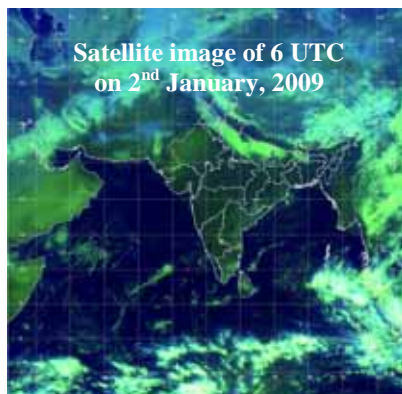




National Agromet Advisory Bulletin

Thursday, 1st January, 2009

(For the period 1st to 5th January, 2009)



Forecast for South India (valid upto 1430 hours IST of 4th January, 2009)

- Rain/thundershowers are likely at isolated places over Nicobar Islands.
- Mainly dry weather is likely over the rest region.

Status of Northeast Monsoon

- Fairly widespread rain/thundershowers occurred on 28th and isolated rainfall occurred on remaining days during 26th – 30th December over Andaman & Nicobar Islands.
- Isolated rain/thundershower occurred over Tamil Nadu & Pudducherry during a few days of the week.

Advisories for Tamil Nadu

- As there was no sufficient rain during last week over the state and mainly dry weather is likely to prevail for the next five days, farmers are advised to apply irrigation to the crops.
- Continue harvesting of cereals and pulses as dry condition prevails during these days.
- Under prevailing weather undertake intercultural operations, application of fertilizers and pesticides in rice, banana, sugarcane, cotton, maize, sorghum and pulse crops.
- Undertake land preparation and sowing and transplanting of vegetable crops like bhindi, tomato, cowpea, dolichos and chilly and transplanting of onion seedlings as conducive weather conditions prevail.

Advisories for Kerala

- As there was no significant rain during last week in the State and no significant rain is likely to occur for next five days, farmers are advised to apply irrigation to the crops.
- As weather condition is favourable, complete sowing of *puncha* rice and undertake sowing of water melon and vegetable crops like bitter gourd, snake gourd and cowpea.
- Provide thatches to protect young seedlings of coconut, arecanut and black pepper from sun scorching.

Advisories for Andhra Pradesh and Karnataka

- As there was no significant rain during last week in these States and no significant rain is likely to occur for next five days, farmers are advised to apply irrigation to the crops.
- Farmers in Krishna, West Godavari, Guntur and Prakasam districts of Andhra Pradesh are advised to undertake sowing of rice fallow maize and rice fallow pulse crops during these days.

Advisories for Northern India

- Due to low temperature cold injury may occur in the crops in Jammu and Kashmir, Punjab, Haryana, Delhi, Himachal Pradesh, Uttarakhand and in parts of Madhya Pradesh, Uttar Pradesh and Rajasthan. Farmers are advised to apply light and frequent irrigation to the crops as well as arrange for smoking in these States to protect the crops from cold injury.

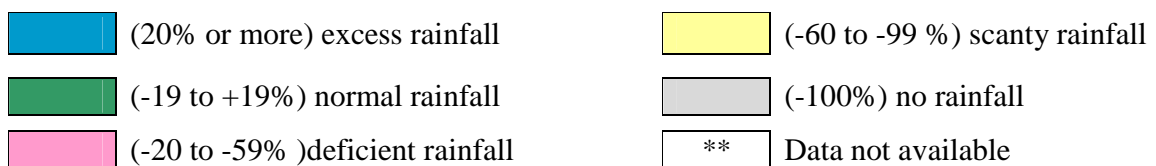
Issued by

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

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

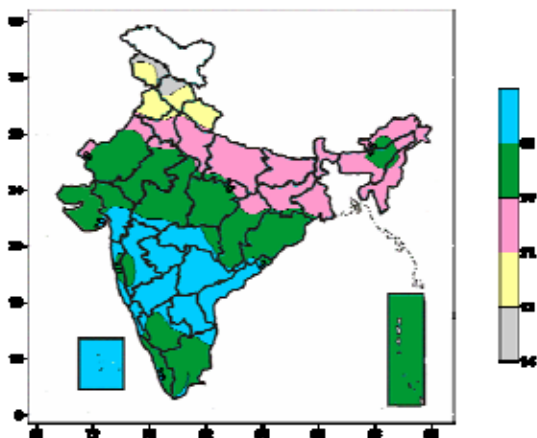
Comparison of weekly rainfall distribution (in % dep.) in different Met. Sub-divisions during past 5 weeks					
Sub-division	Cumulative Rainfall (% Dep.) for the period				
	3 rd December	10 th December	17 th December	24 th December	31 st December
A & N Islands	-55	-60	-98	-92	46
Arunachal Pradesh	-99	-99	-89	-32	-87
Assam and Meghalaya	-99	-99	-97	-86	-59
NNMT	-100	-99	-100	-100	15
SH West Bengal & Sikkim	-93	-84	-99	-89	163
Gangetic West Bengal	-100	-100	-100	-100	-100
Orissa	-99	-100	-100	-100	-100
Jharkhand	-100	-100	-100	-100	-100
Bihar	-100	-100	-94	-95	-100
East Uttar Pradesh	-100	-100	-92	-100	-100
West Uttar Pradesh	-100	-100	-88	-100	-100
Uttarakhand	-100	-100	-50	-33	-100
Haryana, Chandigarh & Delhi	-100	-100	263	-100	-100
Punjab	-100	-89	-100	-66	-100
Himachal Pradesh	-100	-79	-100	122	-100
J & K	-99	340	-100	173	-100
West Rajasthan	-100	346	-99	52	-100
East Rajasthan	-92	-100	-99	-100	-100
West M. P.	-97	-100	-100	-100	-100
East M. P.	-100	-100	-100	-100	-100
Gujarat region	93	-100	-100	-100	-100
Saurashtra & Kutch	2493	-100	-100	-100	-100
Konkan and Goa	31	-66	-100	-100	-100
Madhya Maharashtra	-26	-100	-100	-100	-100
Marathwada	-87	-100	-100	-100	-100
Vidarbha	-87	-100	-100	-100	-100
Chhattisgarh	-100	-100	-100	-100	-100
Coastal A. P.	1129	-100	-100	-94	-80
Telangana	281	-100	-100	-100	-100
Rayalseema	1018	-100	-100	-100	-100
TamilNadu & Pondicherry	415	-35	15	-72	-95
Coastal Karnataka	221	-100	-100	-100	-100
N. I. Karnataka	505	-100	-100	-100	-100
S. I. Karnataka	291	-99	-100	-100	-100
Kerala	73	-77	-47	-96	-100
Lakshadweep	-73	188	207	290	-100

The sub divisions like Arunachal Pradesh, Assam & Meghalaya, Gangetic West Bengal, Orissa, Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Punjab, East Rajasthan, Madhya Pradesh, Madhya Maharashtra, Marathwada, Vidarbha and Chhattisgarh received scanty / deficient rain in all the 5 weeks; Andaman Nicobar Island, Nagaland, Manipur, Mizoram, Tripura, Sub-Himalayin West Bengal and Sikkim, Haryana, Chandigarh, Delhi, Himachal Pradesh, Gujarat region, Saurashtra & Kutch, Konkan & Goa, Andhra Pradesh, Karnataka and Kerala received scanty / deficient rain in 4 out of last 5 weeks; Jammu & Kashmir, West Rajasthan, Tamil Nadu and Pondicherry received scanty / deficient rain in 3 out of last 5 weeks. Other subdivisions received normal or excess rain for at least 3 weeks out of last 5 weeks.



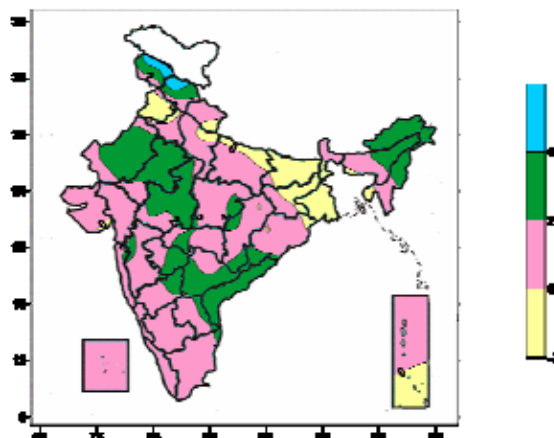
Contour maps for the week ending 31.12.08

Actual Mean Maximum Temperature (°C) in India for the week ending 31.12.08



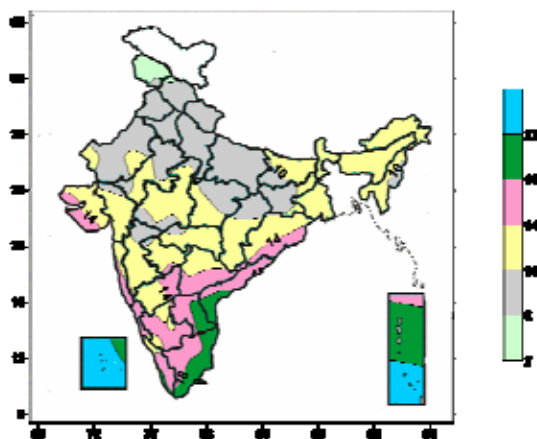
Actual Mean Maximum Temperature ranged between 30 to 34°C over most parts of Marathwada, Madhya Maharashtra, Vidarbha, North Interior Karnataka, Andhra Pradesh, Lakshadweep, some parts of Gujarat, Konkan & Goa, Coastal & south Interior Karnataka and Tamil Nadu, 22 to 26°C over most parts of Haryana, Delhi, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Northeast India, some parts of Rajasthan, Madhya Pradesh and Chattisgarh, 18 to 22°C over most parts of Punjab, Uttarakhand, some parts of Jammu & Kashmir, Haryana, Himachal Pradesh and West Uttar Pradesh, 14 to 18°C over some parts of Jammu & Kashmir and Himachal Pradesh and 26 to 30°C in remaining parts of the country.

Maximum Temperature (°C) Anomaly in India for the week ending 31.12.08



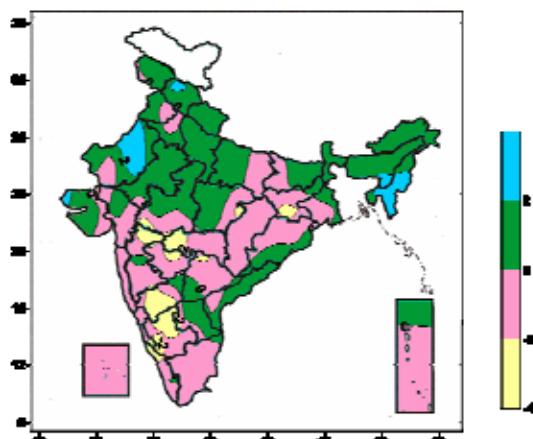
Maximum Temperature anomaly ranged between 4 to 6°C over some parts of Jammu & Kashmir, Himachal Pradesh, 2 to 4°C over most parts of Rajasthan, West Madhya Pradesh, Arunachal Pradesh, Coastal Andhra Pradesh, some parts of Jammu & Kashmir, Himachal Pradesh, Assam, Nagaland, Manipur, Mizoram, Tripura, East Madhya Pradesh, Chhattisgarh, Orissa, Maharashtra, North Interior Karnataka, Telengana, Rayalaseema, Tamil Nadu, -2 to 0°C over most parts of Punjab, Bihar, Jharkhand, Gangetic West Bengal, some parts of Haryana, Uttarakhand, Uttar Pradesh, Sub-Himalyian West Bengal, Assam, Tripura, Orissa, Saurashtra & Kutch, Andman & Nicobar Island and 0 to 2°C over remaining parts of the country.

Actual Mean Minimum Temperature (°C) in India for the week ending 31.12.08



Actual Mean Minimum Temperature ranged between 22 to 26°C over most parts of Lakshadweep, some parts of Andaman Nicobar Islands, 18 to 22°C over some parts of Raylaseema, Coastal Andhra Pradesh, Tamil Nadu, Kerala, Lakshadweep, Andman & Nicobar Islands, 14 to 18°C over some parts of Saurashtra & Kutch, Konkan & Goa, Marathwada, Orissa, Andhra Pradesh, Karnataka, Tamil Nadu, Kerala, Andaman & Nicobar Island, 6 to 10°C over most parts of Punjab, Haryana, Himachal Pradesh, Uttarakhand, Uttar Pradesh, some parts of Jammu & Kashmir, Bihar Jharkhand, Nagaland, Manipur, Rajasthan, Madhya Pradesh, Chhattisgarh, Gujarat, Madhya

Minimum Temperature (°C) Anomaly in India for the week ending 31.12.08

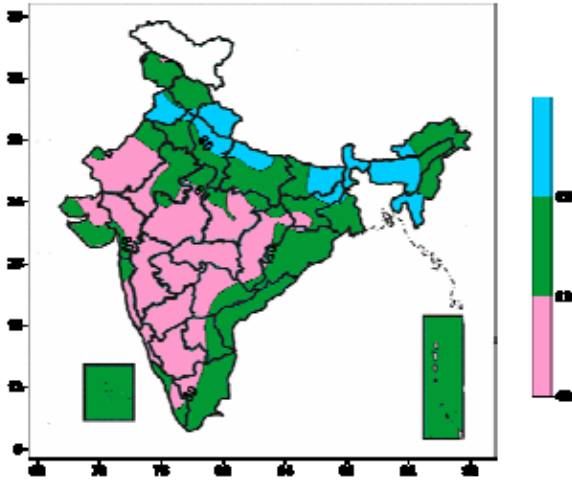


Minimum Temperature anomaly ranged between 2 to 4°C over most parts of Manipur, Mizoram, some parts of Himachal Pradesh, West Rajasthan, Saurashtra & Kutch, Assam, 0 to 2°C over most parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, West Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Assam, Arunachal Pradesh, Nagaland, East Rajasthan, Coastal Andhra Pradesh, some parts of Punjab, Haryana, Delhi, East Uttar Pradesh, Bihar, Jharkhand, Gangetic West Bengal, Orissa, Tripura, West Rajasthan, Gujarat, Madhya Maharashtra, Madhya Pradesh, North Interior

Maharashtra, Marathwada, Vidarbha, 2 to 6⁰C over most parts of Jammu & Kashmir, some parts of Himachal Pradesh, and 10 to 14⁰C over remaining parts of the country.

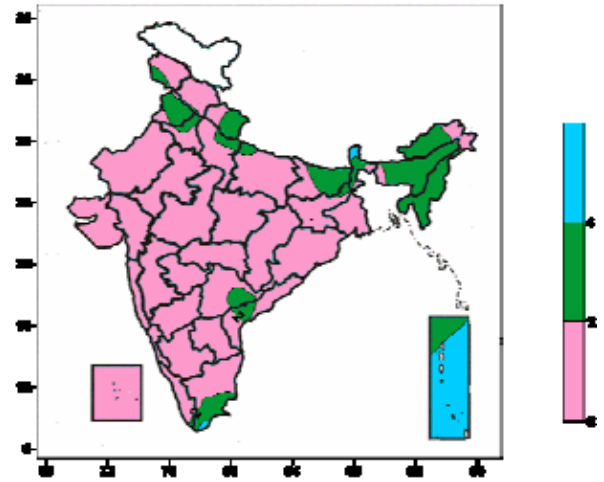
Karnataka, Interior Andhra Pradesh, Kerala, Tamil Nadu, Andman & Nicobar Islands, -4 to -2⁰C over some parts of Jharkhand, Madhya Pradesh, Madhya Maharashtra, Marathwada, Vidarbha, Telangana, Karnataka, Kerala, -2 to 0⁰C over remaining parts of the country.

Relative Humidity (%) over India for the week ending 31.12.08



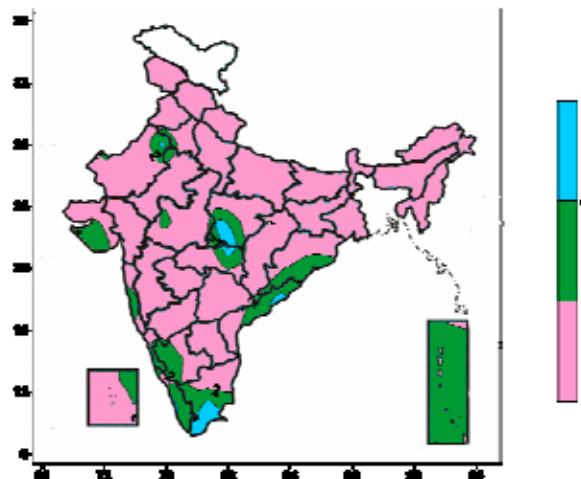
Relative humidity ranged from 80 to 100% over most parts of Punjab, Uttarakhand, Sub Himalayan West Bengal & Sikkim, some parts of Himachal Pradesh, Haryana, Uttar Pradesh, Bihar, Jharkhand, Northeast India, 40 to 60% over most parts of West Rajasthan, Gujarat, Madhya Pradesh, Chattisgarh, Maharashtra, Karnataka, some parts of Jharkhand, East Rajasthan, Saurashtra & Kutch, Telangana, Raylaseema, Kerala, Tamil Nadu and 60 to 80% over remaining parts of the country.

Cloud amount (okta) over India for the week ending 31.12.08



Cloud amount ranged from 4 to 6 okta over most parts of Andaman & Nicobar island, some parts of Sikkim, Tamil Nadu, 2 to 4 okta over most parts of North East India, Sub-Himalayan West Bengal, Bihar, Punjab, some parts of Jammu & Kashmir, Haryana, Uttarakhand, Uttar Pradesh, Coastal Andhra Pradesh, Telangana, Kerala, Tamil Nadu, Andaman & Nicobar Islands, 0 to 2 remaining parts of the country.

Wind speed (knots) over India for the week ending 31.12.08









Wind speed ranged between 4 to 6 knots over some parts of East Madhya Pradesh, Vidarbha, West Rajasthan, Coastal Andhra Pradesh, Tamil Nadu, 2 to 4 knots over most parts of Andaman Nicobar islands, Kerala, some parts of Haryana, west Rajasthan, Saurashtra & Kutch, Madhya Pradesh, Orissa, Coastal Andhra Pradesh, Konkan & Goa, Coastal Karnataka, South Interior Karnataka, Tamil Nadu, Lakshdweep, 0 to 2 knots over remaining parts of the country .

Districts experiencing stress condition (% Departure of weekly rainfall) in South India

*** Most Stress					
State/Districts	03/12/08	10/12/08	17/12/08	24/12/08	31/12/08
Karnataka					
Coastal Karnataka					
Dakshin Kannada	695	-100	-100	-100	-100
Udupi	254	-100	-100	-100	-100
Uttar Kannada	10	-100	-100	-100	-100
North Interior Karnataka					
Bagalkote	223	-100	-100	-100	-100
Belgaum	605	-100	-100	-100	-100
Bidar	-2	-100	-100	-100	-100
Bijapur	213	-100	-100	-100	-100
Dharwad	1086	-100	-100	-100	-100
Gadag	1485	-100	-100	-100	-100
Gulbarga	421	-100	-100	-100	-100
Haveri	342	-100	-100	-100	-100
Koppal	169	-100	-100	-100	-100
Raichur	38	-100	-100	-100	-100
South Interior Karnataka					
Bangalore Rural	127	-100	-100	-100	-100
Bangalore Urban	823	-100	-100	-100	-100
Bellary	176	-100	-100	-100	-100
Chamarajnagar	362	-91	-100	-100	-100
Chickmagalur	324	-100	-100	-100	-100
Chitradurga	459	-100	-100	-100	-100
Davangere	695	-100	-100	-100	-100
Hassan	312	-99	-100	-100	-100
Kodagu	56	-100	-100	-100	-100
Kolar	292	-100	-100	-100	-100
Mandya	279	-99	-100	-100	-100
Mysore	111	-100	-100	-100	-100
Shimoga	53	-100	-100	-100	-100
Tumkur	407	-100	-100	-100	-100
Kerala					
Alappuzha	108	-48	-23	-100	-100
Kannur	51	-100	-75	-100	-100
Idukki	1	-86	-100	-100	-100
Kollam	99	-62	-100	-58	-100
Malappuram	-21	-100	-100	-100	-100
Palakkad	-89	-100	-100	-95	-100
Pathanamthitta	398	-51	-100	-100	-100
Thiruvananthapuram	270	-57	-72	-93	-100
Thrissur	-36	-99	-89	-100	-100
Wyanad	-39	-100	-100	-100	-100
Tamil Nadu					
Chennai	475	-89	-99	-100	-99
Dharmapuri	746	-97	-100	-100	-100
Kanchipuram	561	-61	-99	-100	-100
Kanyakumari	166	-39	-51	-70	-100
Krishnagiri	586	-97	-100	-100	-100
Namakkal	788	-71	-32	-100	-100
Salem	753	-74	-59	-100	-94
Theni	55	-81	-27	-95	-100
Tiruvallur	652	-88	-100	-100	-100
Tiruvannamalai	978	-67	-99	-100	-100
Vellore	819	-96	-100	-100	-100
Villupuram	741	-28	-76	-100	-100
Virudhunagar	43	-55	-34	-78	-100

Andhra Pradesh					
Coastal Andhra Pradesh					
Krishna	1587	-100	-100	-100	-100
Nellore	904	-100	-100	-100	-100
Prakasam	2656	-100	-100	-100	-100
Sirkakulam	-100	-100	-100	-100	-100
Visakhapatnam	-57	-92	-100	-100	-100
Vizianagram	-100	-100	-100	-100	-100
West Godavari	345	-100	-100	-100	-100
Telangana					
Adilabad	-95	-100	-100	-100	-100
Hyderabad	650	-100	-100	-100	-100
Karimnagar	-100	-100	-100	-100	-100
Khammam	367	-100	-100	-100	-100
Mehabubnagar	580	-100	-100	-100	-100
Medak	106	-100	-100	-100	-100
Nalgonda	1142	-100	-100	-100	-100
Nizamabad	-21	-100	-100	-100	-100
Rangareddy	600	-100	-100	-100	-100
Warangal	-87	-100	-100	-100	-100
Rayalaseema					
Anantapur	760	-100	-100	-100	-100
Chittoor	907	-100	-100	-100	-100
Cuddapah	1003	-100	-100	-100	-100
Kurnool	3317	-100	-100	-100	-100

* Stress					
State/Districts	03/12/08	10/12/08	17/12/08	24/12/08	31/12/08
Kerala					
Ernakulam	12	-100	188	-100	-100
Kasaragod	1381	-100	0	-100	-100
Kottayam	13	32	150	-100	-100
Kozhikode	-100	-100	-3	-100	-100
Tamil Nadu					
Coimbatore	-2	-71	-18	-96	-100
Cuddalore	304	10	112	-100	-99
Dindigul	150	28	57	-94	-100
Erode	409	-59	1	-100	-100
Karur	539	-3	56	-100	-100
Madurai	176	-86	26	-99	-100
Nagapattinam	151	-17	150	-96	-77
Nilgiris	106	-37	14	-100	-100
Perambalur	698	-8	77	-100	-100
Pudukottai	360	-44	76	-98	-98
Sivaganga	56	-25	108	-67	-100
Thanjavur	654	-5	119	-95	-93
Tiruvarur	469	13	76	-94	-81
Trichy	923	4	164	-100	-100

 (20% or more) excess rainfall	 (-60 to -99 % scanty rainfall)
 (-19 to +19%) normal rainfall	 (-100% no rainfall)
 (-20 to -59%) deficient rainfall	 ** Data not available

No districts in South India experienced more stress condition during earlier weeks.

*** Most stress (more than 3 weeks continuously deficient to no rain)

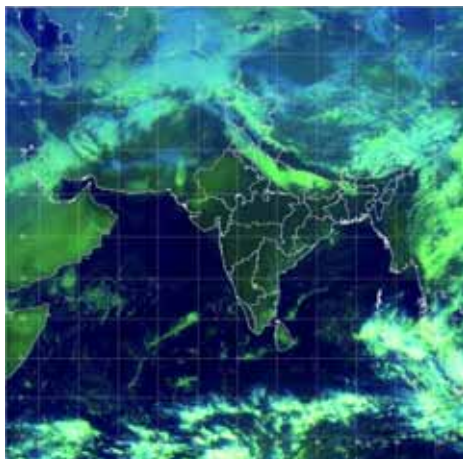
**More stress (3 weeks continuously deficient to no rain)

*Stress (2 weeks continuously deficient to no rain).

Chief Synoptic Feature (Based on 1430 hours IST observations of 1st January, 2009)

- Fog condition prevailed over parts of Punjab, Haryana & Delhi, Uttar Pradesh and Bihar. Current Meteorological Analysis suggests that shallow fog conditions are likely to prevail over plains of northwest and adjoining east India mainly in morning hours during next 2 days.
- Cold day conditions prevailed over Haryana & Delhi, where maximum temperature were equal to or less than 16.0°C.
- A fresh western disturbance and its induced upper air cyclonic circulation is likely to affect Western Himalayan Region and adjoining plains of north India mainly on 3rd & 4th January, 2009. Rise in Minimum temperature is also likely over plains of northwest India during the same period.

Satellite image of 6 UTC on 2nd January, 2009



Zone-wise Forecast

NORTHWEST INDIA [J & K, H. P., UTTARAKHAND, PUNJAB, HARYANA, DELHI, WEST UP] (Forecast valid upto 1430 hours IST of 4th January, 2009)

- Isolated rain/snow is likely over Jammu & Kashmir on 2nd and at many places thereafter.
- Mainly dry weather is likely over Himachal Pradesh and Uttarakhand during next 48 hours and scattered rain/snow thereafter.
- Mainly dry weather is likely over Punjab, north Haryana and Chandigarh during next 48 hours and isolated rain/thundershowers thereafter.

Quantitative District Weather Forecast for next five days:

- There is possibility of light to moderate rain over Jammu & Kashmir, light to rather moderate rain over Himachal Pradesh and Uttarakhand and light rain over Punjab and Haryana.
- Mainly dry weather is likely over the rest region.

EAST INDIA [EAST UP, JHARKHAND, BIHAR, ORISSA, WEST BENGAL & SIKKIM] (Forecast valid upto 1430 hours IST of 4th January, 2009)

- Rain/thundershowers are likely at isolated places over Sub-Himalayan West Bengal & Sikkim.
- Mainly dry weather is likely over the rest region.

Quantitative District Weather Forecast for next five days:

- Light to rather moderate rainfall is likely to occur over Sub-Himalayan West Bengal & Sikkim and mainly dry weather is likely over the rest region.

NORTHEAST INDIA [Arunachal Pradesh, NMM & T, Assam, Meghalaya] (Forecast valid upto 1430 hours IST of 4th January, 2009)

- Rain/thundershowers are likely at isolated places over Arunachal Pradesh, Assam and Maghalaya.
- Mainly dry weather is likely over the rest region.

Quantitative District Weather Forecast for next five days:

- Light rainfall is likely to occur over Arunachal Pradesh, Assam and Maghalaya and mainly dry weather is likely over the rest region.

SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS] (Forecast valid upto 1430 hours IST of 4th January, 2009)

- Rain/thundershowers are likely at isolated places over Nicobar Islands.
- Mainly dry weather is likely over the rest region.

Quantitative District Weather Forecast for next five days:

- Light rainfall is likely to occur over Andaman & Nicobar Islands and mainly dry weather is likely over the rest region.

WEST INDIA [GOA, MAHARASHTRA (OTHER THAN VIDARBHA), GUJARAT, RAJASTHAN] (Forecast valid upto 1430 hours IST of 4th January, 2009)

- Mainly dry weather is likely over the region.

Quantitative District Weather Forecast for next five days:

- Mainly dry weather is likely over the region.

CENTRAL INDIA [M.P., CHHATTISGARH, VIDARBHA] (Forecast valid upto 1430 hours IST of 4th January, 2009)

- Mainly dry weather is likely over the region.

Quantitative District Weather Forecast for next five days:

- Mainly dry weather is likely over the region.

Weather Outlook from 1430 IST of 4th January, 2009 to 1430 IST of 6th January, 2009 (Based on numerical weather products):

- Light to moderate rain/snow is likely over Western Himalayan region and isolated light rain/thundershowers over adjoining plains of northwest India.
- Minimum temperatures are likely to fall over plains of northwest India from 6th January onwards.

Zonewise Agromet Advisories

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

Himachal Pradesh

- **Major Standing crops:** Vegetables (vegetative / flowering / fruiting / harvesting), wheat (germination / early vegetative / CRI / tillering), barley, oat and oil seeds (germination / early vegetative / vegetative), cabbage, cauliflower and broccoli (sowing / transplanting / early vegetative / vegetative), pea and knoll khol (sowing / transplanting / early vegetative / vegetative), carrot, raddish, turnip and the leafy vegetables like lettuce, methi, palak, dhania etc. (sowing / early vegetative / vegetative).
- As there is possibility of drop in temperature, apply light and frequent irrigation to save the crops from cold injury. Also arrange for smoking against cold injury.
- Under prevailing weather conditions, undertake sowing of radish, corriander, fenugreek, cauliflower, cabbage, pea, broccoli and Knol khol and transplanting of seedlings of cabbage, cauliflower and broccoli (if nurseries are 4-6 weeks old).
- The prevailing weather is conducive for the attack of leaf miner in Citrus. For its control, spray 10 ml Matasystox or Malathion in 10 litres of water.
- Weather condition is also congenial for downy mildew in cruciferous vegetables. For control spray Redomil M-Z @ 25 g per litre of water at 15 days interval.
- White wash the stems of the trees like apple and other orchard crops with 10 kg Chuna + 100 gm of Copper oxichloride + 25 liters of water to protect the plants from diseases and direct sun radiation.
- Details of crop varieties are mentioned in Annexure I.

Poultry

- Climate is congenial for attack of Diarrhira and cocksedia, hence, consult the nearby veterinarian.
- Protect the birds from cold and increase the feed by 10%.
- Replace the poultry houses with fresh litter to avoid wetting and keep the houses clean and ensure clean drinking water to the birds.

Honeybees

- Due to winter season enough flora is not available for bees, therefore farmers are advised to give artificial feed of 50% sugar and 50% water solution to honey bees.
- Also ensure proper packing to the apiary to protect from cold.

Uttarakhand

- **Major Standing Crops:** Sugarcane (harvesting), wheat (CRI/tillering) and mustard (early vegetative/vegetative), chickpea, pea and lentil (early vegetative).
- As there was no significant rainfall in most of the districts during last few weeks and no significant rainfall is likely to occur for the next five days, apply irrigation to the standing *rabi* crops.
- Farmers are advised to give second irrigation in wheat crop at 40-45 days after sowing, if ground water table is deep. Provide first irrigation to December sown wheat crop at crown root initiation stage and topdressing of 30 kg Urea per acre in crop before irrigation in heavy soil and after irrigation in light soil. Protect the seedlings of potato and onion crops from cold injury by providing light and frequent irrigation.
- Farmers are advised to complete transplanting of onion and chillies seedlings. Undertake sowing of potato, wheat, mustard, gram, pea and fodder crops.
- Undertake intercultural operation and application of fertilisers in early sown *rabi* crops like, gram, pea and lentil as favourable weather conditions prevail during these days.
- Continue harvesting of *toria* as conducive weather prevails during these days.

Punjab

- **Major Standing Crops:** Horticultural crops (vegetative), sugarcane (harvesting), *spring* sugarcane (early vegetative), potato (early vegetative / vegetative) and wheat (CRI / tillering), gram and lentil (early vegetative / vegetative), pea and vegetable crops like chilly, tomato, brinjal and onion (nursery seedling).
- As there was no significant rainfall during last few weeks in most of the districts and no significant rainfall is likely for the next five days, farmers are advised to apply irrigation to the standing crops.
- Continue harvesting of matured crop of sugarcane.
- In view of fall in temperature, cold injury may occur in vegetables, sugarcane and *rabi* oilseeds. Apply light and frequent irrigation to prevent the young crops. Provide Sarkanda / Kahi / rice straw / polythene cover to save the plants from cold / frost injury. Also arrange for smoking around the field to protect the crops against the cold / frost injury.
- Farmers are advised to continue sowing of African sarson variety PC-5, desi varieties of radish, potato, palak and late season varieties of cauliflower.
- Complete transplanting of sweet pepper, onion and indeterminate tomato.
- Farmers are advised to provide bedding to calve and adult animal. In view of expected fall in temperatures, farmers are advised to manage animal sheds for protection against cold and give 50 gm iodised salt along with 50 to 100 gm mineral mixture daily to keep them healthy.

Haryana

- **Major Standing Crops:** Sugarcane (harvesting), *spring* sugarcane (early vegetative), Horticulture crops (vegetative), sunflower (maturity), cotton (picking stage), early sown wheat (CRI / tillering).
- As there was no significant rainfall during last few weeks in most of the districts and no significant rainfall is likely for the next five days, farmers are advised to apply irrigation to the standing crops.
- In view of fall in temperature, cold injury may occur in sugarcane and vegetables. Apply light and frequent irrigation to the young crops to protect the young seedlings from cold injury. Provide Sarkanda / Kahi / rice straw / polythene cover or arrange for smoking around the field to save the plants from cold / frost injury. Due to low temperature the germination and growth rate of seedling is poor so the farmers are advised to cover the nursery beds by polythene sheets for better growth.
- Farmers are advised to continue picking / harvesting of cotton and sunflower as favourable weather conditions prevail during these days.
- Continue planting of *spring* sugarcane. Prepare the land for sowing of barseem.
- Complete transplanting of tomato and continue transplanting of onion.
- Complete late sowing of wheat with recommended varieties like PBW 373, 1210 for irrigated areas. Reduce dose of Nitrogen to 1/4th so that vegetative phase may be restricted and harvesting may not suffer. Treat seeds with Bavistin 2.5 g / kg for control of loose smut / flag smut.
- Farmers are advised to provide bedding to calve and adult animal. In view of expected fall in temperatures, farmers are advised to manage animal sheds for protection against cold and give 50 gm iodised salt along with 50 to 100 gm mineral mixture daily to keep them healthy.

Delhi

- **Major Standing crops:** Vegetables (vegetative), mustard (vegetative / flowering), potato, gram (vegetative), wheat (CRI / tillering), *rabi* onion and very late maturing cauliflower (transplanting).
- As there is chance of drop in temperature and also dry weather is prevailing for last few weeks and is also likely to prevail for next five days, farmers are advised to apply light and frequent irrigation to wheat, vegetables, mustard, potato, gram etc. to save the crops from cold injury. Also arrange for smoking for protecting the crops from cold injury.
- Under prevailing weather condition farmers are advised to transplant *rabi* onion and very late maturing varieties of cauliflower. Maintain row to row distance of 15 – 20 cm and plant to plant distance of 10 cm for transplanting of onion.

- Due to drop in temperature, there is possibility of infestation of late blight in potato. Farmers are advised to apply Dithane M-45 @ 600 – 800 g mixed in 200 – 250 litres of water for one ha of land to control the disease. Repeat the spray at 10-15 days interval, if required.
- Prevailing weather is highly conducive for the appearance of young mealy bug in Mango crop. To prevent climbing of the bugs in the mango tree, farmers are advised to stick 25-30 cm wide polythene (500 gauge) at 0.5 metre above the ground. They are advised to remove the dried bark of the tree, then stick 5 cm thick Tar coal pad to the polythene on both the side and then stick the polythene to the tree trunk. This will prevent climbing of young bugs.
- Weather conditions are highly favourable for the infestation of white rust in rapeseed and mustard. Preventive spraying with 0.2 % Ridomil is advised. If required, spraying can be repeated at 10 days interval.
- Details of crop varieties are mentioned in Annexure I.

Uttar Pradesh

- **Major Standing crops:** Sugarcane (grand growth/cane formation), mango (fruit setting), rai, mustard, potato, gram, pea and lentil (vegetative), early sown wheat (CRI / tillering).
- As there was no significant rainfall in most of the districts during last few weeks and mainly dry weather is likely to prevail for the next five days, apply irrigation to the standing *rabi* crops and sugarcane. Protect the young crops from cold injury by providing light and frequent irrigation.
- Continue picking of vegetable crops depending upon the market demand.
- Undertake weeding, intercultural operations, application of fertilizers and pesticides in the standing crops like gram, pea, lentil, rai, mustard, garlic, onion and potato as conducive weather conditions prevail during these days.
- Farmers are advised to prepare the field for sowing of Mentha crop.
- Transplanting of onion in main field may be taken up.

J & K

- **Major Standing Crops:** Wheat (vegetative), pulses (vegetative), mustard (vegetative). This is proper time for sowing of wheat (lower belts) in Jammu and Kashmir divisions, planting of spinach, beet and mongol in Leh
- As rain/snow is likely to occur at isolated places on 2nd and many places thereafter, postpone irrigation to the crops.
- Also protect the crops from clod injury/frost due to decrease in minimum temperature by arranging smoke nearby the field. Provide thatches in young orchards of mango, litchi, guava and papaya.
- Undertake intercultural operations in brown sarson, pulses and wheat in Srinagar, mustard in Jammu division and mustard, berseem, pulses and vegetable crops in Rajouri division after current spells of rain to keep the field weed free
- Complete sowing late varieties of wheat in Jammu division.
- Undertake planting of beet, mongol and spinach in Leh division.
- Details of crop varieties are mentioned in Annexure I.
- Due to decrease in minimum and maximum temperature protect the pregnant and milch animals from cold and feed them mineral mixture regularly. Cover the poultry shed with gunny bags in order to protect the birds from cold weather.
- Weather conditions are congenial for mild incidences of aphids, white rust and *Alternaria* blight in mustard in Rajouri division. Monitor the crop for the pests and diseases and undertake plant protection measures.

Animal husbandry

- Due to decrease in minimum and maximum temperature protect the pregnant and milch animals from cold and feed them mineral mixture regularly. Cover the poultry shed with gunny bags in order to protect the birds from cold weather.

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

Bihar

- Major **Standing Crops:** Sugarcane (vegetative), *rabi* maize, pulses, potato and sunflower (early vegetative / vegetative), Wheat (crown root initiation / tillering).
- As there was no significant rainfall during last few weeks in most of the districts and mainly dry weather is likely to prevail for the five days, apply irrigation to the standing crops. Give first irrigation in wheat.
- Farmers are advised to complete sowing of late sown wheat. Details of crop varieties are mentioned in Annexure I.
- Continue sowing of rapeseed and mustard.
- As dry condition is prevailing, undertake intercultural operations in early sown rapeseed, mustard and wheat crop.
- Avoid moisture stress in wheat, potato and maize crop by maintaining adequate soil moisture as moisture stress at this stage affects the yield of the crops.
- Undertake intercultural operations, application of fertilizers and pesticides in early sown maize, rai, toria and mustard as favourable weather conditions likely to prevail during these days.
- Protect seedlings of *boro* rice nursery from cold by spraying of fresh water.
- The wheat crop sown 20 -25 days earlier is in crown root initiation stage. During this stage light irrigation is essential for proper growth, tillering and yield. So irrigate the crop and top dress with Urea @ 88 kg / ha. Before irrigation remove weeds from the crop manually or by spraying with chemical like Isoproturon i.e. @1 kg / ha dissolved in 700 – 800 liter of water.
- Maize, potato and sunflower sown 30 to 35 days earlier should also be top dressed with urea @ 88 Kg / ha and earthing up must be done for proper growth. After earthing up, irrigate the crop.
- Undertake intercultural operations, application of pesticides in early sown maize, pulse, sunflower and vegetable crops like tomato, brinjal, cauliflower and cabbage etc. as per the need.

Jharkhand

- **Major Standing Crops:** Arhar and maize (maturity), wheat (crown root initiation / tillering), *rabi* oilseeds (early vegetative / vegetative).
- As there was no significant rainfall during last few weeks in most of the districts and mainly dry weather is likely to prevail for the next five days, apply irrigation to the standing crops.
- As weather condition is favourable, farmers are advised to complete late sowing of wheat.
- Farmers are advised to undertake weeding, intercultural operations in potato, oilseeds and early sown wheat as dry condition is likely to prevail.

Orissa

- **Major Standing crops:** Sugarcane, sunflower (vegetative), vegetables (vegetative / flowering / fruiting), wheat (CRI / tillering), potato (germination / early vegetative / vegetative).
- As there was no rainfall in the State during last few weeks and mainly dry weather is likely to occur for the next five days, apply irrigation to the standing *rabi* crops.
- The wheat crop is at CRI stage. The crown root initiation stage is the most critical period for irrigation. Care should be taken for irrigating the crop. First top dressing should be given with 50% Nitrogen of the recommended dose of fertilizer after that irrigation has to be done.
- Complete nursery sowing of summer rice. Details of crop varieties are mentioned in Annexure I. The growth of seedlings in early sown crops are affected due to low minimum temperature. For better growth of rice seedling, apply cow dung dust to the nursery.
- Undertake nursery raising of cole crops for late planting. Short duration varieties are suitable for delayed crops. Apply straw mulching to the vegetable nursery after sowing of seeds and cover it with black polythene during the night time.
- Undertake planting of marigold.

- Undertake intercultural operations, application of fertilizers and pesticides in early sown *rabi* crops.
- Weather conditions are congenial for infestation of aphid and *Crocidolomia* in rained mustard. To control *Crocidolomia* and saw fly spray 200 ml Ithofenprox or Deltamethrin per acre.
- Weather conditions are favourable for the infestation of aphids in pulses, *Dolichos* bean etc. Spray 50 ml Imidacloprid or 400 ml Dimethoate or Metasystox in 200 lit water / acre.

West Bengal

- **Major Standing Crops:** Sugarcane (cane development), mustard, gram and lentil (vegetative / branching / flowering), wheat (CRI / tillering), potato (vegetative / tuber formation) and *boro* rice (nursery sowing).
- As there was no significant rain during last few weeks in most of the districts of the State and there is no possibility of significant rain during next five days, apply irrigation to mustard, gram, lentil, wheat, vegetables and potato.
- As there is no possibility of significant rainfall, farmers are advised to undertake intercultural operation to keep the fields weed free.
- As weather condition is favourable, undertake wet nursery bed preparation of *boro* rice near an assured source of irrigation. Seeds should be treated with Agrosan @ 100 g per 50 kg seeds to prevent seed borne diseases.
- To protect the seedlings from cold, cover the nursery bed of *boro* rice with polythene or keep stagnant water in the nursery bed especially for the night-time. Irrigate the nursery bed regularly. Keep 2 to 3 cm stagnant water.
- Start preparation of the main field for transplanting of *boro* rice.
- Under prevailing weather condition, there is possibility of incidence of early blight of potato in New Alluvial Zone. Spray the crop with Copper oxichloride @ 4g / litre of water at 7-10 days intervals, if disease symptom is appeared.
- Weather condition is congenial for infestation of *Alternaria* blight in mustard in Old and New Alluvial Zone and late blight in potato in Old Alluvial Zone. Spray Mancozeb @ 2.5-3.0 g / litre of water to control *Alternaria* blight in mustard and Mancozeb @ 2.5-3.0 g or Copper Oxichloride @ 4 g / litre of water to control late blight of potato.
- In the present situation, some black spot in the leaves are observed in potato which may be caused by mite or thrips. To control this apply Acephate-75% WP @ 0.75 gm per litre of water.
- Details of crop varieties are mentioned in Annexure I.

Sikkim

- **Major Standing Crops:** Orange (maturity/harvesting), large cardamom (harvesting and vegetative), *rabi* wheat (CRI/tillering), mustard (vegetative), vegetable crops (late vegetative/harvesting), potato (vegetative/tuber formation)
- As there was no significant rainfall during last week in the state and rain/thundershowers is likely to occur at isolated places for the next five days, apply irrigation to the vegetable crops, wheat, orange and large cardamom.
- Undertake intercultural operations in early sown *rabi* mustard, wheat and vegetable crops like potato, cabbage, cauliflower, carrot, Chinese cabbage, knol-khol, garden peas, radish, turnip, lettuce, celery, spinach, etc., in medium and low hills as conducive weather prevails during these days.
- Continue harvesting of large cardamom as conducive weather prevails during these days.
- After the harvest of capsules of large cardamom, maintain sucker nursery; apply FYM and undertake intercultural operations.
- **Plant Protection:** Weather conditions are congenial for mild incidences of
- fruit fly and trunk borer in orange. Monitor the trees and undertake plant protection measures to control the pests.
- bacterial wilt in ginger in medium and low hills; collect and destroy the affected plants completely to prevent further spread of the disease.

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

Assam

- **Major Standing crops:** Arhar (pod formation / maturity), sugarcane (harvesting), cauliflower, cabbage, raddish, brinjal, tomato, knolkhol, onion and carrot (vegetative / flowering / fruiting), mustard, lentil and pea (vegetative / flowering), wheat (crown root initiation / tillering stage), potato (vegetative / tuber formation) and *boro* rice (nursery preparation / transplanting).
- As there was no significant rain over the State during last few weeks and no significant rain is expected for next five days, farmers are advised to apply irrigation to arhar (at pod formation stage) and vegetable crops like cauliflower, cabbage, raddish, brinjal, tomato, knolkhol, onion and carrot and also to wheat, mustard, lentil, pea and potato.
- As there is less possibility of occurrence of rain, farmers are advised to undertake intercultural operation to keep the fields weed free. Second earthing up should be done in case of two months old crop of potato.
- Under prevailing dry weather condition, farmers are advised to undertake harvesting of sugarcane.
- As the temperature is favourable for germination, undertake nursery bed preparation and sowing of *boro* rice seeds in nursery bed. Transplanting of *boro* rice may also be undertaken if the seedlings are ready.
- Under prevailing weather condition farmers are advised to undertake planting of late varieties of cauliflower and cabbage and sowing of sunflower.
- Prevailing weather condition is favourable for the infestation of leaf curl virus and late blight in potato. Crop should be sprayed with Malathion 50 EC @ 2 ml / litre of water against insect vector of leaf curl virus and Dithane M 45 @ 2.5 g / litre against late blight disease.

Poultry

- Considering the occurrence of bird flu in different districts of lower Assam, poultry farmers are advised to be extra vigilant. Any unnatural and sudden death of their poultry birds should immediately be reported to veterinary officials.

Fishery

- Under present weather condition fishes may suffer from a disease that cause decay in patches in different parts of the body. To protect from the disease apply Potassium permanganate @ 2.5 Kg / bigha. Moreover, application of 1 Kg turmeric powder and 13 Kg lime can save the fishes from the disease.

Arunachal Pradesh

- **Major Standing crops:** *Rabi* vegetables (vegetative / flowering / fruiting), wheat (CRI / tillering), mustard (vegetative), pea (vegetative / flowering), *rabi* maize (vegetative) and potato (vegetative).
- As there was no significant rainfall in most of the districts during last few weeks and mainly dry weather is likely to occur during next five days, apply irrigation to wheat (CRI stage), *rabi* vegetables, mustard, pea, *rabi* maize and potato.
- Farmers are advised to apply first top dressing in early sown potato followed by earthing up.
- Regular monitoring for powdery mildew attack in pea may be carried out.

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

Andhra Pradesh

- **Major Standing Crops:** sugarcane (grand growth), gram (flowering), wheat, mustard, sunflower and chilly (all at late vegetative).
- Apply irrigation to the crops as there was no rainfall during last week and mainly dry weather is likely to prevail for the next five days.
- Farmers in Krishna, West Godavari, Guntur and Prakasam districts are advised to undertake sowing of rice fallow maize and rice fallow pulse crops during these days. Details of varieties are given in

Annexure I. Undertake intercultural operations in *rabi* pulse crops like green gram. Apply 25 kg urea and 10 kg potash per acre to cotton if sufficient moisture is available in the soil.

- Farmers in high altitude regions of Srikakulam, East Godavari, Vijayanagaram, Visakappattinam and Khammam are advised to undertake intercultural operations in wheat, mustard, gram and sunflower to conserve moisture in the soil. Complete harvesting of rice, rajma and red gram.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
- blast and cut worm in rice, ring spot and rust in sugarcane, *Spodoptera* in cabbage and cauliflower, thrips and mites in chilly and tea mosquito bug in cashew in Srikakulam, Vishakappattinam and Vijayanagaram districts;
- white fly in cotton, stem borer in maize, pod borer in red gram, white fly, mites and fruit rot in chilly and spotted pod borer in black gram and green gram in Krishna, West Godavari, Guntur and Prakasam districts;
- thrips in chilly, leaf spot in turmeric, wilt in chick pea, stem and fruit borer in brinjal, late BPH in rice and necrosis in onion in Karimnagar, Nizamabad, Warranagl and Medak districts;
- Undertake plant protection measures to control the pests and diseases.

Karnataka

- **Major Standing Crops:** Annual sugarcane (grand growth). Early sown *rabi* crops (vegetative).
- As there was no significant rainfall during last week in the state and mainly dry weather is likely to prevail for the next five days, apply irrigation to the crops.

North Interior Karnataka

- Farmers in Bidar region are advised to undertake planting of sugarcane and sowing of water melon in the main field.
- Farmers in Dharwad, Bijapur and Raichur are advised to undertake intercultural operations in *rabi* crops like wheat, gram and safflower.
- Farmers in Raichur are advised to undertake harvesting of red gram and early sown sunflower. Arrange proper storage for harvested produce.
- **Animal Husbandry:** Due to cold weather in and around Dharwad sneezing is noticed indicating respiratory problem. Consult with the nearby veterinary doctor.

Plant Protection: Weather conditions are favourable for mild incidences of:

- *Helicoverpa*, rust, powdery mildew and *Heliothis* in gram and *Heliothis* in red gram in Dharwad and Raichur; undertake plant protection measures.

South Interior Karnataka

- Farmers in Bangalore, Kolar, Tumkur, Chitradurga and Shimoga are advised to undertake intercultural operations and application of fertilizers in *rabi* crops.
- Farmers in Shimoga are advised to undertake harvesting of rice and maize. Arrange proper storage for harvested produce

Plant Protection: weather conditions are favourable for

- leaf spot in sugarcane, *Sigatoka* leaf spot in banana, powdery mildew in bhindi and grey blight in coconut in Shimoga; undertake plant protection measures.

Coastal Karnataka

- Farmers in Udipi and Dakshin Kannada districts are advised to undertake intercultural operations and application of fertilizers and pesticides in plantation crops.
- Undertake harvesting of rice in Uttar Kannada as conducive weather conditions prevail.

Kerala

- **Major Standing Crops:** *Mundakan* rice (tillering/panicle initiation), vegetable (vegetative/ flowering) and plantation crops (Coconut, Arecanut, Pepper and Cashew). This is proper time for sowing *summer* vegetable crops.
- As there was no sufficient rain during last week in the state and mainly dry weather is likely to prevail for the next five days, farmers are advised to apply irrigation to the crops.

- Complete sowing of *puncha* rice in Kottayam and particularly in Kuttanad area. Undertake nursery sowing of summer rice in Wayanad district.
- Undertake sowing of water melon and vegetable crops like bitter gourd (Preethi), snake gourd (Baby and Manusree) and cowpea (Lola and Anaswara) in and around Thrissur.
- Protect black pepper less than three years of age by providing thatches and apply mulching.
- Undertake intercultural operations and application of fertilizers and pesticides in rice in Kottayam, banana in Thrissur and in coconut and banana in Thiruvananthapuram and plantation crops (coconut, arecanut, pepper and cashew), in general, as conducive weather conditions prevail.

Plant Protection:

- Weather conditions are favourable for the attack of
- white stem borer in coffee, thrips in cardamom and burrowing nematode, pollu beetle and quick wilt in pepper in Wayanad.
- bacterial leaf blight in rice and mosaic in vegetables in Thiruvananthapuram.
- *mahali* disease in arecanut in Thrissur, Malappuram, Kasargod, Kozhikode and Kannur districts; apply 1% Bordeaux mixture.
- tea mosquito bug in cashew in Thrissur.
- red palm weevil, rhinoceros beetle, bud rot and stem bleeding in coconut in Kasaragod and Wayanad.
- white fly and aphids, fruit and shoot borer in bhindi and brinjal in Kottayam.
- Undertake plant protection measures.

Tamilnadu

- **Major Standing Crops:** Special season sugarcane (grand growth stage), Cotton (boll maturity/ picking stage). *Rabi* crops like rice, pulses, millets and oilseeds are at vegetative stage.
- As there was no sufficient rain during last week in the state and mainly dry weather is likely to prevail for the next five days, farmers are advised to apply irrigation to the crops.
- Undertake land preparation and transplanting of onion seedlings as conducive weather conditions prevail in north western zone.
- Field preparation i.e. first ploughing can be taken up for sowing garden land crops in Kanchipuram and Thiruvannamalai district. Sowing and transplanting of vegetable crops such as bhendi, tomato, cowpea, dolichos and chillies may be taken up.
- Undertake intercultural operations, application of fertilizers and pesticides in rice, banana, sugarcane, cotton, maize, sorghum and pulse crops.
- Continue harvesting cereals and pulses in Erode district as conducive weather prevails during these days. Arrange for proper storage after the harvest of crops.

Animal Husbandry:

- Undertake vaccination against FMD in cattle, sheep and goat.
- **Plant Protection:** Present weather is conducive for mild incidences of
- stem borer in rice in Coimbatore; spray Monocrotophos @ 1 litre/ha.
- sucking pests in cotton, maize and jowar; spray Imidachlorpid @ 0.5ml/litre of water.
- leaf spot in carrot in Nilgiris; spray Mancozeb @ 2 g/litre of water

WEST INDIA [GOA, MAHARASHTRA, GUJARAT, RAJASTHAN]

Maharashtra

- **Major Standing Crops:** Sugarcane (pre-seasonal & *suru*) (cane maturity / harvesting), irrigated & *kharif* cotton (picking), *tur* (pod maturity), *rabi* jowar (flowering / grain formation in Pune, Nashik, Kolhapur & Aurangabad divisions & flag leaf initiation / flowering in other divisions), *rabi* sunflower (floral bud initiation in Kolhapur & Vegetative in other divisions), maize (vegetative), gram (flowering / pod formation in Nashik, Pune, Nagpur & Kolhapur divisions and branching / flowering in other divisions), wheat (CRI / tillering), safflower (flowering / seed formation in Latur division & flowering in other divisions).
- As there was no significant rain in all the districts of the State during last few weeks and no significant rain is likely to occur during next five days, apply irrigation to the standing crops.

- As dry weather is prevailing, farmers are advised to undertake harvesting of sugarcane and complete the picking of fully opened cotton bolls.
- As there is no possibility of rainfall, farmers in Madhya Maharashtra & Marathwada are advised to complete final earthing up in 16 to 20 weeks old *adsali* sugarcane crop and also to apply 160 kg N, 85 kg P₂O₅ & 85 kg K₂O / ha at the time of earthing up followed by light irrigation.
- Apply second dose of Nitrogen @ 60 kg / ha followed by irrigation to wheat crops after 25 to 30 days from sowing.
- Banana & grape orchards may be protected from cold by arranging smoke around the field during night in North Madhya Maharashtra.
- As weather condition is favourable, transplanting of summer rice and ragi may be carried out with 30 to 35 days old seedlings at a distance of 20 x 20 cm or 15 x 15 cm in Sindhudurga district. Also undertake sowing of groundnut at 30 x 10 cm distance in this district.
- Details of crop varieties are mentioned in Annexure I.
- **Plant protection**
- As weather condition is favourable, grapes are likely to be affected by downy mildew in Latur, Osmanabad, Pune & Solapur districts. For the control, spray Mancozeb @ 25 gm in 10 liters water.
- Cucumber, tomato, *Wal* vegetables are also likely to be affected by looper in Western Maharashtra scarcity zone due to cloudy weather condition prevailed during last two weeks. For control spray 4% Neem extract or Triazophos @ 20 ml in 10 liters water.
- Under prevailing weather condition pea is likely to be affected by downy mildew in Sub Montane zone. For control spray 80 % Sulphur @ 25 g in 10 liters water.

Gujarat

- **Major Standing Crops:** Sugarcane (maturity / harvesting), *Kharif* cotton (boll formation / boll maturity / picking), castor (spike formation / maturity / picking), mustard (vegetative / flowering), vegetables (vegetative / flowering / fruiting), potato (vegetative / tuber formation) and wheat (CRI / tillering).
- As there was no significant rain during last few weeks over the State and mainly dry weather is likely to prevail for next five days, apply irrigation to *kharif* cotton, castor, mustard, wheat, potato and vegetables.
- As there is no possibility of rain, undertake intercultural operation in above mentioned crops to keep the fields weed free.
- Prevailing weather is conducive for harvesting of already matured crops of castor and picking of *kharif* cotton.
- As dry weather is likely to prevail, farmers are advised to apply top dressing of Nitrogen @ 40 kg / ha in wheat followed by light irrigation.
- As there is chance of attack of heliothis in gram in Bhal & Coastal area due to favourable weather condition, Spray Neem based pesticide @ 50 g / pump.

Rajasthan

- **Major Standing Crops:** This is proper time for sowing *rabi* crops. Early sown *rabi* crops (wheat, mustard, gram, vegetable crops, etc.) are at vegetative stage.
- As there was no significant rainfall during last week in the state and mainly dry weather is likely to occur for the next five days, apply irrigation to the crops.
- Fall in minimum temperature is likely to be around 4⁰C or below over north Rajasthan and consequently ground frost may occur over some part of these areas. Farmers are advised to apply light and frequent irrigation to the standing crops. Also arrange for smoking around the field.

East Rajasthan

- Undertake intercultural operations in mustard, gram, onion and garlic in Alwar, Bharatpur, Dholpur, Karauli and Sawai Madhepur districts as conducive weather conditions prevail.

- Undertake land preparation and sowing of cumin, fenugreek, isabgol, garlic and radish in Ajmer, Dausa, Jaipur and Tonk districts.
- Farmers in Banswara district are advised to complete sowing of wheat and maize at the earliest as suitable temperature is prevailing for sowing. Undertake thinning in early sown crops and maintain optimum plant population.
- Complete land preparation and planting of fodder oats slips.
- Details of varieties are given in Annexure I
- **Plant Protection:** Weather conditions are favourable for mild incidences of
- White fly and jassids in cotton in Alwar and Dholpur; spray Dimethoate or Methyl Demeton @ 1 litre/ha.
- Cut worm in gram in Alwar, Dholpur, Bharatpur, Karauli and Sawai Madhepur districts, dust Endosulphan 4 % or Methyl Parathion 2%.
- aphids attack in mustard, barley, cauliflower and radish in Ajmer, Dausa, Tonk and Jaipur districts; spray Dimethoate 30 EC or Methyl Demeton 25 EC @ 1 litre per hectare.
- blight, white rust and powdery mildew in mustard, in Ajmer, Dausa, Tonk and Jaipur districts; spray Blitox-50 @ 3 gm or Mencozeb 2 gm per litre of water.
- loose smut in wheat, stem borer in maize, aphids in mustard, pod borer in gram and leaf spot, blight and black rot in cauliflower and cabbage in Banswara. Undertake plant protection measures as conducive weather conditions prevail.
- mealy bug in mango, guava and pomogranate in Ajmer, Dausa, Tonk and Jaipur districts,, spray Quinophose 1.5% or Endosulphon 4% powder in 50-100g per tree.

West Rajasthan

- Farmers in Bikaner and Jaisalmer are advised to complete sowing of wheat, oats and methi crops.
- Undertake sowing of sweet gourd, cucumber, pumpkin, bitter gourd, tinda, tomato and ladies finger in Barmer, Churu, Jalore and Jodhpur. Also undertake sowing of cumin.
- Farmers in Pali are advised to complete sowing of wheat and cumin at the earliest
- Farmers in Jodhpur, Barmer, churu, Jalore and Pali are advised to undertake planting of onion.
- Details of varieties are given in Annexure I.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
- leaf eating caterpillar in fruits and vegetable crops in Barmer, Churu, Jalore and Jodhpur; spray Qunalphos @ 1.5 kg or Endosulphan @ 4.25 kg/hectre.
- white fly in sugarcane in Sriganganagar and Hanumangarh; undertake plant protection measures.
- fruit fly in ber in Pali; spray Monocrotophos @ 1 ml + Endosulphan @ 1 ml/litr of water.
- sucking pest (mahu) in mustard and cumin in Barmer, Jodhpur, Pali, Churu and Jalore districts, spray Endosulphon 35 EC 2ml/lit water or Melathion 50 E.C. or Methyl Dematon 1ml in 1 lit water.

CENTRAL INDIA [M.P., CHHATTISGARH]

Madhya Pradesh

- **Major Standing Crops:** Sugarcane (grand growth), soyabean (pod maturity), maize (cob development/maturity), cotton (boll development) and vegetable crops (transplanting/ vegetative). This is proper time for sowing of *rabi* crops.
- As there was no significant rainfall during last week and dry weather is likely to prevail over the state for the next five days, apply irrigation to the standing crops. Apply light and frequent irrigation to the young crops to protect the young seedlings from cold injury.
- Undertake transplanting of late sowing vegetable crops like mid cauliflower, cabbage, radish, onion and carrot in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts.
- Farmers in Indore, Mandsaur, Ratlam, Neemuch, Shajapur, Ujjain and Rajgarh are advised to undertake planting/sowing of potato, onion, garlic and pea. Also undertake sowing of wheat with late varieties in areas where wheat crop could not be sown earlier.

- Farmers in Sehore, Bhopal, Damoh, Raisen, Sagar, Vidisha are advised to undertake planting of sugarcane.
- Undertake sowing of potato, berseem, garlic, pea, coriander, spinach and methi in Chhindwara and Betul districts with irrigation facilities and also undertake transplanting of tomato, brinjal, chilli, cauliflower, cabbage and onion.
- Due to favourable weather conditions, farmers in Tikamgarh, Datia and Chattarpur are advised to complete land preparation and sowing of wheat and alsi. Do seed treatment before sowing. Undertake transplanting of radish, carrot, spinach, methi, onion and cabbage.
- Undertake planting of garlic and onion in Jhabua and Dhar.
- Details of varieties are given in Annexure I.
- **Animal Husbandry:** Provide proper ventilation and clean water to cattle and arrange for vaccination to save them from infectious disease in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts. Create smoke during the night in cattle shed to prevent cattle from mosquitoes and bees.
- Undertake vaccination in cattle against Anthrax, Galgotu, Black quarter and FMD in Indore, Mandsaur, Ratlam, Neemuch, Shajapur, Ujjain and Rajgarh. Also undertake deworming.
- Cattle should be kept in aeration condition and in dry place, provide balanced and nutrient rich feed having protein, carbohydrate, fat vitamins and antibiotics in Jhabua.
- **Plant Protection:** Weather conditions are favourable for
- agathi in tomato in Chhindwara and Betul districts. Spray Dithane-M-45 @ 2.5 g/litre of water.
- red leaf on orange orchards in Chhindwara and Betul. To control spray Dikophal 2ml/lit or sulphur.
- red pumpkin beetle in cucurbits, sucking pest and powdery mildew in vegetables in Indore, Mandsaur, Ratlam, Neemuch, Shajapur, Ujjain and Rajgarh districts. Apply Methyl parathion @ 2% dust before fruiting to control red pumpkin beetle, spray Dimethoate @ 1.5 ml/litre of water to control sucking pests and spray Carbendazime @ 1 g/litre of water to control powdery mildew in vegetables.
- army worm in wheat and red gram in Damoh, Bhopal, Sagar, Raisen, Sehore and Vidisha districts. Spray Quinolphose 1 litre or Propenophose one and half litre in 500-600 litre water. Spray Quinolphose one and half % or Methyl parathion 2% 25 kg powder per ha by spraying machine.
- agathi or pacheti and zulsa in potato in Morena, Bhind, Gwalior, Shivpuri, Guna, Sheopur and Ashoknagar districts; spray Mancozeb @ 2 kg in 600 lit water.
- agathi in potato in Damoh, Bhopal, Sagar, Raisen, Sehore and Vidisha districts. Spray diethane M-45 2.5 – 3 g/lit 500-600 litre water per hectre in a span of 15 days .
- powdery mildew in peas in Damoh, Bhopal, Sagar, Raisen, Sehore and Vidisha districts. Spray Sulphex or mixed sulphur 3 g or Carbedaziem 2-2^{1/2} g/lit.
- fruit fly in ber in Pali; spray Endosulphan 35 EC in 2 ml/lit of water.
- aphid in pea, mustard & vegetable crops if attack use dusting of Methyl Parathian 2% dust 20-25 kg/ha in Jhabua and Dhar districts.
- leaf cutting weevil in mango; spray 0.1% Malathion or 0.05% Endosulphan 35EC in Jhabua and Dhar districts.

Chattisgarh

- **Major Standing Crops:** Sugarcane (vegetative), pigeon pea (early maturity / maturity), wheat (CRI / tillering), gram, pea, mustard, berseem, pigeon pea and linseed (early vegetative / vegetative / flowering), potato (vegetative / tuber formation), vegetables (early vegetative / vegetative / flowering).
- As there was no significant rain during last few weeks over the State and mainly dry weather is likely to prevail during next five days, apply irrigation to the standing crops.
- As dry condition is likely to prevail, undertake intercultural operation to keep the fields weed free. Also apply top dressing of Nitrogen to potato followed by earthing up and irrigation.
- Wheat crop sown during November is at crown root initiation / tillering stage. These stages of the crop are critical for moisture and nutrient stress. Hence, as dry condition is likely to prevail, farmers are advised to go for first top dressing of N followed by irrigation.

- Presently timely sown mustard and gram are at branching stage. Irrigation at this stage is required for proper vegetative growth of these crops. Avoid water logging in the fields. Use of sprinkler should be encouraged for irrigation.
- Weather conditions are favourable for sowing of leafy vegetables and transplanting onion during this week.
- There is possibility of infestation of leaf curl virus in chilly under present condition. Farmers are advised to apply Metasystox or Rogor.

Annexure I

Crop varieties

Delhi

- **Onion:** Pusa Red, Pusa Madhabi, Agrifound Light Red.

West Bengal

- **Boro rice:** IET - 1444, IET – 4786 (Satabdi), IET – 4094, Lalat, MTU - 1010, JGI –1798 etc.

Himachal Pradesh

- **Cabbage:** Snow ball K-1, Palam Uphar, Golden Acre.
- **Knol khol:** White Viena.
- **Broccoli:** Palam Kanchan, Palam Vichitrta and Palam Samridhi.
- **Cauliflower:** Pride of India.
- **Raddish:** Japani white, Early Mino White, Chinese Pink and Plamp Hriday.
- **Peas:** Lincoln and Palm Priya.

Jammu

- **Late varieties of wheat:** Raj-3077, PBW-226, Raj 3765, WH-542, PBW-373 & PBW-435

Maharashtra

- **Groundnut:** Improved varieties like TG-26, TG-37, TAG-24.

Punjab

- **Wheat:** PBW 373, 1210 for irrigated areas.
- **Raya:** PBR-210, RLM-619, PBR-91, RL-1359 under irrigated conditions and PBR-97 under rainfed conditions.
- **Pea:** Punjab –87, P6-88, P6-89 and Mitthi Phalli.

Haryana:

- **Wheat:** PBW 373, 1210 for irrigated areas.

Uttar Pradesh:

- **Wheat:** Maliviya-234, Narendra-236, Twt-373, K-8020, Triveni, K-7903 and Halna

Bihar

- **Wheat:** HD 2643, HP 1744, PBW 373, HUW 234, DBW 14, NW 2036 and NW 1014
- **Rape seed and mustard:** Rajendra rai, Pichheti, Rajendar, Anukul and Rajendar Sufalam.

Orissa:

- **Cabbage:** Drum Head, Sri Ganesh Gol.
- **Cauliflower:** Pusa Snow Ball and Pusa Hybrid-2.
- **Summer rice:** Parijat, Khandagiri, Naveen, MTU-1010, Lalat, etc

Rajasthan

East Rajasthan:

- **Fenugreek:** RMT 1 and RMT 14
- **Cumin:** RS 1, RZ 209 and RZ 19
- **Garlic:** G-1, G-41, G-50, G-282 and G-313
- **Radish:** Pusa Deshi and Japani White
- **Cauliflower:** Pusa Hybrid-2, Pusa Snowball-1, Pusa Snowball K- 1 and Pusa Snowball K-25
- **Wheat:** Lok-1, Raj-1972, HD-2236, HD-2329, WH-147, PBW-343 and CPAN-3004 (Alwar, Dholpur, Bharatpur, Karauli and Sawai Madhepur districts).

West Rajasthan:

- **Wheat:** Raj 3765, Raj 3077A and KRL 19 (Pali)
- **Cumin:** RC 19 and GC 4
- **Wheat:** Raj-3765, Raj-3077 , HD-2285 and PBW-373 (Sriganganagar and Hanumangarh districts).

Madhya Pradesh:

- **Wheat:**
 - **Unirrigated/ Semi-irrigated:** JWS-17, HW-2004, HI-1500, Malav Ratna (HD-4672) and Malav Shri (HI-8381).
 - **Irrigated:** GW-273, Kanchan (DL-803-3), WH- 147, GW- 190, GW- 322 and Malav Shakti (HI-8498).
- **Gram:** JG- 412, JG- 226, JG- 11 and JG- 130.
- **Maize:** JM- 421, JM- 8, JM- 12, Chandan makka- 3, Ganga- 3, Ganga- 4 and HPQM – 1.

Andhra Pradesh:

- **Black gram:** LBG 402, 648, 645, 685, 709 and 752.

Assam

- **Boro rice:** Jyotiprasad, Bishnuprasad, Jaymoti, Kanaklata, Boro-1 and Boro-2.
- **Sunflower:** Jalamukhi.