



National Agromet Advisory Service Bulletin



Friday 31st March 2017

(For the period 31st March to 4th April 2017)



Issued by

**National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.**

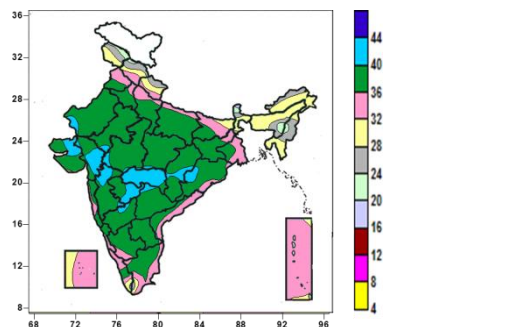
Weblink For

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

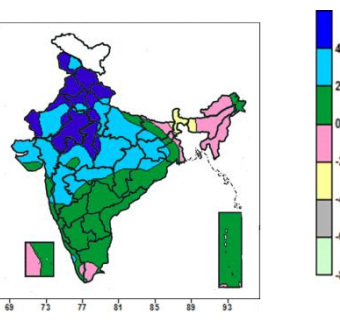
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 29.03.2017

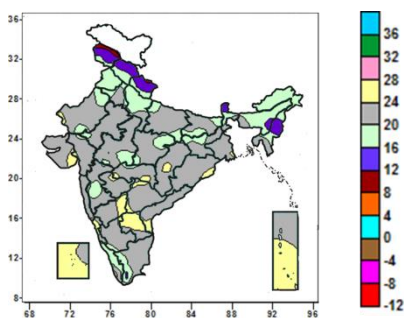
Actual Mean Maximum Temperature (°C) in India for the week ending 29.03.2017



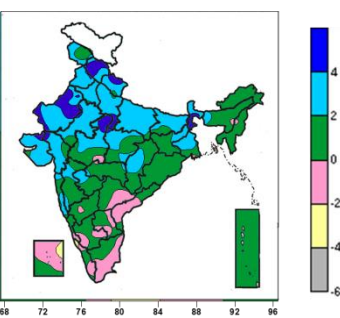
Mean Maximum Temperature (°C) Anomaly in India for the week ending 29.03.2017



Actual Mean Minimum Temperature (°C) in India for the week ending 29.03.2017

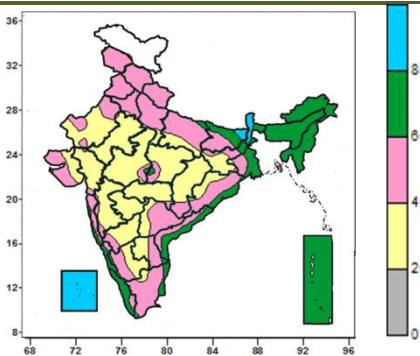


Mean Minimum Temperature (°C) Anomaly in India for the week ending 29.03.2017

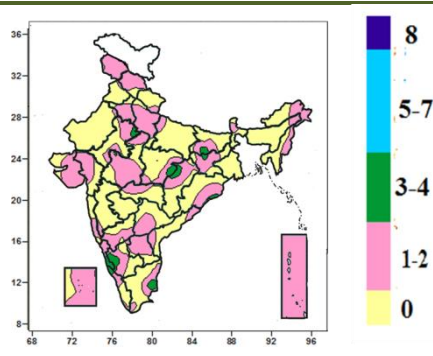


Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 29.03.2017

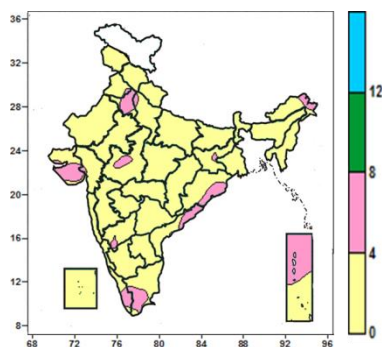
Relative Humidity (%) over India for the week ending 29.03.2017



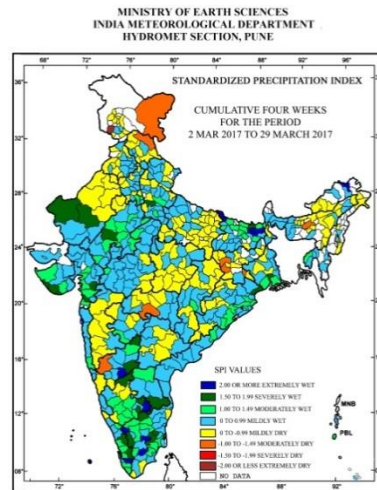
Cloud amount (okta) over India for the week ending 29.03.2017



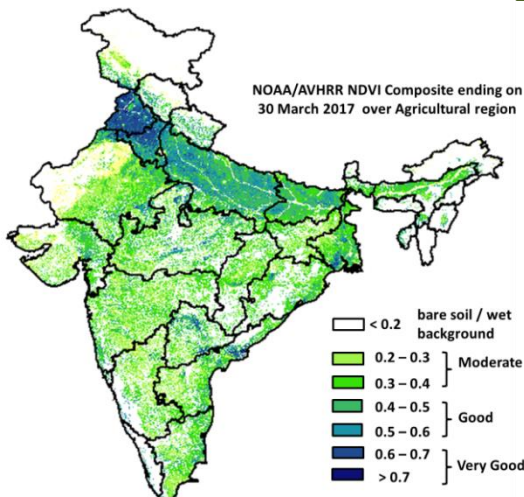
Wind speed (knots) over India for the week ending 29.03.2017



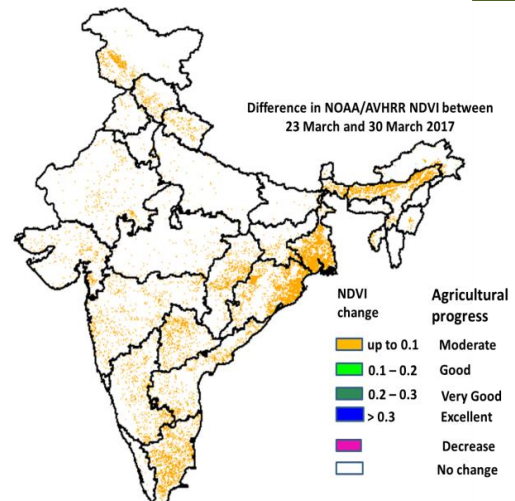
Standardised Precipitation Index Four Weekly for the period 2nd to 29th March 2017



NOAA/AVHRR NDVI composite ending on 30th March 2017 over Agricultural regions of India



Difference in NOAA/AVHRR NDVI between 23rd and 30th March 2017



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

- Maximum temperatures very likely to rise by 2-3°C over North Interior Karnataka, Telangana and Rayalaseema during next 2 days.
- No significant change in maximum temperatures over most parts of the country.

Weather Warning during next 5 days

- **31 March (Day 1):** Heat wave conditions very likely at many places with severe heat wave at isolated places over East Madhya Pradesh; at a few places with severe at isolated places over Jharkhand; severe heat wave at isolated places over interior Odisha; heat wave at many places over West Madhya Pradesh; at a few places over East Uttar Pradesh and Rajasthan and heat wave conditions very likely at isolated places over south Haryana, West Uttar Pradesh, Vidarbha, Chhattisgarh, Bihar and Gangetic West Bengal. Heavy to very heavy rain very likely at isolated places over Assam & Meghalaya and heavy at isolated places over Nagaland, Manipur, Mizoram & Tripura.
- **01 April (Day 2):** Heat wave conditions very likely at a few places with severe heat wave at isolated places over Jharkhand; severe heat wave at isolated places over interior Odisha; heat wave at a few places East Madhya Pradesh and at isolated places over West Madhya Pradesh, Chhattisgarh, Bihar, Gangetic West Bengal, Uttar Pradesh and Rajasthan. Heavy rain very likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura. Thunderstorm accompanied with squall very likely at isolated places over Sub-Himalayan West Bengal & Sikkim.

- **02 April (Day 3):** Heat wave conditions very likely at isolated places over interior Odisha. Thunderstorm accompanied with squall very likely at isolated places over SubHimalayan West Bengal & Sikkim. Thunderstorm accompanied with squall/hail very likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura. Heavy to very heavy rain very likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; heavy at isolated places over Arunachal Pradesh.
- **03 April (Day 4):** Thunderstorm accompanied with squall/hail very likely at isolated places over Bihar; thundersquall Gangetic West Bengal. Heavy to very heavy rain very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **04 April (Day 5):** Thunderstorm accompanied with squall/hail very likely at isolated places over Jammu & Kashmir and Himachal Pradesh. Heavy to very heavy rain very likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

Weather Outlook for subsequent 2 days from 5th to 7th April 2017

- Rain/ thundershower likely at many places over northeastern states and at isolated places over Bihar, Jharkhand, adjoining West Bengal & Sikkim, Kerala and Tamilnadu & Puducherry.
- Rain/snow very likely at many places over western Himalayan region.

**Meteorological sub-division wise detailed 5 day rainfall forecast (Mid day)
31st March 2017**

Met Sub-divisions	31 Mar	01 Apr	02 Apr	03 Apr	04 Apr
1. Andaman & Nicobar Islands	ISOL	ISOL	ISOL	ISOL	SCT
2. Arunachal Pradesh	SCT	FWS	WS	WS	FWS
3. Assam & Meghalaya	FWS	WS	WS	WS	WS
4. N.M.M. & T.	WS	WS	WS	WS	WS
5. S.H. West Bengal & Sikkim	SCT	FWS	FWS	FWS	SCT
6. Gangetic West Bengal	DRY	DRY	ISOL	ISOL	ISOL
7. Odisha	DRY	DRY	DRY	DRY	DRY
8. Jharkhand	DRY	DRY	ISOL	ISOL	DRY
9. Bihar	ISOL	ISOL	ISOL	SCT	ISOL
10. East Uttar Pradesh	DRY	DRY	DRY	ISOL	DRY
11. West Uttar Pradesh	DRY	DRY	DRY	DRY	ISOL
12. Uttarakhand	DRY	ISOL	ISOL	ISOL	SCT
13. Haryana, Chd & Delhi	DRY	ISOL	ISOL	DRY	ISOL
14. Punjab	DRY	ISOL	DRY	DRY	ISOL
15. Himachal Pradesh	ISOL	ISOL	ISOL	ISOL	FWS
16. Jammu & Kashmir	SCT	SCT	ISOL	SCT	FWS
17. West Rajasthan	DRY	DRY	DRY	DRY	DRY
18. East Rajasthan	DRY	DRY	DRY	DRY	DRY
19. West Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
20. East Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
21. Gujarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	DRY	DRY	DRY	DRY	DRY
24. Madhya Maharashtra	DRY	DRY	DRY	DRY	DRY
25. Marathwada	DRY	DRY	DRY	DRY	DRY
26. Vidarbha	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	DRY	DRY	DRY	DRY	ISOL
28. Coastal Andhra Pradesh	DRY	DRY	DRY	ISOL	ISOL
29. Telangana	DRY	DRY	ISOL	DRY	DRY
30. Rayalaseema	DRY	DRY	DRY	DRY	DRY
31. Tamil Nadu & Puducherry	ISOL	DRY	ISOL	ISOL	ISOL
32. Coastal Karnataka	DRY	ISOL	ISOL	DRY	DRY
33. North Interior Karnataka	ISOL	ISOL	DRY	DRY	DRY
34. South Interior Karnataka	ISOL	DRY	DRY	DRY	DRY
35. Kerala	ISOL	ISOL	ISOL	ISOL	ISOL
36. Lakshadweep	ISOL	ISOL	DRY	DRY	DRY

% 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		

Agromet Advisory for standing crop in view of Heat Wave/high Temperature

- As heat wave conditions very likely at many places with severe heat wave at isolated places over **East Madhya Pradesh** on 31st March, at a few places with severe at isolated places over **Jharkhand** on 31st March & 1st April, severe heat wave at isolated places over **Interior Odisha** on 31st March & 1st April, heat wave conditions very likely at many places over **West Madhya Pradesh**, at a few places over **Rajasthan** and **East Uttar Pradesh**, heat wave conditions very likely at isolated places over **West Madhya Pradesh, Chhattisgarh, Vidarbha, Bihar** and **Gangetic West Bengal** on 31st March & 1st April, at a few places over **East Madhya Pradesh** on 1st April, at isolated places over **south Haryana** on 31st March and over **interior Odisha** on 2nd April, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave. Undertake mulching with straw/polythene, soil mulching to conserve soil moisture.
- In **Vidarbha**, to reduce the impact of heat wave conditions, apply light and frequent irrigation in summer groundnut, vegetables, sugarcane and mango orchards. Cover banana bunch with perforated plastic bags or skirting bags to protect from bright sunshine. Spray Kaolin @ 8% in orchards like sweetlime and orange to reduce evapotranspiration. Apply mulch of sugarcane trash, dried grasses or plastic film (polyethylene) to summer crops and orchards to avoid loss of water due to evapotranspiration. Maintain water level of 5-7 cm in summer rice field in East Vidarbha.

Advisory for livestock under heat wave/high Temperature condition

- In **Madhya Pradesh, Chhattisgarh, Rajasthan, Vidarbha, Jharkhand** and **Interior Odisha**, in view of the heat wave forecast, grazing /feeding of cattle/goats may be done during morning/evening hours. Keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking. Also provide balanced feed & adopt vaccination schedule.
- For protection of poultry birds from heat, provide curtains from outside the poultry shed and sprinkle it with water. Apply layer of grass or gunny bags on the roof of poultry shed and sprinkle water on it. Provide fresh and cool drinking water for the poultry birds and chicks.
- As thunderstorm accompanied with squall/hail very likely at isolated places over **Assam & Meghalaya** and **Nagaland, Manipur, Mizoram** and **Tripura** on 2nd April, over **Bihar** on 3rd April, over **Jammu & Kashmir** and **Himachal Pradesh** on 4th April, use hail net or hail cap for orchard crops and fruit vegetables to protect from mechanical damage. Provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
- As thunderstorm accompanied with squall very likely at isolated places over **Sub-Himalayan West Bengal & Sikkim** on 1st and 2nd April and over **Gangetic West Bengal** on 3rd April, provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
- As rain/thundershowers likely at most places over **Nagaland, Manipur, Mizoram** and **Tripura** and at most/many places over **Assam & Meghalaya** during the period, over **Arunachal Pradesh** from 1st to 4th April, at many places over **Sub-Himalayan West Bengal & Sikkim** from 1st to 3rd April, over **Jammu & Kashmir** and **Himachal Pradesh** on 4th April, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting till the end of current spells of rain and keep already harvested produce at safer places.
- As heavy/heavy to very heavy rain very likely at isolated places over **Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura** from 31st March to 4th April and over **Arunachal Pradesh** on 2nd and 3rd April, provide adequate drainage in standing crop fields to avoid water stagnation.

Detailed Zonewise Agromet Advisories

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

- **Realised Rainfall:** Weather remained dry over the region during the week.
- **Advisories:**
 - **Andhra Pradesh:**
 - In the Krishna Godavari Zone, prevailing weather conditions(hot and dry weather), provide irrigation to sugarcane, rice fallow green gram and black gram, crops as per requirement.
 - In the North Coastal Zone, continue planting of sugarcane and harvesting of maize.
 - In the Southern Zone, undertake sowing of summer groundnut under assured irrigation after seed treatment.
 - In the North Coastal Zone, prevailing weather condition is congenial for incidence of fruit borer in mango. To control, spray Chloropyriphos @ 2.5 ml/litre + Dichlorovos @ 1.5 ml/litre of water.
 - In the Scarce Rainfall Zone, powdery mildew incidence is observed in mango crop which is likely to increase in the prevailing weather. For controlling powdery mildew, spray Karathane @ 1ml/litre of water. If the powdery mildew persists, repeat after 3 weeks.
 - In the Southern Zone, prevailing dry weather condition is congenial for incidence of pinworm in tomato. To control, set up 8 pheromone traps/acre and spray Quinalphos @ 2ml/litre of water.
 - **Telangana:**
 - In South Telangana Zone, incidence of mite is noticed in orange. To control ,spray Wettable sulphur @ 3 g/litre of water.
 - In North Telangana Zone, incidence of phyllody was noticed in sesamum. To control, remove and destroy infected plants and spray Dimethoate @ 2 ml/litre of water against leaf hoppers.
 - **Tamil Nadu:**
 - In the Cauvery Delta Zone, as dry weather would prevail, continue harvesting of rice fallow black gram and cultivation of blackgram (variety ADT5 under irrigated conditions). Provide irrigation to sesame, sugarcane and rice fallow cotton crops, since dry weather is expected in the next five days.
 - In the Western Zone, considering the evening low relative humidity, high maximum and minimum temperature, and wind speed of 10 kmph, prop the banana of more than five months old to prevent lodging. To harvest the summer rain and to facilitate the crop residue recycling, plough the harvested and fallow lands against the slopes with inverting type plough. Irrigation may be given based on available soil moisture to all irrigated standing crops including coconut due to anticipated high wind speed and dry weather.
 - In the North Western Zone, due to the prevailing dry condition, fruit trees such as mango, sapota, guava, amla, pomegranate and acid lime are in the stage of wilting. Hence, follow pitcher pot irrigation to withstand drought and follow mulching by spreading natural crop residues or coconut coir waste around the base of the trees to conserve soil moisture.
 - In the High Altitude Zone, since no rainfall is expected, apply necessary irrigation to the standing crops and undertake mulching around the plants to preserve soil moisture.
 - In the High Rainfall Zone, wherever irrigation facilities are available, start irrigating pepper plants once in a week by hose irrigation or daily by drip irrigation, provide sufficient irrigation to vegetables to protect against high temperature and use transparent polythene sheets 4% ventilation to cover banana bunches immediately after opening of the last hand.
 - In the North Western Zone, incidence of shoot and fruit Borer is noticed in brinjal. To control this pest, first remove the infested fruits and shoots from the fields. Then place pheromone traps in brinjal followed by release of *Trichogramma chilonis* @ 2 cc/acre 3 times at 7 days interval.
 - In the South Zone, incidence of pink boll worm is noticed in cotton. For control, spray Phosalone 35% EC 2 l/ha.
 - In the High Altitude Hilly Zone, since cercospora leaf spot is spreading rapidly in beetroot, spray Mancozeb @ 2 gram/litre of water to control the disease.
 - **Kerala:**
 - In the Problem Area Zone, undertake land preparation for next rice crop and continue land preparation for planting of banana and pepper. Protect the newly planted young pepper seedlings from direct sunlight by providing proper shades and properly mulch the intercropped tuber crops in coconut fields for moisture retention.
 - In the High Altitude Zone, continue nursery preparation for cardamom, harvesting of vegetables and land preparation for ginger cultivation.
 - In the Central Zone, adopt drip irrigation in coconut fields and undertake mulching with dried or green coconut leaves or coir pith to maintain moisture in coconut gardens.
 - In the Southern Zone, irrigate banana plants twice in a week, since scarcity of water will lead to the formation of weak bunches.
 - In the Northern Zone, wilting of black pepper is noticed due to prevailing dry conditions. Protect the plants from

direct sunlight by covering the basal portions of the pepper vines with dried banana leaves, plated coconut leaves etc.. Give protective irrigations one in every two weeks.

- In the Central Zone, to control incidence of fruit fly in cucurbitaceous vegetables, remove and destroy affected and decayed fruits and use special pheromone traps. If the attack is not reduced, spray mixture of Malathion 2 ml + jaggery 10 g/litre of water at flowering and fruit initiation stage.

- **Karnataka:**

- In North East Dry Zone, as dry weather would prevail, undertake harvesting of matured mango, groundnut and rice. Due to increase in day and night temperatures sugarcane plants are suffering from lack of soil moisture; provide irrigation to sugarcane crop. Continue summer deep ploughing to expose the pupae and eggs of insect/pests and weed seeds.
- In North East Transition Zone, provide protective irrigation to crops which suffers from lack of soil moisture.
- In North Transition Zone, complete harvesting of the crops (wheat, Bengal gram, rabi sorghum) immediately after the maturity. Continue deep ploughing in the fields where harvesting is completed, which will reduce weeds and pest incidence in the next season. If water scarcity is there irrigate the sugarcane crop in alternate rows, to save the water.
- In Hill Zone, in view of increasing temperature, provide irrigation to groundnut crop and to the arecanut, coconut and black pepper gardens either in furrows or by drip irrigation. Each coconut tree requires 60-70 litres of water per day.
- In Southern Transition Zone, maintain optimum water level in rice field. Undertake sowing of Ginger/turmeric and harvesting of matured arecanut, coconut.
- In the Southern Dry Zone, Eastern Dry Zone, North East Transition Zone and North East Dry Zone, provide irrigation to mango (marble stage) orchard; this will help in better development of fruits. Provide irrigation to dry land horticultural crops and other field crops depending on soil and crop condition.

- **Animal Husbandry**

- In the Scarce Rainfall Zone of Andhra Pradesh, prevailing high temperatures may cause sunstroke in livestock. To prevent stroke, provide green fodder to cattle, do not allow animals to graze during hot periods and provide cool water to animals.
- In the Western Zone of Tamil Nadu, milch animals and buffaloes may be sprayed with water. Enough clean and cool drinking water may be given for drinking. To reduce the impact of hot and dry weather, poultry's sheds may be surrounded with moist gunny bags.
- In the South Zone of Tamil Nadu, vaccinate cattle for foot and mouth disease as prophylactic measure for prevailing hot weather condition. In the North Western Zone of Tamil Nadu, vaccinate the birds against Ranikhet disease and follow bio-security measures to combat heat stress.
- In the Northern Zone of Kerala, due to rise in temperature, protect the livestock from direct sunlight by keeping them in shaded conditions/thatched roofs and provide plenty of water for drinking.
- In Eastern Dry Zone, North Dry Zone, Southern Dry Zone of Karnataka, apply 4-6 inch thick hay thatch as a roofing material on shed of animals. Spray water on the floor and roof of shelter periodically during peak hot hours which lowers the temperature and consequently reduces the heat load on animals; maintain proper ventilation for free circulation of air in the sheds; provide clean drinking water to livestock. Add electrolytes (KCl, NaCl and NaCO₃) in water and feed of poultry birds. Conservation of fodder (hay, silage and in large heaps) is advised to meet the requirement during approaching lean period.

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

- **Realised Rainfall:** Rainfall occurred in Changlang, East Kameng and Tirap districts of Arunachal Pradesh, Dibrugarh, Goalpara, Golaghat, Hailakandi and Kamrup(Metro) districts of Assam, East Garo Hills, East Khasi Hills, West Garo Hills districts of Meghalaya and West Tripura district of Tripura during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most places over Nagaland, Manipur, Mizoram and Tripura and at most/many places over Assam & Meghalaya during the period, over Arunachal Pradesh from 1st to 4th April, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting till the end of current spells of rain and keep already harvested produce at safer places.
 - As heavy/heavy to very heavy rain very likely at isolated places over Assam & Meghalaya and over Nagaland, Manipur, Mizoram & Tripura during the period, heavy rain very likely at isolated places over Arunachal Pradesh on 2nd and 3rd April, provide adequate drainage in standing crop fields to avoid water stagnation.
 - As thunderstorm accompanied with squall/hail very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 2nd April, use hail net or hail cap for orchard crops and fruit vegetables to protect from mechanical damage. Provide support to young fruit plants and staking in vegetables to prevent the crops from

lodging due to strong winds. Keep harvested produce at safer places.

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

- In North Bank Plain Zone of Assam, continue sowing of direct seeded *ahu* rice, summer green gram and black gram, okra, ridge gourd and sponge gourd after current spells of heavy rain. Continue land preparation and sowing of *bau* rice.
- In Barpeta, Bongaigaon, Dhubri and Goalpara districts of Lower Brahmaputra Valley Zone of Assam, continue nursery sowing of summer rice (early *ahu*) after current spells of heavy rain.
- In Hill Zone of Assam, continue land preparation for transplanting of early *ahu* (direct seeded). Continue land preparation and sowing of jute. Continue nursery raising of transplanted normal *ahu* rice and land preparation for sowing summer sesame, planting of ginger and spring sugarcane. Undertake land preparation and sowing of summer green gram and black gram after current spells of heavy rain.
- In Central Brahmaputra Valley Zone of Assam, continue sowing of summer green gram and black gram and land preparation and sowing of summer vegetables and Capsularis jute and planting of ginger and turmeric after current spells of heavy rain. Undertake land preparation for sowing of *bao* rice.
- In Barak Valley Zone of Assam, undertake sowing of direct seeded *ahu* rice and sowing of summer vegetables after current spells of heavy rain.
- In Arunachal Pradesh, utilizing the realized and expected rainfall, continue transplanting of chilli, tomato, capsicum, nursery raising of cole crops in higher altitudes/ cold areas and planting of ginger. Continue sowing of maize. Undertake nursery sowing of *jhum* rice. 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.
- In Meghalaya, continue nursery raising of brinjal and transplanting of tomato. Continue planting of ginger and spring potato. Continue land preparation for sowing of maize in high and mid altitudes after current spells of heavy rain.
- In North Bank Plain Zone and Barak Valley Zone of Assam, there is chance of attack of stem borer in *boro* rice at tillering stage. To control the pest spray Chlorpyrifos 50 EC @ 2 ml per litre of water or apply Darsban or Monocrotophos at the rate of 2 tea spoonful per 5 litre of water after current spells of rain.

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

- In Nagaland, continue land preparation and sowing of summer maize, okra and green gram after current spells of heavy rain. Short duration pulse crops and green manuring crops like dhaincha, sunhemp etc should be cultivated as pre-*kharif* crop in fallow paddy lowland/ terrace rice field to enhance the soil fertility.
- In Manipur, maintain 5-7 cm of water level after 3-4 days of transplanting and continue planting of ginger, turmeric and bhindi after current spells of heavy rain.
- In Mizoram, after current spells of heavy rain, continue sowing of maize (*jhum*), okra, cow pea and planting of ginger and turmeric.
- In Tripura, continue transplanting the young seedlings of summer brinjal & tomato to the main field. Complete sowing of cowpea. Maintain 4-5 cm standing water in the field of *boro* rice at maximum tillering stage.
- In Manipur, to control the infestation of leaf minor in onion/garlic, spray Dichlorovos 36 EC @ 0.5ml/litre of water or Monocrotophos 76EC @ 1ml/litre of water to protect the crop from infestation after current spells of rain.
- In Tripura, occasional high wind may disturb the fruit setting in mango. Spray NAA @ 20 ppm to increase the fruit retention. Application of 1% Potassium Nitrate (10g/litre) at mustard size will increase the fruit set and retention of fruits after current spells of rain.

• **Animal Husbandry**

- In Assam, Meghalaya, Nagaland, Manipur, Mizoram & Tripura, keep cattle under shed during heavy rainfall period.
- In Tripura, vaccinate pig against swine fever. Deworming should be done in calves with consultation with veterinary practitioner.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

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

• **Advisories:**

- As heat wave conditions very likely at a few places over Vidarbha on 31st March, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave, mulching with straw/polythene or soil mulching to conserve soil moisture is advised.

▪ **Maharashtra:**

- In Konkan, in transplanted *rabi* rice (grain filling), maintain water level up to 8-10 cm. As dry weather is prevailing and no significant change expected during next 5 days, reduce the duration between two irrigation in vegetables like okra, chilli, brinjal, cabbage also apply mulch for soil moisture conservation. Apply irrigation to groundnut crop (pegging/ pod formation) at an interval of 10-12 days. The mango fruits are at egg size stage and in maturity stage in Sindhudurg district. Harvest the mature fruits in morning and evening hours at 80 to 85 % maturity. Keep the

harvested fruits in shade to prevent spongy tissue disease and from heat. Apply 80-100 litres of water per mango tree at 7 days interval as per the availability of water. Mulching with grass should be done to avoid the water loss in mango orchards.

- In Madhya Maharashtra, as dry weather is prevailing and no significant change expected during next 5 days, reduce the duration between two irrigation in vegetables and orchards. Also apply mulch with crop residue or plastic sheet to vegetables and orchards like pomegranate and banana. Spray Kaolin 8% in orchards (fig, pomegranate, guava) and vegetable crops (bitter gourd, cucumber, ridge gourd, bottle gourd) to avoid loss of water due to evapotranspiration. Cover banana bunch with perforated plastic bags or skirting bags to protect from bright sunshine. Make arrangement for shade to protect vegetables and young plants from scorching sun. Complete harvesting of matured wheat and maize. Undertake harvesting in morning hours.
- In Marathwada, as dry weather is prevailing and no significant change expected during next 5 days, reduce the duration between two irrigation in vegetables and orchards. Also apply mulch with crop residue or plastic sheet to vegetables and orchards like pomegranate and banana. Spray Kaolin 8% in orchards (fig, pomegranate, guava) and vegetable crops (bitter gourd, cucumber, ridge gourd, bottle gourd) to avoid loss of water due to evapotranspiration. Cover banana bunch with perforated plastic bags or skirting bags to protect from bright sunshine. Make arrangement for shade to protect vegetables and young plants from scorching sun. Complete harvesting of matured wheat and maize. Undertake harvesting in morning hours.
- In Vidarbha, to reduce the impact of heat wave conditions, apply light and frequent irrigation to summer groundnut, vegetables, sugarcane and mango orchards. Cover banana bunch with perforated plastic bags or skirting bags to protect from bright sunshine. Spray Kaolin @ 8% in orchards like sweetlime and orange to reduce evapotranspiration. Apply mulch of sugarcane trash, dried grasses or plastic film (polyethylene) to summer crops and orchards to avoid loss of water due to evapotranspiration. Maintain water level of 5-7 cm in summer rice field in East Vidarbha.
- **Gujarat:**
 - In South Gujarat Heavy Rainfall Zone, undertake weeding and intercultural operations in rice, groundnut and sugarcane. Maintain 2-3 cm water level in transplanted rice field. Apply irrigation in summer groundnut, pulses.
 - In North Gujarat Zone and North West Zone of Gujarat, carry out weeding and inter culturing operations in timely sown groundnut, pearl millet, sesame, green gram, cow pea and vegetable crops to conserve soil moisture. Complete harvesting of fennel crop at physiological maturity and matured papaya fruits in North Gujarat Zone and harvesting of wheat in North West Zone of Gujarat.
 - In South Gujarat Zone, as there is an increase in temperature, apply irrigation in tomato, bhindi and fruit crops. In present dry weather condition, spread plastic or fodder as mulch in vegetable fields for conserving moisture. In mango orchard, spray 20 ppm Nephelin Acetic Acid and 2 % Urea solution for effective control of dropping of mango fruits.
 - In Middle Gujarat Zone of Gujarat, complete sowing of green gram, bhindi and cowpea.
 - In North Saurashtra Zone of Gujarat, in view of prevailing high temperature conditions, apply irrigation in vegetable crops and fodder crops at regular intervals.
 - Due to increase in temperature thrips attack is possible in garlic and onion in Middle Gujarat Zone of Gujarat. Spray Spinosad 48 SC 2 ml or Clorfenpyre 10 EC 7.5 ml in 10 litres of water. There is chance of infestation of fruit and shoot borer in brinjal and tomato; install 40 pheromone traps; change lure at 21 days interval and spray Diclorovos 76 EC @ 7 ml or Deltamethrin 1% + Triazophos 36% EC @ 10 ml in 10 litres of water.
 - Thrips infestation is observed above ETL in summer groundnut, sesame and vegetable crops in North Saurashtra and in groundnut in South Saurashtra Zone; spray 500 ml of 5 % neem seed extract or neem seed oil @ 50 ml with Profenofos @ 20 ml or Imidacloprid 30.5 SC @ 3 ml or LemdaCyhelothrin @ 10 ml/10 litre of water.
- **Animal Husbandry**
 - In Vidarbha, protect the animals from heat wave conditions. Keep animals in shed/shade during noon hours and keep good aeration in animal sheds. For protection of poultry birds from heat, provide curtains from outside the poultry shed and sprinkle it with water. Apply layer of grass or gunny bags on the roof of poultry shed and sprinkle water on it. Provide fresh and cool drinking water for the poultry birds and chicks.
 - In view of high temperature in Gujarat, there is a probability of drop in feed intake, drop in egg weight and shell quality deterioration in poultry birds; maintain optimum temperature between 18 to 29°C in poultry shed for better egg production. For protection of poultry birds from heat, provide curtains from outside the poultry shed and sprinkle it with water. Apply layer of grass or gunny bags on the roof of poultry shed and sprinkle water on it. Provide fresh and cool drinking water for the poultry birds and chicks. Keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking. Also provide balanced feed & adopt vaccination schedule. Make arrangement of curtains and proper ventilation in poultry house. Protect the animals from afternoon heat.

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

- **Realised Rainfall:** Rainfall occurred in Purnea and Saharsa districts of Bihar, Nicobar district of Andaman & Nicobar Islands, Jalpaiguri district of Sub-Himalayan West Bengal and in all districts of Sikkim except West Sikkim during the week and weather remained mainly dry/dry over the region.
- **Advisories:**
 - As heat wave conditions very likely at a few places with severe heat wave at isolated places over Jharkhand and interior Odisha on 31st March and 1st April, heat wave conditions at isolated places over Gangetic West Bengal and Bihar on 31st March and 1st April, over interior Odisha on 2nd April, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave. Undertake mulching with straw/polythene, soil mulching to conserve soil moisture.
 - As thunderstorm accompanied with squall very likely at isolated places over Sub-Himalayan West Bengal & Sikkim on 1st and 2nd April and over Gangetic West Bengal on 3rd April, thunderstorm accompanied with squall/hail very likely at isolated places over Bihar on 3rd April, provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Use hail net or hail cap for orchard crops and fruit vegetables to protect from mechanical damage in Bihar. Keep harvested produce at safer places.
 - As rain/thundershowers likely at many places over Sub-Himalayan West Bengal & Sikkim from 1st to 3rd April, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and keep the harvested produce at safer places.
 - **Odisha:**
 - In North Eastern Coastal Plain Zone, due to dry weather and rise in temperature, apply irrigation in maize and sunflower. In North Eastern Ghat Zone, continue sowing of cowpea.
 - In East and South Eastern Coastal Plain Zone, likely rise in temperature may favour Leaf eating caterpillar and leaf minor in sunflower. Spray Endosulphan @ 400 ml/acre.
 - In Eastern Ghat High Land Zone, current temperature favours thrips infestation in groundnut. Spray Dimethoate @ 400 ml or Imidachloprid @ 50 ml in 200 litres of water per acre. If Tika disease and white ant attack are noticed, spray Blitox – 50, 500 g in 200 litres of water per acre for Tika disease and spray Chloropyriphos @ 2 ml/litre of water for controlling white ant attack.
 - In North Eastern Ghat Zone, mango is at fruiting initiation stage. Mango thrips infestation occurs at this stage leading to shedding of flowers and fruits. Spray imidacloprid 17.8 SL or Thiomethaxome 25% WG 0.3ml/litre of water for its control. Spray Planofix @ 0.2ml/litre of water after one month of flowering or at fruit initiation stage. Irrigate the orchard once in a week as dry weather is forecasted during this period.
 - In East and South Eastern Coastal Plain Zone, increased temperature may favour the egg laying of stem borer in rice in the main field. To attract the butterflies, place 4 Pheromon Traps/acre, collect the adults and destroy them by burning them under soil or by burying. Increased difference between daily maximum and minimum temperature favours the infestation of blast in rice field. Spray 1 g Beam/ 1 water.
 - In East and South Eastern Coastal Plain Zone, summer pulses are at 2 to 3 weeks stage. YMV infestation has been found. Spray 20 ml Rogor/10 litre water to control the white fly. The increased temperature may aggravate the infestation of leaf eating caterpillar and spray Chloropyriphos 2 ml/ litre of water to control it.
 - In North Eastern Coastal Plain Zone, due to abrupt rise and fall in temperature, the pest problem is likely to aggravate. The stem borer attack has been widely noticed. Use pheromone trap @ 20-25 no. per hectare to notice its population. Apply Fipronil or Triazophos @ 2ml/litre when pest population reaches at ETL level.
 - In North Eastern Coastal Plain Zone & in North Central Plateau Zone, due to fluctuation in temperature, white fly population has considerably increased in summer pulses leading to appearance of YMV disease. Destroy the YMV affected plants and spray Thiomethoxam @ 70g/acre to control whitefly population.
 - **West Bengal:**
 - In the New Alluvial Zone, continue land preparation for jute cultivation.
 - In the Hill Zone, harvest matured potato tuber immediately and keep at safer places. Continue land preparation for sowing of ginger, turmeric and bhindi and transplanting of round chilli.
 - In the Coastal Saline Zone, spray fresh water in the afternoon hours to prevent fruit drop in mangoes, apply light irrigation to sunflower (bloomimg stage) and undertake land preparation for planting of elephant footyam (bidhan kusum variety).
 - In the Laterite and Red soil Zone, in this weather condition, stem borer attack may be found in rice. Spray Chloropyriphos 20% EC @ 2 ml/litre of water to control stem borer. To control shoot and fruit borer in ladies finger, Spray Neem Seed Kernal Extract solution @ 5ml/10 litres of water.
 - In the New Alluvial Zone, in the prevailing weather situation, there is a possibility of attack of disease leading to leaf-rolling. To control, uproot the infected plants and apply Urea (@ 3-3.5 kg / bigha) as top dressing.
 - In Old Alluvial Zone, in the present weather condition, there is chance of attack of Mango hopper in mango, spray

Carbaryl 50 W.P @ 2.5g /litre of water at pea stage of fruit set for control. To control Cercospora leaf spot of chilli, spray Carbendazim @ 1 g per litre of water. To control Tikka disease of ground nut, spray Carbendazim @ 1gm/litre of water.

▪ **Andaman and Nicobar Islands:**

- In South Andaman and Nicobar Islands, make basin around the coconut and arecanut tree to harvest rain water. Monitor maturity of pulse crop and harvest matured green gram biweekly.

▪ **Bihar:**

- In North East Alluvial Zone of Bihar, maintain minimum 2-3 inch water in the boro rice fields. Complete sowing of summer maize, green gram, Jute crop, summer vegetables such as lady finger, pumpkin, cucumber, sponge gourd, bitter melon at the earliest and planting of spring sugarcane as soon as possible and undertake sowing of fodder maize.. Complete harvesting of wheat, matured mustard crop in clear weather and keep harvested produce at safe places.
- In South Bihar Alluvial Zone of Bihar, Continue sowing of green gram, complete sowing of early crop of lady finger. Complete the transplanting of young seedlings of tomato, chilli and cole crop. Continue harvesting of matured mustard in clear weather and keep the harvested produce at safe places.
- In North West Alluvial Plain Zone of Bihar, continue sowing of green gram, black gram, summer maize, elephant foot yam and harvesting of matured mustard and potato crop.
- Present temperature conditions are conducive for incidence of powdery mildew disease in cucurbitaceous crops in South Bihar Alluvial Zone; if symptoms are noticed, spray Carbendazim @ 1 g per litre of water. Also in present weather condition, constant monitoring against attack of thrips is advised in timely sown onion crop in South Bihar Alluvial Zone; if population is more, spray Carbaryl @ 2 g per litre of water with sticky material (Tipol @1.0 g/litre).

▪ **Jharkhand:**

- In Jharkhand, wheat crops at grain filling stage is very much sensitive of moisture stress. Hence, irrigate the fields as per the status of soil moisture. Complete transplanting of summer rice in main field.
- In South Eastern Plateau Zone, rice crop is at panicle initiation or at booting stage hence, at both stages hand weeding should be done and then broadcast urea @ 30 kg per acre. Remove excess water during broadcasting of urea. Also apply Phorate 10 G @ 4 kg per acre for stem borer protection.
- In South Eastern Plateau Zone, undertake sowing of summer moong.
- In Central and North Eastern Plateau Zone, continue sowing of green gram and land preparation for sowing of okra. Undertake sowing of high yielding variety of maize (Birsakakka-1, Birsakakka-2, Suwan-1(Hybrid),HQPM (Hybrid) with assured irrigation. Continue harvesting of matured mustard.
- In Western Plateau Zone, irrigate the fruit bearing trees at regular interval. Spray Planofix @ 5 ml per 10 litre of water to check dropping of tiny fruits.

▪ **Animal Husbandry**

- In Gangetic West Bengal, interior Odisha and Jharkhand, grazing/feeding of cattle/goats may be done during morning/evening hours. Keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking. Also provide balanced feed & adopt vaccination schedule. Make arrangement of curtains and proper ventilation in poultry house.
- In the North and Middle Andaman, it is advised to provide cool clean drinking water mixed with electrolyte powder as a preventive measure from heat stress in poultry.

CENTRAL INDIA [M.P., CHHATTISGARH]

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

- **Advisories:**

- As heat wave conditions very likely at many places with severe heat wave at isolated places over East Madhya Pradesh on 31st March and at a few places on 1st April and heat wave conditions very likely at many places over West Madhya Pradesh on 31st March and at isolated places on 1st April, heat wave conditions very likely at isolated places over Chhattisgarh on 31st March and 1st April, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave, mulching with straw/polythene or soil mulching to conserve soil moisture.

- **Madhya Pradesh:**

- In Satpura Plateau Zone, as dry weather conditions would prevail, undertake harvesting of matured wheat, gram and mustard. Undertake sowing of moong and groundnut.
- In Malwa Plateau Zone, apply irrigation and keep optimum moisture in wheat crop at grain filling stage. Continue sowing of cucurbits and okra.
- In Grid Zone, continue harvesting of matured wheat, mustard and gram. Continue sowing of moong and cucurbits.
- In Vindhya Plateau Zone, continue harvesting of matured gram, mustard and wheat crops. Continue sowing of urad

and mung, cucurbitaceous crops, bhindi and maize. Continue nursery sowing of chilli, tomato, brinjal. Undertake sowing of summer maize.

- In Kymore Plateau and Satpura Hill Zone, in view of dry weather and rise in temperature, apply irrigation in wheat crop and vegetables. Continue harvesting of matured timely sown wheat crop and chickpea. Continue sowing of moong and urad in irrigated areas.
- In Chhatarpur, Datia, Tikamgarh districts of Bundelkhand Zone, complete sowing of moong and urad. Continue sowing of summer vegetables like pumpkin, bitter gourd, water melon, muskmelon, cucumber, ladyfinger, bottle gourd. Continue harvesting of matured wheat.
- In Chhatarpur, Datia, Tikamgarh districts of Bundelkhand Zone, there may be attack of fruit borer in brinjal, spray Melathion 50 E.C. @ 1.0 ml per litre of water.
- **Chhattisgarh:**
- In North Hill Zone, as dry weather would prevail, continue harvesting of matured wheat. As temperature is increasing, farmers are advised to apply irrigation in summer rice, sugarcane and summer vegetable crops as per requirement. Complete sowing of summer moong, til and groundnut crop at the earliest. Undertake intercultural operations in cucurbits and onion.
- In Bastar Plateau Zone, as temperature conditions are favourable, continue sowing of summer moong, urad, til, summer vegetables like okra, sponge gourd, cucumber, ridge gourd watermelon, muskmelon and bitter gourd. Continue planting of summer sweet potato. Apply irrigation in wheat at dough stage.
- In Chhattisgarh Plain Zone, continue harvesting of matured wheat, gram oilseed and linseed crops. Continue sowing of summer green gram. Apply irrigation in one month old transplanted vegetables summer paddy crop as per requirement. Undertake land preparation and sowing of maize.
- In North Hill Zone, farmers are advised to fix pheromone traps and light traps in the fields for the control of stem borer in summer paddy. Also spray Saaf fungicide @ 2 g per litre of water for control of purple blotch in onion.
- **Horticulture**
- In Chhattisgarh Plain Zone, apply irrigation in banana, papaya and mango orchards.
- **Animal Husbandry**
- In Madhya Pradesh, in view of the severe heat wave conditions during next 2 days, grazing /feeding of cattle/goats may be done during morning/evening hours. Keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking. Also provide balanced feed and during afternoon hours, sprinkle water on roof of the animal sheds. Make arrangement of curtains and proper ventilation in poultry house.
- In Chhattisgarh, as heat wave conditions very likely to prevail, provide plenty of clean drinking water to animals and keep them in shaded place during noon hours.

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

- **Realised Rainfall:** Weather remained mainly dry/dry over the region during the week.
- **Advisories:**
 - As heat wave conditions very likely at a few places over East Uttar Pradesh and Rajasthan on 31st March and at isolated places over south Haryana and west Uttar Pradesh on 31st March and over Uttar Pradesh and Rajasthan on 1st April, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave, mulching with straw/polythene or soil mulching to conserve soil moisture.
 - As thunderstorm accompanied with squall/hail very likely at isolated places over Jammu & Kashmir and Himachal Pradesh on 4th April, use hail net or hail cap for orchard crops and fruit vegetables to protect from mechanical damage. Provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
 - As rain is expected at many places over Jammu & Kashmir and Himachal Pradesh on 4th April, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
 - **Jammu & Kashmir:**
 - In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, continue transplanting of tomato/brinjal/chilli in the main field. Continue sowing of lady's finger, French bean, cluster bean and summer radish. Continue harvesting of matured wheat, mustard and gram on bright sunny days.
 - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, continue nursery preparation of summer vegetables and land preparation for planting of cucurbits in main field.
 - In Valley Temperate Zone of Jammu and Kashmir, continue sowing of leafy vegetables and cucurbits in poly houses. Continue planting of potato tubers.
 - In Cold Arid Zone of Leh, continue sowing of vegetable seeds under trenches to get early nursery seedlings. Continue harvesting of leafy vegetables (Chinese cabbage, Haenssaag, Palak, mongol and Lettuce) in protected structures.

- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, weather conditions are favourable for blight on very late sown wheat, to control apply combination of Mancozeb and Carbandazim @ 2gm/litre of water on a non rainy day.
- **Uttarakhand:**
- In Udham Singh Nagar district of Bhabar and Tarai Zone, continue sowing of short duration varieties of Urad like Pant Urd 31, Narendra Urd-1, UG 749. Continue transplanting of mentha. Continue sowing of moong and sowing of fodder crops like chari, Maize, bajara, makchari, lobia and jowar. Continue harvesting of matured pea crop.
- In Nainital district of Bhabar and Tarai Zone, if seedlings of tomato, capsicum and brinjal are ready, continue transplanting in the main fields in the valley region. In valley region, continue planting of Kufrijyoti variety of potato. Continue harvesting of mustard crop in clear weather.
- In Tehri Garhwal, Chamoli, Champawat, Pithoragarh, Rudraprayag and Uttarkashi districts of Hill Zone, continue transplanting of chilli, tomato and brinjal in poly houses. Continue sowing of French Bean and okra in High to Mid altitude areas. Continue land preparation in high altitude areas for sowing of French bean, lobia, ginger, turmeric, rajama and potato. Prepare seedlings of early cucurbitaceous crops in small polythene bags in poly houses. Continue harvesting leafy vegetables like fenugreek rye, spinach etc.
- In Udham Singh Nagar district of Bhabar and Tarai Zone, there may be attack of fruit borer in gram crop, to control spray solution of 125 ml of Chlorantraniliprole 18.5 SC or 220 g of Emamectin benzoate 5SG or 750 ml of Novaluron 10 EC or 500 ml of Lembdacyhalothrin 5EC in 500 liter of water should be sprayed @ per ha.
- **Himachal Pradesh:**
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, continue harvesting of matured mustard crop. In lower regions, continue sowing of green gram and black gram, cucurbits crops, early okra, spinach, coriander, fenugreek. Continue sowing moong and mash in irrigated areas. It is optimum time for nursery sowing of tomato, brinjal, chillies and capsicum crops in poly house. Continue sowing of French bean, cluster bean, summer radish as present temperature is suitable for germination of seeds. Continue transplanting of young seedlings of tomato, chilli and cole crop.
- In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Solan, Shimla, Bilaspur, Sirmaur districts, summer vegetables onion, garlic at vegetative stage, undertake hoeing and weeding operation in garlic and onion
- In Mild Hills Sub-Humid Zone of Himachal Pradesh, in Kullu and Mandi districts, continue pruning up to half branch and paste with Chaubatia paints to prevent the infection in apple and per orchards and stone fruits. Continue preparation of tree basins and start pruning by removing diseased and dense unwanted branches etc. in pomegranate orchards.
- In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Solan, Shimla, Bilaspur, Sirmaur districts, present weather is conducive for attack of purple spots in garlic and onion crops for control spray Contaf @ 10ml per 10 litres of water.
- In Mild Hills Sub-Humid Zone of Himachal Pradesh, in Kullu and Mandi districts, present weather is conducive for attack of collar rot in apple and pear, for control remove the soil around the collar region and expose the affected portion to sun. Remove the affected bark and apply Chaubatia paint or Copper Oxchloride paint. Irrigate 30cm radius around tree trunk with Bavistin @ 30gms per 15 litres of water or Rhidomil @ 75gms per 15 litres of water or Dithane M-45 @ 90 to 100 gms per 15 litres of water.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of blight in potato and tomato crop, for control spray Carbendazim @ 1.0 gm per litre of water or Dithane-M-45 @ 2.0 gm per litre of water.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of leaf feeders in cole crop and downy mildew is expected in cruciferous vegetables, for control leaf feeders in cole crop, spray Spinosad @ 1 ml per 3 litres of water and for control of downy mildew in cruciferous vegetables spray Ridomil M-Z @ 25 g per litre of water at 15 days of interval on a non rainy day.
- **Punjab, Haryana and Delhi:**
- In Western Plain Zone of Punjab, complete sowing of summer moong (varieties SML-668 and SML 832) and summer mash (varieties Mash -1008 or Mash-218). Continue harvesting of early sown mustard.
- Undertake sowing of summer moong (varieties SML-668 and SML 832) in Western Zone of Punjab. Undertake transplanting of Chilli in Central and Western Zone of Punjab. In Western Zone of Punjab, prepare the field for sowing of Okra. Varieties recommended for sowing are Punjab Padmini, Punjab-7 and Punjab-8.
- In Central Plain Zone of Punjab, continue planting of sugarcane with recommended varieties.
- In Western Zone of Haryana, undertake harvesting of matured early sown mustard crop and apply the irrigation in wheat crop. Complete the sowing operation of green gram and black gram. Undertake sowing of ladyfinger, bottle gourd, cucumber, ridge gourd and summer radish and apply irrigation to planted vegetable crops. In Eastern Zone of Haryana, undertake planting of spring season sugarcane.
- In New Delhi, continue sowing of ladies finger- A-4, Parbani Kranti and Arka anamika cultivars. Seed rates should be 10-15 kilogram per acre. Undertake sowing of French bean, cluster bean, summer radish as present temperature

is suitable for germination of seeds. Undertake transplanting of young seedlings of brinjal and chilli. Complete sowing of green gram and black gram. Variety: - Green gram – PusaVisal, Pusa Baisakhi, PDM-11, SML-32 and Black gram – Pant Urd 19, Pant Urd 30, Pant Urd 35, PDU-1. Undertake harvesting of matured mustard. In view of increasing temperature irrigate wheat crop in milking and grain filling stage.

- In Delhi, in present weather condition, constant monitoring of the wheat crop against rust disease is advised. If symptoms of black, brown or yellow rust appears, spray the crops with Dithane M-45 @ 2.5 g per litre of water.
- In Delhi, due to sudden rise in day temperature, brown rust/leaf rust may appear in susceptible varieties of wheat, spray with Tilt 25EC / Shine 25EC / Bumper 25EC or Folicur 25 EC @ 200 ml in 200 litres of water / acre as soon as the disease is noticed and repeat at 15 days interval. Attack of podborer may be in gram and lentil crop, spray Indoxacarb 14.5 SC @ 200 ml in 80-100 litres of water for the effective control.
- Due to dry and variable weather condition monitor constantly wheat crop against attack of yellow rust in Western Zone of Haryana, if symptom observed spray 200 ml Tilt 25% EC (Propiconazole 25% EC) in 200 liter water per acre.
- In Western Zone of Punjab, monitor the wheat fields for appearance of yellow rust, spray the crop with Tilt or Shine or Bumper or Stilt or Compass or Markzole @ 200 ml in 200 litres of water per acre at 15 days interval.
- **Uttar Pradesh:**
- In Central Plain Zone of Uttar Pradesh, as dry weather would prevail, undertake harvesting of timely sown matured wheat crop, gram, arhar crop. Undertake sowing of bhindi. Complete harvesting of sugarcane and continue harvesting of matured barley crop. Continue sowing of bhindi, mung and urad. Continue planting of spring sugarcane and sowing of multi harvesting fodder crop like MP-chari, Pusa Chari 23 and pioneer. Continue thinning operation in maize crop after 10 to 15 days of sowing. Apply irrigation to bhindi and cucurbitaceous vegetables, okra, lobia, rajma as per requirement. Apply irrigation to timely sown urad crop after 30 to 35 days of sowing as per requirement. Undertake transplanting of tomato, chilli nurseries in main field.
- In Eastern plain Zone of Uttar Pradesh, as dry weather forecast during the week, farmers are advised to undertake harvesting and threshing of matured mustard crop. Farmers are advised to apply irrigation in rabi onion and zaid vegetables.
- In Bundelkhand Zone of Uttar Pradesh, continue harvesting of matured mustard, linseed, gram, pea crops. Continue sowing of bhindi, Cucurbitaceous vegetables and transplanting of tomato, chilli and brinjal.
- In Western Plain Zone of Uttar Pradesh, in view of increasing temperature farmers are advised to apply light irrigation to wheat crop at milking and grain filling stage and vegetable crop as per requirement.
- In Central Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of green leafhopper in sunflower causing damage by sucking the sap from leaves, for control spray Phosphomidon @ 250ml per hectare.
- In Central Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of stem borer in Brinjal, for control spray Nimgiri @ 4% at 10 days interval.
- In Western Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of red pumpkin beetle in cucurbitaceous crops, for control spray Dichlorvos 76 EC (DDVP) @ 1 gm per litre of water.
- **Rajasthan:**
- In Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, continue harvesting of matured timely sown wheat crop. Late sown wheat is at milking stage and the day temperature is increasing, apply irrigation to wheat crop as per requirement. In view of the prevailing heat wave conditions, avoid transplanting of summer chilli nursery in the main field and sowing of bottle guard.
- In Barmer, Churu, Jalore, Jodhpur, Pali districts of Arid Western Plain Zone, continue harvesting of matured Rabi crop. Apply an additional irrigation to reduce the effect of rise in temperature in the wheat crop at grain filling stage.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, undertake planting of sugarcane and sowing of urad, mung. Do not apply irrigation in Kinnow orchards at flowering stage.
- In Southeastern Humid Plain Zone, in Jhalawar, Kota, Bundi, Baran districts, undertake harvesting of matured rabi crops lentil, linseed, gram, wheat, coriander. Undertake sowing of summer mung, urad. Apply light irrigation to sugarcane crop as per requirement.
- In Southern Humid Plain Zone, in Dungarpur, Banswara and Pratapgarh districts, in view of the rising day temperature with clear sky, farmers are advised to apply irrigation in maize crop at the grain filling stage. In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, continue harvesting of matured wheat crop.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of mosaic virus in chilli crop at flowering / fruiting stage, for control, spray Malathion 50 EC @ 1ml per litre water before & after flowering.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of stem & fruit borer in tomato and brinjal crops, for control destroy the affected fruits and branches, spray Acipheth 75 SP @ 0.5 gm per litre water. Repeat spray after 15 days if problem persists.

- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of red pumpkin beetle in early sown summer cucurbits, for control broadcast Carbaryl 5% @ 20 kg per hectare or spray Asiphet 75 S.P. @ 0.5 gram per litre of water.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganaganagar, prevailing weather condition is congenial for attack of citrus psylla in kinnow orchards for control spray Dimethoate @ 2 ml or Imidacloprid @ 0.33 ml or Asiphate @ 2 gm or Acetamiprid @ 0.4 gm per litre of water.
- **Horticulture**
- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhapur districts of Flood Prone Eastern Plain Zone, due to rise in temperature there may be chances of attack of powdery mildew disease in mango and results dropping of flower and fruits, for control spray Karathane @ 1ml per litre of water. Spray Copper Oxy chloride @ 3g dissolved in one litre of water on citrus plants after pruning operation.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of mango hopper on mango tree at flowering stage, for control spray Melathion 50 EC @ 1.0 ml per litre water.
- In Central Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of premature fruit drop in mango, for control spray Naphthalene acetic acid @ 20g in 1 litre of water or spray Plenofix @ 5 ml per 10 litres of water.
- In Eastern plain Zone and Bundelkhand Zone of Uttar Pradesh, as dry weather forecast during the week, apply irrigation in aonla, banana, ber, bail, guava and papaya etc as per requirement.
- In Bhabar and Tarai Zone of Uttarakhand, on severe occurrence of powdery mildew in mango, spraying of wettable sulphur @ 2g/litre or Carathin @ 6ml/10litre should be done as per recommendation.
- **Floriculture**
- In Himachal Pradesh, present weather is conducive for the attack of inflorescence rotting disease in marigold crop for control spray Bavistin @ 1 g per litre of water or Indofil-M 45 @ 2 ml per litre of water and undertake intercultural operations and weeding in flower beds. The flowers affected with aphids, for control spray Malathion @ 0.05%.
- In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Solan, Shimla, Bilaspur, Sirmaur districts, complete the planting of gladiolus. Undertake transplanting of marigold seedling in main fields.
- In Valley Temperate Zone of Jammu and Kashmir, this is the ideal time for planting bare-rooted rose plants. Start preparation of land for sowing seeds of herbaceous perennials.
- **Apiculture**
- In Himachal Pradesh, the winter packing may be taken away as the temperature is rising to 24°C. The weak apiary should be given artificial food, also insert empty frame/combs for egg laying to the queen as the population starts builds up. Dust sulphur on sealed brood in the colony and not on larvae to control mites attack on honeybees.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, for protection of ants put the leg of apiary into water so that ants could not attack the apiary.
- **Animal Husbandry**
- In East Uttar Pradesh and Rajasthan, in view of the heat wave forecast, grazing/feeding of cattle/goats may be done during morning/ evening hours. Keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking. Also provide balanced feed & adopt vaccination schedule. Make arrangement of curtains and proper ventilation in poultry house.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, Food & mouth disease may spread in cows and buffaloes. Vaccinate the animals against FMD. If animal is affected then isolate the affected animal and wash its mouth with 0.1% potassium permanganate solution.
- In Rajasthan, in Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhapur districts of Flood Prone Eastern Plain Zone, vaccinate animals against FMD, BQ during March-April.
- In Himachal Pradesh, monitor the animals for FMD and advised Vaccination. Ecto-parasite attack is expected in this weather for control spray Butox @ 2ml per litre in cowshed and give mixture of hay & green fodder. Protect the animals from ticks by spraying Cypermethrin @ 2 to 2.5 ml per litre of water. The cowsheds should be kept dry and clean.
- **Poultry**
- In Himachal Pradesh, new lot of layers chicks follow recommended schedule of vaccination for IBD and Ranikhet disease because weather is conducive for the spread of these disease. Increase 10% feeding and add mineral in the diet.
- **Fishery**
- In Himachal Pradesh, fill tanks with water and then add stocking @ 150 fingerlings per 100 sq. meter pond area.