

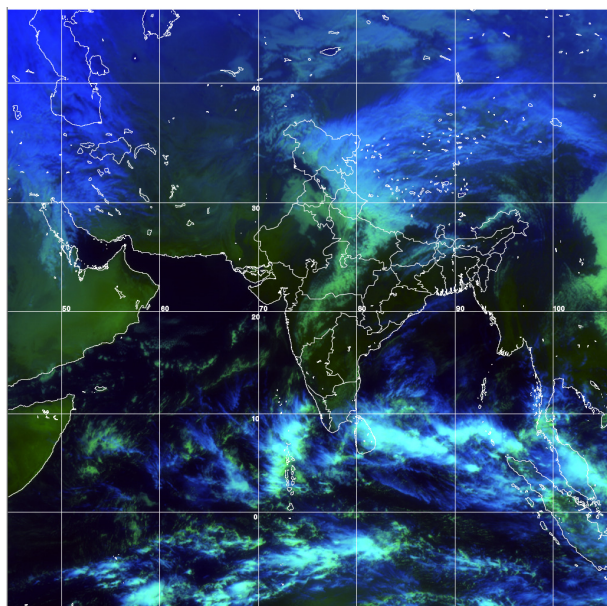


# National Agromet Advisory Bulletin

## Thursday, 30<sup>th</sup> December, 2010

(For the period 30<sup>th</sup> December 2010 to 3<sup>rd</sup> January, 2011)

Satellite image 0600 UTC Dated  
31<sup>st</sup> December, 2010



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National Agrometeorological Advisory Service Centre  
Agricultural Meteorology Division  
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## Executive Summary

Fairly widespread rain/snowfall has occurred over Jammu & Kashmir, Himachal Pradesh and isolated over Uttarakhand and likely to continue for next 24 hours. Fairly widespread rainfall has occurred over Punjab, Haryana & Delhi and Rajasthan and scattered rainfall is likely during next 24 hours. Farmers are advised to undertake sowing of late sown wheat, lentil, fodder oat, barley, potato, radish, carrot, garlic, peas and spinach in Jammu region, late sown wheat, radish and pea in Himachal Pradesh. This rainfall would be beneficial to the *rabi* crops in these region. As cold conditions would occur over some parts of Punjab, Haryana, Delhi, Uttar Pradesh and east Rajasthan, farmers are advised to apply light irrigation to the standing crops regularly and create smoke around the fields to protect the standing *rabi* crops from cold injury. Foggy conditions for extended period in these region may be congenial condition for disease incidence in the standing crops. Farmers are advised to monitor the disease incidences and take appropriate prophylactic measures. Farmers are advised to protect the mango and litchi nursery seedlings and vegetable seedlings with mulching using paddy straw. Farmers are advised to postpone harvesting of toria in Punjab in view of expected rainfall.

Early sown *rabi* crops like wheat, mustard, gram etc are at vegetative / late vegetative stage in northwest and adjoining central and east region of the country. Farmers are advised to undertake intercultural operations and application of fertilizers. Farmers in Orissa and West Bengal are advised to undertake nursery preparation for summer rice and undertake sowing of pulses like green gram. Protect the young seedlings in nursery with rice straw mulching to protect from cold injury. Farmers in Madhya Pradesh are advised to undertake sowing of late varieties of wheat, sowing/transplanting of vegetable crops like garlic, onion, cauliflower and cabbage.

Farmers in Southern Telangana zone of Andhra Pradesh are advised to cover the rice nursery beds with polythene sheet during night and remove in the morning, irrigate the nursery bed every day in the late morning and apply urea @ 2 kg to the nursery sufficient for one acre main field at 10-15 days after sowing to overcome cold injury and for better nursery growth.

Incidence of spodoptera in Rayalaseema region and Helicoverpa in redgram and bengalgram is noticed in Andhra Pradesh. To control spodoptera, spray Quinolphos @ 2 ml or Monocrotophos@ 1.6ml per litre of water. If grown up larvae is noticed, arrange poison baits (Rice bran @ 5 Kg + Jaggery@ 500 g + Monocrotophos or Chlorpyriphos @ 500 ml) during the evening hours to control the pest.

There is attack of powdery mildew on pea crop in Madhya Maharashtra. For control of powdery mildew spray water soluble sulphur powder 80% @ 20 gm or propeconazol @ 10 ml per 10 lit.of water. Give 2 to 3 spraying at 10 to 12 days interval.

Incidence of leaf folder, stem borer, bacterial leaf blight, bacterial leaf streak is reported in samba rice in Tamil Nadu; farmers are advised to monitor the crop for the above pest and diseases and undertake plant protection measures.

**Distribution of rainfall (% departure from normal) for the districts Karnataka, Kerala, Tamil Nadu and Andhra Pradesh during last five Weeks**

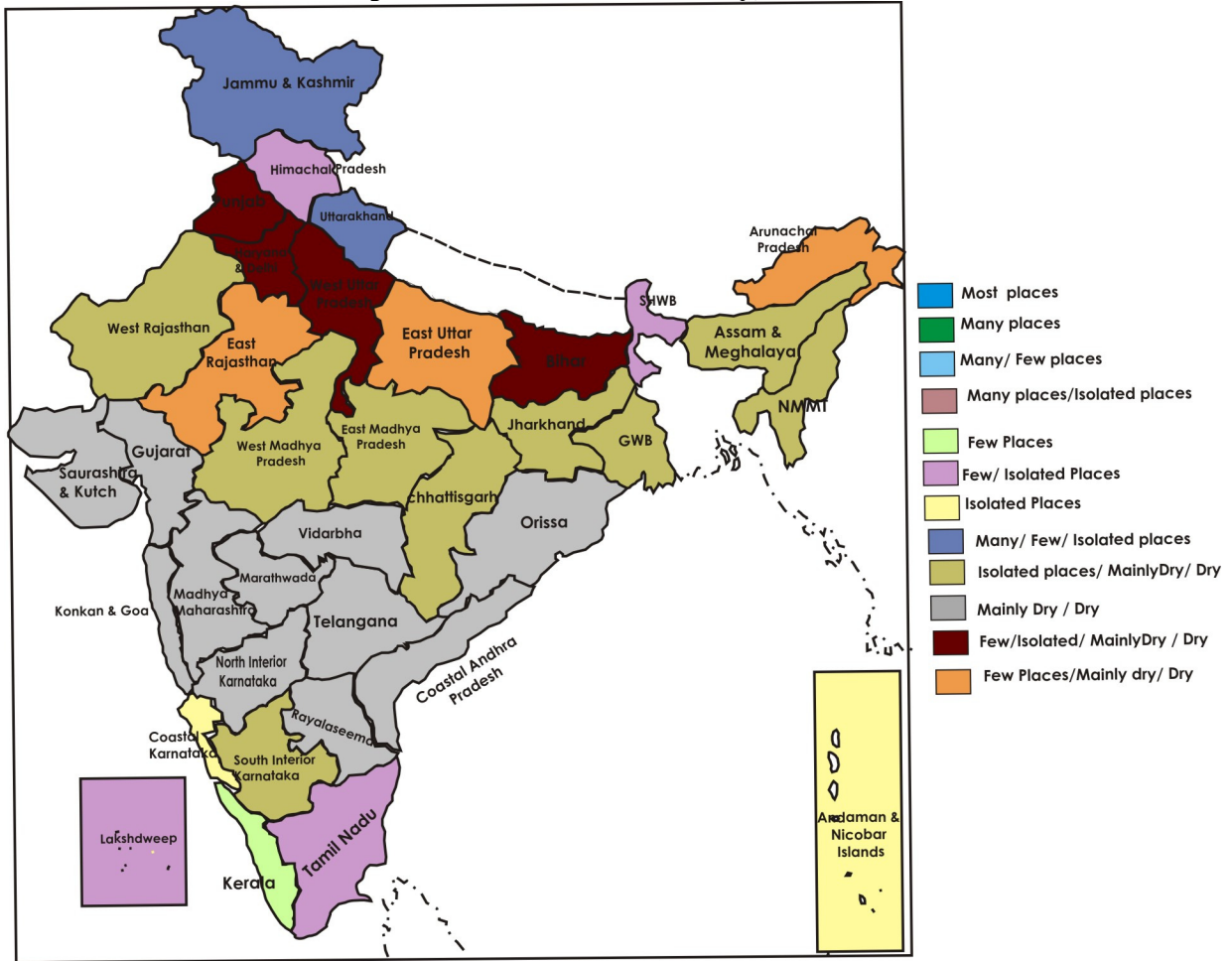
Karnataka	01.12.10	08.12.10	15.12.10	22.12.10	29.12.10
<b>Coastal Karnataka</b>					
Dakshin Kannada	-66	-65	48	86	-100
Udupi	-51	13	0	223	-100
Uttar Kannada	-95	-92	32	340	-100
<b>North Interior Karnataka</b>					
Bagalkote	-100	-100	-87	-100	-100
Belgaum	-82	-100	-100	-100	-100
Bidar	-100	-100	-100	-100	-100
Bijapur	-100	-100	64	-100	-100
Dharwad	-100	-100	-76	-64	-100
Gadag	-100	-100	-90	-100	-100
Gulbarga	-100	-100	70	-100	-100
Haveri	-100	-68	-89	-100	-100
Koppal	-100	-100	-100	-100	-100
Raichur	-100	-80	10	-100	-100
<b>South Interior Karnataka</b>					
Bangalore Rural	-99	-72	83	-40	-100
Bangalore Urban	-82	-68	-99	-58	-100
Bellary	-100	-90	-92	-100	-100
Chamarajnanagar	-33	-36	-5	349	-100
Chickmagalur	-99	-59	-19	-2	-100
Chitradurga	-100	-100	-100	-100	-100
Davangere	-100	-100	-100	-100	-100
Hassan	-99	-89	-100	-7	-100
Kodagu	22	-41	-97	177	-92
Kolar	-99	-67	69	10	-100
Mandya	-19	-93	-99	-53	-100
Mysore	13	-62	-100	42	-100
Shimoga	-75	-88	-16	-100	-100
Tumkur	-98	-97	-100	-100	-100
<b>Kerala</b>					
Alappuzha	2	30	195	172	-100
Kannur	453	-80	-90	-100	-100
Ernakulam	-29	-83	-70	475	-100
Idukki	23	-38	-63	-91	-94
Kasaragod	26	-30	12	-26	-100
Kollam	225	138	381	-81	-100
Kottayam	-55	58	82	250	-24
Kozhikode	220	-96	-94	365	-100
Malappuram	151	-20	-95	143	-100
Palakkad	47	-35	-97	285	-100
Pathanamthitta	56	117	109	114	-100
Thiruvananthapuram	294	443	154	-60	-86
Thrissur	-55	-80	-91	189	-100
Wyanad	-49	-98	-95	-84	-81
<b>Tamil Nadu</b>					
Chennai	-63	216	-89	79	-99
Coimbatore	9	47	-100	-2	-99
Cuddalore	403	94	-72	197	-3
Dharmapuri	175	-6	-50	-30	-100
Dindigul	357	124	-54	105	-95
Erode	50	-13	-45	229	-100

	01.12.10	08.12.10	15.12.10	22.12.10	29.12.10
Kanchipuram	-16	295	-77	75	-98
Kanyakumari	470	534	485	-81	-100
Karur	537	17	140	70	-100
Krishnagiri	89	-65	-88	-7	-100
Madurai	166	70	196	203	-89
Nagapattinam	332	77	-78	107	42
Namakkal	160	62	-62	208	-100
Nilgiris	138	-3	-51	470	-100
Perambalur	553	42	-61	18	-67
Pondicherry	34	158	-41	49	-94
Pudukottai	371	154	-87	-45	-81
Ramanathapuram	424	48	-44	9	-95
Salem	126	69	-4	154	-99
Sivaganga	258	57	-12	45	-84
Thanjavur	449	107	-68	58	-42
Theni	154	10	118	-78	-100
Tirunelveli	261	236	22	-86	-97
Tiruvallur	-30	124	-72	28	-100
Tiruvannamalai	112	149	313	33	-94
Tiruvarur	524	203	-72	119	-21
Tuticorin	307	161	-45	-51	-100
Trichy	633	69	13	51	-80
Vellore	-2	107	-68	-11	-100
Villupuram	304	136	-64	129	-90
Virudhunagar	157	19	107	-9	-100
<b>Andhra Pradesh</b>					
<b>Coastal Andhra Pradesh</b>					
East Godavari	-100	5485	402	-100	-100
Guntur	-99	4090	-39	-100	-100
Krishna	-75	4566	-51	-100	-100
Nellore	-82	220	-57	12	-95
Prakasam	-90	1360	-80	-100	-100
Sirkakulam	-100	11891	469	-100	-100
Visakhapatnam	-100	13747	1142	-100	-100
Vizianagram	-100	9704	411	-100	-100
West Godavari	-25	7077	75	-100	-100
<b>Telangana</b>					
Adilabad	-100	1	107	-100	-100
Hyderabad	-100	298	142	-100	-100
Karimnagar	-100	457	168	-100	-100
Khammam	-100	4290	350	-100	-100
Mehabubnagar	-100	313	-84	-100	-100
Medak	-100	-69	-100	-100	-100
Nalgonda	-100	2829	22	-100	-100
Nizamabad	-100	-63	-100	-100	-100
Rangareddy	-100	99	-56	-100	-100
Warangal	-100	1123	10	-100	-100
<b>Rajalaseema</b>					
Anantapur	-88	-27	-89	-100	-100
Chittoor	-80	84	-33	104	-100
Cuddapah	-83	142	-89	-97	-100
Kumool	-100	299	6	-100	-100

**LEGEND**

- EXCESS 20% OR MORE
- NORMAL +19% TO - 19%
- DEFICIENT - 20% TO - 59%
- SCANTY - 60% TO - 99%
- NO RAIN - 100%
- DATA NOT AVAILABLE

**Weather Forecast**  
(Valid upto 0830 hours of 2<sup>nd</sup> January, 2011)



**Major Feature of Weather Forecast (upto 0830 hours IST of 2<sup>nd</sup> January, 2011)**

- Fairly widespread rainfall/snowfall would occur over western Himalayan region during next 24 hours and decrease thereafter.
- Scattered rain/thundershowers would occur over east Rajasthan, Punjab and Haryana & Delhi and Uttar Pradesh during next 24 hours and decrease thereafter.
- Scattered rain/thundershowers would occur over SubHimalayan West Bengal & Sikkim and Arunachal Pradesh from tomorrow onwards.
- Isolated rain/thundershowers would occur over Madhya Pradesh, Bihar, north Chhattishgarh and Jharkhand from tomorrow.
- Fall in day temperature by 24°C over northwest India today.

**Weather Warnings**

- Isolated heavy rainfall/snowfall would occur over Jammu & Kashmir, Himachal Pradesh and Uttarakhand during next 24 hours.
- Cold day conditions would occur over some parts of Punjab, Haryana, Delhi, Uttar Pradesh and east Rajasthan today.

**Weather Outlook (upto 0830 hours IST of 4<sup>th</sup> January, 2011)**

Scattered rain/thundershowers would occur over extreme peninsula and northeast India.

## Zonewise Agromet Advisories

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

- **Realised Rainfall:** Weather remained dry during the week in Orissa, Jharkhand, West Bengal, Bihar and Sikkim.
- **Rainfall Forecast:** Isolated to scattered rainfall would occur over Sub Himalayan West Bengal & Sikkim and Bihar during next three days and mainly dry/dry weather is likely over remaining region.
- **Major Crops:**
  - Gram (early vegetative), mustard and sarson (early vegetative), maize (sowing), wheat (crown root initiation stage), potato (planting), vegetables like cauliflower, cabbage, chillies, tomato, palak, carrot, radish, knolkhol, turnip, beet, garlic, onion etc. (sowing / early vegetative / vegetative), barseem, lucerne, oat (sowing), coriander, fenugreek(sowing /germination) in Bihar.
  - Arhar and green pea (flowering/ pod formation), wheat (crown root initiation / tillering stage), potato (tuber formation/ vegetative), toria, mustard (flowering / pod formation stage), onion, tomato, cabbage and cauliflower (transplanting / early vegetative), chilli and brinjal (transplanting) other *rabi* crops (Post germination /flowering stage), summer rice ( nursery sowing) in Jharkhand.
  - Cotton (maturity/harvesting), *rabi* paddy (nursery raising), *rabi* vegetable crops (early vegetative / vegetative), *rabi* oilseeds groundnut, mustard, sesamum, sunflower (early vegetative), arhar (flowering/ pre flowering stage), wheat (crown root initiation), potato (planting/ vegetative), *rabi* pulses like lentil, field pea and chickpea (early vegetative), sugarcane (harvesting), green gram, black gram, other pulses & sesame, niger and castor (flowering), garlic (sowing) in Orissa.
  - *Aman* rice (harvesting), pulses (maturity / harvesting), wheat (crown root initiation stage), arhar (flowering / pod formation), mustard (early vegetative), potato, lentil, pea, masur, Bengal gram (early vegetative), *rabi* vegetables - cabbage and cauliflower (transplanting ) in West Bengal.
  - Large cardamom (harvesting / post harvesting), orange (maturity / harvesting), wheat (crown root initiation/ tillering/ active tillering), *rabi* potato (sprouting / vegetative), ginger (harvesting), rice (grain maturity/ harvesting), *rabi* vegetable (vegetative / late vegetative) mustard (vegetative), rice (grain maturity / harvesting) in Sikkim.
- **Advisories:**
  - Farmers in Orissa are advised to undertake nursery preparation for summer rice and undertake sowing of pulses like black gram and green gram. As the temperatures are low, cover the fresh nursery of rice with paddy straw.
  - Farmers in West Bengal are advised to undertake nursery preparation for *boro* rice and field preparation for sowing of groundnut.
  - As there was no significant rainfall during last week in the region and no significant rainfall is likely during next three days, farmers are advised to apply need based irrigation to potato and wheat.
  - Undertake weeding, hoeing in early sown potato in Orissa, rapeseed in Bihar utilizing the favourable weather during next three days.
  - Under present weather conditions wilt disease is likely in tomato and brinjal in Jharkhand. Undertake spraying of 100 mg streptocycline and 1.5 g copper oxychloride per liter of water. In case of leaf curling, spray Super D or Nural D @ 1ml per liter of water.
  - Incidence of aphids is observed in mustard in Orissa. Spray 400 ml Dimethoiate per acre and 200 ml Ethofenprox or Deltamethrin in 200 litre water per acre for controlling aphids.
  - Due to high humidity and fog incidence of leaf spot and blight disease may be noticed in in tomato in West Bengal. Fruits may also attacked by fruit borer and bacterial cancer. Spray the crop 3g copper oxiclride and 2ml spark per litre of water at 7-10 days intervals, if symptoms is appeared.

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

- **Realised Rainfall:** No significant rainfall occurred during last week over the region.
- **Rainfall Forecast:** Mainly dry / dry weather will prevail over northeastern states except in Arunachal Pradesh where rain is likely at few places after 24 hours, in Assam where rain is at isolated places after 48 hours.



- **Major Crops:**

- *Rabi* vegetables (early vegetative), sugarcane (cane development), arhar (pod formation), sesamum (maturity / harvesting), black gram and green gram (harvesting), potato (vegetative/ fruiting), rapeseed & mustard (flowering) jute and *boro* rice (seedling), wheat (seedling/crown root initiation) in Assam.
- *Rabi* vegetables like cauliflower, cabbage, tomato etc. (early vegetative), pea, potato, tomato, mustard, maize (vegetative), orange (fruiting/ picking), ginger, turmeric (vegetative) and potato (seedling/vegetative) in Arunachal Pradesh.
- Toria, lentil, red gram (sowing / early vegetative) and *rabi* vegetables (transplanting / early vegetative / vegetative) in Tripura.
- *Boro* rice (transplanting), *rabi* vegetables (early vegetative / vegetative) in Meghalaya.
- Mustard/ rapeseed (vegetative), field pea (vegetative) in Manipur.
- Khasi Mandarin (maturity/vegetative), banana (various stages), onion (transplanting), pea, carrot, radish (vegetative), tomato, cole crops and chilli & capsicum ( transplanting) in Mizoram.
- Orange (harvesting) potato (vegetative), pea (pod formation stage), toria (seed formation) in Nagaland.

- **Advisory:**

- As there was no significant rainfall in the region, farmers are advised to apply irrigation to the standing crops. Undertake intercultural operations, application of fertilizers and pesticides as favourable weather conditions prevail during these days.
- Wheat crop attaining CRI stage should be provided one need based irrigation. Weeding and top dressing of urea should precede irrigation in Assam district.
- Farmers in Arunachal Pradesh are advised to undertake intercultural operations in mustard, hybrid tomato, cauliflower and cabbage and carrot, pea and potato.
- Farmers in Tripura are advised to undertake sowing / transplanting of boro rice and pulses like lentil.
- Farmers are advised to apply Dimethoate 30 EC or Chloropyriphos 20EC @ 1ml per litre of water in toria, rabi pulses, oilseeds to control saw fly and aphids in Nagaon & Marogaon of Assam districts.
- Weather is congenial for thrips in boro rice, aphids/saw fly in rapeseed and mustard in Upper and Central Bramhaputra Valley Zone, spray Chloropyriphos @ 2 ml/litre of water to control thrips and Chloropyriphos / Malathion @ 2ml per litre of water during evening hours to control aphids/saw fly. Also bacterial wilt attack on Solanacious vegetables in Central Narmada Valley Zone *viz.* potato, tomato, brinjal etc. causing severe damage, burn the infected plants and also apply 1g Asafetida and 5g turmeric diluted in 10 liters of water in the root zone to control.
- Weather conditions are congenial for the incidences of white rust in mustard in Jharnapani region due to high humidity and cloudy conditions. Farmers are advised to monitor the crop for the disease and undertake plant protection measures.
- Because of increase in relative humidity and decrease in sunshine hours in Kolasib (Mizoram), there is attack of diamond back moth, aphids, thrips and cut worm in vegetables, use 5% neem extract or spray endosulphan (35%) 12 ml or dimethoate (30%) 10 ml in 10 lit. water.
- Due to long periods of dew at night and low night temperatures are favorable for the incidence of early blight in tomato and chilli crops in Kolasib (Mizoram).. Farmers are advised to spray of Mencozeb @ 1 gm per litre of water at 10-15 days intervals 8-10 when disease appeared
- **Animal Husbandry:**
- Protect poultry birds from cold by using electric bulb (300Watt for 100 sq.feet) to prevent Coryza disease in Central Narmada Valley Zone. In case of lacrimation and swelling of the head, treat the fowl with Sulpher drugs.

**NORTHWEST INDIA [JAMMU & KASHMIR, HIMACHAL PRADESH, UTTARAKHAND, PUNJAB, HARYANA, DELHI, UTTAR PRADESH & RAJASTHAN]**

- **Realised Rainfall:** Mainly dry weather prevailed during last week in this region.
- **Rainfall Forecast:** Rainfall is likely at many places during next 24 hours in Jammu & Kashmir and Uttarakhand and at a few/isolated places thereafter. Rainfall is likely at a few places over Uttar Pradesh, Haryana, Delhi, Himachal Pradesh and East Rajasthan during next 24 hours and at a few/isolated places or mainly dry weather thereafter. Rain is likely at isolated places during next 24 hours in West Rajasthan and

mainly dry/dry weather thereafter. Isolated heavy rainfall/snowfall would occur over Jammu & Kashmir, Himachal Pradesh and Uttarakhand during next 24 hours.

- **Major Crops:**

- Wheat (Crown root initiation), broccoli, cauliflower, cabbage, onion (transplanting), pea and gram crop (vegetative stage), lentil (early vegetative), garlic (planting) in Delhi.
- Wheat, potato (early vegetative) and vegetables (transplanting/vegetative), tea (raising nursery), garlic (planting in Seobagh), Early sown crops are at early vegetative / vegetative stage in Himachal Pradesh
- Gram, berseem, oats (vegetative), wheat, barley (crown root initiation), brown sarson, potato, radish, carrot, garlic, spinach and peas (early vegetative), toria (pod formation / maturity / harvesting), mustard (vegetative/ early flowering), vegetable crops like tomato, chilli, brinjal, cucurbits, onion (vegetative) in Jammu & Kashmir.
- Sugarcane (maturity / harvesting), wheat (germination / crown root initiation), potato (sowing / grand growth / tuber initiation), toria, mustard (early vegetative / flowering / pod formation), barley, lentil, gram, onion, garlic, seasonal vegetables (early vegetative / vegetative growth), pea (flowering in hill zone), lahi (fruiting / flowering) in Uttarakhand.
- Sugarcane (germination / tillering / maturity), barseem, wheat (germination/tillering), potato, lentil, gram, radish, raya, African sarson (early vegetative), pulses, vegetables (transplanting/vegetative), ghobi sarson (vegetative), oilseeds (flowering / toria (harvesting)), papaya (transplanting, early sown crops are at early vegetative / vegetative stage) in Punjab.
- Sugarcane (harvesting), wheat (CRI / tillering), gram, rapeseed and berseem (vegetative/ flowering), mustard (flowering / podding) in Haryana.
- Wheat (crown root initiation), barley, oats, rajmah, safflower (early vegetative), bajra (flowering / milking stage), arhar (grand growth / flowering), toria (early vegetative/ flowering / pod filling), mustard, sarson (flowering), potato, field pea, chick pea, lentil, linseed (early vegetative), sugarcane (grand growth / formative stage / maturity / harvesting), winter vegetables like green pea, carrot, garlic, onion etc. (early vegetative), radish, cauliflower, cabbage, palak, chilli, brinjal, tomato (harvesting stage) in Uttar Pradesh.
- Sugarcane (grand growth), wheat, barley (crown root initiation), mustard (vegetative / flowering), cumin (vegetative), gram (vegetative), lentil, oats, taramira, ajwain, fenugreek and isabgol (germination/ early vegetative), cabbage, cauliflower (vegetative / fruiting), tomato, berry (flowering/ fruiting) in Rajasthan.

- **Advisory:**

- Farmers in Jammu & Kashmir, Uttarakhand, East Uttar Pradesh, West Uttar Pradesh, Haryana, Delhi, Himachal Pradesh and East Rajasthan are advised not to apply irrigation to the standing wheat, mustard, barley, gram, potato and other *rabi* crops in the region as rain is likely in the above mentioned States during next three days. As isolated heavy rainfall/snowfall would occur over Jammu & Kashmir, Himachal Pradesh and Uttarakhand during next 24 hours, farmers are advised to arrange drainage facilities in the standing *rabi* crops to avoid waterlogging.
- Farmers in West Rajasthan are advised to apply irrigation to wheat, mustard, cumin, gram and other *rabi* crops as there was no significant rainfall during last week and no significant rainfall is likely during next three days.
- As cold conditions would occur over some parts of Punjab, Haryana, Delhi, Uttar Pradesh and east Rajasthan, farmers are advised to apply light irrigation to the standing crops regularly and create smoke around the fields to protect the standing *rabi* crops from cold injury.
- Farmers in New Delhi, Himachal Pradesh and Jammu are advised to complete sowing of late wheat and barley immediately in the unsown areas.
- Farmers in Mid Hills Sub-Humid (Solan, Shimla, Sirmaur) of Himachal Pradesh are advised to undertake transplanting of onion and undertake sowing/transplanting of radish, peas in Sub Montane & Low Hills Sub-Tropical Zone (Hamirpur, Kangra and Una Chamba districts).
- Farmers in Sub Tropical Zone (Jammu, Kathua and Reasi district) are advised to undertake sowing of lentil, fodder oat, potato, radish, carrot, garlic, peas, spinach Knol-Khol and tomato and transplanting of cauliflower.

- Farmers are advised to postpone harvesting of toria in Punjab in view of expected rainfall.
- Farmers in Haryana are advised to cover the young fruit plants with straw to protect from low temperature. Farmers are advised to cover with polythene or straw for fast germination of vegetable seeds.
- Farmers in West Rajasthan are advised to undertake weeding, intercultural operations and top dressing of fertilizer in mustard and gram and farmers in the remaining States of the region are advised to continue the above cultural operations after current spells of rain.
- There is possibility of white rust and *Alternaria* blight in the mustard crop and blight incidence in potato crop in Eastern zone of Haryana and U.P. due to high humidity and foggy weather than farmers are advised to spray the recommended fungicide.

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

- **Realised Rainfall:** Most of the districts in Kerala, Tamilnadu Karnataka and Andhra Pradesh did not receive rainfall, except for Nagapatinam in Tamilnadu.
- **Rainfall Forecast:** Mainly dry / dry weather is likely to prevail over the region. Rain is likely at a few places in Kerala and for next 24 hours followed by isolated places in Tamil Nadu.
- **Major Crops:**
  - Pepper and arecanut are at harvesting stage in Kerala. In cashew, flowering has initiated. Vegetables (sowing).
  - *Late samba / thaladi* rice (flowering), sugarcane (cane development), banana (fruit bearing / maturity stage), pulses (maturity) in Tamil Nadu. This is proper time for sowing or rainfed crops.
  - Red gram (Maturity to harvesting), cotton (Picking); early sown *rabi* crops are at late vegetative/flowering stage, groundnut (Maturity to harvesting), rice (early vegetative /vegetative) in Andhra Pradesh.
  - Sugarcane (cane development), cotton (boll development/picking), pigeon-pea (pod filling), red gram (vegetative), *rabi* jowar (vegetative); early sown gram, safflower, *rabi* sorghum and sunflower crops are at vegetative stage in Karnataka.
- **Advisories:**
  - As there was no significant rainfall in most of the districts in Kerala, Tamilnadu, Karnataka and Andhra Pradesh, except for the Nagapatinam district in Tamilnadu farmers are advised to apply irrigation to the standing crops. Postpone irrigation in the above districts as there was sufficient rainfall during last week.
  - Farmers in Southern Telangana zone of Andhra Pradesh are advised to cover the rice nursery beds with polythene sheet during night and remove in the morning, irrigate the nursery bed every day in the late morning and apply urea @ 2 kg to the nursery sufficient for one acre main field at 10-15 days after sowing to overcome cold injury and for better nursery growth.
  - To avoid frost injury, sprinkler irrigation for a short period of time in the early morning is recommended in the tea gardens of Nilgiris.
  - Due to no rains for the coming four days, farmers of Eastern Dry Zone of Karnataka are advised to take up the harvesting & threshing of crops wherever is incomplete and suggested to take up drying of harvested crop. The farmers are advised to take up the harvesting of crops immediately wherever harvesting is incomplete.
  - Prevailing fog and dew fall conditions are favourable for the incidence of anthracnose in pomegranate crop in Scarce Rainfall Zone in Andhra Pradesh. Also present weather conditions are favourable for the incidence of stem borer in paddy, *maruca* leaf webber, *helicoverpa* in redgram, white fly and jassids in the Southern Telangana Zone, leaf minor in groundnut in Scarce Rainfall Zone of Rayalaseema in Andhra Pradesh. Farmers are advised to monitor the crops for the pests and disease and undertake plant protection measures.
  - Farmers are advised to adopt following IPM measures to manage *Helicoverpa* in redgram and bengalgram.
    - Arrange birdperches @ 20 per acre to promote bird activity.
    - Arrange pheromone traps @4 per acre.
    - Spray NSKE 5% to control eggs and early in star larvae.



- Spray Chlorpyrifos @ 2.5 ml during flowering stage or Quinolphos @ 2ml or Acephate @1.5g per litre of water during podformation stage. If the pest is not controlled by these chemicals, spray Indoxacarb @1ml or Spinosad @0.3ml per litre of water.
- In the northeastern zone of Tamilnadu (Kancheepuram, Thiruvallur, Vellore) farmers are advised to spray Propiconazole (Tilt) 2ml in one litre of water as blast disease is observed in paddy field.
- Incidence of spodoptera in Rayalaseema region and Helicoverpa in redgram and bengalgram is noticed in Andhra Pradesh. To control spodoptera, spray Quinolphos @ 2 ml or Monocrotophos@ 1.6ml per litre of water. If grown up larvae is noticed, arrange poison baits (Rice bran @ 5 Kg + Jaggery@ 500 g + Monocrotophos or Chlorpyrifos @ 500 ml) during the evening hours to control the pest.
- Incidence of leaf folder, stem borer, bacterial leaf blight, bacterial leaf streak is reported in samba rice in Tamil Nadu; farmers are advised to monitor the crop for the above pest and diseases and undertake plant protection measures. Plant protection measures may be undertaken on a non rainy day in Tamil Nadu and Kerala.

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

- **Realised rainfall:** Mainly dry weather prevailed in the region during last week.
- **Rainfall forecast:** Mainly dry/dry weather is likely over the region during next three days.
- **Major Crops:**
  - **Rabi crops:** Rice (sowing/ transplanting), jowar (vegetative / flag leaf initiation), safflower (vegetative / flowering), gram (secondary branching / flowering), maize (vegetative), sunflower (vegetative / floral bud formation), irrigated wheat (crown root initiation/ early tillering), mustard, groundnut (early vegetative / vegetative) in Maharashtra.
  - mustard (branching /flowering), pigeon pea (flowering / pod development ), gram (flowering / pod development), potato (vegetative growth ), brinjal, tomato (productive), *rabi* fennel (growth & flowering), *kharif* fennel (flowering & grain formation), cumin (growth), early sown wheat (booting stage), timely sown wheat (tillering), late sown wheat (crown root initiation), Isabgol (sowing / early vegetative), sugarcane (emergence / early vegetative ) in Gujarat.
- **Advisory:**
  - As dry weather prevailed over the region during last week and same will prevail during next 3 days, farmers are advised to apply protective irrigation to standing crops.
  - Farmers in the region are advised to make smoke around the field to protect orchard crops from cold. Apply irrigation through well in the evening, if possible.
  - Farmers in Madhya Maharashtra are advised to undertake planting of suru sugarcane in between 15<sup>th</sup> December to 15<sup>th</sup> February. Varieties are given in Annexure I. Prevailing cold weather conditions may affect growth of banana plant.
  - As weather conditions are favorable, farmers in Konkan region are advised to complete late sowing of cowpea, wal, kulthi, etc. Also undertake sowing of leafy vegetables crops viz., amaranths, radish, fenugreek coriander, spinach etc. Complete nursery sowing of *rabi* rice and undertake transplanting if the seedlings are ready.
  - Farmers in Gujarat state are advised to complete sowing of very late sown wheat, isabgol, cumin etc as weather conditions are favorable for sowing of these crops.
  - Farmers in Gujarat state are advised to apply irrigation in early sown cumin, fennel, mustard, sugarcane and vegetables crops. Undertake interculture and weeding operations before applying irrigation.
  - Weather conditions are favorable for incidence of powdery mildew in pea, helicoverpa in gram, thrips & blight disease in onion and downey mildew in grapes in Madhya Maharashtra. Farmers are advised to monitor the crops for the pest and disease and undertake plant protection measures.
  - There is a possibility of out break of blight in potato in north Gujarat region. Spray Mencozeb 0.2% @ 30 gram plus 25 ml of concentrated desi soap solution in 10 litre of water. Spray next three doses at the interval of 10 days.

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

- **Realised Rainfall:** No significant rainfall occurred during last week in this region.
- **Rainfall Forecast:** Mainly dry/isolated weather is likely to prevail over the region.
- **Major Crops:**
  - In Madhya Pradesh, wheat (tillering), chickpea (late vegetative/flowering), pigeon pea (pod formation), sugarcane (planting), cotton (boll development).
  - Pigeon pea (pod development), wheat (Crown root initiation) in Chattisgarh.
- **Advisory:**
  - Due to fall in temperature, there are chances of cold injury in the standing crops. Apply light and frequent irrigation to safeguard the crops from cold injury.
  - As there was no significant rainfall in the region, farmers are advised to apply irrigation to the standing crops.
  - Farmers are advised to undertake intercultural operations in the early sown crops to keep the fields weed free.
  - Farmers in Jhabua and Nimar Valley and Gird Zone in Madhya Pradesh are advised to continue sowing of late sown varieties of wheat and transplanting of rabi vegetables.
  - Farmers in Chattisgarh Plain Zone are advised to continue sowing of late sown varieties of Wheat.
  - Weather is congenial for fruit fly in tomato and brinjal in Gird Zone, spray Endosulphon 35 EC @ 1 lit/ha or Trizophos 800 ml/ha.
  - Weather is congenial for the incidences of painted bug in mustard, pod borer in chickpea and purple blotch in onion crops in Bundekhand Zone in Madhya Pradesh. Spray Carbaryl (Sevin) 2 g/liter of water for painted bug, Endosulfan or Quenolphas @ 2.0 ml. per liter for pod borer and spray Dithane M-45 or Blitox 50 @ 0.25% for purple blotch. Also attack of caterpillar in gram, spray Quinolphos 25 EC or Methomyl (12.5%).
  - Due to cloudy weather conditions in Chattisgarh Plain Zone, there are chances for the incidences of pod borer in pigeon pea, chick pea, aphids, fruit and shoot borer in brinjal and mustard and diamond back moth in cole crops, spray Endosulphan or Metasystox @ 1.5 ml per liter etc. for pod borer and continuously monitor the crops infestation of aphids, fruit and shoot borer and if needed spray Endosulfan @ 1.5 ml per liter water solution.
  - Weather is congenial for aphids in early sown vegetables in Bastar Plateau Zone and Chattisgarh Plain Zone, spray Methyl-demeton or Dimethioate @ 1.5-2.0 ml per liter water solution.

**Animal Husbandry & Poultry**

- Undertake vaccination of cattle for the control of Anthrax, Galghotoo, foot and mouth diseases and deworming of animals.
- Save calves from cold (night temperature) use heater, curtains to save them.
- In this week there is possibility of decrease in the night temperature during next five days, so farmers are advised to protect their animals from low night temperature.

## Annexure I List of Varieties

### Orissa

**Summer rice:** Parijat, Khandagiri, Naveen, Lalat, etc.

### West Bengal

**Boro rice:** IET-1444, IET-4786(Satabdi), IET-4094, Lalat, MTU-1010, S-sankar etc.

**Groundnut:** AK 12- 24, JL-24, Girnar-1, Somnath, ICGS-11, ICGM-44, TJ-3

### Assam

**Boro rice:** Mahsuri, IR-50, Dinanath, Bishnuprasad, Jyotiprasad, Swarnabh and Kanaklata

### Arunachal Pradesh

**Potato-** Kufri Chandramukhi, Kufri Jyoti, Kufri Megha, Kufri Badshah, Kufri Sindhuri

### Himachal Pradesh

**Late sown rainfed Wheat in the mid hills of H.P.:** H.S- 295, HPW -42

### Uttar Pradesh

**Wheat :** Malwiya-234, U.P.-2338, PVW-373, 524, H.D.-2643, HUW-510, UP-2425, Narendra wheat-2038, 1014, K-9533, 9162, 7903, 9423

**Durum varieties :** PBW-34, 225, 233, Raj-1555, WH-896, HI-8494

**Onion :** Pusa lal, Kalyanpur lalgol, light red

### Jammu & Kashmir

**Wheat - cv** HD2329, PBW-154, PBW-343, Raj-3077, RSP-303, DBB17 and WH 542) under irrigated areas and PBW 175, PBW 396 and IWP 72 under rainfed areas.

**Barley : cv:** Ratna, Jyoti & Sonu

### New Delhi

**Wheat:** PBW.373, WR-544, UP.2338, UP.2425.

### Maharashtra

**Wheat:** NIAW-34 variety for Pune division, HD-2501, AKW-1071 & 381 in Central Vidarbha Zone.

**Maize:** Deccan 103,105; Ganga-11; Bio- 9637, 9681

**Sunflower:** Modern, S.S.56, B.S.H-1

**Sugarcane:** C0-86032, C0-94012, C0-8014, C0-M-0265, C0-C-671, C0-92005

### Gujarat

**Wheat:** GW- 173, G.W.-496, lok-1, GW-496 or GW-366 or GW-173 or GW-322.

**Isabgol:** Gujarat Isabgol – 2 or 3

**Cumin:** GC 4

### Madhya Pradesh

**Onion:** Udaipur 102, Pusa White, Nasik Red, Nasik Roja etc.

**Wheat: (Jhabua Hila Zone)**

**Late Sown:** M.P. 4010, Vidisha (DL 788-2), G W 173, Naveen Chandosi (HI 1418) and for gram JG 130, JG 226, Vishal, Vijay etc in rainfed and semi irrigated condition.

**Sugarcane:** K Jawahar-86141, K Jawahar – 86572, K –N 8632, K-6304, KC-671, Ko. 86032, Ko-J-N 86600 or 86141.

### Chattisgarh

**Wheat :** GW-273, Kanchan, GW-173, Amar, Lok-1, Ratan and HD-2329

**Gram :** Vaibhav, JG-74, TG-315, ICC-2 (Kabuli)

## Annexure II Contour maps for the week ending 29.12.10

