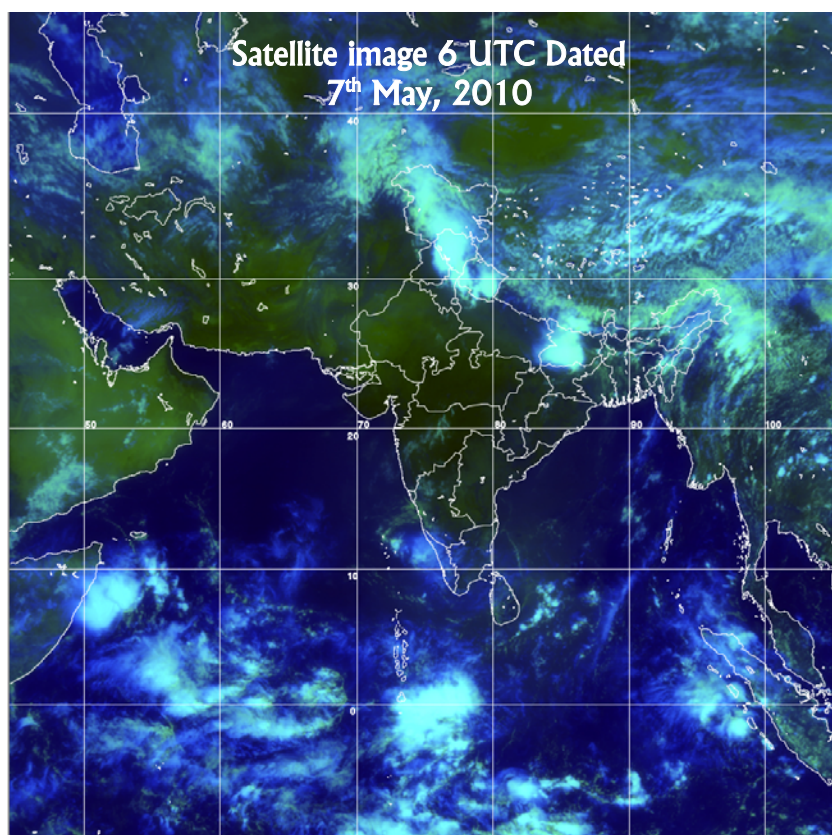




National Agromet Advisory Bulletin

Thursday, 6th May, 2010
(For the period 6th to 10th May, 2010)



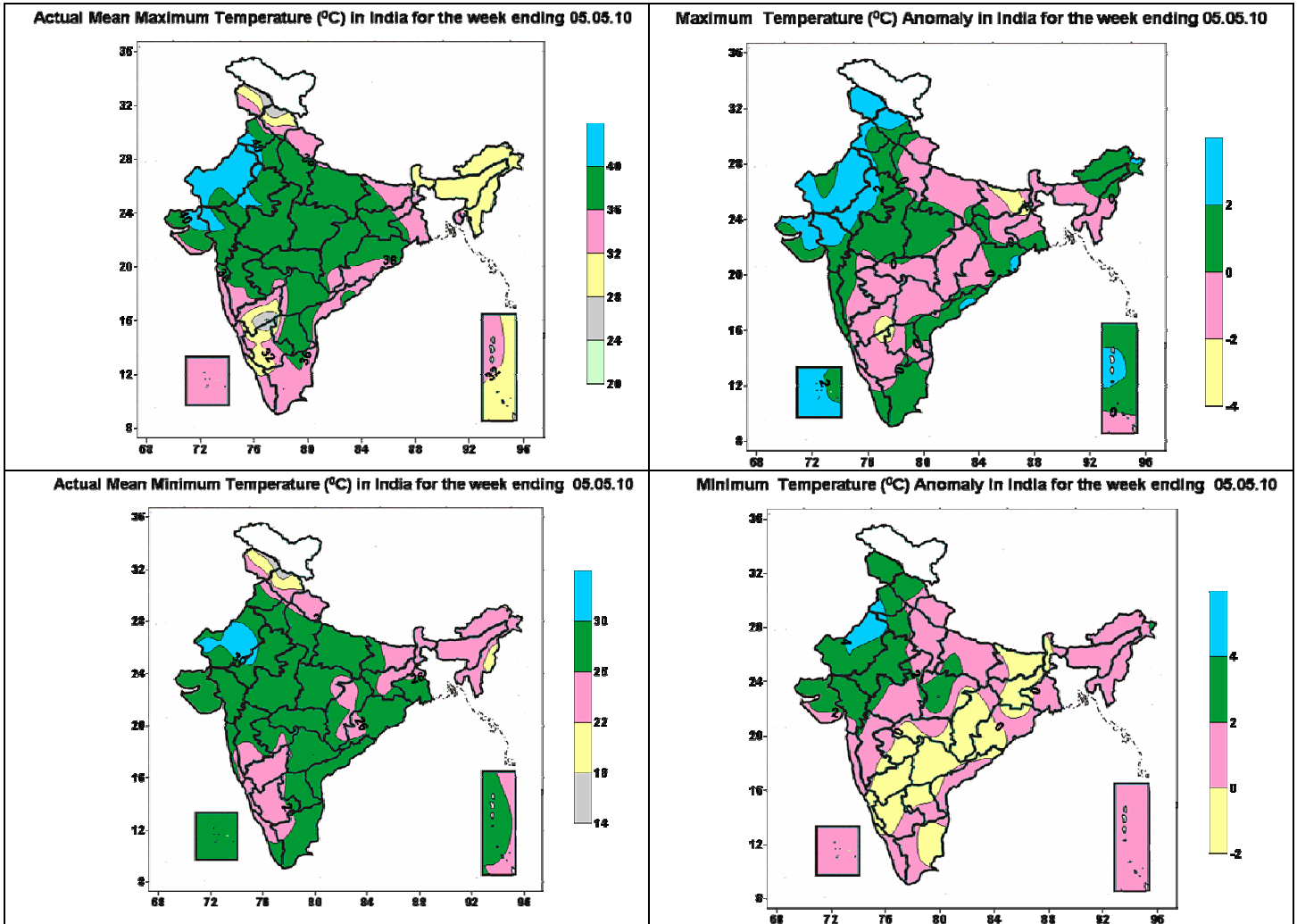
Issued by
National Agrometeorological Advisory Service Centre
Agricultural Meteorology Division
India Meteorological Department
Shivajinagar
Pune.

The bulletin is also displayed in the website (<http://www.imdagrimet.gov.in>) of the Division

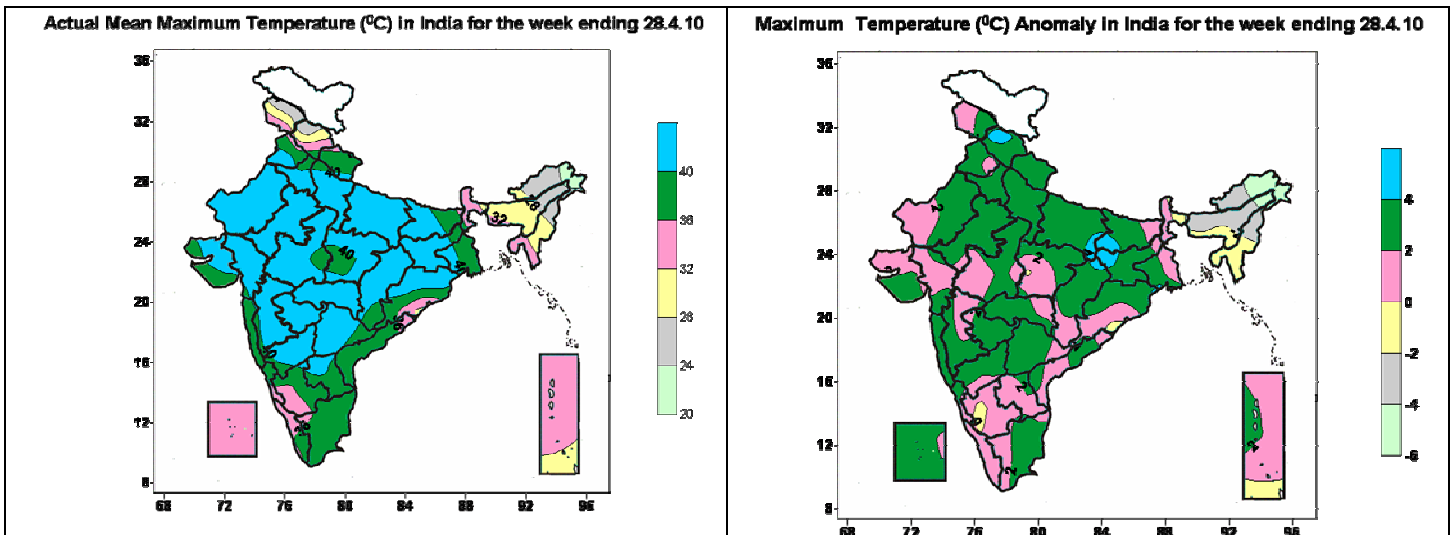
Executive Summary

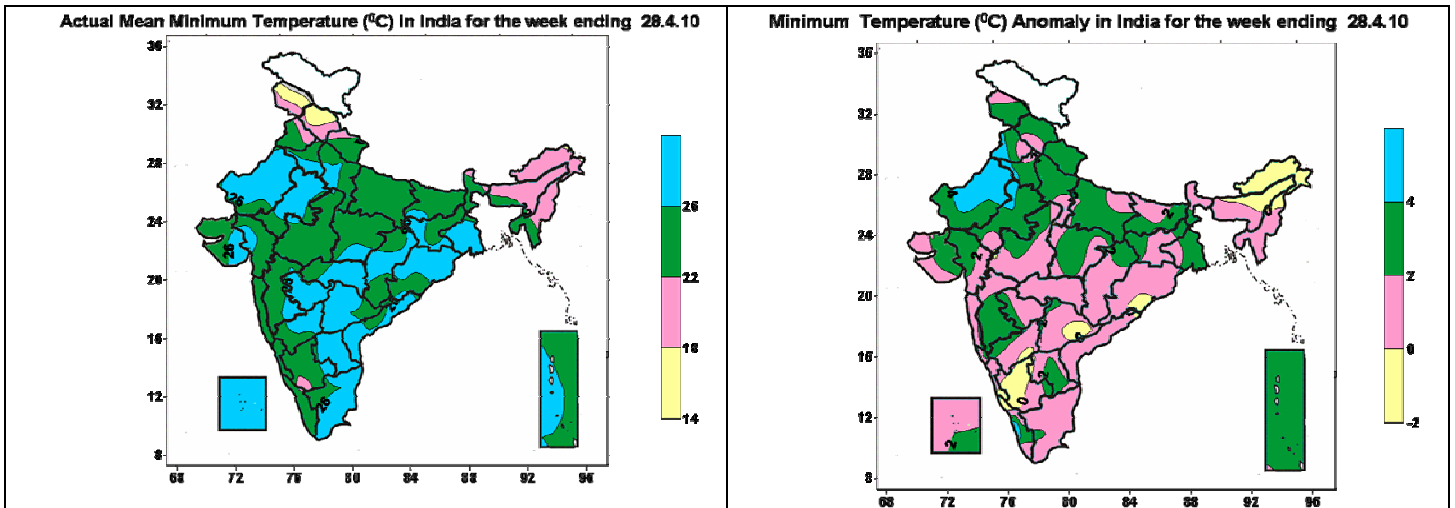
Significant Past Weather

Contour maps of Maximum and Minimum temperatures for the week ending 5.5.10



Contour maps of Maximum and Minimum temperatures for the week ending 28.4.10





- Actual mean maximum temperature anomaly was 2°C and above over most parts of Northwest India (except Uttarakhand, Uttar Pradesh), Gujarat, Saurashtra, Lakshadweep Island, some parts of Arunachal Pradesh, Punjab, Haryana, Coastal Andhra Pradesh, Orissa, Andaman & Nicobar Islands, 0 to 2°C over most parts of Haryana, Madhya Pradesh, Arunachal Pradesh, Konkan & Goa, Orissa, Coastal Andhra Pradesh, Tamil Nadu, Kerala, Andaman & Nicobar Islands, some parts of Northeast and West India.
- Maximum temperature anomaly has decreased in most parts of Northwest India, East India, Central India and West India as compared to the last week except most parts of Rajasthan and Gujarat where it remained unchanged and increased in Northeast India.
- Rainfall occurred in most of the districts of Assam & Meghalaya, Arunachal Pradesh, Jammu & Kashmir, Bihar, Jharkhand, Orissa, West Bengal, Sikkim, Karnataka, Kerala, Tamil Nadu, Telangana, Rayalaseema, some of the places of Himachal Pradesh, Uttarakhand, Delhi, East Uttar Pradesh, Madhya Maharashtra, Konkan & Goa and Marathwada during last week. No significant rainfall occurred or dry or mainly dry weather prevailed in remaining parts of the country.

Rainfall situation in some of the States in the country for the week ending 05.05.2010

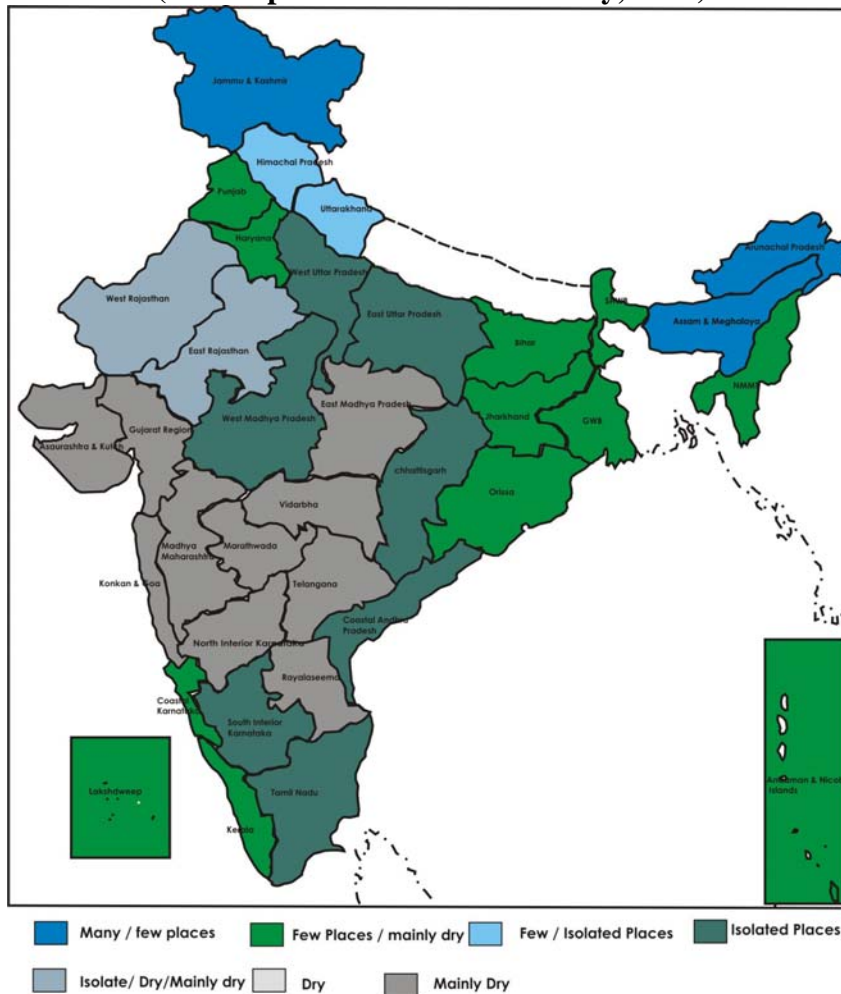
State/Districts	Actual Rainfall (mm)	Departure (%)	State/Districts	Actual Rainfall (mm)	Departure (%)
Assam			UttaraKhand		
Barpeta	99.2	32	Almora	12	53
Dhubri	90.3	22	Chamoli	13.4	8
Himachal Pradesh			Garhwal Pauri	13	59
Hamirpur	3.4	26	Garhwal Tehri	15	85
Haryana			Haridwar	2.4	14
New Delhi	13.8	274	Uttarkashi	12.3	-8
Jammu & Kashmir			Bihar		
Anantnag	19.6	-7	Araria	33.2	5
Badgam	18.9	29	East Champaran	50	456
Kupwara	30.0	15	Madhepura	24.2	43
North Baramula	31.6	26	Purnea	42.4	84
Pulwama	19.4	7	Samstipur	10.5	72
Srinagar	17.6	-6	Saran	5.7	23
East Madhya Pradesh			Supaul	24.4	20
Chhatarpur	0.8	167	Jharkhand		
Rewa	11.2	1500	Bokaro	52.8	644
Sagar	0.0	-100	Dhanbad	11.9	33
Datia	2.2	123	Giridih	33.1	395
Dhar	0.3	57	Hazaribagh	29.2	441
Indore	1.1	88	Ranchi	25.1	423
Ujjain	0.7	140	West Singbhum	36.4	268
Chattisgarh			East Rajasthan		
Bastar	8.4	31	Ajmer	0.6	20
Bilaspur	10.4	154	Bharatpur	1.7	72
Surguja	2.5	9	Jaipur	1.9	113
East Uttar Pradesh			Kota	0.8	300
Ballia	13	364	West Rajasthan		
Deoria	10	104	Jaisalmer	1.1	200
Faizabad	5.3	102	Jodhpur	1.3	86
Fatehpur	7.1	410	Sri Ganganagar	0.9	76
Gazipur	15.3	446	Maharashtra		
Hardoi	7.8	311	Konkan & Goa		
Kanpur Dehat	6	253	North Goa	19.2	96
Kheri	8.8	132	Madhya Maharashtra		
Pratapgarh	7.5	317	Dhule	8.3	1963
RaiBareilly	20	1567	Jalgaon	3.3	313
Sitapur	13.9	560	Nasik	5.9	105
Unnao	4.3	78	Sangli	8.2	-12
West Uttar Pradesh			Satara	37.2	382
Bijnor	2.4	8	Solapur	6.6	77
Jotirba Phule Nagar	1.8	9	Marathwada		
Mathura	3.0	233	Aurangabad	2.5	20
Meerut	1.7	-2	Beed	10.5	518
Moradabad	2	-17	Usmanabad	6.2	105
			Vidarbha		
			Akola	1.3	63
			Chandrapur	4.5	114

State/Districts	Actual Rainfall (mm)	Departure (%)	State/Districts	Actual Rainfall (mm)	Departure (%)
Orissa			Karnataka		
Balasore	47.0	145	Coastal Karnataka		
Jajpur	11.4	14	Dakshin Kannada	24.3	28
Kalahandi	24.8	217	Uttar Kannada	28.7	135
Kandhamal	10.8	9	North Interior Karnataka		
Keonjhar	23.3	74	Bagalkote	9.9	11
Mayurbhanj	21.8	7	Bidar	26.4	438
Nawarangpur	44.7	275	Bijapur	14.4	152
Nayagarh	16.0	158	Dharwad	29.3	62
Sonepur	10.7	94	Gadag	21.9	75
Sundargarh	8.5	56	Gulbarga	17.5	250
West Bengal			Haveri	23.6	11
GWB			Koppal	13.5	92
Bankura	55.5	324	Raichur	3.7	11
Birbhum	17.7	9	South Interior Karnataka		
Burdwan	25.5	104	Bangalore Rural	26.4	40
Hooghly	35.5	55	Bangalore Urban	36.9	88
Howrah	30.8	32	Bellary	9.8	10
24 Pargana (N)	25.4	-11	Chamarajnaragar	30.5	18
Purulia	31.6	239	Chitradurga	16.7	35
24 Pargana (S)	22.2	25	Davangere	17.9	20
West Midnapore	30.4	62	Kodagu	28.6	-8
SHWB			Kolar	41.7	293
Darjeeling	40.9	-5	Mandya	37.6	71
Jalpaiguri	66.4	20	Tumkur	33.7	96
Malda	69.5	3			
Dinajpur (S)	80.3	108			
Sikkim					
North Sikkim	82.2	15			

State/Districts	Actual Rainfall (mm)	Departure (%)	State/Districts	Actual Rainfall (mm)	Departure (%)
Kerala			Tamil Nadu		
Alappuzha	31.6	-30	Chennai	9.8	81
Kannur	21.4	-25	Coimbatore	48	158
Ernakulam	52.4	-3	Cuddalore	44.2	560
Idukki	111.7	152	Dharmapuri	58.4	256
Kollam	73.5	46	Dindigul	74.1	388
Kottayam	94.6	77	Erode	61.1	245
Kozhikode	22.9	-29	Kanchipuram	18.2	272
Malappuram	25.4	-24	Kanyakumari	44.3	71
Palakkad	74.2	143	Karur	64.9	400
Pathanamthitta	65.2	30	Krishnagiri	64	268
Thiruvananthapuram	25.7	-34	Madurai	81.3	765
Thrissur	57.7	84	Nagapattinam	66.5	864
Wyanad	47.1	71	Namakal	52.5	205
Andhra Pradesh			Nilgiris	39.8	74
Telangana			Perambalur	41.3	265
Khammam	10.3	52	Pondicherry	77.5	1661

Mehabubnagar	12.6	308	Pudukottai	53.1	458
Medak	6.3	144	Ramanathapuram	51.9	518
Nalgonda	4.3	21	Salem	56.2	265
Nizamabad	7.2	321	Sivaganga	66.2	604
Rangareddy	16.2	165	Thanjavur	45.3	336
Warangal	5.2	49	Theni	91.1	446
Rayalaseema			Tiruvallur	14.9	281
Anantapur	11.4	35	Tiruvannamalai	51.5	514
Chittoor	30.4	246	Tiruvarur	44.4	543
Cuddapah	7.9	20	Trichy	72.8	628
			Tuticorin	22.4	149
			Vellore	24.8	240
			Villupuram	46.6	813
			Virudhunagar	34.9	164

Weather Forecast
(Valid upto 1430 hours of 9th May, 2010)



Rainfall is likely to occur at many places in Arunachal Pradesh, Assam & Meghalaya, at many places in Jammu & Kashmir during next 48 hours and decrease thereafter, at a few places in Nagaland, Manipur, Mizoram and Tripura, West Bengal, Sikkim, Bihar, Jharkhand, Orissa, Coastal Karnataka, Kerala, Lakshdweep, Andaman & Nicobar Island, at a few places over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi during next 48 hours and decrease thereafter. Isolated rain is likely to occur over Uttar Pradesh, West Madhya Pradesh, Chattisgarh, Coastal Andhra Pradesh, Tamil Nadu & Pducherry and South Interior Karnataka. Rainfall is likely to occur at isolated places over Rajasthan during next 48 hours and

mainly dry weather will prevail thereafter. Mainly dry weather will prevail over remaining States of the country during the period.

Warning

- Isolated hailstorms/thundersqualls would occur over Punjab, Haryana, Chandigarh, Delhi, Rajasthan and Uttar Pradesh during next 48 hours.
- Isolated thundersqualls would occur over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Bihar, Jharkhand, West Bengal & Sikkim and northeastern States during next 48 hours.

Major crops in different States

- Wheat is at maturity / harvesting stage in Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh and Sikkim.
- Summer / *boro* rice is at grain formation / early maturity / maturity stage in Orissa, Chhattisgarh, West Bengal and Assam.
- *Ahu* rice is at sowing / seedling / transplanting / tillering stage in Assam.
- Mustard is at maturity / harvesting stage in Himachal Pradesh.
- Potato is at vegetative stage and *rabi* potatoe is at tuberization / maturity / harvesting in Sikkim.
- Summer green gram and black gram is at sowing / early vegetative / vegetative / flowering stage in Uttarakhand, Punjab, Haryana, Delhi, Rajasthan, at flowering / pod formation / early maturity / maturity stage in Jharkhand, Orissa, West Bengal.
- Jute is at sowing / early vegetative stage in West Bengal and Orissa, at sowing / early vegetative / vegetative in Assam.

Salient advisories

NORTH WEST INDIA

- As there is possibility of rain at many places in Jammu and Kashmir, postpone irrigation to the crops and also intercultural operation, application of fertilizers and plant protection measures. Farmers are also advised to postpone harvesting of the standing wheat crops. Already harvested crops may be removed from the field to the safer place. Farmers in Kashmir region are also advised to prepare nursery utilizing the rainfall during last week and undertake sowing of rice and also undertake sowing of maize in lower belts.
- As no significant rain occurred in Uttar Pradesh and Rajasthan during last week and there is less possibility of rain during the period, apply irrigation to the crops in these States.
- As there is possibility of thunderstorm, farmers in Punjab, Haryana, Delhi and Rajasthan and Uttar Pradesh are also advised to remove harvested products from the fields to the safer places.
- As light rainfall is expected in Uttarakhand, continue sowing of hybrid varieties and composite varieties of maize and lobia as green fodder crops under proper soil moisture.

NORTHEAST INDIA

- As there was rainfall during last couple of weeks in most of the districts of this region and there is also possibility of rain / thundershower over the region for next three days, postpone irrigation to the standing crops.
- In view of rainfall to be likely at many places along with isolated thunder squall in Assam and Arunachal Pradesh, arrange for draining out excess water from the fields to avoid water stagnation. Farmers are also advised to postpone intercultural operation, application fertilizer and plant protection measures to the crops in these States.
- Postpone sowing of ridge gourd, bitter gourd, bottle gourd, pumpkin, French bean, bhindi etc. in Arunachal Pradesh.

- To protect the early sown maize from water logging due to rain during last couple of weeks and also rain likely to occur, proper drainage system may be arranged. Also drain out excess water from green gram and black gram fields immediately as the emerging seedlings can not withstand stagnant water.
- In view of prevailing weather, postpone topdressing in *ahu* rice in Assam.
- Utilizing recent rain, sowing of normal direct seeded *ahu* rice seeds should also be completed within 15th of May.
- Due to increase in RH, the conditions are suitable for the attack of blast disease in *ahu* rice in Assam. Spray Bavistin @ 1 g per litre of water when the symptoms appear. Undertake spraying after current spells of rain.

EAST INDIA

- As Araria, East Champaran and Purnea districts of Bihar, Bokaro, Giridih, Hazaribagh and West Singhbhum districts of Jharkhand, Balasore and Nawarangpur districts of Orissa, Bankura, Hooghly, Howrah, Purulia and West Midnapore districts of Gangetic West Bengal and all the districts of Sub Himalayan West Bengal and Sikkim received good rainfall during last week and there is also possibility of some rainfall during next few days, postpone irrigation to the crops in these districts.
- Take precaution for the harvested and threshed maize, rice, sunflower, sesame and green gram crops and Remove the harvested produce from the fields to a safer place in view of expected rainfall during the period over the region along with isolated thunder squalls over Bihar, Jharkhand, West Bengal and Sikkim during next 48 hours.
- Utilising recent rainfall and also rainfall likely to occur during next few days, prepare the land for nursery bed for transplanted *aus* rice in West Bengal.
- Prevailing weather situation is congenial for the attack of fruit borer in brinjal in New Alluvial zone of West Bengal. Apply 2 ml Quinolphos per litre of water, preferably after sunset, on a non-rainy day. The infected parts should be taken out from the field.
- As there is chance of light rainfall and higher humidity, there is possibility of attack of collar rot and fruit rot in chilli in low laying areas of New Alluvial zone of West Bengal. Keep proper monitoring.

WEST INDIA

- As there was no significant rain during last week in most of the districts of the States of this region and mainly dry weather will prevail during next five days, apply protective irrigation to the standing crops.
- In view of high temperature in Gujarat, cover papaya fruits using gunny bags to avoid scorching.
- To protect newly planted grafts of coconut and areca nut in Maharashtra from bright sunlight shades may be prepared from south side and mulching may be done with grass or paddy straws.
- In view high temperature, make arrangement of shade for milch animals in Gujarat and provide fresh drinking water. Put curtains on west direction in poultry house to protect the birds against hot winds and spray water on them during noon hours to avoid heat stress.
- Due to cloudy weather, infestation of jassids, aphids, white fly and mites are likely to be increased in brinjal in Maharashtra; spray Imdachloprid @ 4 ml or Carbosulfan @ 10 ml in 10 litres of water.
- There are chances of infestation of powdery mildew disease in mango due to rise in temperature in Gujarat; this leads to fruit drop in mango. Spray 0.1% Karathane 48 EC to manage the disease.

SOUTH INDIA

- As there was sufficient rainfall during last week in most of the districts of Tamil Nadu, Kerala and South Interior Karnataka, postpone irrigation to the standing crops in these regions. As there was light rainfall during last week and no significant rainfall is likely for the next five days, farmers in Andhra Pradesh, North Interior Karnataka and Coastal Karnataka are advised to apply need based irrigation to standing crops and horticultural / plantation crops.

- As high wind velocity is likely, farmers in Kannur, Mallapuram, Kozhikode, Kasaragod are advised to undertake propping of banana to prevent from lodging.
- As there was no rainfall in Belgaum district, sugarcane crop is suffering from moisture stress condition. Spray MOP @ 2.5 g / litre of water at 15-20 days interval.
- Utilizing recent rainfall, farmers in North Western zone of Tamil Nadu are advised to undertake sowing of drought resistant black gram and green gram crops and varieties may be selected from Vamban 4, 5 for black gram and Co 7, Vamban 2 and 3 for green gram.
- Dry weather conditions and intermittent summer showers in North Coastal zone of Andhra Pradesh may lead to the attack of bacterial leaf blight in pomogranate. Spray Copper oxy chloride @ 3.5 g + Streptocyclin @ 2.5 g in 10 litres of water. High humidity in Northern Telangana zone may also lead to the attack of sucking pests in vegetable crops. Spray Methyl Demeton 2.5 g / litre of water.
- Due to increase in day temperature from 34° to 35°C in poultry farm there is a probability of drop in feed intake, egg weight drops and shell quality deteriorates in Andhra Pradesh. So farmers are advised to maintain optimum temperature between 18° to 26° C in poultry shed for better production.

CENTRAL INDIA

- In view of dry weather condition prevailing during last few weeks and also likely during next five days along with persisting high temperature over the States, farmers are advised to apply light and frequent irrigation to the standing crops.
- Presently the maximum temperature is more than 40°C and due to hot and dry winds banana and papaya fruits may be damaged because of sun scorching in Chhattisgarh. Hence, farmers are advised to cover the fruits by using leaves or Jute bags to protect the fruits from sun scorching. It is also advised to provide wind breaks in west / north-west direction.
- Looking to the expected thunder-squalls in the evening hours, farmers are requested to shift the harvested produce from the field to the safer place as early as possible.
- **As high temperature conditions prevail during these days, avoid grazing of animals under direct sun. Farmers are advised to provide clean drinking water to cattle 3 – 4 times a day. Also protect young calves from scorching sun. Cover the windows and doors with gunny bags of poultry sheds and wet it regularly to minimize the effect of the dry wind.**

Zonewise Agromet Advisories

NORTH WEST INDIA [J & K, H. P., UTTARAKHAND, PUNJAB, HARYANA, DELHI, UP, RAJASTHAN]_C

- **Realised Rainfall:** Rainfall occurred at some places in Jammu & Kashmir, West Uttar Pradesh, Uttarakhand and Delhi during last week. No significant rainfall occurred in most of the districts of Himachal Pradesh and East Uttar Pradesh. Mainly dry or dry weather prevailed over Punjab, Haryana and Rajasthan.
- **Rainfall Forecast:** Rainfall is likely at many places during next two days in Jammu & Kashmir and at a few places thereafter. Rainfall is likely at a few places during next two days in Punjab, Haryana, Delhi, Uttarakhand and Himachal Pradesh and either isolated rain will occur or mainly dry weather will prevail thereafter. Rainfall is likely at isolated places during next two days in Uttar Pradesh and Rajasthan during next two days and either isolated rain will occur or mainly dry weather will prevail thereafter.
- **Major Crops:**
 - Wheat (grain maturity / harvesting), mustard, gram and lentil (maturity / harvesting) and vegetables (sowing / nursery sowing / vegetative) in Himachal Pradesh.
 - Wheat, barley (grain maturity / harvesting), brown sarson (maturity), vegetable crops (sowing / vegetative / flowering / fruiting / harvesting) in Jammu & Kashmir.
 - Maize (early vegetative), black gram and green gram (sowing / vegetative / flowering) in Uttarakhand.
 - Sugarcane (vegetative), black gram and green gram (early vegetative) in Punjab.
 - Sugarcane (vegetative), black gram and green gram (sowing) in Haryana.

- Green gram and black gram (early vegetative) and vegetable crops (vegetative / flowering / fruiting / harvesting) in Delhi.
- Sugarcane (vegetative), black gram and green gram (sowing / vegetative / flowering) in Uttar Pradesh.
- Vegetable crops (flowering / fruiting / harvesting) in Rajasthan.

- **Advisory:**

- As there is possibility of rain at many places in Jammu and Kashmir, postpone irrigation to the crops. As no significant rain occurred in Uttar Pradesh during last week and there is less possibility of rain during the period, apply irrigation to the crops in these States.
- In view of expected rainfall at many places in Jammu and Kashmir, farmers are also advised to postpone intercultural operation, application of fertilizers and plant protection measures.
- In view of prevailing high temperature in some parts of Punjab, Haryana and Rajasthan, farmers are advised to apply light and frequent irrigation to the standing crops to meet the excess evaporative demands.
- Farmers in Jammu & Kashmir particularly Rajouri and Udhampur districts are advised to take care of the harvested wheat crop to protect it from rainfall. Farmers may delay harvesting of the standing crop as rainfall is expected over the next five days. Already harvested crops may be removed from the field to the safer place.
- As there is possibility of hailstorm during next 48 hours, farmers in parts of Punjab, Haryana, Chandigarh, Delhi, Rajasthan and Uttar Pradesh are advised to use hailnet to protect fruits from hailstorm.
- As there is possibility of thunderstorm, farmers in Punjab, Haryana, Delhi and Rajasthan and Uttar Pradesh are advised to make wheat bhusa (turi) using wheat straw and they are also advised to store the same to avoid possible damage from rain / thundershowers. Farmers in these States are also advised to remove harvested products from the fields to the safer places.
- Farmers are advised to apply the deep irrigation in fields in Haryana where cotton will be sown, thereafter prepare the field and start sowing of *desi*, *BT* cotton and American Cotton. Due to hot and dry weather, sowing of Cotton should be done during morning and evening hours only.
- Farmers in Punjab and Jammu & Kashmir are advised to white washing of lower portion of trunk / stem with a thick solution of lime (white washing) along with a little quantity of copper sulphate in mango, litchi, loquat, citrus, ber, and guava trees to avoid the adverse effect of hot weather on fruit trees. However, the same may be postponed until the rain stops.
- Apply frequent irrigations for proper development of fruit size and better quality to peach and plum trees. If the number of trees to be protected from heat is very small, the wrapping of stem / trunk with old gunny bags/ cardboards etc may also be used.
- As light rainfall is expected in Uttarakhand, continue sowing of hybrid maize varieties like VL-42, Him-129, Vivek-5, Vivek Sanker Makka-9 and composite varieties like VL-16, VL Makka-88, VL Makka-41 etc. and lobia varieties like Russian Joint, EC-4216, UPC-5286 etc. as green fodder crops under proper soil moisture.
- The temperature conditions will remain favourable for sowing of *okra* in Uttarakhand. Farmers are advised to go for sowing of *okra* variety VL Bhindi-1 under optimum soil moisture.
- There has been light rainfall during last few days in Uttarakhand and also light rainfall is expected in coming few days, farmers at 1500 m height are advised to continue sowing of Chaitee Dhan in nursery with improved varieties like VL-Dhan-206, Majdera-7 etc. under un-irrigated conditions. Sowing must be done in lines.
- Farmers in Kashmir region are advised to prepare nursery utilizing the rainfall during last week and undertake sowing of rice and also undertake sowing of maize in lower belts.
- Sowing of summer green gram and black gram crop may be completed this week in Delhi utilizing the last week rainfall. Select the varieties from Pusa Ratna, Pant mung 1, Samrat, SML-668, Pusa Vaisakhi, Pusa Vishal, Pusa 105, PDM-11 and SML-32 for green gram and Pusa 1, Ajad Urd 2, Narender Urd-1, T-9 and P.D.U.-1 for black gram.

- In view of less possibility of rainfall and high temperature for the next five days, light and frequent irrigation is advised in chilli, brinjal, bitter gourd, spinach and cabbage crop in Rajasthan and Uttar Pradesh.
- Deep ploughing of fields after harvesting of *rabi* crops is advised so that eggs and pupae of insects and weed seeds are destroyed.
- Prevailing weather conditions may be favorable for the infestation of fruit fly in cucurbitaceous crops in Jammu & Kashmir; under such situation farmers are advised to spray the crop with Endosulfan 35 EC @ 2 ml / litre of water for its control after current spells of rain.
- Take adequate steps to protect the animals from summer heat and stress. Farmers are advised to provide clean drinking water to animals more than three times a day and 50 to 100 grams good quality minerals mixture with feed. Keep animals under shades during day time.

EAST INDIA [JHARKHAND, BIHAR, ORISSA, WEST BENGAL & SIKKIM]_C

- **Realised Rainfall:** Araria, East Champaran and Purnea districts of Bihar, Bokaro, Giridih, Hazaribagh and West Singbhum districts of Jharkhand, Balasore and Nawarangpur districts of Orissa, Bankura, Hooghly, Howrah, Purulia and West Midnapore districts of Gangetic West Bengal and all the districts of Sub Himalayan West Bengal and Sikkim received good rainfall during last week. Some rainfall also occurred in a few districts of these States during the period. No significant rain occurred over remaining parts of the region.
- **Rainfall Forecast:** Rain is likely to occur at a few places over the region during the period. Isolated thunder squalls would occur over Bihar, Jharkhand, West Bengal and Sikkim during next 48 hours.
- **Major Rabi Crops:**
 - Maize (Maturity / harvesting) and moong (flowering / pod formation / maturity) in Bihar.
 - Green gram and black gram (flowering / pod formation / maturity) in Jharkhand.
 - Sunflower (seed formation / maturity), black gram and green gram (flowering / pod formation / maturity), groundnut (seed formation / early maturity) and summer rice (early maturity / maturity) in Orissa.
 - Sugarcane (vegetative), vegetable crops (vegetative / flowering / fruiting / harvesting), *boro* rice (early maturity / maturity), black gram and green gram (grain formation / early maturity / maturity), sunflower (seed formation / early maturity / maturity) and sesame (flowering / grain formation / seed formation / early maturity) in West Bengal.
 - High hills (1500- 2000 m) in Sikkim: large cardamom (vegetative / primary flowering / secondary flowering), seed potato (tuberization), summer potato (Very High Hills) (vegetative), *kharif* vegetables & off season vegetables (transplanting / vegetative), maize (sowing / germination / early vegetative / vegetative); Medium hills (1000 - 1500 m): large cardamom (vegetative / primary flowering / secondary flowering), *Rabi* potatoes (maturity / harvesting), maize (early vegetative / vegetative / tasseling / silking), *kharif* vegetable (transplanting / vegetative), ginger (sowing / germination), rice (sowing / nursery sowing); Low Hills (Below 1000 m): large cardamom (vegetative / primary flowering / secondary flowering), *Rabi* potatoes (maturity / harvesting), wheat (harvesting), maize (early vegetative / vegetative / tasseling / silking), *kharif* vegetable (transplanting / vegetative), ginger (sowing / germination).
- **Advisories:**
 - As Araria, East Champaran and Purnea districts of Bihar, Bokaro, Giridih, Hazaribagh and West Singbhum districts of Jharkhand, Balasore and Nawarangpur districts of Orissa, Bankura, Hooghly, Howrah, Purulia and West Midnapore districts of Gangetic West Bengal and all the districts of Sub Himalayan West Bengal and Sikkim received good rainfall during last week and there is also possibility of some rainfall during next few days, postpone irrigation to the crops in these districts.
 - Stop irrigation for few days in the field of onion in Bihar because rainfall is likely to occur and bulb may be damaged.
 - Take precaution for the harvested and threshed maize, rice, sunflower, sesame and green gram crops and Remove the harvested produce from the fields to a safer place in view of expected rainfall during the

period over the region along with isolated thunder squalls over Bihar, Jharkhand, West Bengal and Sikkim during next 48 hours.

- Utilizing recent rainfall, provide deep summer ploughing in fields of Bihar and Jharkhand after harvesting of crops to suppress the weeds, insect-pest & diseases and also to increase the water holding capacity of field.
- Utilising recent rainfall and also rainfall likely to occur during next few days, prepare the land for nursery bed for transplanted *aus* rice in West Bengal. One and half *katha* of nursery bed is required for transplanting of one Bigha of land. At the time of last ploughing, apply 3 Kg SSP and 3 Kg MOP in the nursery bed.
- Utilising recent rain continue sowing operation of jute in West Bengal. The recommended varieties are Chaitali, Basudev, Naveen, Sonali, Sobujsona, Shyamali etc.
- Under prevailing weather there is chance of infestation of red mite in litchi in Jharkhand. Apply Dicofol @ 2 ml / litre of water on a non-rainy day at an interval of 15 days.
- Under prevailing weather condition there is possibility of attack of white fly in ladies finger in New Alluvial zone of West Bengal. To control it, apply 2 gm carbaril or sevin on a non-rainy day at an interval of 15 days.
- Prevailing weather situation may also cause attack of fruit borer in brinjal in New Alluvial zone of West Bengal. Apply 2 ml Quinolphos per litre of water, preferably after sunset, on a non-rainy day. The infected parts should be taken out from the field.
- Due to forecast of light rainfall and higher humidity, attack of collar rot and fruit rot may be seen in chilli in low laying areas of New Alluvial zone of West Bengal. Keep proper monitoring.

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

- **Realised Rainfall:** Rainfall occurred in many districts of Assam and Arunachal Pradesh during last week.
- **Rainfall Forecast:** Rainfall is likely to occur at many places in Arunachal Pradesh, Assam & Meghalaya and at a few places in Nagaland, Manipur, Mizoram and Tripura during the period. Isolated thunder squall would occur over northeastern States during next 48 hours.
- **Major Crops:**
 - Vegetables (vegetative / flowering / fruiting / harvesting), *boro* rice (early maturity / maturity), *ahu* rice (sowing / seedling / transplanting / tillering), sugarcane (planting), maize, jute, mesta (sowing / early vegetative) in Assam.
 - Rice, pulses and vegetables (sowing) and maize (sowing / vegetative) in Arunachal Pradesh.
- **Advisory:**
 - As there was rainfall during last couple of weeks in most of the districts of this region and there is also possibility of rain / thundershower over the region for next three days, postpone irrigation to the standing crops. In view of rainfall to be likely at many places along with isolated thunder squall in Assam and Arunachal Pradesh, also arrange for draining out excess water from the fields to avoid water stagnation in these two States.
 - As there is possibility of rainfall at many places in Assam and Arunachal Pradesh during the period, farmers are also advised to postpone intercultural operation, application fertilizer and plant protection measures to the crops.
 - Damage to the standing *boro* rice due to heavy rainfall in previous fortnight is reported in Cachar and
 - Conserve water received from recent rain to prepare fields for raising rice nursery in raised bed in Arunachal Pradesh.
 - Also postpone sowing of ridge gourd, bitter gourd, bottle gourd, pumpkin, French bean, bhindi etc. in Arunachal Pradesh.
 - To protect the early sown maize from water logging due to rain during last couple of weeks and also rain likely to occur, proper drainage system may be arranged.
 - In view of prevailing weather, postpone topdressing in *ahu* rice in Assam.
 - Taking the advantage of recent rain in Assam, plough the fallow land where *sali* rice will be raised. This will control the intensity of stem borer in the crop in due course.

- Due to increase in RH, the conditions may be suitable for the attack of blast disease in *ahu* rice in Assam. Spray Bavistin @ 1 g per litre of water when the symptoms appear. Undertake spraying after current spells of rain.
- Utilizing recent rain, sowing of normal direct seeded *ahu* rice seeds should also be completed within 15th of May.
- Farmers are advised to drain out excess water from green gram and black gram crop fields immediately as the emerging seedlings can not withstand stagnant water.
- Farmers are advised to drain out excess water from the root zone of all the cucurbitaceous crops to get rid from fungal diseases in these prevailing rainy days.
- Release of fish prawn in the ponds may be carried out as there was sufficient rainfall during previous fortnight.

SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS]_C

- **Realised Rainfall:** Most of the districts of South Interior Karnataka, Kerala and Tamil Nadu received rainfall during last week.
- **Rainfall Forecast:** Rain is likely to occur at a few places over Coastal Karnataka, Kerala, Lakshadweep and Andaman & Nicobar Islands during the period. Either mainly dry condition will prevail or isolated rain will occur over remaining parts of the region.
- **Major Crops:**
 - Vegetable crops (flowering / fruiting) in Andhra Pradesh.
 - Pigeon pea and sunflower (maturity / harvesting), summer groundnut (pod maturity) and vegetables (flowering / fruiting / harvesting) in Karnataka.
 - Rice (harvesting of third crop and nursery sowing for first crop), Vegetables (flowering / fruiting / harvesting) and plantation crops (coconut, arecanut, pepper and cashew) in Kerala.
 - Rice (grain development), pulses (pod maturity) and cotton (picking) in Tamil Nadu.
- **Advisories:**
 - As there was sufficient rainfall during last week in most of the districts of Tamil Nadu, Kerala and South Interior Karnataka, postpone irrigation to the standing crops in these regions. Undertake summer ploughing to conserve realized rainfall. As there was light rainfall during last week and no significant rainfall is likely for the next five days, farmers in Andhra Pradesh, North Interior Karnataka and Coastal Karnataka are advised to apply need based irrigation to standing crops and horticultural / plantation crops.
 - Harvest immediately the third crop of rice in Kannur, Mallapuram, Kozhikode, Kasaragod (Northern Zone) and Vellayani (southern Zone) as chances of rain are there. In Thrissur (Central Zone), mulch the coconut basin using husks to reduce evapo transpiration. Coir pith @ 25 kg / palm is an ideal mulching material to preserve moisture.
 - Farmers are advised to get ready for sowing of first crop of rice in Kerala as sufficient rainfall received. This is the most ideal time for application of fertilisers and manures for banana and coconut grown under rain fed conditions.
 - Farmers in High Altitude zone in Kerala are advised to provide drainage to areca nut plantation in view of realized and expected rainfall.
 - In Problem areas zone of Kerala, as there was sufficient rainfall during last week, undertake sowing of upland rice. Select among Suvarnamodan, Swarnaprabha, Vaisakh, etc. Also undertake planting of WCT coconut seedlings.
 - Due to forecast of high wind velocity, farmers in Kannur, Mallapuram, Kozhikode, Kasaragod are advised to undertake propping of banana to prevent from lodging.
 - Farmers in Central zone of Kerala are advised to undertake cashew planting due to receipt of sufficient rainfall during last few weeks. Select among Madakathara 1, Anakkayam 1, Kanaka, Amritha and Dhanya.

- Dry weather conditions prevailed over Coastal Andhra Pradesh and Rayalaseema region in Andhra Pradesh. Farmers are advised to apply light and frequent irrigation to overcome heat injury on standing crops.
- As there was sufficient rainfall in Coastal zone of Karnataka, farmers are advised to start land preparation and sowing of rice nursery. Select varieties from MO4 and Champaka.
- As there was no rainfall in Belgaum district, sugarcane crop is suffering from moisture stress condition. Spray MOP @ 2.5 g / litre of water at 15-20 days interval.
- Utilizing recent rainfall, farmers in North Western zone of Tamil Nadu are advised to undertake sowing of drought resistant black gram and green gram crops and varieties may be selected from Vamban 4, 5 for black gram and Co 7, Vamban 2 and 3 for green gram.
- Dry weather conditions and intermittent summer showers in North Coastal zone of Andhra Pradesh may lead to the attack of bacterial leaf blight in pomogranate. Spray Copper oxy chloride @ 3.5 g + Streptocyclin @ 2.5 g in 10 litres of water. High humidity in Northern Telangana zone may also lead to the attack of sucking pests in vegetable crops. Spray Methyl Demeton 2.5 g / litre of water.
- High humidity prevailing in Thirnelveli and Virudunagar may lead to the attack of ear head bug in rice and sucking pests in cotton, respectively. Spray Monocrotophos @ 500 ml / ha for ear head bug and 1000 ml / ha for sucking pests.
- Under high temperature conditions spodoptera incidence is predominant in groundnut in North Transition zone. Spray NPV @ 100 LE / acre to control the pest.
- Due to dry spell, incidence of thrips is noticed in onion in Raichur district. To control, spray Oxydemeton methyl (1.5 ml) or Dimethoate (1.7 ml) or Monocrotophos (1.0 ml) in one liter of water on a non rainy day.
- Due to prevalence of higher relative humidity, areca nut crop may be infested with koleroga in Southern Transition zone in Karanataka; hence farmers are advised to go for spraying of 1% Bordeaux mixture on a non rainy day.

Poultry:

- Due to increase in day temperature from 34° to 35°C in poultry farm there is a probability of drop in feed intake, egg weight drops and shell quality deteriorates in Andhra Pradesh. So farmers are advised to maintain optimum temperature between 18° to 26° C in poultry shed for better production.

Animal Husbandry:

- Undertake vaccination of animals before monsoon season for Black Quarter and Foot and Mouth Disease in Kerala and Karnataka.
- Keep animals under cool conditions and provide drinking water frequently to overcome summer effect.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]_C

- **Realised Rainfall:** No significant rain occurred in most of the districts of these States except in Satara district of Maharashtra.
- **Rainfall Forecast:** Mainly dry weather will prevail over the States of this region during the period.
- **Major Crops:**
 - Maharashtra: Vegetables (vegetative / flowering / fruiting / harvesting) and summer rice (grain maturity / harvesting in North Konkan and grain formation / maturity in East Vidarbha), summer groundnut (pod maturity / harvesting in North Konkan & Latur division and pod development / pod maturity in other regions), summer sunflower (seed maturity in Latur division & head formation in other divisions), summer maize (cob maturity / harvesting in Latur division & cob initiation in other divisions), summer *bajra* (grain maturity / harvesting).
 - Gujarat: Green gram (pod maturity / harvesting), summer groundnut (pegging / pod development), sugarcane (vegetative) and vegetables (vegetative / flowering / fruiting / harvesting).
- **Advisory:**
 - As dry weather is prevailing for last few weeks and also likely to prevail during next five days along with persistent high temperature, apply irrigation to groundnut, sugarcane etc. in Gujarat.
 - As there was no significant rain during last week in most of the districts of Maharashtra and mainly dry weather will prevail during next five days, apply protective irrigation to the standing crops.

- To control water loss through evaporation from soil from sugarcane fields in Gujarat, spread dry leaves of sugarcane in between two rows of sugarcane.
- Taking the advantage of dry weather, undertake harvesting of already matured summer rice and groundnut in South Konkan and start harvesting of already matured summer *bajra* in Madhya Maharashtra and also undertake harvesting of matured crops of green gram, maize etc. in Gujarat.
- In view of high temperature in Gujarat, cover papaya fruits using gunny bags to avoid scorching.
- To protect newly planted grafts of coconut and areca nut in Maharashtra from bright sunlight shades may be prepared from south side and mulching may be done with grass or paddy straws.
- Undertake deep ploughing in the fields for soil solarization to kill fungal spores and other pathogens taking the advantage of dry condition.
- In view high temperature, make arrangement of shade for milch animals and provide fresh drinking water. Put curtains on west direction in poultry house to protect the birds against hot winds and spray water on them during noon hours to avoid heat stress.
- Due to cloudy weather, infestation of yellow vein mosaic is likely to be increased in bhindi in Maharashtra; for control uproot infested plants and destroy and spray Di-chlorvos @ 50 ml in 100 litres of water.
- Due to cloudy weather, crops are likely to be infested by powdery mildew and anthracnose (*kavadi*) in Maharashtra. For control of powdery mildew spray Dinocap or Tridemarf @ 10 g or WS Sulphur @ 25 g in 10 litres of water for 2-3 times at 10-15 days interval. For control of anthracnose (*kavadi*), spray Mancozeb or Copper oxy chloride @ 25 g in 10 litres of water for 2-3 times at 15 days interval.
- Due to cloudy weather, infestation of jassids, aphids, white fly and mites are likely to be increased in brinjal in Maharashtra; spray Imidachloprid @ 4 ml or Carbosulfan @ 10 ml in 10 litres of water.
- There are chances of infestation of powdery mildew disease in mango due to rise in temperature in Gujarat; this leads to fruit drop in mango. Spray 0.1% Karathane 48 EC to manage the disease.

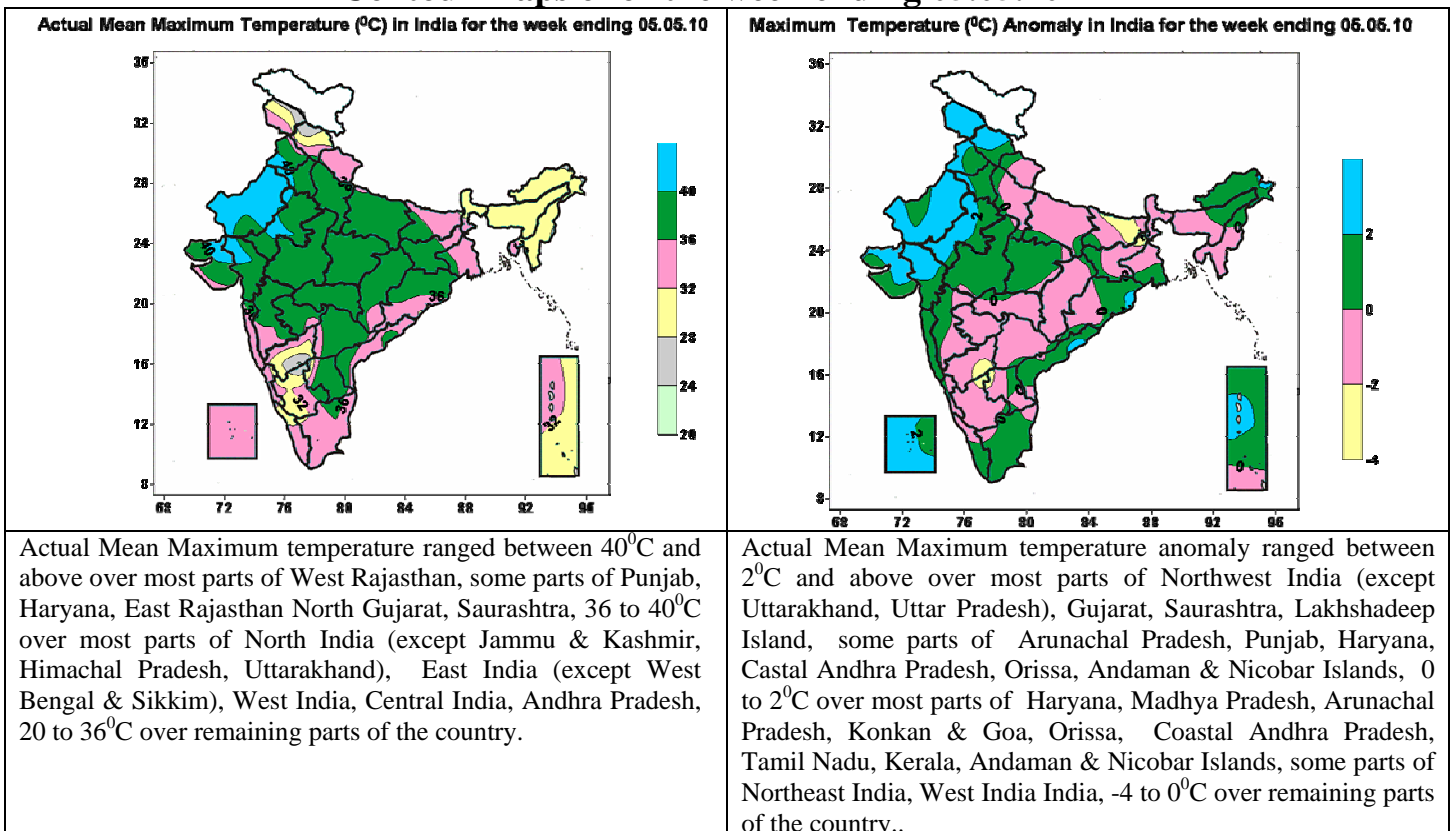
CENTRAL INDIA [M.P., CHHATTISGARH]_C

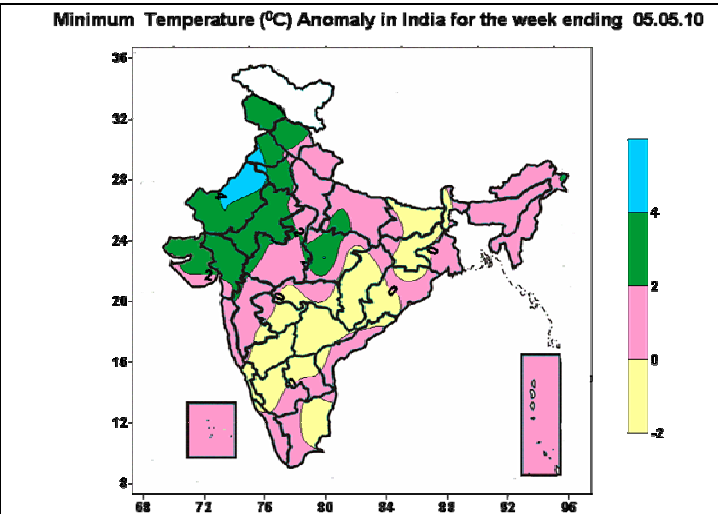
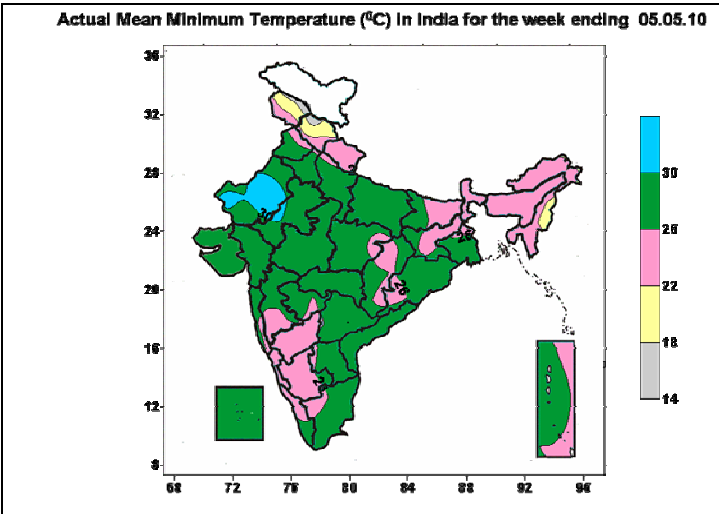
- **Realised Rainfall:** No significant rainfall occurred over the States during the period.
- **Rainfall Forecast:** Either isolated rain will occur or mainly dry weather will prevail over the region.
- **Major Crops:**
 - Wheat (maturity / harvesting), summer urd, mung and sunflower (vegetative), sugarcane (cane development) and vegetable crops (vegetative / flowering / fruiting) in Madhya Pradesh.
 - *Boro* rice (grain formation / early maturity / maturity), sesame (pod formation / seed formation / early maturity) in Chhattisgarh.
- **Advisory:**
 - In view of dry weather condition prevailing during last few weeks and also likely during next five days along with persisting high temperature over Madhya Pradesh, farmers are advised to apply light and frequent irrigation to the standing crops like moong, urad, sunflower and soyabean to meet the excess evaporative demands to the tune of 10-11 mm / day. Farmers are advised to irrigate vegetable crops by drip or sprinkler system to save water.
 - Evaporation rates are presently higher due to higher temperature and it is being recorded around 11 mm / day in Chhattisgarh, which has increased the water requirements of summer crops like summer rice, vegetables, sunflower, green gram, groundnut etc. Farmers are advised to reduce the interval between two irrigations.
 - Presently the maximum temperature is more than 40°C and due to hot and dry winds banana and papaya fruits may be damaged because of sun scorching in Chhattisgarh. Hence, farmers are advised to cover the fruits by using leaves or Jute bags to protect the fruits from sun scorching. It is also advised to provide wind breaks in west / north-west direction.

- Farmers are advised to undertake deep ploughing after harvesting of *rabi* crops so that disease pathogens and insect's larvae and eggs will come in contact with solar radiation and may get killed.
- Looking to the expected thunder-squalls in the evening hours, farmers are requested to shift the harvested produce from the field to the safer place as early as possible.
- **Animal Husbandry**
 - As high temperature conditions prevail during these days, avoid grazing of animals under direct sun. Farmers are advised to provide clean drinking water to cattle 3 – 4 times a day. Also protect young calves from scorching sun. Cover the windows and doors with gunny bags of poultry sheds and wet it regularly to minimize the effect of the dry wind.

Annexure I

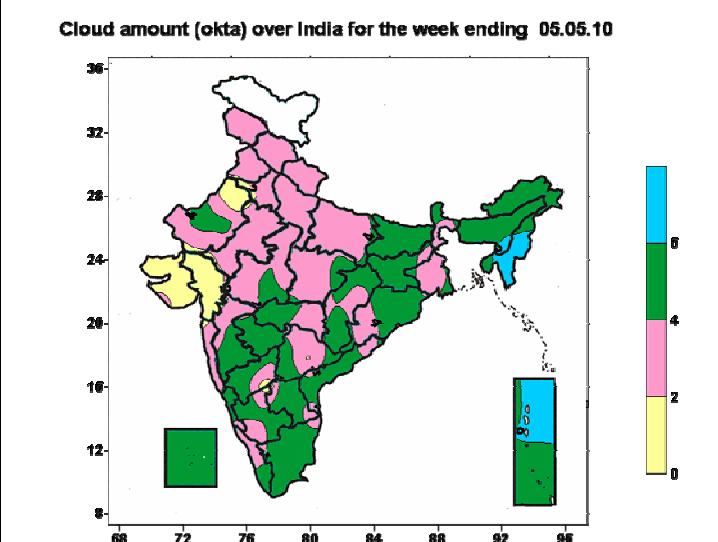
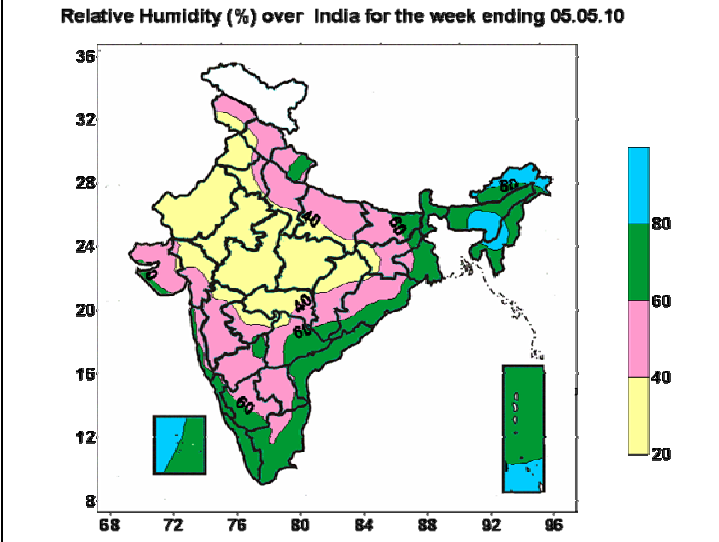
Contour maps o for the week ending 05.05.10





Actual Mean Minimum Temperature ranged between 30⁰C and above over most parts of West Rajasthan, some parts of East Rajasthan, 26 to 30⁰C over most parts of Country (except Northeast India, Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sub-Himalayan West Bengal & Sikkim, Karnataka), 14 to 26⁰C over remaining parts of the country.

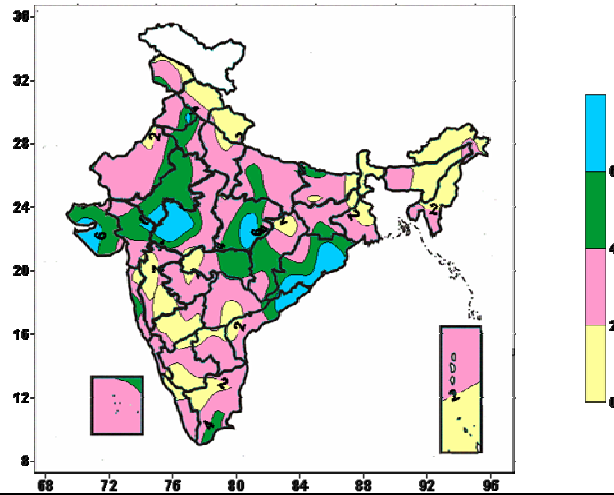
Minimum Temperature anomaly ranged 4⁰C and above over some parts of West Rajasthan, Punjab, Haryana, 2 to 4⁰C over most parts of Northwest India (except, Uttarakhand, West Uttar Pradesh) Gujarat, Saurashtra & Kutch, some parts of East Uttar Pradesh, Madhya Pradesh, -2 to 2⁰ C over remaining parts of the country.



Relative humidity between 80% and above over some parts of Northeast India, Andaman & Nicobar, Lakshadweep Islands, 60 to 80% over most parts of North East Inida, West Bengal & Sikkim, East Coastal region & West Coastal region of the Country and Lakshadweep & Andaman & Nicobar Islands, some parts of Uttarakhand, Kutch, Bihar, Jharkhand, Chattisgarh, Interior parts of South India, 20 to 60% over remaining parts of the country.

Cloud amount 6 okta and above over most parts of Manipur, Mizoram, Andaman & Nicobar Islands and some parts of Assam, 4 to 6 okta over most parts of South India, East & Northeast India (except West Bengal), Madhya Maharashtra, Marathwda, some part of West Rajasthan, Central India, 0 to 4 okta over remaining parts of the country.

Wind speed (knots) over India for the week ending 05.05.10



Wind speed ranged between 6 knots and above over some parts of Punjab, Madhya Pradesh, Orissa, Gujarat, Saurashtra & Kutch, North Coastal Andhra Pradesh, 4 to 6 over most parts of East Rajasthan, Gujarat, Saurashtra & Kutch, some parts of Jammu & Kashmir, Punjab, Haryana, West Rajasthan, East Uttar Pradesh, Bihar, Jharkhand, Orissa, Central India, Konkan, Coastal Andhra Pradesh, Tamil Nadu, Andaman & Nicobar Islands, 0 to 4 knots over remaining parts of the country.