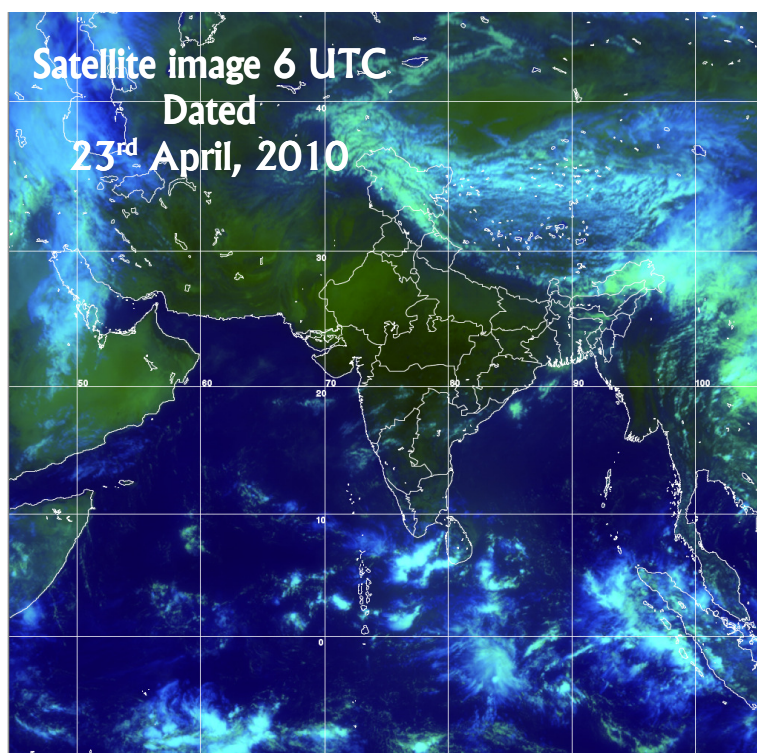




National Agromet Advisory Bulletin

Thursday, 22nd April, 2010

(For the period 22nd to 26th April, 2010)



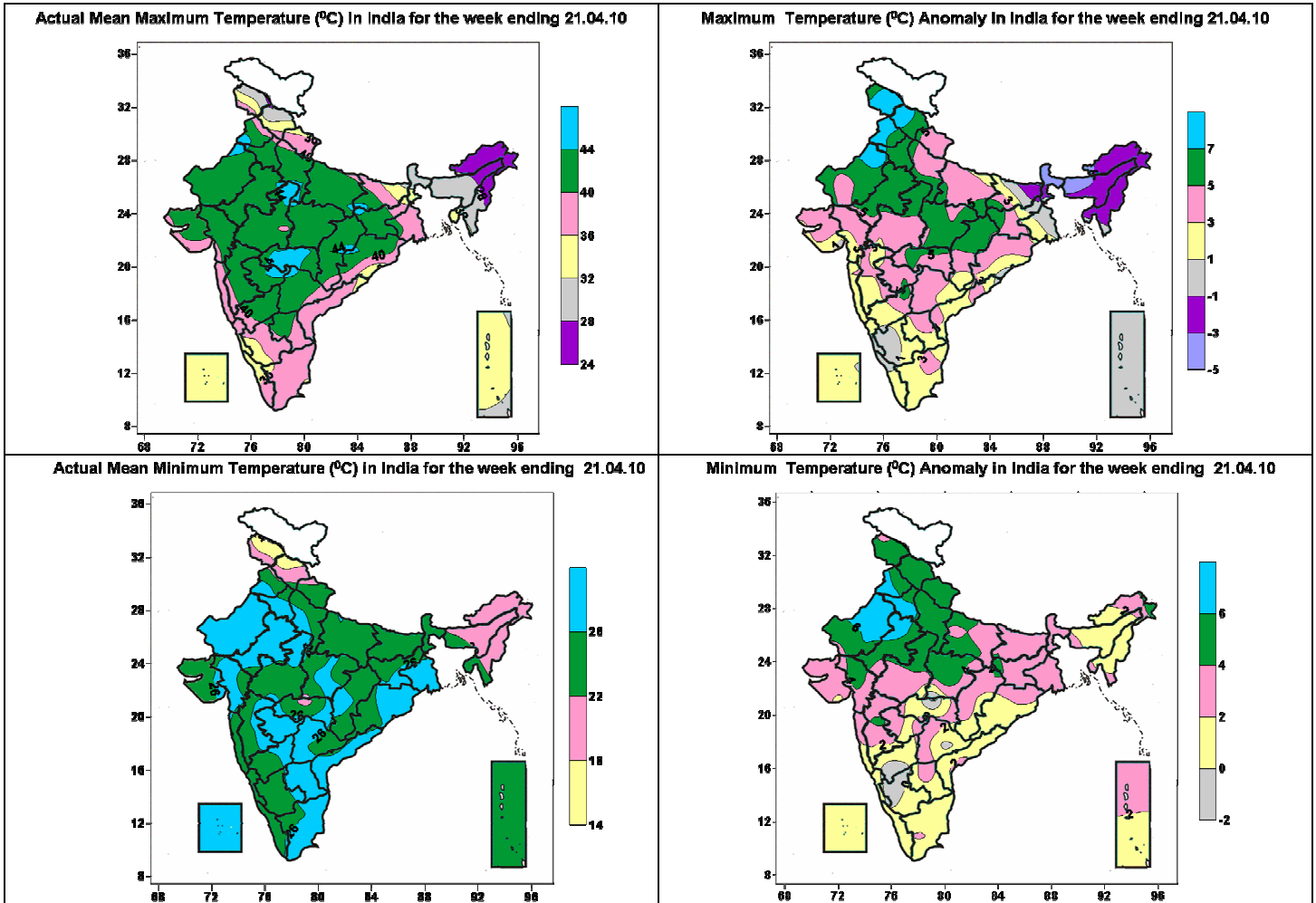
Issued by
National Agrometeorological Advisory Service Centre
Agricultural Meteorology Division
India Meteorological Department
Shivajinagar
Pune.

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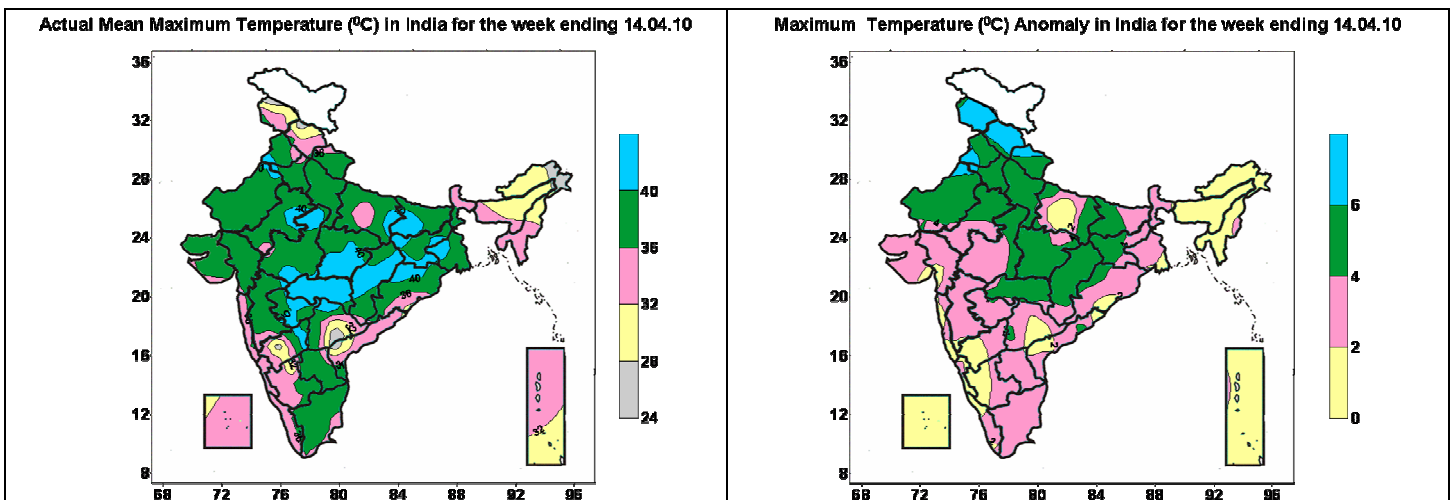
Executive Summary

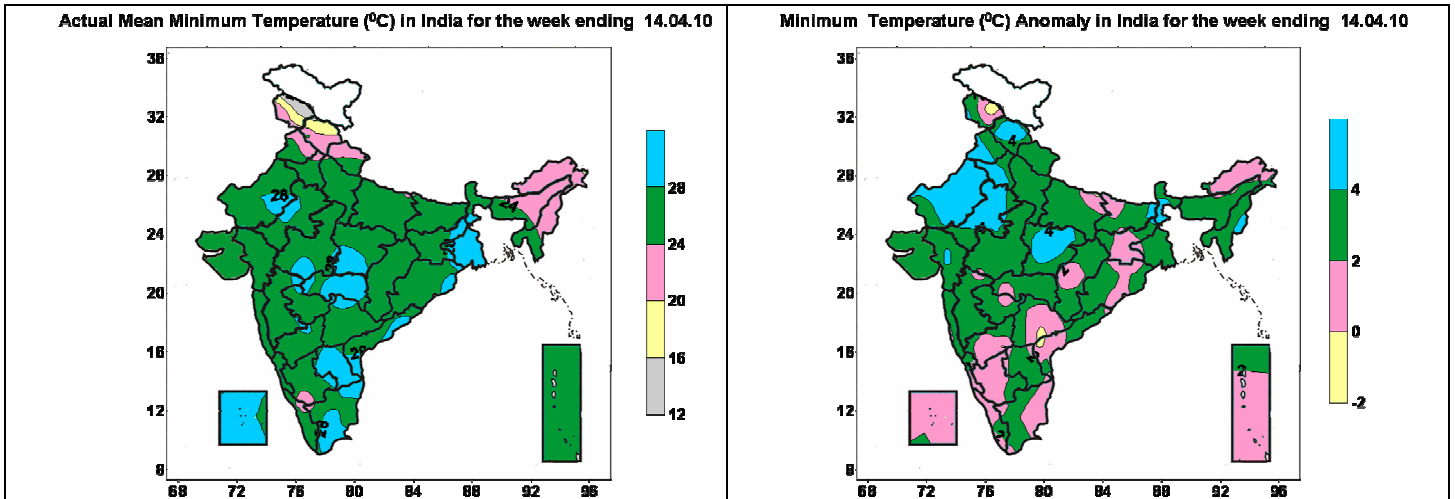
Significant Past Weather

Contour maps of Maximum and Minimum temperatures for the week ending 21.4.10



Contour maps of Maximum and minimum temperatures for the week ending 14.4.10





- Actual Mean Maximum temperature anomaly was 7°C and above over most parts of Jammu & Kashmir, Punjab and Himachal Pradesh, 5 to 7°C over most parts of Haryana, Delhi, Rajasthan, East Madhya Pradesh, Chattisgarh, some parts of Uttar Pradesh, Bihar, Jharkhand, West Madhya Pradesh, Vidarbha, Marathwada and North Interior Karnataka.
- Maximum temperature anomaly has decreased in parts of West Bengal, Sikkim, Bihar, Jharkhand, Assam & Meghalaya, Arunachal Pradesh South Interior Karnataka, Coastal Karnataka, Kerala, Andaman Islands as compared to last week and remains unchanged in most parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Uttarakhand, Rajasthan, Madhya Pradesh, Chhatisgarh.
- Rainfall occurred in most of the districts of Jammu & Kashmir and some places in Himachal Pradesh during last week. Most of the districts of Sub-Himalayan West Bengal and Sikkim received rainfall during the period. Rainfall also occurred in most of the districts of Assam and Arunachal Pradesh, most of the districts of Karnataka, Kerala, some places of Tamilnadu and Anantpur district of Rayalseema, some districts of Madhya Maharashtra and Sindhudurg in Konkan & Goa. 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 21.4.2010

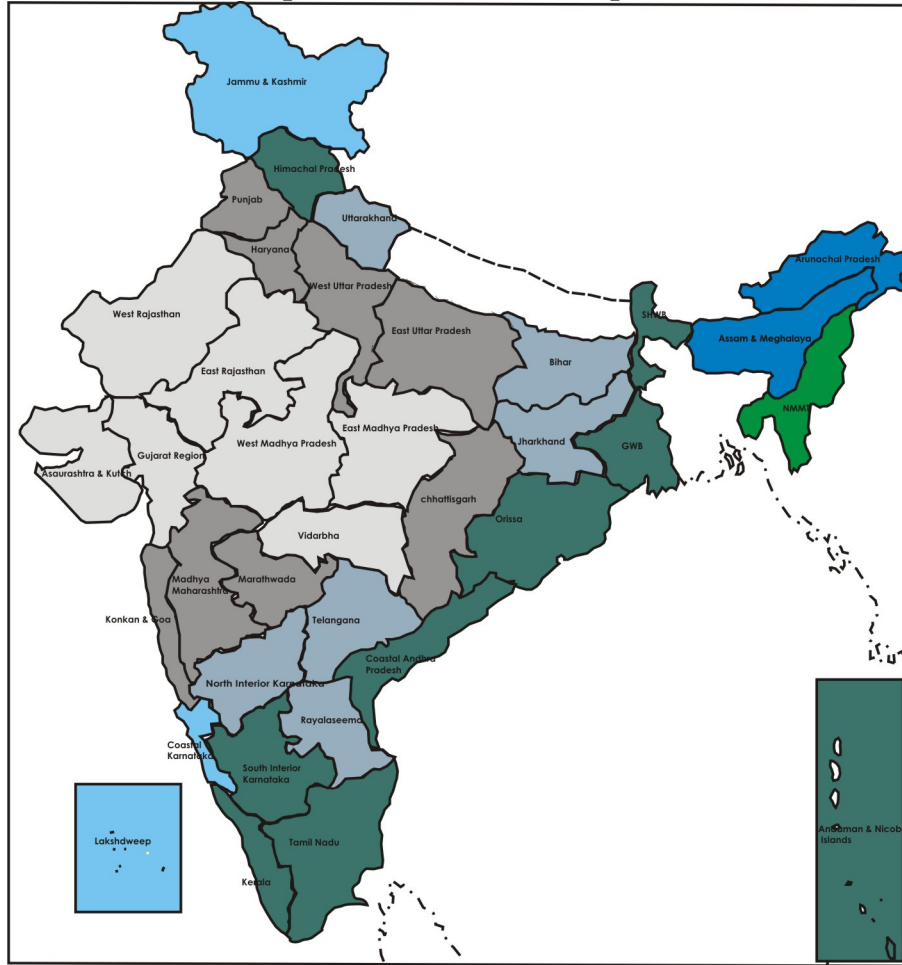
State/Districts	Actual (mm)	% Departure
Arunachal Pradesh		
East Siang	92.1	30
Lohit	173.5	100
Papumpara	257.7	323
Tawang	20.0	-3
Upper Subansiri	55.0	-10
West Kameng	63.8	133
Assam		
Barpeta	239.9	302
Bongaigaon	314.8	491
Cachar	226.5	172
Dhubri	137.9	223
Dibrugarh	104.4	70
East Garo Hills	194.5	442
East Khasi Hills	384.5	278

State/Districts	Actual (mm)	% Departure
Assam		
Goalpara	224.8	393
Golghat	151.8	280
Hailakandi	252.1	163
Jorhat	145.6	176
Kamrup	299.0	557
Karbi Analog	88.6	347
Karimganj	159.0	77
Kokrajhar	187.1	251
Lakhimpur	113.2	116
Morigaon	112.8	233
N.C.Hills	58.1	3
Nalbari	217.1	377
Nowgong	69.1	104
Sonitpur	181.6	360
Tinsukia	86.8	63

State/Districts	Actual (mm)	% Departure
Himachal Pradesh		
Kinnaur	70.6	280
Kullu	46.4	277
Lahaul and Spiti	63.7	132
Jammu & Kashmir		
Anantnag	79.0	162
Badgam	69.0	235
Doda	30.4	7
Kupwara	57.1	57
Ladakh(Leh)	6.3	163
Pulwama	40.7	70
Srinagar	55.0	167
UttaraKhand		
Almora	7.3	9
Chamoli	14.0	36
Garhwal Tehri	8.5	-13
Maharashtra Konkan & Goa		
Sindhudurg	11.7	680
Madhya Maharashtra		
Kolhapur	14.8	97
Sangli	11.1	82
Satara	21.8	336
Orissa		
Nawarangpur	22.0	-11
West Bengal		
Sub-Himalayan West Bengal		
Coochbehar	91.8	208
Darjeeling	39.1	83
Jalpaiguri	78.7	170
Malda	28.8	123
Dinajpur (S)	21.9	26
Sikkim	133.0	189

State/Districts	Actual (mm)	% Departure
Karnataka		
Coastal Karnataka		
Dakshin Kannada	36.3	290
Udupi	10.2	28
Uttar Kannada	8.3	88
North Interior Karnataka		
Dharwad	20.1	91
South Interior Karnataka		
Bangalore Urban	35.7	247
Chamarajnaragar	21.8	4
Chickmagalur	49.5	851
Chitradurga	33.6	151
Davangere	23.8	349
Hassan	27.2	278
Kodagu	40.3	225
Kolar	44.6	136
Shimoga	50.6	201
Tumkur	28.7	223
Kerala		
Kannur	36	2
Ernakulam	61	58
Idukki	34	97
Kollam	94	124
Kottayam	53	50
Kozhikode	76	257
Malappuram	27	29
Palakkad	41	92
Thiruvananthapuram	30	-7
Wyanad	45	102
Tamil Nadu		
Dharmapuri	25.2	152
Nagapattinam	26.6	110
Perambalur	27.7	40
Tirunelveli	29.7	63
Tiruvallur	24.0	101
Andhra Pradesh		
Rayalaseema		
Anantapur	23.4	516

Weather Forecast
(Valid upto 1430 hours of 25th April, 2010)



Rainfall is likely to occur at many places in Assam & Meghalaya, Arunachal Pradesh and at a few places in Nagaland, Manipur, Mizoram and Tripura. Rain is likely to occur at a few places for next 48 hours in Jammu & Kashmir, for next 24 hours in Coastal Karnataka, Lakshdweep Islands and at isolated places thereafter. Rainfall is likely to occur at isolated places over Himachal Pradesh, Gangetic West Bengal, Sikkim, Orissa, Coastal Andhra Pradesh, South Interior Karnataka, Tamil Nadu, Kerala, Andaman & Nicobar Islands. Either isolated rainfall will occur or dry or mainly dry weather will prevail over Uttarakhand, Bihar, Jharkhand, North Interior Karnataka, Telengana and Rayalaseema. Dry or mainly dry weather will prevail in remaining days over remaining States of the country during the period.

Warning

- Isolated heavy to very heavy rainfall with thunder squalls would occur over northeastern States during next 48 hours.
- Isolated thunder squall may occur over Bihar and West Bengal & Sikkim during next 48 hours.

Major crops in different States

- Wheat is at grain development / early maturity / maturity stage in Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Jharkhand, Orissa and South Madhya Pradesh and at early maturity/ maturity / harvesting stage in Punjab, Haryana, Delhi, Rajasthan, Jharkhand, Bihar, Madhya Pradesh, Assam and West Bengal, Sikkim.
- Summer / *boro* rice is at flowering/ grain formation stage in Orissa, Chhattisgarh, West Bengal, Sikkim and Assam.
- Mustard is at pod development / early maturity/ maturity stage in Punjab, Uttarakhand, Haryana, and Jharkhand, early maturity / maturity / harvesting stage in Himachal Pradesh, Delhi, Rajasthan.
- Potato is at maturity/ harvesting stage in Punjab, West Bengal.
- Sowing of summer green gram and black gram in Delhi, jute in West Bengal and Orissa, planting of ginger and turmeric in Assam and rice (third season) and vegetables in Kerala is in progress.

Salient advisories

- In view of prevailing high temperature in Punjab, Haryana and of Uttar Pradesh, farmers are advised to apply light and frequent irrigation to wheat wherever the crops are at dough stage to meet the excess evaporative demands. Farmers are also advised to apply light and frequent irrigation in other standing crops in above mentioned States .
- Harvesting of the already matured mustard is advised in Haryana, Punjab, Uttar Pradesh, Uttarakhand, Rajasthan and Delhi as weather will be mainly dry for the next five days. Immediate threshing after drying is advised. Attack of painted bug will be more if crop is kept in the field for long time after harvest. Farmers are advised to plough the field deep in hot summer to destroy the various stages of pest under heat.
- There is possibility of infestation of powdery mildew disease in mango in Rajasthan, due to rise in temperature, which leads to flower and fruit drop in mango. Spray Karathane @ 1 ml / litre of water to manage the disease.
- Under clear sky and low humidity condition for next five days, harvesting of mature wheat crop should be done as early as possible. Harvested crops should be properly tied to avoid being carried away by winds. Adequate drying of harvested grains before storage should be done.
- Threshing of harvested wheat gram, lentil and barley crops should be done as early as possible in Punjab in order to avoid damage from the dust storms. Store/market the thrashed grains to avoid possible damage from rain/thundershowers
- As scattered rain/thundershowers would occur over Jammu & Kashmir , suspend the harvesting of wheat and barley crop during these period. Due to possibility of getting rainfall showers top dressing of urea is advised in tomato, chilli, brinjal, bhindi, cucumber, sponge gourd and ridge gourd crop.. With receipt of good rains in high hills in Himachal Pradesh, prepare the basins of apple orchard and apply half dose of nitrogen when the sky is clear .Use net to protect stone fruit from hailstorm in mid hills.
- As there was sufficient rainfall during last week and rainfall is likely during next few days, postpone irrigation to the standing crops in Assam and Arunachal Pradesh.
- Due to increase in RH and probable increase in temperature in the coming days in Assam, the condition has been suitable for the attack by 'blast' disease in Ahu rice. Spray Bavistin @ 1 gm per litre of water when the symptoms appear when the weather is dry. Weeding may be done in case of direct seeded Ahu rice.
- As number of districts in Kerala received good amount of rainfall during last week and isolated rainfall is expected for next three days, farmers can skip irrigation during this week. Keep the copra and arecanut for drying only during the clear sky condition in Kannur, Mallapuram, Kozhikode, Kasaragod (Northern Zone). In Thrissur (Central Zone) Mulch the coconut basin using husks to reduce evapo transpiration. Coir pith @25kg/palm is an ideal mulching material to preserve moisture. In Vellayani (southern Zone) Harvest of third crop may be completed as immediately as possible since chances of light showers are

there. Farmers are advised to get ready for sowing of first crop. But sowing should be done only after the receipt of one or two good showers

- As the pre-monsoon shower is yet to start, and there is no chance of moderate and heavy rainfall, sowing operation of aus rice in New Alluvial zone of West Bengal may be postponed for the time being for some days if there is a lack of proper irrigation facility.
- Due to high humidity and temperature mite may cause serious damage to chilli causing longitudinal crinkling, curling, sometimes severe defoliation in South 24 Parganas and Purba Medinipore districts in West Bengal. Two spraying with any one of the acaricides like Ethion 50EC @ 1.5 ml / litre or Dicofol 18.5EC @ 3 ml / litre or profenophos @ 1.5 ml / litre of water at 10 days intervals, if attack is noticed.
- As there is possibility of rain / thundershower over the region for next three days, postpone irrigation to the standing crops. In view of isolated heavy to very heavy rainfall with thunder squalls during next 48 hours, also arrange for draining out excess water from the fields.
- In view of prevailing weather, postpone topdressing to ahu rice.
- Arrange for draining out excess water from the fields of SRI crop as there is possibility of isolated heavy rainfall over the region.
- 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 bajra, groundnut, greengram etc. in Gujarat.
- As mainly dry weather prevailed during last week in most of the districts of Maharashtra and mainly dry weather is likely to prevail during next five days, apply protective irrigation to the standing crops.
- Keep mulching in mango orchard in Gujarat to maintain moisture and protect the fruit from spongy tissue.
- Due to increase in temperature in Maharashtra, summer chilli is likely to be infested by thrips & mites; spray Methyl Dimeton 25 EC @ 15 ml or Dimethoate 30 EC@16 ml + Sulphur 80% @ 20 g in 10 litres water.
- As present weather conditions are favourable, farmers in Grid zone of Madhya Pradesh are advised to undertake sowing of summer moong and sunflower under irrigated conditions.
- Evaporations rates are presently higher due to higher temperature and it is being recorded around 10-12 mm/day in Chhattishgarh, which has increased the water requirements of summer crops like summer rice, vegetables, sunflower, green gram, groundnut etc. Hence, farmers are advised to apply light and frequent irrigation to these crops.
- Presently the maximum temperature is around 44°C and due to hot and dry winds banana and papaya fruits are damaged because of sun scorching. Hence, the farmers in Chhattishgarh 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.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Rainfall occurred at some places in Jammu & Kashmir and Himachal Pradesh during last week. No significant rainfall occurred in most of the districts of Uttarakhand. Dry weather prevailed over Punjab, Haryana, Delhi, Uttar Pradesh and Rajasthan.
- **Rainfall Forecast:** Either dry or mainly dry condition will prevail or isolated rain will occur in all the days in all the States of the region except in Jammu and Kashmir where rainfall is likely to occur at a few places during next two days.
- **Major Crops:**
 - Wheat (grain development / early maturity / maturity), mustard, gram and lentil (early maturity / maturity / harvesting) and vegetables (sowing / nursery sowing) in Himachal Pradesh.
 - Wheat, barley (grain development / early maturity / maturity), brown sarson (seed development / early maturity / maturity), vegetable crops (sowing / vegetative / flowering / fruiting / harvesting) in Jammu & Kashmir
 - Wheat (grain development / early maturity / maturity), mustard, lentil, gram (seed development / early maturity / maturity), pea, rajmah (pod development / early maturity) in Uttarakhand.
 - Wheat (early maturity / maturity / harvesting), raya, rapeseed and mustard (pod development / maturity), potato (maturity / harvesting) in Punjab.
 - Wheat (early maturity / maturity / harvesting), raya and mustard (pod development / maturity), summer sunflower, maize (early vegetative / vegetative) in Haryana
 - Wheat (maturity / harvesting); pea and gram (maturity / harvesting); mustard (maturity / harvesting) and vegetable crops (vegetative / flowering / fruiting / harvesting) in Delhi.
 - Wheat (maturity / harvesting), gram, pea, and lentil (seed maturity / harvesting) in Uttar Pradesh.
 - Wheat (maturity / harvesting), gram (maturity / harvesting), vegetable crops (flowering / fruiting / harvesting) in Rajasthan.
- **Advisory:**
 - In view of prevailing high temperature in Punjab, Haryana and Uttar Pradesh, farmers are advised to apply light and frequent irrigation to wheat wherever the crops are at dough stage to meet the excess evaporative demands. Farmers are also advised to apply light and frequent irrigation in other standing crops in above mentioned States.
 - Harvesting of the already matured mustard is advised in Haryana, Punjab, Uttar Pradesh, Uttarakhand, and Delhi as weather will be mainly dry for the next five days. Immediate threshing after drying is advised. Attack of painted bug will be more if crop is kept in the field for long time after harvest. Farmers are advised to plough the field deep in hot summer to destroy the various stages of pest under heat.
 - There is possibility of infestation of powdery mildew disease in mango in Rajasthan, due to rise in temperature, which leads to flower and fruit drop in mango. Spray Karathane @ 1 ml / litre of water to manage the disease.
 - Under clear sky and low humidity condition for next five days, harvesting of matured wheat crop should be done as early as possible. Harvested crops should be properly tied to avoid being carried away by winds. Adequate drying of harvested grains before storage should be done.
 - Threshing of harvested wheat, gram, lentil and barley crops should be done as early as possible in Punjab in order to avoid damage from the dust storms. Store / market the thrashed grains to avoid possible damage from rain / thundershowers
- As scattered rain/thundershowers would occur over Jammu & Kashmir, suspend the harvesting of wheat and barley crop during this period. Due to possibility of getting rainfall, top dressing of urea is advised in tomato, chilli, brinjal, bhindi, cucumber, sponge gourd and ridge gourd crop. With receipt of good rains

- in high hills in Himachal Pradesh, prepare the basins of apple orchard and apply half dose of nitrogen when the sky is clear .Use net to protect stone fruit from hailstorm in mid hills.
- Due to chances of rainfall/thundershowers farmers are advised to delay sowing of bhindi and radish and also application of urea in tomato, chilli, brinjal, bhindi, cucumber, sponge gourd and ridge gourd crop for 3 to 4 days in Jammu and Kashmir.
 - Due to increase in the maximum temperature white washing of lower portion of trunk of mango, litchi, citrus with thick solution of lime and small quantity of Copper Sulphate in order to protect the crop from heat in Jammu and Kashmir. As temperature is suitable, it is the optimum time for the sowing of okra, cucumber, beans, muskmelon, water melon, round gourd, bottle gourd, sponge gourd and bitter gourd in Jammu and Kashmir.
 - In Himachal Pradesh, it is right time to start sowing of pea in Miyad, Chandra, Tod valley of Lahaul and also in areas of Spiti valley where snow has melted. Use pea varieties like Azad P1 and P 89.
 - It is the right time for sowing of ageti bhindi in Himachal Pradesh (var. P-8, Prabhini Kranti, Arka Anamika) and frenchbean (var. Contender), *khira* , summer squash , bitter gourd, tori in polyhouses and also for transplanting and nursery sowing of brinjal (Arka Nidhi, PPC), Shimla mirch (California wonder), pepper (Surjmukhi) and tomato in polyhouses.
 - In areas of Himachal Pradesh where the snow cover has melted, especially in Spiti and Tod valley, go for immediate application of 220 g SSP and 115 g MOP for 1st year old plant and increase the dose with age as it's multiple.
 - In Rajasthan, it is right time for sowing cucurbitaceae vegetables like melon, bottlegourd, ridgegourd, bittergourd, pumpkin and smoothgourd etc. and for raising nursery for summer marigold.
 - Under prevailing weather light irrigation is also advised in onion crop in Delhi.
 - Weather conditions are favourable for sowing of summer green gram and black gram in Delhi, select varieties for - Green gram – Pusa Ratna, Pant mung 1, Samrat, SML-668, Pusa Vaisakhi, Pusa Vishal, Pusa 105, PDM-11, SML-32; for Black gram – Pusa 1, Ajad Urd 2, Narender Urd-1, T-9, P.D.U.-1. Seeds should be treated with crop specific *Rhizobium* culture as well as phosphorus solubilising bacteria. Seed rate – 15-20 kilogram per hectare. Depth of sowing should be 4-5 centimeter and row to row spacing should be 25-30 centimeter.
 - In Rajasthan, deep summer ploughing is recommended just after harvesting of *rabi* crops to control soil borne insects, diseases and nematode attack. This will also help in conserving rainfall in situ.
 - Collar rot, wilt and root rot in gram in Jammu & Kashmir, rogue out the severely infested plants and drench the affected areas with thiram or carbendazim and for leaf blight, spray mancozeb @ 0.25 % or carbendazim @0.1 % at disease appearance and repeat the spray after 10-15 days.
 - Weather conditions are favourable for late blight in appeain potato growing areas like Palam and Nagrota in Himachal Pradesh. To control spray Dithane M-45 @ 25 gram in 10 litres of water and repeat the spray at 10-15 days interval.
 - Due to dry weather there are chances of occurrence of Powdery mildew in Himachal Pradesh, to control spray Hexacoazole @ 100 ml per 200 liters of water after petal fall.
 - Take adequate steps to protect the animals from summer heat and stress in Punjab and Haryana. Keep the animal and poultry sheds clean and dry. Regularly deworm the calves with piperazine liquid (4ml per kg body weight) first at 10 days of age, then 15 days of age and then monthly upto 3 months of age and then 4 monthly upto 1 year of age. Make sure that all the animals are vaccinated against FMD. Increase protein level by increasing oilseed cakes by 5-7 per cent. Do not feed excess wheat/cereal to dairy animals. This can be fatal. It is best time to replace the stock. Reduce the thickness of litter and change the wet litter. Provide the cool and fresh water to birds. Provide sufficient water to avoid excess movement of birds. Proper vaccination schedule must be followed. White wash the poultry shed from outside especially roof. This will help to reflect the sun rays.

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

- **Realised Rainfall:** Most of the districts of Sub Himalayan West Bengal and Sikkim received rainfall during last week. Mainly dry weather prevailed over remaining parts of the region.
- **Rainfall Forecast:** Isolated rain will occur over West Bengal, Sikkim and Orissa during the period. Isolated rain is likely over Bihar and Jharkhand during next 24 hours and mainly dry weather will prevail thereafter.
- **Major Rabi Crops:**
 - Wheat (early maturity / maturity / harvesting), maize (cob formation), gram, pea, and lentil (pod maturity / harvesting), summer maize, moong and sunflower (early vegetative) in Bihar
 - Wheat (early maturity / maturity / harvesting), gram, arhar and peas (maturity / harvesting) in Jharkhand
 - sunflower, (vegetative), groundnut (pegging / pod formation) and summer rice (flowering / grain formation) in Orissa
 - Sugarcane (vegetative), vegetable crops (vegetative / flowering / fruiting / harvesting) and *boro* rice (flowering / grain formation) in West Bengal
 - High hills (1500- 2000 m) in Sikkim: large cardamom (vegetative), wheat (maturity / harvesting), seed potato (vegetative), *kharif* vegetable (sowing / nursery sowing); Medium hills (1000 - 1500 m): large cardamom (vegetative), orange (early flowering), *Rabi* potatoes (tuberization), mustard (harvesting), wheat (harvesting), maize (early vegetative / vegetative), *kharif* vegetable (sowing / nursery sowing), ginger (land preparation); Low Hills (Below 1000 m): large cardamom (vegetative / germination), *Rabi* potatoes (tuberization), mustard (harvesting), wheat (grain formation / maturity), maize (early vegetative / vegetative), *kharif* vegetables (sowing / nursery sowing), ginger (land preparation).
- **Advisories:**
 - In view of prevailing dry weather condition during last few weeks and also due to less possibility of rain during next five days along with persisting high temperature, farmers are advised to apply light and frequent irrigation to the standing crops in Gangetic West Bengal, Orissa, Bihar and Jharkhand. As there was good rain during last week in Sub Himalayan west Bengal and Sikkim, postpone irrigation to the crops of these regions.
 - As there was excess rainfall during last two weeks in Sikkim, farmers are advised to postpone irrigation to large cardamom, potato and maize. Undertake land preparation and sowing of maize.
 - As there is less possibility of rain during the period, harvest already matured crops of pulses in West Bengal, wheat, linseed, peas and lathyrus in Bihar and wheat in Jharkhand at the earliest taking the advantage of dry condition.
 - Under irrigated conditions, continue sowing operation of jute in West Bengal and Orissa. If there is no irrigation facility, postpone the sowing till rainfall occurs. The recommended varieties are Chaitali, Basudev, Naveen, Sonali, Sobujsona, Shyamali etc. in West Bengal and JRO-524 (Naveen) in Orissa.
 - As the pre-monsoon shower is yet to start, and there is no chance of moderate and heavy rainfall, sowing operation of *aus* rice in New Alluvial zone of West Bengal may be postponed for the time being for some days if there is a lack of proper irrigation facility.
 - Due to high humidity and temperature mite may cause serious damage to chilli causing longitudinal crinkling, curling, sometimes severe defoliation in South 24 Parganas and Purba Medinipore districts in West Bengal. Two spraying with any one of the acaricides like Ethion 50EC @ 1.5 ml / litre or Dicofol 18.5EC @ 3 ml / litre or profenophos @ 1.5 ml / litre of water at 10 days intervals, if attack is noticed.
 - Due to the cloudy sky, Brown Plant Hopper (BPH) may attack the rice plants in Coastal saline zone of West Bengal. Adults and nymphs should be found in the lower portion of the plant and causing hopper burn symptoms. Control measure should be taken when 15-20 nymphs or adults per hill are found.

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

- **Realised Rainfall:** Rainfall occurred in most of the 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 heavy to very heavy rainfall with thunder squalls would occur over northeastern States during next 48 hours.
- **Major Crops:**
 - Pea, arhar (maturity / harvesting), vegetables (vegetative / flowering / fruiting / harvesting), *boro* rice (grain formation), *ahu* rice (sowing / seedling / transplanting / tillering), sugarcane (planting), maize, jute, mesta (sowing) in Assam.
 - Pea (harvesting), maize (grain formation) in Arunachal Pradesh.
- **Advisory:**
 - As there is possibility of rain / thundershower over the region for next three days, postpone irrigation to the standing crops. In view of isolated heavy to very heavy rainfall with thunder squalls during next 48 hours, also arrange for draining out excess water from the fields.
 - In view of prevailing weather, postpone topdressing to *ahu* rice.
 - Arrange for draining out excess water from the fields of SRI crop as there is possibility of isolated heavy rainfall over the region.
 - Plucking of ripened pods of black gram and green gram may be started as soon as rain stops.
 - Due to increase in RH and high temperature in the coming days, the conditions may be suitable for the attack of blast disease in *ahu* rice. Spray Bavistin @ 1 g per litre of water when the symptoms appear. Undertake spraying after current spells of rain.
 - Postpone harvesting of matured rajmah, pea and arhar in view of heavy rain during next few days.
 - Undertake sowing of the crops like maize, jute, mesta and summer vegetables like Ladies finger, ridge gourd etc. and also planting of sugarcane setts after current spells of rain. High yielding varieties of maize are Ganga-5, Highstars, NLD, Dhawal, Navjot, Kissan, Vijay etc. Select varieties from Dhansiri, Kalang, Luhit, CO-Jor- 1, CO-Jor- 2 etc. for planting of sugarcane in Assam.
- **Animal Husbandry:**
 - Immunizations against FMD, HS and BQ in cattle & buffaloes and swine-fever in pigs may be carried out during pre-monsoon season.

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

- **Realised Rainfall:** Most of the districts of Karnataka, many districts of Kerala and some districts of Tamil Nadu received rainfall during last week. No significant rainfall occurred in remaining parts of the region.
- **Rainfall Forecast:** Either dry or mainly dry condition will prevail or isolated rain will occur in all the days in all the States of the region except in Coastal Karnataka where rainfall is likely to occur at a few places during next 24 hours.
- **Major Crops:**
 - Pigeon pea and sunflower (maturity / harvesting), Vegetables (Flowering / fruiting / harvesting) in Karnataka.
 - Rice (grain maturity / harvesting), Vegetables (flowering / fruiting / harvesting) and plantation crops (coconut, arecanut, pepper and cashew) in Kerala.
 - Rice (grain development), pulses (pod maturity), cotton (picking) in Tamil Nadu.
- **Advisories:**
 - As number of districts in Kerala received good amount of rainfall during last week and isolated rainfall is expected for next three days, farmers can skip irrigation during this week. Keep the copra and arecanut for drying only during the clear sky condition in Kannur, Mallapuram, Kozhikode, Kasaragod (Northern Zone). 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. In Vellayani (southern Zone) harvest of third crop may be completed as immediately as possible since chances of light showers

are there. Farmers are advised to get ready for sowing of first crop. But sowing should be done only after the receipt of one or two good showers.

- As there was no rainfall during last week and dry weather / no significant rainfall is likely for the next five days, farmers in Andhra Pradesh and Tamil Nadu are advised to apply irrigation to standing *rabi* crops and horticultural / plantation crops. As there was sufficient rainfall during last week in most of the districts of Karnataka, postpone irrigation to the standing crops.
- High temperature conditions prevailed over Telangana region in Andhra Pradesh. Farmers are advised to apply light and frequent irrigation to overcome heat injury on standing crops.
- . Farmers in Central zone of Kerala are advised to undertake mulching in the coconut basin using husks to reduce evapotranspiration. Coir pith @ 25 kg / palm is an ideal mulching material to preserve moisture. Irrigation can be continued. Protect palms from sun by wrapping stems with areca sheath or whitewash the exposed portion.
- Farmers in north eastern zone in Tamil Nadu are advised to spray 0.5% of Potassium Chloride to withstand the moisture scarcity.
- Under high temperature conditions spodoptera incidence is predominant in groundnut. Spraying of quinalpos @ 2 ml / litre or monocrotopos @ 1.6 ml / litre is recommended to control the pest.
- Prevailing weather conditions are congenial for the incidence and spread of murda disease, powdery mildew and die back disease in chilli in Belgaum and Haveru regions. Hence to manage the severity of murda disease, spray imidachloprid (17.8 SL) @ 0.30 ml/liter plus fenazaquin (10 EC) @2 ml/L or Dicofal @ 2.5 ml/litre. To control powdery mildew spray carbendizim (80% WS) @ 1 g/litre or hexacenzazole 1 ml/litre. Die back disease may be managed by spraying with hexacenzazole @ 1 ml / litre.
- Due to prevalence of higher relative humidity, arecanut crop may be infested with koleroga, hence farmers are advised to go for spraying of 1% Bordeaux mixture to control.
- In rice fallow cotton present weather conditions are favourable for occurrence of jassids, thrips, hoppers, and white flies. To check the prevalence of these insects use yellow trap smeared with castor oil or white grease and spray any one of the blue labelled systemic insecticide along with sticking agent at recommended dose.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rain occurred in Sindhudurg, Kolhapur, Sangli and Satara districts of Maharashtra during last week. Mainly dry weather prevailed over remaining parts of the region.
- **Rainfall Forecast:** Mainly dry weather is likely to prevail over the region during the period.
- **Major Crops:**
 - In Maharashtra: Vegetables (vegetative / flowering / fruiting / harvesting), summer rice (grain formation / grain maturity in South Konkan and flowering / grain formation in East Vidarbha), summer groundnut (pod maturity / harvesting in South Konkan and flowering / pegging / pod formation in other region), summer sunflower (flowering/ head formation), summer maize (tasseling & silking / cob initiation), summer *bajra* (flowering / grain formation & grain maturity at some places).
 - In Gujarat: Green gram (pod formation), summer groundnut (pod formation) 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 *bajra*, groundnut, greengram etc. in Gujarat.
 - As mainly dry weather prevailed during last week in most of the districts of Maharashtra and mainly dry weather is likely to prevail during next five days, apply protective irrigation to the standing crops.
 - Due to increase in evaporation, farmers are advised to apply irrigation in groundnut at 8-10 days interval in Maharashtra.
 - Due to clear sky forecast, farmers are advised to thresh dried up isabgul crop in Gujarat during early morning.

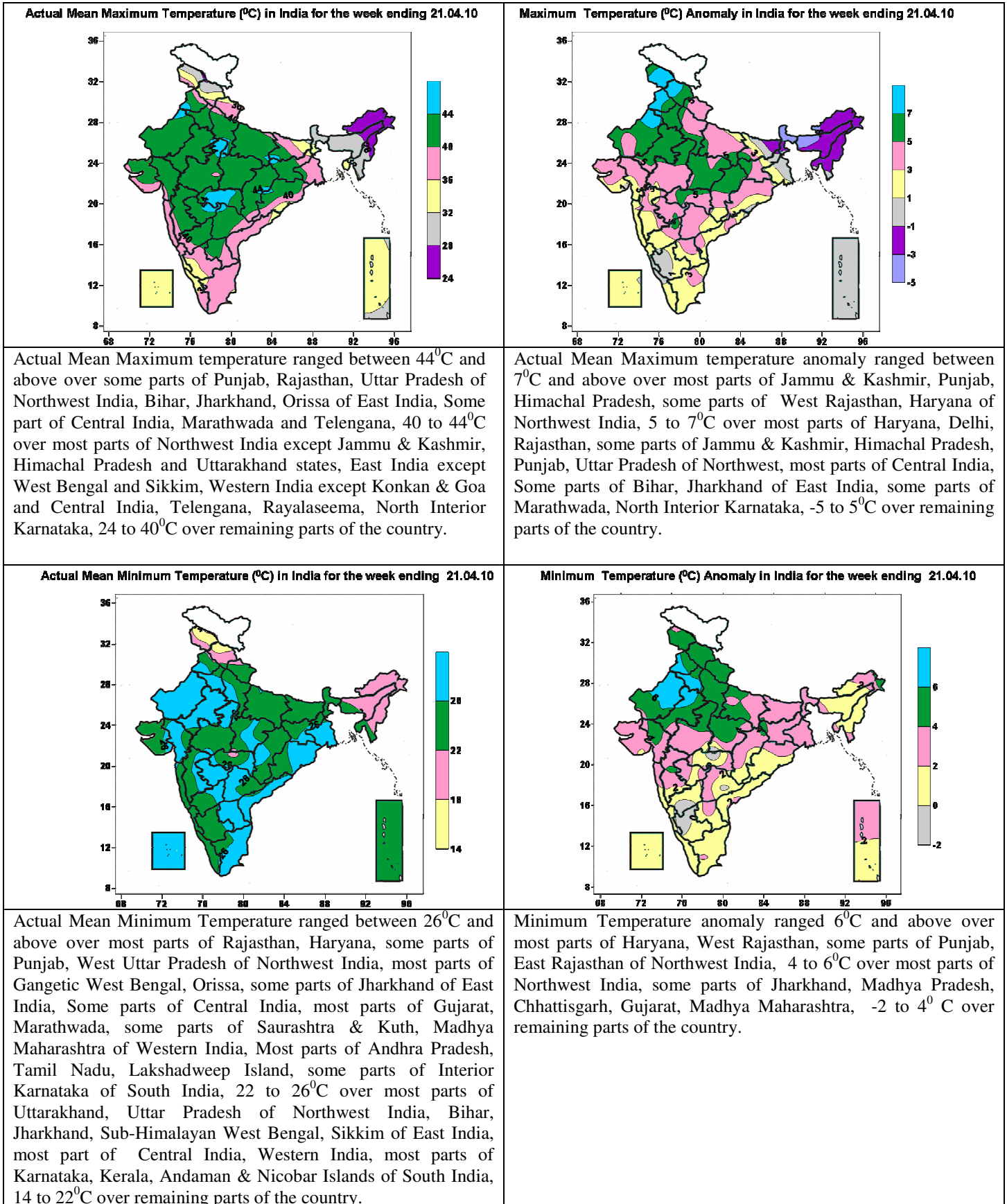
- Due to prevailing high temperature, cover papaya fruits using gunny bags in Gujarat. Irrigate pomegranate, sapota, lemon and papaya orchards to protect the crops from heat stress.
- To protect newly planted grafts of coconut and arecanut, in Maharashtra, from bright sunlight, shades may be prepared from south side and mulching may be done with grass or paddy straws.
- Keep mulching in mango orchard in Gujarat to maintain moisture and protect the fruit from spongy tissue.
- Due to increase in temperature, premature fruit dropping may occur in mango in Maharashtra, to reduce the same, provide irrigation to mango @ 150 to 200 litres / plant at fortnightly interval and spray 2% urea (20 g / litre water).
- Due to cloudy weather, tomato is likely to be infested in Maharashtra by fruit borer, thrips, white fly & leaf caterpillar. Spray alternately Imidachloprid @ 4 ml or Dimethoate @ 10 ml or Methyl dimeton @ 10 ml in 10 litres of water at 10-15 days interval.
- Due to increase in temperature in Maharashtra, summer chilli is likely to be infested by thrips & mites; spray Methyl Dimeton 25 EC @ 15 ml or Dimethoate 30 EC @ 16 ml + Sulphur 80% @ 20 g in 10 litres water.
- To protect from high temperature, keep animals under shade during noon hours and provide clean drinking water. Avoid transportation of poultry birds during noon time. Put curtains on north-west side of poultry house and sprinkle water on curtains during noon time.
- The growth of fishes and water in the pond may be checked periodically in Maharashtra. Natural feed and supplementary feed like groundnut cake, rice or wheat bran be mixed in 1:1 proportion and mixed with water and given twice a day.

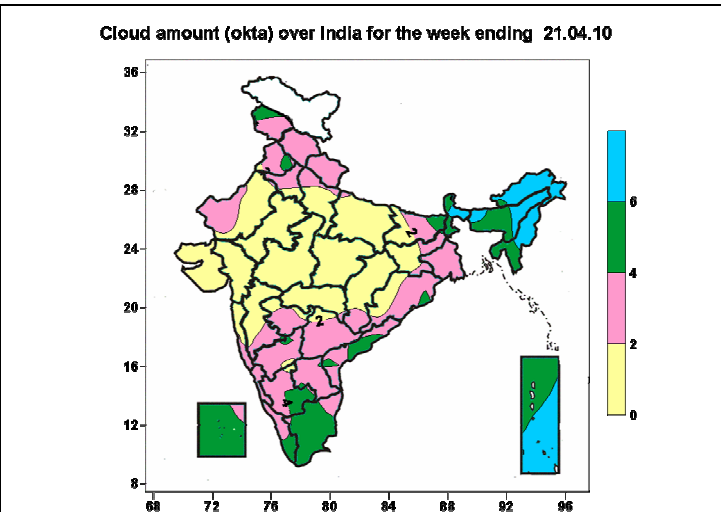
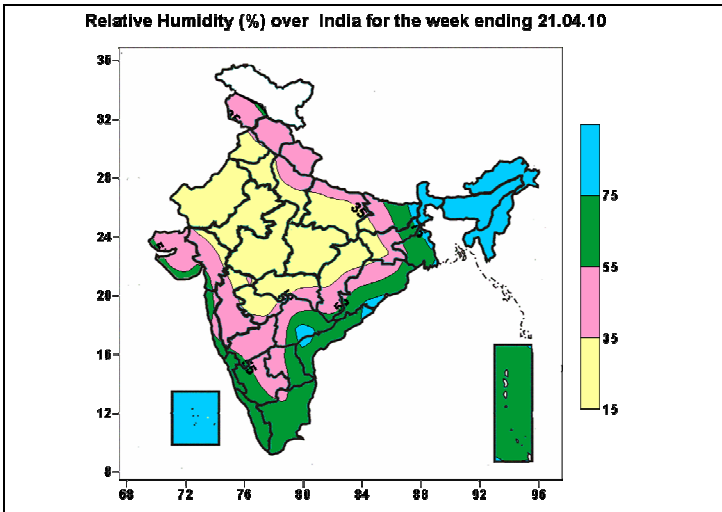
CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Mainly dry weather prevailed over the region during last week.
- **Rainfall Forecast:** Mainly dry weather will prevail over the region during the period.
- **Major Crops:**
 - Wheat (maturity / harvesting), pulses (grain maturity / harvesting), sugarcane (cane development), and vegetable crops (vegetative / flowering / fruiting) in Madhya Pradesh.
 - *Boro* rice (flowering / grain formation), sesame (vegetative / flowering / pod formation) in Chhattisgarh.
- **Advisory:**
 - In view of prevailing dry weather condition during last few weeks and also during next five days along with persisting high temperature over central India, farmers are advised to apply light and frequent irrigation to the standing crops to meet the excess evaporative demands.
 - As present weather conditions are favourable, farmers in Grid zone of Madhya Pradesh are advised to undertake sowing of summer moong and sunflower under irrigated conditions.
 - Evaporations rates are presently higher due to higher temperature and it is being recorded around 10-12 mm/day in Chhattisgarh, which has increased the water requirements of summer crops like summer rice, vegetables, sunflower, green gram, groundnut etc. Hence, farmers are advised to apply light and frequent irrigation to these crops.
 - Presently the maximum temperature is around 44°C and due to hot and dry winds banana and papaya fruits are damaged because of sun scorching. Hence, the farmers in Chhattisgarh 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.
 - After harvesting of *rabi* crops deep ploughing is advised wherever sufficient soil moisture is there in the fields, particularly in those fields where wilt, stem rot and nematode diseases are frequently observed, to facilitate soil solarisation to control these pests and diseases.
- **Animal Husbandry**
 - Due to forecast of high temperature in coming days in Madhya Pradesh, farmers are advised to provide clean drinking water to cattle. Prevent young calves from scorching sun.

Annexure I

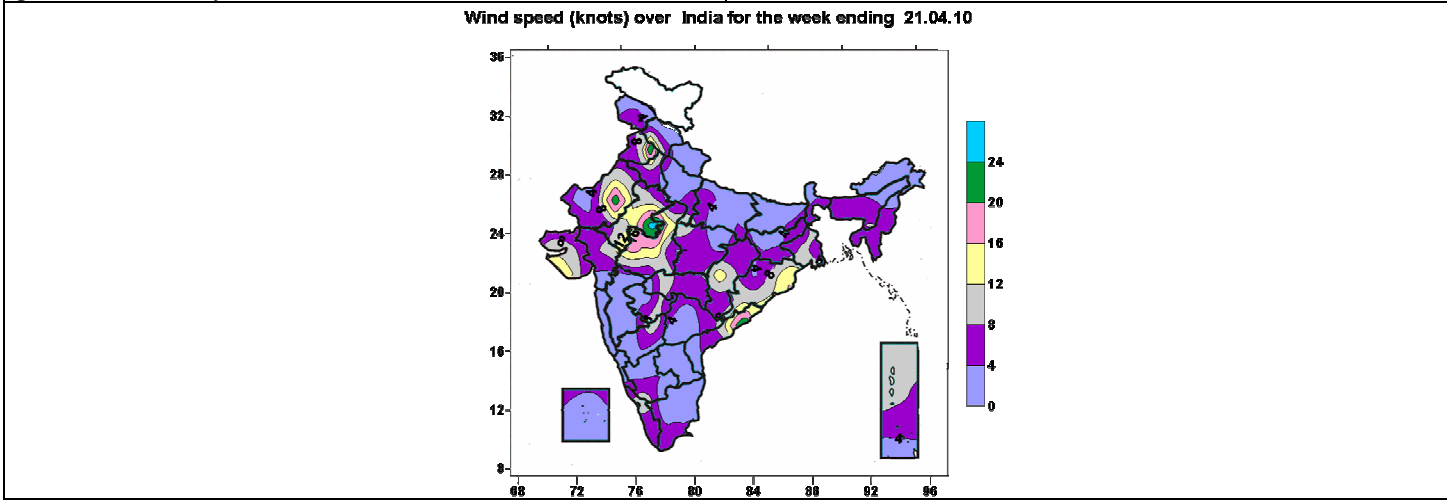
Contour maps o for the week ending 21.04.10





Relative humidity between 75% and above over most parts of Northeast India, most parts of Sub-Himalayan West Bengal and Sikkim, some parts of Bihar, Jharkhand, Orissa of East India, most parts of Lakshadweep Islands, some parts of Telengana, Coastal Andhra Pradesh of South India, 55 to 75% over most parts of Gangetic West Bengal, Orissa, some parts of Bihar, Jharkhand of East India, Most parts of Andhra Pradesh, Tamil Nadu, Kerala, Coastal, South Interior Karnataka, Andaman & Nicobar Islands of South India, most parts of Konkan & Goa, Coastal Kutch, of Western India, 15 to 55% over remaining parts of the country.

Cloud amount 6 okta and above over most parts Northeast India, Andaman & Nicobar Islands of South India, some parts of Sub-Himalayan West Bengal, 4 to 6 okta over some parts of Jammu & Kashmir, Punjab of Northwest India, most parts of Sub-Himalayan West Bengal, Sikkim, some parts of Bihar, Orissa of East India, most parts of Meghalaya, Mizoram, Tripura of Northeast India, Most Parts of Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, some parts of Coastal Andhra Pradesh, Interior Karnataka, Kerala of South India, 0 to 4 okta over remaining parts of the country.



Wind speed ranged between 24 knots and above over some parts of Punjab, East Rajasthan in Northwest India, 20 to 24 knots over some parts of Punjab, Rajasthan, of Northwest India, North Coastal Andhra Pradesh of South India, 16 to 20 over some parts of Punjab, West Rajasthan of Northwest India, some parts of North Coastal Andhra Pradesh, 12 to 16 over some parts of Himachal Pradesh, Punjab, Haryana, Rajasthan of Northwest India, West Madhya Pradesh, Chattisgarh of Central India, Saurashtra & Kutch of Western India, some parts of Orissa of East India, some parts of North coastal Andhra Pradesh, 0 to 12 knots over remaining parts of the country.