks. Nylon net barrier may be given to the fisheries in the low lying areas to prevent escape of fishes during heavy rainfall.

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

**Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands; in Araria, Banka, Bhagalpur, Bhojpur, Jahanabad, Kishanganj, Nalanda and West Champaran districts of Bihar; in Bokaro, Deogarh, Dhanbad, Dumka, East Singhbhum, Giridih, Godda, Jamtara, Pakur, Ramgarh, Sahebganj, Saraikela and West Singhbhum districts of Jharkhand; in Angul, Balasore, Bhadrak, Cuttack, Dhenkanal, Gajapati, Ganjam, Jagatsingpur, Jajpur, Khandhamal, Kendrapada, Keonjhar, Khurda, Mayurbhanj, Nayagarh, Puri and Sundargarh districts of Odisha and in all districts of West Bengal and Sikkim. Weather remained mainly dry over rest of the region.

#### **Advisories:**

- As thunderstorm & lightning accompanied with gusty wind (**wind speed reaching 30-40 kmph**) at isolated places very likely over Odisha on 11<sup>th</sup> to 13<sup>th</sup>, over Bihar and Jharkhand from 12<sup>th</sup> to 14<sup>th</sup>, over Gangetic West Bengal 12<sup>th</sup> May, thunderstorm **accompanied with squall (wind reaching 50-60 kmph)** very likely over Gangetic West Bengal on 13<sup>th</sup> May, provide mechanical support to young fruit plants, banana and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping in sugarcane in Odisha.
- Heat Wave Conditions very likely at isolated pockets over Bihar, Jharkhand, Gangetic West Bengal and Odisha on 10<sup>th</sup> & 11<sup>th</sup> May, apply light and frequent irrigation to the standing crops to cope up with the excessive evaporative demand. Do soil mulching or mulching with straw/polythene to conserve soil moisture.

- As rain/thundershowers likely at many places over Sub-Himalayan West Bengal & Sikkim from 12<sup>th</sup> to 14<sup>th</sup> May along with **heavy rainfall** at isolated places very likely on 12<sup>th</sup> & 13<sup>th</sup>; **heavy rainfall** at isolated places very likely over West Bengal & Sikkim on 14<sup>th</sup> May, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields. Keep harvested produce at safer places.

#### **Odisha:**

- Drain out excess water from the standing crop fields especially vegetables and flowers. Undertake planting of vegetables at optimum soil moisture conditions. Go for Picking of matured pods of pigeon pea instead of cutting plants to avoid viviparous germination after rain. Cut down the sugarcane leaves damaged due to cyclonic wind and carry out wrapping and propping of lodged sugarcane plants
- In present weather condition, fruit borer, leaf eating caterpillar and leaf miner are major pest observed in the tomato and brinjal fields. To control these pests, spray Spinosad 45SC@70ml/acre with 200 litres of water.

#### **Bihar:**

- There is a possibility of rainfall in the next few days. Harvest mature wheat, pigeon pea and rabi maize crops immediately and postpone irrigation to the summer maize crop. Carry out intercultural operations in onion field after the rain. Carry out one hand weeding in green gram crop. Carry out land preparation for nursery sowing of rice, planting of ginger and turmeric crops. Continue planting of elephant foot yam.
- For management of insect/pests in green gram, spray Methyl parathion 50 EC @ 2.0 ml or Chlorpyrifos 20 EC @ 2.5ml/litre of water. To control fruit fly in cruciferous crops, spray Dimehoate 30EC @ 2ml+10g sugar/litre of water.

#### **Jharkhand:**

- Maintain optimum water level in summer paddy fields as timely transplanted crop is at grain filling stage and this stage is sensitive of moisture stress. Continue sowing of improved varieties of summer cowpea, planting of ginger, turmeric and elephant foot yam. Irrigate vegetable crops at regular intervals. Make pits for planting new orchards of mango, Guava and litchi.
- To control fruit & shoot borer in okra (bhindi), spray neem extract insecticide @ 1.5 to 2 ml / litre of water. To control Gundhi bug in summer paddy, spray Quinalphos 1.5% dust @ 10 kg/acre.

#### **West Bengal:**

- In Sub-Himalayan West Bengal, complete the pit preparation for planting of new orchards of Mandarin orange. Provide mulching to large cardamom plants. Carry out thinning of jute crop. Continue planting of ginger and turmeric to main field. To control chilli fruit rot, spray Carbendazim + Mancozeb @ 2.5g/liter of water. To control Yellow Vein Mosaic in Bendi, Spray Imidacholorprid @ 0.2ml/liter of water at morning time. To control sucking pest in green gram, spray Acephate 25% + Fenvelerate 3% @ 1.5g/litre of water at evening hour.
- In Gangetic West Bengal, complete the harvesting, threshing and sun drying of Boro paddy. Carry out sowing of Olitorius jute. Carry out harvesting of litchi when 50% of the fruits in a bunch start developing red colour. Spray spinosad@1.5ml/liter of water for fruit borret attack in okra and brinjal crops. Place pheromone traps for fruit fly attack in mango, guava and citrus orchards.

#### **Andaman & Nicobar Islands:**

- Do weeding and earthing up in vegetable crops as weeds are germinated due to the rain. Clean the crown portion of coconut and garden before onset of monsoon.

#### **Animal Husbandry:**

- In Bihar, provide clean water to the milch animals and keep them in shaded places during the day time. Carry out de-worming in animals.
- In Jharkhand, rise in temperature increases the possibility of death in poultry. Preventive measure should be taken by giving mixture of vitamin C and anti-stress solution of cool water and spraying of cool water during noon time. Roof of asbestos sheet should be painted with white paint. Supply sufficient amount of wet poultry feed. Dip the bird in cool water and keep it in shed when affected with heat stroke. Vaccinate cow, buffalo, goat and sheep against H.S & FMD.
- In West Bengal, take care for day old chicks with proper brooding, ventilation and management may reduce morbidity and mortality rate.
- In Odisha, make arrangement for sufficient clean drinking water for the livestock at different locations due to rise in temperature. Do not allow the animals for grazing in open field during the peak of temperature. Arrange to feed the animals with green forages on regular basis.

#### **Fisheries:**

- In Andaman Islands, prepare the nursery pond by cleaning wild fishes for the next fish breeding season.
- In Jharkhand, add cow dung and lime in the pond as a natural food for fishes and provide alternative feeds like Rice Bran and Mustard cake (each of 5 kg per day per acre area of pond).



## WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

**Realised Rainfall:** Weather remained dry over the region.

### Advisories:

- Heat Wave Conditions very likely in some parts over Vidarbha on 10<sup>th</sup> & 11<sup>th</sup> May, apply light and frequent irrigation to the standing crops to cope up with the excessive evaporative demand. Do soil mulching or mulching with straw/polythene to conserve soil moisture.
- As thunderstorm & lightning accompanied with gusty winds (**wind speed reaching 30-40 kmph**) at isolated places very likely over Vidarbha on 11<sup>th</sup> May, provide mechanical support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping in sugarcane.
- **Maharashtra:**
- In South Konkan, Apply irrigation to vegetables and orchards, continue harvesting of groundnut, continue harvesting of mango before 10 A.M. and after 4 P.M.
- In Madhya Maharashtra, provide shade for protection of young fruit plants from scorching sun, apply irrigation to orchards and vegetables, undertake harvesting of groundnut and also to control aphids and mealy bug in papaya, spray Diamethoate @ 20 ml per 10 litres of water and for the control of white fly in sugarcane, spray Malathion 50% @ 20 ml in 10 liters of water.
- In Marathwada, apply irrigation to sugarcane, orchards and vegetables, to control stem borer in sugarcane, spray Chlorantranilipole 18.5 % SC @ 4 ml per 10 liter of water.
- In Vidarbha, Undertake harvesting of matured rice, groundnut and sesame.
- Apply light and frequent irrigation to standing crops like green gram, sesame, orchards and vegetables, undertake ploughing in harvested crop fields.
- For control of fruit borer in vegetables like tomato and okra, spray Quinalphos 25 EC @ 20 ml per 10 litres of water.
- **Gujarat:**
- In South Gujarat, undertake nursery bed preparation for rice (varieties: NAUR-1, GNR-2 (Costal area) GNR-3, GNR-4, GNR-5, GNR-6 (Long duration), Jaya, Gurjari, GR-5, 7, 8, 9, IR-28, Purna and GAR-13) crop. Undertake weeding in rice, groundnut and pulses crops. Continue sowing of leafy vegetable (Fenugreek, Coriander, Green Garlic) crops. Undertake sowing of cluster bean and cowpea crops. As there is increase in temperature, apply irrigation in vegetable and fruit crops.
- In Saurashtra & Kutch, apply light irrigation in cluster bean crop. Undertake harvesting of green gram, black gram sesame and pearl millet crops in before seed shattering.
- In Middle Gujarat, due to high temperature conditions reduce interval between two irrigations. Apply irrigation as per requirement to fruit plants, bajra, vegetable, cowpea and green gram crops.
- In North Gujarat, do not carry out weeding and intercultor practices during in groundnut (pegging stage) crop. Under higher temperature and moderately dry condition apply irrigation at 5 to 7 days interval. Apply light irrigation in groundnut (pegging), pearl millet (ear head emergence), cluster bean, green gram pea (flower initiation), cow pea crops and pomegranate, sapota, lemon and papaya orchards. Continue plucking of matured vegetables/fruits (bhindi, tomato, cucumbers, water melon and muskmelon).
- In Saurashtra & Kutch, in all vegetable crops, thrips and whiteflies infestation is observed above ETL; spray 500 ml of 5 % neem seed extract or neem seed oil @50 ml with Acetamiprid 20 % SP @ 5gm or Imidacloprid 30.5 SC @3 ml/10 litres of water for control of whiteflies. If population is more, then spray Ethion @ 1.5-2 ml/litre of water for the control of mites.
- **Animal Husbandry**
- In Gujarat, keep animals under shade/shed during noon hours. Put curtains on south-west side of poultry house and sprinkle water on curtains during noon time. Provide plenty of cold water mixed with minerals for drinking and shower the animals with cold water two to three times in a day.

## CENTRAL INDIA [M.P., CHHATTISGARH]

**Realised Rainfall:** Weather remained dry over the region during the week.

### Advisories:

- As thunderstorm & lightning accompanied with gusty winds (**wind speed reaching 30-40 kmph**) at isolated places very likely over Chhattisgarh on 10<sup>th</sup> to 12<sup>th</sup> May, with gusty winds (**wind speed reaching 40-50 kmph**) at isolated places over Madhya Pradesh on 11<sup>th</sup> & 12<sup>th</sup> May, provide mechanical support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping in sugarcane.
- Heat Wave Conditions very likely in some parts over Chhattisgarh on 10<sup>th</sup> & 11<sup>th</sup> May, apply light and frequent irrigation to the standing crops to cope up with the excessive evaporative demand. Do soil mulching or mulching with straw/polythene to conserve soil moisture.
- **Madhya Pradesh**
- In Kymore Plateau and Satpura Hill Zone, complete sowing of moong and summer vegetables and sowing of watermelon, melon, cucumber etc.

- In Vidhyan Plateau Zone, apply irrigation through thala method or drip method of irrigation to standing fruit crops of Papaya and Banana.
- In West Madhya Pradesh, in summer groundnut and maize crop, farmers are advised to spread mulch or paddy straw in between the rows so that evapo-transpiration rate can be reduced. Farmers' having irrigation facility is advised to start sowing of summer moong in fallow fields and choose the improved varieties and treat the seed with Rhizobium culture before sowing. Apply irrigation in the vegetable and orchard crops at evening time and regular monitoring the crops against insect-pest disease infestation.
- In present weather, in mango orchards, wrapping of plastic sheets around mango tree trunk should be done for preventing climbing of young (nymphs) mealy bugs. Apply grease to seal any cracks in the polythene sheets. Apply irrigation in fruit orchards at regular intervals to keep optimum moisture in the basin.

#### **Chhattisgarh:**

- In Chhattisgarh Plain Zone, need based irrigation and intercultural operation should be done in tomato, brinjal, chilli, okra and other vegetable crops. Increase frequency of irrigation as per environmental temperature. . Farmers having drip irrigation system for vegetables and plantation crops should regulate the water discharge rate accordingly to maintain proper soil moisture around root zone.
- In Northern Hill Zone, this is the proper time for summer ploughing for preparing land for kharif crops. After first ploughing, FYM or Compost should be spread in the field and then mix it properly in the soil. Neem or karanj cake may be mixed in the soil at the time of final land preparation to protect the crop against termites. Farmers are advised to arrange the seeds and prepare the nursery for sowing of long duration rice varieties. Treat paddy seed with carbendazim (2 gm/kg of seed) fungicide before sowing in nursery.
- For control of powdery mildew diseases in cucurbitaceous family crops like bottle gourd, pumpkin, ridge gourd, and snake gourd, spray Karathan @ 1 gm/liter of water of water.

#### **Animal Husbandry**

- In Madhya Pradesh, farmers are advised to keep animal in shade and give plenty of water to them Farmer are advised to cover Animal and poultry sheds with gunny bag so that temperature may be reduced. To prevent Ranikhet disease vaccinate the poultry. Provide windows for fresh air in poultry shed and animal shed. During summer, @50-60 grams salt per animal per day must be fed.
- In Chhattisgarh, special attention should be given to milch animals with regard to feed and water in view of the prevailing high temperature. Give lot of clean water to the animals and keep them in the shaded place. If possible arrange the fogger in animal shed and sprinkling of water should be done at an interval of every four to five hours. There is a chance of attack of Heat stroke in cattle at present weather condition. Hence, farmers are requested to avail plenty of drinking water for them and do not allow them to remain in sunlight during noon hours. To keep their room cool, Jute bag may be hanged as curtain in the windows and it should be wetted time to time.

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

**Realised Rainfall:** Rain occurred in Kinnaur district of Himachal Pradesh; Bandipore and Baramula districts of Jammu & Kashmir during the week. Weather remained mainly dry/dry over rest of the region.

#### **Advisories:**

- Thunderstorm & lightning accompanied **with hail and gusty wind (40-50 kmph)** at isolated places very likely over Himachal Pradesh on 10<sup>th</sup> & 11<sup>th</sup>, 13<sup>th</sup> & 14<sup>th</sup> and over Uttarakhand on 11<sup>th</sup> to 14<sup>th</sup>, with gusty winds **(40-50 kmph)** at isolated places over Jammu & Kashmir on 10<sup>th</sup> & 11<sup>th</sup>, 13<sup>th</sup> & 14<sup>th</sup>, thunderstorm/Duststorm & lightning accompanied with gusty wind **(40-50 kmph)** at isolated places very likely over West Rajasthan on 10<sup>th</sup> & 11<sup>th</sup> and over Rajasthan on 13<sup>th</sup> & 14<sup>th</sup>, with gusty wind **(30-40 kmph)** at isolated places over East Rajasthan on 10 & 11<sup>th</sup>, over Punjab, Haryana, Chandigarh & Delhi and Uttar Pradesh on 10<sup>th</sup>, 11<sup>th</sup>, 13<sup>th</sup> & 14<sup>th</sup> May, provide mechanical support to young fruit plants and vegetables. Provide hail net for orchard crops in Himachal Pradesh and Uttarakhand to protect from mechanical damage. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm period.
- As rain/thundershowers likely at many places over over Himachal Pradesh during the period, over Uttarakhand on 11<sup>th</sup>, 13<sup>th</sup> & 14<sup>th</sup>, over Jammu & Kashmir from 10<sup>th</sup>, 11<sup>th</sup>, 13<sup>th</sup> & 14<sup>th</sup> May, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields. Keep harvested produce at safer places.

#### **Jammu & Kashmir:**

- In Sub Tropical Zone, complete harvesting of early sown wheat and late sown pea. Carry out hoeing and weeding operations in summer pulses after the rains keep the weeds under check.
- In Intermediate Zone, continue sowing of okra and French bean. In temperate areas/higher reaches of the district, continue sowing of maize crop after rains to utilize adequate soil moisture conditions for better germination of maize crop. Complete harvesting of wheat, rabi pulses and store the threshed produce at safer places from crop fields in advance. Possibility of light rainfall in between 10th to 12th May postpone hoeing cum weeding operation

in tomato, brinjal chilli and irrigation in vegetable crops.

- In Valley Temperate Zone, in apple, ensure orchard sanitation through destruction of pruned or diseased/infected twigs by burning. Adopt proper central drainage system. Maintain a gap of 3-4 days between insecticide and fungicide spray. Avoid mixing of fungicides, insecticide and spray suspensions. Adjuvants/Stickers may be added for better efficacy of fungicides especially during rainy days. Stickers should not be used with Dodine. Do not spray pesticides during bloom. Same systemic fungicides should not be repeated continuously in two sprays. Undertake preparation of nursery beds of rice and during night hours cover the seed beds with polyethylene sheets so as to maintain temperatures. Complete the sowing of maize and undertake harvesting of oats for green fodder purpose

#### **Himachal Pradesh:**

- In High Hill Temperate Zone, carry out pruning of unwanted branches in apple trees. Undertake grafting work in apple nursery. To avoid mortality of seedlings in polyhouse due to damping off, carry out drenching of the beds with Bavistin (15-20g/10 litres of water) three weeks before sowing. Undertake sowing of peas.
- In Mid-Hills Sub-Humid Zone, apply light irrigation to vegetables, nurseries and fruit crops.
- Undertake sowing of bitter gourd, cucumber and pumpkin.

#### **Punjab, Haryana and New Delhi**

- In Punjab, continue harvesting of wheat and pulses and store harvested grain in safe and dry place. Continue sowing of summer moong, summer mash, bhindi, cowpea and cucurbits. Undertake transplanting of vegetables (tomato, chilli, brinjal). Continue sowing of cotton including Bt cotton or desi Cotton and planting of turmeric.
- In Haryana, prepare the field and undertake sowing of cotton, continue transplanting of matured seedlings of tomato, cauliflower, cabbage in prepared field and undertake sowing of ladyfinger, bottle gourd, cucumber, ridge gourd and summer radish. Complete the sowing operation of green gram and black gram.
- In Delhi, continue sowing of spinach, coriander, fenugreek. Continue sowing of lady finger, green gram. Undertake field preparation for sowing of pigeon pea and cotton. Harvest the matured vegetables at morning and evening hours. Maintain optimum moisture level in cucurbitaceous crops by light and frequent irrigation as dry conditions may lead to poor fruiting and thus drop in yield of the crop. Apply light irrigation as per requirement in all vegetable and standing crops. High temperature is suitable for deep ploughing of fields after harvesting of Rabi crops

#### **Uttar Pradesh:**

- In East Uttar Pradesh, complete harvesting and threshing of wheat and barley. Multi cutting Jwar 20 Kg Nitrogen (44 Kg Urea) at every cutting. Send 500 gm. Undertake nursery preparation for late sowing variety of Paddy. Spray 4% Potassium Sulphate to protect cracking of citrus fruits. Irrigate cucurbit crops at interval of 5-6 days. Apply irrigation in rose as per requirement.
- In West Uttar Pradesh, continue harvesting/threshing of wheat and preparation for storage of wheat. Undertake irrigation in maize, urad, moong jowar , bajra as per requirement.

#### **Uttarakhand**

- In Bhabar and Tarai Zone, continue harvesting of wheat and pulses. Continue transplanting of brinjal, tomato and capsicum in high hills. Apply life saving irrigation to plants and make necessary arrangement for moisture conservation. Continue sowing of French beans.
- In Hill Zone, avoid water logging and spraying of chemicals in onion and garlic. Carry out mulching operation to suppress the weeds and preserve moisture. Hail net should be used to protect from hailstorm. Protect tomatoes, chilli, capsicum, brinjal, and cucurbitaceous crops from hails. Undertake staking of newly transplanted seedlings. Mulching may be done with crop residues; this will suppress the weed growth besides conserving moisture. Harvest the matured crops of wheat, barley, mustard and kept in safe place.
- In Sub-Humid Sub-Tropic Zone, complete harvesting of sugarcane. Avoid spray of insecticide/pesticide in vegetable crops. Pick matured vegetables timely. Transplant the nursery of chilli. Carry out harvesting of wheat and undertake sowing of summer maize.

#### **Rajasthan:**

- Chilli crop is affected by leaf curl and mosaic disease. Uproot & burn affected plants to check the spread of disease and spray Dimethoate 30EC @ 1.0 ml per litre water.
- Due to rise in temperature, transpiration rate will be increased, so, maintaining for proper moisture for vegetables, irrigation should be applied at 5 to 6 days intervals.
- In Semi Arid Eastern Plain Zone, field preparation may be started for the sowing of B.T. cotton crop.
- In Arid Western Plain Zone, fruit borer may attack in brinjal crop, pick up the affected fruit and buried in the soil, spray Quinalphos @ 1 ml per liter water.  
In Arid Western Plain Zone, it is right time for sowing of American cotton by using 16 kg seed with 65-70 cm row to row and 20-25 cm plant to plant spacing. Apply 50 kg nitrogen and 40 kg phosphorus per ha as basal application at the time of sowing.

#### **Apiculture:**

- In Intermediate Zone of Jammu & Kashmir, keeping in view of the present weather conditions, shift the honey bee



colonies towards shady conditions or place them under open straw huts. Bees need water to dilute honey and to cool the hives during hot weather conditions and keep water trough filled with coarse gravel near the hive. Provide proper ventilation by slightly raising the brood chamber.

**Animal Husbandry:**

- In Uttar Pradesh, vaccinate all the cattle against Anthrax and B.Q. disease. Vaccinate the chicks against chicken pox.

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