



National Agromet Advisory Service Bulletin

Friday 24th January 2020
(For the period 24th to 28th January 2020)



Issued by
India Meteorological Department

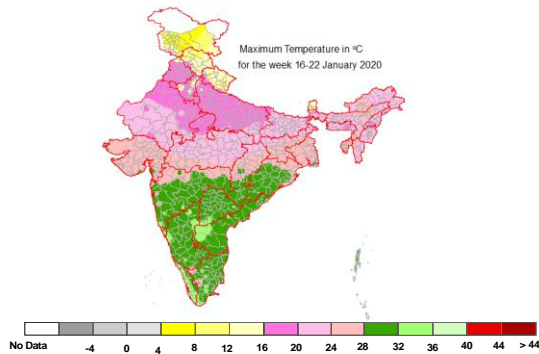
Weblink For

District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>

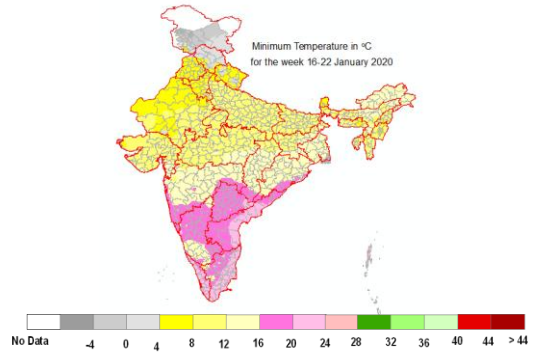
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

spatial distribution of weather parameters for the week ending on 22.01.2020

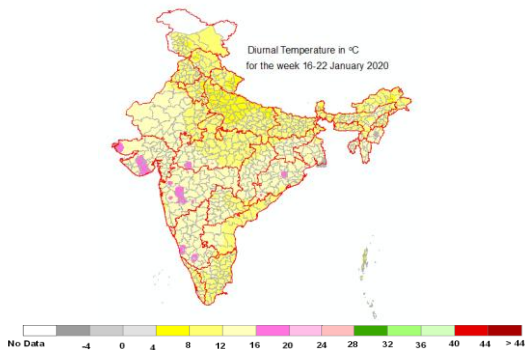
Mean Maximum Temperature (°C) for the week ending on 22.01.2020



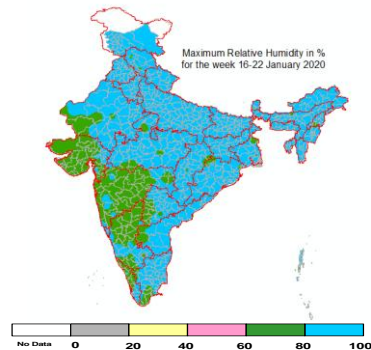
Mean Minimum Temperature (°C) for the week ending on 22.01.2020



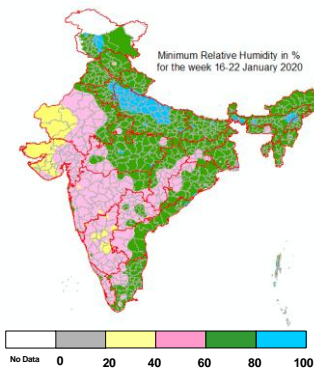
Mean Diurnal Temperature Variation (°C) for the week ending on 22.01.2020



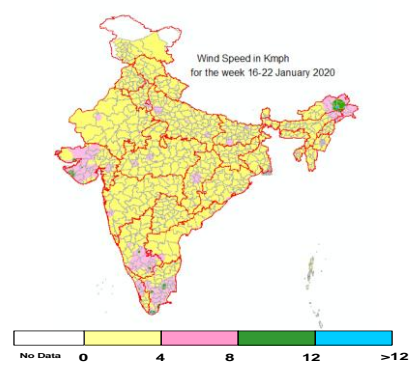
Mean Maximum Relative Humidity (%) for the week ending on 22.01.2020



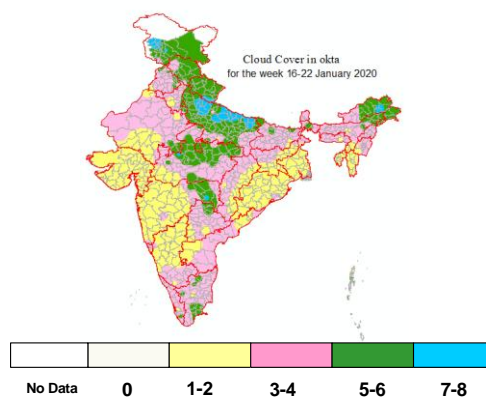
Mean Minimum Relative Humidity (%) for the week ending on 22.01.2020



Mean Wind Speed (km/hr) for the week ending on 22.01.2020

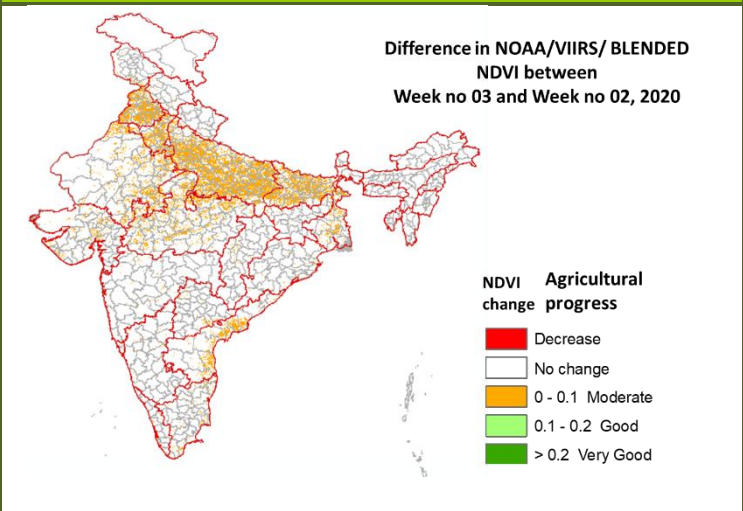
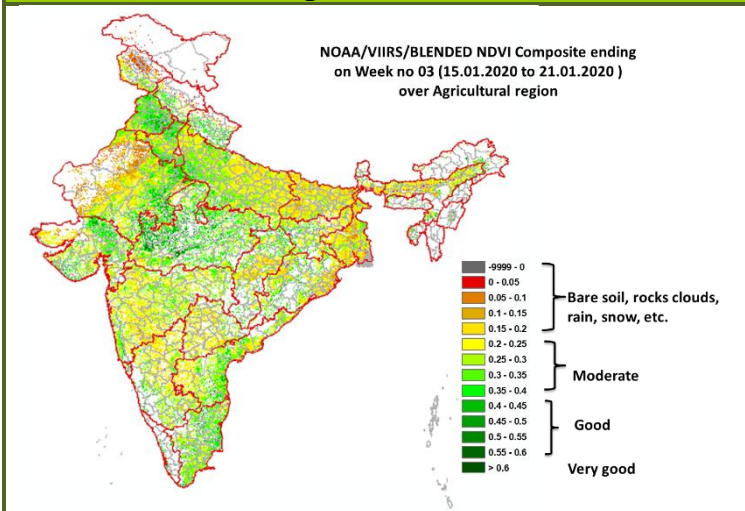


Mean Cloud Cover (okta) for the week ending on 22.01.2020



NOAA/VIIRS/BLENDED NDVI composite for the week number 03 (15.01.2020 to 21.01.2020) over Agricultural regions of India

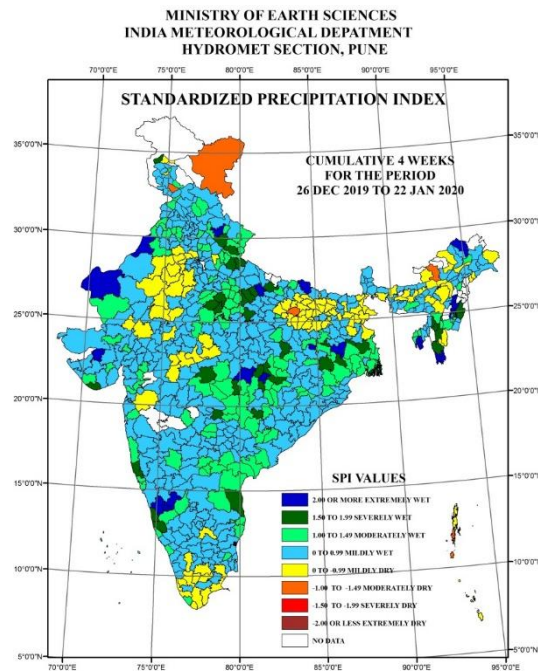
Difference in NOAA/VIIRS/BLENDED NDVI between week number 03, 2020 and week number 02, 2020



Agriculture vigour was good at many parts of West Madhya Pradesh & Punjab; at few parts of Uttarakhand, East Rajasthan, East Madhya Pradesh, Gujarat, Tamilnadu, Kerala & Coastal Karnataka; at isolated parts of Haryana, West Uttar Pradesh, Chattisgarh, Odisha, North Eastern States, Jharkhand, Sub Himalayan West Bengal, Sikkim, Coastal Andhra Pradesh, Konkan & Goa.

Moderate difference in agricultural vigour has been observed in most parts of Punjab, Haryana Uttar Pradesh and Bihar. It was few to isolated over rest of the country.

Standardised Precipitation Index Cumulative 4 weeks for the period 26th Dec 2019 to 22nd Jan 2020



- Extremely/Severely wet conditions exist in Nellore district of Andhra Pradesh; Upper Siang district of Arunachal Pradesh; Hailakandi district of Assam; West Champaran district of Bihar; Gir Somnath, Morbi districts of Gujarat; Kupwara district of Jammu; Dakshin Kannada, Udupi, Davangere, Shimoga districts of Karnataka; Betul, Bhind, Datia, Gwalior, Balaghat districts of West Madhya Pradesh; Sindhudurg, Bhandara districts of Maharashtra; Imphal East, Senapati, Ukhrul districts of Manipur; Aizwal, Kolasib, Lawngtlai, Lunglei, Saiha districts of Mizoram; Kohima district of Nagaland; Sri Ganganagar, Jaisalmer districts of Rajasthan; South Tripura district of Tripura; Puducherry districts of Union Territory; Banda, Barabanki, Gonda, Kanpur City, Lucknow, Unnao, Bareilly, Pilibhit districts of Uttar Pradesh; Burdwan, Purulia districts of West Bengal; Lohardaga, East Singhbhum, West Singhbhum, Ramgarh districts of Jharkhand; Nainital, Garhwal Pauri, Garhwal Tehri districts of Uttarakhand; Durg, Kowarda, Narayanpur, Baloda Bazaar, Bemetara, Mungeli, Surajpur districts of Chhatisgarh; Adilabad district of Telangana.
- Moderately dry conditions exist in East Kameng district of Arunachal Pradesh; Ladakh (Leh), Udhampur districts of Jammu; Ghazipur district of Uttar Pradesh; South Andaman district of Andaman & Nicobar Islands.
- Moderately wet to mildly dry conditions were experienced in remaining districts in the country.

Weather Forecast for next 5 days valid upto 0830 hours of 29th January, 2020

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table below.
- ◆ Minimum temperatures likely to fall by 2-3°C over east India and no significant change in rest parts of the country during next 2-3 days.
- ◆ Shallow to moderate fog in the morning hours likely over West Bengal & Sikkim, Bihar and Assam & Meghalaya during next 3 days and over Odisha on 25th & 26th January.

5 Day Rainfall Forecast (MID-DAY) 24th January 2020

Met-Sub-Division	24-Jan Today	25Jan Sat	26Jan Sun	27Jan Mon	28Jan Tue
1. Andaman & Nicobar Islands	DRY	DRY	DRY	DRY	DRY
2. Arunachal Pradesh	SCT	ISOL	ISOL	SCT	ISOL
3. Assam & Meghalaya	ISOL	DRY	DRY	ISOL	ISOL
4. N. M. M. & T.	ISOL	DRY	DRY	DRY	DRY
5. S.H. West Bengal & Sikkim	ISOL	ISOL	ISOL	ISOL	ISOL
6. Gangetic West Bengal	DRY	DRY	DRY	DRY	ISOL
7. Odisha	DRY	DRY	DRY	DRY	ISOL
8. Jharkhand	DRY	DRY	DRY	DRY	ISOL
9. Bihar	DRY	DRY	DRY	DRY	ISOL
10. East Uttar Pradesh	DRY	DRY	DRY	DRY	SCT
11. West Uttar Pradesh	DRY	DRY	DRY	ISOL	SCT
12. Uttarakhand	DRY	ISOL	DRY	ISOL	WS
13. Haryana, Chd & Delhi	DRY	DRY	DRY	SCT	FWS
14. Punjab	DRY	DRY	DRY	SCT	FWS
15. Himachal Pradesh	DRY	ISOL	DRY	ISOL	FWS
16. Jammu & Kashmir	SCT	SCT	ISOL	SCT	WS
17. West Rajsthan	DRY	DRY	DRY	ISOL	ISOL
18. East Rajasthan	DRY	DRY	DRY	ISOL	ISOL
19. West Madhya Pradesh	DRY	DRY	DRY	DRY	ISOL
20. East Madhya Pradesh	DRY	DRY	DRY	DRY	ISOL
21. Gujarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	DRY	DRY	DRY	DRY	DRY
24. Madhya Maharashtra	DRY	DRY	DRY	DRY	DRY
25. Marathawada	DRY	DRY	DRY	DRY	DRY
26. Vidharbha	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	DRY	DRY	DRY	DRY	ISOL
28. Coastal A. P. & Yanam	DRY	DRY	DRY	DRY	DRY
29. Telangana	DRY	DRY	DRY	DRY	DRY
30. Rayalaseema	DRY	DRY	DRY	DRY	DRY
31. T.N., Puducherry & Karaikal	DRY	DRY	DRY	DRY	DRY
32. Coastal Karnataka	DRY	DRY	DRY	DRY	DRY
33. North Interior Karnataka	DRY	DRY	DRY	DRY	DRY
34. South Interior Karnataka	DRY	DRY	DRY	DRY	DRY
35. Kerala & Mahe	DRY	DRY	DRY	DRY	DRY
36. Lakshadweep	DRY	DRY	DRY	DRY	DRY

% Station Reporting Rainfall

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)
No Rain	Dry		

Weather Warning during next 5 days

- ◆ **24 January (Day 1):** ◆ Dense fog very likely in isolated parts over Odisha.
- ◆ **25 January (Day 2):** ◆ Dense fog very likely in isolated parts over Punjab and Haryana & Chandigarh.
- ◆ **26 January (Day 3):** ◆ Dense fog very likely in isolated parts over Punjab and Haryana, & Chandigarh and Uttar Pradesh (valid upto 0830 hours IST of 27th January).
- ◆ Strong wind (speed reaching 45-55 kmph) likely to prevail over Northwest & Westcentral Arabian Sea.
- ◆ **27 January (Day 4):** ◆ Thunderstorm accompanied with hail & lightning likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and Rajasthan.
- ◆ Strong wind (speed reaching 45-55 kmph) likely to prevail over Northwest & Westcentral Arabian Sea.
- ◆ **28 January (Day 5):** ◆ Heavy rain/snow likely at isolated places over Jammu & Kashmir and Himachal Pradesh.
- ◆ Thunderstorm accompanied with hail & lightning likely at isolated places over Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and Rajasthan; with lightning at isolated places over East Uttar Pradesh.

Weather Outlook for subsequent 2 days from 29th to 31st January, 2020

- ◆ Fairly widespread to widespread rain/snow over Western Himalayan Region and scattered to fairly widespread rain/thunderstorm over plains of northwest India and east & northeast India.
- ◆ Weather likely to be dry over rest parts of the country.

Salient advisories

- **Advisory for Desert Locust:**
- On arrival/attack of locusts in area, intimate immediately to locust control room, Suratgarh at 09969341927, 09588849282 or to Deputy Director (Extension), Sriganganagar at 0154 2422345, 09928116968.
- In Arid Western Plain Zone, where there is attack of locusts, apply Chloropyriphos (50%) 1 ml/litre or (20%) 2.5 ml/litre of water in standing crops.
- As **Thunderstorm** accompanied with **hail & lightning** likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and Rajasthan on 27th & 28th and over West Uttar Pradesh on 28th; with **lightning** at isolated places over East Uttar Pradesh, use hail net for orchard crops to protect from mechanical damage. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at most/many places over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Jammu & Kashmir and Himachal Pradesh with **Heavy rain/snow** likely at isolated places over Jammu & Kashmir and Himachal Pradesh on 28th, postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in crop fields.
- As **Dense fog** very likely in isolated parts over Odisha on 24th; over Punjab and Haryana & Chandigarh on 25th & 26th and over Uttar Pradesh on 26th till morning of 27th, monitor the standing crops for incidence and spread of pest & diseases and monitor tomato and potato crops for blight disease. If symptoms are noticed, undertake plant protection measures.
- Undertake sowing/ transplanting of following crops:
 - Undertake planting of tapioca and brinjal in Problem Area Zone of Kerala.
 - Undertake intercropping with greengram or black gram in sugarcane field in North Coastal Zone of Andhra Pradesh.
 - Undertake sowing of rice fallow pulses viz., black gram and green gram varieties in Cauvery Delta Zone of Tamil Nadu.
 - Undertake land planting of sugarcane in South Interior Karnataka and Odisha.

- Undertake sowing of pre-kharif rice in Manipur.
- Undertake sowing of long duration varieties of sunflower in Western Zone of Punjab.
- Undertakesowing of summer groundnut in Maharashtra.

Detailed Agromet Advisories

SOUTH INDIA [TAMIL NADU, TELANGANA, ANDHRA PRADESH, KARNATAKA, KERALA]

Realised Rainfall : Rainfall occurred in Thiruvarur district of Tamil Nadu. Weather remained dry over the region.

Advisories:

Kerala

- In Problem Area Zone, undertake planting of tapioca and brinjal. Weather is congenial for bud rot disease in coconut; spray Bordeaux mixture 1% on spindle leaves and crown of disease affected as well as neighbouring palms.
- In High Altitude Zone, undertake sowing of short duration vegetable crops like amaranthus, cow pea, etc. in the interspaces of newly planted banana crop. Undertake harvesting of ginger and coffee.
- In Southern Zone, undertake harvesting of paddy. Weather is congenial for leaf spot in vegetables, brown coloured leaf lesions with grey centres which coalesce resulting in premature shedding of leaves, spray Copper Oxchloride 2 g/litre or Mancozeb 3-4 g/litre.
- In Central Zone, there is a chance of powdery mildew in vegetables, spray 20g Trichoderma per one litre of water.

Andhra Pradesh

- In North Coastal Zone, undertake intercropping with greengram or black gram in sugarcane field in paired row method by using spacing 60 X 150 cm so as to improve soil fertility.
- In Scarce Rainfall Zone, provide irrigation and spray KNO₃ 10 g and urea 5 g per litre of water to enhance the flowering in mango.
- In Krishna Godavari Zone, due to prolonged dry spells, moisture stress has been observed in maize; spray 2% urea solution 2-3 times in a week.
- In Southern Zone, due to prevailing dry weather, there is possibility of incidence of thrips in groundnut; to control, spray Monocrotophos @ 1.6 ml. or Imidachloprid @ 0.3 ml per litre of water which will also control the incidence of bud necrosis; remove weeds like parthenium in and around the fields; protect crop from nutrient deficiency and water stress

Telangana

- Prevailing low temperature is congenial for the incidence of blast disease in *rabi* rice nurseries; spray Tricyclazole @ 0.6 g per litre of water.
- Prevailing weather conditions are congenial for the incidence of powdery mildew disease in vegetables; spray wettable Sulphur @ 3.0 g or Kerathen @ 1.0 ml or Hexaconazole @ 2 ml per litre of water.
- In North Telangana Zone, undertake transplanting of 4-6 leaf stage seedling for paddy. Make 20 cm alleyways at every 2 meters apart to facilitate free aeration and control pests & diseases.

Tamil Nadu

- In North-eastern Zone, undertake harvesting of matured paddy.
- In Cauvery Delta Zone, undertake sowing of rice fallow pulses viz., black gram and green gram varieties.
- In Western Zone, white fly incidence is seen in tapioca; monitor the crop carefully and place yellow sticky traps in 5 or 6 places; and if required, spray Diazophos @ 2ml or Imidachloprid @ 0.6ml per liter of water.
- In South Zone, prevailing weather is conducive for boll worm; to control spray Quinalphos 25 EC (or) Phosalone 35% EC @ 2.0 l/ha.

Karnataka

- In North Interior Karnataka, undertake harvesting of pigeon pea (short duration varieties) crop. Apply light irrigation to the late sown chick pea crop. In case of long duration pigeon pea varieties, if the incidence of pod fly persists, spray crop with Thiamethaxom @ 0.25 gm in one litre of water. Continue land preparation for planting of sugarcane. Spray Emamectin Benzoate @ 0.2 gm or Spinosad @ 0.1ml or Indoxacarb @ 0.3ml in one litre of water in the gram crop for pod borer management.
- In South Interior Karnataka, undertake harvesting of matured red gram, pepper and matured rhizomes of ginger, turmeric. Undertake land preparation for transplanting of rice. Continue planting of sugarcane. There is a possibility of occurrence of powdery mildew and hoppers in mango. Spray Wettable Sulphur @3gm/ litre and Rogar @1.5ml/ litre of water respectively.
- In Coastal Karnataka, continue threshing of rice. For control of wilt in black pepper, spray Metalaxyl MZ @ 1g/litre of water.

Animal Husbandry:

- In Karnataka, provide oil cake/concentrated feeds with jaggary to the milch animals; it helps to keep body warm during the winter months. In order to protect the animals from sudden drop in temperature, particularly during night time, wrap the cattle shed with jowar /maize stalk.
- In Karaikal and Pondicherry, as a preventive measure for Babesiosis disease, apply Butox @ 2 ml/litre of water on cattle and also spray it on the nearby areas of the shed.

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

Realised Rainfall: Significant rainfall occurred in East Siang, Lower Dibang Valley and Upper Siang districts of Arunachal Pradesh. Weather was mainly dry over rest of the region.

Advisories:

Arunachal Pradesh

- In Arunachal Pradesh, apply light and frequent irrigation in winter maize to protect crop from low temperatures and frost damage. Carry out weeding operation in mustard. Provide proper drainage in potato field to avoid water stagnation. Collect and dispose off fallen orange fruits regularly to reduce fruit fly population.

Assam & Meghalaya

- In Hill Zone of Assam, undertake main field preparation for transplanting *Boro* paddy seedlings. Monitor cole crops regularly for leaf feeders; if pest population is above ETL, spray of B.t. @ 1.0 g/ litre of water or Spinosad @1 ml / 3 litre of water.
- In Lower Brahmaputra Valley Zone of Assam, undertake gap filling in the main summer rice field within 7 -10 days after transplanting; maintain 5cm water level in the main field. Apply irrigation to coconut plants at 15 days interval.
- In Upper Brahmaputra Valley Zone, apply irrigation in *Boro* rice to maintain 5-7 cm water level; if moderate infestation of stem borer is observed, spray Chlorpyrifos 20 EC or Quinalphos 25 EC (70-80 ml per 70-80 litres of water per bigha). Due to favourable weather conditions, incidence of wilt disease may be observed in the pulses crops such as chick pea, lentil, etc.; drench the soil with Bavistin @ 1ml/litre of water as soon as wilt symptoms are observed.
- In Barak Valley Zone, carry out weeding in *Boro* rice at 20 and 40 days after transplanting of seedling in the field. Keep 5 cm standing water in the rice field and minimize the loss of irrigated water through seepage. Apply irrigation every alternate day in winter vegetables. Apply three irrigations in potato field at 25 days , 60 days and 80 days after planting.
- In North Bank Plain Zone, undertake transplanting of *Boro* rice seedlings. Minimum temperature below 12.5 degree Celsius is favourable for infestation of aphids and sawfly in rapeseed and mustard; apply Dimethoate 30EC or Chlorpyrifos @ 2ml per litre of water with a spray volume of 500-700 litres/ha for

hand sprayer & 200-250 litres/ha for power sprayer. Present weather is favourable for appearance of late blight in potato; spray Mancozeb @2.5g/litre of water in clear weather.

- In Meghalaya, undertake nursery bed preparation for sowing of tomato seeds. Monitor the incidence of South American tomato leaf minor and destroy the infested leaves at initial stages in the nursery. Apply irrigation to mustard / rapeseed at flowering stage. Maintain proper soil moisture in carrot / raddish at vegetative stage. Apply irrigation to cole crops to maintain proper soil moisture. Undertake harvesting of ginger and turmeric.

Manipur, Mizoram, Tripura and Nagaland

- In Manipur, undertake land preparation for nursery sowing of pre *kharif* rice. Carry out weeding operation in coriander and spinach. To control powdery mildew in field pea/ lentil, spray Bayleton @ 7g/ 10 litres of water or *Neem* seed kernel extract at 5% concentration. Spray Nimbicidin (0.3%) to control rust disease. To prevent thrips in onion crop, install blue sticky trap in the field or spray *Neem* seed kernel extract @2ml/litre of water.
- In Mizoram, provide proper drainage facility in maize crop field. Provide irrigation to mustard crop at 10 days interval. Use straw mulch where irrigation is not possible. Undertake harvesting of turmeric. Carry out intercultural operations near the base of the potato plants; apply irrigation at 2-3 days interval; use straw mulch for better soil moisture conservation.
- In Tripura, undertake transplanting of *Boro* rice seedlings. Apply irrigation in *rabi* legumes like toria, sesame, lentil etc and *rabi* maize. Apply mulch to retain soil moisture for longer period. Apply light irrigation after proper weeding in cole crops. Cloudy weather condition is conducive for fungal diseases like blight in potato; spray Mancozeb (Indofil M-45) @ 2.5gm per litre of water in potato fields at least twice at an interval of 10 days.
- In Nagaland, undertake harvesting of green gram. Undertake harvesting of rapeseed when the pods turn yellowish brown. Undertake 2-3 pickings of French beans at 4-5 days interval.

EAST INDIA [JHARKHAND, BIHAR, ODISHA, WEST BENGAL & SIKKIM, ANDAMAN & NICOBAR ISLANDS]

Realised Rainfall: Rainfall occurred in West Champaran district of Bihar. Weather remained dry/mainly dry over the region.

Advisories:

Odisha

- As **Dense fog** very likely in isolated parts over Odisha on 24th; monitor the standing crops for incidence and spread of pest & diseases and monitor tomato and potato crops for blight disease. If symptoms are noticed, undertake plant protection measures.
- Prepare main field for transplanting three to four week old seedlings. Prepare field for planting sugarcane; Apply FYM 10t/acre before final land preparation. Go for sowing of lentil, field pea, green gram, black gram and chickpea @ 20 kg/acre. Continue picking cotton from matured dry bolls. Irrigate onion crop at 10 days interval. Irrigate oats crop at tillering stage. Leaf eating caterpillar and fruit borer may infest tomato, cabbage and cauliflower crops; spray Fipronil 5% SL 400ml or Emamectin benzoate 5% SG 80gm or Indoxacarb 14.5% SC 200ml mixing in 200litres of water per acre crop.

Bihar

- Continue transplanting of Rabi onion seedlings. Harvest elephant foot yam and turmeric on priority basis. Carry out land preparation for planting sugarcane. It is time for flowering initiation in mango and litchi; stop intercultural operation in the orchard. To control stem borer in maize crop, spray Carbaryl 50 WP @ 1kg/acre or Dimethoate 30% EC @ 250ml/acre on the 20th day of sowing. If the attack of Fall Army worm is above ETL, apply neemicide or use pheromone trap. Spray Chlorpyrifos 20 EC @2.5-3 ml per liter of water for cut worm infestation in potato crop.

Jharkhand

- Collect seeds for nursery raising of summer rice; place seeds in wet jute bag for two days for early germination; to prepare nursery bed, thoroughly mix well rotten Farm yard manure @ 100 kg along with 10 to 12 kg karanj or neem cake in the well pulverized puddled soil.
- Pigeon pea crop is at pod formation stage; attack of insects is common due to variation in temperature; spray Imidacloprid @ 4 ml or Acephate 75 % SP @ 5 g or Quinalphos 25EC @ 20 ml per 10 litres of water on clear day. For control of wilt in tomato and brinjal crops, spray Blitox 50 @ 3g/litre of water or Streptocycline @ 0.25 g/litre of water.

West Bengal

- In Sub-Himalayan West Bengal, prepare main land for transplanting 25-30 days old seedlings. Stop irrigation to lentil crop if flowering has started. Carry out earthing up in potato crop followed by irrigation. Apply light irrigation to mustard crop for better siliqua setting. Carry out harvesting of matured cole crops and garden pea. To control dieback/fruit rot in chilli crop, spray Carbendazim @ 1g/liter of water.
- In Gangetic West Bengal, apply water to Boro paddy nursery bed at night and drain the water in the next morning to prevent seedlings from turning yellowish; prepare main field for transplanting seedlings; complete transplanting of seedlings by the end of this week. Stop application of irrigation to potato crop at tuber formation stage. Apply light irrigation to mustard crop at flowering to siliqua formation stage. Continue sowing of sunflower. Spray Mancozeb @ 2.5-3 g/litre of water for control of rust and smut diseases.

Andaman & Nicobar Islands

- Do water spray in tomato at fruiting stage in morning hours to manage temperature. Uproot and burn the badly damaged papaya plants. Observe for termite in coconut trunk and clean around the tree. Apply bio control agent Trichoderma @ 2.5 kg/ha to control soil borne diseases in pulses.

Animal Husbandry

- Vaccinate animals against FMD, HS and BQ. To cure coccidiosis in poultry birds, provide Amprolium oral medicine and sulfa drugs after consultation with nearby veterinary clinic. Keep poultry shed dry and warm. Provide 60 watt electric bulbs in poultry sheds during night as cold weather is likely to continue.

Fishery

- In Andaman & Nicobar Islands, harvest fully grown fresh water fishes (IMC) as dry weather will continue.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Realised Rainfall: Weather remained mainly dry/dry over the region.

Advisories:

Maharashtra

- In Konkan, farmers are advised to undertake earthing up in early sown groundnut. Continue field preparation for transplanting of rice. To control leaf folder in rice, spray Quinalphos 25% EC @ 2 litres per 500 litres of water. To control hoppers in flower buds of mango, spray Lambda cyhalothrin 5% EC @ 6 ml + Hexaconazole @ 5 ml per 10 liters in water.
- In Madhya Maharashtra, farmers are advised continue sowing of groundnut (varieties : Phule Unnati, TAG24, TPG41, JL501). Continue land preparation for plantation of *suru* sugarcane [varieties- CO-86032 (Nira), CO-94012 (Savitri), CO M-0265 (Phule-265)]. To control blight in onion, spray Diathane M-45 @ 25 g per 10 liters of water. To control sucking pest in potato, spray 4% NSKE. To control thrips in onion, spray Dimethoate 30 % EC @ 15 ml or Lambda Cyhalothrin 5 % EC @ 6 ml in 10 liters of water. To control powdery mildew in grapes, spray Dithane Conazole @ 0.5 ml per litre of water.
- In Marathawada, farmers are advised to continue harvesting of matured pigeon pea. Undertake intercultural operation like weeding in pomegranate orchards. To control stem borer in sugarcane,

spray Chlorpyrifos 20% EC @ 30 ml per 10 liters of water.

- In Vidharbha, farmers are advised to continue harvesting of pigeon pea. Continue sowing of summer groundnut (Varieties : TAG-24, TG-26 and SB-11). To control aphids in late sown safflower (ETL : 30% infested plants), spray Dimethoate 30% EC @ 10 ml per 10 litres of water. To control aphids in wheat, spray Quinalphos 25% EC @ 40 ml in 10 liters of water.

Gujarat

- In North Gujarat, apply irrigation to cotton crop in alternate rows. Harvest the matured spikes of castor. Weather is congenial for outbreak of aphids in the vegetable crops; for effective control, spray Dimethoate @ 10 ml adding in 10 litres of water.
- In Middle Gujarat, there are chances of early blight in the potato crop. To control this disease, spray Propiconazole 25 EC @ 10 ml in 10 litres of water 35 days after planting. Spray next four doses at the interval of 12 days.
- In South Gujarat, undertake land preparation for transplanting of rice. Maintain standing water level of 3-5 cm in the rice nursery. Intercropping of onion, garlic, mustard, cabbage, cauliflower, green gram and black gram in sugarcane is suggested. Complete nursery sowing of brinjal and chilli.
- In Saurashtra & Kutch, apply light irrigation to wheat crop during evening time. Under present weather conditions, severe attack of thrips has been reported in chili. Spray Ethion @ 20 ml with 500 ml of 5 % neem seed extract or neem seed oil @ 50 ml in 10 litres of water. In case of heavy attack, spray Spinosad or Spinetoram @ 3 ml /10 litres of water.

Animal Husbandry:

- Keep the animals indoor at night time for protecting against extreme cold winds. Provide warm drinking water to animals.

CENTRAL INDIA [M.P., CHHATTISGARH]

Realised Rainfall: Rainfall occurred in Bhind, Datia, Guna, Gwalior, Morena and Shivpuri districts of Madhya Pradesh. Weather remained dry/mainly dry over rest of the region during the week.

Advisories:

Madhya Pradesh

- In Malwa Plateau Zone, apply manure and fertilizer in fruit orchards. Continue sowing of Rabi onion after seed treatment with Captan @ 2.5 g/kg of seeds. Carry out earthing up in potato crop. For monitoring of pod borer in gram crop, install pheromone traps @ 3-4 traps per acre; if flowering has reached 10-15%, place 'T' shaped bird perches in and around crop field to control insect population.
- In Vindhya Plateau Zone, cover new orchards with hay to protect them from cold weather. Continue transplanting of brinjal seedlings. To check caterpillar population in gram crop, install bird perches @ 40-60 per acre.
- In Central Narmada Valley Zone, spray N P K 19:19:19 water-soluble manure at the rate of 100 g per pump if yellowing due to excessive moisture is observed in standing wheat crop; avoid water logging in the field; apply light irrigation at 20 days interval. Apply Dimethoate 30 EC 500 ml/ha if aphid infestation in mustard crop is found to be above ETL.
- In Bundelkhand Zone, irrigate wheat crop and apply remaining dose of nitrogen fertilizer 3-4 days after irrigation. Spray Mancozeb @ 2.5 ml per liter of water to control blight disease in potato crop.
- In Jhabua Hills Zone, apply third irrigation to wheat crop at booting stage (50-55 DAS) and fourth irrigation at head initiation stage (65-70 DAS) so as to maintain sufficient moisture in the field. Irrigate winter vegetable crops. Irrigate mustard crop at seed formation stage (60-65 DAS) and chick pea crop at pod filling stage (60-70 DAS). Stop irrigation to turmeric and ginger crops; dig mature rhizomes. Harvest mature tomato, early cauliflower, brinjal and chilli crops. Timely cut /dig/ pick spinach, fenugreek, pea, radish, etc. and market them.

Chhattisgarh

- In Chhattisgarh Plain Zone, irrigate wheat crop at critical stages like CRI, tillering, etc. At 50% flowering

stage in mango, give irrigation strictly at an interval of 15 days or more. Irrigate banana and papaya seedlings once a week and give support to the banana plants at the time of flowering. If Yellow Vein Mosaic (YVM) disease is observed in pulses crop, destroy the affected plants and spray Metasystox or Rogar insecticide @ 1 ml/litre of water.

- In Northern Hill Zone, wheat crop is at CRI/tillering stage; irrigate crop and apply nitrogen. Continue transplanting of onion seedlings. Prepare field by the first week of February for planting sugarcane. Apply light irrigation to vegetable crops such as cauliflower, cabbage, tomato, pea, chilli, brinjal, etc., as per soil moisture. To control pod borer in gram, use pheromone traps; spray *neem* extract @ 5% to prevent female insects laying eggs; in case of heavy infestation, spray Quinalphos @ 0.05%.
- In Bastar Plateau Zone, apply irrigation to wheat crop at critical stages. Prepare field for planting sugarcane in last week of January or first week of February. Raise seedlings of cucurbitaceous crops in poly bags. To control white fly in tomato crop, apply Thiamethoxam 25 WG 400 g/ha or Acetamiprid 20% WP 100ml/ha.
- **Animal Husbandry**
- Fully milk the milch animals to avoid mastitis; feed them a mixture of *gud* and concentrate. Vaccinate cattle against FMD and HS; goat against PPR and poultry birds against Ranikhet disease.

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

Realised Rainfall : Significant rainfall occurred in Chamba, Kinnaur and Kullu districts of Himachal Pradesh; in Anantnag, Badgam, Doda, Ramban and Srinagar districts of Jammu & Kashmir and in all districts of Uttarakhand except Dehradun and Haridwar; Bagraich, Barabanki, Basti, Farrukhabad, Gonda, Hardoi, Kannauj, Kanpur City, Kanpur Dehat, Lucknow, Maharajganj and Unnao districts of East Uttar Pradesh and Auraiya, Bareilly, Etawah, Hapur, Jalaun, Jhansi, Kanshiramnagar, Mohamaya nagar, Mainpuri, Moradabad, Muzzaffarnagar, and Pilibhit districts of West Uttar Pradesh.

Advisories:

- As **Thunderstorm** accompanied with **hail & lightning** likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and Rajasthan on 27th & 28th and over West Uttar Pradesh on 28th; with **lightning** at isolated places over East Uttar Pradesh, use hail net for orchard crops to protect from mechanical damage. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at most/many places over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Jammu & Kashmir and Himachal Pradesh with **Heavy rain/snow** likely at isolated places over Jammu & Kashmir and Himachal Pradesh on 28th, postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in crop fields.
- As **Dense fog** very likely in isolated parts over Punjab and Haryana & Chandigarh on 25th & 26th and over Uttar Pradesh on 26th till morning of 27th, monitor the standing crops for incidence and spread of pest & diseases and monitor tomato and potato crops for blight disease. If symptoms are noticed, undertake plant protection measures.

Jammu & Kashmir

- In Sub-Tropical Zone, monitor wheat crop for zinc deficiency; if young to middle leaves develop yellow patches between the mid-vein and edge of the leaf and extend lengthways towards the tip and base of the leaf, spray 0.2% Zinc Sulphate Heptahydrate (ZnSO₄.7H₂O) during clear weather conditions. Carry out weeding in onion, garlic fields and spray Mancozeb @ 2.5gm/litre of water during clear weather to avoid fungal attack.
- In Cold Arid Zone, plough fields to retain more moisture during the winter months. It will also help in uprooting of the weeds and decomposition of crop residues. Carry out intercultural practices like weeding and hoeing after applying vermi-compost/FYM in poly-houses. Undertake harvesting of Chinese cabbage, kale, spinach and lettuce in protected structures at weekly interval to avoid loss due to frost.

- In Intermediate Zone, monitor pulses crop for wilt and blight incidence; if symptoms are observed, drench the affected spots with Carbendazim @ 1 ml in 1 litre of water during clear weather conditions. Provide staking to the pea vines and apply irrigation at first flower formation and pod formation stage depending upon the soil moisture conditions.
- In Valley Temperate Zone, provide drainage channels in *rabi* crop fields like wheat, oats, lentils, pea, brown sarson and chicken pea wherever there is probability of water accumulation; keep bunds and irrigation channels clean. Remove snow from poly-houses and poly tunnels and provide adequate drainage in all vegetable crops.

Himachal Pradesh

- In High Hill Temperate Dry Zone, cover small apple plants with grass to avoid cold paralysis. Remove and destroy disease-stricken apple branches.
- In Mild Hills Sub Humid Zone, cover the small pomegranate plants with grass to avoid cold paralysis. Destroy the infected plant parts and undertake dressing of cut ends. To protect the plants from direct sun shine which may cause canker disease, white wash the stem up to first branch. Apply the solution of 15 kg white wash + 5 kg copper sulphate +2 litres linseed oil in 50 litres of water on branches of sunny side.
- In Mid Hills Sub-Humid Zone, undertake stacking in the pea crops so that it grows vertically and pod picking becomes easy. Make arrangement for drainage of rainwater from the vegetable crops. Apply Chaubatia paint immediately after training /pruning of the temperate fruits. To control milbug in Mango, wrap alkathene tape of 15-20 cm width around the stem at height of half meter from the ground.

Punjab, Haryana and New Delhi

- In Western Zone of Punjab, irrigate crops; take special care of vegetables and newly planted orchard plants on cold days. Complete transplanting of 6-8 weeks old seedlings of onion; apply 20 tonnes of well rotten farmyard manure together with 45 kg of urea, 125 kg single superphosphate and 35 kg muriate of potash per acre before transplanting
- In Western Plain Zone of Punjab, undertake sowing of long duration varieties of sunflower. Apply irrigation to save mustard crop from frost damage. Check aphid damage on raya; observe 12-16 widely scattered plants from an acre; if aphid population is above ETL level, spray 40 g Actara 25 WG or 400 ml of Rogar 30 EC or 600 ml Dursban/Coroban 20 EC in 80-125 litres of water per acre.
- In Undulating Zone of Punjab, remove excess water from wheat and Bengal gram fields. Protect young evergreen mango plants from cold weather by preparing thatches using straw, plastic, etc.
- In Western Plain Zone of Punjab and Undulating Zone of Punjab, regularly monitor potato crop; if symptoms of late blight are observed, spray Indofil M45/Mass M45/Markzeb/Kavach @ 500-750g using 250-350 liters of water per acre at 7 days interval in clear weather conditions.
- In Western Zone of Haryana, due to possibility of dry weather, apply fertilizer doses and chemical spray in mustard, wheat and barley crops as per need after dew evaporation.
- In Eastern Zone of Haryana, spray 250 to 400 ml of Methyl Demeton 25 EC or Dimethoate 30 E . in 250 to 400 liters of water per acre to prevent cepa in mustard.
- In Delhi, complete sowing of wheat, mustard and pea. Continue transplanting of onion, tomato, cauliflower, cabbage, knolkhol and broccoli crops in raised bed. Undertake sowing of spinach, coriander and fenugreek. Undertake nursery preparation for chili, tomato and brinjal in poly house. Monitor pod borer in the gram crop; install pheromone traps @ 3-4 traps per acre; if flowering has reached 10-15%, install “T” shaped bird perches in and around crop field for controlling insect population.

Uttar Pradesh

- In East Uttar Pradesh, farmers are advised to undertake transplantation of onion crop after proper field preparation and manure/fertilizers application. If symptoms of termite appear in wheat crop, apply Chlorpyrifos 20 EC @ 2.0 litre/acre. For attack of aphids in mustard crop, apply insecticides/pesticides

when sky is clear. Due to high relative humidity, infection of blight may occur in potato; spray Carbandazim @ 1.0 g / litre of water Or Indofil-M-45 @500-700gm per acre Or blitox @750 - 1000 gm per acre in 250-350 litre of water 2-3 times at weekly interval. Adopt recommended plant protection control measures for pest and diseases in Bengal gram and chick pea.

- In West Uttar Pradesh, farmers are advised to transplant onion seedlings and irrigate immediately after transplanting; for weed control in onion crop, spray Pendimethalin 30% EC @ 3.5 litres / ha in 800 litres of water immediately after planting or just before irrigation. Carry out dressing of urea in the wheat crop. Due to cloudy sky conditions, mustard crop is likely to show outbreak of aphids; spray Chlorpyrifos 20% EC 1.0 liter/ha or Monocrotophos 36% SL; make a slurry in 400 to 450 liters of water at the rate of 500 ml / ha when spraying. There is a possibility of outbreaks of pod borer in gram/chick pea crops; spray Qunalphos 25 EC @ 2 litres per hectare in 500-600 litres of water.

Uttarakhand

- In Bhabar and Tarai Zone, apply irrigation to the new orchards to save them from frost. Monitor mustard crop regularly for aphids; in early-stage, cut and destroy the infested part of the plant. If the polyhouse is clear and well treated, prepare bed at ridge and sow seeds at proper distance to grow seedlings of capsicum, tomato, and brinjal.
- In Sub Humid Sub Tropic Zone, carry out weeding operation in wheat. Undertake transplanting of late sown cabbage and cauliflower.

Rajasthan

- In Semi Arid Eastern Plain Zone, weather is congenial for mango hopper; spray Malathion 50 EC @ 1.0 ml per litre water.
- In Sub Humid Southern Plain and Aravali Hill Zone, weather is congenial for leaf spot in cauliflower; spray Mancozeb 2 g or Carbendazim 1 g per litre of water.
- In Flood Prone Eastern Plain Zone, alternaria blight (black spot) disease may attack in mustard crop in some pockets, destroy the infested plants, spray Iprodione or Mencozeb @ 2 kg/800 litres of water.

Animal Husbandry

- Give balanced diet to milch animals. Add wheat straw to 60% green fodder. Use paddy straw or ash as litter in animal sheds. Mix vitamins and energy food material as well as calcium content in poultry feed. To keep chickens warm, provide light bulb in the poultry houses for 15 to 16 hours a day.

The Agromet Products in this Bulletin are generated by Agrimet Division, weather forecast issued by NWFC, New Delhi and AgrometAdvisories are prepared based on the DAAS Bulletins issued by different Agrometeorological Field Units.