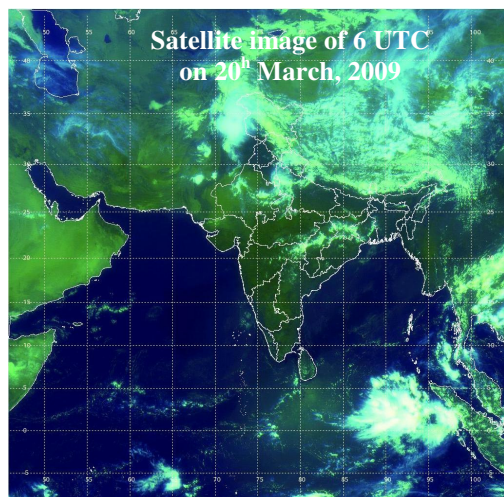




National Agromet Advisory Bulletin

Thursday, 19th March, 2009

(For the period 19th March to 23rd March, 2009)



Chief Synoptic Feature (Based on 1430 hours IST observations of 19th March, 2009)

- Under the influence of a western disturbance, currently lying over Jammu & Kashmir and neighbourhood, isolated to scattered rain/thundershowers are likely over western Himalayan region during next 48 hours. Isolated rain/thundershowers are also likely over Punjab, Haryana, Chandigarh & Delhi, Rajasthan and West Uttar Pradesh on 20th March.
- The minimum temperatures are above normal by 3-4°C over parts of western Himalayan region, west and adjoining central India.
- The meteorological conditions suggest fall in temperatures by 2-3°C over northwest India and Rajasthan during next 2-3 days.

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, Chattishgarh, Bihar 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.

Advisories for irrigation

- As there was no significant rain in most of the remaining States of the country except parts of Tamil Nadu and Kerala 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:
 - thrips in onion in Haryana.
 - aphids in late sown mustard in Jammu & Kashmir.
 - aphids in late sown wheat in Uttarakhand.
 - stem borer in *boro* rice and caterpillars in sesame in West Bengal.
- Monitor the crops for the pest and disease incidences and undertake plant protection measures if required.

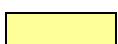
Issued by

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

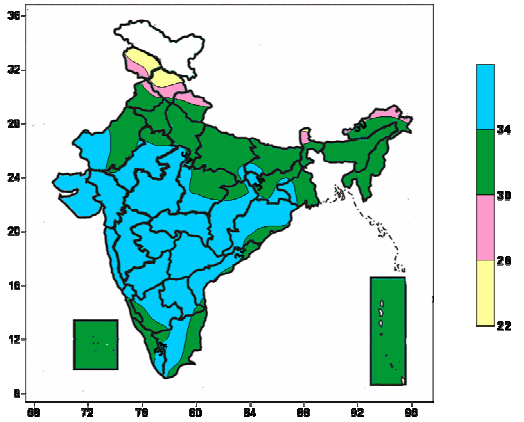
Comparison of weekly rainfall distribution (in % dep.) in different Met. Sub-divisions during past 5 weeks					
Sub-division	Cumulative Rainfall (% Dep.) for the period				
	18th February	25th February	4th March	11th March	18th March
A & N Islands	-100	-100	-27	-72	119
Arunachal Pradesh	-93	-40	29	-84	-99
Assam and Meghalaya	-96	-21	-45	-85	-100
NMMT	-69	-100	-54	-98	-100
SH West Bengal & Sikkim	-83	-97	-91	-99	-100
Gangetic West Bengal	-70	-100	-100	-90	-40
Orissa	-100	-100	-100	-100	-100
Jharkhand	-100	-100	-100	190	-100
Bihar	-53	-100	-100	-98	-100
East Uttar Pradesh	-100	-100	-100	-100	-100
West Uttar Pradesh	-100	-100	-100	-100	-100
Uttarakhand	20	-100	-100	-100	-100
Haryana, Chandigarh & Delhi	-87	-100	-100	-100	-100
Punjab	-32	-99	-100	-100	-100
Himachal Pradesh	-79	-50	-99	-97	-99
J & K	-39	-13	-95	-88	-98
West Rajasthan	-39	-100	-100	-100	-100
East Rajasthan	-100	-100	-100	-100	-100
West M. P.	-100	-100	-100	-99	-84
East M. P.	-100	-100	-100	-95	-95
Gujarat region	-100	-100	-100	-100	-100
Saurashtra & Kutch	-100	-100	-100	-100	-100
Konkan and Goa	-100	-100	-100	-100	113
Madhya Maharashtra	-100	-100	-100	-100	7
Marathwada	-100	-100	-100	-100	-96
Vidarbha	-100	-100	-100	-100	358
Chhattisgarh	-100	-100	-100	-100	-100
Coastal A. P.	-100	-100	-100	-99	-99
Telangana	-100	-100	-100	-100	-90
Rayalseema	-100	-100	-100	-100	-35
TamilNadu & Pondicherry	-100	-99	-100	111	289
Coastal Karnataka	-100	-100	-100	-97	1117
N. I. Karnataka	-100	-100	-100	-99	52
S. I. Karnataka	-100	-85	-100	-100	943
Kerala	-65	-100	-99	-34	432
Lakshadweep	-63	-100	-100	-100	-100

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

	(20% or more) excess rainfall		(-60 to -99 %) scanty rainfall
	(-19 to +19%) normal rainfall		(-100%) no rainfall
	(-20 to -59%) deficient rainfall		** Data not available

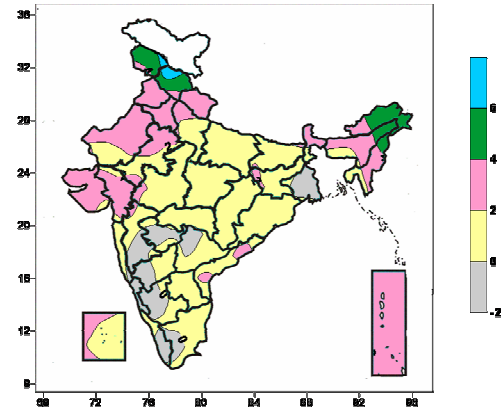
Contour maps for the week ending 18.03.09

Actual Mean Maximum Temperature (°C) In India for the week ending 18.03.09



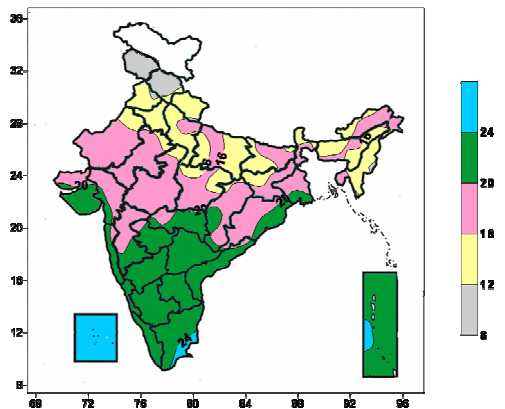
Actual Mean Maximum temperature ranged between 30 to 34°C over most parts of Punjab, Haryana, New Delhi, Uttar Pradesh, Bihar, Jharkhand, West Bengal, North East India, Andman & Nicobar Islands, some parts of Rajasthan, East Madhya Pradesh, Chhattisgarh, Orissa, Coastal Andhra Pradesh, Rayalaseema, Coastal and South Interior Karnataka, Kerala, 26 to 30°C over most parts of Sikkim, some parts of Jammu & Kashmir, Uttarakhand, Himachal Pradesh, Punjab, Arunachal Pradesh, 22 to 26°C over some parts of Jammu & Kashmir, Himachal Pradesh, 34 to 38°C over remaining parts of the Country.

Maximum Temperature (°C) Anomaly in India for the week ending 18.03.09



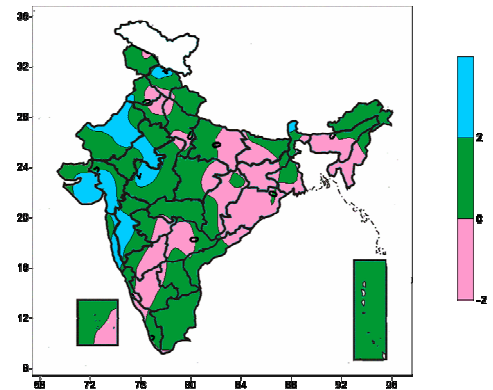
Actual Mean Maximum temperature anomaly ranged between 6 to 8°C over some parts of Jammu & Kashmir, Himachal Pradesh, 4 to 6°C over most parts of Himachal Pradesh, Nagaland, some parts of Jammu & Kashmir, Assam, Arunachal Pradesh, 2 to 4°C over most parts of Punjab, Haryana, Delhi, Uttarakhand, Sikkim, Assam, Manipur, Mizoram, West Rajasthan, Gujarat, Saurashtra & Kutch, Andman & Nicobar Islands, some parts of Jammu & Kashmir, Himachal Pradesh, West Uttar Pradesh, Sub-Himalayan West Bengal, Arunachal Pradesh, Bihar Jharkhand, East Rajasthan, West Madhya Pradesh, Coastal Andhra Pradesh, Lakshadweep Island, -2 to 0°C over most parts of Coastal Karnataka, Gangetic West Bengal, Marathwada, some parts of Madhya Maharashtra, Interior Karnataka, Kerala, Tamil Nadu, Telangana, 0 to 2°C over remaining parts of the country.

Actual Mean Minimum Temperature (°C) In India for the week ending 18.03.09



Actual Mean Minimum Temperature ranged between 24 to 28°C over most parts of Lakshdweep, some parts of Tamil Nadu, Andaman & Nicobar Islands, 20 to 24°C over most parts of South Saurashtra & Kutch, Konkan & Goa, Marathwada, Vidarbha, South India, Andaman & Nicobar Islands, some parts of Gangetic West Bengal, Orissa, Chhattisgarh, 12 to 16°C over

Minimum Temperature (°C) Anomaly in India for the week ending 18.03.09

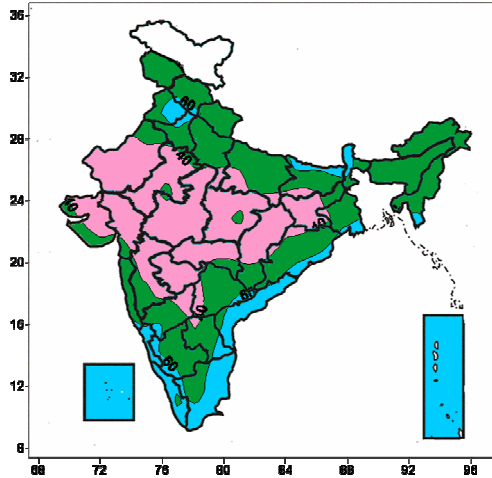


Minimum Temperature anomaly ranged between 2 to 4°C over some parts of Himachal Pradesh, Rajasthan, West Madhya Pradesh, Gujarat region, Konkan & Goa, Madhya Maharashtra, Sikkim, -2 to 0°C over most parts of Bihar, Jharkhand, Orissa, Manipur, Mizoram, Tripura, some parts of Punjab, Haryana, Uttar Pradesh, West Bengal, Assam & Meghalaya, Madhya Pradesh,

most parts of Punjab, Haryana, New Delhi, Uttarakhand, Uttar Pradesh, Madhya Pradesh, some parts of Rajasthan, Bihar, Jharkhand, Sub Himalayan West Bengal, Sikkim, North East India, Madhya Pradesh, Chattisgarh, 8 to 12°C over most parts of Himachal Pradesh, some parts of Jammu & Kashmir, Punjab, 16 to 20°C over remaining parts of country.

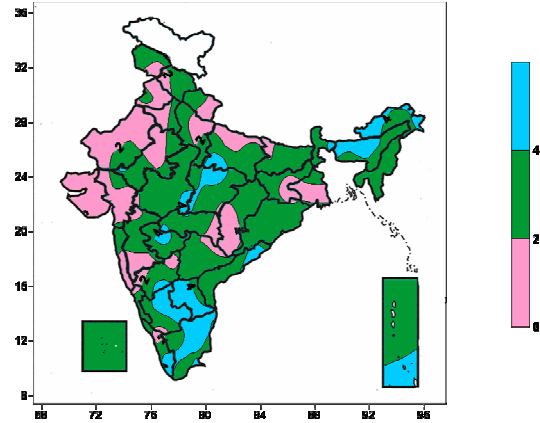
Chhattisgarh, Marathwada, Telangana, Karnataka, Kerala, Lakshdweep, 0 to 2°C over remaining parts of the Country.

Relative Humidity (%) over India for the week ending 18.03.09



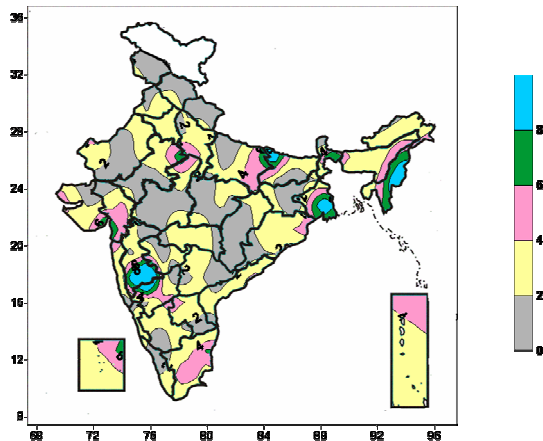
Relative humidity more than 60% over most parts of Sikkim, Coastal Andhra Pradesh, Tamil Nadu, Coastal Karnataka, Kerala, Lakshadweep, Andaman & Nicobar Islands, some parts of Punjab, Haryana, Himachal Pradesh, Bihar, West Bengal, Mizoram, Orissa, Interior Karnataka, Telangana, Rayalaseema, 40 to 60% over most parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana New Delhi, Uttar Pradesh, Bihar, West Bengal, North East India, Orissa, Telangana, Rayalaseema, Konkan & Goa, Interior Karnataka, some parts of Rajasthan, East Madhya Pradesh, Jharkhand, Gujarat region, Madhya Maharashtra, Vidarbha, Chhattisgarh, Tamil Nadu, Kerala, Coastal Karnataka, 20 to 40 % over remaining parts of the country..

Cloud amount (okta) over India for the week ending 18.03.09



Cloud amount ranged from 6 to 8 okta over some parts of Arunachal Pradesh, Assam, 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 18.03.09



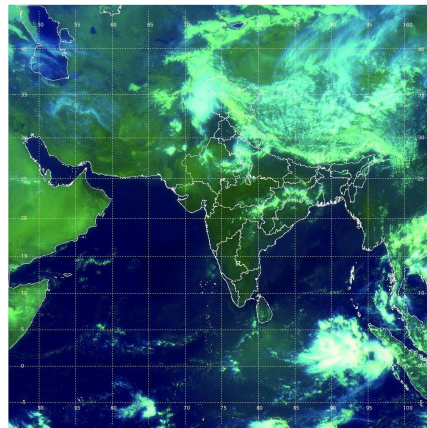
Wind speed ranged between 6 to 8 knots over some parts of Gangetic West Bengal, Bihar, Manipur, Mizoram Madhya Maharashtra, 4 to 6 knots over some parts of East Rajasthan, East Uttar Pradesh, Bihar, West Bengal, Nagaland, Manipur, Mizoram, Tripura, Gujarat, Saurashtra & Kutch, Madhya Maharashtra, North Interior Karnataka, Lakshdweep, 4 to 6 knots over some parts of Uttar Pradesh, Bihar, Assam & Meghalaya, West Bengal, Orissa, Gujarat, region, West Madhya Pradesh, Madhya Maharashtra, Interior Karnataka, Rayalaseema, Tamil

Nadu, Andaman & Nicobar Islands, & Lakshdweep, 0 to 2 knots over most parts of Himachal Pradesh, Uttarakhand, Rajasthan, Madhya Pradesh, Chattisgarh, Sikkim, some parts of Jammu & Kashmir, Punjab, Uttar Pradesh, Gujarat, Bihar, Jharkhand, West Bengal, Assam, Arunachal Pradesh, Orissa, Maharashtra, Andhra Pradesh, Karnataka, 2 to 4 knots over remaining parts of the country.

Chief Synoptic Feature (Based on 1430 hours IST observations of 19th March, 2009)

- Under the influence of a western disturbance, currently lying over Jammu & Kashmir and neighbourhood, isolated to scattered rain/thundershowers are likely over western Himalayan region during next 48 hours. Isolated rain/thundershowers are also likely over Punjab, Haryana, Chandigarh & Delhi, Rajasthan and West Uttar Pradesh on 20th.
- The minimum temperatures are above normal by 3-4°C over parts of western Himalayan region, west and adjoining central India.
- The meteorological conditions suggest, fall in temperatures by 2-3°C over northwest India and Rajasthan during next 2-3 days.
-

Satellite image of 6 UTC on 20th March, 2009



Zone-wise Forecast (Forecast valid upto 1430 hours IST of 22nd March, 2009)

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

- Rain/thundershowers are likely at a few places over Jammu & Kashmir during next 48 hours and isolated thereafter.
- Isolated rain/thundershowers are likely over Himachal Pradesh and Uttarakhand.
- Isolated rain/thundershowers are likely over Punjab, Haryana, Chandigarh and Delhi and West Uttar Pradesh on 20th March.

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

- Isolated rain/thundershowers are likely over West Bengal & Sikkim.
- Isolated rain/thundershowers are likely over Orissa and Jharkhand from tomorrow onwards.
- Mainly dry weather is likely over the rest region.

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

- Isolated rain/thundershowers are likely over the region.

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

- Rain/thundershowers are likely at a few places over Andaman & Nicobar Islands.

- Isolated rain/thundershowers are likely over Kerala and Lakshadweep.
- Isolated rain/thundershowers are likely over north Coastal Andhra Pradesh from 21st 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 Rajasthan on 20th March.
- Mainly dry weather is likely over the rest region.

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

- Mainly dry weather is likely over the region.

Weather Outlook from 1430 IST of 22nd March, 2009 to 1430 IST of 24th March, 2009 (Based on numerical weather products):

- Isolated to scattered rain/thundershowers are likely over Western Himalayan region and northeast 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 berseem and oat one cut can be taken. As there is no possibility of significant rain, apply urea to irrigated crop of oat where first cut has been taken.
- Weather is favourable and also it is optimum time for sowing of Chari, bajra and maize in low hills.
- Under prevailing weather it is advised for nursery sowing of tomato, chilli, summer squash, capsicum, brinjal, ridge gourd and bitter gourd in poly houses.
- It is time for sowing of ageti, bhindi and french bean in the field.
- It is optimum time for plantation of gladiolus and liliun. To prepare the planting material of carnation terminal bud of 8-10 cm length may be cut and planted. It is also optimum time for raising nursery of summer flowers Viz. China aster, glardia, rudevekia, Kochia, African Marigold, French Marigold, partulaca, Tithinia, Torinia and cleome etc.
- 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.

Plant protection

- There are chances of attack of peach leaf curl disease in peach and pear fruit plant where fruit bearing has started. For control spray Nuvan @ 1 ml + 3 g Blitox per litre of water.

- In coming week late blight may appear in potato due to congenial weather condition. For the control of late blight of potato spray Dithane M-45 @ 25 g in 10 litres of water and repeat the spray at 10-15 days interval.
- Aphids are appearing in the seed crop of cole crops and there is also chance of increase of the infestation under prevailing weather. For control, spray Rogor @ 1ml per litre of water.
- 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

- The winter packing may be taken away as the temperature is rising. The weak apiary should be given artificial food. Also insert empty frame /combs for egg laying to the queen as the population starts building up.
- Dust sulphur on sealed brood in the colony and not on larvae to control mite attack on honeybees.

Animal Husbandry

- 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.

Poultry

- Replace the poultry houses with fresh litter to avoid wetting. Give clean water to birds. For precautionary measures spray formaline 40% @ one litre in 9 litres of water outside or surrounding the farm.
- Also do not allow human and birds from outside. This will help in protection from bird flu.

Uttarakhand

- **Major Standing Crops:** Sugarcane (harvesting), wheat (grain formation/early maturity) and potato (early maturity), mustard, chickpea and lentil (early maturity), cabbage, onion, garlic and tomato (vegetative), summer sunflower(early 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 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.
- Farmers are also advised to start sowing of foxtail millet from this week with improved local varieties under optimum soil moisture.
- Undertake harvesting of matured crops of wheat, mustard, chickpea, 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 sugarcane, moong and urd, undertake sowing of these crops with irrigation facilities.
- Farmers are also advised to undertake sowing of bhindi, french bean and tomato. Ensure proper soil moisture at the time of sowing.
- Details of varieties are given in Annexure I.

Plant Protection: Weather conditions are favourable for mild incidences of

- aphid incidence in late sown wheat by which leaves will have yellow sopts. If such symptoms are seen then farmers are advised to spray 25 EC Propikonajale @ 200 ml per 400 litres of water per acre for effective control. Continue rouging in standing wheat crop.

Punjab

- **Major Standing Crops:** Horticultural crops (vegetative), spring sugarcane (early vegetative), potato (tuber formation / early maturity), wheat (grain formation), gram and lentil (pod formation/early maturity), pea and vegetable crops like chilly, tomato, brinjal and onion (early vegetative) and oilseeds (pod formation/early maturity), summer pulses, sunflower(early vegetative), summer rice(tillering)
- As there was no rainfall 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 during last few weeks, apply light and frequent irrigation to the crops to meet the excess demands for evapotranspiration. Provide mulching in the standing crops to conserve soil moisture.
- Farmers are advised to complete 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 intercultural operations in tomato, onion and chillies.
- Undertake layering of litchi trees and side grafting of mango for their propagation.
- Apply 50% N as top dressing to summer rice at 21 days after transplanting. Maintain 2.5 cm standing water in the field from 7 to 25 days after transplanting. Always apply fertiliser after draining water from the field and irrigate after 48 hrs.
- Weather is favourable for sowing greens(Khada).Lay out small beds of 5ft. long, 4 ft. wide with bunds all around and use 4-6 kg seeds per acre. Because of small size seeds, mix the seeds with coarse sands for easy sowing. Cover the seeds with soil by hands followed by straw to avoid high temperature.

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/early maturity), summer pulses, sunflower(early vegetative)
- As there was no rainfall 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 during last few weeks, apply light and frequent irrigation to the crops to meet the excess demands for evapotranspiration.
- Prepare the field and complete the planting of sugarcane with irrigation facilities.
- Complete sowing of berseem.
- Details of crop varieties are mentioned in Annexure I.
- Farmers are advised to prepare the field and continue sowing of cucurbits.
- Undertake intercultural operations in tomato, onion and chillies.
- Farmers are also advised to continue sowing of pigeon pea.

- 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 thrips attack in onion, hence the farmers are advised to spray the crop with 300 ml Malathion 50 EC or 75 ml Fenvalerate 20 EC or 60 ml Cypermethrin 25 EC with 250 liters of water per acre.
- thrips in grapes; spray 500 ml Malathion 50 EC or 150 ml Fenvalerate 20 EC in 500 litre water per acre.

Delhi

- **Major Standing crops:** Vegetables (vegetative / flowering / fruiting / harvesting), *toria* (maturity / harvesting), mustard (seed formation / seed maturity), potato (tuber maturity / harvesting), gram (grain formation / maturity), wheat (milk / dough).
- 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, gram etc.
- Farmers are advised to sow the seeds of tomato (HS 101, HS 102, Pusa Rubi etc.) 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.
- 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.

Uttar Pradesh

- **Major Standing crops:** Sugarcane (grand growth / cane formation), mango (fruit setting), rai, mustard, gram, pea and lentil (pod formation/early maturity), potato (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 completed.
- 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.
- To save the mango fruits from falling, spray the solution of Naphthalene acetic acid 15 ppm.

- 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 (pod formation), mustard (capsule formation). This is proper time for planting of orchard tree saplings in Jammu and sowing/transplanting of vegetable crops in nursery/main field in Leh, Jammu and Rajouri divisions.
- As there was no significant rain during last few weeks and rain/thundershowers is likely to occur at a few places over the state during next 48 hours and there is also persisting above normal temperature, apply light and frequent irrigation to the crops.
- Start planting of potato in the main field in Kashmir division.
- Continue planting of saplings in orchard and nursery sowing of cole crops in Leh division.
- Undertake sowing of vegetable crops like bhindi, beans, cucurbits and transplanting 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 and loose smut and flag smut in wheat/barley in Jammu division; monitor the crops for the pests and diseases and undertake plant protection measures on a non rainy day.

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

Bihar

- **Major Standing Crops:** Sugarcane (vegetative), *rabi* maize (cob formation), pulses (early maturity), sunflower (head formation), wheat (grain formation) and *boro* rice (tillering), summer moond, urd, sesame(early 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 during last few weeks, apply light and frequent irrigation to the crops to meet the excess demands for evapotranspiration.
- Avoid moisture stress in summer vegetables 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 complete the planting of sugarcane. Continue sowing of summer urd and moong 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 rapeseed, gram, pea, lentil 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), summer maize(early vegetative).
- As there was no significant rain during last few weeks and no significant rain is likely for next five days over the State, apply irrigation to the crops.
- Undertake field preparation and sowing of summer moong. Use seed rate 30 kg per hectare and apply 44 kg Urea, 250 kg SSP 34 kg MOP per hectare before sowing. Treat the seed with *Rhizobium* culture.
- 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, maize as weather is favourable.
- Farmers are advised to harvest the matured crops of sugarcane and allow ratoon. Irrigate the field after application of recommended dose of fertilizer and give earthing up.

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/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.
- As weather conditions are favourable for jute sowing. Sow the recommended variety JRO-524 (Naveen) which is resistant to mite. Apply 5 cart load of FYM per acre during last ploughing and apply 12:12 kg PK/acre as basal. Use 2 kg seeds/acre for line sowing and 3 kg seeds for broadcasting. Before sowing seeds are to be treated with 2 g Carbendazim or 3 g Thiram/kg seeds to avoid root and stem rot. To maintain 2 lakh healthy plants per acre, sow the seeds in lines at 25 cm apart with 3cm depth.
- 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, tuberose 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 case worm in rice, spray the crop with Endosulphan @ 2 ml/lit. or Chloropyrifos @ 2 ml/lit.
- 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 / early maturity), 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 no significant rain is likely to occur during next five days, apply irrigation to standing crops.
- As mainly dry weather is like to prevail, farmers are advised to undertake intercultural operation to keep the fields weed free.
- Keep 5 to 7 cm standing water in *boro* rice field. Apply second top dressing of 9 Kg Urea per bigha of land. For late transplanted crop apply first top dressing of fertilizer (Urea @ 18 kg / bigha).
- Complete harvesting of matured potato and mustard.
- Prepare the land for sowing of jute. Apply two cart of FYM during land preparation. Collect good quality seed material in advance.
- As weather condition is favourable, prepare sandy-loam and well drained land and complete sowing of sesamum within this week. 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 @ 1 g / litre of water.
- In the prevailing weather condition, there is a Stem-borer attack in maximum crop field in New Alluvial zone. If the infestation is more than 10%, apply Triazophos or Hostathion @ 1.5 ml/lit of water.
- Due to favourable weather condition, rice plant may be infected by blast and brown spot diseases in Coastal Saline zone. 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.
- Presently mango is in pea formation stage. There is a heavy chance of infestation of anthracnose (black spot) disease under prevailing weather in New Alluvial zone. Apply carbendazim @ 1 ml per litre of water.
- There is report of moderate to heavy infestation of different types of caterpillar in sesame which may also be increased. To control apply Endosulfan @ 2 ml per litre of water.
- Due to high humidity for last few days there may be chance of incidence of fruit & shoot borer in bhindi in Coastal Saline zone. Thus apply alternatively Phosphamidon 85 EC @ 1 ml / litre or Endosulfan 36 EC @ 1.5 ml / litre or Triazophos 40 EC @ 1.2 ml / litre of water when the symptoms are found.
- Details of crop varieties are mentioned in Annexure I.

Sikkim

- **Major standing crops:** (a) **High hills: Off-season vegetable crops** (nursery sowing/ seedlings) (b) **Medium & Low hills: Orange** (early flowering); **large cardamom** (early flowering); **wheat**

(milk/dough); **mustard** (capsule/grain development/maturity); **vegetable crops** (flowering/fruitletting/harvesting); **rabi potato** (maturity/harvesting).

- There was no significant rainfall during last few weeks and mainly dry weather has prevailed over Sikkim due to which both the maximum & minimum temperatures were above normal. Hence, light and frequent irrigation should be applied to vegetable crops, wheat and large cardamom in medium and low hills.
- As there are chances of isolated thundershowers in high hills, the seedlings of vegetable crops may be protected from onslaught of hail stone showers.
- Apply mulches around Orange trees in the mid hills in order to conserve sufficient moisture supplemented with light irrigation wherever possible to avoid moisture stress in the soil during prevailing low humid conditions.
- Pre-treated, healthy & certified seeds of kharif vegetable crops like tomato, chilly, capsicum brinjal, lali sag, ladies finger, radish etc. may be sown in nursery beds and climbing plants like bodi, iscus, bitter and other gourds in suitable places after applying FYM/compost and irrigating the soil with enough water in order to allow proper germination.
- Maintain large cardamom sucker nursery; apply FYM (dry and powdered)/compost; and undertake intercultural operations.
- All the disease/pest infected suckers in the nursery and all the aged/diseased/unproductive plants in the field of large cardamom crop may be removed/uprooted and destroyed.
- Chirke and Foorkey infected cardamom plants may be destroyed by uprooting and buried in the pits at regular intervals.

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

Assam

- **Major Standing crops:** Arhar (harvesting), vegetables (vegetative / flowering / fruiting / harvesting), mustard, lentil and pea (harvesting), wheat (dough / early maturity), *boro* rice (tillering), *ahu* rice (transplanting), jute and maize (sowing).
- 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.
- 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.
- As weather condition is favourable, undertake sowing of black gram and green gram. Sowing may be completed by this week.
- 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.

Animals

- Immunizations of animals against Foot and Mouth disease in cattle & buffaloes and swine-fever in pigs may be carried out during pre-monsoon season.

Arunachal Pradesh

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

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

Andhra Pradesh

- **Major Standing Crops:** sugarcane (grand growth), gram (grain development/maturity) 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 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
- spotted pod borer and powdery mildew in black gram, green gram and red gram, sheath blight in maize and fruit rot in chilli in Guntur;
- early shoot borer in sugarcane and 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).
- 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.
- 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. Also apply mulches in the soil to conserve moisture.
- 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 spray 4 ml planofix in 16 liter of water.
- Complete 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 reduce 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.
- purple blotch in onion in Bidar region; spray Mancozeb @ 2 ml/litre of water. Also necrosis in sunflower; spray Imidachlorpid @ 0.3 ml/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).
- Intercultural operations, 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.

Plant Protection:

- Weather conditions are favourable for the attack of
- 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/harvesting 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.
- 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.

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 / panicle initiation in South Konkan & tillering in North Konkan, East Vidarbha), summer groundnut (flowering / pegging in Konkan and vegetative in other divisions), summer maize (vegetative), summer sunflower (vegetative / floral bud formation) and summer bajra (vegetative / preflowering in Pune, Nashik & Aurangabad divisions).
- As there was no significant rain in most of the districts (except Buldhana district) 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 dry weather is prevailing, farmers are advised to continue harvesting of already matured crops of sugarcane and wheat.
- Apply 100 kg N / ha to sugarcane (*suru*) at 6 to 8 weeks after planting and 136 kg N, 85 kg P₂O₅ & 85 kg K₂O / ha to sugarcane (pre seasonal) at two inter node formation stage.
- Under present situation, apply a dose of Nitrogen @ 40 kg / ha to summer rice after 30 days from transplanting in 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 in Konkan.

Plant protection

- Due to cloudy & humid weather prevailed during last week, tomato crop is likely to be affected by blast & fruit borer in Western Maharashtra Scarcity zone. For control alternate spraying of Mancozeb @ 25 gm or Tabuconazol @ 5-10 ml in 10 liters of water may be carried out.
- There is possibility of tikka & rust disease in groundnut in Konkan. For control spray Mancozeb @ 25 g per 10 liters of water.
- 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 (harvesting), gram (harvesting), vegetables (vegetative / flowering / fruiting / harvesting), potato (harvesting), wheat (milk / dough), groundnut (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 dry weather is likely to prevail, apply 75 kg and 60 kg N as first split dose to okra and bajra crops respectively.

- 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.
- Under prevailing weather condition there is chance of attack of thrips in chilli and powdery mildew in mango in North Saurashtra region. 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.
- As weather condition is favourable for the attack of shoot borer in maize apply Carbofuran 3G @ 7.5 kg / ha in maize to control shoot borer.

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 of okra, 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 sowing of moong 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.
- powdery mildew disease in mango in Alwar, Bharatpur and Karauli districts due to rise in temperature . This leads to flower and fruit drop in mango, spray Karathane @ 1ml/l water to manage the disease. First spary should be done before flowering and second during fruited period.
- sucking pests in vegetables in Alwar, Bharatpur and Karauli, spray 0.03% Imidacloprid to Vegetables at 10 day interval to manage the pest.

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, Khargone 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.

- Undertake sowing of moong Urd, Sunflower and vegetables like lady's finger, cow-pea and cucurbitaceous crops in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts.
- Undertake sowing of summer moong and urad in Sehore, Bhopal, Sagar, Vidisha, Damoh 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.
- sucking pest of summer okra in Jhabua and Dhar, spray 1 ml/l of water of Mithyl Dimetron 25 EC.
- stem borer in sugarcane in Sehore, Bhopal, Sagar, Vidisha, Damoh districts, spray foret 10 gm/hect.

Chattisgarh

- **Major Standing Crops:** Sugarcane (vegetative / maturity), wheat (milk / dough / early maturity), gram, pea, mustard, berseem, pigeon pea and linseed (maturity / harvesting), potato (maturity / harvesting), vegetables (vegetative / flowering / fruiting / harvesting), summer rice (tillering), groundnut and sunflower (vegetative / flowering), summer vegetables, sesame and green gram (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 microclimate 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. Mulching is also advised to minimize the evaporation losses.
- 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.
- After harvest of sugarcane, clean the dry leaves and weeds from the fields to take ratoon crop; hoeing / earthing up and application of fertilizer followed by irrigation is advised.
- 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 within this week.
- As summer rice is at tillering / panicle initiation stage, under prevailing weather, application of second top dressing of N is recommended at this stage.
- 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.

- After harvesting of wheat, prepare the field well pulverized and complete the sowing of summer green gram within this month.

Annexure I Crop varieties

Himachal Pradesh

- **Ageti bhindi:** Prabhini kranti, Arka anamika.
- **French bean:** Conender.
- **Brinjal:** Arka Nidhi, PPC.
- **Capicum:** California wonder.

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.
- **Fox tail millet:** VL-29, VL-21, VL Madira-172
- **Bhindi:** Pusa Savany, Parbhani Krant

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.
- **Pigeon pea:** UPAS 120 and T-21.

Jammu

- **Potato** Kufri Jyoti and Kufri Badshah

Uttar Pradesh:

- **Sunflower:** Modern, Sankar, Surya, Jwalamukhi
- **Moong:** Pant-1, pant-2, 3, Narendra-1, Malviya, jyoti

Bihar:

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

Jharkhand:

- **Summer moong:** Sunayana, Pusha baishakhi, K851

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, Coorg honey dew, Coimbatore-1, Coimbatore-2, Pusa delicious, Pusa Majestic, Pusa Dwarf and Pusa Giant.
- **Pineapple:** Que, queen, Simachalan and Maritius.
- **Tube rose:** Shringar, Coimbatore Single and Kolkatta Single and Suhasini double.

West Bengal

- **Sesame:** Rama, Tilottoma.
- **Green gram:** TM-99-50, PDM-54, TARM-1, 2 etc.
- **Olitorious jute:** Basudev, Navin, Chaitali.
- **Capsularis jute:** Sonali, Sabuj Sona.

Assam

- **Direct seeded *ahu* rice:** Luit, Kapili,disang, Pusa-2-21, Culture-1 etc.
- **Transplanted *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.

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

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
- **Bottle guard:** Pusa Naveen, Arka Bahar
- **Pumpkin** - Pusa Vishwas, Arka Chandan, Puas Alankar, Arka Suryamukhi
- **Bitter guard:** Arka Harit Pusa Vishesh, Priya
- **Round gourd-** Arka tinda, Bikaneri green, Punjab-48.

Gujarat

- **Green gram:** Guj. GG-3 & Guj. GG-4 etc.
- **Sesamum:** Gujarat Til -2.

Madhya Pradesh:

- **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.
- **Summer moong:** PDM-11, JM-721, TJM-1
- **Urad:** Jawahar Urad-2, PDU-1, TPU-4