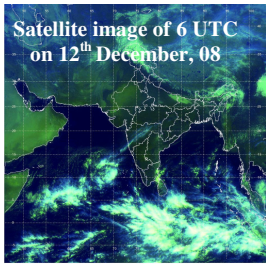




## National Agromet Advisory Bulletin

**Thursday, 11<sup>th</sup> December, 2008**  
**(For the period 11<sup>th</sup> to 15<sup>th</sup> December, 2008)**



### Forecast for South India (valid upto 1430 hours IST of 14<sup>th</sup> December 2008)

- Rain/thundershowers are likely at a few places over south Tamil Nadu, Kerala, Lakshdweep and Nicobar Islands during next 24 hours and decrease thereafter.
- Isolated rain/thundershowers are likely over rest Tamilnadu, Coastal Karnataka and Andaman Islands.
- Mainly dry weather is likely over the rest region.

### Status of Northeast Monsoon

- Scattered to fairly widespread rainfall occurred on first four days over Andaman & Nicobars Islands, on two to three days over Tamil Nadu & Puducherry, Kerala & Lakshdweep during the week.

### Advisories for Tamil Nadu

- As there was no significant rain during last week in the State except in Cuddalore, Dindigul, Nagappattinam, Perambalur, Pondicherry, Ramanathapuram, Thanjavur, Thiruvarur and Villupuram districts and no significant rain is likely to occur for next five days, farmers are advised to apply irrigation to the crops. Postpone irrigation in the above districts as there was excess rainfall during last week.
- Due to fall in temperature in Nilgiris, protect the crops from cold injury by providing thatches.

### Advisories for Kerala

- As there was no significant rain during last week in this 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 pancha rice in Kottayam and particularly in Kuttanad area and 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.
- Provide mechanical support to nendran banana as velocity of Easterly winds is increasing over Thrissur area.
- Protect young seedlings of coconut and arecanut from sun scorching by providing thatches.

### 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.

### Advisories for Jammu & Kashmir

- Due to the forecast of low night temperature, cold/frost injury may occur in newly planted orchards crops like mango, litchi, papaya, guava and citrus in Rajouri. Protect the crops from cold injury by providing thatches.







### 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

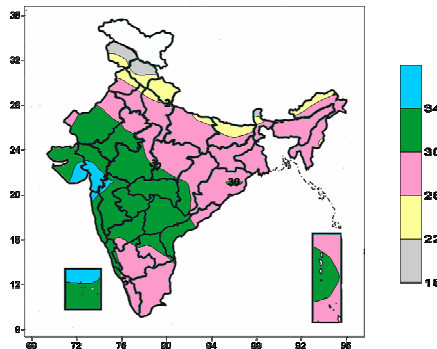
Comparison of weekly rainfall distribution (in % dep.) in different Met. Sub-divisions during past 5 weeks					
Sub-division	Cumulative Rainfall (% Dep.) for the period				
	12 <sup>th</sup> November	19 <sup>th</sup> November	26 <sup>th</sup> November	3 <sup>rd</sup> December	10 <sup>th</sup> December
A & N Islands	73	98	35	-55	-60
Arunachal Pradesh	-40	-100	-17	-99	-99
Assam and Meghalaya	-100	-100	-65	-99	-99
NNMT	-94	-100	-100	-100	-99
SH West Bengal & Sikkim	-100	-98	-85	-93	-84
Gangetic West Bengal	-100	-100	-100	-100	-100
Orissa	-100	-99	-87	-99	-100
Jharkhand	-100	-100	12	-100	-100
Bihar	-100	-100	-100	-100	-100
East Uttar Pradesh	-100	-22	-98	-100	-100
West Uttar Pradesh	-100	-11	367	-100	-100
Uttarakhand	-100	-100	43	-100	-100
Haryana, Chandigarh and Delhi	-100	-100	159	-100	-100
Punjab	-100	-100	-86	-100	-89
Himachal Pradesh	-100	-100	-75	-100	-79
J & K	-100	194	-86	-99	340
West Rajasthan	-100	-100	-99	-100	346
East Rajasthan	-100	-42	-91	-92	-100
West M. P.	-100	347	-43	-97	-100
East M. P.	-100	-83	-20	-100	-100
Gujarat region	-100	-95	-100	93	-100
Saurashtra & Kutch	-100	-100	-100	2493	-100
Konkan and Goa	-100	-97	-98	31	-66
Madhya Maharashtra	-100	-96	-46	-26	-100
Marathwada	-100	-89	37	-87	-100
Vidarbha	-100	-99	-82	-87	-100
Chhattisgarh	-100	-100	-78	-100	-100
Coastal A. P.	-95	144	-42	1129	-100
Telangana	-100	51	-59	281	-100
Rayalseema	-98	109	-12	1018	-100
TamilNadu & Pondicherry	-95	-90	307	415	-35
Coastal Karnataka	-91	-86	-97	221	-100
N. I. Karnataka	-100	158	-46	505	-100
S. I. Karnataka	-100	-60	-49	291	-99
Kerala	-73	-81	-33	73	-77
Lakshadweep	-90	-97	139	-73	188

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

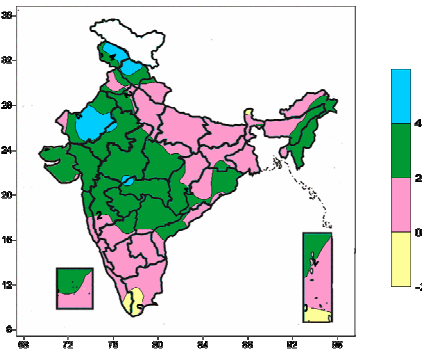
## Contour maps for the week ending 10.12.08

**Actual Mean Maximum Temperature (°C) in India for the week ending 10.12.08**



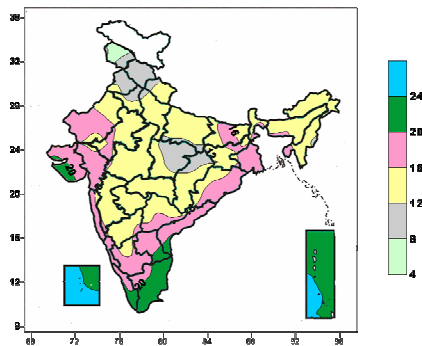
Actual Mean Maximum Temperature ranged between 34 to 38 °C over some parts of South Gujarat, Konkan & Goa, Madhya Maharashtra, Lakshdweep, 30 to 34°C over some parts of Chhattisgarh, East Madhya Pradesh, Coastal Andhra Pradesh, Rayalaseema, Orissa, South Interior Karnataka, Andaman & Nocobar Island, over most parts of Rajasthan, Maharashtra, Gujarat, West Madhya Pradesh, Coastal Karnataka, North Interior Karnataka, Telangana, Lakshdweep, 22 to 26°C over some parts of Jammu & Kashmir, Punjab, Himachal Pradesh, Haryana, Uttar Pradesh, Bihar, Sub Himalayan West Bengal, Arunachal Pradesh, most parts of Uttarakhand, 18 to 22°C over some parts of Jammu & Kashmir, Himachal Pradesh, Sikkim and 26 to 30°C in remaining parts of the country.

**Maximum Temperature (°C) Anomaly in India for the week ending 10.12.08**



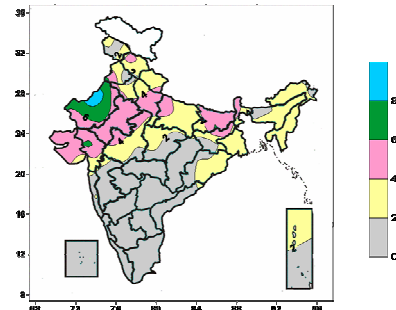
Maximum Temperature anomaly ranged between 4 to 6°C over some parts of Jammu & Kashmir, Himachal Pradesh, West Madhya Pradesh, Vidarbha, most parts of West Rajasthan, 2 to 4°C over some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Uttarakhand, Orissa, Coastal Andhra Pradesh, Andaman Nicobar Island, Lakshadweep, North Interior Karnataka, most parts of West, Central, North East India, Telangana, most parts in Kerala, Tamil Nadu -2 to 0°C over Kerala, Tamil Nadu, Andaman Nicobar Islands and 0 to 2 °C over remaining parts of the country.

**Actual Mean Minimum Temperature (°C) in India for the week ending 10.12.08**



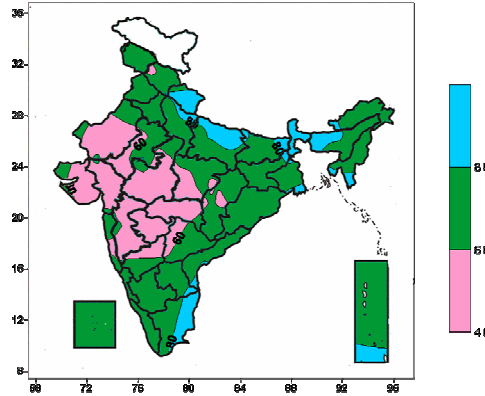
Actual Mean Minimum Temperature ranged between 24 to 26°C over some parts of Andaman Nicobar Islands, most parts of Lakshdweep 20 to 24°C over some parts of Saurashtra & Kutch, Kerala, Coastal Andhra Pradesh, Rayalaseema, Lakshdweep, most parts of, Tamil Nadu, Andaman Nicobar Islands, 16 to 20 °C over some parts of East Rajasthan, East India, Telangana, Interior Karnataka, Assam & Meghalaya, Tamil Nadu, most parts over West Rajasthan, West Coast, Tripura, Coastal Andhra Pradesh, Rayalaseema, 8 to 12 °C over some parts of Jammu & Kashmir, Haryana, Uttarakhand, West Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, most parts of Himachal Pradesh, Punjab 4 to 8 °C over some parts of Jammu & Kashmir, and 12 to 16°C over remaining parts of the country.

**Minimum Temperature (°C) Anomaly in India for the week ending 10.12.08**



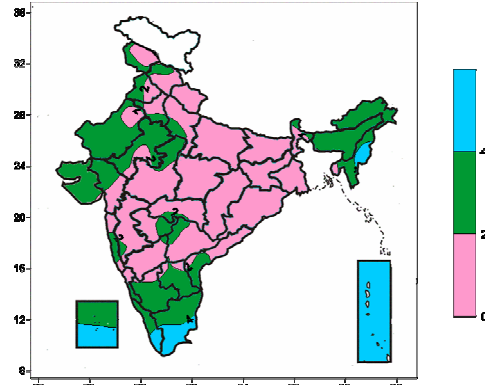
Minimum Temperature anomaly ranged between 8 to 10°C over some parts of West Rajasthan, 6 to 8 °C over some parts of Gujarat most parts of West Rajasthan, 4 to 6°C over some parts of Himachal Pradesh, Punjab, Haryana, West Rajasthan, Uttarakhand, East Uttar Pradesh, West Madhya Pradesh, Jharkhand, over most parts of East Rajasthan, Gujarat, West Uttar Pradesh, Bihar, Sikkim, 0 to 2 °C over some parts of Jammu & Kashmir, Punjab, Haryana, Assam & Meghalaya, Arunachal Pradesh, Madhya Pradesh, Orissa, Jharkhand, Andaman Nicobar Island, most parts over Maharashtra, Chhattisgarh, south India and 2 to 4°C over remaining parts of the country.

Relative Humidity (%) over India for the week ending 10.12.08



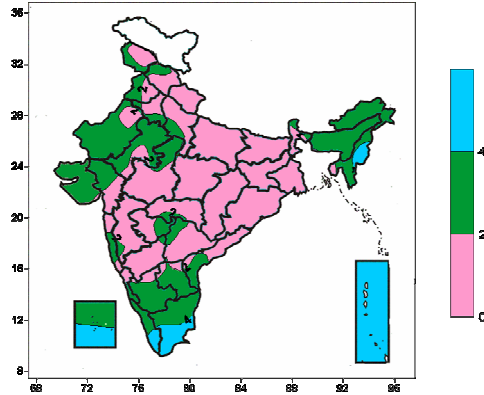
Relative humidity ranged from 80 to 100% over some parts of Uttar Pradesh, Bihar, Gangetic West Bengal, Arunachal Pradesh, Assam & Meghalaya, Coastal Andhra Pradesh, Tamil Nadu, Andaman & Nicobar Islands most parts over Uttarakhand, Sub Himalayan West Bengal & Sikkim, 40 to 60% over some parts of Himachal Pradesh, East Rajasthan, East Madhya Pradesh, Chhattisgarh, Konkan & Goa, Telangana, North Interior Karnataka, most parts of West Rajasthan, Gujarat, Maharashtra, West Madhya Pradesh and 60 to 80% over remaining parts of the country.

Cloud amount (okta) over India for the week ending 10.12.08



Cloud amount ranged from 4 to 6 okta over some parts of, Tamil Nadu, Kerala, Lakshadweep, most parts of Manipur, Andaman & Nicobar Islands, 2 to 4 okta over some parts of, Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, West Uttar Pradesh, West Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Telangana, Coastal Andhra Pradesh, North Interior Karnataka, Kerala, Lakshadweep, most parts of Rajasthan, Gujarat, North East India, Sikkim, Rayalaseema, Coastal Andhra Pradesh, South Interior Karnataka, 0 to 2 okta remaining parts of the country.

Cloud amount (okta) over India for the week ending 10.12.08









Wind speed ranged between 4 to 6 knots over some parts of Kerala, Tamil Nadu, Lakshadweep, most parts over Andaman Nicobar Island 2 to 4 knots over some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, West Uttar Pradesh, Gujarat, Sub Himalayan West Bengal & Sikkim, Maharashtra, Telangana, Coastal Andhra Pradesh, Tamil Nadu, Kerala, Lashdweep, most parts of Rajasthan, Saurashtra & Kutch, North East India, Rayalaseema, South Interior Karnataka, 0 to 2 knots over remaining parts of the country .

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

*** Most Stress Districts					
State/Districts	12/11/08	19/11/08	26/11/08	03/12/08	10/12/08
<b>Kerala</b>					
Kozhikode	-100	-100	-59	-100	-100
Malappuram	-100	-95	-61	-21	-100
Palakkad	-100	-97	-76	-89	-100
Thrissur	-100	-100	-96	-36	-99
Wyanad	-100	-71	-65	-39	-100
<b>Andhra Pradesh</b>					
Coastal Andhra Pradesh					
Sirkakulam	-100	-37	-100	-100	-100
Telangana					
Adilabad	-100	-100	-95	-95	-100
Nizamabad	-100	-72	-100	-21	-100
Warangal	-100	-38	-100	-87	-100

** More Stress Districts					
State/Districts	12/11/08	19/11/08	26/11/08	03/12/08	10/12/08
<b>Andhra Pradesh</b>					
Coastal Andhra Pradesh					
Visakhapatnam	-100	77	-100	-57	-92
Vizianagram	-100	19	-100	-100	-100

* Stress Districts					
State/Districts	12/11/08	19/11/08	26/11/08	03/12/08	10/12/08
<b>Tamil Nadu</b>					
Tuticorin	-48	-90	338	-27	-50
<b>Andhra Pradesh</b>					
Telangana					
Karimnagar	-100	-66	-17	-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

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

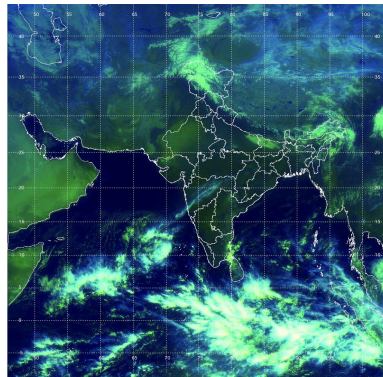
\*\*More stress (3 weeks continuously deficient to no rain)

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

## Chief Synoptic Feature (Based on 1430 hours IST observations of 11<sup>th</sup> December, 2008)

- Morning's low pressure area over southeast Arabian Sea and neighbourhood persists. Under its influence, scattered to fairly widespread rainfall activity is likely over Lakshadweep during next 24 hours and decrease thereafter.
- Current Meteorological analysis suggests subdued rainfall activity over south peninsula during next 5 days.
- The western disturbance as an upper air system over Jammu & Kashmir and neighbourhood persists. It is likely to move away eastward by tomorrow. Under its influence, scattered precipitation is likely over western Himalayan region during next 24 hours.
- The minimum temperatures have fallen by 4-6<sup>0</sup> C during past 24 hours over north Rajasthan and 2-4<sup>0</sup> C over south Rajasthan, Gujarat and parts of Punjab. With the eastward movement of western disturbance, the minimum temperatures are likely to fall further by 2-4<sup>0</sup> C over parts of northwest and central India from tomorrow onwards.

### Satellite image of 6 UTC on 12<sup>th</sup> December 08



### Zone-wise Forecast

#### **NORTHWEST INDIA [J & K, H. P., UTTARAKHAND, PUNJAB, HARYANA, DELHI, WEST UP]** (Forecast valid upto 1430 hours IST of 14<sup>th</sup> December, 2008)

- Rain/snow is likely at a few places over Jammu & Kashmir during next 24 hours and mainly dry weather thereafter.
- Mainly dry weather is likely over the rest region.
- Fall in night temperature by 2-4<sup>0</sup> C over the region.

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

- Light rainfall is likely to occur over Jammu & Kashmir during next 24 hours and mainly dry weather thereafter.
- 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 14<sup>th</sup> December, 2008)

- Isolated rain/thundershowers are likely over Sub-Himalayan West Bengal & Sikkim.
- Mainly dry weather is likely over the rest region.

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

- Light rainfall is likely over Sub-Himalayan West Bengal & Sikkim.
- Mainly dry weather is likely over the rest region.

**NORTHEAST INDIA [Arunachal Pradesh, NMM & T, Assam, Meghalaya]** (Forecast valid upto 1430 hours IST of 14<sup>th</sup> December, 2008)

- Isolated rain/thundershowers are likely over Arunachal Pradesh, Assam and Maghalaya.
- Mainly dry weather is likely over Nagaland, Manipur, Mizoram & Tripura.

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

- Light rainfall is likely to occur over Arunachal Pradesh, Assam and Maghalaya.
- Mainly dry weather is likely over Nagaland, Manipur, Mizoram & Tripura.

**SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS]** (Forecast valid upto 1430 hours IST of 14<sup>th</sup> December, 2008)

- Rain/thundershowers are likely at a few places over south Tamil Nadu, Kerala, Lakshdweep and Nicobar Islands during next 24 hours and decrease thereafter.
- Isolated rain/thundershowers are likely over rest Tamilnadu, Coastal Karnataka and Andaman Islands.
- 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 south Tamil Nadu, Kerala, Lakshdweep and Nicobar Islands during next 24 hours and decrease thereafter.
- Light rainfall is likely to occur over rest Tamilnadu, Coastal Karnataka and Andaman Islands.
- 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 14<sup>th</sup> December, 2008)

- Isolated rain/thundershowers are likely over south Konkan & Goa and south Madhya Maharashtra.
- Mainly dry weather is likely over the rest region.

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

- Light rainfall is likely to occur over South Konkan & Goa and South Madhya Maharashtra.
- Mainly dry weather is likely over the rest region.

**CENTRAL INDIA [M.P., CHHATTISGARH, VIDARBHA]** (Forecast valid upto 1430 hours IST of 14<sup>th</sup> December, 2008)

- Mainly dry weather is likely over the region.
- Fall in night temperature by 2-3° C over Madhya Pradesh.

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

- Mainly dry weather is likely over the region.

**Weather Outlook from 1430 IST of 14<sup>th</sup> to 1430 IST of 16<sup>th</sup> December, 2008 (Based on numerical weather products):**

- Subdued rainfall activity likely to continue over Peninsular India.
- A fresh western disturbance is likely to approach and cause scattered precipitation activity over northwest India and also rise in minimum temperature.

## 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, oat and oil seeds (land preparation / sowing / early vegetative), cabbage, cauliflower and broccoli (sowing / transplanting / early vegetative), pea and knoll khol (nursery sowing / transplanting / early vegetative), carrot, raddish, turnip and the leafy vegetables like lettuce, methi, palak, dhania etc. (sowing / early vegetative), seed crop of onion (planting).
- 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.
- As weather condition is favourable, undertake land preparation and sowing of wheat, barley, oat and oil seeds.
- As dry condition is prevailing, the sowing of radish, corriander, fenugreek, cauliflower, broccoli, Knol khol should be done in the fields ensuring proper soil moisture in the field. Also undertake transplanting of seedlings if nurseries of cabbage, cauliflower and broccoli are 4-6 weeks old.
- 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.

### Poultry

- Climate is congenial for attack of Diarrhia 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), maize (grain formation), groundnut (early maturity), lahi (pod formation / harvesting), wheat (early vegetative / CRI) and mustard (early vegetative).
- As there was no significant rain during last few weeks and mainly dry weather is likely to prevail for the next five days, apply irrigation to the standing *rabi* crops.
- Farmers in Nainital and Udham Singh Nagar districts are advised to give first irrigation to wheat at 21-25 days after sowing (CRI). Protect the germinating seedlings / young seedlings of potato and onion crops from cold injury in nursery by providing light and frequent irrigation.
- Undertake sowing of potato, wheat, mustard, gram, pea and fodder crops in Haridwar, Dehradun and Pauri districts.
- Undertake intercultural operations and application of fertilisers in early sown *rabi* crops like wheat, gram, pea and lentil as favourable weather conditions prevail during these days.
- Due to low temperature conditions farmers are advised not to go for sowing of lentil in Udham Singh Nagar district. Undertake harvesting of potato in Nainital as conducive weather prevails during these days.



- Farmers are advised to continue transplanting of onion in Nainital district.
- Due to cloudy weather conditions, there are chances of mild attack of aphids in *toria* and mustard in Nainital district. Spray Neem oil @ 2 ml/litre of water to control the pest.

### **Punjab**

- **Major Standing Crops:** Horticultural crops (vegetative), Sugarcane (cane formation/harvesting), maize (grain formation), cotton (picking), groundnut (pod development), sunflower (seed formation / maturity), wheat, gram and lentil (germination / early vegetative), pea and vegetable crops like chilly, tomato, brinjal and onion (sowing).
- As there was 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.
- Complete late sowing of wheat with recommended varieties i.e. 373, 1210 for irrigated areas and other recommended varieties for rainfed areas. Reduce dose of Nitrogen to 1/4th so that vegetative phase may be restricted and harvesting may not suffer. Treat seeds with Bavistin 2.5g/kg to control loose smut/flag smut.
- Protect the germinating seedlings/young seedlings of vegetable crops from cold injury in nurseries. Cold injury may also occur in sugarcane. Apply light and frequent irrigation to prevent the crops from cold injury.
- Due to favourable weather conditions, farmers are advised to continue picking of cotton.
- Farmers in Amristar, Fateihgar, Jalandhar, Ludhiana and Kapurthala districts are advised to undertake sowing of raya, pea and vegetable crops like chilli, tomato, brinjal, onion etc. For raya, select among PBR-210, RLM-619, PBR-91, RL-1359 under irrigated conditions and PBR-97 under rainfed conditions. African sarson PC-5 can also be sown during this month. For pea select among Punjab – 87, P6-88, P6-89 and Mitthi Phalli.
- Complete transplanting of sweet pepper and indeterminate tomato under net house.
- It is proper time for layering of litchi trees and side grafting of mango for their propagation.
- Farmers are advised to continue sowing of *desi* varieties of radish, 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.
- Weather conditions are favourable for mild incidences of dieback and fruit rot in chillies. Spray Indofil M-45 @ 750 g or Blitox in 250 litres of water per acre. Repeat spraying after 10 days.
- In view of expected fall in temperature farmers are advised to take care of 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 (cane development / harvesting), Horticulture crops (vegetative), Sunflower (seed formation / maturity), cotton (picking stage), bajra (harvesting), early sown wheat (germination).
- As there was 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.
- Protect the germinating seedlings/young seedlings of vegetable crops from cold injury in nurseries. Cold injury may also occur in sugarcane. Apply light and frequent irrigation to prevent the crops from cold injury.
- Continue planting of spring sugarcane in Eastern zone. Prepare the land for sowing of barseem.
- Complete late sowing of wheat with recommended varieties i.e. 373, 1210 for irrigated areas and other recommended varieties for rainfed areas. Reduce dose of Nitrogen to 1/4th so that vegetative phase may be restricted and harvesting may not suffer. Treat seeds with Bavistin 2.5g/kg to control loose smut/flag smut.
- Farmers are advised to continue picking/harvesting of cotton, sunflower and bajra as favourable weather conditions prevail during these days.

- Farmers are advised to 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 Eastern and Western zones.

### Delhi

- **Major Standing crops:** Vegetables (vegetative), mustard, potato, gram (vegetative), wheat (sowing / CRI), *rabi* onion (transplanting).
- Under prevailing weather conditions farmers are advised to take control measures against weed in wheat. Late sowing of wheat may be completed. The seed rate should be 125 kg per hectare. As dry weather is prevailing for last few weeks and is also likely to prevail for next five days, farmers are advised to apply irrigation to wheat wherever the crops are at CRI stage.
- In mustard crops, farmers are advised to irrigate to facilitate proper branching.
- Light irrigation is advised to 40-45 days old gram crops and also to field pea crop.
- As dry weather is likely to prevail, the farmers, who have sown *toria* in time, are advised to harvest already matured crops.
- Present weather conditions are highly congenial for transplanting of *rabi* onion seedlings.
- Prevailing weather conditions are highly congenial for the attack of aphids in mustard and cucurbitaceous crops. Regular monitoring of crops against the attack of aphids is advised.
- Drop in temperature is highly conducive for the appearance of 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.
- Present weather condition is favourable for infestation of early blight in potato and tomato. Farmers are advised to apply Mancozeb @ 2 g / litre of water to control the disease. Repeat the spray at 10-15 days interval, if required.
- Details of crop varieties are mentioned in Annexure I.

### Uttar Pradesh

- Major Standing crops: Summer sugarcane (grand growth), Mango (fruit setting), rai, mustard, gram, pea and lentil (vegetative).
- As there was no significant rain in the state during last few weeks and mainly dry weather is likely to prevail for the next three days, apply irrigation to sugarcane and standing *rabi* crops.
- Undertake sowing of late varieties of wheat like Malviya-234, Narendra 236, TWT-343 at seed rate of 125 Kg / hectare after purification of seeds by carbendazim or Thiram. Use 25% more seeds from normal for sowing wheat varieties KAL-203, Raj-2007 and Lokuan etc in barren land.
- Undertake weeding, intercultural operations, application of fertilizers and pesticides in the standing crops like gram, pea, lentil, *toria*, rai, mustard, garlic, onion and potato as conducive weather conditions prevail during these days.
- Continue picking of vegetable crops depending upon the market demand.
- Weather conditions are favourable for mild incidences of mealy bug in mango and Jhulsa disease in potato in Bahraich, Balrampur, Gonda, Kushinagar, Siddharthnagar, Maharajganj and Lalitpur districts; spray Folidol @ 250 g / ha for mealy bug in mango and Mancozeb @ 250 g / ha for Jhulsa disease in potato.

### J & K

- **Major Standing Crops:** Wheat (vegetative), pulses (vegetative), mustard (vegetative). This is proper time for sowing of wheat and barley (lower belts) and planting of vegetable crops in Jammu and Kashmir divisions, planting of spinach, beet and mongol in Leh and sowing of wheat in Rajouri.
- As rain/snow is likely to occur at a few places during next 24 hours and dry weather thereafter, apply light and frequent irrigation to the crops. This also saves the crops from cold injury.

- 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 to keep the field weed free as conducive weather prevails during these days.
- Complete planting of onion and garlic in Kashmir divisions. Also continue transplanting of root crops.
- Continue sowing of late varieties of wheat and barley in Jammu division.
- Undertake planting of beet, mongol and spinach in Leh division.
- Undertake sowing of wheat and barley and transplanting of cauliflower in Jammu division.
- Due to the forecast of low night temperature, cold/frost injury may occur in newly planted orchards crops like mango, litchi, papaya, guava and citrus in Rajouri. Protect the crops from cold injury by providing thatches.
- Details of crop varieties are mentioned in Annexure I.

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

### Bihar

- **Major Standing Crops:** Sugarcane (vegetative), *Kharif* rice (harvesting), *Rabi* maize, pulses, potato (germination/early vegetative). Early sown wheat is at crown root initiation stage.
- As mainly dry weather is likely to prevail for the next five days, apply irrigation to the standing crops.
- **North West alluvial plain zone:**
- Farmers are advised to continue harvesting the matured rice crop.
- Farmers are advised to complete sowing of wheat with late varieties. Continue sowing of rapeseed and mustard. Select among Rajendra rai, Pichheti, Rajendar, Anukul and Rajendar Sufalam.
- The day temperature is remaining high. In this condition, the germination and growth of *rabi* crops will be affected. Farmers are advised to maintain proper moisture in the field. Care should be taken to ensure proper moisture at the time of sowing of crops.
- Undertake intercultural operations in early sown rapeseed and mustard crop.
- There are chances of mild incidences of stem borer in the maize crop. Apply Sevin or Carbufuran granular insecticide @ 3 to 4 granules per plant.

### Flood affected North East alluvial plain zone:

- Farmers are advised to complete sowing of wheat with irrigation facilities.
- 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.
- Give first irrigation in November sown maize. Prefer late sown wheat varieties for December sowing.
- Carry out thinning and apply light irrigation followed by top dressing with adequate dose of Nitrogen in *rai* and *toria*.
- Complete harvesting of rice and thresh it properly and safe at around 10% moisture level.

### South Bihar:

- The farmers, who have not sown wheat are advised to sow the late varieties of wheat, which can be sown up to 30th December.
- 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. @ 1kg/ha dissolved in 700 – 800 liter of water, 30 to 35 days after sowing.
- 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 in such a manner that only 2/3rd of the ridge could wet.

- Undertake intercultural operations, irrigation, application of fertilizers and pesticides in early sown maize, pulse, potato, sunflower and vegetable crops like tomato, brinjal, cauliflower and cabbage etc. as per the need.

### Jharkhand

- **Major Standing Crops:** Arhar and maize (grain formation).
- As mainly dry weather is likely to prevail for the next five days, apply irrigation to the standing crops.
- Farmers are advised to complete sowing of wheat. Select among K 9107, HUW 468, PBW 343, HD 2402, HUW 468 and C 306 for irrigated conditions in midland and C 306, K 8027 and WR 544 for unirrigated condition.
- Farmers are advised to continue planting of late variety of potato Kufri Bashah and Kufri Sinduri utilising the residual soil moisture.

### Orissa

- **Major Standing crops:** *Kharif* rice (harvesting), Sugarcane (vegetative), vegetables (vegetative / flowering / fruiting), potato (germination/early vegetative).
- As mainly dry weather is likely to prevail for the next five days, apply irrigation to the standing *rabi* crops. The wheat crop is at CRI stage(15 days in coastal areas and 18 days in inland areas). 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 irrigation.
- Farmers are advised to continue sowing of pea. Select among Rachana, Arkel, etc. Complete sowing of *rabi* groundnut and gram.
- Undertake sowing of coriander. Select high yielding variety like CO-1, CO-2, CO-3, Swati, Sadhana, Ram Selection and Udi.
- Undertake transplanting of onion in the main field. Transplant the seedling of 8-10 weeks old in winter.
- Farmers in Balasore, Bhadrak and Jajpur districts are advised to undertake planting of marigold.
- The farmers interested in Dalua paddy, may go for land preparation for raising nursery.
- Undertake intercultural operations, application of fertilizers and pesticides in early sown *rabi* crops.
- Weather conditions are congenial for infestation of aphid and *Crocidolomia* in rainfed mustard. To control *Crocidolomia* and saw fly spray 200 ml. Ithofenprox or Deltamethrin per acre.

### West Bengal

- **Major Standing Crops:** Sugarcane (cane development), mustard, gram and lentil (germination / early vegetative / vegetative), wheat (germination / early vegetative) and potato (land preparation / planting / early vegetative / 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 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.
- The farmers, who like to cultivate potato after harvesting of *aman* rice, use suitable recommended variety Kufri Jyoti. The seed weight varies from 200 – 270 kg per bigha according to the size of the seed tuber.
- High humidity and fog for the last few days may cause incidence of early blight disease in potato in Coastal Saline zone. Thus spray the crop with Copper oxichloride @ 4g / litre of water at 7-10 days intervals, if disease symptom is appeared.
- Details of crop varieties are mentioned in Annexure I.

## Sikkim

- **Major Standing Crops:** Orange (fruiting/harvesting), rice (grain maturity/harvesting), large cardamom (harvesting and nursery). This is proper time for sowing of *rabi* wheat. Early sown *rabi* crops like mustard, potato and vegetable crops are at vegetative stage.
- As there was no significant rainfall during last week in the state and isolated rain/thundershower is likely to occur for the next three days, apply irrigation to the vegetable crops, early sown wheat, orange and large cardamom.
- Undertake intercultural operations in early sown *rabi* mustard 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 rice and large cardamom as conducive weather prevails during these days.
- Continue sowing of wheat when the temperature is in the range of 20-23°C.
- 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
- caterpillar/shoot borer/shoot fly incidence in large cardamom; hand pick and destroy the larva mechanically. Spray 1% Bordeaux mixture or copper oxychloride @ 3gm/ltr of water to protect from fungal diseases.
- 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 (flowering / pod formation), 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 (germination / early vegetative / vegetative), wheat (germination / crown root initiation stage), potato (sprouting / early vegetative / vegetative) and *boro* rice (nursery preparation).
- 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 and vegetable crops like cauliflower, cabbage, raddish, brinjal, tomato, knolkhol, onion and carrot and also to wheat (at CRI stage), 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.
- Under prevailing dry weather condition, farmers are advised to harvest already matured crops of black gram and green gram.
- Farmers may apply fertilizers in citrus orchard as no significant 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 temperature is favourable for germination, nursery bed preparation and sowing of *boro* rice seeds in nursery bed should be started immediately.
- Under prevailing weather condition, white rust may occur in mustard leaves. Proper field sanitation should be maintained and avoid over irrigation. Spray the crop with Mancozeb 75WP @ 2 gm per litre of water at the onset of the disease. Repeat the spray at 15 days interval.

## Arunachal Pradesh

- **Major Standing crops:** *Rabi* vegetables (vegetative), wet seeded rice (harvesting), millets (harvesting), wheat (vegetative), mustard, pea (vegetative), *rabi* maize (vegetative), potato (vegetative).
- As there was no significant rainfall in most of the districts during last few weeks and no significant rain is likely to occur during next five days, apply irrigation to *rabi* vegetables, wheat, mustard, pea, *rabi* maize and potato.
- As dry condition is prevailing, farmers are advised to continue harvesting of matured crops of wet seeded rice and millets.
- Regular monitoring for insects/ pests may be carried out.

## 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 (grain formation), Chilly (late vegetative).
- Apply irrigation to the crops as there was no significant rainfall during last week and mainly dry weather is likely to prevail for the next three days.

#### Coastal AP

##### Plain Land

- 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. Apply 25 kg urea and 10 kg potash per acre to cotton if sufficient moisture is available in the soil.
- **Plant Protection:** Weather conditions are congenial for the 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; undertake plant protection measures.
- BPH, blast, sheath blight in rice, white fly in cotton, stem borer in maize, pod borer in red gram, spotted pod borer in black gram and green gram in Krishna, West Godavari, Guntur and Praskasam districts; undertake plant protection measures.

##### High Altitude Areas

- Farmers in high altitude regions of Srikakulam, East Godavari, Vijayanagaram, Visakappattinam and Khammam are advised to undertake intercultural operations in *rabi* crops like wheat, mustard, gram and sunflower to conserve moisture in the soil.
- Farmers are advised to complete harvesting of rice, rajma and red gram.

##### Rayalaseema

- Undertake intercultural operations and application of fertilizers and pesticides in *rabi* crops like sunflower, maize and Bengal gram in Anantapur and in rice in Chiththoor as conducive weather conditions prevail.
- **Plant Protection:** Weather conditions are congenial for the incidences of
- blast and sheath blight in rice, pod borer in red gram and downy mildew in ber; undertake plant protection measures.

##### Telangana

- Farmers in Karimnagar, Nizamabad and Adilabad districts are advised to undertake intercultural operations in early sown *rabi* crops as conducive weather conditions prevail.
- **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.

## Karnataka

- **Major Standing Crops:** Annual sugarcane (grand growth). Early sown *rabi* crops are at vegetative stage.
- As there was no significant rainfall during last week in the state and isolated rain/thundershower is likely to occur over Coastal Karnataka and mainly dry weather is likely to prevail over Interior Karnataka for the next three days, apply irrigation to the crops.

### North Interior Karnataka

- Farmers in Bidar region are advised to undertake sowing of vegetable crops like brinjal, tomato, cabbage and cauliflower in the nursery. Also continue transplanting of seedlings in the main field.
- Farmers in Dharwad, Bijapur and Raichur are advised to undertake intercultural operations in 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.
- Reddening of cotton is observed in Raichur due to decrease in temperature. Spray MgSO<sub>4</sub> @ 1.5 kg/acre to overcome the problem.
- **Animal Husbandry:** In and around Dharwad and surrounding villages Foot and Mouth disease has been noticed. Undertake vaccination. Flies menace is also observed due to dumping of garbage. Maintain sanitation.
- 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:

- *Heliothis* in gram and red gram in Dharwad;
- aphids in safflower, mirid bug and wilt in Bt cotton and powdery mildew in mango in 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 early sown 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 Udupi and Dakshin Kannada districts are advised to undertake intercultural operations and application of fertilizers and pesticides in plantation crops.

## Kerala

- **Major Standing Crops:** *Mundakan* rice (tillering), 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 rain/thundershower is likely to occur at a few places during next 24 hours and decrease thereafter, farmers are advised to apply irrigation to the crops.
- Complete sowing of *puncha* rice in Kottayam and particularly in Kuttanad area.
- 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.
- Provide mechanical support to *nendran* banana as velocity of Easterly winds is increasing in Thrissur.
- Protect young seedlings of coconut and arecanut from sun scorching by providing thatches in Thrissur.
- Tapping of rubber may be continued as conducive weather conditions prevail.

- 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.
- **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. Protect young animals from decrease in temperature.

**Plant Protection:**

- Weather conditions are favourable for the attack of
- leaf roller and sheath blight in rice and downy mildew 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 and *Epilachna* beetle in brinjal and cucurbits in Thrissur.
- red palm weevil, rhinoceros beetle, bud rot and stem bleeding in coconut in Kasaragod and Wayanad.
- pollu beetle and quick wilt in pepper in 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 except in Cuddalore, Dindigul, Nagappattinam, Perambalur, Pondicherry, Ramanathapuram, Thanjavur, Thiruvarur and Villupuram districts and rain/thundershower is likely to occur at a few places during next 24 hours and decrease thereafter over south Tamil Nadu and isolated rain/thundershower is likely to occur over north Tamil Nadu, farmers are advised to apply irrigation to the crops. Postpone irrigation in the above districts as there was excess rainfall during last week.
- Undertake intercultural operations in rice, banana and sugarcane crops in Thirunelveli, cotton, maize, sorghum and pulse crops in Virudhunagar rice and vegetable crops in Chennai, Cuddalore, Kanchipuram, Thiruvarur, Thiruvannamalai and Villupuram districts and rice, maize, cotton, gram and oilseed crops in Namakkal district.
- Continue harvesting cereals and pulses in Erode district as conducive weather prevails during these days. Arrange for proper storage after the harvest of crops.
- Due to fall in temperature in Nilgiris, protect the crops from cold injury by providing thatches.

**Animal Husbandry:**

- 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

- Leaf folder and stem borer attack in rice in Namakkal; spray 5% neem seed kernel extract.
- 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.
- Sucking pests in cotton, maize and jowar. Spray Imidachlorpid @ 0.5ml/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 (vegetative / flag leaf initiation in Pune, Nashik & Aurangabad divisions & vegetative in other divisions), *rabi* sunflower (vegetative / floral bud initiation in Kolhapur & Vegetative in other divisions), maize (vegetative), gram (flowering / pod formation in Pune & Kolhapur divisions and germination / branching in other divisions), wheat (sowing / germination / crown root initiation in Pune, Kolhapur, Aurangabad, Nashik, Amravati &



Nagpur divisions, early sown crop is at tillering stage in Pune & Kolhapur divisions), safflower (vegetative / head formation).

- As there was no significant rain in most of 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 *rabi* crops.
- As dry weather is prevailing, farmers are advised to undertake harvesting of sugarcane and picking of fully opened cotton boll.
- 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 P<sub>2</sub>O<sub>5</sub> & 85 kg K<sub>2</sub>O / ha at the time of earthing up followed by light irrigation.
- Apply second dose of Nitrogen 60 kg / ha at the time of irrigation to early sown crops in Sub Montane zone & Western Maharashtra Plain zone.
- As weather condition is favourable, farmers are advised to complete the land preparation and sowing of wheat.
- Prevailing weather condition is also congenial for sowing of *rabi* groundnut, mustard and sunflower.
- Details of crop varieties are mentioned in Annexure I.

#### **Plant protection**

- Vine crop (grapes) is likely to be affected by downy mildew due to untimely rain in some parts of Satara, Sangli, Kolhapur and Pune districts and prevailing cloudy weather condition during last week. For control spray, Mancozeb @ 25 g in 10 liters of water.
- Onion Crop is likely to be affected by blast in pockets due to rain / cloudy weather conditions prevailed during last week. For the control, spray Dithane M-45 @ 1250 gm / ha in 500 liters of water.
- Under prevailing weather condition gram is likely to be infested by pod borer in Sub Montane zone & Western Maharashtra Plain zone. For control spray 35 EC Endosulphan @ 15 ml in 10 litres of water for the control of pod borer in early sown crops.

#### **Gujarat**

- **Major Standing Crops:** Sugarcane (early maturity / harvesting), *Kharif* cotton (boll formation / boll maturity / picking), castor (spike formation / maturity / picking), mustard (vegetative), vegetables (sowing / transplanting / early vegetative), potato (sprouting / early vegetative / vegetative) and wheat and cumin (germination / 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.
- Under prevailing weather condition farmers are advised to apply top dressing of Nitrogen @ 40 kg / ha before initiation of tasseling of maize in Middle Gujarat zone.
- As weather condition is favourable, complete land preparation and sowing of isabgul varieties Gujarat Isabgul-1 or Gujarat Isabgul-2 in Middle Gujarat zone and also complete transplanting of onion seedling in North Gujarat zone. Farmers are advised to use seed rate of 4 kg / ha for isabgol.
- Prevailing weather condition is favorable for out break of early blight in early sown potato (before 40 days) in North Gujarat zone. For the control of this disease spray Mancozeb 0.2% @ 25 g plus 25 ml of concentrated *desi* soap solution in 10 litres of water. Spray second dose after 10 to 15days.
- Under prevailing weather condition there is a possibility of out break of blight in cumin crop. For the control of this disease spray Mancozeb 0.2% @ 27 g plus 25 ml of concentrated *desi* soap solution in 10 litre of water. Spray next three doses at the interval of 10days.

## 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 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.
- Farmers in Banswara district are advised to complete sowing of wheat and maize 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 planting of fodder oats slips.
- Incidences of new disease infecting rapeseed-mustard are observed in Alwar, Dholpur, Bharatpur, Karauli and Sawai Madhepur districts leading to decaying and drying of plants. Some cases are noticed after irrigation only. Hence it is advised to postpone irrigation. If incidence is observed in small patches, remove the affected plants and destroy completely by burning. In case of epidemic, drench Carbendazim @ 20 g/ 20 litre or garlic extract @ 20 g/ 10 litre or Tetracycline @ 200 mg capsule/10 litre water near roots and avoid application of urea.
- Farmers in Alwar, Dholpur, Bharatpur, Karauli and Sawai Madhepur districts are advised to complete sowing of wheat. Also complete sowing of radish and cauliflower.
- 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.
- sucking pests in vegetable crops in Banswara; spray Dimethoate @ 2 ml/litre of water.
- cut worm in gram in Alwar, Dholpur, Bharatpur, Karauli and Sawai Madhepur districts, dust Endosulfan 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.
- pod borer in pea (at pod formation stage) in Ajmer, Dausa, Tonk and Jaipur districts; spray Endosulfan 35 EC or Melathion 50 EC @ 1 ml per litre water is suggested.
- 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.
- stem borer in maize in Banswara, apply Carbofuran 5% @ 5-7.5 kg/ha in the leaf whorls on the 15 -30 days old crop.
- aphids in mustard; spray Endosulfan 35 EC @ 875 ml/ha in Banswara.

## West Rajasthan

- Farmers in Bikaner and Jaisalmer are advised to complete 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 complete sowing of wheat and cumin
- 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 Sriganaganar and Hanumangarh; undertake plant protection measures.
- fruit fly in ber in Pali; spray Monocrotophos @ 1 ml + Endosulphan @ 1 ml/litr of water.
- termite on wheat in Sriganaganar and Hanumangarh districts spray Endosulphon 35 E.C. or Chloropyriphose 20 E.C. @ 400 ml or Imida Chlorpyrid 17.8 S.L. @ 200 ml in 5 lit water for 100 kg seeds.

## CENTRAL INDIA [M.P., CHHATTISGARH]

### Madhya Pradesh

- **Major Standing Crops:** Sugarcane (grand growth), soyabean (pod development/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, apply irrigation to the standing crops.
- Complete 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 alsi. 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 like wheat, gram and maize
- Also undertake transplanting of winter vegetables i.e. tomato, brinjal, chilli, cauliflower, cabage etc. Berseem and sowing of vegetable pea (Arkil) in Jhabua.
- 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
- 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 Malathian @ 2 ml/litre of water to control the pests. Also leaf spot on ginger and turmeric. Spray Mecozeb 2.5 to 3 g/litre of water.
- spider in chilli in Khargone district. Spray Carbedizem 1% and 1% Dicophol and sticker

- 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.
- pod borer in early sown gram in Jhabua and Dhar districts; spray Endosulphon 35 EC @ 2 ml/litre of water.

### Chhattisgarh

- **Major Standing Crops:** Sugarcane (vegetative), pigeon pea (seed formation / early maturity), wheat (sowing / germination / CRI / vegetative), gram, pea, mustard, berseem, pigeon pea and linseed (germination / early vegetative / vegetative), potato (planting / early vegetative / vegetative), vegetables (early vegetative / 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 the standing crops.
- As dry condition is likely to prevail, undertake intercultural operation to keep the fields weed free.
- The temperatures are favourable for the sowing of wheat, but further delay in sowing of wheat may result in significantly low productivity. Hence, wherever, sowing of wheat crop is not yet done, farmers are advised to complete the sowing at the earliest. GW-273, Kanchan, GW-173, Amar, Lok-1, Ratan and HD-2329 are suitable varieties for Chhattisgarh Plains zone. For sowing of wheat seed rate should be 125 kg / ha for all the varieties.
- Wheat crop sown during mid of November is at crown root initiation stage. This stage of the crop is 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 and irrigate the fields.
- Presently early sown mustard and gram are at branching stage. Looking to the above normal day temperature, 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 Sunflower. Sowing of leafy vegetables can also be done during this week.
- Weather conditions are favorable for incidence of Diamond Back Moth in Cole crops. Hence it is advised to spray Endosulphan or Trizophos @ 1.5 ml / liter of water to control the insect.

## Annexure I

Varieties of major crops for sowing in different States are given below:

### Jammu

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

### 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 Japoni 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 for Pali district and Raj-3765, Raj-3077 , HD-2285 and PBW-373 for Sriganganagar and Hanumangarh districts.
- **Cumin:** RC 19 and GC 4

### Delhi

- **Late varieties of wheat:** HD 2932, DVW 16 etc.
- **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.
- **Potato after aman rice:** Kufri Jyoti.

### 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.
- **Raddish:** Japoni white and Early Mino White.
- **Peas:** Agad, Lincoln and Priya.

### Maharashtra

- **Wheat:** HD-2189, MACS-3185, NIAW-301 (Trimbak), NIDW-295 (Godawari).

- **Mustard:** Pusa Bold and Varuna.
- **Sunflower:** Modern, SS-56, BSH-1 etc.

**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.

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