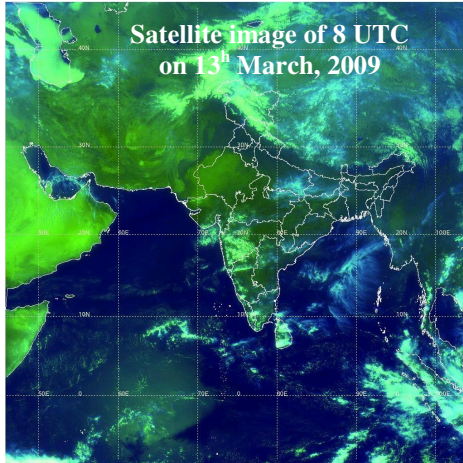




National Agromet Advisory Bulletin

Thursday, 12th March, 2009
(For the period 12th March to 16th March, 2009)



Chief Synoptic Feature (Based on 1430 hours IST observations of 12th March, 2009)

- The minimum temperatures are below normal by 2-3°C over Indo Gangetic plains. However, they are above normal by 2-3°C over central and west India.
- The prevailing meteorological conditions suggest no large change in temperatures scenario during next 2-3 days over northwest and central India.
- There is possibility of isolated thundershowers over Maharashtra, Telengana and Chhattisgarh during 13th to 15th and over east and north eastern states during 16th to 18th March.

Advisories for high temperature

- There are reports of relatively higher temperature than normal in northern and central parts of the country during last few weeks. Under such circumstances there may be a chance of negative impact of high temperature on *rabi* crops particularly on wheat crop in Madhya Pradesh, Chhatisgarh, Bihar, Jharkhand and East Uttar Pradesh.
- Therefore, farmers of the above mentioned States are advised to apply light and frequent irrigation to meet the excess evaporative demands and to avoid adverse impact of high temperature.

Advisories for irrigation

- As there was no significant rain in most of the remaining States of the country except parts of Tamil Nadu during last week and no significant rain is likely to occur for next five days, farmers are advised to apply irrigation to the crops.

Advisories for pest and disease

- Weather conditions are favourable for the incidence of pests and diseases in the following States:
 - aphid in tomato, late mustard and cabbage in Delhi.
 - downy mildew in cruciferous vegetables in Himachal Pradesh.
 - blast and brown spot in *boro* rice in West Bengal.
- Monitor the crops for the pests and diseases and undertake plant protection measures if required.

Issued by

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

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

Comparison of weekly rainfall distribution (in % dep.) in different Met. Sub-divisions during past 5 weeks

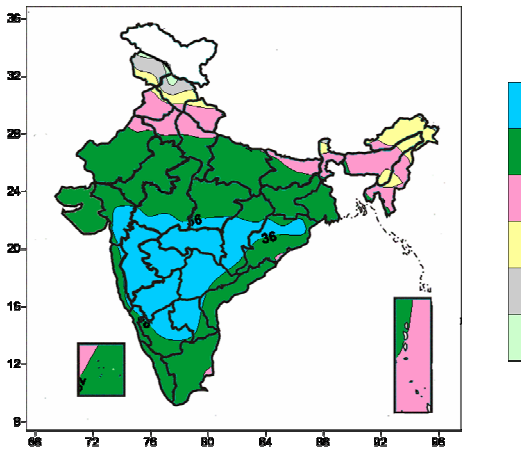
Sub-division	Cumulative Rainfall (% Dep.) for the period				
	11 th February	18 th February	25 th February	4 th March	11 th March
A & N Islands	-49	-100	-100	-27	-72
Arunachal Pradesh	-100	-93	-40	29	-84
Assam and Meghalaya	-100	-96	-21	-45	-85
NMMT	-100	-69	-100	-54	-98
SH West Bengal & Sikkim	-100	-83	-97	-91	-99
Gangetic West Bengal	-100	-70	-100	-100	-90
Orissa	-100	-100	-100	-100	-100
Jharkhand	-100	-100	-100	-100	190
Bihar	-68	-53	-100	-100	-98
East Uttar Pradesh	19	-100	-100	-100	-100
West Uttar Pradesh	-2	-100	-100	-100	-100
Uttarakhand	182	20	-100	-100	-100
Haryana, Chandigarh & Delhi	270	-87	-100	-100	-100
Punjab	29	-32	-99	-100	-100
Himachal Pradesh	167	-79	-50	-99	-97
J & K	-50	-39	-13	-95	-88
West Rajasthan	-96	-39	-100	-100	-100
East Rajasthan	-100	-100	-100	-100	-100
West M. P.	-100	-100	-100	-100	-99
East M. P.	-100	-100	-100	-100	-95
Gujarat region	-100	-100	-100	-100	-100
Saurashtra & Kutch	-100	-100	-100	-100	-100
Konkan and Goa	-100	-100	-100	-100	-100
Madhya Maharashtra	-100	-100	-100	-100	-100
Marathwada	-100	-100	-100	-100	-100
Vidarbha	-100	-100	-100	-100	-100
Chhattisgarh	-100	-100	-100	-100	-100
Coastal A. P.	-100	-100	-100	-100	-99
Telangana	-100	-100	-100	-100	-100
Rayalseema	-100	-100	-100	-100	-100
TamilNadu & Pondicherry	-100	-100	-99	-100	111
Coastal Karnataka	-100	-100	-100	-100	-97
N. I. Karnataka	-100	-100	-100	-100	-99
S. I. Karnataka	-100	-100	-85	-100	-100
Kerala	-100	-65	-100	-99	-34
Lakshadweep	-100	-63	-100	-100	-100

The subdivisions like Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura, West Bengal, Sikkim, Orissa, Bihar, Rajasthan, Madhya Pradesh, Gujarat State, Maharashtra, Chhattisgarh, Andhra Pradesh, Karnataka, Kerala and Lakshadweep Islands received scanty / deficient rain in all the 5 weeks; Arunachal Pradesh, Jharkhand, Uttar Pradesh, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh and Jammu & Kashmir, Tamil Nadu & Pondicherry, received scanty / deficient rain in 4 out of last 5 weeks; Uttarakhand received scanty / deficient rain in 3 out of last 5 weeks.



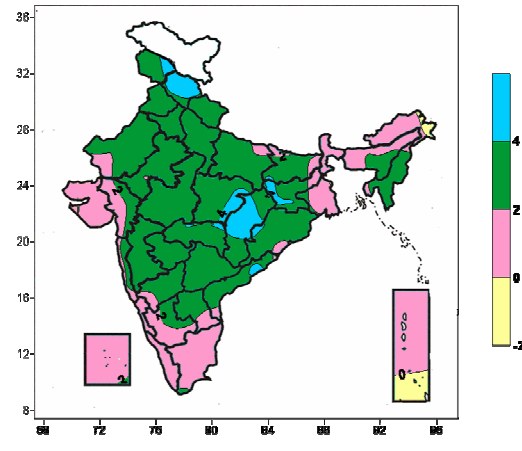
Contour maps for the week ending 11.03.09

Actual Mean Maximum Temperature (°C) in India for the week ending 11.03.09



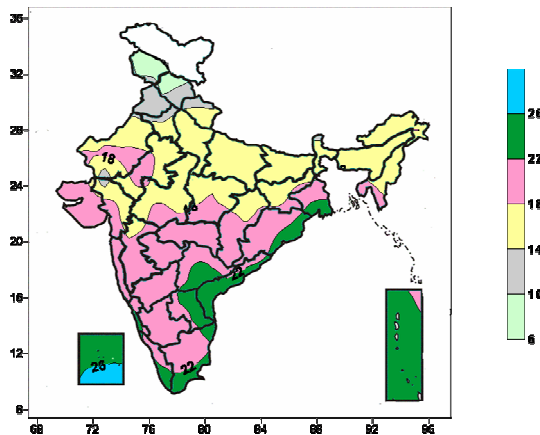
Actual Mean Maximum temperature ranged between 36 to 40°C over most parts of Madhya Maharashtra, Marathwada, Vidarbha, North Interior Karnataka, Telangana, south Chhattisgarh, some parts of Orissa, South Madhya Pradesh, Gujarat, Rayalaseema, South Interior Karnataka, Coastal Karnataka, 28 to 32°C over most parts of Punjab, Haryana, Uttarakhand, Sub Himalayan West Bengal, Assam & Meghalaya, Nagaland, Mizoram, Tripura, Andaman Nicobar Island, some parts of Himachal Pradesh, West Uttar Pradesh, Bihar, Arunachal Pradesh, Lakshadweep, 24 to 28°C over most parts of Arunachal Pradesh, Manipur, some part of Jammu & Kashmir, Punjab, Uttarakhand, Himachal Pradesh, Sikkim, Assam, 20 to 24 °C over some parts of Jammu & Kashmir, Himachal Pradesh, 16 to 20°C over some parts of Jammu & Kashmir, Himachal Pradesh, 32 to 36°C over remaining parts of the Country.

Maximum Temperature (°C) Anomaly in India for the week ending 11.03.09



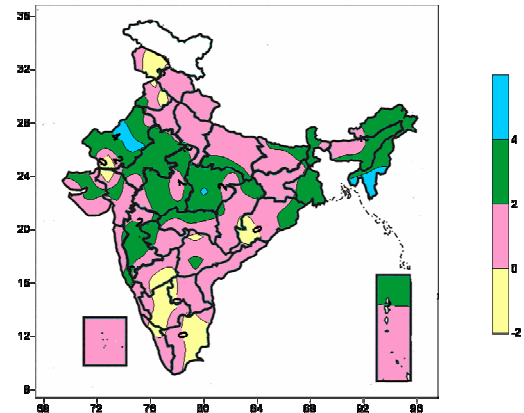
Actual Mean Maximum temperature anomaly ranged between 4 to 6°C over most parts of Himachal Pradesh, some parts of Jammu & Kashmir, Jharkhand, East Madhya Pradesh, Chattisgarh, Coastal Andhra Pradesh, 0 to 2°C over most parts of Saurashtra & Kutch, West Bengal and Sikkim, Arunachal Pradesh, Coastal Karnataka, Kerala, Tamil Nadu, Lakshdweep, Andaman & Nicobar Islands, some parts of West Rajasthan, Gujarat region, East Uttar Pradesh, Bihar, Jharkhand, Assam & Meghalaya, Tripura, Orissa, Konkan & Goa, Interior Karnataka, Coastal Andhra Pradesh, Rayalaseema, -2 to 0°C over some parts of Arunachal Pradesh, Andaman & Nicobar Islands, 2 to 4°C over remaining parts of the country.

Actual Mean Minimum Temperature (°C) in India for the week ending 11.03.09



Actual Mean Minimum Temperature ranged between 26 to 30°C over some parts of Lakshadweep Island, 22 to 26°C over most parts of Andhra Pradesh, Lakshdweep, Andaman & Nicobar Islands, some parts of Gangetic West Bengal, Orissa, Tamil Nadu, Kerala, Coastal Karnataka, 14 to 18°C over most parts of Haryana, New Delhi, Uttar Pradesh, Bihar, Jharkhand, Sub Himalayan West Bengal, North East India, Madhya Pradesh, some parts of Uttarakhand, Rajasthan, Gujarat, Madhya Maharashtra, Chattisgarh, 10 to 14°C over most parts of Punjab, some parts of Jammu & Kashmir, Himachal Pradesh,

Minimum Temperature (°C) Anomaly in India for the week ending 11.03.09

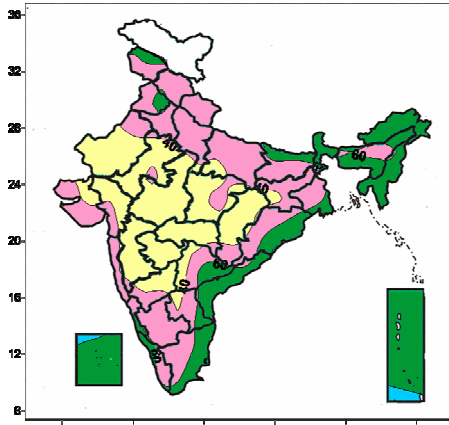


Minimum Temperature anomaly ranged between 4 to 6°C over some parts of West Rajasthan, East Madhya Pradesh, Mizoram, Tripura, 2 to 4°C over most parts of Rajasthan, Madhya Pradesh, West Bengal, Sikkim, North East India, some parts of Punjab, Haryana, Uttar Pradesh, Gujarat, Saurashtra & Kutch, Chhattisgarh, Maharashtra, Orissa, Telangana, Andaman Nicobar Island, -2 to 0°C over some parts of Jammu & Kashmir, Punjab, Rajasthan, Gujarat, Kerala, Tamil Nadu, Orissa, Telangana, Rayalaseema, Interior Karnataka, 0 to 2°C over

Uttarakhand, Haryana, West Rajasthan, Gujarat, 6 to 10°C over some parts of Jammu & Kashmir, Himachal Pradesh, 18 to 22°C over remaining parts of country.

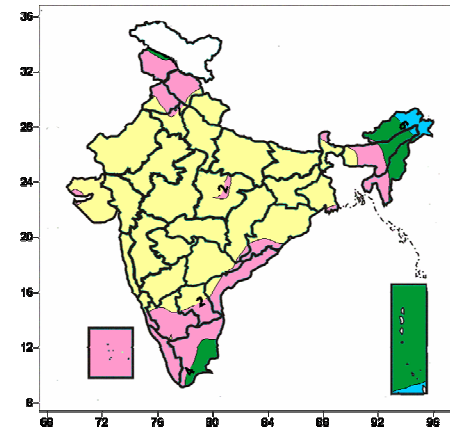
remaining parts of the Country.

Relative Humidity (%) over India for the week ending 11.03.09



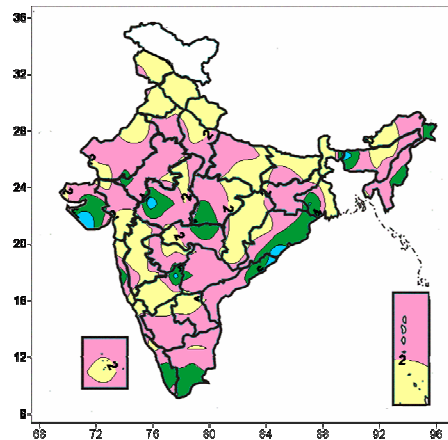
Relative humidity ranged from 80 to 100% over some parts of Lakshadweep, Andaman & Nicobar Islands, 60 to 80% over most parts of Sub-Himalayan West Bengal & Sikkim, North East India, Coastal Orissa, Coastal Andhra Pradesh, Coastal Tamil Nadu, Lakshdweep, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Punjab, Bihar, Gangetic West Bengal, Telangana, Rayalaseema, Kerala, Coastal Karnataka, 20 to 40 % over most parts of Rajasthan, Gujarat, Madhya Pradesh, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, over some parts of Saurashtra & Kutch, Jharkhand, Telangana, Rayalaseema, North Interior Karnataka, 40 to 60% over remaining parts of the country..

Cloud amount (okta) over India for the week ending 11.03.09



Cloud amount ranged from 6 to 8 okta over some parts of Arunachal Pradesh, Andaman Nicobar Island, 4 to 6 okta over most parts North East India, Andaman Nicobar Islands, some parts of Jammu & Kashmir, Tamil Nadu, 2 to 4 okta over most parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Sikkim, Coastal Andhra Pradesh, south Interior Karnataka, Kerala, Tamil Nadu, Lakshadweep, some parts of North East India, West Saurashtra & Kutch, Madhya Pradesh, Chhattisgarh, Orissa, 0 to 2 okta over remaining parts of the country.

Wind speed (knots) over India for the week ending 11.03.09

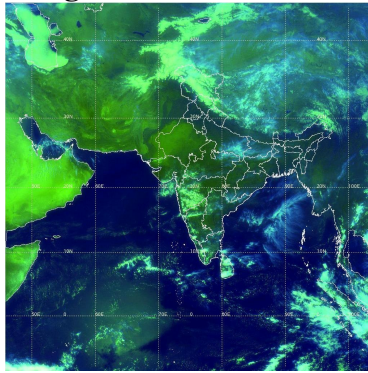


Wind speed ranged between 6 to 8 knots over some parts of Saurashtra & Kutch, West Madhya Pradesh, Assam, Orissa, Coastal Andhra Pradesh, 4 to 6 knots over some parts of West Bengal, Arunachal Pradesh, Assam, Mizoram, Saurashtra & Kutch, Madhya Pradesh, Rajasthan, Coastal Orissa, Coastal Andhra Pradesh, Telengana, Vidarbha, Konkan, North Interior Karnataka, Kerala, Tamil Nadu, 0 to 2 knots over most parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Chattisgarh, Sub-Himalayan West Bengal and Sikkim, Madhya Maharashtra, North Interior Karnataka, some parts of Haryana, Uttar Pradesh, Bihar, Gangetic West Bengal, Assam, Arunachal Pradesh, Rajasthan, Madhya Pradesh, Gujarat, Konkan & Goa, Marathwada, Vidarbha, Orissa, Karnataka, Andaman & Nicobar Islands, & Lakshdweep, 2 to 4 knots over remaining parts of the country.

Chief Synoptic Feature (Based on 1430 hours IST observations of 12th March, 2009)

- The minimum temperatures are below normal by 2-3°C over Indo Gangetic plains. However, they are above normal by 2-3°C over central and west India.
- The prevailing meteorological conditions suggest no large change in temperatures scenario during next 2-3 days over northwest and central India.
- There is possibility of isolated thundershowers over Maharashtra, Telengana and Chhattisgarh during 13th to 15th and over east and north eastern states during 16th to 18th March.

Satellite image of 8 UTC on 13th March, 2009



Zone-wise Forecast (Forecast valid upto 1430 hours IST of 15th March, 2009)

NORTHWEST INDIA [J & K, H. P., UTTARAKHAND, PUNJAB, HARYANA, DELHI, WEST UP]

- Mainly dry weather is likely over the region.

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

- Mainly dry weather is likely over the region.

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

- Mainly dry weather is likely over the region.

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

- Isolated rain/thundershowers are likely over Tamil Nadu, Kerala, Lakshadweep, Karnataka and Andaman & Nicobar Islands.
- Isolated rain/thundershowers are likely over Talengana from 14th March onwards. Mainly dry weather is likely over the rest region.

WEST INDIA [GOA, MAHARASHTRA (OTHER THAN VIDARBHA), GUJARAT, RAJASTHAN]

- Isolated rain/thundershowers are likely over South Konkan Goa, South Madhya Maharashtra and Marathwada from tomorrow onwards. Mainly dry weather is likely over the rest region.

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

- Isolated rain/thundershowers are likely over Vidarbha and south Chhattisgarh from 14th March onwards. Mainly dry weather is likely over the rest region.

Weather Outlook from 1430 IST of 15th March, 2009 to 1430 IST of 17th March, 2009 (Based on numerical weather products):

- Isolated thunderstorm is likely over east and north eastern states.
- Gradual rise in temperatures is likely over northwest, west and central India.

Zonewise Agromet Advisories

NORTH WEST INDIA [J & K, H. P., UTTARAKHAND, PUNJAB, HARYANA, DELHI, WEST UP]

Himachal Pradesh

- **Major Standing crops:** Vegetables (vegetative / flowering / fruiting / harvesting), wheat (flowering / grain formation), barley and oat (flowering / grain formation), oil seeds (pod formation), potato (planting / vegetative / tuber formation), cabbage, cauliflower and broccoli (head formation), pea (flowering / pod formation), leafy vegetables like lettuce, methi, palak, dhania etc. (vegetative).
- As there was no significant rain during last few weeks and mainly dry weather is likely to prevail for next five days over the State and there is also persisting above normal temperature in some parts of the State during last few weeks, apply light and frequent irrigation to the crops.
- For seed crop of oat one cut can be taken. As there is no possibility of rain, apply urea to irrigated crop of oat where first cut has been taken.
- Earthing up can be undertaken in potato crop. It is also optimum time for sowing of potato in mid hills region.
- As there is no possibility of rain, termite affected plots may be treated with 80 ml chloropyriphos mixed with 1 kg of sand for one kanal area of plot.
- Under prevailing weather it is advised for nursery sowing of tomato, chilli, capsicum and brinjal in poly house. Summer squash crop should be raised in poly tubes in the poly houses so that plant may be ready after 15 days for transplanting in the field. The transplanting of onion may be finished within this week. It is optimum time for sowing of raddish (Pusa Himani).
- Weather is congenial for production of white button mushroom in the closed room. Maintain room temperature at 18-22^oC and relative humidity around 85% for successful cultivation.
- Under present weather the training and pruning work of peach, plum and apricot may be completed at the earliest.
- Under prevailing weather condition there is possibility of infestation of powdery mildew. For control of powdery mildew in peas spray Sulfex @ 25 g per 10 litres of water or karathane @ 5 ml per 10 litres of water.
- Weather condition is also congenial for downy mildew in cruciferous vegetables. For control spray Redomil M-Z @ 25 g per litre of water at 15 days interval.
- Do white washing on the stem of the trees of apple with 10 kg Chuna + 100 gm. of Copper oxichloride + 25 liters of water to protect from diseases and direct solar radiation.

Honeybees

- Due to winter season enough flora is not available for bees, therefore farmers are advised to give artificial feed of 50% sugar and 50% water solution to honey bees.
- Also ensure proper packing to the apiary to protect from cold.
- Ensure before packing that weak apiaries should be given artificial food. Insert the brood chamber without frame for ensuring aeration.

Animal Husbandry

- Still the night temperature is low enough to protect the newly born calves in some parts of the State. Pregnant and lactating cows and buffaloes should be given 2 kg feed for their body maintenance and additional 1 kg for developing calves with mineral mixture @ 15-30 g per day. For milch animals 2 kg feed + one kg additional feed per 2.5 kg milk production should be given.

Uttarakhand

- **Major Standing Crops:** Sugarcane (harvesting), wheat (grain formation) and potato (tuber formation / early maturity), mustard, chickpea and lentil (pod formation / early maturity), cabbage, onion, garlic and tomato (vegetative).

- As there was no significant rain during last few weeks and mainly dry weather is likely for next five days over the State and there is also persisting above normal temperature in some parts of the State during last few weeks, apply light and frequent irrigation to the crops to meet the excess demands for evapotranspiration.
- Undertake field preparation and planting of sugarcane with irrigation facilities.
- Undertake harvesting of matured crops of potato, lentil, sugarcane and *toria* as weather conditions are favourable for harvesting of the crops.
- Farmers are advised to undertake field preparation and sowing of sunflower with irrigation facilities. Sow certified seeds of high yielding varieties.
- Farmers are advised to undertake field preparation and sowing of non seasonal pea with improved varieties in high hills.
- As weather is favourable for sowing of moong and urd, undertake sowing of these crops with irrigation facilities.
- Farmers are also advised to undertake sowing of french bean. Ensure proper soil moisture at the time of sowing.
- Details of varieties are given in Annexure I.

Punjab

- **Major Standing Crops:** Horticultural crops (vegetative), spring sugarcane (early vegetative), potato (tuber formation / early maturity), wheat (grain formation), gram and lentil (pod formation), pea and vegetable crops like chilly, tomato, brinjal and onion (early vegetative) and oilseeds (pod formation).
- As there was no significant rain during last few weeks and mainly dry weather is likely for next five days over the State and there is also persisting above normal temperature in some parts of the State during last few weeks, apply light and frequent irrigation to the crops to meet the excess demands for evapotranspiration.
- Farmers are advised to complete sowing of sunflower and transplanting of chilli, tomato, brinjal and onion with irrigation facilities. Undertake sowing of cucurbits in polythene bags for raising early crop.
- Undertake field preparation and planting of sugarcane with irrigation facilities.
- Farmers are advised to undertake field preparation and nursery sowing of bhindi.
- Details of crop varieties are mentioned in Annexure I.
- Farmers are advised to raise nurseries of muskmelon, pumpkin, chillies and capsicum.
- Farmers are advised to undertake planting of deciduous fruit crops like pear, grapes and phalsa. Pruning in grapes may be completed.
- Undertake layering of litchi trees and side grafting of mango for their propagation.
- Give well chopped barseem mixed with wheat straw to avoid aphara (Tympany) in animals.
- **Plant Protection:** Weather conditions are favourable for mild incidences of pod borer attack in gram; spray 400 ml Endosulfan 35 EC or Quinalphos 25 EC or 200 ml Monocrotophos 36 SL in 100 litres water per acre.

Haryana

- **Major Standing Crops:** Spring sugarcane (early vegetative), vegetable crops (early vegetative), wheat (grain formation) and oilseeds (pod formation).
- As there was no significant rain during last few weeks and mainly dry weather is likely for next five days over the State and there is also persisting above normal temperature in some parts of the State during last few weeks, apply light and frequent irrigation to the crops to meet the excess demands for evapotranspiration.
- Prepare the field and continue the planting of sugarcane with early maturing varieties with irrigation facilities.

- Complete sowing of sunflower and berseem.
- Details of crop varieties are mentioned in Annexure I.
- Farmers are advised to prepare the field and continue sowing of cucurbits.
- Complete transplanting of tomato and continue transplanting of onion and chillies.
- Pruning in grapes may be completed.
- Farmers are advised to give the 50grams Iodized salt along with 50 to 100 grams mineral mixture daily to keep calves and adult animals healthy.

Plant Protection: Weather conditions are favourable for mild incidence of

- aphids in mustard and therefore, farmers are advised to monitor the aphid build up and spray the crop with 250 to 400 ml Metasystox 25 EC or Rogor 30 EC per acre as weather is expected to be dry.
- pod borer attack in gram; spray 400 ml Endosulfan 35 EC or Quinolphos 25 EC or 200 ml Monocrotophos 36 SL in 100 litres water per acre.

Delhi

- **Major Standing crops:** Vegetables (vegetative / flowering / fruiting / harvesting), *toria* (maturity), mustard (capsule / seed formation / seed maturity), potato (tuber maturity), gram (pod / grain formation), wheat (flowering / grain formation), *rabi* onion (vegetative).
- As there was no significant rain during last few weeks and mainly dry weather is likely to prevail for next five days over the State and there is also persisting above normal temperature in the State for last few weeks, apply light and frequent irrigation to wheat, vegetables, mustard, gram etc.
- As dry weather is likely to prevail, farmers are advised to continue harvesting of already matured crops of potato, *toria*, mustard etc.
- Farmers are advised to sow the seeds of tomato as the weather condition is favourable.
- As present weather conditions are favourable, farmers are advised for direct sowing of vegetables like ladies finger, bottle gourd, ridge gourd, cucumber etc. and also transplanting of sugarcane.
- Under prevailing weather condition complete sowing of sunflower immediately.
- Prevailing weather condition is conducive for powdery mildew infestation in pea and other pulses. Spraying of Carathene @ 2 g per litre of water (700 litres / ha) is advised where infestation is observed.
- In view of favourable weather conditions for aphid infestation in tomato, late mustard and cabbage, spraying of Confidor (Imidacloprid) @ 0.25 % solution is advised.
- Present weather condition is favourable for infestation of pod borer in gram. Farmers are advised to monitor the crops and use pheromone traps for managing the pest. Under high infestation farmers are advised to spray Endosulfan 0.07% when the population crosses Economic Threshold Level (ETL).
- Farmers are advised for regular monitoring against fungal disease on flower panicle of mango.
- Details of crop varieties are mentioned in Annexure I.

Uttar Pradesh

- **Major Standing crops:** Sugarcane (grand growth / cane formation), mango (fruit setting), rai, mustard, gram, pea and lentil (pod formation/early maturity), potato (tuber formation/early maturity) and wheat (grain formation), zaid maize(seedling).
- As there was no significant rain during last few weeks and mainly dry weather is likely to occur for next five days over the State and there is also persisting above normal temperature in some parts of the State during last few weeks, apply light and frequent irrigation to the crops to meet the excess demands for evapotranspiration.
- Continue picking of vegetable crops depending upon the market demand.

- Undertake weeding, intercultural operations, application of fertilizers and pesticides in the standing crops like early sown *zaid* maize, garlic and onion as favourable weather conditions prevail during these days.
- Sowing / transplanting of onion may be continued.
- Farmers are advised to continue harvesting of the matured crops of potato, pea, sugarcane, rai and *toria* as favourable weather conditions are prevailing.
- Sowing of *zaid* maize at seed rate of 18-20 kg / hectare may be continued.
- Prepare field and undertake sowing of summer sugarcane, vegetables, sunflower, moong and urd with irrigation facilities. Details of crop varieties are mentioned in Annexure I.
- Weather conditions are favourable for mild incidences of hopper in mango and leaf eating caterpillar in summer vegetable crops. Monitor the crops for the pests and undertake plant protection measures to control the pests.

J & K

- **Major Standing Crops:** Wheat (flowering/grain formation), pulses (flowering), mustard (flowering). This is proper time for planting of orchard tree saplings in Jammu and sowing of vegetable crops in nursery in Rajouri divisions.
- As there was no significant rain during last few weeks and mainly dry weather is likely to prevail over the state for the next five days and there is also persisting above normal temperature, apply light and frequent irrigation to the crops.
- Undertake planting of saplings in orchard in Jammu division.
- Undertake sowing of vegetable crops like bhindi, beans, cucurbits and nursery sowing of tomato, brinjal and chillies in Jammu and Rajouri divisions. Undertake transplanting of popular trees in main field in Jammu division.
- Weather conditions are congenial for mild incidences of aphids in late sown mustard in Jammu and Rajouri division; monitor the crops for the pests and diseases and undertake plant protection measures.

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

Bihar

- **Major Standing Crops:** Sugarcane (vegetative), *rabi* maize (cob formation), pulses (pod formation), potato (tuber formation / maturity) and sunflower (head formation), wheat (grain formation) and *boro* rice (tillering).
- As there was no significant rain during last few weeks and mainly dry weather is likely for next five days over the State, apply irrigation to the crops.
- Avoid moisture stress in wheat and maize crop by maintaining adequate soil moisture as moisture stress at this stage affects the yield of these crops. Avoid irrigation to fruit crops during flowering.
- Weather is favourable for sowing of summer green gram. Farmers are advised to prepare the land and undertake sowing. Seed treatment with rhizobium culture before sowing is advised. Adopt spacing of 30 x 7 cm.
- Farmers are advised to prepare land and continue the sowing of summer vegetables.
- Undertake intercultural operations, application of fertilizers and pesticides in maize, tomato, brinjal, cauliflower, cabbage and *boro* rice.
- Farmers are advised to continue the field preparation and undertake planting of sugarcane crops.
- Weather condition has become favourable for sowing of summer maize crop in north Bihar. The farmers should ensure sufficient moisture in the field at the time of sowing for better germination of seeds. Seed treatment with Thiram @ 2.5 g per kilogram of seeds is advised before sowing.

- Farmers are also advised to harvest the matured potato, rapeseed and mustard crops as weather favourable for undertaking harvesting.

Plant Protection: Weather conditions are favourable for mild incidence of

- litchi mite and borer in litchi orchards. Spray Rogor @ 1.5 to 2.0 ml / litre of water against borer insects immediately.
- severe aphid infestation in the late sown mustard / toria crop. Spray Endosulphan@1.5 ml per litre of water to protect the crops.

Jharkhand

- **Major Standing Crops:** wheat (grain formation), *rabi* oilseeds (pod formation), potato (tuber formation / maturity).
- As there was no significant rain during last few weeks and mainly dry weather is likely for next five days over the State, apply irrigation to the crops.
- Undertake transplanting of onion and sowing of bitter gourd, sponge gourd, ridge gourd, bhindi and water melon in the main field.
- Farmers are advised to undertake weeding, intercultural operations in early sown summer rice as weather is favourable.

Orissa

- **Major Standing crops:** Sugarcane (harvesting), sunflower, mustard (pod formation / maturity), vegetables (vegetative / flowering / fruiting / harvesting), wheat (grain formation), potato (tuber formation / maturity), onion (vegetative) and summer rice (tillering), summer sunflower(vegetative), summer sesame, pulses like cowpea, green gram(early vegetative) and summer groundnut (vegetative / flowering).
- As there was no significant rain during last few weeks and mainly dry weather is likely to occur for next five days over the State and there is also persisting above normal temperature in some parts of the State during last few weeks, apply light and frequent irrigation to the crops to meet the excess demands for evapotranspiration. Sprinkler irrigation should be provided to the orchard crops and vegetables.
- The early sown sesame crop is at 3 to 4 week stage. Apply 13 kg. urea per acre followed by earthing up. Irrigate the crop after fertilizer application.
- Summer sunflower crop is at pre -flowering stage. Spray 2-3 g Borax per litre water.
- Current weather conditions are favourable for planting of pine apple and marigold. Use healthy, robust 3-4 months aged pineapple rhizomes of 350-400 g by weight. Plant the seedlings in 0.5x0.5x0.5 m pit at a spacing of 1x 0.3 m distance.
- Transplanting of vegetables should be done in afternoon hour to avoid high temperature and place the paper cap over the freshly transplanted seedlings.
- Farmers are advised to complete planting of papaya. Details of crop varieties are mentioned in Annexure I.
- Undertake planting of sugarcane. Dip the sugarcane seed material (setts) in Bavistin solution (1.5 g / litre of water) for 20-30 minutes before planting.
- As dry weather is prevailing, undertake intercultural operations in early sown summer groundnut, sunflower, sesame and pulses to keep the fields weed free.
- Maintain average water depth at 5ft level in the fish pond. Feed fishes with oil cake, bran mixture at 2% of their body weight daily. Start partial harvesting of fishes above ABW 750g.
- **Plant Protection:** Weather conditions are favourable for mild incidence of
- yellow stem borer in rice. Install light trap or pheromone trap to monitor yellow stem borer population. If incidence is more in the field (5% DH), apply phorate 10 G @ 4 kg / acre or Cartap hydrochloride 4G @ 5 kg / acre ensuring no leakage of water through the bunds.

- thrips in summer groundnut. Spray 400 ml Dimethoate or Endosulphan or 50 ml Imidachloprid in 200 litre water per acre.

West Bengal

- **Major Standing Crops:** Sugarcane (cane maturity / harvesting), mustard, gram and lentil (seed maturity / harvesting), wheat (milk / dough), potato (maturity / harvesting) and *boro* rice (tillering), sesamum, green gram (sowing).
- As there was no significant rain during last few weeks in most of the districts of the State and mainly dry weather is likely during next five days, apply irrigation to wheat and vegetables.
- As mainly dry weather is like to prevail, farmers are advised to undertake intercultural operation to keep the fields weed free.
- Timely transplanted *boro* rice crop is now at tillering stage. Maintain 3-5 cm depth of standing water at tillering stage. As dry weather is prevailing, apply 13 kg of urea per bigha as second top dressing after 40 – 45 days of transplanting.
- Complete harvesting of matured potato and mustard.
- Under present weather condition, undertake preparation of land and complete sowing of sunflower. 600 to 800 g of well filled plump seeds of sunflower are required to cover one bigha land.
- As weather condition is favourable, prepare sandy-loam and well drained land for sesamum cultivation. It can also be sown after harvesting of potato. The seed rate varies from 400 to 700 g per bigha.
- Also prepare well-drained and sandy-loam soil for green gram. The seed rate varies from 2.5 to 3 kg / bigha when sown in broadcasting. Seed should be inoculated with *Rhizobium* culture before sowing.
- Planting of corms of gladiolus should be completed in Hill Zone. Before planting the corms should be treated with Carbendazim@ 1g / litre of water.
- Due favourable weather condition, rice plant may be infected by blast and brown spot diseases. Spray the crop with Ediphenphos 50 EC @ 1 ml / litre or Carbendazim 50 WP @ 1 g / litre or Tricyclozole 75 WP @ 0.6 g / litre of water when the above disease symptoms appear. Decide number of spray depending on the severity of infection.
- Details of crop varieties are mentioned in Annexure I.

Sikkim

- **Major Standing Crops:** Orange (maturity/picking), large cardamom (vegetative), *rabi* wheat (milk/ dough), mustard (capsule formation/development/early maturity), vegetable crops (flowering/fruitletting/ harvesting), potato (maturity/harvesting)
- As there was no significant rainfall during last few weeks in the state and mainly dry weather is likely to prevail over the state for the next five days and there is also persisting above normal temperature, apply light and frequent irrigation to the vegetable crops, wheat, orange and large cardamom in medium and low hills.
- Apply mulches in vegetable crops like cabbage, cauliflower, carrot, Chinese cabbage, knol-khol, garden peas, radish, turnip, lettuce, celery, spinach, etc., to conserve moisture.
- Maintain large cardamom sucker nursery; apply FYM and undertake intercultural operations.

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

Assam

- **Major Standing crops:** Arhar (pod maturity / harvesting), vegetables (vegetative / flowering / fruiting / harvesting), mustard, lentil and pea (pod maturity / harvesting), wheat (milk / dough), potato (maturity / harvesting) and *boro* rice (tillering).

- As there was no significant rain over the State during last few weeks and mainly dry weather is likely to prevail for next five days, farmers are advised to apply irrigation to vegetable crops like brinjal, tomato, onion and also to wheat.
- As there is no possibility of rain, farmers are advised to undertake intercultural operation to keep the fields weed free.
- Under prevailing dry weather condition, farmers are advised to undertake harvesting of already matured crops of arhar, potato, mustard, lentil and pea under present weather.
- Under present weather top dressing of N @ 3 kg urea per bigha may be carried out in *boro* rice at the tilling stage. Also maintain 3-5 cm stagnant water in *boro* rice field.
- Sowing of direct seeded *ahu* rice may be undertaken as the weather is likely to be fair & dry in the next week. Transplanted *ahu* rice may also be raised where irrigation facilities are available. Sowing of seeds in nursery beds for this purpose may be undertaken.
- As weather condition is favourable, undertake sowing of black gram and green gram. Sowing may be carried out from 15th February to 15th March.
- As present weather condition is favourable, farmers may go for cultivation of summer vegetables like ladies finger, bottle gourd, pumpkin, ridge gourd, cucumber, bitter gourd, snake gourd etc.
- March-April is the high time for sowing of jute seeds. As weather condition is favourable, prepare land and undertake sowing of jute.
- Under prevailing weather prepare land and undertake sowing of maize and planting of 3 – 4 budded sugarcane setts.
- Soil and air temperatures are favourable for the attack of stem borer in *boro* rice. If eggs of the pests are noticed, apply ‘Darsban’ or ‘mpnocrotophos’ at the rate of 2 tea spoon full per 5 litres of water in the field.
- Details of crop varieties are mentioned in Annexure I.

Fishery

- Due to gradual decline of water level in ponds, fishery owners are advised to take out excess fishes from their ponds.

Arunachal Pradesh

- **Major Standing crops:** *Rabi* vegetables, pea and potato (harvesting), wheat (grain formation/maturity), mustard (maturity), *rabi* maize (grain formation / maturity).
- As there was no significant rainfall in most of the districts during last week mainly dry weather is likely during next five days, farmers are advised to apply irrigation to mustard, wheat and *rabi* maize. Farmers are advised to undertake intercultural operations in late sown crops.
- Also undertake harvesting of matured vegetables, mustard, wheat, pea, potato and *rabi* maize.
- Farmers are advised to continue land preparation for sowing of summer vegetables.

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

Andhra Pradesh

- **Major Standing Crops:** sugarcane (grand growth), gram (grain formation/development/maturity), wheat, mustard and sunflower (grain/seed development) and chilli (fruit development)
- As there was no significant rain during last few weeks and no significant rainfall is likely for next five days over the State and there is also persisting above normal temperature in some parts of coastal Andhra Pradesh, apply light and frequent irrigation to the crops.
- Farmers in Srikakulam, Vijayanagaram and Visakappattinam are advised to undertake ratoon or new planting after harvesting of sugarcane.

- Farmers in Krishna, West Godavari, Guntur and Prakasam districts are advised to complete sowing of rice fallow maize and rice fallow pulse crops during these days. Details of varieties are given in Annexure I.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
- incidence of thrips, rust and late leaf spot in groundnut.
- leaf spot in turmeric, stem and fruit borer in brinjal, late BPH in rice and necrosis in onion in Karimnagar, Nizamabad, Warranagl and Medak districts;
- spotted pod borer and powdery mildew in black gram, green gram and red gram, *spodoptera* in gram, sucking pests in cotton and white fly and fruit rot in chilli in Guntur;
- early shoot borer in sugarcane, black headed caterpillar, eriophid mite, bud rot in coconut.
- blast and sheath blight in rice.
- undertake plant protection measures to control the pests and diseases.

Karnataka

- **Major Standing Crops:** Annual sugarcane (grand growth). *rabi* crops (grain development/maturity/harvesting). This is proper time for sowing of *summer* and *rice fallow* crops.
- As there was no rainfall during last few weeks in the state and no significant rain is likely to occur over the state for the next five days, apply irrigation to the crops.
- Farmers in Gulbarga and Raichur are advised to continue harvesting of red gram and early sown sunflower due to dry weather conditions prevail during these days. Arrange proper storage for harvested produce. As sorghum and safflower crops are at grain filling stage, conserve moisture in the soil to overcome stress conditions.
- Irrigation must be given to coconut at an interval of 5-10 days depending upon the type of soil weather, which helps to control dropping of fruits.
- If farmers have irrigation facility, provide irrigation to mango trees up to first week of April, then stop the irrigation. Then provide one or two irrigation during fruit development stage, which helps for increasing fruit size. To reduce flower and fruit drop in mango spraying of 4 ml planofix in 16 liter of water is recommended. Apply one irrigation to mango, as the fruits are in marble stage, this will help for the better development of fruits.
- Undertake sowing of summer crops like water melon, snake gourd and ribbed gourd.
- After the harvest of *rabi* crops, farmers are advised to undertake deep ploughing to conserve moisture and to control weeds and soil borne pathogens.
- As temperature is rising, undertake intercultural operations and mulching with crop residues in summer crops to reduce the moisture loss (evaporation) from the soil.
- Irrigation should be continued for arecanut (10 lts/day), coconut (50 lts/day) and black pepper (2 lts/day). Irrigation should be given through drip irrigation to save water and to control the heavy evaporation of water and also provide the mulch around the trees/plants.

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

- powdery mildew in pulse crops namely green gram, black gram and cowpea. Spray, Carbendazim @ 1.0 gm or water soluble sulphur @ 3 gm per liter of water.
- leaf minor, mites and thrips in summer groundnut. Spray 1.0 ml Monocrotophos 36 S.L or 0.5 ml Phosphamidon 85 W.S.C. per litre of water.
- tea mosquito on cashew. Spray lambda cyhalothrin @ 0.5 ml/lit of water.
- powdery mildew in mango. Spray 1.7 ml Dimethoate 30 EC plus Carbendazim 0.1 % per lit. of water.

Kerala

- **Major Standing Crops:** Rice (tillering), vegetable (vegetative/flowering/fruitletting) and plantation crops (coconut, arecanut, pepper and cashew).

- As there was no significant rainfall during last week in the state and isolated rain/thundershowers is likely to occur for the next five days, farmers are advised to apply irrigation to the crops.
- Intercultural operations, irrigation, husk burial, mulching, shading of young plants and seed nut collection may be continued in coconut. Collected seednuts may be stored in shade for a minimum period of 60 days prior to sowing in nursery.
- Provide thatches to young plants of arecanut in Wayanad and coconut in Thrissur and Thiruvananthapuram to prevent from sun scorching.
- Undertake planting of ginger in Wayanad district and pepper in poly bags in Thrissur district.
- Tapping and plant protection operations may be continued in rubber. In defoliated trees, tapping may be discontinued. The basal trunk portion may be painted with lime to protect the young trees from sun scorching. The plantation may be kept clean and fire belt may be made to avoid fire incidence.

Plant Protection:

- Weather conditions are favourable for the attack of
- red palm weevil, rhinoceros beetle, stem bleeding, and leaf rot in coconut, spindle bug, yellowing, *Sigatoka* leaf spot, bunchy top and rhizome weevil in banana, white stem borer in coffee and powdery mildew, leaf spot, shoot and fruit borer in vegetable crops in Wayanad.
- fruit fly and powdery mildew in gourds and bacterial wilt in tomato, brinjal and chilly in Malappuram, Kasargod, Kozhikode and Kannur districts;
- pseudo stem weevil, rhizome weevil and bunchy top in banana and tea mosquito bug in cashew.
- Undertake plant protection measures.

Tamilnadu

- **Major Standing Crops:** Special season sugarcane (cane formation), cotton (picking stage). *Rabi* crops like rice, pulses, millets and oilseeds are at grain maturity stage. This is proper time for sowing of *summer irrigated* crops and nursery sowing of *navarai* rice. Early sown *summer* groundnut is at vegetative stage.
- As there was no sufficient rain during last week in the state except in Cuddalore, Kanyakumari, Nagappattinam, Pondicherry, Thiruvarur and Villupuram districts and isolated rain/thundershowers is likely to occur for the next five days, farmers are advised to apply irrigation to the crops. Postpone irrigation in the above districts as there was excess rainfall during last week.
- Undertake land preparation and nursery sowing of *navarai* rice. Use seed rate for short duration varieties @ 60 Kg/ha, medium duration varieties @40 Kg/ha. Treat the seeds with *Pseudomonas fluorescens* @ 10gm/kg of seeds and then with 3 packets of Azospyrillum per ha seed. Prepare nursery in an area 20 cents/ha.
- Undertake land preparation and sowing of maize, bitter gourd, pumpkin, snake gourd and water melon as conducive weather conditions prevail during these days.
- Complete sowing of irrigated safflower, gingelly and groundnut in Western region and undertake transplanting of vegetable crops such as bhendi, tomato, cowpea, dolichos and chilly may be taken up with irrigation facilities.
- Continue land preparation for sowing of summer irrigated crops like cotton, black gram and bajra in Thirunelveli, Tuticorin and Virudhunagar districts.
- Details of varieties are given in Annexure I.
- **Plant Protection:** Present weather is conducive for mild incidences of boll worm in cotton and fruit borer and tip rot in chilly in southern region; undertake plant protection measures.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT, RAJASTHAN]

Maharashtra

- **Major Standing Crops:** Sugarcane (pre-seasonal and *suru*) (cane maturity / harvesting), wheat (maturity / harvesting in early sown crops while dough stage in late sown crop), summer rice (tillering in Konkan & transplanting / early tillering in East Vidarbha), summer groundnut (vegetative / flowering in Konkan and germination / vegetative in other divisions), summer maize (germination / vegetative) and summer bajra (vegetative in pune & Aurangabad divisions).
- As there was no significant rain during last few weeks over the State and no significant rain is likely to occur for next five days and there is also persisting high temperature, apply light and frequent irrigation to the standing crops to meet the excess demands for evapotranspiration.
- As dry weather is prevailing, farmers are advised to continue harvesting of already matured crops of sugarcane and wheat.
- Under prevailing weather, transplanting of summer rice may be completed with 30 to 35 days old seedlings at a distance of 20 x 20 cm or 15 x 15 cm in East Vidarbha. Also undertake sowing of summer sunflower, summer ridge gourd (1.5 X 1 m spacing), summer tomato (90 x 30 cm spacing) and summer ladies finger (30 x 20 or 30 X 15 cm spacing).
- Details of crop varieties are mentioned in Annexure I.
- Under present situation, apply a dose of Nitrogen @ 40 kg / ha to summer rice after 30 days from transplanting in North Konkan & East vidarbha.
- As dry weather is prevailing, apply third dose of 330 g Nitrogen (700 g urea) and 330 g Potash (550 g muriate of potash) per plant of coconut of age 5 years and more and also apply 75 g Nitrogen (160 g urea) and 75 g Potash (125 g Muriate of potash) per plant of arecanut of age 3 years and more followed by irrigation.

Plant protection

- Due to late inflorescence in mango, there may be attack of mango hopper & red mite in Konkan. For control, spray Phosalon 35% @15ml or Quinolphos25% @ 20ml + Sulpher 80 WP @ 20gm in 10 liters water.
- There is possibility of tikka disease on groundnut at flowering stage in Konkan. Spray 0.1 percent Carbendazim to control the disease.
- Infestation of thrips on onion crop is likely to be increased in Western Maharashtra scarcity zone. For control spray Trizophos + Deltamethrin @ 20 ml or 25 % Cypermethrin @ 5 ml in 10 liters of water.

Gujarat

- **Major Standing Crops:** Sugarcane (maturity / harvesting), mustard (maturity / harvesting), gram (maturity / harvesting), vegetables (vegetative / flowering / fruiting / harvesting), potato (tuber maturity / harvesting), wheat (milk / dough), groundnut (early vegetative / vegetative), summer rice (tillering) and green gram, black gram, cow pea, cluster bean and pearl millet (sowing).
- As there was no significant rain during last few weeks over the State and mainly dry weather is likely to prevail for next five days and there is also persisting high temperature, apply light and frequent irrigation to the standing crops to meet the excess demands for evapotranspiration.
- As there is no possibility of rain, undertake intercultural operation to keep the fields weed free.
- Prevailing weather is conducive for harvesting of matured crops of mustard, gram and potato.
- As weather condition is favourable, apply Amm. Phosphate @ 50 kg N / ha as first split dose of fertilizer in brinjal and Urea @ 45 kg N / ha as first split dose of fertilizer in tomato.
- Under prevailing weather condition farmers are advised to prepare land and undertake sowing of summer crops like green gram, black gram, sesamum, cow pea, pearl millet and summer vegetables like ladies finger, bitter gourd, bottle gourd, small gourd and cluster bean.

- As there is chance of attack of fruit borer in brinjal and okra in Bhal and Coastal region due to favourable weather condition, apply Endosulfan @ 20 ml in 10 liters of water.
- Under prevailing weather condition there is chance of attack of thrips in chilli in North Saurashtra region and powdery mildew in mango in North Saurashtra and South Gujarat regions. For control of thrips in chilli, spray triphose @ 15 ml / 10 litres of water. To control powdery mildew in mango spray sulphur 80 WP @ 30 gm or dinocap @ 10 ml / 10 litres of water.

Rajasthan

- **Major Standing Crops:** Wheat (grain formation), mustard, gram (pod formation/development), vegetable crops (flowering/fruited).
- As there was no significant rain during last few weeks and no significant rainfall is likely for next five days over the State and there is also persisting above normal temperature in some parts of the State, apply light and frequent irrigation to the crops.
- Undertake sowing of groundnut, cucurbits like bitter gourd, water melon, pumpkin (kaddu), cucumber, round gourd (tinda), ridged Gourd (turai), loki, muskmelon in Bhilwara, Sirohi, Udaipur and Chittorgarh.
- Undertake sowing summer Okra in Ajmer, Dausa, Tonk and Jaipur and treat seed with 1 gm Carbendizim & 3 gm Thiram per kg of seed.
- Undertake sowing of cucurbits, zaid pearl millet fodder, zaid sorghum fodder, zaid green gram and okra in Ajmer, Dausa, Tonk and Jaipur.
- Undertake sowing of bajra, jowar, sweet gourd, cucumber, pumpkin, bitter gourd, tinda, tomato and ladies finger in Barmer, Churu, Jalore and Jodhpur.
- Undertake planting of sugarcane in Sriganganagar and Hanumangarh.
- Details of varieties are given in Annexure I.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
- pod borer in gram in Alwar, Bharatpur and Karauli districts, dust 20-25 kg Malathion @ 5% or Methyl Parathion @ 2% dust before flowering and pod formation. Spray Endosulfan 35 EC or Fenitrothion 25 EC @ 1.25 l/ha in case of availability of water.
- loose smut in wheat in Alwar, Dholpur, Bharatpur, Karauli and Sawai Madhepur district. Farmers are advised to destroy the loose smut affected ears to prevent its spread. Spray 0.2% solution of Propiconazole to manage Karnal bunt disease.
- powdery mildew in mango in Banswara, Karauli and Sawai Madhepur district, spray Karathane @ 1 ml/l water to manage the disease. First spray should be done before flowering and second during fruiting period. Wrap plucked papaya fruits in paper bags to induce ripening.

CENTRAL INDIA [M.P., CHHATTISGARH]

Madhya Pradesh

- **Major Standing Crops:** Sugarcane (grand growth), soyabean (pod maturity), maize (cob maturity), cotton (boll development) and vegetable crops (vegetative).
- As there was no significant rain during last few weeks and no significant rainfall is likely for next five days over the State and there is also persisting above normal temperature in some parts of the State, apply light and frequent irrigation to the crops.
- Complete sowing of summer vegetables like cucurbits, ladies finger and also cow pea.
- Complete sowing of moong and urad in Khandwa, Kargone and Harda districts and sunflower in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts.
- Undertake transplanting of brinjal in Mandsaur, Ratlam, Neemuch, Shajapur, Ujjain and Rajgarh. Prepare the nursery of summer vegetables such as brinjal and chilli. Apply irrigation and nitrogen to onion.
- Undertake planting of sugarcane in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts.

- Undertake sowing of summer okra, summer moong and urd in Jhabua and Dhar districts.
- Details of varieties are given in Annexure I.
- **Animal Husbandry:** Provide proper ventilation and clean water to cattle and arrange for vaccination to save them from infectious disease in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts. Create smoke during the night in cattle shed to prevent cattle from mosquitoes and bees.
- To control ticks and mite in cattle, sheep and goat, apply butox / deltox @ 4 ml/ l of water on the body in Jhabua and Dhar districts.
- **Plant Protection:** Weather conditions are favourable for
- fruit borer in tomato and brinjal in Tikamgarh, Chhatrapur and Datia districts, spray Malathion 1ml in 1 litre of water.
- mealybug in mango plantation in Jhabua and Dhar districts spray Propenophos 50 EC 2.0 ml/l + Acetamiprid 0.6 gm/l of water and second spray after 15 days.
- red pumpkin beetle in cucurbits in Indore, Dewas, Mandsaur, Neemuch, Rajgarh, Ratlam, Ujjain, Shahjapur districts, apply 2 % methyl parathion dust before fruiting.
- aphids in safflower Indore, Dewas, Mandsaur, Neemuch, Rajgarh, Ratlam, Ujjain, Shahjapur districts.

Chattisgarh

- **Major Standing Crops:** Sugarcane (vegetative / maturity), wheat (milk / dough), gram, pea, mustard, berseem, pigeon pea and linseed (maturity / harvesting), potato (maturity / harvesting), vegetables (vegetative / flowering / fruiting / harvesting), summer rice (tillering), summer vegetables (sowing).
- Due to above normal temperatures, the evaporation rate has increased during last few weeks (presently 5-6 mm/day) and thereby the water requirement of *rabi* crops has also increased. Therefore, it is advised to apply light and frequent irrigation to maintain proper soil-moisture and micro-climate within the crop canopy, so that the adverse effect of higher temperature or thermal stress can be minimised. The farmers who have drip irrigation system for vegetables and plantation crops should regulate the water discharge rate accordingly to maintain proper soil moisture around root zone.
- As dry weather is prevailing, it is advised to undertake intercultural operation, fertilizer application, earthing up followed by irrigation in sugarcane crop wherever the crop is at knee height stage.
- Under prevailing weather condition, it is advised to prepare well pulverized field and plant sugarcane setts. Intercropping of summer moong, early maturing crops or leafy vegetables can also be done for additional income.
- As weather condition is favourable, it is time for sowing of summer green gram and sesamum and also some cucurbitaceous crops, like pumpkin, bitter gourd, bottle gourd, okra etc. Hence, the sowing of these vegetables should be completed at the earliest.
- As weather condition is congenial, intercultural operation and weeding are advised in sunflower and groundnut. Complete final intercultural operation in groundnut within flowering stage. Fertilizer application followed by irrigation should also be done in sunflower after weeding.
- Summer rice is at tillering stage. Under prevailing weather, application of second top dressing of N is recommended at this stage.
- Presently mango crop is at flowering / fruit setting stage and at this stage there is chance of infestation of powdery mildew, which causes poor fruit setting and later on fruit dropping. Hence, it is advised to keep watch over the crops and whenever the symptom appears, spray Carbendizim (Bavistin) @ 1.5 g or Sulphex @ 3 g per litre of water.

Annexure I Crop varieties

Uttarakhand:

- **Sugarcane:** Co- Pant 84211, COS-95255, COS-8436, COS-88230, COS-96268 and Moderate to late varieties like Co-Pant 97222, Co-Pant-96219, Co-Pant-84212, Co-Pant-90223.
- **Sunflower:** MSFS-8, NSFH-9, Ranjha, Heer, Badshah etc.(hybrids), Morden and Paradobic (varieties).
- **French bean:** Pant Anupama, Pant Bean-2, VL Vonibean-1 and Pusa Parvati
- **Pea:** VL Ageti, Matar-7 or Vivek Matar-10
- **Moong:** Pant Moong-2, Pant Moong-4, Pant Moong-5 & Narendra Moong-1.
- **Tomato:** VL-Tomato – 3
- **Urd:** Pant Urd – 30, Pant Urd-35 & Narendra Urd -1.

Punjab:

- **Sugarcane:**
Early maturing: COJ 64, COH 56 and COH 92, **mid-season:** CoJ-88 CoS-8436, and **late maturing variety:** CoJ-89 and Co-1148
- **Bhindi:** Punjab Padmini, Punjab 7, Punjab 8 and Pusa sawni.

Haryana:

- **Sugarcane:** COJ 64, COH 56 and COH 92.
- **Sunflower:** Surajmukhi No.1, Hybrids: KBSH 1, PAC 36, MSFH 8, PCSH 234, KBSH 44, HSFH 848.

Uttar Pradesh:

- **Sunflower:** Modern, Sankar, Surya, Jwalamukhi

Jammu

- **Radish:** Japanese white and Minowase
- **Beans** Contender and Arka Komal
- **Potato** Kufri Jyoti and Kufri Badshah

Delhi

- **Sunflower:** Modern.
- **Tomato:** HS 101, HS 102, Pusa Rubi etc.

Bihar:

- **Summer maize:** Suwan, Ganga 11, Deoki, Shaktiman 3 and 4
- **Summer moong:** Pusa Vishal, Samrat, PS 16 and SML 668

Orissa:

- **Maize:** Hybrid varieties-MRM-3838, MRM-3765, Shaktiman 1, Bio 9681, Cargil 633, Deccan 105, K.H. 510 , Composite varieties – Navjot, Arun, Kiran.
- **Sesame:** Uma, Usha, Kalika, Nirmala, Prachi and Amrit.
- **Summer moong:** PDM 11, PDM 54, K 851 and TARM 1.
- **Cowpea:** Bush type- Pusa Phalguni, Pusa Komal, and runner type- American long, and Banarasi long, other improved varieties like Russian Giant, EC-4316, NP-3, C-152, UPC-286,UPC-5286 and IGFI-450 can be grown.
- **Papaya:** Honey dew, Kurg honey dew, Coimbatore-1, Coimbatore-2, Pusa delicious, Pusa Majestic, Pusa Dwarf and Pusa Giant.
- **Pineapple:** Que, queen, Simachalan and Maritius.

Assam

- **Direct seeded *ahu* rice:** Luit, Kapili,disang, Pusa-2-21, Culture-1 etc.
- **Direct seeded *ahu* rice:** Lachit, Chilarai, Govind, IR-50, Rachi, Jaya etc.
- **Boro rice:** Jyotiprasad, Bishnuprasad, Jaymoti, Kanaklata, Boro-1 and Boro-2.
- **Ridge Gourd:** Pusa Nasder, Surekha etc.
- **Bitter gourd:** Monsoon Monarch, Long green Monsoon, Coimbatore long etc.
- **Pumpkin:** Arka Suryyamukhi, Arka-Chandan, Large green etc.
- **Snake gourd:** Long green, Long white, Extra long etc.
- **Cucumber:** Chinese Green, Pusa Sonjog, AAUC-I, AAUC-2, AAUC-3, UC-4 etc.
- **Jute:** JTC 212, JRC 312, UPC 94.
- **Maize:** Ganga-5, Highstars, NLD, Dhawal, Navjot etc.

West Bengal

- **Sunflower:** Morden, Sidhesor, Surya and hybrid varieties like Pack-36, Pack-1091, M.F.S.H.-17, Sungin-85, B.S.H.-1, Surya-51, K.B.S.H.
- **Sesame:** Rama, Tilottoma.
- **Green gram:** TM-99-50, PDM-54, TARM-1, 2 etc.

Maharashtra

- **Summer ridge gourd:** Pusa Nasdar, Konkan Harita.
- **Summer sunflower :** EC-68414, Morden & PKVSF-9.
- **Summer tomato:** Dhanshri, Phule-Raja.
- **Summer ladies finger:** Parbhani Kranti, Parbhani Utkarsha, Akola Bahar, Arka Anamika, Arka Abhay & Phule Kriti.

Gujarat

- **Green gram:** Guj. GG-3 & Guj. GG-4 etc.

- **Sesamum:** Gujarat Til -2.

Rajasthan:

- **Green gram:** SML-686, Pusa Vishal, PDM-139 & G-8.
- **Groundnut:** TAG-24, SB-11, DH-86 and GG-2.
- **Bhindi:** Pusa sawani, Pusa Makhmali, Parbhani, Kranti, Arka Abhay & Arka Anamika

Andhra Pradesh:

- **Black gram:** LBG 402, 648, 645, 685, 709 and 752.

Kerala:

- **Bhindi:** Arka anamica, Arka Abhay, Susthira

Tamil Nadu:

- **Groundnut:** TMB-13, VRI-6 and VRI-7
- **Gingelly:** SVPR-1, TMB-5, 6 and VRI-2.
- **Rice:** ADT-36, ADT-37, ADT-39, ADT-43, ADT(R)-45, ADT(R)-47, Co-43, Co-47
- **Maize:** Co-1, Co.H.(M)-4, Co.H.(M)-5, Private Hybrids
- **Cotton:** MCU 5, SVPR 2 and LRA 5166
- **Black gram:** Co 5, KM 2
- **Bajra:** WCC 75, Co 7

Madhya Pradesh:

- **Wheat:**
- **Unirrigated/ Semi-irrigated:** JWS-17, HW-2004, HI-1500, Malav Ratna (HD-4672) and Malav Shri (HI-8381).
- **Irrigated:** GW-273, Kanchan (DL-803-3), WH- 147, GW- 190, GW- 322 and Malav Shakti (HI-8498).
- **Gram:** JG- 412, JG- 226, JG- 11 and JG- 130.
- **Maize:** JM- 421, JM- 8, JM- 12, Chandan makka- 3, Ganga- 3, Ganga- 4 and HPQM – 1.
- **Sugarcane:** Co Jawahar-86141, Co Jawahar-86572, Co Jawahar-86600, Co 86032.