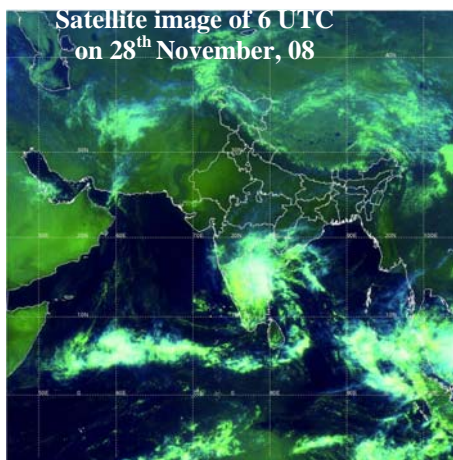




## National Agromet Advisory Bulletin

Thursday, 27<sup>th</sup> November, 2008  
(For the period 27<sup>th</sup> November to 1<sup>st</sup> December, 2008)



### Forecast for South India (valid upto 1430 hours IST of 30<sup>th</sup> November 2008)

- Rain/thundershowers are likely at most places over north Tamil Nadu and Puducherry during next 24 hours and decrease thereafter.
- Rain/thundershowers at many places likely over Kerala, south Tamil Nadu, south Karnataka, Lakshadweep, south Andhra Pradesh during the same period.
- Rain/thundershowers are likely at a few places over north Andhra Pradesh, north Karnataka and Rayalaseema during the same period.
- Isolated rain/thundershowers are likely over the rest region.

### Status of Northeast monsoon

Under the influence of the cyclonic storm, "NISHA", scattered to fairly widespread / widespread rainfall occurred over Tamil Nadu & Puducherry during the week. Widespread rainfall with scattered heavy to very heavy falls and isolated extremely heavy falls occurred over these regions during last two days of the week. Isolated rain/thundershowers occurred over Kerala and Lakshadweep during many days of the week.

### Advisories for Tamil Nadu

- Arrange for extensive drainage facilities in rice, banana and sugarcane crops in Thirunelveli, cotton, maize, sorghum and pulse crops in Virudhunagar and rice, maize, cotton, gram and oilseed crops in Namakkal as heavy to very heavy rainfall at a few places along with isolated extremely heavy falls ( $\geq 25$  cm) over north Tamil Nadu and isolated heavy to very heavy rainfall over south Tamil Nadu are likely to occur during next 24 hours.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely to occur over interior districts of Tamil Nadu during next 12 hours. Farmers are advised to provide strong mechanical support to vegetable crops and banana to prevent lodging of crops.

### Advisories for Kerala, Andhra Pradesh and Karnataka

- As rain/thundershowers are likely to occur at many places for the next 24 hours with isolated heavy to very heavy rainfall in Kerala, south Karnataka and south Andhra Pradesh, farmers in these regions are advised to postpone irrigation to the crops. Also arrange for extensive drainage facilities to avoid water stagnation.
- Provide strong mechanical support to banana in Thrissur district of Kerala and vegetable crops of all these regions to prevent lodging due to increase in velocity of Easterly winds.


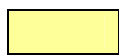

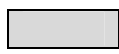

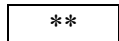
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**Issued by  
National Agrometeorological Advisory Service Centre,  
Agricultural Meteorology Division,  
India Meteorological Department, Shivajinagar, Pune.**

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

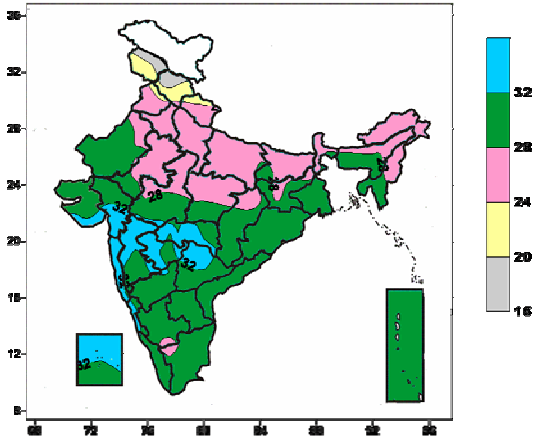
Comparison of weekly rainfall distribution (in % dep.) in different Met. Sub-divisions during past 5 weeks					
Sub-division	Cumulative Rainfall (% Dep.) for the period				
	29 <sup>th</sup> October	5 <sup>th</sup> November	12 <sup>th</sup> November	19 <sup>th</sup> November	26 <sup>th</sup> November
A & N Islands	266	-52	73	98	35
Arunachal Pradesh	233	-98	-40	-100	-17
Assam and Meghalaya	215	-98	-100	-100	-65
NNMT	371	-96	-94	-100	-100
SH West Bengal & Sikkim	123	33	-100	-98	-85
Gangetic West Bengal	141	-100	-100	-100	-100
Orissa	-80	-100	-100	-99	-87
Jharkhand	-94	-100	-100	-100	12
Bihar	-100	-100	-100	-100	-100
East Uttar Pradesh	-87	-100	-100	-22	-98
West Uttar Pradesh	-100	-100	-100	-11	367
Uttarakhand	-100	-100	-100	-100	43
Haryana, Chandigarh and Delhi	-100	-100	-100	-100	159
Punjab	-100	-100	-100	-100	-86
Himachal Pradesh	-99	-100	-100	-100	-75
J & K	-99	-97	-100	194	-86
West Rajasthan	-100	-100	-100	-100	-99
East Rajasthan	-100	-100	-100	-42	-91
West M. P.	-100	-100	-100	347	-43
East M. P.	-100	-100	-100	-83	-20
Gujarat region	-100	-100	-100	-95	-100
Saurashtra & Kutch	-100	-100	-100	-100	-100
Konkan and Goa	-92	-100	-100	-97	-98
Madhya Maharashtra	-100	-100	-100	-96	-46
Marathwada	-100	-100	-100	-89	37
Vidarbha	-100	-100	-100	-99	-82
Chhattisgarh	-100	-100	-100	-100	-78
Coastal A. P.	-40	-100	-95	144	-42
Telangana	-78	-100	-100	51	-59
Rayalseema	15	-100	-98	109	-12
TamilNadu & Pondicherry	-26	-99	-95	-90	307
Coastal Karnataka	86	-100	-91	-86	-97
N. I. Karnataka	-59	-100	-100	158	-46
S. I. Karnataka	32	-100	-100	-60	-49
Kerala	154	-96	-73	-81	-33
Lakshadweep	264	-98	-90	-97	139

The sub divisions like Orissa, Bihar, East Uttar Pradesh, Punjab, Himachal Pradesh, Rajasthan, East Madhya Pradesh, Gujarat, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, received scanty / deficient rain in all the 5 weeks; Assam and Meghalaya, Nagaland, Manipur, Mizoram, Tripura, Gangetic West Bengal, Jharkhand, Uttarakhand, Haryana, Chandigarh and Delhi, Jammu & Kashmir, West Madhya Pradesh, Marathwada, Coastal Andhra Pradesh, Telangana, Karnataka, Tamil Nadu & Pondicherry, Kerala received scanty / deficient rain in 4 out of last 5 weeks; Arunachal Pradesh, Sub Himalayan West Bengal & Sikkim, West Uttar Pradesh and Lakshdweep 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.

	(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

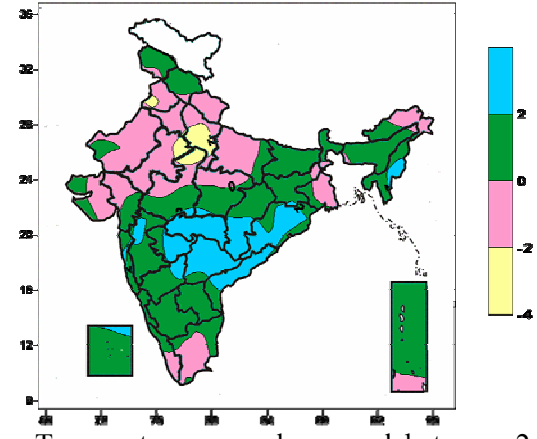
## Contour maps for the week ending 26.11.08

**Actual Mean Maximum Temperature (°C) in India for the week ending 26.11.08**



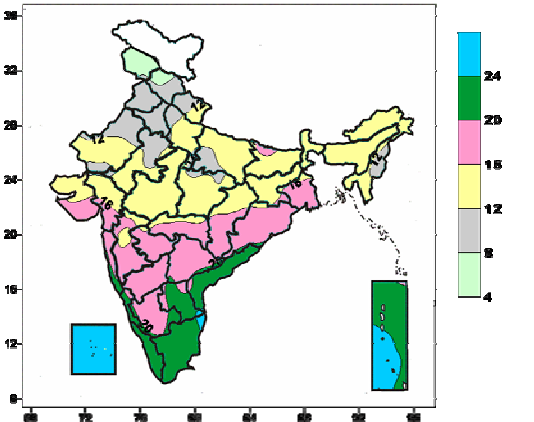
Actual Mean Maximum Temperature ranged between 32 to 36°C in some parts of South Gujarat, North Maharashtra, West Madhya Pradesh, Coastal Karnataka, Telangana, Lakshdweep, 24 to 28°C in some parts of South Interior Karnataka, Tamilnadu, Chattisgarh, Jharkhand, North East India, most parts of Punjab, Haryana, New Delhi, Uttarakhand, Uttar Pradesh, North Madhya Pradesh, Bihar, Sub Himalayan West Bengal, Sikkim, 20 to 24°C in some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand and 28 to 32°C in remaining parts of the country.

**Maximum Temperature (°C) Anomaly in India for the week ending 26.11.08**



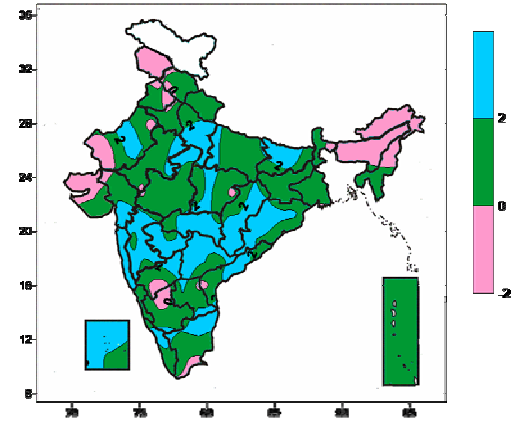
Maximum Temperature anomaly ranged between 2 to 4°C over some parts of Manipur, Konkan, & Goa, Madhya Maharashtra, Marathwada, South Madhya Pradesh, Chhattisgarh, Orissa, North Interior Karnataka, Lakshdweep, most parts over Vidarbha, Telangana, Coastal Andhra Pradesh, -2 to 0°C over some parts of Jammu & Kashmir, Jharkhand, West Bengal, Assam, Arunachal Pradesh, Kerala, Tamilnadu, Andaman Nicobar Island, and most parts of North India, Rajasthan, Central Gujarat, North Madhya Pradesh, -4 to -2°C over some parts of Punjab, East Rajasthan, West Uttar Pradesh, North East Madhya Pradesh and 0 to 2°C in remaining parts of the country.

**Actual Mean Minimum Temperature (°C) in India for the week ending 26.11.08**



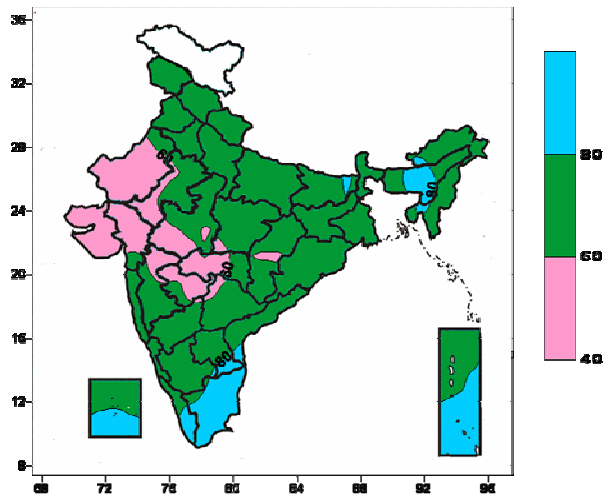
Actual Mean Minimum Temperature ranged between 24 to 28°C in some parts of Rayalaseema, Tamil Nadu, Andaman Nicobar Islands, most parts of Lakshdweep 20 to 24°C over some parts of Konkan & Goa, Telangana, most parts of Coastal Karnataka, Kerala, Tamil Nadu, Rayalaseema, Coastal Andhra Pradesh, Andaman Nicobar Islands, 16 to 20 °C over some parts of Bihar, Jharkhand, Chhattisgarh, South Gujarat, Rayalaseema, Coastal Andhra Pradesh, most parts of Gangetic West Bengal, Maharashtra, Orissa, Telangana, Interior Karnataka, 8 to 12 °C in some parts of Rajasthan, Uttar Pradesh, East Madhya Pradesh, most parts of Himachal Pradesh, Punjab, Haryana, New Delhi, Uttarakhand, 4 to 8 °C in some parts of Jammu & Kashmir, Himachal Pradesh and 12 to 16°C in remaining parts of the country.

**Minimum Temperature (°C) Anomaly in India for the week ending 26.11.08**



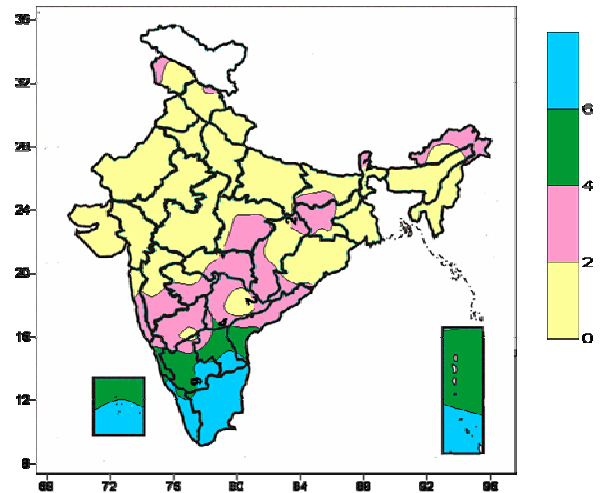
Minimum Temperature anomaly ranged between 2 to 4°C in some parts of Rajasthan, Uttar Pradesh, Bihar, Madhya Pradesh, Coastal Andhra Pradesh, Rayalaseema, Tamil Nadu, Kerala, Interior Karnataka most parts in Orissa, Chhattisgarh, Maharashtra, Telangana, Lakshdweep -2 to 0°C over some parts of Jammu & Kashmir, Punjab, Himachal Pradesh, Haryana, Rajasthan, Saurashtra & Kutch, Madhya Pradesh, Interior Karnataka, Coastal Andhra Pradesh, Tamil Nadu, most parts of North East India, and 0 to 2°C over remaining parts of the country.

**Relative Humidity (%) over India for the week ending 26.11.08**



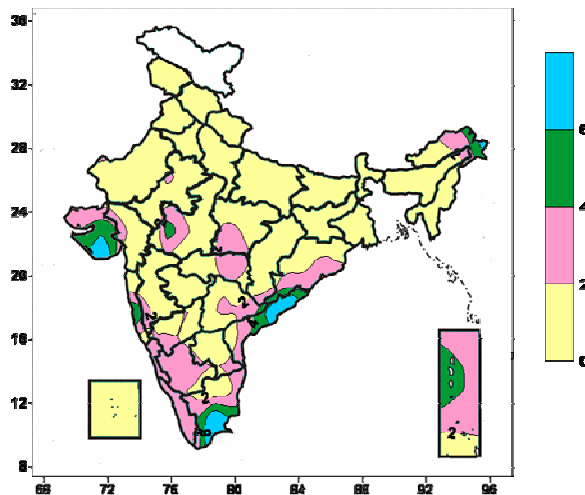
Relative humidity ranged from 80 to 100% in some parts of Bihar, Arunachal Pradesh, Assam & Meghalaya, Tripura, Coastal Andhra Pradesh, Kerala, Lakshdweep, Andaman & Nicobar Islands most parts of Tamil Nadu, 40 to 60% over some parts of Madhya Pradesh, Maharashtra, Chhattisgarh, most parts of Rajasthan, Gujarat, Marathwada, Vidarbha and 60 to 80% over remaining parts of the country.

**Cloud amount (okta) over India for the week ending 26.11.08**



Cloud amount ranged from 6 to 8 okta in some parts of Rayalaseema, South Interior Karnataka, Lakshdweep, Andaman & Nicobar Islands, most parts of Tamil Nadu, 4 to 6 okta in some parts of Andhra Pradesh, South Interior Karnataka, Coastal Karnataka, Lakshdweep, Andaman & Nicobar Islands, 2 to 4 okta in some parts of Jammu & Kashmir, Arunachal Pradesh, Himachal Pradesh, Bihar, Jharkhand, Chhattisgarh, Orissa, Maharashtra, Rayalaseema, South Interior Karnataka, most parts in Sikkim, Arunachal Pradesh, Coastal Andhra Pradesh, Telangana, North Interior Karnataka, and 0 to 2 okta in remaining parts of the country.

**Wind speed (knots) over India for the week ending 26.11.08**









Wind speed ranged between 6 to 8 knots in some parts of Saurashtra & Kutch, Coastal Andhra Pradesh, Tamil Nadu, 4 to 6 knots over some parts of Saurashtra & Kutch, West Madhya Pradesh, Konkan & Goa, Arunachal Pradesh, Coastal Andhra Pradesh, Tamil Nadu, Andaman & Nicobar Island, 2 to 4 knots in some parts of east Rajasthan, Madhya Pradesh, Gujarat, Arunachal Pradesh, Assam, Orissa, Konkan & Goa, Madhya Maharashtra, Vidarbha, Telangana, Rayalaseema, Tamil Nadu, most parts of Coastal Andhra Pradesh, Karnataka, Kerala, Andaman Nicobar Islands and 0 to 2 knots over remaining parts of the country.

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

*** Most Stress Districts					
State/Districts	29/10/08	05/11/08	12/11/08	19/11/08	26/11/08
<b>Karnataka</b>					
Coastal Karnataka					
Dakshin Kannada	181	-100	-78	-95	-91
Udupi	93	-100	-100	-98	-99
Uttar Kannada	3	-100	-98	-74	-100
North Interior Karnataka					
Bidar	-100	-100	-100	-88	-98
South Interior Karnataka					
Chamarajnagar	102	-100	-100	-86	-22
Chickmagalur	5	-100	-100	-78	-98
Chitradurga	-42	-100	-100	-52	-81
Davangere	-48	-100	-100	-62	-85
Hassan	37	-100	-100	-54	-51
Kodagu	98	-100	-100	-94	-70
Kolar	40	-100	-100	-81	-30
Mandya	44	-100	-100	-100	-57
Mysore	77	-100	-100	-100	-84
Shimoga	-77	-100	-100	-81	-100
Tumkur	48	-100	-100	-44	-32
<b>Kerala</b>					
Kannur	375	-100	-100	-100	-95
Ernakulam	37	-92	-87	-95	-56
Idukki	28	-97	-91	-58	-48
Kasaragod	48	-100	-100	-100	-95
Kozhikode	640	-100	-100	-100	-59
Malappuram	306	-100	-100	-95	-61
Palakkad	144	-100	-100	-97	-76
Thrissur	216	-100	-100	-100	-96
Wyanad	532	-100	-100	-71	-65
<b>Tamil Nadu</b>					
Nilgiris	219	-100	-100	-56	-20
<b>Andhra Pradesh</b>					
Coastal Andhra Pradesh					
Sirkakulam	-68	-100	-100	-37	-100
Telangana					
Adilabad	-100	-100	-100	-100	-95
Mehabubnagar	-79	-100	-100	-25	-100
Medak	-100	-100	-100	-44	-56
Nizamabad	-100	-100	-100	-72	-100
Warangal	-59	-100	-100	-38	-100

No district in Southern States experienced stress or more stress situation during earlier weeks.

	(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

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

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

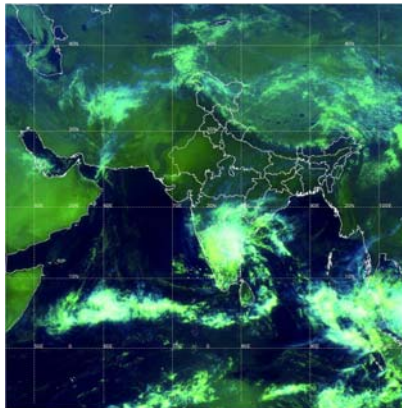
\*Stress (2 weeks continuously deficient to no rain).



## **Chief Synoptic Feature (Based on 1430 hours IST observations of 27<sup>th</sup> November, 2008)**

- The cyclonic storm 'NISHA' over coastal Tamil Nadu moved northwestwards and weakened into a deep depression, lay centered at 1430 hours IST of today, the 27<sup>th</sup> November 2008 over interior Tamil Nadu about 100 Km east-southeast of Dharmapuri. The system is likely to move in a northwesterly direction and weaken further.
- Under its influence, rainfall at most places with heavy to very heavy falls at a few places and isolated extremely heavy falls (>25 cm) is likely over north Tamil Nadu and Puducherry during next 24 hours. Rainfall at many places with isolated heavy to very heavy falls is also likely over south interior Karnataka, south coastal Andhra Pradesh, Rayalseema and isolated heavy falls over Kerala and south Tamil Nadu during the same period.
- The minimum temperatures are above normal by 3-4 °C over northwest Rajasthan and adjoining northwest Madhya Pradesh and 2-3°C above normal over south Andhra Pradesh, south interior Karnataka & Gujarat. Current meteorological analysis and Numerical Model Prediction suggests this scenario likely to continue during next 2-3 days.

### **Satellite image of 6 UTC on 28<sup>th</sup> November 08**



### **Zone-wise Forecast**

**NORTHWEST INDIA [J & K, H. P., UTTARAKHAND, PUNJAB, HARYANA, DELHI, WEST UP]**  
(Forecast valid upto 1430 hours IST of 30<sup>th</sup> November, 2008)

- Mainly dry weather is likely over the region.

**Quantitative District Weather Forecast for next five days:**

- Mainly dry weather is likely over the region.

**EAST INDIA [EAST UP, JHARKHAND, BIHAR, ORISSA, WEST BENGAL & SIKKIM]**  
(Forecast valid upto 1430 hours IST of 30<sup>th</sup> November, 2008)

- Mainly dry weather is likely over the region.

**Quantitative District Weather Forecast for next five days:**

- Mainly dry weather is likely over the region.

**NORTHEAST INDIA [Arunachal Pradesh, NMM & T, Assam, Meghalaya]** (Forecast valid upto 1430 hours IST of 30<sup>th</sup> November, 2008)

- Mainly dry weather is likely over the region.

**Quantitative District Weather Forecast for next five days:**

- Mainly dry weather is likely over the region.

**SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS]** (Forecast valid upto 1430 hours IST of 30<sup>th</sup> November, 2008)

- Rain/thundershowers are likely at most places over north Tamil Nadu and Puducherry during next 24 hours and decrease thereafter.
- Rain/thundershowers at many places likely over Kerala, south Tamil Nadu, south Karnataka, Lakshadweep, south Andhra Pradesh during the same period.
- Rain/thundershowers are likely at a few places over north Andhra Pradesh, North Karnataka and Rayalaseema during same period.
- Isolated rain/thundershowers are likely over the rest region.

**Quantitative District Weather Forecast for next five days:**

- Moderate to heavy rainfall is likely to occur over Tamil Nadu and Puducherry, moderate to rather heavy rainfall is likely to occur over Kerala, Coastal Andhra Pradesh, Rayalaseema, South Interior Karnataka, Lakshadweep and light rainfall is likely to occur over North Interior Karnataka, Coastal Karnataka, Telangana during next 24 hours and light rainfall will occur thereafter over the region.

**WEST INDIA [GOA, MAHARASHTRA (OTHER THAN VIDARBHA), GUJARAT, RAJASTHAN]** (Forecast valid upto 1430 hours IST of 30<sup>th</sup> November, 2008)

- Isolated rain/thundershowers are likely over Konkan Goa, Madhya Maharashtra, Marathwada after 48 hours.
- Mainly dry weather is likely over the rest region.

**Quantitative District Weather Forecast for next five days:**

- During next 48 hours light rainfall is likely to occur over Konkan Goa, Madhya Maharashtra, Marathwada and mainly dry weather is likely over the rest region.

**CENTRAL INDIA [M.P., CHHATTISGARH, VIDARBHA]** (Forecast valid upto 1430 hours IST of 30<sup>th</sup> November, 2008)

- Isolated rain/thundershowers are likely over Vidarbha after 48 hours.
- Mainly dry weather is likely over the region.

**Quantitative District Weather Forecast for next five days:**

- During next 48 hours light rainfall is likely to occur over Vidarbha and mainly dry weather is likely over the region.

**Warning:**

- Heavy to very heavy rainfalls at a few places and isolated extremely heavy falls ( $\geq 25$  cm) is likely over north Tamil Nadu, Puducherry during next 24 hrs.
- Isolated heavy to very heavy rainfall is also likely over Kerala, South Tamil Nadu, south Karnataka, south Andhra Pradesh and Lakshadweep during the same period.
- Squally wind speed reaching 45-55 kmph are likely along and off Tamil Nadu & Puducherry coasts during next 12 hours. Sea condition is very rough to high along and off these coasts. Squally wind speed reaching 45-55 kmph gusting to 65 kmph is also likely over interior districts of Tamil Nadu during the same period.

**Weather Outlook from 1430 IST of 30<sup>th</sup> November to 1430 IST of 2<sup>nd</sup> December, 2008 (Based on numerical weather products):**

- Scattered to fairly wide spread rainfall activity is likely over south peninsula.



# 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), apple (fruit maturity / harvesting), tea (plucking), wheat, barley, gram, oat and oil seeds (land preparation / sowing / early vegetative), cabbage, cauliflower and broccoli (nursery sowing / transplanting), pea and knoll khol (nursery sowing), carrot, raddish, turnip and the leafy vegetables like letuce, methi, palak, dhania etc. (sowing), seed crop of onion (planting).
- As dry condition is prevailing, farmers are advised to harvest matured crops of maize and pulses.
- As weather condition is favourable, undertake land preparation and sowing of wheat, barley, gram, oat and oil seeds.
- Under prevailing weather condition, undertake nursery sowing of pea, cauliflower, cabbage, knoll khol and broccoli. Also undertake transplanting of seedlings if nurseries of cabbage, cauliflower and broccoli are 4-6 weeks old.
- Weather condition is also favourable to undertake sowing of carrot, raddish and turnip and also the leafy vegetables like letuce, methi, palak, dhania etc.
- Under prevailing weather condition, for taking seed crop of onion, plant bulbs at 45 X 45 cm apart directly in the field. It is also time for sowing of peas and garlic.
- Whitewash the stems of the trees in orchards with 10 kg Chuna + 100 g of Copper sulphate + 25 liters of water to protect the plants from diseases and direct solar radiation.
- Details of crop varieties are mentioned in Annexure I.

### Plant protection

- Blister blight is appearing in the tea orchards and there is chance of enhanced infestation as the weather is conducive for its spread. For control spray Tilt (Propiconazol) @ 1 ml or cantaf @ 1 ml per litre of water and repeat the spray at 15 days interval.

### Poultry

- For new lots of layers chicks follow recommended schedule of vaccination for IBD and Ranikhet disease because weather is conducive for the spread of these diseases.
- Climate is congenial for attack of Diarrhia and cocksedia, hence, consult the nearby veterinarian.

### Honeybees

- As the temperature has fallen and expected to fall further, give the winter packing immediately to colonies.
- Check the colonies for nector and give artificial food to honey bees as there is scarcity of flowers during these days and keep colonies in sun on clear day.

## Uttarakhand

- **Major Standing Crops:** Sugarcane (harvesting), maize (flowering/grain formation), groundnut (early maturity/maturity) and vegetables (early vegetative/vegetative), Lahi (flowering & pod formation), wheat (early vegetative) & mustard(early vegetative)
- As there was no rainfall in most of the districts of the State during last few weeks and mainly dry weather is likely to prevail for next five days, apply irrigation to the standing crops.
- As weather condition is favourable, farmers are advised to continue sowing of wheat. Select only recommended, certified & high yielding varieties like UP-2338, UP-2554, UP-2584, UP-2382, UP-2565, WH-542, PBW-343 etc. for Udham Singh Nagar district and UP-1109, HS-240, VL-421, VL-804 & HS-277 for Nainital district. Apply top dressing of fertilisers in early sown crops.
- Weather conditions are also favourable for sowing of chickpea & lentil in Udham Singh Nagar district. Select recommended varieties of lentil such as PL-639, PL-406, Pant Masoor-4 & Pant Masoor-5 in Udham Singh Nagar district and VL Massor-4, VL-Masoor-103, VL Masoor-126 or VL-

Massor-507 in Nainital district. Farmers can continue sowing of Onion seeds @ 400 g seed per 6 m<sup>2</sup> area for one acre crop.

### **Punjab**

- **Major Standing Crops:** Horticultural crops (vegetative), Sugarcane (vegetative), cotton (harvesting stage), maize (grain formation), groundnut (pod formation), sunflower (grain formation/maturity) and early sown wheat, gram and lentil (germination).
- As most of the districts received no significant rain during last few weeks and mainly dry weather is likely for the next five days, farmers are advised to apply irrigation to the standing crops.
- As dry weather is prevailing, farmers are advised to continue picking of cotton.
- Due to favourable weather, complete the sowing of timely sown and late sown wheat.
- Under prevailing weather condition, farmers are advised to complete planting of sugarcane and continue sowing of desi varieties of radish, peas, potato, palak and late season varieties of cauliflower and planting of fruit crops like sweet orange, lime, mango and guava with irrigation facilities in Central and Western plain zones.
- In view of expected fall in temperatures farmers are advised to take care animal sheds for protection against cold and give 50 gm Iodised salt alongwith 50 to 100 gm mineral mixture daily to keep them healthy.

### **Haryana**

- **Major Standing Crops:** Sugarcane (vegetative), Horticulture crops (vegetative), Sunflower (grain formation/maturity), cotton (harvesting stage), bajra (harvesting), early sown wheat(germination).
- As most of the districts received no significant rain during last few weeks and mainly dry weather is likely for the next five days, farmers are advised to apply irrigation to the standing crops. Apply light and frequent irrigation in sugarcane.
- Complete sowing of timely sown wheat. Sowing of late sown wheat may be undertaken in the second fortnight with certified seeds of varieties like WH-711, PBW-343, WH-147 & UP-2338.
- Farmers are advised to continue picking of matured crops of cotton.
- Farmers are advised to continue sowing of desi varieties of radish, peas, potato, palak and late season varieties of cauliflower and planting of fruits crops like sweet orange, lime, mango and guava with irrigation facilities in Eastern and Western zone. Continue planting of Spring sugarcane in Eastern zone.

### **Delhi**

- **Major Standing crops:** Vegetables (sowing / transplanting / early vegetative / vegetative), mustard, potato, gram (early vegetative / vegetative), wheat (sowing / early vegetative), *rabi* onion (nursery sowing).
- 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.
- During the week the minimum temperature has dropped to 6.6°C and in the coming week there is possibility of further drop in the minimum temperature, even to 3.5°C. These conditions are not favourable for sowing of general wheat varieties. So, farmers are recommended for sowing of late varieties. The seed rate for these varieties is 125 kg per hectare. The spacing between rows should be 15-18 cm.
- The present weather is highly conducive for the growth of weeds in timely sown wheat. Farmers are advised to spray 2, 4-D @ 500-700 g active ingredient (a.i.) per hectare to control broad leaved weeds, Isoproturon @ 1000 g a.i. per hectare or Sulphosulphuron @ 20 g a.i. per hectare to control narrow leaved (Grass family) weeds.
- In mustard crop, farmers are advised to follow thinning operations, as it will reduce inter-competition and thus favour healthy crop stand. The farmers are also advised to prune / debranch the bottom three to four leaves depending on the growth or first one or two branches. This will lower the incidence of

white rust or *alternaria* blight diseases. This also would facilitate lowering the insect attack on the lower leaves.

- Present weather conditions are also highly congenial for sowing of *rabi* onion in the nursery.
- Prevailing high humidity (above 70%) along with a temperature range of 10-30°C is highly congenial for incidence and spread of powdery mildew disease in the ber crop. To protect the crop, it is advised to spray Mancozeb @ 2 g / litre of water.
- Those farmers who have transplanted the tomato crop during October are advised to monitor the crop against viral diseases. If detected it is advised to uproot and destroy by burning or deep burial of infected plants.
- Details of crop varieties are mentioned in Annexure I.

### **Uttar Pradesh**

- Major Standing crops: Summer sugarcane (vegetative), Mango trees (fruit setting), *Kharif* Rice (harvesting), rai, mustard, gram, pea and lentil (early vegetative).
- Sowing of improved varieties of wheat like PBW- 343, UP-2338, Malviya etc. may be done.
- Sowing of medium, late varieties of potatoes like Ku Badshah, Ku Bahar, Ku Sindoori & Ku Lalima may be done.
- As there was no significant rain in most of the districts during last few weeks and no rain is likely to occur for the next five days, apply irrigation to sugarcane and early sown *rabi* crops.
- Undertake weeding, intercultural operations, application of fertilizers and pesticides in the standing crops.

### **J & K**

- Major Standing Crops: Wheat (vegetative), pulses (vegetative), mustard (vegetative). This is proper time for sowing of wheat and lentil (lower belts) and planting of vegetable crops in Jammu and Kashmir division
- As dry weather is likely to prevail for the next three days, apply irrigation to the crops.
- Undertake intercultural operations in brown sarson and wheat in Srinagar, mustard in Jammu division and pulses in Rajouri division to keep the field weed free.
- Complete planting of onion and garlic in Kashmir divisions. Also continue sowing *rabi* crops like wheat and lentil in lower belts.
- Undertake harvesting of crops like brinjal, chilly and capsicum in Kashmir division, toria in Rajouri. Continue picking of sweet orange in Jammu division.
- Undertake sowing of wheat, barley and cauliflower in Jammu division.
- **Plant Protection:** Weather conditions are congenial for the mild incidences of
- Saw fly and flea beetle in mustard; spray Malathion @ 0.05%.

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

#### **Bihar**

- **Major Standing Crops:** Sugarcane (vegetative), *Kharif* rice (harvesting), maize (germination), pulses, potato (germination).
- As mainly dry weather is likely to prevail for the next three days, apply irrigation to the standing crops.
- **North west alluvial plain zone:**
- Farmers are advised to harvest the matured rice crop and undertake the sowing of *rabi* crops.
- Farmers are advised to sow the late varieties of rapeseed and mustard like Rajendra rai, Pichheti, Rajendar Anukul and Rajendar Sufalam.
- If there is deficient moisture in the potato field, irrigate the crop for proper germination as moisture stress at this stage would bring adverse effect on yield. Potato crop which is sown a month earlier

requires interculturing and after that apply 75 kg nitrogen per hectare and do the earthing up operation followed by irrigation.

- **Flood affected North East alluvial plain zone:**

- Complete planting of early potato and continue sowing of *rabi* maize (Shaktiman 1, 2, 3 and 4) and berseem utilizing residual soil moisture.
- Undertake land preparation and sowing of wheat.

- **South Bihar:**

- Farmers are advised to prepare the land and sowing of *rabi* crops like wheat, maize and potato depending on the moisture condition of the soil.
- Sowing of pulses like pea, lentil, gram, etc. should be completed as early as possible.
- In irrigated condition, planting of potato tuber and sugarcane sets may be completed the earliest. The improved varieties of potato are Kufri Chandramukhi, K. Badsah, K. Sinduri, K. Lalima and Rajendra Potato 1, 2 and 3.
- Late cauliflower, cabbage and tomato may be transplanted as early as possible. Sowing of onion, garlic, radish and carrot may be done.
- Sowing of wheat under irrigated condition may be continued. Improved varieties of wheat which can be sown upto 30<sup>th</sup> November are HD 2733 and 2824, PBW 343 and 443, HP 1761 and 1731, K 5107, UP 262, RW 346 and 3413.

### **Jharkhand**

- **Major Standing Crops:** Arhar and maize (flowering).
- As mainly dry weather is likely to prevail for the next three days, apply irrigation to the standing crops.
- If irrigation facility is available in mid land sowing of wheat varieties K9107, HUW 468, PBW343, HD2402, HUW 468 and C306 can be undertaken. For unirrigated condition farmers, by utilizing soil moisture after the harvesting of rice, prepare the field immediately and sow improved variety like C306, K 8027 and WR 544.
- Farmers are advised to undertake sowing of late variety of potato Kufribashah and Kufri Sinduri utilizing the residual soil moisture.
- Farmers are advised to sow gram varieties like Pant G 114, H208 & T397 in East Singhbhum, West Singhbhum and Saraikela districts.

### **Orissa**

- **Major Standing crops:** *Kharif* rice (harvesting stage.), Sugarcane (vegetative), vegetables (sowing / transplanting / vegetative / flowering / fruiting), potato (germination).
- As there was insufficient rainfall in most of the districts of Orissa during last few weeks and mainly dry weather is likely to prevail, apply irrigation to the standing crops.

- **Coastal Orissa:**

- Complete sowing of mustard under irrigated condition. Select varieties like Pavati, Varun kranti, Pusa bold, Pusa bahar, Pusa Jaikisan, PT-303, PT-507 and Pusa Agran.
- Start sowing of pea. Use improved varieties like Rachana, Arkel, Early December. Use 30kg seed /acre. Apply recommended dose of fertilizer and sow in line. Undertake sowing of *rabi* groundnut, sunflower, green gram, black gram and sesame. Start land preparation and sowing of toria.
- Undertake sowing of coriander. Select high yielding variety like CO-1, CO-2, CO-3, Swati, Sadhana, Ram Selection and Udi.

### **Interior Orissa:**

- Field pea and black gram may be sown 20 days before harvest of paddy as paira crop. Improved varieties such as Rachana, Arkel, Blackgram-PU-19, PU-30 and B-3-8-8. While harvesting rice, leave about 20cm stubble in the field.
- Complete sowing of onion in the nursery bed. The best varieties are NH-53& Agrifound-light-red.

### **West Bengal**

- **Major Standing Crops:** Sugarcane (cane development), *aman* rice (maturity / harvesting), mustard, gram and lentil (germination / early vegetative), wheat, (land preparation / sowing / early vegetative) and potato (land preparation / planting / early vegetative).
- As there was no significant rain during last few weeks in most of the districts of the State and mainly dry weather is likely to prevail over the State during next five days, apply irrigation to the standing crops.
- Under prevailing weather condition, continue harvesting of already matured crops of *aman* rice.
- As weather condition is favourable, continue land preparation and complete sowing of seeds of wheat within this week, continue planting of potato and start nursery bed preparation of *boro* rice in New Alluvial zone. Seed rate is 14 kg per bigha for sowing of wheat.
- Under prevailing weather condition, farmers of Coastal Saline Zone are also advised to undertake planting of potato. Seed weight varies from 250-300 kg per bigha according to the size of the seed tuber for potato.
- Prevailing weather condition is also congenial for nursery sowing of cabbage and knoll khol in Coastal Saline Zone. For the early crop of cabbage, 80-100 g and for late crop 55 g seeds where as for knoll-khol 150-200 g of seeds are required for sowing one bigha of land.
- Details of crop varieties are mentioned in Annexure I.

### **Sikkim**

- **Major Standing Crops:** Orange (fruiting/harvesting), ginger (rhizome development), maize (harvesting), rice (flowering/grain formation). This is proper time for sowing/planting of *rabi* wheat and potato.
- As there was no significant rainfall during last week in the state and mainly dry weather is likely to prevail for the next three days, apply irrigation to the standing crops.
- Undertake intercultural operations in early sown *rabi* mustard and vegetable crops like cabbage, cauliflower, carrot, Chinese cabbage, knol-khol, garden peas, radish, turnip, lettuce, celery, spinach, etc., in medium and low hills.
- Undertake planting of *rabi* potato in medium and low hills.
- Continue sowing of wheat when the temperature is in the range of 20-23<sup>0</sup>C.
- **Plant Protection:** Regular inspections may be carried out to observe caterpillar/ shoot borer/shoot fly incidence if any and may be hand picked and destroyed mechanically. 1% Bordeaux mixture or copper oxychloride @ 3gm/ltr of water may be sprayed to the cardamom plants to protect from fungal diseases.
- 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.
- Monitor ginger for bacterial wilt in medium and low hills and 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 (flowering / pod formation), *sali* rice (grain maturity / harvesting), black gram and green gram (pod maturity / harvesting), cauliflower, cabbage, raddish, brinjal, tomato, knolkhol, onion and carrot (early vegetative / vegetative / flowering / fruiting), mustard, lentil and pea (sowing / germination / early vegetative) and potato (planting / early vegetative).

- As there was no significant rain over the State during last few weeks and weather will be mainly dry for next five days, farmers are advised to apply irrigation to arhar and vegetable crops like cauliflower, cabbage, raddish, brinjal, tomato, knolkhol, onion and carrot.
- As mainly dry weather is likely to prevail, farmers are advised to undertake intercultural operation to keep the fields weed free.
- Under prevailing dry weather condition, farmers are advised to harvest already matured crops of *sali* rice, black gram and green gram.
- Farmers may apply fertilizers in citrus orchard as no rainfall is predicted in the coming week. The fertilizer dose for the plants older than 4 years and above is 650 gm Urea, 1250 gm SSP and 500 gm MOP per plant.
- As the weather condition is favourable, this is proper time to prepare land and undertake sowing of wheat, mustard, lentil and pea and planting of potato with presowing irrigation.
- Details of crop varieties are mentioned in Annexure I.

### **Arunachal Pradesh**

- **Major Standing crops:** Vegetables (early vegetative), Wet seeded rice (harvesting), millets (harvesting), wheat, mustard, pea(germination), *rabi* maize(vegetative), potato (germination), winter vegetables(vegetative stage).
- As there was no significant rainfall in most of the districts during last few weeks, apply irrigation to the standing crops. Apply 1<sup>st</sup> irrigation in wheat at crown root initiation stage i.e.20-25 days after sowing.
- Farmers are advised to continue land preparation and sowing of pea.
- Apply top dressing in maize with urea @65 kg/ha on 35 days after emergence of seedlings.

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

#### **Andhra Pradesh**

- **Major Standing Crops:** Groundnut, Jowar, Bajra, Ragi and Maize (all harvesting), Sugarcane (grand growth), Rice (flowering/grain formation), Chilly (late vegetative)
- As rain/thundershowers are likely to occur at many places for the next 24 hours and decrease thereafter with isolated heavy to very heavy rainfall over south Andhra Pradesh, farmers in the state are advised to postpone irrigation to plantation crops. Also arrange for extensivedrainage facilities to avoid water stagnation.
- Apply irrigation to the crops in north Andhra Pradesh except in Nellore as there was no significant rainfall during last week and rain/thundershowers are likely to occur at a few places for the next three days. Postpone irrigation in Nellore as there was excess rainfall during last week.

#### **Coastal AP**

##### **Plain Land**

- Farmers in Srikakulam are advised to complete harvesting of groundnut, ragi and maize crops.
- Farmers in upland areas of West Godavari, Krishna, Guntur and Praskasam districts are advised to undertake intercultural operations in *rabi* pulse crops like green gram on a non rainy day.
- **Plant Protection:** Weather conditions are congenial for the incidences of
- sheath blight, blast and leaf folder in rice, pod borer in red gram, red mite in brinjal and bhendi, thrips and mites in chilly and internode borer in sugarcane in Srikakulam and Vijayanagaram districts; undertake plant protection measures on a non rainy day.

##### **High Altitude Areas**

- Farmers in high altitude regions of Srikakulam, East Godavari, Vijayanagaram, Visakappattinam and Khammam are advised to undertake intercultural operations and application of fertilizers and pesticides in *rabi* crops like mustard on a non rainy day.
- Farmers are advised to complete harvesting of rice, rajma and ragi.



### **Rayalaseema**

- Farmers in Anantapur are advised undertake intercultural operations and application of fertilizers and pesticides in *rabi* crops like sunflower, maize and Bengal gram after spells of rain.
- Farmers in Chiththoor are advised to complete transplanting of rice in the main field after spells of rain.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
- *Heliothis* in tomato in Cuddappah district; undertake plant protection measures after spells of rain.

### **Telangana**

- Farmers in Karimnagar, Nizamabad and Adilabad districts are advised to undertake intercultural operations in early sown *rabi* crops on a non rainy day.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
- sucking pests in cotton, thrips in chillies, 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 on a non rainy day.

### **Karnataka**

- **Major Standing Crops:** Annual sugarcane (grand growth). Early sown *rabi* crops are at vegetative stage.
- As rain/thundershowers are likely to occur at many places for the next 24 hours and decrease thereafter with isolated heavy to very heavy rainfall over south Karnataka, farmers are advised to postpone irrigation to the crops. Also arrange for extensive drainage facilities to avoid water stagnation.
- Apply irrigation to the crops in north Karnataka as there was no significant rainfall during last week and rain/thundershowers are likely to occur at a few places for the next three days.

#### **Coastal Karnataka**

- Farmers in Udupi and Dakshin Kannada districts are advised to undertake intercultural operations and application of fertilizers and pesticides in arecanut, coconut, cashew and banana on a non rainy day.

#### **North Interior Karnataka**

- Farmers in Bellary, Bijapur, Bagalkot and Koppal districts are advised to undertake intercultural operations in September sown sunflower on a non rainy day.
- Farmers in Bidar region are advised to undertake sowing of *rabi* crops Bengal gram (upto November end). Also undertake planting of sugarcane during November and sowing of vegetable crops like brinjal, tomato, cabbage and cauliflower in the nursery. Undertake transplanting of vegetable seedlings in the main field when they attain proper age.
- Farmers in Dharwad, Bijapur and Raichur are advised to undertake intercultural operations in early sown wheat, gram and safflower on a non rainy day.
- **Animal Husbandry:** In and around Dharwad and surrounding villages Foot and Mouth disease has been noticed. Undertake vaccination. Due to cold weather sneezing is noticed indicating respiratory problem. Consult with the nearby veterinary doctor.

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

- citrus canker, anthracnose in pomegranate, purple blotch and thrips in onion, *Phytophthora* blight in red gram and sucking pests in cotton in Bijapur; spray Streptomycin Sulphate (0.5 g) + Copper oxichloride (2g)/liter of water for citrus canker, Kavach @ 2 g/litre of water for anthracnose in pomegranate, Hexaconazole @ 1 ml + Acitamaprid @ 0.25 g/litre of water for purple blotch and thrips in onion, Redomil @ 4 g/litre of water for *Phytophthora* blight in red gram and Monocrotophos @ 1 ml/litre of water for sucking pests in cotton.
- sucking pests in Bt cotton in Gulbarga; undertake plant protection measures.
- Spraying of chemicals may be undertaken on a non rainy day.

#### **South Interior Karnataka**

- Farmers in Bangalore, Kolar and Tumkur are advised to undertake intercultural operations and application of fertilizers in early sown crops after spells of rain.

- Farmers in Chitradurga and Shimoga are advised to undertake sowing of Bengal gram and safflower during *rabi* season (November). Select among A1 and GBS 964 for Bengal gram and A1 and S-144 for safflower. Postpone sowing during spells of heavy rain.

**Plant Protection:** weather conditions are favourable for

- Sigatoka leaf spot in banana and powdery mildew in bhindi in Shimoga. Spray Tridemorph @ 1 ml/litre of water for Sigatoka leaf spot in banana and spray Wettable sulphur @ 2.5 g/litre of water for powdery mildew in bhindi. Spraying of chemicals may be undertaken after spells of rain.

### Kerala

- **Major Standing Crops:** *Mundakan* rice (vegetative/tillering), vegetable and plantation crops (Coconut, Arecanut, Pepper and Cashew).
- As rain/thundershowers are likely to occur at many places for the next 24 hours and decrease thereafter with isolated heavy to very heavy rainfall, farmers in the state are advised to postpone irrigation to plantation crops. Also arrange for extensive drainage facilities to avoid water stagnation.
- Undertake planting of tapioca after spells of rain.
- Provide strong mechanical support to banana in Thrissur district to prevent lodging due to increase in velocity of Easterly winds.
- Undertake sowing of water melon and vegetable crops like bitter gourd (Preethi), snake gourd (Baby and Manusree) and cowpea (Lola and Anaswara) after spells of rain.
- Tapping of rubber may be continued after spells of rain.
- Undertake intercultural operations and application of fertilizers and pesticides in plantation crops (coconut, arecanut, pepper and cashew) after spells of rain.
- **Animal Husbandry:** Flies menace may occur in cattle due to present weather conditions in Kasaragod, Kozhikode, Kannur and Malappuram. Maintain sanitation and consult veterinarian to prevent flies attack.

**Plant Protection:**

- Due to overcast/cloudy sky and high RH, sheath blight and blast diseases may attack rice in Thiruvananthapuram. Spray Hinosan @ 200 ml in 200 litres of water per acre after spells of rain.
- Weather conditions are favourable for the attack of
- mahali disease in arecanut in Thrissur, Malappuram, Kasargod, Kozhikode and Kannur districts; apply 1% Bordeaux mixture after spells of rain.
- red palm weevil, rhinoceros beetle, bud rot and stem bleeding in coconut in Kasaragod and Wayanad. Undertake plant protection measures after spells of rain.
- pollu beetle and quick wilt in pepper in Wayanad. Undertake plant protection measures after spells of rain.
- *Epilachna* beetle in brinjal and cucurbits in Thrissur. Collect and destroy the egg masses. To control the beetle, spray Carbaryl @ 0.2% after spells of rain.

### Tamilnadu

- **Major Standing Crops:** Early, Mid Sugarcane (harvesting stage), Special season sugarcane (grand growth stage), Cotton (boll maturity/picking stage).
- Arrange for extensive drainage facilities in rice, banana and sugarcane crops in Thirunelveli, cotton, maize, sorghum and pulse crops in Virudhunagar and rice, maize, cotton, gram and oilseed crops in Namakkal as heavy to very heavy rainfall at a few places along with isolated extremely heavy falls ( $\geq 25$  cm) over north Tamil Nadu and isolated heavy to very heavy rainfall is likely to occur over south Tamil Nadu during next 24 hours.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely to occur over interior districts of Tamil Nadu during next 12 hours. Farmers are advised to provide strong mechanical support to vegetable crops and banana to prevent lodging of crops.
- Farmers in Namakkal are advised to arrange for staking of tomato plants (at fruiting stage) to prevent lodging of plants and damage to fruits due to heavy rainfall.

- Rice plants may show drying symptoms due to excess water stagnation. Spray ZnSO<sub>4</sub> @ 1% and DAP @ 2% after spells of rain to overcome.
- Farmers in Chennai, Cuddalore, Kanchipuram, Thiruvavarur, Thiruvannamalai and Villupuram districts are advised to undertake intercultural operations in vegetable crops after spells of rain.
- **Animal Husbandry:** Due to rainy conditions in Chennai, Cuddalore, Kanchipuram, Thiruvallur, Vellore, Villupuram, increase in vector activity resulting in a slight rise in arthropod borne diseases particularly blood protozoans like Anaplasmosis, Theileriosis and Trypanosomiasis and viral disease such as blue tongue amongst farm animals is expected. Undertake vector control for ticks and flies and midges under the guidance of veterinarians. Also avoid stagnation which can allow for fly and midges breeding sites. Also undertake prophylactic drenching with appropriate medication, for fluke infections like amphistomiasis and liverflukes.
- Ranikhet and *E. coli* incidences may spread among the poultry birds during these days in and around Namakkal. Consult veterinarians and undertake vaccination to prevent further spread.

**Plant Protection:** Present weather is conducive for mild incidences of

- seedling rot/damping off in chillies nursery in Tuticorin. Spray Copper oxy chloride @ 2.5 g/liter of water.
- Sigatoka leaf spot in banana and stem borer in rice in Coimbatore; spray Carbendazim @ 1 g/litre of water for Sigatoka leaf spot in banana and Monocrotophos @1 litre/ha for stem borer in rice.
- Undertake plant protection measures after spells of rain.

## WEST INDIA [GOA, MAHARASHTRA, GUJARAT, RAJASTHAN]

### Maharashtra

- **Major Standing Crops:** Sugarcane (pre-seasonal & suru) (cane maturity), irrigated & *kharif* cotton (picking), *kharif* rice (harvesting of late maturing variety in Nagpur division), tur (pod maturity in Konkan & pod formation in other divisions), *rabi* jowar (early vegetative / vegetative), *rabi* sunflower, maize (germination / early vegetative), gram and wheat (sowing / germination in Pune, Kolhapur, Aurangabad, Nashik, Amtaravati & Nagpur divisions), safflower (vegetative).
- As there was no significant rain during last few weeks and no significant rain is likely to occur during next five days, apply irrigation to the standing *rabi* crops.
- As dry weather is prevailing, farmers are advised to undertake harvesting of rice and sugarcane and picking of fully opened cotton boll.
- As weather condition is favourable, farmers are advised to complete the land preparation and sowing of *rabi* crop viz., wheat and gram.
- Under prevailing weather condition, prepare main field and undertake transplanting of vegetables like watermelon, brinjal, chilli and tomato in north konkan. Complete land preparation and undertake sowing of *rabi* maize in sub montane zone.
- Prevailing weather condition is also congenial for sowing of *rabi* groundnut, mustard and sunflower.
- Banana orchards may be protected from cold by making smoke during the night.
- Details of crop varieties are mentioned in Annexure I.

### Gujarat

- **Major Standing Crops:** Sugarcane (early maturity / harvesting), *Kharif* cotton (boll formation / boll maturity / picking), castor (spike formation / maturity), mustard (sowing / early vegetative), vegetables (sowing / transplanting / early vegetative), potato (planting / early vegetative) and wheat and cumin (sowing / early vegetative).
- 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 *kharif* cotton, castor, mustard, wheat, potato and vegetables.
- As dry condition is likely to prevail, undertake intercultural operation in above mentioned crops to keep the fields weed free.

- Prevailing weather is conducive for harvesting of already matured crops castor and picking of *kharif* cotton.
- As weather condition is favourable, undertake land preparation and planting of potato in Middle Gujarat zone, sowing of wheat, chickpea and cumin in Bhal and Coastal zone and sowing of isabgol in North Gujarat zone. Farmers are advised to use seed rate of 125 kg / ha for wheat, 4 kg / ha for isabgol and 2500 – 3000 kg / ha for potato.
- Weather condition is also favourable to undertake sowing of vegetable crops like brinjal, tomato and cabbage in North Saurashtra region.
- Details of crop varieties are mentioned in Annexure I.

### **Rajasthan**

- **Major Standing Crops:** Groundnut, bajra, jowar, maize, sesame, cluster beans, red gram, cotton and vegetables. All the crops are at end harvesting stage. This is proper time for sowing *rabi* crops. Early sown *rabi* crops are at vegetative stage.
- As there was no significant rainfall during last week in the state and dry weather is likely to prevail for the next three days, apply irrigation to the crops.

#### **East Rajasthan**

- Undertake intercultural operations in mustard, gram, onion and garlic in Alwar, Bharatpur, Dholpur, Karauli and Sawai Madhepur districts.
- Undertake land preparation and sowing of cumin, fenugreek, isabgol, garlic and radish in Ajmer, Dausa, Jaipur and Tonk districts. Select among RMT 1 and RMT 143 for fenugreek and RS 1, RZ 209 and RZ 19 for cumin.
- Farmers are advised to complete sowing of wheat and maize in Banswara district during this week as suitable temperature is prevailing for sowing. Undertake thinning in early sown crops and maintain optimum plant population.
- Complete land preparation and sowing of wheat in Udaipur district. Select among Raj-4037, Raj-3765, Raj-3077, Lok-1, WH-147, GW-322, GW-273 and HI-8498. The normal time of sowing of wheat is first week to third week of November. Also complete planting of fodder oats slips.
- **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.
- sucking pests in vegetable crops in Banswara; spray Dimethoate @ 2 ml/litre of water.

#### **West Rajasthan**

- Farmers in Bikaner and Jaisalmer are advised to undertake sowing of *rabi* crops like 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 undertake sowing of wheat (Raj 3765, Raj 3077A and KRL 19) and cumin (RC 19 and GC 4)
- **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 Sriganaganagar and Hanumangarh; undertake plant protection measures.
- Fruit fly in ber in Pali; spray Monocrotophos @ 1 ml + Endosulphan @ 1 ml/litr of water

### Madhya Pradesh

- **Major Standing Crops:** Sugarcane (grand growth), soyabean (pod development/maturity), maize (cob development/maturity), cotton (boll development) and vegetable crops (transplanting). 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, apply irrigation to the standing crops.
- Undertake land preparation and planting of vegetables like mid cauliflower, cabbage, radish, onion and carrot and sowing of coriander 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. Also undertake planting of *autumn* sugarcane and onion.
- Due to favourable weather conditions, farmers in Tikamgarh, Datia and Chattarpur are advised to complete land preparation and sowing of wheat and als. Do seed treatment before sowing. Undertake transplanting of radish, carrot, spinach, methi and cabbage.
- Farmers in Jhabua are advised to undertake land preparation and sowing of *rabi* crops:  
**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, JG- 130.  
**Maize:** JM- 421, JM- 8, JM- 12, Chandan makka- 3, Ganga- 3, Ganga- 4, HPQM – 1.
- Also undertake transplanting of winter vegetables i.e. tomato, brinjal, chilli, cauliflower, cabbage etc. Berseem and sowing of vegetable pea (Arkil) in Jhabua.
- **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
- pod fly in pigeonpea and fruit fly in Ber; spray Propenophos 40 EC @ 2ml/l of water for pod fly and Endosulphon 35 EC @ 2 ml/l of water & second spray after 15 days for fruit fly in Jabhua hills zone.
- agathi in tomato in Chhindwara and Betul districts. Spray Dithane-M-45 @ 2.5 g/litre of water.
- 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.
- pod borer in red gram in Damoh, Bhopal, Sagar, Raisen, Sehore and Vidisha districts. Spray Endosulphan 35 EC or Malathion @ 2 ml/litre of water to control the pests.

### Chhattisgarh

- **Major Standing Crops:** Sugarcane (vegetative), pigeon pea (flowering / seed formation / early maturity), wheat, gram, pea, mustard, berseem, pigeon pea and linseed (sowing / germination / early vegetative), potato (planting / early vegetative), vegetables (sowing / transplanting).

- 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.
- Considering the clear weather forecast for the next 3-4 days, farmers are advised to harvest the matured crop of rice and ensure proper sun drying and safe storage of the harvested produce. Wherever *utera* crops are sown in rice fields, transfer the harvested rice from such fields as early as possible to avoid losses in *utera* crops.
- As present weather condition is ideal for proper germination of wheat, gram, pea, mustard, berseem, pigeonpea and linseed, farmers are advised for sowing of these *rabi* crops as early as possible after harvesting of rice. For wheat - GW-273, Kanchan, GW-173, Amar, Lok-1, Ratan and HD-2329 are suitable varieties for Chhattisgarh Plain zone. However, under limited irrigation conditions, sowing of Sujata variety is recommended. For sowing of wheat seed rate should be 125 kg / ha for all the varieties. Vijay, Vaibhav, JG-74, JG-315, G-14, ICC-2 (Kabuli) etc. are suitable varieties of gram for Chhattisgarh.
- Present weather conditions are favorable for planting of potato. Hence, planting of potato should be done at the earliest after proper seed treatment with Carbendazim solution @ 2 g / liter of water. As the winter span is less, short duration varieties of potato should be preferred.
- For more flowering in the mango farmers are advised to stop irrigation in the mango orchard.
- Weather conditions are suitable for transplanting of vegetables like tomato, brinjal and chilli etc. Planting can be done preferably during afternoon hours to avoid the seedling mortality. Sowing of winter season vegetables can also be done during this period.



## Annexure I

### Crop varieties of Assam

- **Wheat:** Sonalika, UP-262, K-7410, WH-291, HDR-77 etc.
- **Potato:** Kufri Chandramukhi, Kufri Jyoti, Kufri Megha, Kufri Badshah, Kufri Sindhuri etc.
- **Mustard:** TS-36, TS-38, Varuna, TM-2, TM-4, M-27 etc.
- **Pea:** T-163, Rasna, Banevila, Arkel, Azad, Alankar, HUP-2 etc.
- **Lentil:** B-77, L-9-12, P-L-406 etc.

### Crop varieties of Gujarat (North Gujarat zone)

- **Isabgol:** Gujarat Isabgol – 1 or 2 or 3.

### Middle Gujarat

- **Potato:** Kufri Badshah, Kufri Bahar, Laukar etc.

### Crop varieties of Delhi

- **Wheat:**
  - **Advanced varieties for Irrigated conditions:** HD 2284, RAJ 3777, HD 1633, NW 1014 and HD 2307.
  - **Varieties for non-irrigated conditions:** K9465, HDR 77.
- **Onion:** Pusa Red, Pusa Madhabi, Agrifound Light Red.

### Crop varieties of West Bengal

#### New Alluvial zone

- **Wheat:** Rajlakshmi, H.P. 1701, Janak, HP-1209, BW-11 etc.

#### Coastal Saline zone

- **Potato:** Kufri Alankar and Kufri Chandramukhi.
- **Cabbage:** Golden Acre, Pride of India.
- **Knoll khol:** White Viena.

### Crop varieties of Himachal Pradesh

- **Wheat:** HPW-89,147 VL-738 and HS-240.
- **Barley:** HBL-316 and Dolma.
- **Oat:** Palampur-1.
- **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.
- **Peas for nursery sowing:** Mater ageta-6.
- **Raddish:** Japani white and Early Mino White.
- **Turnip:** PTWG-1.
- **Peas:** Agad, Lincoln and Priya.

### Crop varieties of Maharashtra

- **Wheat:** HD-2189, MACS-3185, NIAW-301 (Trimbak), NIDW-295 (Godawari).
- **Gram:** Vishwas, Phule G-12, Vijay, Vishal, Digvijay, Rajas.
- **Mustard:** Pusa Bold and Varuna.
- **Sunflower:** Modern, SS-56, BSH-1 etc.