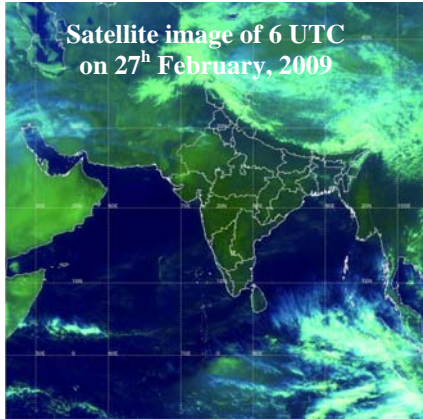




National Agromet Advisory Bulletin

Thursday, 26th February, 2009

(For the period 26th February to 2nd March, 2009)



Chief Synoptic Feature (Based on 1430 hours IST observations of 26th February, 2009)

- Scattered rain/thundershower has occurred over northeastern states due to the presence of an upper air cyclonic circulation in the lower troposphere and trough in the middle troposphere. The ongoing rain/thundershower activity is likely to continue during next 2-3 days.
- The maximum temperatures are 4-6°C above normal over many parts of west, central, east and peninsular India. They are 2-3°C above normal over the remaining parts of the country.
- The minimum temperatures are 3-6°C above normal over west and central India and 2-3°C over remaining parts of the country.
- The current meteorological analysis suggests, strong northwesterly surface winds over Indo- Gangetic plains and also a fall of about 2°C in the temperatures during next 48 hours.

Advisories for cold injury

- Due to possibility of low minimum temperature in Leh division of Jammu & Kashmir, protect vegetable crops like garlic from cold injury by arranging smoke nearby the field. Cover the cabbage heads with straw to avoid cold injury.

Advisories for irrigation

- As there was light to moderate rainfall in most of the districts in Arunachal Pradesh during last week and rainfall is likely during next five days, farmers are advised not apply irrigation to the crops.
- As there was no significant rain in most of the remaining States of the country during last week and no significant rain is likely to occur for next five days, farmers are advised to apply irrigation to the crops. However, in view of increasing temperature farmers are advised to apply irrigation to the crops, especially, wheat more frequently.

Advisories for pest and disease

- Weather conditions are favourable for the incidence of pests and diseases in the following States:
 - collar rot in gram and powdery mildew in field pea in Jammu division
 - thrips, rust and late leaf spot in groundnut in Andhra Pradesh.
 - aphids in mustard in Punjab, Haryana, Orissa and Bihar.
- 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.

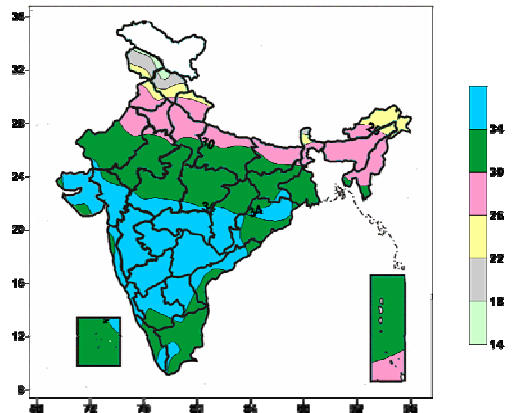
Comparison of weekly rainfall distribution (in % dep.) in different Met. Sub-divisions during past 5 weeks					
Sub-division	Cumulative Rainfall (% Dep.) for the period				
	28 th January	4 th February	11 th February	18 th February	25 th February
A & N Islands	-99	-96	-49	-100	-100
Arunachal Pradesh	16	-71	-100	-93	-40
Assam and Meghalaya	49	-95	-100	-96	-21
NNMT	-100	-100	-100	-69	-100
SH West Bengal & Sikkim	-100	-99	-100	-83	-97
Gangetic West Bengal	-100	-100	-100	-70	-100
Orissa	-100	-100	-100	-100	-100
Jharkhand	-100	-100	-100	-100	-100
Bihar	-100	-100	-68	-53	-100
East Uttar Pradesh	-100	-100	19	-100	-100
West Uttar Pradesh	-100	-100	-2	-100	-100
Uttarakhand	-100	-100	182	20	-100
Haryana, Chandigarh & Delhi	-87	-100	270	-87	-100
Punjab	-100	-100	29	-32	-99
Himachal Pradesh	-81	-95	167	-79	-50
J & K	-15	-96	-50	-39	-13
West Rajasthan	-100	-100	-96	-39	-100
East Rajasthan	-100	-100	-100	-100	-100
West M. P.	-100	-100	-100	-100	-100
East M. P.	-100	-100	-100	-100	-100
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	-100
Telangana	-100	-100	-100	-100	-100
Rayalseema	-100	-100	-100	-100	-100
TamilNadu & Pondicherry	106	-98	-100	-100	-99
Coastal Karnataka	-100	-100	-100	-100	-100
N. I. Karnataka	-100	-100	-100	-100	-100
S. I. Karnataka	-100	-100	-100	-100	-85
Kerala	-7	-100	-100	-65	-100
Lakshadweep	4	-100	-100	-63	-100

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

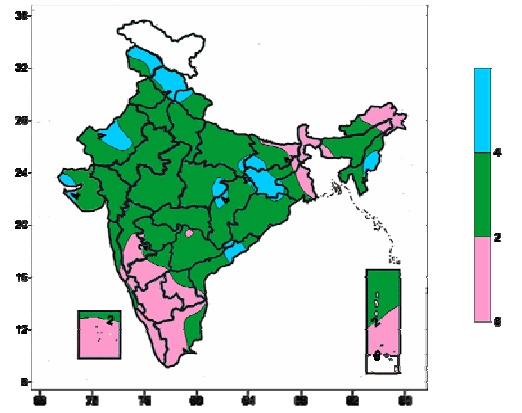
Contour maps for the week ending 25.02.09

Actual Mean Maximum Temperature (°C) in India for the week ending 25.02.09



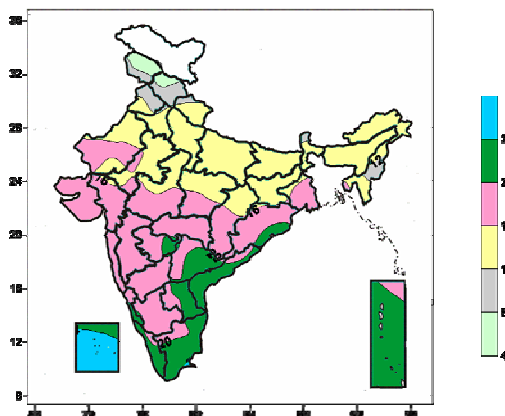
Actual Mean Maximum temperature ranged between 34 to 38°C over most parts of Gujarat, Saurashtra & Kutch, Maharashtra, Andhra Pradesh, Karnataka, some parts of West Rajasthan, South Madhya Pradesh, Chhattisgarh, Jharkhand, Orissa, Tamil Nadu, Kerala, Lakshdweep, 26 to 30°C over most parts of Punjab, Haryana, New Delhi, Uttarakhand, West Uttar Pradesh, North East India, Sub Himalayan West Bengal, some parts of North Rajasthan, East Uttar Pradesh, Bihar, Andaman & Nicobar Islands, 22 to 26°C over some part of Jammu & Kashmir, Punjab, Uttarakhand, Himachal Pradesh, Sikkim, North East India, 18 to 22 °C over some parts of Jammu & Kashmir, Himachal Pradesh, 14 to 18°C over some parts of Jammu & Kashmir, Himachal Pradesh, 30 to 34°C over remaining parts of the Country.

Maximum Temperature (°C) Anomaly in India for the week ending 25.02.09



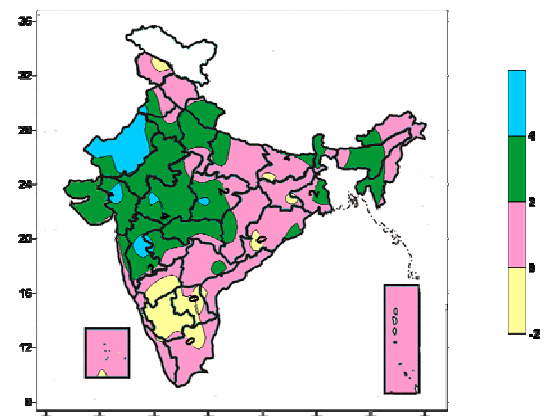
Actual Mean Maximum temperature anomaly ranged between 4 to 6°C over most parts of Himachal Pradesh, some parts of the Jammu & Kashmir, Uttarakhand, West Rajasthan, Saurashtra & Kutch, East Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Orissa, Coastal Andhra Pradesh, Manipur, 0 to 2°C over most parts of West Bengal & Sikkim, South Madhya Maharashtra, Karnataka, Rayalaseema, Kerala, Tamil Nadu, Lakshadweep, some parts of Bihar, Jharkhand, Assam, Arunachal Pradesh, Konkan & Goa, Marathwada, Telangana, Andaman & Nocobar Islands, 2 to 4°C over remaining parts of the country.

Actual Mean Minimum Temperature (°C) in India for the week ending 25.02.09



Actual Mean Minimum Temperature ranged between 24 to 28°C over most parts of Lakshadweep Island, 20 to 24°C over most parts of Andhra Pradesh, Tamil Nadu, Kerala and Andaman & Nicobar Islands, some parts of Marathwada, Coastal Orissa, Coastal Karnataka, 12 to 16°C over most parts of Haryana, New Delhi, Uttarakhand, East Rajasthan, Uttar Pradesh, Bihar, Jharkhand, Sub Himalayan West Bengal, North East India, North Madhya Pradesh, north Chhattisgarh,

Minimum Temperature (°C) Anomaly in India for the week ending 25.02.09

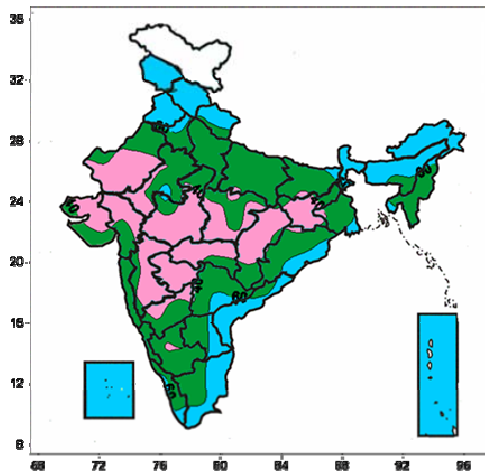


Minimum Temperature anomaly ranged between 4 to 6 °C over most parts of West Rajasthan, some parts of Punjab, Gujarat, Madhya Maharashtra, Madhya Pradesh, 2 to 4°C over most parts of Uttarakhand, Haryana, Delhi, West Uttar Pradesh, East Rajasthan, Madhya Pradesh, Maharashtra, Gujarat, Sub Himalayan West Bengal, Sikkim, some parts of Punjab, East Uttar Pradesh, West Rajasthan, Chhattisgarh, Gangetic West Bengal, North East India, Orissa, Telangana, -2 to 0°C

some parts of Punjab, West Rajasthan, Gujarat, 8 to 12°C over some parts of Jammu & Kashmir, Himachal Pradesh, Punjab Uttarakhand, Sikkim, Manipur, 4 to 8°C over some parts of Jammu & Kashmir, Himachal Pradesh, 16 to 20°C over remaining parts of country.

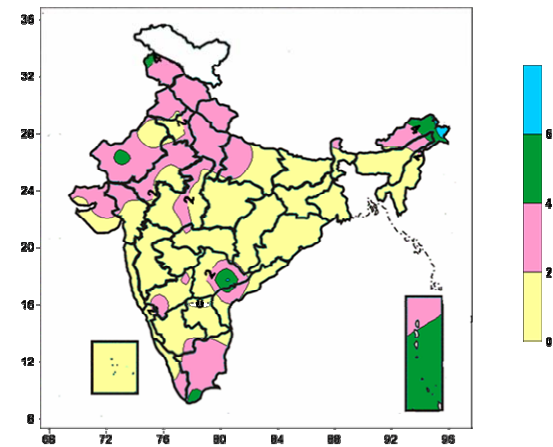
over most parts of South Interior Karnataka, some parts of Jammu & Kashmir, Bihar, Jharkhand, Orissa, Rayalaseema, North Interior Karnataka, Tamil Nadu, Lakshdweep, 0 to 2°C over remaining parts of the Country.

Relative Humidity (%) over India for the week ending 25.02.09



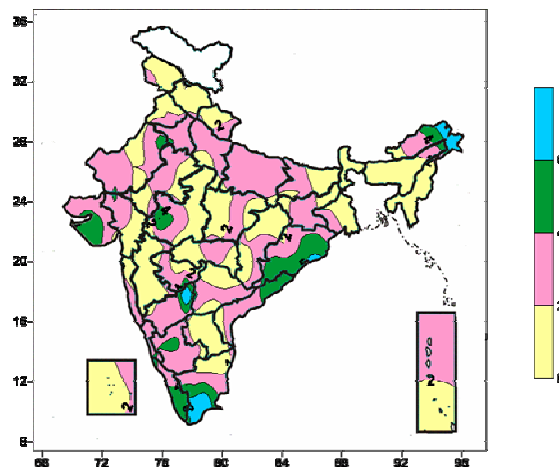
Relative humidity ranged from 60 to 80% over most parts of Jammu & Kashmir, Himachal Pradesh, Punjab, sub Himalayan west Bengal, Sikkim, Assam & Meghalaya, Arunachal Pradesh, Coastal Orissa, Coastal Andhra Pradesh, Coastal Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, some parts of Haryana, Uttarakhand, East Rajasthan, Bihar, Gangetic West Bengal, Tripura, Kerala, 20 to 40 % over most parts of West Rajasthan, North Gujarat, North Saurashtra, west Madhya Pradesh, North Chhattisgarh, Jharkhand, Madhya Maharashtra, Marathwada, Vidarbha, over some parts of East Uttar Pradesh, East Madhya Pradesh, Bihar, Interior Karnataka, Orissa, 40 to 60% over remaining parts of the country..

Cloud amount (okta) over India for the week ending 25.02.09



Cloud amount ranged from 6 to 8 okta over Arunachal Pradesh, 4 to 6 okta over most parts of Andaman Nicobar Islands, some parts of Jammu & Kashmir, West Rajasthan, Arunachal Pradesh, Assam, Telangana, Coastal Andhra Pradesh, Tamil Nadu, 2 to 4 okta over most parts of North India, North Gujarat, North Saurashtra, Rajasthan, Tamil Nadu, some parts of East Uttar Pradesh, Sikkim, West Madhya Pradesh, Vidarbha, Assam, Arunachal Pradesh, Interior Karnataka, Telangana, Rayalaseema, Andaman & Nicobar Islands, 0 to 2 okta over remaining parts of the country.

Wind speed (knots) over India for the week ending 25.02.09



Wind speed ranged between 6 to 8 knots over some parts of Arunachal Pradesh, Assam, North Interior Karnataka, Orissa, Tamil Nadu, 4 to 6 knots over some parts of West Rajasthan, south Saurashtra & Kutch, West Madhya Pradesh, Orissa, Arunachal Pradesh, Assam, Coastal Andhra Pradesh, Interior Karnataka, Kerala, Tamil Nadu, 0 to 2 knots over most parts of Jammu & Kashmir, Himachal Pradesh, Madhya Maharashtra, Rayalaseema, West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura, Lakshdweep, some parts of Punjab, Uttarakhand, Uttar Pradesh, Rajasthan, Gujarat, Konkan & Goa, Marathwada, Central India, Bihar,

Jharkhand, Arunachal Pradesh, Orissa, Telangana, Coastal Andhra Pradesh, Tamil Nadu, Andaman & Nicobar Islands, 2 to 4 knots over remaining parts of the country.

Chief Synoptic Feature (Based on 1430 hours IST observations of 26th February, 2009)

- Scattered rain/thundershowers have occurred over northeastern states due to the presence of an upper air cyclonic circulation in the lower troposphere and trough in the middle troposphere. The ongoing rain/thundershower activity is likely to continue during next 2-3 days.
- The maximum temperatures are 4-6°C above normal over many parts of west, central, east and peninsular India. They are 2-3°C above normal over the remaining parts of the country.
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- The current meteorological analysis suggests, strong northwesterly surface winds over Indo-Gangetic plains and also a fall of about 2°C in the temperatures during next 48 hours.

Satellite image of 6 UTC on 27th February, 2009

Zone-wise Forecast (Forecast valid upto 1430 hours IST of 1st 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]

- Isolated Rain/thundershowers are likely over Sub Himalayan West Bengal & Sikkim.
- Mainly dry weather is likely over the rest region.

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

- Rain/thundershowers are likely at a few places over Arunachal Pradesh during next 48 hours and at isolated places thereafter.
- Isolated rain/thundershowers are likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura.

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

- Isolated Rain/thundershowers are likely over Nicobar Islands.
- Mainly dry weather is likely over the rest region.

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

- Mainly dry weather is likely over the region.

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

- Mainly dry weather is likely over the region.

Weather Outlook from 1430 IST of 1st March, 2009 to 1430 IST of 3rd March, 2009 (Based on numerical weather products):

- A fresh western disturbance is likely to affect Western Himalayan region from 3rd March onwards.

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 (heading / flowering), barley, oat and oil seeds (vegetative / flowering), cabbage, cauliflower and broccoli (vegetative / head formation), pea (vegetative / flowering), carrot, raddish, turnip and the leafy vegetables like lettuce, methi, palak, dhania etc. (vegetative).
- As there was no significant rain during last week and no significant rain is likely to occur for next five days over the State, apply irrigation to the crops.
- For seed crop of berseem and oat one cut can be taken. As there is less 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 mainly dry weather is prevailing, 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 lower plain areas. 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.
- Weather is congenial for production of white button mushroom in the closed room. Maintain room temperature at 18-22⁰C 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.
- Mulch the tree basins to conserve moisture. Use waste materials like dry grass, broken leaves etc. Farmers may use black UV sheet for tree basins.

Poultry

- Replace the poultry houses with fresh litter to avoid wetting and keep the houses clean and ensure clean drinking water to the birds.

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. 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 (flowering/grain formation) and potato (tuber formation), mustard, chickpea and lentil (pod formation) and cabbage, onion, garlic and tomato (vegetative).
- As there was no significant rainfall in most of the districts during last few weeks and no significant rainfall is likely for the next five days, apply irrigation to the standing *rabi* crops.
- The weather conditions will remain favourable for wheat crop in grain filling of wheat crop as well for crops in other growth stages. Farmers having irrigation facilities must apply light irrigation in crop at ear head emergence stage followed by top dressing of Urea @ 2 kg per Nali in late sowing crop for encouraging quick ear head emergence.
- Undertake field preparation and planting of sugarcane.
- Undertake harvesting of matured crops of potato, sugarcane and toria as weather conditions are favourable for harvesting of the crops.
- Farmers are advised to undertake field preparation and sowing of sunflower and moong. 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.
- Farmers are also advised to undertake sowing of french bean. Details of varieties are given in Annexure I.

Punjab

- **Major Standing Crops:** Horticultural crops (vegetative), *spring* sugarcane (early vegetative), potato (tuber formation), wheat (heading/flowering), gram and lentil (vegetative), pea and vegetable crops like chilly, tomato, brinjal and onion (early vegetative), oilseeds (pod formation).
- Farmers are advised to complete sowing of sunflower and transplanting of chilli, tomato, brinjal and onion. Undertake sowing of cucurbits in polythene bags for raising early crop.
- As there was no significant rainfall in most of the districts during last week mainly dry weather is likely during next five days, apply irrigation to the standing crops.
- Undertake field preparation and planting of sugarcane.
- 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.
- Planting of citrus, guava and ber may be undertaken during late February.
- 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.
- Farmers are advised to cover the side of poultry sheds to maintain the temperature inside the shed.
- Give well chopped barseem mixed with wheat straw to avoid aphara (Tympany) in animals.

Plant Protection: Weather conditions are favourable for mild incidences of

- aphid in mustard crop, spray with 40 Actara 25 WG or 400 ml of Metasystox 25 EC Rogor 30 EC or Thiodan 35 EC or Ekalux 25 EC or 600 ml of Dursban 20 EC in 80-125 litres of water per acre or apply 4 kg Thimet 10 G (Phorate) or 13 kg Furadan 3 G followed by light irrigation. This spray must be carried out in the afternoon when the pollinators are less active.

Haryana

- **Major Standing Crops:** Spring sugarcane (early vegetative), vegetable crops (early vegetative), wheat (heading/flowering) and oilseeds (pod formation).

- As there was no significant rainfall in most of the districts during last two weeks mainly dry weather is likely during next five days, apply irrigation to the standing crops.
- Prepare the field and start the planting of sugarcane with early maturing varieties:
- 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. 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
- aphid in the mustard crop and hence farmers are advised to monitor the aphid build up and spray the crop with 250 to 400 ml Metasystox 25 EC or Rogor 30EC per acre as weather is expected to be clear.

Delhi

- **Major Standing crops:** Vegetables (vegetative / flowering / fruiting / harvesting), mustard (capsule formation), potato (tuber formation / tuber maturity), gram (pod formation), wheat (heading / flowering), *rabi* onion (vegetative).
- As dry weather is likely to prevail for next five days, farmers are advised to apply irrigation to wheat, vegetables, mustard, potato, gram etc.
- As there is no chance of rain, farmers are advised to undertake intercultural operation to keep the crop fields weed free.
- As dry weather is likely to prevail, farmers are advised to continue harvesting of already matured crops of potato.
- In view of prevailing dry weather and increasing temperature farmers are advised to apply irrigation to wheat more frequently.
- Farmers are also advised to apply irrigation to mustard wherever crops are at capsule formation stage.
- Farmers are advised for field preparation for transplanting of ladies finger during this week.
- Under present weather farmers are also advised to sow sunflower.
- As weather condition is favourable for pesticide application, spraying of Metasystox @ 1.5 ml / litre of water is advised in those wheat fields where aphid population has crossed economic threshold level.
- 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), potato (tuber formation) and wheat (flowering/grain formation).
- As there was no significant rainfall in most of the districts during last few weeks and mainly dry weather is likely to prevail for the next five days, apply irrigation to the standing *rabi* crops and sugarcane.
- Continue picking of vegetable crops depending upon the market demand.

- Undertake weeding, intercultural operations, application of fertilizers and pesticides in the standing crops like garlic, onion and potato as favourable weather conditions prevail during these days.
- Sowing/transplanting of onion may be continued.
- Farmers are advised to harvest the matured crops of sugarcane, rai and toria as favourable weather conditions are prevailing.
- Sowing of *zaid* maize at seeds rate 18-20kg/hectare may be done after preparing field and purification of seeds.
- Prepare field and undertake sowing of summer vegetables, sunflower and urd. 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 (tillering), pulses (late vegetative), mustard (late vegetative). This is proper time for planting of orchard tree saplings in Jammu and sowing of vegetable crops in nursery in Rajouri divisions.
- As mainly weather is likely to occur during next three days, apply irrigation to the crops.
- Due to possibility of low minimum temperature in Leh division, protect vegetable crops like garlic from cold injury by arranging smoke nearby the field. Cover seed crops mainly cabbage heads with straw to avoid cold injury. Arrange inputs for hot bed preparation.
- As there is possibility of no rain during next three days, apply fertilizers and plant protection measures.
- Undertake intercultural operations in brown sarson, pulses and wheat in Srinagar, mustard in Jammu division, beet, mongol and spinach in Leh division and mustard, berseem, pulses and vegetable crops in Rajouri division to keep the field weed free.
- Complete transplanting of onion and tomato seedlings in Jammu division. Undertake planting of saplings in orchard.
- Undertake sowing of tomato, brinjal, chilly and capsicum in nursery and raising of poly bags for bottle gourd, cucumber, pumpkin, sponge gourd and bitter gourd in Rajouri division.
- Undertake transplanting of popular trees in main field in Jammu division.
- In apiculture it is right time for initiating multiplication of earmark colonies showing good performance.
- Due to decrease in minimum temperature protect the pregnant and milch animals from cold and feed them mineral mixture regularly. Cover the poultry shed with gunny bags in order to protect the birds from cold weather.
- Weather conditions are congenial for mild incidences of
- aphids in mustard, collar rot and root rot in pulses and leaf eating caterpillar in vegetable crops in Rajouri division;
- collar rot in gram and powdery mildew in field pea in Jammu 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) and sunflower (head formation), wheat (flowering/grain formation) and *boro* rice (early vegetative)

- As there was no significant rainfall during last few weeks in most of the districts and mainly dry weather is likely for the next five days, apply irrigation to the standing 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.
- 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 for planting of sugarcane crop.
- 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@2.5gm per kilogram of seeds is advised before sowing.
- Farmers are also advised to harvest the matured potato, rapeseed, mustard and potato 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 crop.

Jharkhand

- **Major Standing Crops:** wheat (heading/flowering), *rabi* oilseeds (pod formation), potato(tuber formation).
- As there was no significant rainfall during last few weeks in the State and mainly dry weather is likely for the next five days, apply irrigation to the standing 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 (flowering), potato (tuber formation / early maturity), onion (vegetative) and summer rice (early tillering), summer sunflower (seedling / early vegetative) and summer groundnut(vegetative/flowering)
- As there was no significant rainfall in the State during last few weeks and mainly dry weather is likely for the next five days, apply irrigation to the standing *rabi* crops.
- Farmers are advised to undertake sowing of summer moong, maize, sesame and planting of marigold.
- Current weather conditions are favourable for planting of pine apple. Use healthy, robust 3-4 months aged rhizomes of 350-400 g by weight. Plant the seedlings in 0.5x0.5x0.5 m pit at a spacing of 1x0.3 m distance.
- Farmers are advised to complete sowing of summer cow pea, green gram and 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 *rabi* crops and early sown summer groundnut to keep the fields weed free.
- Early sown summer sunflower is at 25 days. Thin out plants keeping one healthy plant.
- 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 straw borer in rice. Install light trap or yellow stem borer pheromone trap to monitor yellow stem borer population. If incidence is more in the field (5% DH), apply phorate 10 G @ 4kg/acre or Cartap hydrochloride 4G @ 5 kg/ acre ensuring no leakage of water through the bunds.
- blast in rice. Spray 0.6 g Tricyclazole or 1 ml. Ediphenphos per litre water. Withhold top dressing of Urea for five days after the spraying. Increased temperature may favour the egg laying of stemborer in rice in the main field. To attract the borer butterflies, place 4 Pheromon traps/acre, collect the adults and destroy them by burying them under soil or by burning. Spray 2 ml Prophenophos per litre water. Brown Plant Hopper(BPH) infestation may be found in BPH prone areas. Keep regular watch on BPH attack. Drain out the water and again irrigate the field.
- aphids and leaf webber in late sown mustard crop. Spray the crop with Quinalphos @2 ml/lit.
- shoot and fruit borer in brinjal. Clip all the infested terminal shoots and destroy them. Immediately after clipping, spray the crop by Fenvalerate @1 ml/lit. if sucking insects are not there. If sucking insects are present along with fruit and shoot borer, spray the crop with Actara 25WG @1g/4 litre of water or Spinosad 45 SC @ 0.5 ml/litre of water.

West Bengal

- **Major Standing Crops:** Sugarcane (cane maturity / harvesting), mustard, gram and lentil (seed / grain formation / early maturity), wheat (flowering / grain formation), potato (maturity / harvesting) and *boro* rice (early vegetative / tillering).
- As there was no significant rain during last few weeks in most of the districts of the State and there is less possibility of rain during next five days, apply irrigation to mustard, gram, lentil, wheat and vegetables.
- As there is less possibility of rainfall, farmers are advised to undertake intercultural operation to keep the fields weed free.
- Timely transplanted crop is now at tillering stage. Maintain 3-5 cm depth of standing water at tillering stage. As dry weather is prevailing, apply 20 kg of urea per bigha as top dressing after 21 days of transplanting.
- Stop application of irrigation 15 days before harvesting of potato. Dehaulm the upper portion of the crop so that infestation of tuber from virus can be checked.
- Harvest timely sown 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.
- Due to variation of temperature between day and night, 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.
- Due to high humidity, gram, lentil and *Lathyrus* may be infected by blight and rust diseases. Thus spray *Tricoderma* @ 4 g / litre or carbendazim 50 WP @ 1 g / litre of water, if the disease symptoms appear. There is also chance of attack of pod borer. Spray Deltamethrin + Triazophos @ 2 ml / litre or Endosulphan @ 2 ml / litre or B.T. @ 1 ml / litre of water, if the attack is noticed.
- Details of crop varieties are mentioned in Annexure I.

Sikkim

- **Major Standing Crops:** Orange (maturity/picking), large cardamom (vegetative), *rabi* wheat (heading/ flowering), mustard (capsule formation), vegetable crops (flowering/fruitleting/harvesting), potato (maturity)
- 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, apply irrigation to the vegetable crops, wheat, orange and large cardamom in medium and low hills.
- Undertake intercultural operations and application of 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.
- **Plant Protection:** Weather conditions are congenial for mild incidences of fruit fly and trunk borer in orange. Monitor the crop/tree and undertake plant protection measures to control the pests and diseases.

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

Assam

- **Major Standing crops:** Arhar (pod formation / maturity), sugarcane (harvesting), vegetables (vegetative / flowering / fruiting / harvesting), mustard, lentil and pea (pod formation / early maturity), *toria* (maturity), wheat (heading / flowering / grain formation), potato (early maturity / maturity) and *boro* rice (early vegetative / tillering).
 - As there was no significant rain over the State during last few weeks and no significant rain is likely to occur for next five days, farmers are advised to apply irrigation to arhar (at pod formation stage) and vegetable crops like cauliflower, cabbage, raddish, brinjal, tomato, knolkhol, onion and carrot and also to wheat, mustard, lentil and pea.
 - As there is no possibility of significant 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 sugarcane. Farmers are also advised to harvest already matured crops of arhar, potato and *toria* 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 started now.
 - As weather condition is favourable, undertake sowing of black gram and green gram. Sowing may be done 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. as growing of early summer vegetable crops will fetch more income.
 - Rust in field pea has been observed in some locality and is likely to be increased. To prevent the spread of this disease Calixin @ 1-2 ml / litre of water may be applied depending on the disease intensity.
 - 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 (seed formation/maturity), *rabi* maize (grain formation / maturity).
- As there was light to moderate rainfall in most of the districts during last few weeks and rainfall is likely during next five days, farmers are advised not apply irrigation to mustard, wheat and *rabi* maize.
- As there is rain at few places during next two days is expected, farmers are advised to undertake intercultural operations in late sown crops on a non rainy day.
- Also undertake harvesting of matured vegetables, mustard, wheat, pea, potato and *rabi* maize on bright sunny days.
- Farmers are advised to undertake 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 chilly (fruit development)
- Apply irrigation to the crops as there was no rainfall during last few weeks and mainly dry weather is likely to prevail over the state for the next five days.
- 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 undertake sowing of rice fallow maize and rice fallow pulse crops during these days. Details of varieties are given in Annexure I.
- Farmers in high altitude regions of Srikakulam, East Godavari, Vijayanagaram, Visakappattinam and Khammam are advised to complete harvesting of red gram. Complete transplanting the seedlings of rice and ragi.
- **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, Spodaptera in gram, sucking pests in cotton and white fly and fruit rot in chilly in Guntur;
- ring spot and rust in sugarcane, powdery mildew and thrips in chilly, Alternaria leaf spot and fruit borer in tomato, powdery mildew in gourds, leaf spot and aphids in field bean and hopper, mealy bug and anthracnose in mango in Srikakulam, Vijayanagaram and Visakappattinam
- 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 mainly dry weather is likely to prevail over the state for the next five days, apply irrigation to the crops.
- Farmers in Gulbarga and Raichur are advised to undertake 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.
- 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.

- Planting of new sugarcane can be taken up to the end of February.
Plant Protection: Weather conditions are favourable for mild incidences of:
- *Heliothis* in gram and red gram and jassids and powdery mildew in mango in Dharwad;
- blast in rice, flower drop in arecanut and powdery mildew in pulses and mango; undertake plant protection measures.
- tea mosquito on cashew. So farmers are advised to take up spraying of lambda cyhalothrin @ 0.5 ml/lit of water.

Kerala

- **Major Standing Crops:** *Mundakan* rice (maturity), vegetable (vegetative/flowering/fruited) and plantation crops (coconut, arecanut, pepper and cashew). This is proper time for sowing *puncha* rice and *rice fallow/summer* vegetable crops.
- As there was no rainfall during last few weeks in the state and mainly dry weather is likely to prevail for the next five days, farmers are advised to apply irrigation to the crops.
- Undertake sowing of *puncha* rice in nursery in Malappuram, Kasargod, Kozhikode and Kannur districts.
- Undertake sowing of rice and *summer* vegetable crops in and around Thrissur.
- Details of varieties are given in Annexure I.
- Provide thatches to young plants of arecanut in Wayanad and coconut in Thiruvananthapuram to prevent from sun scorching. Undertake coating of bottom portion of rubber trees with lime.
- Continue harvesting/plucking of arecanut, coconut, pepper, banana, ginger, cardamom and coffee in Wayanad and turmeric, ginger and pepper in Thrissur as conducive weather conditions prevail during these days. Collect and store seed nuts for new planting.
- Undertake planting of ginger in Wayanad district and pepper in poly bags in Thrissur district.

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.
- mealy bugs, scales, mites, etc. in vegetables.
- Undertake plant protection measures.

Tamilnadu

- **Major Standing Crops:** Special season sugarcane (grand growth stage), Cotton (boll maturity/ 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.
- As there was no sufficient rain during last few weeks in the state and mainly dry weather is likely to prevail over the state for the next five days, farmers are advised to apply irrigation to the crops.
- Undertake land preparation and sowing of 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.
- Start land preparation for sowing of summer irrigated crops in Thirunelveli, Tuticorin and Virudhunagar districts.
- **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), *rabi* jowar (grain maturity / harvesting), *rabi* sunflower & safflower (seed maturity / harvesting), maize (cob maturity/harvesting), gram (pod maturity / harvesting), wheat (dough/ maturity in early sown crops while late sown crop at milk / dough stage), summer rice (transplanting / early tillering in Konkan & transplanting in East Vidarbha), summer groundnut (vegetative in Konkan and sowing / germination in other divisions).
- As there was no significant rain in all the districts of the State during last few weeks and mainly dry weather is likely to prevail during next five days, apply irrigation to the summer rice & groundnut in Konkan.
- As dry weather is prevailing, farmers are advised to continue harvesting of already matured crops of sugarcane, jowar, safflower, sunflower, gram and maize.
- Under prevailing weather, transplanting of summer rice and ragi may be completed with 30 to 35 days old seedlings at a distance of 20 x 20 cm or 15 x 15 cm in North Konkan and also continue transplanting of summer rice in East Vidarbha. Also undertake sowing of summer groundnut (30 x 10 cm spacing), summer bajra (30 X 10 cm spacing) and 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 Konkan.
- As prevailing weather condition is favourable, apply dose of 136 kg N₂, 85 kg P₂O₅ & 85 kg K₂O / ha to the pre-seasonal sugarcane after 4 to 4.5 months from planting at the time of final earthing up followed by irrigation and also apply 100 kg Nitrogen / ha to sugarcane (*suru*) after 6 to 8 weeks from planting followed by irrigation.
- As dry weather is prevailing, apply third dose of 330 g Nitrogen (700 g urea) and 330 g Potash (550 g murate 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 Murate of potash) per plant of arecanut of age 3 years and more followed by irrigation.
- **Plant protection**
- There is chance of attack of thrips on cashew in Konkan, for control spray 50% prophanophos @ 10 ml or 5 % Lamdacylothrin @ 6 ml / 10 liters of water. There is also chance of attack of nut borer in cashew, spray D.D.V.P @ 1 ml / 1liter 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), *Kharif* cotton (boll maturity / picking), castor (maturity / picking), mustard (pod formation), vegetables (vegetative / flowering / fruiting / harvesting), potato (tuber formation / maturity) and wheat (heading / flowering).
- 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, apply irrigation to mustard, wheat, potato and vegetables.
- As there is no possibility of rain, undertake intercultural operation to keep the fields weed free.
- Prevailing weather is conducive for harvesting matured crops of castor and picking of *kharif* cotton.
- As weather condition is favourable, farmers are advised to undertake transplanting of summer rice in the main field.

- Under prevailing weather condition farmers are advised to prepare land and undertake sowing of summer groundnut and other summer crops like green gram, black gram, cow pea, cluster bean and pearl millet.
- As there is chance of attack of pod borer in gram in Bhal and Coastal region and Saurashtra region due to favourable weather condition, apply Endosulphan 35 EC or Monocrotophos 35 EC @ 20 ml in 10 liters of water for effective control of pod borer.
- 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, South Gujarat and Bhal and Coastal 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: Rabi crops (wheat, mustard, gram, vegetable crops, etc.) are at flowering stage.
- As there was no significant rainfall during last week in the state and no significant rainfall is likely for the next five days, apply irrigation to the crops.
- Undertake sowing of groundnut, cucurbits like as Bitter gourd, water melon, pumpkin (kaddu), cucumber, round gourd (tinda), Ridged Gourd (turai), loki, muskmelon in Bhilwara, Sirohi, Udaipur and Chittorgarh. Select varieties like TAG-24, SB-11, DH-86 and GG-2. A seed rate of 100-120 kg/ha for groundnut.
- Undertake sowing summer Okra in Ajmer, Dausa, Tonk and Jaipur. Use varieties like Pusa sawani, Pusa Makhmali, Parbhani, Kranti, Ark Abhay & Arka Anamika 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.K-851 (60-70 days), PDM-11 (60-65 days), Pusa Baisakhi (60-80 days), RMG-268 (65-70 days) are improved varieties of green gram in Ajmer, Dausa, Tonk and Jaipur.
- Undertake sowing for the summer groundnut and cucurbits like as Bitter gourd, water melon, pumpkin (kaddu), cucumber, round gourd (tinda),Bhilwara, Sirohi, Udaipur and Chittorgarh.
- Undertake sowing of bajara, jowar, sweet gourd, cucumber, pumpkin, bitter gourd, tinda, tomato and ladies finger in Barmer, Churu, Jalore and Jodhpur.
- Undertake sowing of sugarcane in Sriganganagar and Hanumangarh.
- Details of varieties are given in Annexure I.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
- cut worm in gram in Alwar, Dholpur, Bharatpur, Karauli and Sawai Madhepur districts, dust Endosulphan 4 % or Methyl Parathion 2%.
- purple blotch disease in onion in Alwar, Dholpur, Bharatpur, Karauli and Sawai Madhepur, spray 2-3 times 0.25% solution of Dithane M 45 at 15 days interval to manage purple blotch disease.
- termite attack on Rabi onion in Ajmer, Dausa, Tonk and Jaipur districts,give Endosulfan 35 EC @ 2.5 litre or chlorpyriphos 20 EC @ 4 litre per hectare with irrigation water.
- red pumpkin beetle in cucurbits in Ajmer, Dausa, Tonk and Jaipur districts, Broadcast carboryl 5% @ 20 kg/ha or spray Asipheth 75 S.P. 0.5 gram per litre water.
- fruit borer in Tomato in Ajmer, Dausa, Tonk and Jaipur districts, spray Endosulfan 35 EC or Malathion 50 EC @ 1 ml per litre water or spray Bacillus Thuringensis Kastki (Dypel-8 L)@ 1 litre water with Methomil 40 SP @ 600 gm per hectare. Repeat spray after 15 days if problem persists.
- fruit fly in ber in Pali; spray Monocrotophos @ 1 ml + Endosulphan @ 1 ml/litr of water.

CENTRAL INDIA [M.P., CHHATTISGARH]

Madhya Pradesh

- Major Standing Crops: Sugarcane (grand growth), soyabean (pod maturity), maize (cob development/maturity), cotton (boll development) and vegetable crops (vegetative).
- As there was no significant rainfall during last few weeks and dry weather is likely to prevail over the state for the next five days, apply irrigation to the standing crops.
- Undertake intercultural operations in cauliflower, cabbage, tomato, chilly, onion and brinjal in Chindwara and Betul.
- Undertake sowing of summer vegetables like cucurbits, summer okra, summer moong and urd in the pit in Jhabua, Dhar, Chattarpur and Datia.
- Undertake sowing of moong and urad in Khandwa, Khargone and Harda
- Undertake planting of brinjal in Mandsaur, Ratlam, Neemuch, Shajapur, Ujjain and Rajgarh. Prepare the nursery of summer vegetables such as brinjal and chilly. Apply irrigation and nitrogen to onion.
- 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.
- **Plant Protection:** Weather conditions are favourable for
 - red pumpkin beetle in cucurbits, sucking pest and powdery mildew in vegetables in Indore, Mandsaur, Ratlam, Neemuch, Shajapur, Ujjain and Rajgarh districts. Apply Methyl parathion @ 2% dust before fruiting to control red pumpkin beetle, spray Dimethoate @ 1.5 ml/litre of water to control sucking pests and spray Carbendazime @ 1 g/litre of water to control powdery mildew in vegetables.
 - agathi or pacheti and zulsa in potato in Morena, Bhind, Gwalior, Shivpuri, Guna, Sheopur and Ashoknagar districts; spray Mancozeb @ 2 kg in 600 lit water.
 - mealy bug in mango in Jhabua and Dhar, spray 25 gm Esiphet or 30 ml Prophenophos
 - pod borer in chickpea in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi., to control place “T” shaped pegs in the field to shelter the predators and also use different types of light traps i.e. Mercury Vapor Lamp and Pheromone Traps @ 5 trap/ hectare and for caterpillar spray NPV virus @ 250 lt. dissolve in 500 L water.

Chattisgarh

- **Major Standing Crops:** Sugarcane (vegetative / maturity), wheat (heading / flowering), gram, pea, mustard, berseem, pigeon pea and linseed (pod formation), potato (early maturity / maturity), vegetables (vegetative / flowering / fruiting / harvesting), 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 advised to reduce the interval between two irrigations (particularly in wheat crop) 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.
- Now the temperature conditions are suitable for proper germination of sugarcane. Hence, it is advised to prepare well pulverized field and plant sugarcane. 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 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.
- 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

Jammu

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

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.

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.

Rajasthan:

- **Green gram:** K-851 (60-70 days), PDM-11 (60-65 days), Pusa Baisakhi (60-80 days), RMG-268 (65-70 days)

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.

Punjab:

- **Sugarcane:**
Early maturing: CoJ-85, CoJ-83 CoJ-64, **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

Bihar:

- **Summer maize:** Suwan, Ganga 11, Deoki, Shaktiman 3 and 4

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.
- **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.

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.

Maharashtra

- **Groundnut:** Improved varieties like TAG-26, TG-37, TAG-24 & SB-11.
- **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.
- **Summer bajra :** Shardha and Saburi or I.C.T.P-8203, I.C.M.V.-211.

Delhi

- **Sunflower:** Modern.