

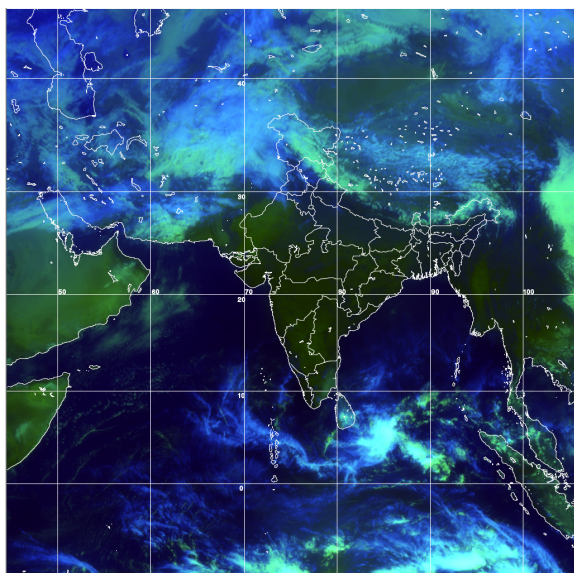


National Agromet Advisory Bulletin

Thursday, 10th February, 2011

(For the period 10th to 14th February, 2011)

Satellite image 0600 UTC Dated
11th February, 2011



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Executive Summary

Mainly dry weather prevailed over the country during last week except occurrence of scattered rainfall / thundershowers over Kerala and isolated rainfall over Sikkim, Arunachal Pradesh, Assam and Andaman & Nicobar Islands. Minimum temperatures have been observed between 4-8⁰C over most parts of northwest India and 8-12⁰C over parts of central, east and northeastern states and above 12-18⁰C over remaining parts of the country. They are below normal by 2-4⁰C over most parts of Telengana, Raylaseema, South & North Interior Karnataka, some parts of Marathwada, above normal by 2⁰C over some parts of East Madhya Pradesh, Chattisgarh, Vidarbha, and remaining parts of southern peninsula.

Rubber plants in Southern Zone of Kerala are likely to experience drought like situation. Farmers are advised to stop tapping of rubber and undertake soil moisture conservation measures.

Due to low temperature in Gurdaspur and Hoshiarpur Divisions of Punjab, standing *rabi* vegetables suffered from cold injury and farmers are accordingly advised to apply light irrigation by sprinklers in brinjal, tomato, chillies and early sown cucurbits to protect against cold injury. Thatching and mulching of basins of young plantations of fruit crops especially papaya should be done with sarkanda / dry grasses/ polythene / paddy straw etc. for protection against cold. Also apply light irrigation to grown-up trees.

Farmers in Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh are advised to protect the nurseries of vegetables from cold injury by covering with polythene sheet. Burn the dried leaves or grass or inert material in the garden so that ill effects of low temperature can be avoided in floricultural crops.

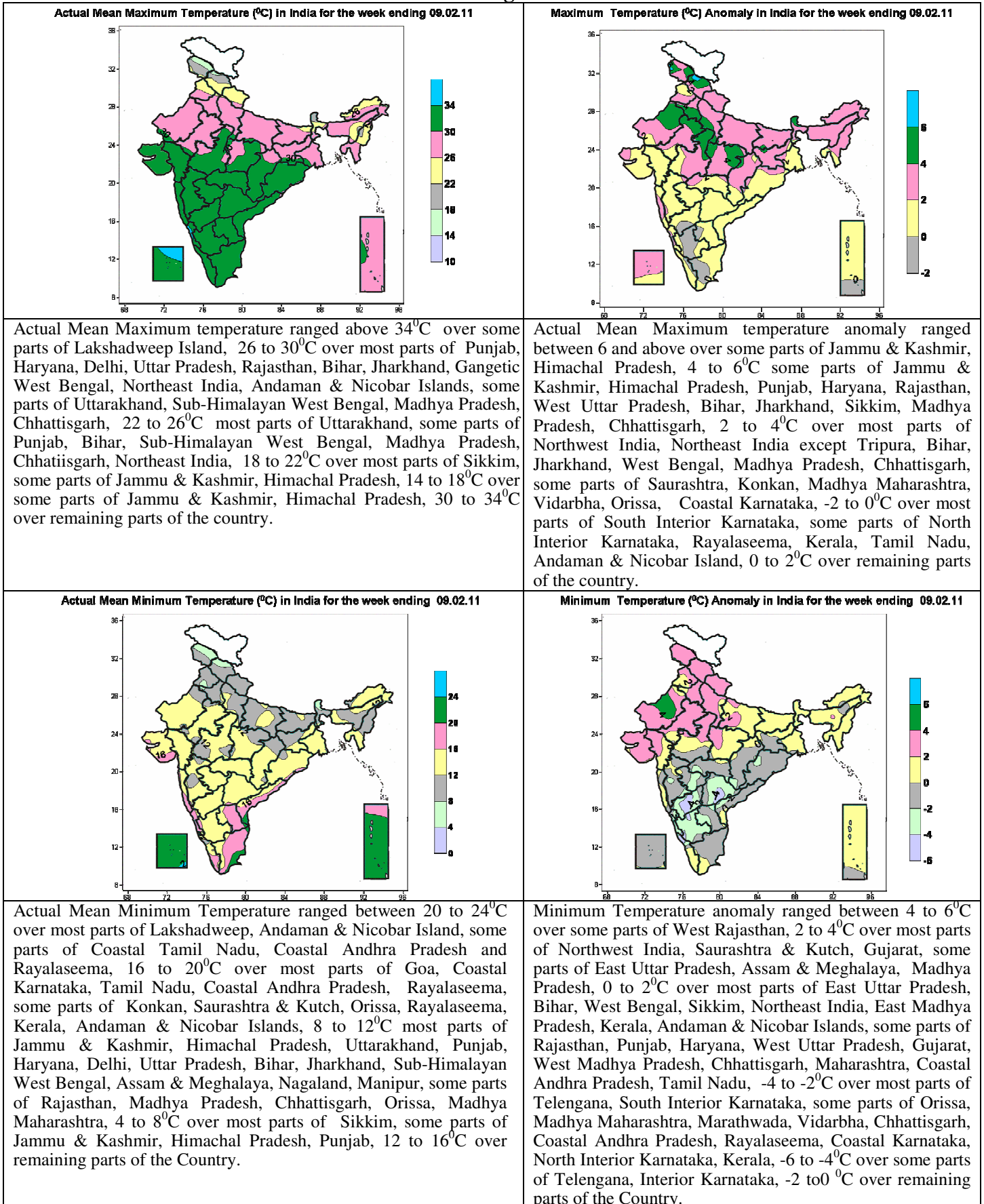
Rain / snow at a few / many places may occur over Jammu & Kashmir and Himachal Pradesh during next three days. Due to availability of sufficient moisture in soil, farmers are advised to apply top dressing of fertilizers in wheat and barley. Farmers are also advised to monitor the crops and arrange for smoke around the field for low temperature effect.

As dry weather is likely to prevail over remaining parts of the country, farmers are advised to complete intercultural operations utilizing the favourable weather conditions. Harvesting of crops may be undertaken during the next three days.

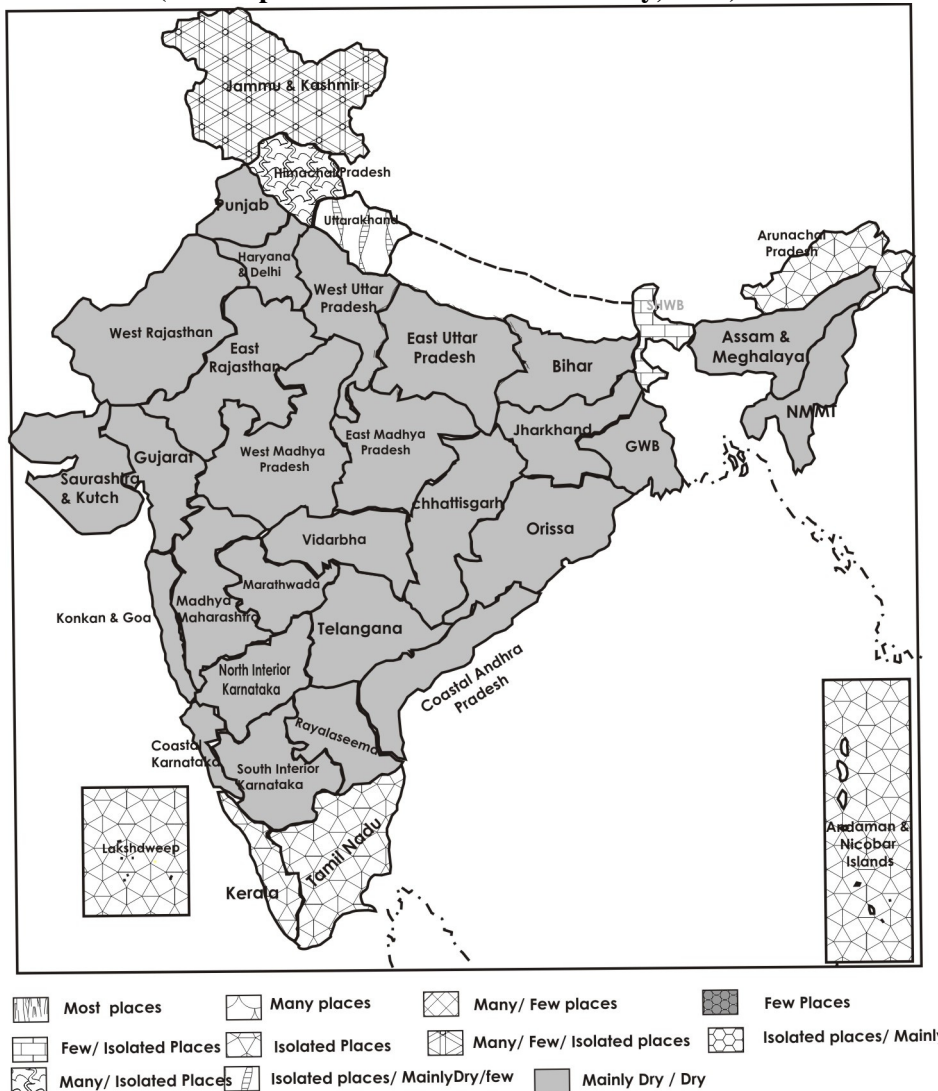
Weather condition is favourable for sowing of chari, bajra, maize, planting of bulbs of tulip and lilium and other flowers, fruit crops like walnut, almonds, plum, peach and pear and vegetables like brinjal, tomato, capsicum, french bean and chillies and also winter flowers in Himachal Pradesh, nursery sowing of tomato, chillies, brinjal, bhindi and water melon in Jammu region, tomato, cauliflower, cabbage and knoll-khol, leafy vegetables like spinach and methi in Kashmir region of Jammu & Kashmir and transplanting of *puncha* rice in Kerala. Farmers are advised to undertake land preparation and sowing of these crops.

Due to congenial weather conditions there is report of incidence of late blight in winter potato in Meghalaya, aphids in safflower in Pune of Maharashtra and pod fly in North Sourashtra Zone of Gujarat state. Farmers are advised to adopt appropriate plant protection measures to avoid severe crop damage.

Contour maps (Maximum, Minimum temperature and anomalies) for the week ending 09.02.2011



Weather Forecast (Valid upto 1430 hours of 13th February, 2011)



Major Feature of Weather Forecast (upto 1430 hours IST of 13th February, 2011)

- Isolated rain/snow would occur over western Himalayan region during next 24 hours and scattered to fairly widespread thereafter.
- Isolated rain/thundershowers would occur over Sikkim and Arunachal Pradesh.
- Isolated rain/thundershowers would occur over Andaman & Nicobar Islands and extreme south peninsular India.
- Minimum temperatures would rise by 34°C over northwest India, Gujarat, Madhya Pradesh and Maharashtra during next 3 days.
- Maximum temperatures would rise by 24°C over plains of northwest India and adjoining central India during next 3 days.

Weather Outlook (upto 1430 hours IST of 15th February, 2011)

- Fairly widespread rain/snowfall with isolated heavy falls would occur over western Himalayan region.
- Scattered rain/thundershowers with isolated hailstorm/thundersqualls would occur over Punjab, Rajasthan, Haryana, Delhi and West Uttar Pradesh.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Weather remained mainly dry during last week in the States of the region.
- **Rainfall Forecast:** Rain is likely to occur at a few places over Sub Himalayan West Bengal and Sikkim during next 24 hours and decrease thereafter. Dry weather is likely to prevail during the period over the remaining States of the region.
- **Major Crops:**
 - Tobacco (harvesting), gram (pod formation / grain formation), mustard and sarson (pod formation / seed formation), wheat (tillering / ear head emergence), maize (vegetative / tasseling / silking), potato (tuber formation), vegetables like cauliflower, cabbage (head formation / maturity), chillies, tomato (vegetative / flowering / fruiting / harvesting), palak, carrot, radish etc. (vegetative / harvesting), knoll khol, turnip, beet, garlic, onion etc. (vegetative), barseem, lucerne, oat (vegetative), coriander, fenugreek (vegetative), sugarcane (planting), *boro* rice (transplanting / early tillering), summer vegetables like bhindi, bitter gourd, sponge gourd, pumpkin, cucumber etc. (sowing) in Bihar.
 - Arhar and green pea (pod formation / seed formation), wheat (tillering / ear head emergence), potato (tuber formation / early maturity), *toria*, mustard (pod formation / early maturity), pea, lentil and gram (pod formation / grain filling), onion (vegetative), tomato (flowering / fruiting / harvesting), cabbage and cauliflower (head formation / harvesting), chilli and brinjal (transplanting / early vegetative), summer rice (transplanting / early tillering), summer vegetables (sowing / transplanting / germination), mango and litchi (flowering) in Jharkhand.
 - Cotton (maturity / picking), *boro* rice (transplanting / early tillering), maize (sowing / vegetative), green gram, groundnut, garlic, sesame, sunflower (sowing), ragi (transplanting), *rabi* vegetables (flowering / fruiting / harvesting), *rabi* oilseeds like groundnut, mustard and sunflower (pod formation / seed formation / early maturity), arhar (pod formation / grain formation), wheat (tillering / flowering), potato (tuber formation), *rabi* pulses like gram, lentil, field pea and chickpea (pod formation / seed formation) and sugarcane (harvesting) in Orissa.
 - *Boro* rice (transplanting / early tillering), wheat (tillering / ear head emergence), arhar (pod formation), mustard (pod development / seed development), potato (tuber formation / early maturity), lentil, pea, Bengal gram (pod formation / seed formation), *rabi* vegetables like cabbage and cauliflower (head formation / harvesting), groundnut, sesame, sunflower (sowing), summer vegetables like ladies finger, *Kakrol*, amaranthus (sowing) in West Bengal.
 - Large cardamom (vegetative lag phase), orange (end harvesting), wheat (tillering / active tillering / flowering), *rabi* potato (tuberization), ginger (harvesting), *rabi* vegetables (vegetative / flowering / fruiting / harvesting), mustard (siliqua formation / seed formation / seed maturity) in Sikkim.
- **Advisories:**
 - 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 irrigation to pulses like lentil, gram, arhar etc., mustard, *rabi* vegetables and also to wheat at tillering stage and light and frequent irrigation to potato.
 - In Orissa, undertake transplanting of rice seedlings. Also undertake transplanting of ragi. The weather is also optimum land preparation and sowing of summer groundnut and sunflower.
 - Prepare the field and undertake sowing of summer vegetable crops like bhindi, bitter gourd, sponge gourd, pumpkin, cucumber etc. and also undertake transplanting the seedlings of *boro* rice in main field in North West Alluvial Plain Zone and South Bihar Alluvial Zone in Bihar. Also prepare land for spring season sugarcane and summer vegetable in North East Alluvial Zone of Bihar.
 - Farmers in West Bengal are advised to undertake field preparation for sowing of groundnut, sesame and sunflower and also planting of Gladiolus.
 - Farmers are advised to undertake transplanting of *boro* rice in Jharkhand and West Bengal.
 - Prepare the field and undertake sowing of summer vegetable crops like long gourd, round gourd, ridge gourd, bitter gourd, sponge gourd, cucumber, water melon and musk melon, *okra*, brinjal and shimla mirch in Jharkhand.
 - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure I.
 - Due to sudden rise of temperature, aphid infestation may be high in mustard crop in New Alluvial zone of West Bengal. Apply 1.5 ml Metasystox / Rogor per litre of water to control the pest. Sudden increase

in temperature may also increase infestation of mango hopper in mango in this zone; apply 2 g Carbaril or 1.5 g Monocrotophos per litre of water for mango hopper.

- There is possibility of infestation of late blight in potato in Central & North Eastern Plateau Zone of Bihar; apply Krilaksil or Ridomil MZ @ 1.5 g / liter of water.
- Increased temperature may favour the egg laying of stem borer in rice in the main field in Puri district of Orissa. To attract the butterflies, place 4 Pheromone traps / acre; collect the adults and destroy them by burying under soil or by burning. Increased difference between daily maximum and minimum temperature favours the infestation of blast in main field as well as nursery of rice. Spray 1 g Beam in one litre water.
- Cold and foggy weather may favour attack of powdery mildew in Western Undulating Zone of Orissa; spray wettable Sulphur @ 5 g / litre of water or Carbendazim @ 2 g / litre of water.
- Present weather may favour the infestation of aphids in Dolichos bean, radish and cole crops and powdery mildew in cucurbits in Ganjam district Orissa; farmers are advised to apply appropriate plant protection measures.
- The current weather is favourable for infestation of thrips and aphids in Kendrapara district of Orissa. Apply 10 Kg of 2% Methyl Parathion dust around the bund and spray 400 ml Dimethoate or 50 ml Imidachloprid in 200 litres of water / acre.
- Cloudy weather may favour the infestation of saw fly, leaf webber and aphids in mustard in Khurda district of Orissa; spray 400 ml Endosulphan / acre for saw fly, 200 ml Ithofenprox or Deltamethrin per acre for leaf webber and 400 ml Dimethoate or Methyl demeton or 50 ml Imidachloprid in 200 litres of water for aphids.
- **Animal Husbandry**
- Under present weather condition, calves may be affected by pneumonia (CCPP). Consult veterinarian for vaccination in South Eastern Plateau Zone of Jharkhand. Protect goats, lambs and calves from cold weather and take preventive measures to control pneumonia (CCPP) disease through vaccination in Central & North Eastern Plateau Zone of Bihar.
- As the temperature is rising continuously, weather conditions are favourable for growth of fishes. Add cow dung and lime in the pond for natural foods and alternative feeds may also be used like rice bran and mustard cake (each of 5 kg per day per acre area of pond) in Western Plateau Zone of Bihar.

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

- **Realised Rainfall:** No significant rainfall occurred during last week in most of the districts of the States of the region.
- **Rainfall Forecast:** Isolated rain will occur or mainly dry weather will prevail over the States of the region during the period.
- **Major Crops:**
 - Cole crops like cauliflower and cabbage (head formation / maturity / harvesting), sugarcane (cane development), potato (maturity / harvesting), rapeseed & mustard (pod filling / maturity / harvesting), *boro* rice (transplanting / tillering), wheat (tillering / heading) and early *ahu* rice (sowing) in Assam.
 - Tomato (fruiting / maturity / harvesting), pea (pod formation / maturity), maize (vegetative) and potato (vegetative / tuber formation / maturity), mustard (siliqua formation) and orange (maturity) in Arunachal Pradesh.
 - *Toria*, lentil (pod formation), *rabi* vegetables (flowering / fruiting / harvesting) and *boro* rice (transplanting / early tillering) in Tripura.
 - *Boro* rice (seedling / transplanting), *rabi* vegetables (vegetative / flowering / fruiting / harvesting), rapeseed and mustard (pod filling stage), *rabi* maize (vegetative), *rabi* maize at medium and low altitudes (harvesting), wheat (tillering), winter potato (tuber initiation / tuber formation), winter potato at high altitude (harvesting) and summer vegetables (sowing) in Meghalaya.
 - Rice (sowing), *rabi* maize (sowing), mustard and rapeseed (pod formation), field pea (vegetative / flowering), onion (vegetative / bulb formation), cauliflower and cabbage (harvesting), tomato (transplanting) and potato (tuber formation) in Manipur.
 - Khasi Mandarin (vegetative), banana (vegetative / fruiting / maturity), onion (vegetative), pea (pod formation / maturity / harvesting), beans (flowering / pod formation / harvesting), carrot and radish

(harvesting), tomato, chilli and capsicum (flowering / fruiting / harvesting), cole crops (vegetative / head formation), ginger, turmeric (harvesting) and maize (cob formation / maturity) in Mizoram.

- Potato (tuber formation), pea (fruiting to harvesting), mustard (pod formation), *toria* (pod formation / maturity) and papaya (fruiting) in Nagaland.

- **Advisory:**

- As there was no significant rainfall in the region during last couple of weeks and no significant rain is likely to occur, farmers are advised to apply irrigation to the standing crops. Undertake intercultural operations, application of fertilizers and pesticides taking the advantage of dry weather conditions prevailing during these days.
- Apply irrigation to *rabi* pulses, potato, cole crop, *rabi* vegetables and also to wheat at tillering and heading stage in Assam. Weeding and top dressing of urea in wheat should precede irrigation.
- As dry weather is likely to prevail, undertake harvesting of potato and rapeseed and mustard in Assam during this week.
- Farmers in Assam, Tripura and Manipur are advised to transplant the seedlings of *boro* rice.
- Light and frequent irrigation is required to keep the soil moist during the vegetative phase of onion in Manipur. Frequent irrigation should also be continued at bulb formation stage of onion.
- Taking the advantage of prevailing dry weather condition, weeding, top dressing and earthing up may be carried out in *rabi* maize, winter potato and tomato in Ri-bhoi, East Khasi and South Garo Districts of Meghalaya. As there is no possibility of rain, light irrigation may be given immediately in wheat crop.
- Due to reduced moisture, condition is favourable for cracking in banana and tomato in Mizoram. The cracking may be minimized by proper mulching and nutrient management especially with application of boron.
- As the weather condition is congenial for the growth of blister blight disease in tea plants in Assam, farmers are advised to spray Hexaconazol @ 100 ml per 100 litres of water or Copper Oxychloride @ 500 g per 100 litres of water in lower surface of the leaves when 1-2 blisters are observed.
- Fluctuation of temperature from low to high with foggy weather at morning and evening and low night temperatures are the most favourable for the incidence of late blight in tomato and chilli crops in Mizoram. Farmers are advised to spray Mancozeb @ 1 g per litre of water at 10-15 days intervals when disease appears.
- Incidence of late blight is noticed in winter potato in Meghalaya. To control late blight in potato, spraying of Indofil-M-45 @ 2 - 3 g / litre of water or Ridomil-Z-78 @ 2 - 3 g / litre of water may be done at the interval of 15-20 days.
- Late blight on potato and tomato may spread due to light rains followed by cloudy sky, low night temperature in Arunachal Pradesh; Spraying of Redomil (3 g / litre of water), Bavistin (1 g per litre of water) etc., keeping the nozzle in upright position, is recommended.
- Farmers are advised for proper monitoring for blight of potato as the prevailing weather condition is conducive for the infestation.
- **Animal Husbandry:**
- In present weather conditions provide proper lighting to keep chicks warm and also provide lukewarm water fortified with Vitamin B complex in Arunachal Pradesh. Warm clean drinking water should also be ensured to the cattle round the clock and water troughs/feeders should be regularly cleaned. Avoid dampness in the shed and put animals in the sunshine during the morning hours.
- In Mizoram, pigs need housing to keep them warm to avoid scorching cold temperature.
- In Nagaland, the prevailing temperature is too cool for the suckling pigs; it requires a temperature around 33°C; therefore, farmers are advised to use different means to keep the suckling pigs warm.

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

- **Realised Rainfall:** Rain occurred in most of the districts of Himachal Pradesh and Jammu and Kashmir, few districts of Punjab and Uttarakhand during last week. Weather remained dry in remaining States of the region.
- **Rainfall Forecast:** Rainfall is likely at a few places after 24 hours in Jammu & Kashmir and at many places thereafter. Rainfall is likely at isolated places during next 48 hours in Himachal Pradesh and at a few places

thereafter. Isolated rainfall is likely after 24 hours in Uttarakhand and at a few places thereafter. Either mainly dry/dry weather will prevail over the remaining States.

- **Major Crops:**

- Wheat (flag leaf / flowering), mustard, pea and gram (pod formation), broccoli, cauliflower, cabbage and onion (early vegetative / vegetative), tomato, chilli, brinjal & cucurbits crops (nursery) and lentil (pod formation) in Delhi.
- Wheat (tillering / flowering), potato (vegetative / tuber initiation / tuber formation), vegetables (flowering / fruiting / harvesting), garlic (planting) in Himachal Pradesh.
- Gram (flowering), berseem (vegetative), oats (flowering), wheat, barley (tillering / jointing / flag leaf stage), very late sown wheat (CRI stage), lentil (vegetative), field pea (flowering), toria (maturity / harvesting), mustard (pod formation), late sown mustard (pod formation / flowering), vegetable crops like tomato, chilli, brinjal, cucurbits (vegetative / flowering), onion (vegetative), cauliflower, cabbage, carrot (fruiting) in Jammu & Kashmir.
- Sugarcane (maturity / harvesting), wheat (tillering / flag leaf /ear head emergence stage), potato (tuber initiation / maturity / harvesting), toria (maturity / harvesting), mustard, chickpea (flowering / pod formation), barley (tillering), garlic, seasonal vegetables (vegetative / flowering), onion (vegetative), pea (harvesting), chilli, tomato (sowing / transplanting), lahi (flowering / fruiting) in Uttarakhand.
- Sugarcane (maturity/harvesting), berseem (vegetative), wheat (tillering), barley (heading), lentil, gram (branching), raya, African sarson (flowering/pod formation), radish (vegetative), ghobi sarson (vegetative), oilseeds (flowering), papaya, onion (transplanting), vegetables (sowing) in Punjab.
- Sugarcane (harvesting), wheat (tillering/ flowering), berseem (vegetative), gram, rapeseed, mustard (pod formation / seed formation) in Haryana.
- Wheat (tillering / flag leaf), barley, oats (vegetative / tillering), *toria* (flowering / pod formation), mustard, sarson (flowering / pod formation), potato (vegetative / tuber formation), field pea, chick pea, lentil, linseed (late vegetative / flowering), winter sugarcane (vegetative), winter vegetables like carrot, garlic, onion (vegetative), tomato, brinjal (flowering / fruiting), cabbage, cauliflower (flowering / fruiting / maturity), vegetable pea (flowering / pod formation) etc. in Uttar Pradesh.
- Sugarcane (maturity / harvesting), winter sugarcane (initial growth), wheat (tillering / jointing), oats, barley (tillering), taramira (flowering / pod formation), mustard (flowering / pod formation / maturity (in Jodhpur), gram (flowering / pod formation), lentil (vegetative / flowering), ajwain, fenugreek and isabgol (vegetative), potato (tuberization), cabbage, cauliflower (late vegetative / head formation), tomato (flowering/ fruiting) in Rajasthan.

- **Advisory:**

- In Gurdaspur and Hoshiarpur divisions of Punjab, due to low temperature standing *rabi* crops suffered from cold injury; farmers are advised to apply light irrigation by sprinklers in vegetables particularly in brinjal, tomato, chillies and early sown cucurbits to protect against cold injury. Farmers are also advised to thatch and apply mulch in basins of young plantations of fruit crops i.e. papaya with sarkanda / dry grasses / polythene / paddy straw etc. and give light irrigation in big plants for protection against cold injury. Farmers in Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh are advised to protect the nurseries of vegetables and forest plants by covering nursery with polythene sheet from cold injury in lower regions.
- Farmers in Jammu & Kashmir are advised to go for nursery sowing of tomato, chillies, brinjal, cauliflower, cabbage, knoll-khol, kale, sowing of bhendi and leafy vegetables like spinach and methi (in poly house). In low laying areas, it is advised to drain out excess water from the field of mustard.
- In Himachal Pradesh, farmers are advised to start nursery sowing of cauliflower, cabbage, capsicum, lettuce etc. for early planting in open field and planting the winter fruit plants viz. walnut, almonds, plum, peach persimmon, pear and kiwi.
- In sub-montane & Low Hills sub-tropical zone of Himachal Pradesh, sowing of potato may be taken up as good rains are expected in mid hills and lower regions. As good rainfall received in last week in Mid-hills sub-humid zone of Himachal Pradesh, may be utilized for preparation of field, sowing of crops and vegetables and preparation of basins in the orchards.
- Farmers in Bhabar and Terai Zone (Nainital and Udamsingh Nagar districts) of Uttarakhand are advised to undertake nursery sowing of tomato, brinjal and capsicum and harvesting of pods of vegetable pea. Due to prevailing low night temperature, farmers are advised to cover the small plants of mango, guava

and litchi with straw material to save from cold injury. Farmers in Hill zone (Ranichouri) are also advised to prepare land for sowing of potato and tomato.

- Farmers in Bhabar and Terai Zone of Uttarakhand are advised to undertake harvesting of main sugarcane during this week and spread a layer of trash in the field due to prevailing low minimum temperature.
- Farmers in Delhi are advised to undertake preparation of nursery for cucurbitaceous vegetables, chilli, tomato and brinjal, sowing of spinach, coriander, fenugreek and bhendi, transplanting of tomato, chilli and cole crops. They are also advised to undertake intercultural operations in cole crops, carrot, radish, turnip and sweet potato.
- Farmers in Rajasthan are advised to raise nursery of brinjal, chilli (Jaipur division), summer tomato (Udaipur division) and also start sowing of summer Okhra and cucurbits (Jaipur division). In Barmer district of Jodhpur division, farmers are advised to undertake harvesting of matured crop of mustard.
- Farmers in Kanpur and Bharari division of Uttar Pradesh are advised to spray the solution of 5 kg Zinc Sulphate and 16 kg Urea in 800 litre of water, if Zinc deficiency is seen. Farmers are also advised to undertake sowing of recommended varieties of lady finger and gourd.
- In Sub Humid Southern Plain and Aravali Hill Zone (Udaipur) of Rajasthan, there is possibility of incidence of aphid infestation in late sown mustard. Farmers are advised to spray Endosulphan 35 EC @ 1.25 l/ha for the control of aphids.
- Weather is congenial for incidence of Alternaria blight, white rust, yellow rust, powdery mildew in Bhabar and Terai Zone of Uttarakhand. If symptoms of the disease is observed, farmers are advised to spray Preproconazol 25 EC @ 200 ml in 400 liters of water per acre. If necessary spray it again after an interval of 10 days. Also under these weather conditions, there are chances of loose smut disease in wheat at ear head emergence stage. Farmers are advised to remove those plants bearing such ear heads from the ground and burn or dump it in the soil.
- In Jodhpur division of Rajasthan, Jhulsa and Chhachaya disease in cumin is noticed, to control the disease farmers are advised to spray the solution of Mancozeb @ 2 gm and soluble Sulphur @ 2 gm per litre of water.
- Weather conditions are favourable for the incidence of yellow rust and aphid in wheat in undulating plain zone (Gurdaspur & Hoshiarpur districts) of Punjab. Farmers are advised to monitor for the symptoms of yellow rust. Spray Propiconazole 25 EC @ 200ml in 200 liter water/acre.
- In Sub-tropical zone of Jammu & Kashmir, weather condition is favorable for incidence of white rust and downey mildew in mustard, cabbage butter fly in cabbage and increase of aphid population in cole crop, farmers are advised to spray the mustard with macozeb @ 0.2% or copper oxychloride @ 0.3%. Collect and destroy egg masses and caterpillars of cabbage butterfly in gregarious phase and spray the cole crops with Endosulfan @ 0.07% during clear weather to control aphids.

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

- **Realised Rainfall:** Mainly dry weather prevailed during last week in the States of the region.
- **Rainfall Forecast:** Dry or mainly dry weather is likely to prevail during the next three days over the region except Tamil Nadu and Kerala where rainfall is likely to occur at isolated places.
- **Major Crops:**
 - Vegetables (vegetative / flowering), rice (tillering) in Kerala. This is proper time for sowing of *puncha* rice in the nursery
 - Rice (maturity), pulses (pod initiation / development), groundnut (late vegetative), cotton (boll development), sugarcane (vegetative) in Tamil Nadu.
 - Bengal gram (pod development to maturity), rice (tillering), red gram (pod formation), sunflower (flowering / seed development), groundnut (pegging / pod development) in Andhra Pradesh.
 - Sugarcane (ratooning), mango (flowering), pigeon pea (harvesting), bengal gram (Pod formation stage/maturity) bitter gourd (fruiting), cotton (square to boll formation/harvesting), sunflower (flowering to head filling), safflower (Seed filling), wheat (Ear head filling/Grain formation stage), jowar (Grain milking stage) in Karnataka.
- **Advisories:**
 - As there was no significant rainfall in the region, farmers are advised to apply irrigation to the standing crops.

- Rubber plants in Southern Zone of Kerala experience drought situation. Farmers are advised to stop tapping of rubber and undertake soil moisture conservation measures.
- Farmers of North Dry Zone of Karnataka are advised to undertake intercultural operations in the field and horticultural crops and harvest the matured sorghum, chickpea and wheat.
- This is proper time for sowing / transplanting the vegetables in the Problem Area zone of Kerala. Generally it is recommended to add compost or cow-dung while preparing the land for vegetable cultivation.
- Since there is no rainfall, farmers of Coastal Zone of Karnataka, can take up harvesting of pulse crops like green gram, black gram, cow pea etc.
- Due to dry weather that may prevail in next three days, farmers in Southern Dry Zone of Karnataka are advised to apply irrigation to the dry land horticultural crops and other field crops depending on soil and crop condition.
- In Scarce Rainfall Zone of Rayalaseema of Andhra Pradesh, dry weather prevailing since last month were favourable for the incidence of sucking pests in groundnut especially thrips. To control, spray acephate @ 1.5g **or** acetamiprid @0.2 g per litre of water and to control leaf miner spray Monocrotophos @ 1.6 ml **or** Chlorpyrifos@2.0 ml per litre of water.
- In the Southern Telangana Zone, prevailing weather conditions are congenial for the incidence of blast in rice. To control spray Tricyclazole @ 0.6 g per litre of water, followed by application of urea as top dressing.
- In the Problem Area zone of Kerala due to the prevailing climatic condition there is chance of sheath blight occurrence in the fields where the plant population is high. The farmers are advised to remove the severely affected plants in order to provide air circulation into the crop canopy and there by reduce the spread of the disease to the nearby plants.
- In the Southern Area zone of Kerala, the prevailing weather conditions favour the incidence of viral diseases on vegetables. Sticky yellow traps can be used in the fields to trap white flies which is a vector of viral diseases.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised rainfall:** Weather remained dry in the States of the region during last week.
- **Rainfall forecast:** Dry weather is likely to prevail over the States of the region during the period.
- **Major Crops:**
 - Summer rice (seedling / transplanting/ early tillering in Konkan and East Vidarbha), Jowar (maturity / harvesting), *rabi* gram (pod development / pod maturity), safflower (flowering / seed formation), maize (silking and tasseling / cob initiation), sunflower (flowering / head formation), irrigated wheat (flowering / milk), sugarcane (*Adsali*) (active tillering), sugarcane-pre seasonal (early vegetative), sugar cane-*Suru* (planting), summer groundnut (germination / early vegetative in Konkan & sowing in other Divisions) in Maharashtra.
 - Mustard (seed formation), pigeon pea (pod development / seed formation / early maturity), gram (pod development), potato (tuber development), brinjal and tomato (flowering / fruiting / harvesting), *rabi* fennel (flowering / seed formation), cumin (flowering / seed formation), early sown wheat and timely sown wheat (flag leaf initiation / milk), late sown wheat (tillering), isabgol (tillering / flowering / grain formation), sugarcane (sprouting / early vegetative) in Gujarat.
- **Advisory:**
 - As dry weather prevailed during last few weeks and is likely to prevail during the period, farmers are advised to apply irrigation to the standing crops.
 - Taking the advantage of prevailing favourable weather, farmers are advised to undertake planting of watermelon and sowing of summer seasmum in Central Vidarbha Zone, sowing of summer ladies finger in Pune division and central Vidharbha region, sowing of vegetables like tomato, brinjal, ridge gourd and bitter gourd in Pune division and sowing of fodder maize and jowar in Eastern Vidarbha region of Maharashtra.
 - Taking the advantage of dry weather, farmers are advised to continue harvesting of the already matured jowar & gram in Maharashtra.
 - Taking the advantage of prevailing weather, farmers are advised to carry out land preparation and undertake sowing of summer groundnut in north Gujarat and north Saurashtra region and *kharif* pulses in south Gujarat heavy rainfall zone.

- As dry condition prevailed during last few weeks and is likely to prevail, farmers in Gujarat state are advised to irrigate pigeon pea, wheat, cumin, gram, mustard, banana and vegetable crops etc. Also undertake intercultural operations before applying irrigation.
- The suitable varieties of different crops are mentioned in Annexure I.
- Due to cold weather there may be occurrence of recurrent flowering in mango in South Konkan region of Maharashtra; sprayings of Gibberlic acid @ 50 ppm at flowering stage and mustard stage of fruit formation may be done twice. There may also be incidence of anthracnose on new vegetative flush and inflorescence of mango; spray Carbendazim @ 10 g or Thiophenate methyl @10 g or Propineb @ 20 g per 10 liters of water.
- Prevailing weather is favourable for attack of rust in wheat in Central Vidarbha Zone of Maharashtra; spray Mancozeb @ 25 g in 10 liters water.
- There is attack of aphids in safflower in Pune division; spray Dimethoate 30% @10 ml or Endosulfan 35% @ 10 ml in 10 liters water.
- Weather conditions are favourable for infestation of late blight in potato and outbreak of aphids in mustard in north Gujarat region. To control late blight spray Metalaxil M Z (Redomel gold) @ 20 g in 10 liters of water and to control aphids dust the Methyle parathion 2% or Quinalphos 1.5% powder @ 25 kg / ha during morning when wind velocity is less.
- Weather is congenial for blight disease in tomato and cumin crop in north Gujarat region. Spray 0.25% Mancozeb @ 30 g in 10 litres of water with 10 g *desi* soap solution to control the disease.
- Infestation of pod fly crossed ETL in North Sourashtra Zone of Gujarat state. Farmers are advised to spray Endosulphan 35 EC @ 20 ml / 10 litres of water Solution.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Weather remained dry during last week in the region.
- **Rainfall Forecast:** Dry weather is likely to prevail over the region.
- **Major Crops:**
 - Wheat (flowering), mustard (seed development), chickpea (pod formation), pigeon pea (pod formation), sugarcane (planting), cotton (boll formation), Maize (milking/ dough), onion (nursery preparation), Gram/Linseed (fruiting) in Madhya Pradesh.
 - Pigeon pea (pod development), gram (pod formation / development), wheat (tillering/ panicle initiation), mustard (pod formation), sunflower (sowing), sugarcane (vegetative) in Chattisgarh.
- **Advisory:**
 - Taking the advantage of dry weather, farmers are advised to undertake intercultural operations in the early sown crops to keep the fields weed free and apply irrigation to the standing crops as there is chance of increase in temperature.
 - Farmers in Jhabua Hill Zone are advised to prepare nursery for summer onion and sowing of okra. Also farmers in Nimar Valley Zone are advised to plant sugarcane.
 - Farmers in Nimar, Central Narmada Valley and Gird Zones in Madhya Pradesh are advised to continue sowing of cucurbitaceous vegetables, watermelon and muskmelon. Also farmers in Kymore Plateau Zone are advised to raise nursery for late sown cabbage, cauliflower and transplant the matured seedlings in main field.
 - As there are chances of dry weather conditions and increase in maximum temperature by 2-3 °C during the next five days, farmers in Bundelkhand Zone are advised to transplant tomato, chilly and sow cucurbit crops in the field.
 - Farmers in Chattisgarh Plain Zone are advised for sowing of cucurbitaceous crop in the poly bags. And also sowing of leafy vegetables and land preparation for the summer vegetable and complete sowing of sunflower as early as possible. Also farmers in Northern Hill Zone are advised to raise nursery for onion and prepare land for planting of sugarcane.
 - Farmers in Bastar Plateau Zone in Chattisgarh are advised to prepare nursery for late sown *rabi* vegetables and farmers in Chattisgarh Plain Zone are advised to sow cucurbitaceous and leafy vegetables and preparation of land for the summer vegetables.
 - Weather is congenial for early blight in potato, leaf curl and *Alternaria* blight in tomato, leaf miner and pod borer in pea in Budelkhand Zone in Madhya Pradesh; farmers are advised to spray Mancozeb @ 2.5 ml per liter of water to control early blight and Imidacloprid @ 0.5 ml per liter of water for leaf curl,

Mencozeb @ 2.5 ml per liter of water for *Alternaria* blight and Melathion 50 E.C. @ 1.0 ml per litre of water for leaf minor and pod borer.

- In Powerkheda region of Madhya Pradesh, spray Phorate 10G 3.0 KG per acre as wheat crop is infected by Mahu and also infected by Dimak, spray Clorpyrifos 20 EC in 1 lit after irrigation.
- As there are chances of dry weather conditions and 2°C increase in minimum temperature during the next 5 days in Bundelkhand Zone in Madhya Pradesh, farmers are advised to monitor mustard, lentil and kusum crops against attack of aphids. If noticed, it is advised to spray Methyl Demeton 25 E.C. or Dimethoate 30 E.C. @ 2.0 ml. per liter of water. Also there is attack of leaf curl in tomato and chilly crops, farmers are advised to spray Methyl Demeton 25 E.C. @ 2.0 ml. or Emidachloprid @ 0.5 ml. per litre of water.
- As there are chances of rise in temperature in coming days in Kymore Plateau Zone, farmers are advised to monitor chickpea for pod borer incidences. If caterpillars are more than 2 or 3 in per meter row length spray 10% of the neem leaves extract, spray Chlorpyrifos 20 EC or Indosulfan 35 EC per liter @ 500 litre of water.

Animal Husbandry & Poultry

- In Malwa Plateau Zone in Madhya Pradesh, farmers are advised to insure vaccination to protect animals from infections/diseases like Black Quarter and FMD etc. And also provide the animals clean water, balanced and nutrients rich food.
- As there are chances of clear sky conditions during next 5 days in Bundelkhand Zone of Madhya Pradesh, hence sheep raiser are advised to do medicine bath in sunny condition to control parasites. There is possibility of decrease in disease resistance in chicken; therefore antibiotic may be added in their feed. In present weather conditions, it is advised to provide dry fodder mix with the *barseem* to milking animals.

Annexure I List of Varieties

Bihar

Bhindi: Parvani Kranti, Arka Abhay, Arka Anamika, KS 312 and hybrid varieties such as Bhawani, Krishna, Lam Hybrid, Hybrid 6, Hybrid 8, Indranil.

Orissa

Summer maize: Dhabal and Navjot and Hybrid varieties like Decca, Ganga, Deccan 105, Kargil 900-M, PRO 345, Kargil 633.

Summer groundnut: Smruti (OG 52-1), Phule Pragati, ICGS-44, TAG-24, TG-3, TMV-2 and TG 38.

Summer Sunflower: High Yielding Variety like Modern and Hybrid Varieties like PAC 36, KBSH, MSFH-8 and MSFH 17.

Sesame: Uma, Kalika, Nirmala, Prachi and Usha.

West Bengal

Sunflower : Morden, Surya (90-95 days duration), Pack 36 (hybrid variety, 104 days duration), KBSH (90-95 days duration).

Green gram: TM-99-50, PDM-11, TARM-1, 2, Samrat.

Sesame : Tilotamma, Rama.

Groundnut: JL-24, J-11, AKG-12-24.

Jharkhand

Summer Rice: IR 36, 64, Naveen, Lallat, Taichung Native.

Assam

Ahu Rice: High yielding tall varieties like Banglami, Dubaichenga, Rangadaria (115-120 days), Ahujoha (110-120 days) and short duration varieties like Dogaranga (85-95days) etc.

Jammu & Kashmir

Tomato : Pusa ruby & Pb. Chuhara

Chillies : NP-46A & Pusa Ruby

Brinjal : PPL, PPG, PPR & PK

Bhindi : pusa sawani

Delhi

Spinach: Jyoti

Coriander: Pant Haritma

Fenugreek: PEB, AM-1

Ladies finger: A-5 and Parvani Kranti

Uttar Pradesh

Sunflower : Modern KBSH-1

Lady Finger : VRO-6, 5, IIVR-10

Gourd : Swarna Purna, Swarna Sweta, Swarna Ageti and hybrid varieties like Aman and Priya.

Uttarakhand

Brinjal: Pant Samrat, Pant Rituraj, Pant Brinjal-4, ARU-1

Potato : Kufri Jyoti, Kufri Ashok & Kufri Anand

Gujarat

Summer groundnut: G.G.-2 or G.G. 20 for north Gujarat and GG6, TG37A, TGP41 for north Saurashtra region.

Maharashtra

Water Melon: Sugar Baby, Arka Manik, Arka Jyoti.

Summer seasmum : AKT-101 and NT-11-99.

Ladies finger: Parbhani Kranti, Phule Utkarsha, Arka Anamika, Arka Abhay for Pune division, Arka Anamika, Parbhani Kranti, Akola Bahar & Phule Utkarsha for central Vidharbha.

Tomato: Dhanshri, Bhagyashri, Phule Raja (hybrid).

Brinjal: Krishna (hybrid).

Ridge gourd: Pusa Nasdar, Konkan Harita, Phule Suteta.

Bitter gourd: Hirkani, Phule Green Gold.

Fodder maize: African Tall.

Fodder jowar: Pusa Chari, MP Chari, SSG898.

Annexure II

Contour maps (Relative humidity, Cloud amount and Wind Speed) for the week ending 09.02.2011

