



National Agromet Advisory Bulletin

Thursday, 21st May, 2009

(For the period 21st to 25th May, 2009)



Chief Synoptic Feature (Based on 1430 hours IST observations of 21st May 2009)

- Heat wave conditions continued to prevail over some parts of Rajasthan and isolated pockets of Madhya Pradesh. They are likely to abate during next 2 days.
- Current meteorological analysis and numerical weather prediction models indicate gradual increase in pressure gradient over Bay of Bengal and Arabian Sea causing strong cross equatorial flow and increase in rainfall activity over south peninsula during next 3-4 days.
- A low pressure area is likely to form over central Bay of Bengal around 23rd May.

Forecast for the 2009 Monsoon Onset over Kerala

The onset forecast model suggests that the monsoon onset over Kerala in 2009 is likely to be on **26th May** with a model error of ± 4 days.

Salient Advisories

Advisories for Severe heat wave/heat wave

- Heat wave conditions continued to prevail over some parts of Rajasthan and isolated pockets of Madhya Pradesh. As there is no possibility of significant rain over these areas, apply light and frequent irrigation to the crops to avoid the adverse effects of high temperature.

Advisories for squall

- Protect the standing crops and fruits by providing mechanical support as thunder squall is likely over some parts of Gangetic West Bengal and Orissa during next 48 hours.

Advisories for sowing

- Start land preparation utilizing recent pre-monsoon thundershower and arrange seeds and other inputs to undertake sowing of *kharif* crops as soon as monsoon arrives over Karnataka and Andhra Pradesh.
- Undertake land preparation utilizing the showers in Tamil Nadu. Complete nursery sowing of *kuruvai* rice in Cauvery deltaic areas at the earliest and start land preparation for transplanting of rice in the main field.
- Undertake transplanting of *virippu* rice in Kerala after current spells of rain as rain/thundershowers at most places along with isolated heavy rainfall is likely during next 48 hours.
- After harvesting of summer crops the land should be ploughed by heavy tractor in most of the remaining States utilizing pre monsoon shower and leave it for sun drying. It is useful for management of weeds and pests.

Advisories for irrigation

- As rain is likely to occur at most places over Kerala, Tamilnadu and Coastal & South Interior Karnataka during next five days, farmers are advised to postpone irrigation and agricultural operations like fertilizer and pesticides application.
- 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 the next five days, farmers are advised to apply irrigation to the crops as and when required.

Advisories for pest and disease

- Weather conditions are favourable for the incidence of pests and diseases in the following States:
 - White fly and fruit fly in watermelon and muskmelon in Delhi.
 - Powdery mildew in apple in Himachal Pradesh.
 - Mite in cucurbit, brinjal and tomato in Rajasthan.
 - Fruit and shoot borer 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,

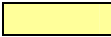

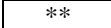
Agricultural Meteorology Division, India Meteorological Department, Shivajinagar, Pune.

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 for the period									
	22nd April		29th April		6th May		13th May		20th May	
	Normal (mm)	% Dep.	Normal (mm)	% Dep.	Normal (mm)	% Dep.	Normal (mm)	% Dep.	Normal (mm)	% Dep.
A & N Islands	16	93	27	-86	56	-45	57	-84	90	-47
Arunachal Pradesh	62	-21	67	-77	61	-61	52	-41	70	-59
Assam and Meghalaya	51	31	55	-65	86	-9	84	-43	89	-83
NMMT	40	44	41	-92	53	-27	50	-75	47	18
SH West Bengal & Sikkim	32	112	33	-90	53	-19	50	-11	58	-69
Gangetic West Bengal	15	-99	15	-97	18	-28	23	62	18	137
Orissa	11	-90	10	-97	11	-53	14	-54	14	-3
Jharkhand	6	-100	6	-100	8	-14	12	-5	9	-1
Bihar	7	-84	7	-100	10	-51	13	48	11	-49
East Uttar Pradesh	2	-100	1	-100	3	48	4	12	4	8
West Uttar Pradesh	1	-100	1	-100	2	-89	3	-74	3	-51
Uttarakhand	9	-100	8	-100	10	-18	16	-73	16	-91
Haryana, Chandigarh & Delhi	2	-89	1	-100	2	-8	4	-97	3	-95
Punjab	3	-92	2	-100	2	-14	5	-99	4	-88
Himachal Pradesh	15	-5	13	-98	14	75	18	-30	16	-76
J & K	25	-54	23	-98	17	61	22	-52	16	-50
West Rajasthan	1	-97	1	-100	1	-65	2	-100	22	-100
East Rajasthan	1	-100	1	-100	1	-96	2	-83	22	-66
West M. P.	1	-100	**	-100	1	179	1	-79	21	154
East M. P.	2	-100	1	-100	1	-99	1	-100	12	-11
Gujarat region	1	-100	**	-100	**	-100	1	-100	1	-100
Saurashtra & Kutch	1	-100	**	-100	**	-100	1	-100	1	-100
Konkan and Goa	2	-100	1	-100	3	-100	1	-100	5	-99
Madhya Maharashtra	2	-100	3	-100	5	-100	3	-91	6	38
Marathwada	2	-100	1	-100	2	-100	2	-96	4	-4
Vidarbha	2	-100	1	-100	2	-100	2	-100	2	102
Chhattisgarh	5	-100	3	-100	5	-84	5	-100	55	-46
Coastal A. P.	8	-91	6	-75	8	120	17	-94	14	-68
Telangana	5	-71	4	-31	4	-16	6	-95	8	6
Rayalseema	5	-67	5	-68	7	-50	7	-66	16	-23
TamilNadu & Pondicherry	10	-16	11	-67	12	-49	14	-41	20	15
Coastal Karnataka	6	-93	10	-21	17	-77	11	-16	30	3
N. I. Karnataka	5	-60	9	-67	9	-74	8	-88	14	81
S. I. Karnataka	10	2	15	-40	19	-46	16	-74	27	87
Kerala	28	-50	34	-59	39	-51	36	-29	67	-40
Lakshadweep	10	-100	11	-81	18	-78	19	-61	36	65

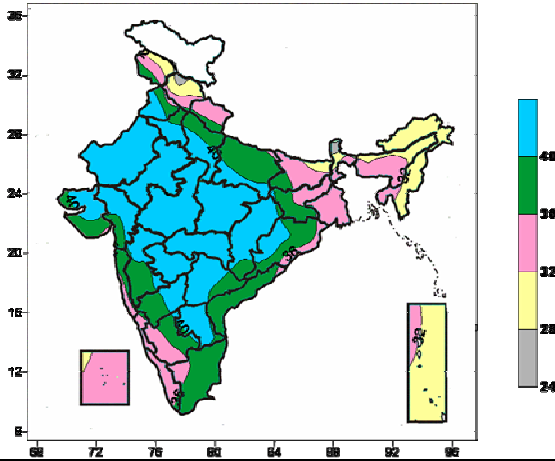
The subdivisions like Arunachal Pradesh, West Uttar Pradesh, Rajasthan, Gujarat, Saurashtra & Kutch, Konkan & Goa, Chhattisgarh, Rayalaseema, Kerala received scanty / deficient rain in all the 5 weeks; Andaman & Nicobar Island, Orissa, Bihar, Uttarakhand, Haryana, Chandigarh & Delhi, Punjab, Jammu & Kashmir, East Madhya Pradesh, Madhya Maharashtra, Marathwada, Vidarbha, Coastal Andhra Pradesh, North Interior Karnataka, and Lakshdweep Islands received scanty / deficient rain in 4 out of last 5 weeks; Assam & Meghalaya, Nagaland-Manipur-Mizoram-Tripura, Gangetic West Bengal, Himachal Pradesh, West Madhya Pradesh, Telangana, Tamil Nadu & Pondicherry and Coastal & South Interior Karnataka, received scanty / deficient rain in 3 out of last 5 weeks. Remaining States received normal / excess rain in 2 or more weeks during last 5 weeks.

 (20% or more) excess rainfall
 (-19 to +19%) normal rainfall
 (-20 to -59%) deficient rainfall

 (-60 to -99 %) scanty rainfall
 (-100%) no rainfall
 ** Data not available

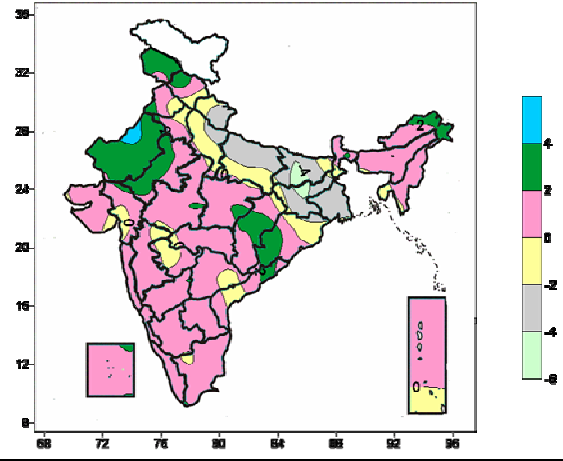
Contour maps for the week ending 20.05.09

Actual Mean Maximum Temperature (°C) in India for the week ending 20.05.09



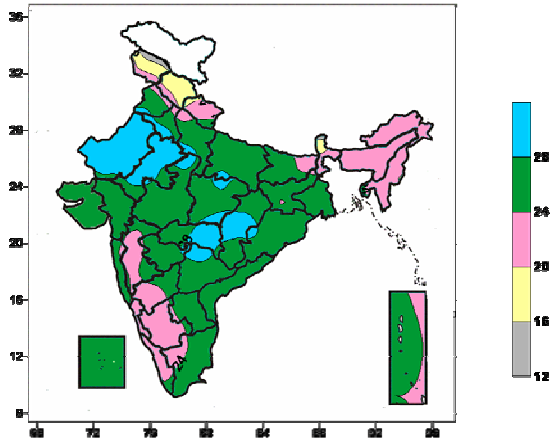
Actual Mean Maximum temperature ranged between 40°C and above over most parts of Marathwada, Vidarbha, Telangana, Rajasthan, Madhya Pradesh, Chattisgarh some parts of Orissa, Madhya Maharashtra, Rayalaseema, Gujarat, Punjab, Haryana, Uttar Pradesh 36 to 40°C over most parts of Konkan & Goa, Interior Karnataka, Uttar Pradesh, Coastal Andhra Pradesh, Tamil Nadu some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Bihar, Jharkhand, West Bengal, Orissa, Saurashtra & Kutch, 32 to 36°C over most parts of Assam & Meghalaya, Nagaland, Manipur, Lakshadweep, Kerala some parts of Andaman & Nicobar Islands, Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Orissa, Interior Karnataka, Tamil Nadu, West Bengal 28 to 32°C over most part of Andaman & Nicobar Islands over some parts of Jammu & Kashmir, Himachal Pradesh, Arunachal Pradesh, Nagaland Manipur, Bihar 22 to 26°C over some parts of Himachal Pradesh, Sikkim.

Maximum Temperature (°C) Anomaly in India for the week ending 20.05.09



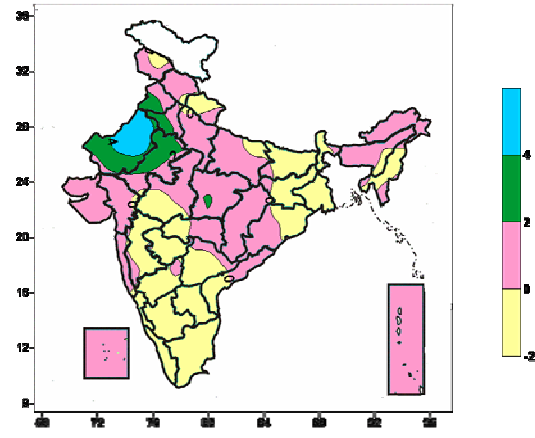
Actual Mean Maximum temperature anomaly ranged between 4°C and above over some part of Rajasthan 2 to 4°C over most parts of Rajasthan, Jammu & Kashmir some parts of Himachal Pradesh, Assam & Meghalaya, Arunachal Pradesh, Orissa, East Madhya Pradesh, Coastal Andhra Pradesh, -2 to 0°C over some parts of Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh, Bihar, Orissa, Gujarat, Madhya Maharashtra, Marathwada, Tamil Nadu, Andaman & Nicobar Islands, Telangana Coastal Andhra Pradesh -4 to -2°C over some parts of Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, Gangetic West Bengal -4 to -6°C over some part of Bihar & Jharkhand 0 to 2°C over remaining parts of the country.

Actual Mean Minimum Temperature (°C) in India for the week ending 20.05.09



Actual Mean Minimum Temperature ranged between 28 to 32°C over most part of Rajasthan, some part of Marathwada, Vidarbha, Madhya Pradesh, Chhattisgarh, Andhra Pradesh, Uttar Pradesh 20 to 24°C most parts of Northeastern States, Karnataka, Kerala, Madhya Maharashtra, some part of Punjab, Haryana, Uttarakhand, Bihar, Sub-Himalayan West Bengal, Sikkim, Konkan, west Uttar Pradesh, Tamil Nadu, Andaman & Nicobar Islands 16 to 20°C over some parts of Jammu & Kashmir,

Minimum Temperature (°C) Anomaly in India for the week ending 20.05.09

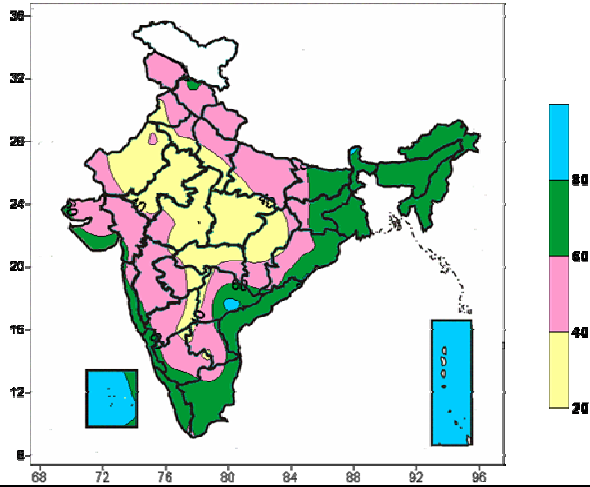


Minimum Temperature anomaly ranged between 2 to 4°C over some parts of Rajasthan, East Madhya Pradesh, -2 to 0°C over most parts of Bihar Jharkhand, Sikkim, West Bengal Nagaland, Manipur, Madhya Maharashtra, Marathwada Telangana, Royalaseema, Interior Karnataka, Tamil Nadu, Kerala some parts of Jammu & Kashmir, east Uttar Pradesh, Himachal Pradesh, Vidarbha, Coastal Andhra Pradesh, Coastal Karnataka, Orissa 0 to 2°C over remaining parts of the

Himachal Pradesh, Uttarakhand, Sikkim, 12 to 16°C over some parts of Jammu & Kashmir, Sikkim, 24 to 28°C over remaining parts of country.

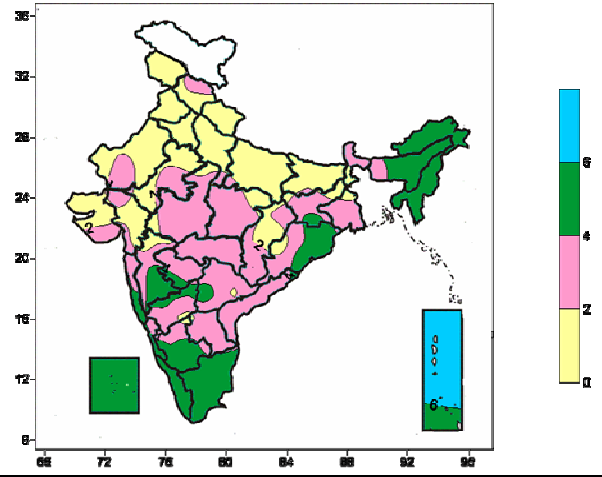
Country.

Relative Humidity (%) over India for the week ending 20.05.09



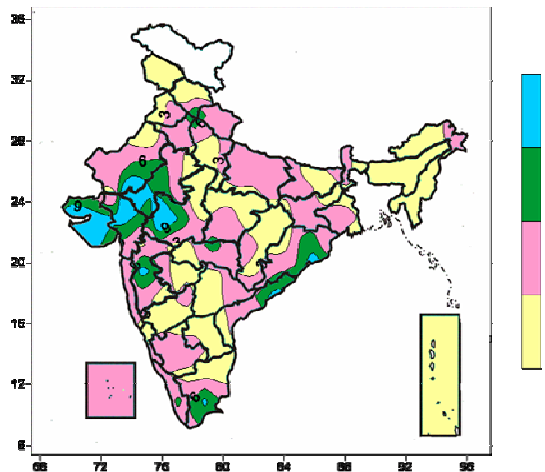
Relative humidity more than 80% over most parts of Lakshdweep, Andaman & Nicobar Islands, 60 to 80% over most parts of West Bengal, Sikkim, Northeast India, Bihar, Jharkhand, Coastal Orissa, Coastal Andhra Pradesh, Tamil Nadu, Kerala, Coastal Karnataka, Konkan & Goa, , some parts of Himachal Pradesh, Saurashtra & Kutch, Telengana, Raylaseema, North & South Interior Karnataka, Madhya Maharashtra, 40 to 60% over most parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Central Orissa, Saurashtra & Kutch, Gujarat, Madhya Maharashtra, Marathwada, North & South Interior Karnataka, Rayalaseema, some parts of Punjab, Haryana, Rajasthan, Bihar Jharkhand, Orissa, Chhattisgarh, Telengana, North & South Interior Karnataka, Tamil Nadu, 20 to 40 % over remaining parts of the country.

Cloud amount (okta) over India for the week ending 20.05.09



Cloud amount ranged from 6 to 8 okta over most parts of Andaman & Nicobar Islands, 4 to 6 okta over most parts of Northwest India, Coastal & South Interior Karnataka, Kerala, Tamil Nadu, Lakshadweep Island, some parts of Andaman & Nicobar Island, Jharkhand, Orissa, Konkan, Mahdy Maharashtra, Telengana, 2 to 4 okta over most parts of West Bengal, Sikkim, Andhra Pradesh, Vidarbha, Mahdy Pradesh, some parts of Himachal Pradesh, Assam, Chattisgarh, Orissa, Karnataka, Konkan & goa, Madhya Maharashtra, Marathwada, Gujarat, Rajasthan, Uttar Pradesh, 0 to 2 okta over remaining parts of the country.

Wind speed (knots) over India for the week ending 20.05.09

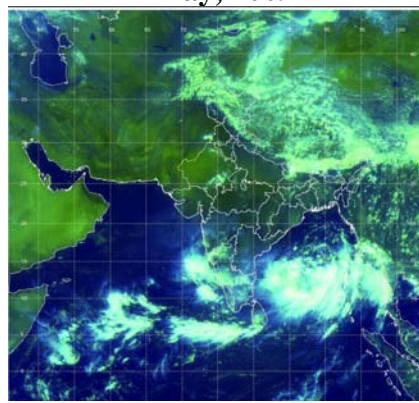


Wind speed ranged between 9 to 12 knots over some parts of Orissa, Saurashtra & Kutch, Gujarat, Rajasthan, Madhya Maharashtra, West West Madhya Pradesh, Coastal Andhra Pradesh, Tamil Nadu, 6 to 9 knots over some parts of Himachal Pradesh, Harayana, Uttarakhand, West Uttar Pradesh, Orissa, Saurashtra & Kutch, Gujarat, Rajasthan, Madhya Maharashtra, Vidarbha, West Madhya Pradesh, Coastal Andhra Pradesh, Tamil Nadu, Kerala, 0 to 3 knots over most parts Jammu & Kashmir, Himachal Pradesh, Northeast India, Chhattisgarh, North Interior Karnataka, Telangana, Rayalaseema, Andaman & Nicobar Islands, some parts of Punjab, Uttar Pradesh, Rajasthan, Bihar Jharkhand, Orissa, Madhya Maharashtra, Marathwada, Vidarbha, Madhya Pradesh, Coastal Andhra Pradesh, South Interior Karnataka, Tamil Nadu, 3 to 6 knots over remaining parts of the country.

Chief Synoptic Feature (Based on 1430 hours IST observations of 21st May, 2009)

- Heat wave conditions continued to prevail over some parts of Rajasthan and isolated pockets of Madhya Pradesh. They are likely to abate during next 2 days.
- Current meteorological analysis and numerical weather prediction models indicate gradual increase in pressure gradient over Bay of Bengal and Arabian Sea causing strong cross equatorial flow and increase in rainfall activity over south peninsula during next 3-4 days.
- A low pressure area is likely to form over central Bay of Bengal around 23rd.

Satellite image of 6 UTC on 22nd May, 2009



Zone-wise Forecast (Forecast valid upto 1430 hours IST of 24th May, 2009)

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

- **Isolated** rain/thundershowers over Jammu & Kashmir, Himachal Pradesh and Uttarakhand.
- **Isolated** duststorm/thunderstorm accompanied with squall over the rest region.

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

- Rain/thundershowers at a **few places** over region.

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

- Rain/thundershowers at a **few places** over the region.

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

- Rain/thundershowers at **most places** over Andaman & Nicobar Islands, Kerala, Lakshadweep, Tamilnadu and Coastal & South Interior Karnataka.
- Rain/thundershowers at a **few places** over coastal Andhra Pradesh and North Interior Karnataka.
- **Isolated** rain/thundershowers over the rest region.

WEST INDIA [GOA, MAHARASHTRA (OTHER THAN VIDARBHA), GUJARAT REGION, SAURASHTRA & KUTCH]

- **Isolated** rain/thundershowers over Madhya Maharashtra, Konkan & Goa and Marathawada.
- **Mainly dry** weather over the rest region.

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

- **Isolated** rain/thundershower over Chhattisgarh and Vidarbha.
- **Mainly dry** weather over the rest region.

WARNING: (For next 48 hours)

- Isolated heavy rainfall over Andaman & Nicobar Islands, Kerala, Lakshadweep and Tamilnadu during next 48 hours.
- Isolated thundersquall accompanied with hail is likely over Orissa and Gangetic West Bengal during next 48 hours.

Weather Outlook from 1430 IST of 24th May, 2009 to 1430 IST of 26th May, 2009 (Based on numerical weather products):

- Increase of rainfall activity over south peninsula and northeastern states.
- A feeble western disturbance is likely to affect northwest India during 24-26th.

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), potato (planting / vegetative), cabbage, cauliflower and broccoli (head formation), pea (pod formation / early maturity), leafy vegetables like lettuce, methi, palak, dhania etc. (vegetative).
- As there was no significant rain in most of the districts during last week over the State and no significant rain is likely to occur for next five days, apply irrigation to the standing crops. Apply mulch in the orchards for conservation of moisture.
- In areas of High Hill Temperate Dry Zone where snow has melted from the apple orchards, basin forming operation should be carried out and required fertilizers should be added in the basin.
- Plucking of tea leaves may be continued at 7-8 days interval.
- Complete transplanting of french bean, cucumber, bitter melon in sub-mountain low hills sub tropical zone. Prepare the nurseries for sowing of cabbage, cauliflower, broccoli, lettuce and other varieties.
- Provide mulch in the tree basins with straw or UV Sheet to reduce evaporation and moisture conservation.
- Harvest the ripened or half ripened strawberry fruits and store them at 15-20^o C as high temperature may hamper the fruit quality and juice contents.
- To have green fodder in summer, it is optimum time for sowing of chari, bajra and maize in Mid Hills Sub Humid zone. Also sow maize for green cobs.
- This is optimum time for sowing of *agehi* bhindi and French bean in the field in Mid Hills Sub Humid zone. It is also advised for nursery sowing of khirai, summer squash, bitter melon, tori, tomato, chilli, capsicum, brinjal and pepper in poly houses.
- Undertake sowing of summer flowers like china aster, glardia, rudbeckia, kochia, african marigold, french marigold, portulaca, tithonia, torinia and cleome etc. in Mid Hills Sub Humid zone.
- Details of crop varieties are mentioned in Annexure I.

Plant protection

- Weather is favourable for attack of peach leaf curl disease in peach and pear fruit plants where fruit bearing has started, spray Nuvan 1 ml + 3 g Blitox per litre of water.
- There is report of infestation of mealy bug in tea in Mid Hills Sub Humid zone and there is also chance of increase of infestation, for control spray Deltamethrin (Decis 2.8 EC) @ 1340 ml in 750 litres of water for one hectare.
- Aphids are appearing in the seed crop of cole crops, for control spray rogor 1 ml per litre of water. For the control of powdery mildew in seed crop of peas spray sulfex @ 25g per 10 litre of water or Karathene 5ml per 10 litres of water.
- As there is chance of occurrence of powdery mildew, early leaf fall etc. in apple, apply Carbendazim @ 100 g or Hexaconazole @ 100 ml or Shield @ 600 ml in 200 liters of water.

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.

Animal husbandry

- It is high time for vaccination of animals against FMD as animals are shifting from plain to higher reaches.

Uttarakhand

- **Major Standing Crops:** Sugarcane ratoon (early vegetative), cabbage, garlic, tomato (vegetative), onion(maturity), summer sunflower, moong, urd (vegetative), maize, French bean (early vegetative), chatee dhan (seedling).

- As there was no significant rainfall during last week in most of the districts in the State and no significant rainfall is likely to occur for next five days, apply irrigation to the crops.
- Farmers are advised to go for deep ploughing of their fields for increasing its soil physical condition, controlling insects, pests, diseases.
- Farmers are advised to apply urea in chiatee dhan nursery for better growth of the seedlings. If the seedlings are ready, undertake transplanting.
- Undertake weeding, intercultural operations and top dressing in ratoon sugarcane, early sown chaiti dhan , maize, French bean and vegetable crops.
- Farmers are also advised to continue sowing of bhindi and maize under irrigated conditions.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
- fruit borer in tomato, Shimla mirchi etc. Farmers are advised to spray Prophenophos 50 EC @ 1 ml per litre of water.
- armyworm in sugarcane, if the damage is more than 10 %, farmers are advised to submerge the field with 4 inch water, if still insects are seen, then spray Endosulphan 36 EC @ 1 ml per litre of water in the evening after 4 p.m for effective control.

Punjab

- **Major Standing Crops:** Spring sugarcane (early vegetative/vegetative), pea and vegetable crops like chilli, tomato, brinjal, bhindi and onion (early vegetative/vegetative), summer pulses(pod formation), sunflower (head formation), groundnut(seedling), cotton and berseem(early vegetative)
- As there was no significant rain during last few weeks and no significant rainfall is likely to occur over the State, apply irrigation to the crops.
- Start preparation of the land and nursery raising of rice during this week. Soak the seeds in 10 litres of water containing Emisan 5 g and Streptocycline 1g for 8 to 10 hours before sowing. Details of crop varieties are mentioned in Annexure I.
- Undertake weeding, intercultural operations in sugarcane. Irrigate the sugarcane crop if required as dry weather is expected in the coming days. Provide straw mulching in between the rows to conserve the soil moisture.
- Undertake sowing of fodder crops in mixture i.e. maize + cowpeas. For getting good growth of fodders, provide irrigation at regular interval.
- As no significant rainfall is expected in coming days, irrigate the fruit plants at regular intervals. Avoid planting of deciduous fruit plants since temperature has increased and also irrigate newly planted orchards at 3-4 days interval.
- To protect the fruit tress from scorching effect, lower portion of the exposed trunks should be white washed with a thick lime solution (slaked lime 25 kg, copper sulphate 500 g, gum 500 g and water 100 litres) during these days.
- Complete transplanting of mentha.
- Make arrangements to protect the animals and poultry birds from summer stress. The sheds should be properly ventilated and comfort. The fodder crops may be sown to avoid scarcity of fodder in coming months. Vaccinate the animals immediately against gal ghotu, black quarter, if not already done.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
- black bug in sugarcane, spray 350 ml of Dusban or Lethal or Massban 20 EC in 400 liters of water per acre. Direct the spray into the leaf whorl.
- red spider mite on cucurbits. Apply rogor @200 ml per acre in 200 litre water.
- fruit borer in bhindi. Apply Sevin 500g or Hexavin or Sumicidin 100 ml per acre in 100-125 litres of water.
- Weather is suitable for multiplication of mealy bug in cotton. Farmers are advised to keep check on the mealy bug breeding sites.

Haryana

- **Major Standing Crops:** Spring sugarcane (early vegetative/vegetative), vegetable crops (early vegetative), summer pulses(pod formation), sunflower (head formation), early sown cotton and berseem (early vegetative)
- Continue threshing of wheat as weather is favourable.
- As there was no significant rain during last few weeks and no significant rainfall is likely to occur over the State, apply irrigation to the crops.
- Start preparation of the land and nursery raising of rice during this week.
- Apply 45 kg urea or 80 kg CAN/acre to sugarcane. In ratoon crop, apply 65 kg urea/acre. Undertake hoeing and weeding and conserve soil moisture by application of mulches. Irrigate the crop at 10-15 days interval for getting better growth of the crop.
- Farmers are advised to prepare the field for cotton sowing and continue the sowing of *desi* cotton and American cotton. Details of crop varieties are mentioned in Annexure I.
- Farmers are advised to prepare the field and continue sowing of cucurbits and summer radish.
- Undertake intercultural operations in tomato, onion and chilli.
- As temperature is high and humidity is low, the farmers are advised to whitewash the trunks of fruit trees, provide shelter to young tree and give frequent irrigation to protect fruit trees.
- Farmers are advised to feed the animals with 50 to 100 grams good quality mineral mixture. Vaccinate against sheep pox as per veterinarian advice.

Delhi

- **Major Standing crops:** Vegetables (vegetative / flowering / fruiting / harvesting), green gram (vegetative), onion (maturity / harvesting), pigeon pea, beans (sowing).
- As there was no significant rain over the State during last week and no significant rain is likely to occur for next five days, apply irrigation to *lobia*, green gram and the vegetables like bhindi, brinjal, chilli etc.
- Keeping in view of clear weather for the next five days farmers are advised to store grains after drying on thrashing yard. There should be 9-11 % moisture at the time of storage.
- Arrange for seeds for sowing of fodder jowar.
- Farmers are advised to harvest the mature crop of onion as clear weather is likely to prevail for the next five days.
- Present weather conditions are highly conducive for starting seed bed and field preparation for early cauliflower. Keeping in view of clear weather conditions, farmers are advised to carry out solarization of prepared nursery beds by covering with thin plastic sheets of 20-30 um thickness. This operation will help in reducing microbes responsible for disease development in seedlings. It is also advised to go for shed nets, which reduces 40-50 % of light and thereby helps in reducing soil borne disease and thus producing healthy seedlings.
- Under present temperature and humidity condition, farmers are advised for sowing of beans and cluster bean.
- Present weather conditions are highly favourable for field preparation and sowing of pigeon pea. Before sowing seeds should be treated with pigeon pea specific Rhizobium culture and Phosphate solubilizing Bacteria.
- Present weather conditions are highly conducive for incidence of white fly and fruit fly in cucurbitaceous crop exceptionally in watermelon and muskmelon crops. Spray Sevin @ 2g / litre to control the pests.
- Solarization of fallow fields should be taken up to kill insect pests and destruction of weed seeds beneath the soil. Deep ploughing / discing in fallow lands is advised after harvesting of *rabi* crop.

Uttar Pradesh

- **Major Standing crops:** Summer sugarcane and vegetables (early vegetative), mango (fruit setting), *zaid* maize (cob formation/maturity), urd, moong(pod formation).
- Undertake harvesting of matured crops like maize and vegetables.

- As there was no significant rain during last few weeks and no significant rainfall is likely for the next five days, apply irrigation to the crops.
- Start the field preparation and sowing of nursery of early and medium varieties of rice in irrigated areas.
- Undertake weeding, intercultural operations and application of fertilizers in the standing crops like sugarcane and mentha on a non rainy day in East Uttar Pradesh.
- Prepare the field and undertaking sowing of turmeric and ginger.
- Undertake sowing of dhaincha as green manure crop.
- Undertake digging of pits for plantation of new garden of fruit crops.
- To save the mango fruits from falling, spray the solution of Naphthalene acetic acid @15 ppm.
- **Plant Protection:** Weather conditions are favourable for mild incidences of fruit borer in tomato and brinjal, spray the solution of Carbaryl @ 2 g / litre of water. Monitor the crops for the pests and undertake plant protection measures to control the pests.

J & K

- **Major Standing Crops:** This is proper time for planting of orchard tree saplings in Jammu and Rajouri and sowing of rice in the nursery and maize in the main field and transplanting of solanaceous vegetable crops.
- As there was no significant rain during last week and dry weather is likely to prevail over the state for the next five days, apply irrigation to the crops.
- Undertake sowing of rice in the nursery and maize in the main field in Jammu, Kathua, Kashmir, Rajouri, Udampur, Kathua, Doda and Srinagar divisions.
- Complete sowing of brinjal in the nursery in Jammu and Kathua regions. Start transplanting in the main field when the seedlings are ready.
- Details of varieties are given in Annexure I.
- Undertake intercultural operations, irrigation, application of fertilizers and pesticides in vegetable crops like brinjal, tomato, chilli, capsicum, bhindi, beans, cucurbits and pumpkin in Doda, Udampur, Kathua and Rajouri divisions.
- **Plant Protection:** Weather conditions are congenial for mild incidences of fruit fly in vegetables in Jammu division. Undertake plant protection measures.
- fruit borer in tomato, brinjal and bhindi crop in Jammu, Kathua and Kashmir, spray Endosulphan @ 0.07%, or carbaryl @0.1% or DD Chlorvos @0.03%.
- mango hopper in mango in Jammu, Kathua and Kashmir, spray the crop with Dimethoate 30 EC @ 0.03 % in 500 litres of waters.
- downy mildew in onion in Srinagar region, spray metalaxyl @ 0.2% solution

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

Bihar

- **Major Standing Crops:** Sugarcane (vegetative), *boro* rice (grain formation/maturity), summer moong, urd (maturity), sunflower, sesame (seed formation), summer maize (cob formation/maturity), summer vegetables (vegetative), fodder maize, jowar, lobia and sudan grass (early vegetative).
- As there was no significant rain during last few weeks in most of the districts and no significant rainfall is likely for next five days over the State, apply irrigation to the crops.
- Harvest the matured crops of maize and moong in bright sunny days.
- Undertake field preparation for sowing *kharif* rice in nursery. Select varieties such as Rajshri, DPT 52-04, Rajendra Monsuri & Pravat for kosi region.
- Undertake intercultural operations, application of fertilizers and pesticides in summer vegetables, like tomato, brinjal, cauliflower and cabbage and sugarcane on a non rainy day.
- Farmers are advised to prepare the nursery for flower cultivation in *kharif* season.
- Undertake deep summer ploughing in fallow land for moisture conservation to suppress weeds, insects population.

- Maintain 5 – 7 cm standing water in *boro* rice field. Drainout the standing water 7 days before harvesting.

Jharkhand

- **Major Standing Crops:** Sugarcane (vegetative), summer maize (cob formation/maturity), moong (pod formation), summer vegetables (early vegetative/vegetative) and rice (grain formation/maturity).
- As there was no significant rain during last few weeks and no significant rainfall is likely over the State for the next five days, apply irrigation to the crops.
- Farmers are advised to undertake sowing of flower crops like rose, ixora, gulfrena, balsam, amaranthus, cosmos, torenia and zenea and bulbous flower plants like achemenus, glory lily, ukeres, jacobian lily, japhranthus lily and terin lily etc. Spread 3 inches layer of well rotten farm yard manure or plant waste materials in furrows to conserve soil moisture.
- Undertake sowing of dhaincha as green manure crop.
- Farmers are advised to undertake weeding, intercultural operations in sugarcane and vegetables on a non rainy day.
- Maintain continuous standing water of 5 – 7 cm depth in summer rice field. Drain out the standing water 7 days before harvesting.
- Site selection of new orchard and digging of pit for mango, jackfruit, litchi, guava, papaya and banana may be undertaken.
- Continue planting of *colacasia* as the weather is favourable and it is the right time for the cultivation of *colocasea* crop on upland.
- This is the right time of sowing dhaincha green manure crop. Prepare land by mixing 250 kg/ha of rock phosphate. Use 100-125 kg of dhaincha seed.
- Undertake planting of turmeric and ginger.
- Rinder pest disease is common in goat during summer season. TPR vaccine @ 1 ml subcutaneous should be vaccinated except for those goats that are less than 3 months of age and are pregnant.

Orissa

- **Major Standing crops:** Sugarcane (early vegetative), vegetables (fruiting / harvesting), onion (vegetative) and summer rice (grain formation/maturity), summer sunflower (head formation), summer sesame (flowering / pod formation), pulses like cowpea (pod formation), summer green gram (pod formation/maturity), summer maize (cob formation) and summer groundnut (pod formation/maturity), jute (early vegetative).
- As no significant rainfall is likely for the next five days, apply irrigation to the crops. Sprinkler irrigation should be provided to the orchard crops and vegetables.
- Protect the fruits and trees through hail nets, as thunder squall accompanied with hail is likely during next 48 hours.
- Harvest the matured crops of summer rice, groundnut and green gram as the weather is favourable for undertaking harvesting.
- Digging of pits may be done before onset of monsoon to undertake planting of fruit trees on receipt of rain.
- This is the optimum time for sowing of green manuring crops like sesbania and sunhemp in the areas receiving convectional rain in the state.
- Farmers are advised to go for summer ploughing in places received soaking rainfall to reduce weed infestation, to destroy eggs and larvae of hibernated soil insects and to increase soil profile recharge.
- Undertake land preparation for sowing of *kharif* crops utilizing the rainfall received during last week. Some of the promising crops for rainfed uplands are maize, cowpea, arhar, blackgram, ragi, groundnut, sesame, rice bean, castor, pumpkin and sweet potato. Arrange good quality certified seeds. Details of crop varieties are mentioned in Annexure I.

- Maintain 3 – 5 cm standing water in the summer rice field. Drainout the water 7 days before harvesting of the crop.
- Harvest all the cultured fish from the pond and drain out water from it for complete drying. In perennial ponds where water draining is impossible, apply Mahua oil cake 1 t/acre to kill all the predatory and weed fishes. Clear the aquatic weeds from the pond and strengthen the embankments.
- **Plant Protection:** Weather conditions are favourable for mild incidence of leaf spot in bhindi. Spray Blitox 50 @ 2.5gms/litre of water.

West Bengal

- **Major Standing Crops:** Sugarcane (early vegetative / vegetative), *boro* rice (grain maturity / harvesting), sesame (seed formation / maturity / harvesting), green gram (pod formation / early maturity / maturity), groundnut (early maturity / maturity / harvesting) and jute (seedling / early vegetative / vegetative).
- Complete harvesting of *boro* rice immediately on sunny days if not done till date.
- Harvest matured crops of sesame, groundnut, black gram and green gram on sunny days.
- After harvesting the land should be ploughed by heavy tractor utilizing pre monsoon shower and leave it for sun drying. It is useful for management of weeds and pests.
- Farmers are advised to undertake intercultural operation, application of fertilizers and plant protection measures on a non-rainy day as there is chance of rain at a few places over the State.
- Continue thinning operation and maintain proper plant population in early sown crops of jute. Complete the intercultural operations in jute and after that apply top dressing of fertilizer. For crops of three-week stage, apply 6 to 7 Kg Urea (per bigha) as first top dressing and for crops of six-week stage apply the same amount of fertilizer as second top-dressing.
- With the help of recent pre monsoon rainfall undertake the sowing operation of *aus* rice as early as possible. Apply 25 Kg SSP and 6.5 Kg MOP per bigha before sowing. Sow 11 to 12 kg of seeds in rows at a distance of 8 inch apart.
- Continue sowing of rice in the nursery for *kharif* rice.
- Prepare well drained, fertile and loam soil rich in humus utilizing pre monsoon shower in Coastal Saline zone for turmeric cultivation. Adopt spacing of 45-60 cm between the ridges and 15-25 cm between the plants and seed rate (rhizome or finger) of 250-350 kg per bigha.
- Under prevalent weather situation, there is chance of attack of jute apion in New Alluvial Zone. To control it spray Methayl Parathion 50% @ 1 ml / litre of water.
- Fruit and shoot borer in brinjal is very severe in maximum places of New Alluvial Zone and there is possibility of increase of infestation. Apply Triazophos 40 EC @ 1.5 ml, Spinosad 45 EC @ 0.2 ml or Cartap Hydrochloride @ 0.75 g per litre of water alternatively.
- Under current weather situation, attack of stem rot may be increased in pointed gourd in New Alluvial Zone. Apply Bavistin or Benlate (1 g per litre of water) to control the disease.
- In Coastal saline Zone, due to occasional shower and high humidity, the rotten areas may develop on the leaf blade of betelvine and spread very rapidly covering major portion of the leaf within very short time. Spray Metalaxyl 75 WP @ 1.5 g / litre of water or Bordeaux mixture (4:4:50) @ 0.5%.

Sikkim

- **Major standing crops:** (a) **High hills: Off season Vegetable crops** Transplantation/Vegetation; (b) **Medium hills: Orange:** Flowering; (c) **Medium & Low Hills: Kharif Vegetables:** Transplantation/Early Vegetation; **Maize:** Vegetative; **Large Cardamom** Early/Secondary Flowering; **Rabi Potato:** Maturity/Harvesting.
- As there was no significant rain during last week and rain/thundershowers is likely to occur at a few places for the next five days over the State, apply irrigation to the crops.
- Continue nursery sowing and preparation of land for transplanting paddy in mid hills.
- Continue planting of orange sapling in May. Deshooting/debugging of newly planted to 1 – 4 years old trees upto a basal height of 40 – 50 cm should be done on monthly basis.

- Top dressing of ginger with organic manures and mulching to be done on a non rainy day. Proper drainage to be maintained and weeding to be done on a non rainy day.
- The loose soil of kharif vegetable seedlings transplanted in mid upper terraces should be tightly packed and enough shade be provided during bright sunshine. Climbing plants in lower terrace must be given proper supporting structure. Weeding and topdressing with FYM/Compost should be done on a non rainy day and on monthly basis.
- 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 (for replantation/gap filling operations).
- Trenches of width 30 cm and depth 45 cm with convenient length may be opened with 30 cm interspacing. Trenches to be filled by mixture of FYM and soil. Disease free high yielding grown up large cardamom shoots with emerging buds may be planted at 45 cm apart in the trenches within May/June. Base may be mulched with forest leaves. Bamboo/wooden support stakes may be provided for suckers. Overhead pandals may be erected immediately after planting of suckers
- Application of 1% Bordeaux mixture to cardamom on a non rainy day will help to control the fungal diseases. 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:** vegetables (vegetative / flowering / fruiting / harvesting), *boro* rice (grain maturity / harvesting), early *ahu* rice (tillering), direct seeded regular *ahu* rice (early vegetative), transplanted regular *ahu* rice (transplanting), jute (germination / early vegetative / vegetative), maize (early vegetative / vegetative) and sugarcane (vegetative).
- Complete harvesting *boro* rice immediately in view of occurrence of rain in coming days.
- Undertake earthing up in sugarcane on a non-rainy day. Apply Urea and MOP in the field @ 26 kg per bigha and 7.5 kg per bigha prior to earthing up.
- Farmers are advised to collect quality seeds of medium duration *sali* rice varieties. Plough the fallow land where *sali* rice will be raised. This will control the intensity of stem borer in the crop in due course.
- Undertake intercultural operation and fertilizer application in jute on a non-rainy day.
- Maintain 3-5 cm stagnant water in early *ahu* rice and direct seeded regular *ahu* rice field.
- There is chance of attack of fruit fly, red pumpkin beetle and epilechna beetle in summer gourds. Spray endosulphon or malathion 50 EC @ 1 ml per litre of water on a non-rainy day in the field to control these insects.

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.

Fishery

- Prepare the fingerling rearing tanks and nurseries by cleaning them and applying agricultural lime @ 65-70 gm of basic per sq.m. for raising fingerlings. Apply cow dung @ 500 gm per sq m. at least 15 days ahead of releasing fingerlings into the tanks.

Arunachal Pradesh

- **Major Standing crops:** Maize, millet(early vegetative/vegetative), ginger, summer vegetables (vegetative), *jhum* rice (early vegetative), WRC rice (seedling/transplanting)
- As there was no significant rainfall in most of the districts and no significant rainfall is likely to occur during next 5 days over the State, farmers are advised to apply irrigation to the crops. Postpone irrigation in West Kameng district as there was sufficient rainfall during last week.
- Continue transplanting of early sown transplanted rice. Transplanting may be done when seedlings are 20-25 days old at the spacing of 20 x10cm.
- Undertake weeding, intercultural operations in early sown crops on a non rainy day.

- Prophylactic measure for protection of seed ginger rhizome from fungal disease may be taken. Water logging in the field must also be avoided.

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

Andhra Pradesh

- **Major Standing Crops:** sugarcane (cane development), vegetable crops (fruiting/harvesting) and chilli (fruit development/picking).
- Arrange seeds and other inputs to undertake sowing of *kharif* crops as soon as monsoon arrives over the state.
- Undertake sowing of sunflower in Anantapur area on receipt of rain.
- Foot and mouth disease in cattle, sheep pox in sheep and ranikhet disease in poultry may occur under prevailing weather. To prevent the diseases, vaccinate the animals and poultry.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
- smut and early shoot borer in sugarcane; spray Propiconazole @ 1 ml/litre of water for smut and release parasitic complex *Trichogramma chelonis* @ 20,000 per acre at 30 days after transplantation, 4 times at 10 days interval.
- yellow and red spider mites in sugarcane. To control, spray Wettable Sulphur @ 3 g per litre of water to cover the under surface of the leaves.
- thrips and mites in chilli in Guntur, Krishna, Prakasam and West Godhavari districts; spray Acephate @ 1.5 g per litre of water for thrips and Phosalone @ 2 ml per litre of water to control the pests.
- Spraying of chemicals may be undertaken on a non rainy day in Coastal Andhra Pradesh.

Karnataka

- **Major Standing Crops:** Annual sugarcane (cane development/maturity), green gram, black gram and cowpea (pod maturity/harvesting), groundnut (pod development/ maturity).
- As rain/thundershowers is likely to occur at most places over Coastal and South Interior Karnataka for the next five days, postpone irrigation to the crops. Apply irrigation to the crops in North Interior Karnataka
- Arrange seeds and other inputs to undertake sowing of *kharif* crops as soon as monsoon arrives over the state.
- Arrange seeds and other inputs to undertake sowing/planting of rice, sugarcane and pulses in Mysore, Mandya and Chamraj Nagar districts.
- Undertake planting of ginger and turmeric and dry sowing of rice in Uttar Kannada.
- Start sowing cotton in Shimoga district.
- Continue planting of seed-nuts for coconut and arecanut in nursery in Sirsi region.
- Sowing/planting, intercultural operations and application of fertilizers may be continued after spells of rain over Coastal and South Interior Karnataka and on a non rainy day in North Interior Karnataka.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
- bacterial blight in pomegranate and citrus canker in Bijapur and leaf spot in sapota in Dharwad; Undertake plant protection measures after spells of rain over Coastal and South Interior Karnataka and on a non rainy day in North Interior Karnataka

Kerala

- **Major Standing Crops:** vegetable (vegetative / flowering / fruiting) and plantation crops (coconut, arecanut, pepper and cashew). Summer crops (maturity/harvesting). This is proper time for sowing of rice and vegetable crops in the nursery.
- As rain/thundershowers is likely to occur at most places for the next five days, postpone irrigation to the crops. Arrange for drainage facilities as isolated heavy rainfall is likely during next 48 hours.

- Undertake nursery sowing of *virippu* rice and red amaranthus, brinjal and chilli. Also plant tubers of Dioscoria, ginger, turmeric and tapioca in Thrissur.
- Sowing of rice in the nursery may be undertaken in Kannur, Kasargod, Malappuram and Kozhikode areas.
- Undertake sowing of vegetable crops in nursery for transplanting during monsoon.
- Continue planting of pepper and cardamom in Wayanad.
- Undertake wet sowing of rice in *kari* soils in Kottayam.
- Start transplanting of *virippu* rice and planting of coconut for seed nuts in Kollam and Thiruvananthapuram districts.
- Intercultural operations and mulching may be continued in plantation crops. Conserve moisture by preventing evaporation due to high temperature.
- Sowing/planting, intercultural operations, application of fertilizers and pesticides may be continued after spells of rain.

Plant Protection:

- Due to high temperature and high humidity, pest and disease incidences like stem bleeding in coconut, blast and sheath blight in rice, pollu beetle and thrips in pepper, Sigatoka leaf spot in banana and leaf rust in coffee may occur. Monitor the crops for the pests and diseases and undertake plant protection measures.
- Weather conditions are favourable for mild incidences of *Epilachna* beetle in brinjal, aphids in cowpea and pseudostem weevil in banana in Kottayam. Undertake plant protection measures.

Tamilnadu

- **Major Standing Crops:** Sugarcane (cane maturity) and cotton (picking stage). This is proper time for raising nursery for *kuruvi* rice and vegetable crops.
- As rain/thundershowers is likely to occur at most places for the next five days, postpone irrigation to the crops. Arrange for drainage facilities as isolated heavy rainfall is likely during next 48 hours.
- Complete nursery sowing of *kuruvai* rice in Cauvery deltaic areas at the earliest. Start land preparation for transplanting of rice in the man field.
- Undertake land preparation for sowing of crops like cotton in Thirunelveli, Thooththukkudi and Virudhunagar districts.
- Details of varieties are given in Annexure I.
- Undertake earthing up operations in sugarcane in Thirunelveli district
- Undertake sowing of vegetable crops in nursery for transplanting during monsoon in Kanyakumari district.
- Sowing/planting, intercultural operations, application of fertilizers and pesticides may be continued after spells of rain.
- **Poultry:** Farmers are advised to monitor for Infectious Bronchitis (IB) and Ranikhet disease and in the case of lower values, administration of commercial vaccine is advised.

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

- damping off and white fly in chillies and green capsicum, spray Copper-oxy-chloride @ 2.5 g/liter of water for damping off and 2 ml of Methyl Demeton per litre of water for white fly.
- boll worm, mealy bug and stem weevil in irrigated cotton, thrips in chilli and aphids in maize in Thirunelveli, Thooththukkudi and Virudhunagar districts; undertake plant protection measures to control the pests.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT, RAJASTHAN]

Maharashtra

- **Major Standing Crops:** Summer rice (grain maturity / harvesting in Konkan, grain formation / maturity in East Vidarbha), summer groundnut (pod formation in Nagpur division and pod maturity / harvesting in other divisions), summer maize (cob maturity), summer sunflower (seed maturity) and summer bajra (grain maturity / harvesting in Pune, Nashik & Aurangabad divisions).

- As there was no significant rain in most of the districts of the State during last week and no significant rainfall is likely to occur during next five days, apply irrigation to the standing crops. Maintain 4 – 5 cm standing water in summer rice field where the crops are at grain formation stage.
- As dry weather is prevailing, continue harvesting of already matured summer rice & mango in Konkan & summer bajra in Pune, Nashik, Aurangabad divisions. Start harvesting of already matured summer groundnut, sunflower in Konkan, Madhya Maharashtra & Marathwada.
- Farmers are advised to apply 100 kg N, 55 kg P₂O₅ and 55 kg K₂O / ha at the time of last earthing up in sugarcane (*Suru*) followed by light irrigation in Madhya Maharashtra, Marathwada & West Vidarbha.
- Land preparation may be done for new plantation of fruit crops like mango, cashew, coconut, arecanut, etc. in south Konkan. Dig the pit for plantation of mango at the spacing of 10 x 10 m or 5x5 m and for cashew at 7x7 m. Pit size should be 1x1x1 m for mango and 0.6x0.6x0.6 m for cashew.
- Complete preparatory tillage with the help of pre-monsoon showers. Planning for *kharif* season i.e. selection of crops & varieties, arrangement of seeds and fertilizers should be done before the onset of monsoon.

Plant protection

- There is possibility of infestation of sucking pests in okra under the present weather in Western Maharashtra Plain Zone. Avoid attack of sucking pest by spraying Imidochloprid @ 4 ml or Dimethoate @ 4 gm or Dematon @ 10 ml / litre of water.

Fishery

- Feed management of brackish water shrimps may be followed. Water level in the pond may be maintained at 1.5 m.

Gujarat

- Major Standing Crops: Sugarcane (vegetative), vegetables (vegetative / flowering / fruiting / harvesting), groundnut (seed formation / seed maturity), summer rice (grain maturity / harvesting), pearl millet (grain formation / maturity) and green gram, black gram, cow pea, cluster bean (pod formation / maturity).
- 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 the standing crops.
- Undertake harvesting of matured crops of rice, groundnut, green gram etc. as prevailing dry condition is favourable for harvesting.
- As there is no possibility of rain, undertake intercultural operation to keep the fields weed free.
- As dry condition is prevailing, farmers are advised to undertake intercultural operation and apply nitrogen fertilizer (87.5 kg nitrogen / ha) followed by earthing up in sugarcane. Provide straw mulching to conserve soil moisture.
- There is chance of infestation of thrips in summer groundnut due to favourable weather condition. Spray Profenophos @ 10 ml / 10 liter of water to control Thrips.
- There is also chance of infestation of fruit fly in mango. To control fruit fly, destroy affected fruits, arrange Methyl usanol trap each for 10-12 trees, spray Fenthion @ 10 ml + 150 g Jaggery / 10 liter of water with big nozal on stem.
- As there is chance of infestation of thrips in chilli in North Sourashtra region, to control thrips and associated leaf curling, spray trisophos @ 15 ml / 10 litres of water.
- Harvest the matured fruits of vegetable crops in the morning hours.
- Provide mulching with wheat or mustard straw around the mango tree to reduce evaporation and conserve soil moisture.
- Undertake deep ploughing to prepare the land for kharif sowing. This will help for natural control of soil borne pathogens and pest.

Animal Husbandry

- Make arrangements for shade with proper ventilation to protect the animals from sunlight and temperature.

Poultry

Put curtains on west direction in poultry shed and spray water on them during noon hours to avoid

Rajasthan

- **Major Standing Crops:** vegetable crops (flowering / fruiting).
- As there was no significant rain during last few weeks and no significant rainfall is expected during next five days over the State, apply irrigation to the crops.
- Heat wave conditions prevailed over some parts of Rajasthan; apply light and frequent irrigation to the crops to prevent the crops from high temperature.
- Undertake intercultural operations in early sown bajra, jowar, sweet gourd, cucumber, pumpkin, bitter gourd, tinda, tomato and ladies finger in Pali, Barmer, Churu, Jalore and Jodhpur.
- Undertake field preparation for sowing of cotton in Bhiwara, Chittorgarh, Sirohi and Udaipur.
- Undertake sowing of groundnut in Bikaner and Jaisalmer, cotton in Sriganganagar and Hanumangarh and transplanting of chilli in Bhiwara, Chittorgarh, Sirohi and Udaipur.
- Details of varieties are given in Annexure I.

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

- mango hopper in mango tree at flowering stage in Ajmer, Dausa, Jaipur and Tonk districts, spray Melathion 50 EC @ 1.0 ml or Endosulfan 35 EC @ 1.5 ml per litre water.
- powdery mildew in mango and vegetables in Banswara, spray Karathane @ 1 ml or Sulphur Fungicide @ 2.5 g / litre of water.
- termite in onion in Ajmer, Dausa, Jaipur and Tonk districts; spray Endosulfan 35 EC or Chlorpyrifos 25 EC @ 4 litre per hectare.
- stem borer in okra in Udaipur, Bhilwara and Chittogarh districts; spray Endosulfan 35 EC @ 1.5 ml / litre of water.
- mites in cucurbit, brinjal, tomato in Sikar, Fatehpur and Jhunjunu, spray formothyon 25 EC or Methyldematon 25 EC @ 1000 ml/ha or Dicopal 18.5 EC @ 1250 ml /ha.
- collar rot in tomato, okra, chilli and vegetable guar in Ajmer, Dausa, Tonk and Jaipur. Broadcast Blitox-50 @ 8 kg/ha near roots and immediately provide light irrigation.
- bark eating caterpillar in mango, ber & aonla in Ajmer, Dausa, Tonk and Jaipur spray Endosulfan @ 1.5 ml per litre water.

CENTRAL INDIA [M.P., CHHATTISGARH]

Madhya Pradesh

- **Major Standing Crops:** Sugarcane (cane development), cotton (boll development/maturity) and vegetable crops (vegetative).
- As there was no significant rain during last few weeks and mainly dry weather is likely to prevail for the next five days over the State, apply irrigation to the crops.
- Heat wave conditions prevailed over isolated pockets of west Madhya Pradesh; apply light and frequent irrigation to the crops to prevent the crops from high temperature.
- Undertake planting of chilli in Indore, Mandsaur, Ratlam, Neemuch, Shajapur, Ujjain and Rajgarh districts.
- Undertake planting of sugarcane in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts.
- Details of varieties are given in Annexure I.
- Undertake intercultural operations in early sown in maize, sorghum, jowar, moong, urad, sunflower and vegetables like ladies finger, cow-pea, tomato, brinjal, chilli and cucurbitaceous crops in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts. for raising summer season crops.
- **Animal Husbandry:** Provide proper ventilation and clean water to cattle and arrange for vaccination to save them from infectious diseases in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts.
- To control ticks and mite in cattle, sheep and goat, apply butox / deltox @ 4 ml / litre of water on the body in Jhabua and Dhar districts.

- foot and mouth disease in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts, use Potassium Permanganate @ 5ml per litre of water for infected animals.

Plant Protection: Weather conditions are favourable for-

- sucking pest in okra in Jhabua and Dhar; spray Methyl Dimeton 25 EC @ 1 ml / litre of water.
- fruit borer in tomato and chilli in Chinndwara and Betul, spray Endosulphan 35 EC 2.5 ml per litre of water.
- mealy bug in mango in Khargone, Khandwa and Harda, spray 25 gm Esiphet and 30 ml Prophenophos.
- sucking pests in moong and urad in Bhopal, Sagar, Damoh, Vidisha, Raisen, Sehore, spray Ethoprox 10 EC in 1 Litre or Dimethoyte 30 EC 750 ml per hectre in 600 to 700 Litre of water
- caterpillar in pomegranate in Sehore, Bhopal, Sagar, Vidisha, Damoh, Raisen districts; spray Melathion 50 EC @ 1 ml / lit water;
- powdery mildew in cucurbitaceous crops in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts, Spray of karothane in open weather conditions.
- fruit fly in okra in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts, spray trizophos crops in open weather conditions @ 1.5 ml per liter.
- fruit fly in cucurbits in Jhabua and Dhar, spary @ 2ml/li of Endosulphon 35 EC.
- stem borer in sugarcane in Sehore, Bhopal, Sagar, Vidisha, Damoh, Raisen districts, spray Foret 10 G 15 Kg/ha

Chattisgarh

- **Major Standing Crops:** Sugarcane (vegetative), vegetables (flowering / fruiting / harvesting), summer rice (grain formation / maturity), groundnut (seed formation / maturity), sunflower (seed formation / maturity) and sesame (seed formation / maturity) and green gram (pod formation / maturity).
- As there was no significant rain during last few weeks over the State and no significant rain is likely to occur for next five days, farmers are advised to apply irrigation to the crops. Farmers, who have drip irrigation system, are also advised to regulate the discharge rate of the system for proper water management.
- Under prevailing dry weather farmers are advised to harvest the matured crops of rice, groundnut, sunflower, sesame and green gram.
- After harvesting of *rabi* crops deep ploughing is advised for soil solarisation, particularly in those fields where wilt, stem rot and nematode diseases are frequently observed.
- 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.
- Due to hot and dry winds and high maximum temperature, banana and papaya fruits are damaged because of sun scorching. Hence, the farmers are advised to cover the fruits by using leaves or jute bags to protect the fruits from sun scorching.

Annexure I

Crop varieties

Madhya Pradesh:

- **Sugarcane:** Co Jawahar-86141, Co Jawahar-86572, Co Jawahar-86600, Co 86032.

Tamil Nadu:

- **Cotton:** MCU 5, SVPR 2 and LRA 5166
- **Black gram:** Vamban-4, and Vamban-5
- **Green gram:** Co-7, Vamban-2
- **Bajra:** WCC 75, Co 7

Jammu & Kashmir

- **Maize:** GS-2, Vijay, Mansar, C-5 and C-8.

Rajasthan

- **Groundnut:** TG-37 A, TBG-39, HNG-10, PG-1, GG-20 and Chandra.
- **Narma Cotton:** RS 2013, RS 810, RS 875 and MRT 9.
- **Chilli:** Pusa Jwala, N.P.46-A, PantC-2, Pusa Sadabahar, G-3, G-5 and RCH-1.
- **Shimla Mirch:** Yellow wonder, California wonder, Bulnose and Arka Mohini.

Uttarakhand:

- **Chiatee Dhan:** VL-Dhan-206, Majdera-7 etc.
- **Bhindi:** VL Bhindi-1

Punjab:

- **Rice:** PAU 201, PR 120, PR 118, PR 116, PR 114, PR 113, PR 111, PR 115 etc.

Haryana:

- **Cotton:** desi cotton varieties: HD 107, HD 123 and AAH 1, american cotton with varieties: HS6 & H1117.
- **Rice:** PAU 201, PR 120, PR 118, PR 116, PR 114, PR 113, PR 111, PR 115 etc.

Uttar Pradesh:

Rice : Aswani, Manhar, Saket-4, Govind, Narendra-118, Narendra-97

Jharkhand:

- **Ginger:** Reo-de-genero, Nadia, China, Samastipur, Suprava, Suruchi
- **Turmeric:** Suravi, Rajendar, Roma

Orissa:

- **Jute:** JRC-212, JRC-321, JRC-9442, JRC-4444.KC-1, For up land: JRD-632, JRD-878, JRD-5204
- **Rice:** Early varieties - Parijat, Khandagiri, Vandana, Jogesh, Siddant, Medium varieties - MTU-1001, MTU1010, Pratikshya, Tapaswini, Konark, Surendra, Lalata, Kharavela, Naveen, Surendra, Late varieties- CR-1009, CR-1018, Ranidhan, Swarna, RGL-2837, Ketakijoha, Moti, Padmini, Kanchana, Mahanadi, Jagabandhu.

Assam

- **Transplanted *ahu* rice:** Lachit, Chilarai, Govind, IR-50, Rachi, Jaya etc.
- ***Sali* rice:** Mahsuri, Ranjit, etc.

Himachal Pradesh

- **Ageti bhindi:** P-8, Prabhini kranti, Arka anamika.
- **French bean:** Contender.
- **Brinjal:** Arka Nidhi, PPC.
- **Capicum:** California Wonder.
- **Peper:** Surjmukhi.

Delhi

- **Fodder jowar:** Pusa Chari-9, Pusa Chari-6.
- **Cauliflower:** Pusa Megha and Pusa Kranti Sankar.
- **Beans:** Pusa Beans -3.
- **Cluster bean:** Pusa Sadabahar and Pusa Navbahar.