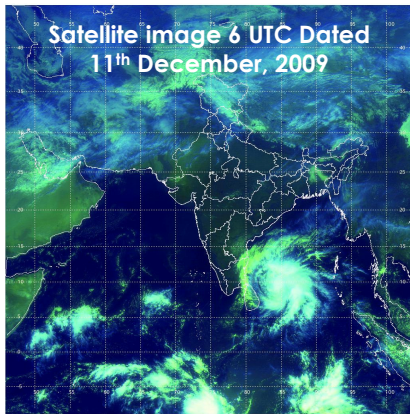




# National Agromet Advisory Bulletin

Thursday, 10<sup>th</sup> December, 2009 (For the period 10<sup>th</sup> to 14<sup>th</sup> December, 2009)



## Rainfall Forecast valid upto 1430 hours IST of 13<sup>th</sup> December, 2009

- **Many Places:** Tamil Nadu & Pondicherry and Jammu & Kashmir
- **Few Places:** Himachal Pradesh, Andaman & Nicobar Islands
- **Isolated Places:** Arunachal Pradesh, Himachal Pradesh, Uttarakhand, Punjab, Rayalaseema, South Interior Karnataka, Kerala and Lakshadweep
- **Dry:** Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, Orissa, Jharkhand, Bihar, Uttar Pradesh, Haryana, Chandigarh & Delhi, West Rajasthan, East Rajasthan, West Madhya Pradesh, East Madhya Pradesh, Vidarbha, Chhattisgarh, Gujarat Region, Saurashtra, Kutch & Diu, Konkan & Goa, Madhya Maharashtra, Marathwada, Telengana, Coastal Andhra Pradesh and North Interior Karnataka
- **Mainly dry Weather:** Sub Himalayan West Bengal & Sikkim and Coastal Karnataka

## Weather Outlook (upto 1430 hrs IST of 15<sup>th</sup> December, 2009)

- Fairly widespread rainfall activity with heavy to very heavy fall is likely over extreme south peninsular India.
- A feeble Western disturbance is likely to affect western Himalayan region.
- Mainly dry weather conditions are likely to continue over remaining parts of the country.

## Agromet advisories for irrigation and *rabi* sowing

- Farmers in Jammu & Kashmir and Tamil Nadu are advised not to apply irrigation as rainfall is likely to occur at many places during next five days in these States.
- As there was no significant rain in most of the States during last week and mainly dry weather/no significant rain is likely to occur for next five days, farmers are advised to apply need based irrigation to the standing crops.
- Farmers in Jammu & Kashmir, Rajasthan, Punjab, Himachal Pradesh, Uttar Pradesh and Madhya Pradesh are advised to undertake field preparation and sowing of late sown wheat and complete sowing of gram, lentil and pea.
- Farmers in Maharashtra are advised to undertake field preparation and sowing of groundnut, sunflower and mustard.
- Farmers in Andhra Pradesh are advised to undertake field preparation and sowing of rice and green gram, black gram and chick pea.

### Advisories for pest and disease

- Due to favourable weather condition, there are chances of pest and disease incidences in the following regions:
  - Rust in pea, aphids in mustard in Uttarakhand.
  - Aphid and white rust attack in mustard, pod borer in pea in Rajasthan.
  - Flea beetle in toria, cut worm in gram in Jammu & Kashmir.
  - Aphid and saw fly in the rapeseed and mustard in Assam.
  - Scale insect, mealy bug and *pyrilla* in sugarcane in Andhra Pradesh.
- Farmers are advised to undertake plant protection measures, if required.

Issued by

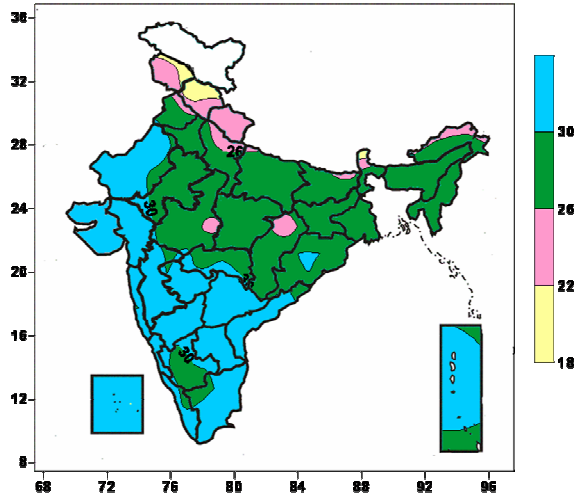
National Agrometeorological Advisory Service Centre,

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

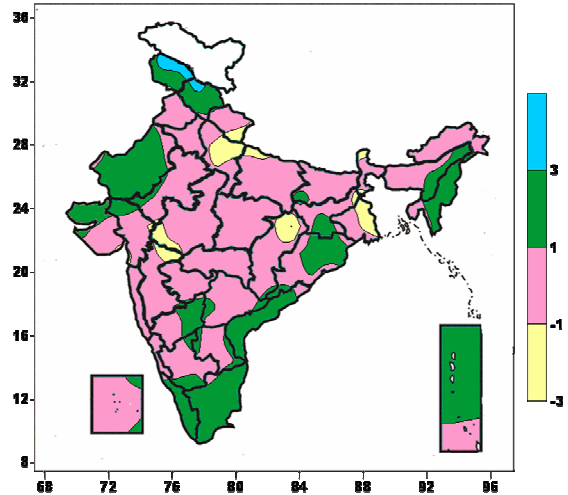
The bulletin is also displayed in the website (<http://www.imdagrimet.org>) of the Division

## Contour maps for the week ending 9.12.09

**Actual Mean Maximum Temperature (°C) in India for the week ending 09.12.09**



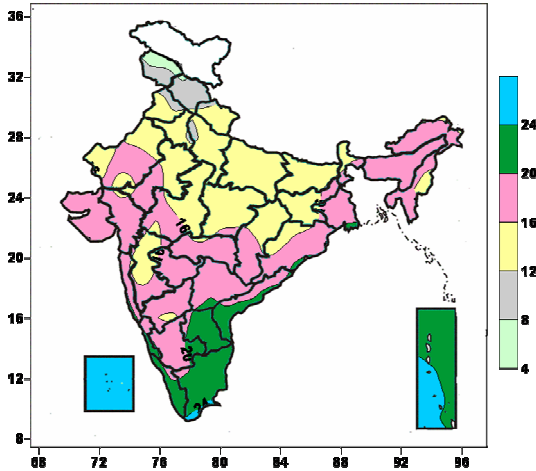
**Maximum Temperature (°C) Anomaly in India for the week ending 09.12.09**



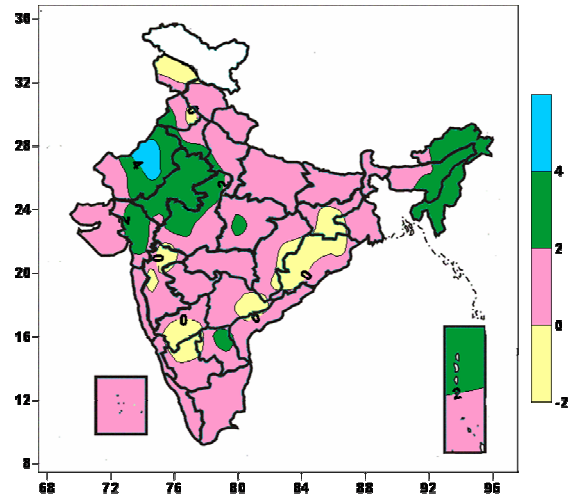
Actual Mean Maximum temperature ranged between 30°C and above over most parts of West Rajasthan, Gujarat, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra, Marathwada, Andhra Pradesh, Coastal Karnataka, North Interior Karnataka, Kerala, Tamil Nadu, Lakshdweep, Andaman & Nicobar Islands, Some parts of East Rajasthan, West Madhya Pradesh, Orissa, Vidarbha, South Interior Karnataka, 22 to 26°C over most parts of Uttarakhand, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Uttar Pradesh, Bihar, Sub-Himalayan West Bengal, Arunachal Pradesh, West Madhya Pradesh, Chhattisgarh, 18 to 22°C over some parts of Jammu & Kashmir, Himachal Pradesh, 26 to 30°C over remaining parts of the country.

Actual Mean Maximum temperature anomaly ranged between 3°C and above over some parts of Jammu & Kashmir, Himachal Pradesh, 1 to 3°C over most parts of Himachal Pradesh, West Rajasthan, Nagaland, Manipur, Mizoram, Orissa, Coastal Andhra Pradesh, Kerala, Tamil Nadu, Andaman & Nicobar Island, some parts of Jammu & Kashmir, East Rajasthan, Bihar, Jharkhand, Assam & Meghalaya, Gujarat, Saurashtra & Kutch, Interior Karnataka, Telengana, Rayalaseema, Lakshdweep Islands, -3 to -1°C over some parts of Uttarakhand, Uttar Pradesh, Jharkhand, West Bengal, Sikkim, Chhattisgarh, West Madhya Pradesh, North Madhya Maharashtra, -1 to 1°C over remaining parts of the country.

**Actual Mean Minimum Temperature (°C) in India for the week ending 09.12.09**



**Minimum Temperature (°C) Anomaly in India for the week ending 09.12.09**

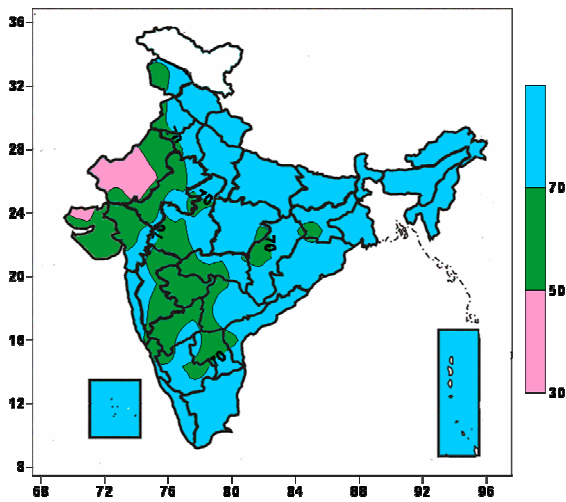


Actual Mean Minimum Temperature ranged between 24°C and above over most parts of Lakshadweep Islands, some parts of Tamil Nadu, Andaman & Nicobar Islands, 20 to 24°C over most parts of Coastal Andhra Pradesh, Rayalaseema, Kerala, Tamil Nadu, Andaman & Nicobar Islands, some parts of Gangetic West Bengal, Orissa, Telengana, Coastal Karnataka, South Interior Karnataka, 12 to 16°C over most parts of Punjab, Haryana, Delhi, Uttarakhand, Rajasthan, Uttar Pradesh, Bihar, Jharkhand, Sikkim, Madhya Pradesh, Chhattisgarh, some parts of Sub-Himalayan West Bengal, Manipur, Orissa, Maharashtra, North Interior Karnataka, 8 to 12°C over most parts of

Minimum Temperature anomaly ranged between 4°C and above over some parts of West Rajasthan, 2 to 4°C over most parts of West Rajasthan, Gujarat, Arunachal Pradesh, Assam, Nagaland, Manipur, Mizoram, Tripura, Andaman & Nicobar Islands, some parts of Punjab, Haryana, West Uttar Pradesh, Madhya Pradesh, Rayalaseema, -2 to 0°C over most parts of Jammu & Kashmir, Jharkhand, Orissa, some parts of Punjab, Chhattisgarh, Madhya Maharashtra, Marathwada, Interior Karnataka, Andhra Pradesh, 0 to 2°C over remaining parts of the Country.

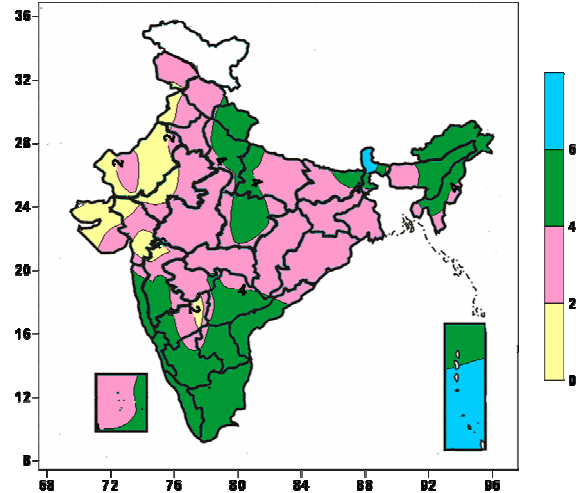
Himachal Pradesh, some parts of Jammu & Kashmir, Punjab, Haryana, West Uttar Pradesh, Uttarakhand, 4°C to 8°C over some parts of Jammu & Kashmir, Himachal Pradesh, 16°C to 20°C over remaining parts of the country.

**Relative Humidity (%) over India for the week ending 09.12.09**



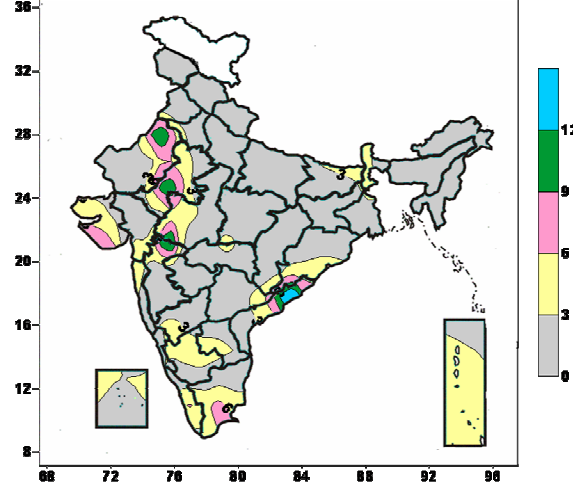
Relative humidity between 50 to 70% over most parts of Rajasthan, Saurashtra & Kutch, Gujarat, Madhya Maharashtra, Marathwada, Vidarbha, Coastal Karnataka, North Interior Karnataka, Rayalaseema, some parts of Jammu & Kashmir, Punjab, Haryana, Jharkhand, Madhya Pradesh, Chhattisgarh, Coastal Andhra Pradesh, Telangana, South Interior Karnataka, 30 to 50 % over most parts of West Rajasthan, some parts of Saurashtra, 70% and above over remaining parts of the country.

**Cloud amount (okta) over India for the week ending 09.12.09**



Cloud amount 6 okta and above over most parts of Sikkim, Andaman & Nicobar Island, 4 to 6 okta over most parts of Uttarakhand, West Uttar Pradesh, Northeast India, East Madhya Pradesh, Konkan & Goa, South Madhya Maharashtra, Karnataka, Andhra Pradesh, Kerala, Tamil Nadu, some parts of Himachal Pradesh, East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal, Marathwada, Lakshdweep, Andaman & Nicobar Islands, 0 to 2 okta over most parts of West Rajasthan, Gujarat, Saurashtra & Kutchh, some parts of Punjab, East Rajasthan, North Madhya Maharashtra, North Interior Karnataka, 2 to 4 okta over remaining parts of the country.

**Wind speed (knots) over India for the week ending 09.12.09**



Wind speed ranged between 12 knots and above over some parts of Coastal Andhra Pradesh, 9 to 12 knots over some parts of Rajasthan, West Madhya Pradesh, North Madhya Maharashtra, Coastal Andhra Pradesh, 6 to 9 knots over some parts of Rajasthan, Kutch, West Madhya Pradesh, North Madhya Maharashtra, Orissa, Coastal Andhra Pradesh, adjoining Telangana, Tamil Nadu, 3 to 6 knots over most parts of Sikkim, Saurashtra & Kutch, South Interior Karnataka, Kerala, Tamil Nadu, Andaman & Nicobar Islands, some parts of Punjab, Haryana, Rajasthan, Bihar, Sub-Himalayan West Bengal, Madhya Pradesh, Chhattisgarh, Orissa, Maharashtra, North Interior Karnataka, Andhra Pradesh, Lakshdweep Islands, 0 to 3 knots over remaining parts of the country.

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

Sub-division	Cumulative Rainfall for the period									
	11 <sup>th</sup> November		18 <sup>th</sup> November		25 <sup>th</sup> November		2 <sup>nd</sup> December		9 <sup>th</sup> December	
	Normal (mm)	(%) Dep.	Normal (mm)	(%) Dep.	Normal (mm)	(%) Dep.	Normal (mm)	(%) Dep.	Normal (mm)	(%) Dep.
A & N Islands	64.3	-64	61.0	-85	50	-64	41.6	-54	47.5	10%
Arunachal Pradesh	14.0	-94	5.6	433	9.7	-44	10.4	-95	4.8	95%
Assam and Meghalaya	9.2	-97	3.7	175	3.9	-80	4.5	-99	1.6	-50%
NMMT	16.6	-100	6.4	102	5.2	-99	5.3	-100	0.9	-100%
SH West Bengal & Sikkim	4.1	-100	2.8	-29	2.2	-100	3.7	-99	1.4	-85%
Gangetic West Bengal	7.1	-96	5.0	146	3.6	-95	3.7	-100	0.9	-100%
Orissa	8.2	-52	5.9	230	4.7	71	1.8	-100	0.8	-100%
Jharkhand	3.3	-94	1.7	526	2.0	-100	2.2	-100	0.5	-100%
Bihar	1.2	-100	0.6	538	0.5	-100	1.5	-100	0.1	-100%
East Uttar Pradesh	1.0	-100	0.6	1141	0.5	-100	0.8	-100	0.6	-100%
West Uttar Pradesh	1.3	-97	0.6	2273	0.8	-100	1.0	-100	0.8	-100%
Uttarakhand	1.8	-22	1.1	525	2.1	-100	1.8	-100	1.9	-100%
Haryana, Chandigarh & Delhi	0.5	-62	0.4	550	1.4	-100	1.4	-100	0.6	-100%
Punjab	0.8	91	0.7	539	1.3	-100	1.3	-100	1.1	-100%
Himachal Pradesh	2.8	380	2.7	1157	6.8	-100	5.1	-100	4.1	-100%
J & K	5.5	274	6.7	262	7.6	-96	9.2	-86	6.6	-94%
West Rajasthan	0.3	-100	0.5	-96	0.8	-100	0.5	-100	0.2	-100%
East Rajasthan	1.6	-100	1.0	781	2.9	-100	1.2	-100	0.9	-100%
West M. P.	4.4	-33	1.7	2525	3.1	-100	3.6	-100	1.4	-100%
East M. P.	3.5	-39	1.5	3973	3.5	-100	3.0	-100	1.9	-99%
Gujarat region	2.9	-51	1.9	265	4.2	-100	1.4	-100	0.3	-100%
Saurashtra & Kutch	3.0	-100	2.2	-43	2.9	-100	0.5	-100	0.1	-100%
Konkan and Goa	7.3	355	6.1	1274	7.3	-85	1.6	-100	1.3	-100%
Madhya Maharashtra	7.8	508	6.4	1102	7.3	-78	3.5	-100	1.2	-100%
Marathwada	6.5	229	3.2	1420	4.4	-100	4.7	-100	1.6	-100%
Vidarbha	3.4	192	1.8	2950	5.2	-100	3.5	-100	1.2	-100%
Chhattisgarh	2.1	-100	1.3	3274	3.0	-60	2.3	-100	0.9	-100%
Coastal A. P.	30.3	170	21.1	73	20.5	118	11.7	-100	8.5	-14%
Telangana	6.4	25	3.3	386	3.5	122	2.3	-100	1.3	-100%
Rayalseema	17.8	257	14.9	44	13.7	2	8.4	-100	11	-69%
TamilNadu & Pondicherry	44.8	325	38.9	68	34.6	-1	26.4	-69	32.6	-51%
Coastal Karnataka	22.5	169	14.7	351	14.1	15	6.4	-75	3.5	-1%
N. I. Karnataka	9.4	95	4.9	382	3.9	92	3.3	-100	1.7	-100%
S. I. Karnataka	15.6	123	9.7	124	10.1	58	3.8	-95	5.5	-70%
Kerala	48.2	244	37.2	85	31.3	15	13.8	-53	19.2	-49%
Lakshadweep	35.6	278	23.9	-83	24.7	-43	19.7	-94	20.9	52%

(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

## Zonewise Agromet Advisories

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

### Himachal Pradesh

- **Realised Rainfall:** There was no rainfall during last week in the State.
- **Rainfall Forecast:** Rainfall at a few places during next 24 hours and decrease thereafter over the State.
- **Major *rabi* Crops:** Wheat, gram, lentil
- **Advisory:**
  - It is time for planting of late sown rainfed wheat in the mid hills of the State. H.S- 295, HPW -42 varieties are suitable for the late sown conditions. Against fungal disease, seed treatment with 2.5g bavistin or sevin / kg of seed should be done before sowing. Termite affected plots may be treated with 80 ml chloropyrifos mixed with 1 kg of sand and spread over one kanal area of plot. In the timely planted wheat crop where weeds are 2-3 leaves stage , spray isoproturon @80 gram per 30-32 litres of water in one kanal for the control of weeds.
  - The sowing of gram and lentil in lower belt may also be completed.
  - To protect the wheat seed from fungal disease, seed treatment with 2.5g bavistin or sevin / kg should be done before sowing.
- **Major Seasonal Crop:** Fruit crops, Flower crops and Vegetables
- **Advisory:**
  - Farmers are advised to prepare the pits for planting the winter plants like peacunut, walnut, almond plum and peach. Farmers are advised to undertake field preparation and planting for new orchards.
  - Training and pruning work can be completed in the tea. It is time for nursery raising of tea plants in polythene tubes. Do lopping of the tree in the tea orchards to have more sunlight.
  - It is optimum time for nursery sowing of onion. Undertake planting of seed crop of onion plant bulbs at 45x45 cm apart directly in filed. It is also time for sowing of peas (var. agad, lincoln and priya).
  - It is time for planting the winter flowers annuals viz. calendula, aster, larkspur, dianthus, african daisy, stasis, lupines, petunia, flox, nicotiana, vanadium and torinia. Flowers can be raised in the pots, hanging pots rocks etc. Keep the flowers beds free from the weeds, The flowers affected with aphids, spray malathion @0.05% for the control. Remove the apical shoot in winter annuals to have more side branches to cover the entire pot. It is time for sowing of bulbous flowers like fresia, tulips and nargis etc.
  - Undertake weeding, intercultural operations and top dressing of fertilizers on a non rainy day.
  - It is also an optimum time for transplanting of strawberries in raised beds.
  - Undertake sowing of radish (var. early meno white, japanese white, chinese pink and pamp hriday, peas(palm priya or linclon) in the fields. Treat the seed with 2.5 g Sevin or bavistin per kg of seed before sowing of pea crop. Drench the crop with Dithane M-45, 2 g and Bavistin 1 g for the control of damping off of nursery.
  - As there was no rainfall in the State during last week and rainfall is likely to occur in the State at a few places during next 24 hours, the farmers are advised to apply need based irrigation to vegetable and floricultural crops.
  - Sowing of gobhi sarson may be completed.
  - **Plant Protection:** Weather conditions are favourable for mild incidences of –
    - leaf minor in citrus, spray 10 ml Matasystox or Malathion 10 ml in 10 litre of water. Spray Streptocycline Sulphate 500 ppm solution for control of citrus canker. Remove the shoots below the graft or bud unions.
    - downy mildew in cruciferous vegetables, for control spray ridomil MZ @ 25 g per litres of water at 15 days interval. For control of powdery mildew in peas, spray celfex@25 g per 10 litres of water or karathane@5 ml per 10 litres of water.
    - To control the root borer in apple irrigate the basins after removing the upper soil with 10-15 liters of the solution of Chlorpyrifos 20 E.C. @ 5 ml per liter of water.
    - Spray the chemicals on a non rainy day.

- **Animal Husbandry:** Feed pregnant and lactating cows and buffaloes with balance feed including mineral mixture. The night temperature is falling and the newly born calves may be protecting from the cold. Provide the mineral mixture to the milch animals as per the schedule of 1 kg feed+50g mineral mixtures per 2 litres of milk. This schedule will maintain the reproductive ability of animals. It has been observed that dairy animals are deficient in minerals elements which are the sole reason of repeat breeding and other gyne related diseases in animals. So ensure to give 50 g mineral mixture to animals daily. Ensure cleanliness in cows having advanced pregnancy to avoid mastitis.

## Uttarakhand

- **Realised Rainfall:** There was no rainfall during last week in the State.
- **Rainfall Forecast:** Isolated rainfall is likely over the State.
- **Major Rabi crops:** Wheat, mustard, lentil, pea, chickpea, rajmash
- **Advisory:**
  - Due to expected dry weather conditions during this week, farmers having irrigation facilities are advised to give first irrigation in wheat crop at crown root initiation stage and then top dress @ 2.5 kg Urea per Nali when soil moisture is sufficient. Do weeding for remove weeds for better growth of wheat crop by hand hoe. Farmers may continue sowing of wheat during this week also. The recommended high varieties of wheat for this week for both irrigated and un-irrigated conditions are UP-2572, UP-2584 UP-1109, HS-2395, HD-2380, HS-420 etc.
  - Due to expected dry weather condition, farmers are also advised to complete sowing of lentil with available varieties under sufficient moisture in soil.
  - Provide irrigation, weeding and thinning in mustard crop and top dress 1/2 kg Urea per Nali if not done so far.
  - Do weeding and thinning operations in other standing crops like pea, chickpea, rajmash etc. for their better growth.
- **Major Seasonal Crop with stage:** Sugarcane ratoon (planting/early vegetative), cabbage, garlic, tomato (vegetative), French bean (early vegetative).
- **Crop Condition:** Good
  - **Advisory:**
    - Farmers are advised to undertake weeding in early sown garlic crop and give irrigation for better crop growth. However, if irrigation facilities are not available, then put straw mulch in between rows for moisture conservation.
    - Continue digging of matured potato crop as per maturity of tubers as dry weather is expected.
    - Remove weeds from other standing vegetable crops and keep grass lying on the ground for conserving soil moisture. If pods of vegetable pea are ready then plug them and sent to the nearby market. Apply irrigation in crops including coriander, spinach, radish, menthe etc. under low soil moisture.
    - Apply need based irrigation to the standing vegetable crops like coriander, spinach, radish, mentha etc.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
  - white rust in pea is possible, spray 0.5 % solution of Carbendazim immediately at an interval of 10 days.
  - aphids in mustard. If the aphids are seen in 10 % population, then spray 200 SL Emidachlorpid @ 3 ml per 10 litre of water.

## Punjab

- **Realised Rainfall:** There was no rainfall during last week in the State.
- **Rainfall Forecast:** Rainfall is likely at isolated places during next 24 hours and mainly dry weather thereafter over the State.
- **Major Rabi Crops with stage:** toria(seed formation), raya, rapeseed and mustard (early vegetative), potato(vegetative)
  - As there was no rainfall in the State during last week and rainfall is likely to occur in the State at a few places during next 24 hours and isolated thereafter, the farmers are advised to apply need based irrigation to the standing *rabi* crops.

- Undertake sowing of late sown varieties and the late sown wheat may be given 25 percent less nitrogen than the recommended dose.
- Farmers are advised to give light irrigation to the wheat crop. Apply second dose of 55 kg urea per acre to wheat before first irrigation.
- Undertake intercultural operations in early sown wheat, raya, taramira, lentil and chickpea on a non rainy day.
- Farmers are advised to undertake sowing transplanting of gobhi sarson, which is more profitable than direct sowing.
- To early sown raya, apply 45 kg urea per acre with first irrigation.
- Complete sowing of PDG 3, PDG 4 and GPF 2 varieties of gram under rainfed conditions. Treat the seed with Bavistin and Thiram (1:1) or Hexacap / Captan / Captaf @ 3 g/kg of seed for the control of blight.
- Thinning operation in timely sown rape seed and mustard crops may be undertaken.
- Undertake harvesting of matured crops of toria.
- Farmers are advised to undertake the first cutting of Barseem. Conserve the surplus maize fodder as silage at milk dough stage.
- Complete sowing of autumn potato crop particularly for seed production during this period. Before sowing treat the potato tubers in 0.25% solution of Emisan 6 or Monceren (250 g or ml in 100 litres of water) for 10 min. to black scurf of potato. Discard and destroy late blight infected tubers. Keep the soil wet at tuberization to minimize the scab infection.
- This is the right time for sowing of English varieties of Radish (Japanese White, white Icicle), Turnip (Golden Ball), transplanting of 4 to 6 week old seedlings of cabbage, Chinese cabbage and late season cauliflower.
- Undertake transplanting of tomato.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
  - Aphid in potato. Keep watch on aphid population as soon as it reaches 20 aphids per 100 leaves build up, the haulms should be cut down. Keep the soil wet at tuberization to minimize the scab infection.
- **Animal Husbandry:** Watch the animals in the early and late hours of the day especially at the time of milking. Provide clean, dry and good bedding especially for young calves to protect from cold weather. Keep the animals in dry place and change the bedding material. Provide clean, dry and good bedding especially for young calves and newly born should be given care in cold weather, keep them warm. Keep the animals under roof at night time and in the sun during day. The protein in the concentrate can be reduced 2-3 percent. Deworming should be done in the calves especially against Ascariasis/Malap

## Haryana

- **Realised Rainfall:** There was no rainfall during last week in the State.
- **Rainfall Forecast:** Dry weather is likely over the State during next two days and mainly dry thereafter.
- **Major rabi Crops:** Wheat, raya and mustard
- **Advisory:**
  - Complete planting of winter sugarcane, varieties: COH 56, COH 64, COH 99, COH 119, CO 7717 and COS 8436. Apply 45 kg Urea or 80 kg Kisan Khad and 125 kg Single Super Phosphate.
  - Complete the sowing of barley with certified seed of BG-25, BH-75 and C-164 under timely sown irrigated conditions and C-138 in rainfed conditions as earliest.
  - Apply the irrigation in timely sown raya/mustard crop.
  - Complete the sowing of wheat crop with seed treatment by Bavistin or Benvalerate @ 2 g/kg seed of certified varieties WH-711, WH-283, WH 542, PBW-343, PBW 550, DWR 17, UP 2338 and HD 2687 within this month.
- **Major Seasonal crop with stage:** Spring sugarcane (early vegetative/vegetative), vegetable crops (vegetative), cotton (boll formation)
- **Crop Condition:** Good

- **Advisory:**
  - Undertake hoeing and weeding and apply the remaining dose of nitrogen fertilizer to the sugarcane.
  - The weather conditions are ideal for sowing early varieties. Continue sowing “desi” varieties of radish (Punjab Pasand & Punjab Safed), turnip (L-1 & 4-white) and carrot (No. 29 PC-34 and Sel. 21), pea, potato and palak (Punjab Green). Transplant fully developed seedlings (4-6 week old) of main season varieties of cauliflower. Sowing of late season varieties of cauliflower i.e. Snow-Ball-16, Pusa Snow ball 1 & Pusa Snow ball K-1 can be continued.
  - This is suitable time for planting of evergreen fruit plants like sweet orange, mandarin, lime, lemon, guava & ber. For checking pre-harvest fruit drop, spray the trees with 10 ppm of 2, 4-D and 0.3% of Zinc sulphate. In citrus leaf miner can be checked by spraying 500 ml of Sumicidin 20 EC or 1000 ml Ripcord 10 EC or 1250 ml Hostathion 40 EC in 500 litres of water. In grapes, spray the vines with Bavistin @ 400g/400 litres of water to control anthracnose.
  - Farmers are advised to undertake weeding and hoeing in cotton and intercultural operations in tomato, onion and chilli.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
  - Saw fly and burgada (Dholia) in younger plants of mustard, to control spray 200 ml malathion 50 EC or 400 ml endosulphan 35EC in 200 lt. of water/acre.
  - bacterial blight in guar, farmers are advised to spray the crop with 400ml blitox and 30 grams of streptocyclin in 200 liters of water per acre.
- **Animal Husbandry:** Possibility of fall in temperature, farmers are advised to protect against from cold winds. Farmers are advised to give the 50grams Iodized salt and 50 to 100 grams mineral mixture daily to keep them healthy.

## Delhi

- **Realised Rainfall:** The State received no rainfall during last week.
- **Rainfall Forecast:** Dry weather is likely over the State during next two days and mainly dry thereafter.
- **Major Rabi Crops:** Wheat
- **Advisory:**
  - Average daily temperature is likely to be below 20°C for the next five days, which is optimum for sowing of wheat. Recommended cultivars: - CPAN-3004, Raj-3077, PBW-343, DBW-17, DBW-550, HD 2851, HD 2687, HD 2733.
  - Field preparation for transplantation of onion should be started. Application of fully decomposed FYM should be done 15 days before transplantation.
  - Present weather conditions are suitable for sowing of spinach and coriander. Recommended cultivar for coriander: - Pant Haritama and Azad Dhanian-1. Before sowing of coriander, the seed should be separated into two cotyledons.
  - Transplanting of mature seedlings of tomato, cauliflower, cabbage, knolkhol and broccoli crop may be done in the raised bed.
  - Sowing of Nantes group of carrot (Pusa Yamdagini), European group of radish such as Pusa Mridula and Pusa Himani, Crimson Globe cultivar of beetroot and snowball cultivars group of turnip can be done this weather conditions. Proper spacing should be maintained. Before sowing seed should be treated.
  - Interculture operations in vegetables are advised keep the fields weed free.
- **Plant Protection:**
  - Due to high relative humidity, infection of early blight may occur in potato and tomato. Constant monitoring is advised. Two to three spraying of Mencozeb @ 1 gm per litre of water at 8-10 days interval is advised when disease is detected.

## Uttar Pradesh

- **Realised Rainfall:** The State received no rainfall during last week.
- **Rainfall Forecast:** Dry weather is likely over the State.
- **Major rabi crops:** Wheat, maize, gram, pea, and lentil.



- Weeding and hoeing, and top dressing of recommended amount nitrogen may be done in early sown wheat and to control broad leaf weeds apply 2, 4 – D sodium salt @ 625gm/ hectare. To control Gehunsa / Jangali Jai, use Isoproturon 50% @ 1.5 kg/ hectare and apply fertilizers on the basis of soil testing and use bio fertilizers Azetobactar and P.S.B to increase the fertility of soil.
- Complete the sowing of late sown varieties of wheat as Malviya- 234, Narendra- 236, and Twt-373 at earliest and use seeds @ 125 kg/ hectare and purification of seeds may be done by Carbendazim or Thiram. For sowing varieties of wheat KRL – 203, Raj -3077, Lokvan etc. in barren land, use seeds 25% more than normal.
- Undertake weeding, intercultural operation and top dressing in barley, gram, pea, and lentil.
- **Major Seasonal Crop with stage:** Sugarcane (grand growth) and vegetables (vegetative/fruited), mango (fruit setting).
- **Crop Condition:** Good
- **Advisory**
  - Undertake weeding, intercultural operations and application of fertilizers in the standing crops like sugarcane, vegetables and mentha.
  - Complete sowing Barseem at the earliest.
  - Sowing of garlic may be done after purification of seeds at the seed rate 500- 700 kg seeds/ hectare at distance 15x7.5 cm.
  - Complete the sowing of recommended varieties of gram, pea and lentil and other pulses crops in sufficient moisture at the earliest.
  - Complete sowing of early varieties of potatoes like Kufri Chandramukhi, Kufri Bahar, Kufri Sadabahar, Kufri Ashok.
  - Weeding, hoeing, thinning and top dressing of recommended amount of Nitrogen may be done in toria.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
  - mal formation disease in mango, spray the solution of Naphthalene Acetic acid @ 200 ppm or 4ml. Planofix in 9 litre of water.
  - cankers disease in lemon, spray the solution of Blitox 3-4 gram/litre in water.
  - fruit borer in tomato and brinjal, spray the solution of Carbaryl @ 2 g / litre of water.

## J & K

- **Realised Rainfall:** There was no rainfall during last week in most of the districts over the State.
- **Rainfall Forecast:** Rain is likely to occur at many places over the State for the next 24 hours and decrease thereafter.
- **Major rabi crops:** Wheat, barley, brown sarson
- **Advisory:**
  - As rainfall is likely over the State during next 24 hours, farmers are advised not to apply irrigation to the standing crops.
  - Farmers are advised to complete the sowing of normal wheat (cv HD2329, PBW-154, PBW-343, Raj-3077, RSP-303 and WH 542) for irrigated areas and PBW 175, PBW-396 and IWP-72 for rainfed areas with seed rate 100 kg/ha during this period.
  - Farmers can go for sowing of late sown wheat varieties (Raj 3077, HD 2285 & Raj 3765) under irrigated as well as rainfed areas. But before sowing seed should be treated with vitavax or bavistin or agrozim @ 2g/kg of seed against seed borne disease.
  - Drill 110, 42, 20 & 85 kg /ha of DAP, MOP, ZnSO<sub>4</sub> & urea, respectively as basal dose under irrigated condition.
  - In rainfed areas where sowing is not done yet farmers can go for sowing of Mustard (Cv RLM-514, RLM-619, Kranti, Varuna and RH –30) can be done during this period with seed rate of 5kg/ha with recommended dose of fertilizer due to the presence of moisture in the soil.
  - Farmers are advised to continue the sowing of lentil (var L-9/12, PL-406 and L-4147) with seed rate 40 kg/ha. Hoeing and weeding in gram crop if crop is 40 days old.

- In brown sarson first thinning may be done any time 20 days after germination if field in condition. Maintain 10 cm plant to plant distance in line sown crop. While thinning, keep extra plants in a row as an allowance of frost injury. Left over excess plant can be removed during 1st week of March. Under broadcast condition maintain approximately 50 plants per sq m area at the time of 1st thinning.
- Farmers are advised to sow lentil at the rate of 2.25 kg seed / kanal at a distance of 23 cm row to row. Use 2.5 kg seed/ kanal for bold seeded variety. Apply 1.8 kg urea, 6.5 kg DAP and 1.7 kg MOP /kanal as basal. For weed control spray pendimethalin @ 1 kg ai /ha with 500 liter water within 2-3 days after sowing. Provide adequate drainage to avoid water stagnation in field.
- Continue sowing of Oats, orchardgrass, tallfescue, sainfoin, clover and lucerne. Assure proper moisture in field for good germination.
- **Major Seasonal Crop with stage:** Vegetables (vegetative/flowering/fruited).
- **Crop Condition:** Good.
- **Advisory:**
  - Transplanting of onion and garlic should be completed positively by the end of this week as the minimum temperature is expected to fall below 2 °C, which adversely affects the establishment of seedlings. As the weather is expected to remain clear, hoeing and earthing up operation in potato, cabbage, cauliflower and main season knoll-khol should be taken up on priority. Harvesting of early sown knolkhol, spinach and methi should be done.
  - Undertake top dressing of cauliflower, knoll-khol, potato, spinach, methi and garlic @ 60, 50, 20, 20, 20 and 20 kg/ha. Rouging of virus effected plants from brinjal, tomato, cauliflower and cabbage crop.
  - Harvest early variety of sweet orange. Remove the stock sprout, suckers and water sprout from budded/grafted plants.
  - Select well drained field, if sowing of peas is not done so far, sowing should be done at the seed rate of 5 kg/ kanal. Apply fertilizer @ 5.5 kg DAP /kanal and 4.25kg MOP/ kanal as basal. Required nitrogen is met through DAP applied.
  - Continue sowing of Oats, orchardgrass, tallfescue, sainfoin, clover and lucerne. Assure proper moisture in field for good germination.
  - Undertake hoeing and weeding in transplanted crops like cabbage, cauliflower, kale and other standing crops.
  - Undertake hoeing and earthing up operation in potato, cabbage, cauliflower and main season knoll-khol after current spells of rain.
- **Plant Protection:** Weather conditions are favourable for
  - leaf curl/stigmia blight in peaches/plum/apricot and almond, spray copper oxychloride (0.3%) or captan (0.2%) before leaf fall.
  - flea beetle in toria crop, spray Carbaryl 50 WP @ 2gm/lit or Malathion @ 0.05 %.
  - anthracnose and die back diseases in citrus and mango, soft rot, anthracnose and scab in guava and anthracnose in grapes, spray with copper oxychloride (0.3%) at 15 days interval. Young trees and nursery plants may also be given chemical protection if needed.
  - cut worm on gram, apply 2 litres of Chloropyriphos 20 EC mixed with 25 kg of dry sand and broadcast followed by hoeing.
  - powdery mildew on ber, spray dinocap (0.05%) or wettable sulphur (0.25%) at fruit set stage.
  - Spray the chemicals after current spells of rain.

## Rajasthan

- **Realised Rainfall:** There was no rainfall during last week in the State.
- **Rainfall Forecast:** Mainly dry weather is likely to prevail over the State during next two days and dry weather thereafter.
- **Major Seasonal Crop with stage:** vegetable crops (flowering / fruited / harvesting)
- **Crop Condition:** Good
- **Advisory:**

- As mainly dry/dry weather is likely over the next five days, apply first irrigation to mustard and wheat crop.
- Undertake intercultural operations in sweet gourd, cucumber, pumpkin, bitter gourd, tinda, tomato and ladies finger.
- Sow seeds in nursery for raising seedling of autumn vegetables. Use following improved varieties for nursery sowing: Tomato: Pusa Rubi, Pusa Early and Vihar. Brinjal: Pusa Summer Prolific Round, Pusa Summer Prolific Long, Meghdoot, Navin and Arka Bahar, Cucumber: Balam and Pusa Sahyog. Smooth gourd: Chikni and Nasdar.
- Undertake sowing of late sown wheat.
- Undertake sowing of rapeseed, mustard at vapsa condition using 5-6 kg/ha certified seed of HYV of rapeseed, mustard viz. NRCDR-2, Urvashi, Pusa Jai Kisan, Laxmi, Rohini, NRCHB 506, NRCHB 101, Maya and treat seed with Apron 35 SD @ 6g/kg seeds or 2% garlic bulb extract.
- Top dress half doze of nitrogen (65 kg urea/ha) in mustard.
- Undertake sowing of barley at vapsa condition using 100-125 kg/ha certified seed of HYV of barley viz. RD 2035, RD 2052, RD 2503, RD 2668, BL 2 and treat seed with Thirum @ 3g/kg seeds.
- Right time for planting nursery of late cauliflower, cabbage & rabi onion and sowing of carrot, radish & garlic.
- Undertake sowing of gram, lentil, pea, Lucerne cumin, Isabgol & Ajwain and Taramira.
- **Animal Husbandry:**
  - To protect milch & infant animals from cold, cover the door of animal house and wrap jute beg around animal back. Keep litter dry everyday in Ajmer, Dausa, Tonk and Jaipur.
  - Due to fall in temperature there are chances of cold winds, protect animals by putting curtains in animal sheds. Vaccinate animals against FMD and BQ in consultation with local veterinarian. Arrange for curtains in poultry in Bharatpur region.
- **Plant Protection:** Weather conditions are favourable for
  - Aphid and white rust attack in Mustard, Barley, cauliflower & Radish. spray insecticide Dimethoate 30 EC or Methyl Demeton 25 EC @ 1 litre per hectare.
  - sucking pest in vegetables. Spray imidachloprid @ 0.3 ml/1 water.
  - Mango, Guava & pomegranate may be attacked by mealy bug insect. Hopper of this bug suck sap of tender leaves of these trees. To control this mix quinalphos 1.5 % or Endosulfan 4% granules @ 50-100 gm per tree in soil at a depth of 10-25 cm.
  - pod borer in pea crop at pod formation stage, spray Endosulfan 35 EC or Melathion 50 EC @ 1.0 ml per litre water.
  - Due to congenial weather there are chances of multiplication of bacterial rot. If few plants found rotted near collar region, uproot such plants and destroy by burying in soil. Spray a solution of Streptocycline (2 g in one spray tank i.e.15 lit water) + carbendazim (15 g in one spray tank) on lower side of the stem during evening or late morning hours.
  - Painted bug and fly in mustard, spray Endosulphan 4% or Quinolphos 1.5 % or Malethion 5 % or Methyl Paraphyn 2 % per hectre.

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

### Bihar

- **Realised Rainfall:** There was no rainfall during last week in the State.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major *rabi* Crops:** sarson, rai, maize, wheat
- **Crop Condition:** Good
- **Advisory**
  - As there was no rainfall in the State during last week and dry weather is likely over the State during next five days, apply irrigation to the already sown *rabi* crops.
  - Continue preparation of the field and sowing of *rabi* crops viz., Sarson (Var-Rajendra Sarson-1, Swarna, etc.), rai (Rajendra Rai Pachheti, Pusabold and Kranti) using seedrate @ 5kg/ha and sunflower like

(modern, surya Paradovic, KBSH I-44 using seed rate 5kg/ha for hybrid and 8 kg/ha for composite variety, gram (Rajendra chana, Uday, Pusa 256, RAU 52, SG2) using seed rate 75 to 80 kg/ha sowing at a distance of 30x10 cm, Lentil (BR 25, Pant1406, 639, Malika, Arun) using seed rate @ 40 to 45 kg/ha and apply 20: 40: N:P kg/ha respectively. All pulses seed should be treated with Rhizobium culture @ 5 Pkt/ha or chemical treatments should be done with thiram or bavistine @ 2.0gm/kg of seed for good germination and minimum losses from insects and diseases.

- *Rabi* maize varieties like Shaktiman 1,2,3,4: Laxmi, Rajendra Shankar Makka 1 and 2 should be sown at a distance of 75 x 20 cm and apply 20 kg seeds /ha for getting maximum yield. To drop the seed of onion in the nursery. Start the sowing of fodder crops like berseem, lucerne and oat in the field.
- Apply first irrigation in wheat at CRI stage (21 to 25 days after sowing) and apply nitrogenous fertilizer after first irrigation.
- Farmers are advised to prepare the field for sowing of HUW234, PBW373, HW2045, HP1744, HD 2643, 2285, NW 1014, 2036, DBW 14, Raj 3765. Undertake sowing of un irrigated Oat varieties like: Ratna, Azad and K125 and seed rate @ 100 kg/ha and nutrient doses approx. 60:30:20 N:P:K kg/ha respectively should be given at the last ploughing of the field.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative/grand growth), sudan grass (vegetative)
- **Crop Condition:** Good
- **Advisory:**
  - Prepare the field for autumn planting sugarcane and no need of irrigation is required in early sowing of potato.
  - Undertake intercultural operations, application of fertilizers.
  - Weather condition is congenial for transplanting of Aghani, Pusa Dipali, Pusi, Patna Main and Pusa Shuvra varieties of cauliflower.
  - Prepare the field and transplanting late maturing cauliflower, cabbage, brinjal, tomato and sowing of medium & late potato like Kufri Badsah, Kurfi Sinduri, Kufri Lalima, Rajendra Alu 1, 2 and 3.
  - Cut berseem and lucerne fodder at the interval of 25 to 30 days and after that provide irrigation and fertilizer (Nitrogen @ 10 kg /ha)
- **Plant Protection:** Weather conditions are favourable for mild incidences of -
  - stem borer insects in brinjal crop. Farmers are advised to apply Endosulphan @ 1.5 ml per litre of water.

## Jharkhand

- **Realised Rainfall:** There was no rainfall during last week in the State.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major *rabi* Crops:** rai, toria, gram, peas, potato, mustard
- **Crop Condition:** Good
- **Advisory:**
  - As there was no rainfall in the State during last week and dry weather is likely over the State during next five days, apply irrigation to the already sown *rabi* crops.
  - Farmers are advised to continue sowing of rai, gram, peas, potato, mustard etc. Recommended varieties of rai are – Pusa Jaikishan, Shivani, Varuna, Kanti. Select varieties of toria like PT-303, Parechali, Bhavani. Good varieties of peas are- Arkel, Pant Uphar, Pusa Pragati etc. Good varieties of potato are - Kufri Ashoka, Kufri Chipsona-1, Kufri Chipsona-2. Recommended varieties of gram are- Pant G 114, KWR 108, KPG 59. Treat the seed before seeding with Rhizobium culture @ 5 packet of 100 gm/hectare. Give urea 44 kg, SSP-250 kg & MOP 34 kg/hectare. Recommended varieties of Mustard are Shivani, Varuna, Pusa bold, Kranti.
  - Undertake weeding, intercultural operations and top dressing in early sown *rabi* crops..
- **Major Seasonal Crop with stage:** Sugarcane (vegetative/grand growth)
- **Crop Condition:** Good
- **Advisory:**

- Undertake sowing of Cabbage varieties in Early type – Golden acre, Early drum head, Pride of India. Late type – Late drum head Cauliflower Varieties are – Early – Pant Early, Pusa katki, Pusa Dipali. Seed rate is 600 – 700 gm/hactare.

## Orissa

- **Realised Rainfall:** There was no rainfall during last week in the State.
- **Rainfall Forecast:** Dry weather is likely over the State.
- **Major *rabi* Crops:** wheat, pulses, mustard, sunflower, groundnut
- **Advisory:**
  - Undertake weeding, intercultural operations and application of fertilizers.
  - As there was no rainfall in the State during last week and dry weather is likely over the State during next five days, apply irrigation to the already sown *rabi* crops.
  - Complete sowing of *rabi* pulses like lentil, field pea and chickpea @ 20 kg/acre. Now the current temperature is optimum for sowing of Bengal gram with improved varieties like Gourav, Annegiri, Radhey.
  - The current temperature is favourable for wheat sowing in inland districts. Select HYV like Sonalika, UP-262. Use 40 kg seed/acre. Before sowing the seeds should be treated with 3 g Captan or Thiram/kg of seeds. To avoid the infestation of loose smut disease, soak the seeds in water for 5-6 hours, dry it in sun for 4-5 hours after draining out water then treat the seeds in the 2.5 g/kg of Bavistin of seeds before sowing. Sow the seeds in line at a row distance of 15 cm. Before sowing apply 15:20:20 kg NPK/acre. In termite prone areas, apply 1.5% Chloropyriphos @ 10 kg dust during the final land preparation.
  - Complete sowing of mustard under irrigated condition.
  - This is the optimum time for sowing of sunflower. Grow high yielding varieties like Morden, Sunrise, Surya and Hybrid varieties like KBSH-1, KBSH-3 and MSFH. Use 4 kg seeds/acre for high yielding varieties for rainfed condition, 3.5 kg for irrigated condition, 2-2.5 kg seeds/acre for hybrid varieties under rainfed condition and 1.5-2 kg seeds for irrigated condition. Sow the seeds in lines 30 cm apart.
  - The weather is optimum for sowing of rainfed groundnut. Suitable varieties are Smruti, JL-24, TMV-11, AK12-24
  - Go for *piara* cropping of green gram, black gram, lentil and mustard as the weather is optimum.
  - Land preparation for toria may be continued in upland and medium land after harvest of *kharif* paddy.
- **Major Seasonal Crop with stage:** Sugarcane (early vegetative), vegetables (fruiting / harvesting), onion (vegetative).
- **Crop Condition: Good**
- **Advisory:**
  - Cole crop seedlings are at 3-week stage in the nursery. Go for transplanting in the main field.
  - Undertake weeding, intercultural operations and application of fertilizers.
- **Animal Husbandry:** calf and kids are susceptible to respiratory infection mostly pneumonia. Provide warm and comfortable housing to animals. Now-a-days, poultry birds are prone to respiratory infection and CRD (Chronic Respiratory Diseases). Provide comfortable warm housing and good ventilation. In case of disease outbreak, therapeutic measures are to be taken up. Vaccination for FMD (Foot and Mouth Disease) of animals is to be taken up. In case of disease outbreak, strict isolation of affected animals should be done.

## West Bengal

- **Realised Rainfall:** There was no rainfall during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major *Kharif* Crops:** Rice, vegetables
- **Crop Stage:** *aman* rice (grain development/harvesting)
- **Crop Condition: Good**
- **Advisory:**
  - Arrange for harvesting matured crop of paddy.

- Harvesting of Kodo millet should be started.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative), vegetable crops (transplanting)
- **Crop Condition: Good**
- **Advisory:**
  - Prepare upland, light loam and well drained field for early potato (90 days). Select among varieties like Kufri Alankar and Kufri Chandramukhi. Suitable late varieties after harvesting the *kharif* rice are Kufri Jyoti and Phokraj.
  - Where irrigation water is available, start land preparation for boro paddy. The recommended varieties are IET – 1444, IET – 4786 (Satabdi), IET – 4094, Lalat, MTU – 1010, JGI -1798 etc.
  - After harvesting of the *kharif* crop, sowing of irrigated late variety such as DBW-14, HP-1744 (Rajeswari), NW-1014 & HW-2045 etc. can be done.
  - After the harvesting of *kharif* rice farmers are advised to prepare the field for mustard sowing. apply 5-6 q cowdung per bigha with 20 kg urea, 50 kg SSP and 25 kg MoP while land preparation.
  - Continue harvesting of ginger. During harvesting, removal of roots, mud from rhizomes, heap and stored in cool and shade place for their multiplication.
  - Start harvesting orange; after harvesting of orange pruning should be done. After removal of dry shoots and other unwanted branches manuring and irrigation should be applied for their continuous growth.
- **Plant protection:**
  - Weather conditions are favourable for the incidences of leaf folder and BPH in late transplanted *aman* paddy. To control leaf folder, apply Lamda cyhalothrin 5EC @ 0.5 ml and for BPH (If it cross 10 per hill) apply Buprofezin @ 1.5 ml per litre of water. In this weather Blast disease may be severe. To prevent the disease apply Tricyclazole 0.6 gm per litre of water.

## Sikkim

- **Realised Rainfall:** The State received no significant rainfall during last week.
- **Rainfall Forecast:** Mainly dry weather is likely over the State during next two days and dry weather thereafter.
- **Major Seasonal Crop with stage: Rice:** harvesting **Vegetables:** flowering/ fruiting/ harvesting; **Large Cardamom:** Capsule maturity/harvesting;
- **Crop Condition: Good**
  - **Advisory:** Farmers are advised to continue transplanting of vegetable crops. Apply compost/FYM before transplanting of seedlings
  - Apply irrigation to the crops as there was no sufficient rainfall during last week.
  - Application of fertilizers, pesticides and intercultural operations may also be undertaken in standing crops like ginger.
  - Water level of 5 cm to at least 3/2.5 cm should be maintained in paddy fields for better yield.
- **Plant protection:**
  - Regular inspection may be carried out to observe caterpillar/shoot borer/shoot fly incidence, if any, and may be hand picked and destroyed mechanically or by burning.

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

### Assam

- **Realised Rainfall:** There was no significant rainfall in the State during last week.
- **Rainfall Forecast:** Dry weather during next two days and mainly dry weather thereafter in the State.
- **Major rabi crops:** Wheat, Potato, Pea and vegetables, mustard
  - Undertake land preparation and seed sowing of wheat in wheat areas. Undertake weeding and apply light irrigation in early sown wheat.
  - Undertake weeding and thinning in early sown rape seed and mustard.
  - Plant quality tubers of late potato variety like Kufri Megha. Depending up on weather, irrigate the crop and spray Indofil M-45 @ 0.25 % (2.5 g/L of water) against late blight.

- Undertake sowing of toria varieties like M27, TS 36, TS 38 and TS 46 and niger. Collect quality seeds of field peas like Rasna, Arpana and Pant 14 and sowing can be done by this week.
- Farmers are advised to prepare nursery bed for sowing of recommended boro paddy varieties like Joymati, Bishnu prasasad, Swarnabh, Dinanath etc. in nursery beds may be taken upto mid December.
- **Major Seasonal Crop with stage:** Vegetables (vegetative / flowering / fruiting / harvesting), and sugarcane (vegetative).
- **Crop Condition:** Good
- **Advisory:**
  - Seeds of cabbage, cauliflower, knoll khol, tomato, brinjal etc., can be sown in nursery beds.
  - Continue land preparation for sowing of onion and garlic under well drained, sandy loam condition.
  - Farmers are advised to start planting of potato, tomato, cabbage, knol khol etc.
- **Plant protection:** Weather conditions are favourable for mild incidences of –
  - blight in potato, spray Mancozeb 75% a.i.(2.5g/l).
  - aphid and saw fly in the rapeseed and mustard crop. Spray Dimethoate 30 EC @2ml/l. or Chloropyriphos 20 EC @2ml/l.
  - sigatoka leaf spot in banana, spray calixin (1 ml/l) along with sticker.
  - late blight in tomato, *phytophthora* rot in onion and bacterial wilt and *phytophthora* fruit rot in brinjal is observed, spray Equation-pro (1 ml/l) or Acrobat (2 g/l) for their control. For purple blotch disease of onion, spray Dithane M-45 or Kavach (2 g/l).

### Arunachal Pradesh

- **Realised Rainfall:** Many districts of the state received no rainfall during last week except East Siang, Lohit, Upper Subansiri, West Kameng districts which received excess rainfall.
- **Rainfall Forecast:** Dry weather is likely during next 24 hours and at rainfall is at isolated places thereafter over the State.
- **Major rabi Crops:** Pea, maize, potato
- **Crop Stage:** Pea, maize, potato
- **Crop Condition:** Good.
- **Advisory:**
  - Thinning be done wherever necessary followed by weeding.
- **Major Seasonal Crop:** Vegetables
  - Matured fruits of orange may be harvested for sale and avoid over maturity.
  - Transplanted vegetables may be provided with proper irrigation and weeding be done followed by fertilizer application.
  - Sowing of pea may be done followed by thinning wherever necessary.
- **Plant Protection:** Prophylactic measure for protection of seed ginger rhizome from fungal disease may be taken.

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

#### Andhra Pradesh

- **Realised Rainfall:** The State received no significant rainfall in most of the districts during last week except Nellore district which received excess rainfall during last week.
- **Rainfall Forecast:** Dry weather is likely over the State. After 48 hours isolated rainfall is likely over Rayalaseema.
- **Major Kharif Crops:** Cotton
- **Crop Stage:** boll development (cotton).
- **Crop Condition:** Good.
- **Advisory:**

- The fields which are completely inundated due to the floods to Krishna river and cotton crop completely damaged, alternate crops like greengram, blackgram, rabi redgram, maize, chickpea, sorghum is recommended.
- Third split dose of fertilizer ie, 35 kg urea and 15 kg MOP per acre is to be applied for cotton crop. (Krishna, Guntur and Prakasam). Spraying 2% urea or 2% KNO<sub>3</sub> should be taken up two times at weekly intervals.
- Suitable varieties for *rabi* rice are NLR-145, NLR-34449, MTU-1010, MTU-1001, BPT- 5204. Treat the paddy seed with carbendazim @ 1g /kg seed. If BPT 5204 is to be planted than treat the seed with 0.6ml tricyclazole/kg seed. Apply carbofuran 3G@ 1.0kg/200m<sup>2</sup>, 5-7 days before pulling the nursery. Provide alley ways of 20cm width for every 2m for monitoring of BPH while transplanting.
- Greengram / blackgram can be sown as *rabi* pulses. Suitable greengram varieties for sowing are LGG 410, LGG 460, LGG 407, and that of blackgram are LBG 17, LBG 20, LBG 22, LBG 623, LBG 402, LBG 611, LBG 685, LBG 752. Greengram/ blackgram seed to be treated with carbofuran @ 30g or imidacloprid @ 5ml and mancozeb @ 3g or carbendazim @ 2.0 per kg of seed.
- Chickpea can be sown at the earliest. Suitable chickpea varieties for sowing are ICCV-7, Swetha, Annegiri, Jyothi, ICCV-10, KAK-2, JG-11, LBeG-7. Seed treatment with Trichoderma viride @ 4g/ kg seed in wilt prone areas. The crop should be sown with a spacing of 30X10cm. The recommended seed rate is 25-30 kg/acre. 50kg DAP or 35kg urea + 125 kg SSP/acre should be applied as basal fertilizers for chickpea.
- **Major Seasonal Crop:** Sugarcane and Vegetables
  - Farmers are advised to undertake intercultural operations in sugarcane and vegetables to keep the fields weed free.
  - Raise the nurseries of *rabi* vegetable crops like brinjal, cabbage, cauliflower, capsicum and tomato.
  - In view of prevailing low minimum temperatures, apply Dormix @ 30 ml per litre of water on pruned branches for obtaining better bud break on grapes.
- **Plant protection:** Present weather conditions were congenial for the incidence of
  - Jassid incidence is observed in many fields and for the control spray 1.6ml monocrotophos or 1.5g acephate or 2ml fipronil per litre of water.
  - Incidence of Aphids and whitefly in Cotton. To control them, spray Monocrotophos @ 1.5 ml or Methyl Demeton @ 2 ml or Acetamaprid @ 0.2 g or Acephate @ 1.5 g per litre of water.
  - Incidence of leaf spots in Cotton. To control, spray Mancozeb @ 2.5 g or Copper-Oxy-Chloride @ 3g or Cuman-L @ 4 ml per litre of water 4-5 times at 15 days interval.
  - Severe incidence of white fly is noticed in water logged sugar cane fields of Krishna district. To control, spray Endosulphon or Malathion @ 2 ml per litre of water.
  - Prevailing weather conditions are congenial for the incidence of scale insect, mealy bug and *Pyrilla* in Sugarcane. To control, de trash the basal leaves and spray Dimethoate @ 1.7 ml or Malathion @ 3 ml per litre of water. To control *Pyrilla*, spray Endosulfan or Malathion @ 2 ml per litre of water.
  - Incidence of thrips is noticed in onion. To control, spray Imidacloprid @ 0.4 ml or Fipronil @ 2 ml per litre of water.
  - Incidence of shoot and fruit borer is noticed in brinjal and bhendi. To control, install pheromone traps @ 4 per acre, clip the infested shoots and destroy, spray Endosulfan or Profenophos @ 2 ml per litre of water.
  - Incidence of mites is noticed in chillies. To control thrips, spray Acephate @ 1.5 g or Fipronil @ 2 ml per litre of water and to control mites, spray Phosolone @ 2 ml per litre of water.
  - Leaf webber in mango. To control spray Monocrotophos @ 1.6 ml or Quinolphos @ 2 ml per litre of water.
  - Canker is noticed in sweet orange and acid lime in Nalgonda district. To control, spray Copper. Oxy. Chloride @ 30 g + Plantamycin @ 1 g in 10 litres of water 2 to 3 times at 20 days interval.

## Karnataka

- **Realised Rainfall:** There was no significant rainfall in the State during last week.



- **Rainfall Forecast:** Dry/mainly dry weather over the State. There may be rainfall at isolated places over South Interior Karnataka after 48 hours.
- **Major *rabi* Crops:** Wheat (6 - 8 leaf emergence), Bengal gram (Branching), *rabi* Sorghum (Knee-high), Pigeonpea (Pod filling), Sunflower(Head filling)
- **Advisory:**
  - As there was no significant rainfall in the State during last week, farmers are advised to apply irrigation to the crops.
  - Undertake sowing chickpea, treat the seeds being used for one hectare with 375 g. Rhizobium and 375 g. Phosphorus solubilising bacteria. Also treat the seeds with 2 g. Carbandizem or 4 g. Trichoderma to disease infestation to the crop.
  - Farmers in Udupi and Dakshin Kannada are advised to undertake sowing of pulse crops. Select among varieties like PS-16 (Green gram), C-152, TVX-944 (Cow pea), T-9, TAU-1 (Black gram), PHG-9 (Horse gram).
  - It is right time to give 2<sup>nd</sup> dose of fertilizer to plantation crops. For the four year old and above tree or vine, the below mentioned dose of N:P:K fertilizer can be given as the 2<sup>nd</sup> dose. 1) Arecanut:- 50:20:70 gm per tree. 2) Black pepper:- 50:20:70 gm per vine. 3) Banana: 90:54:113 gm per plant. 4) Coconut: 250:165:600 gm per tree. 5) Cardamom: 250:60:60 gm per tree.
  - Farmers in Shimoga and Hassan districts are advised to undertake planting of banana. Select healthy and disease free suckers and apply 500 grams neemcake and 20grams Carbofuran per plant before planting.
  - Farmers in Hiriyyur district are advised to undertake sowing of *Rabi* crops like Bengal gram, sunflower rainfed and Maize and Onion under irrigated condition.
  - Provide one irrigation as the wheat crop is in crown root initiation (CRI) stage which is critical stage for irrigation.
  - Carry out the nipping operation in the Bengal gram as it helps in spreading of the crop and produce more of side branches. Take up the spraying of 2 % urea. This will helps for better establishment of vegetative growth.
- **Major Seasonal Crop:** Sugarcane, vegetables, ginger (Nursery ), onion (5 - 6 leaf emergence)
- **Advisory:**
- **Major Seasonal Crop:** Sugarcane and Vegetables
  - Farmers are advised to undertake intercultural operations in sugarcane and vegetables to keep the fields weed free.
  - Raise the nurseries of *rabi* vegetable crops like brinjal, cabbage, cauliflower, capsicum and tomato.
  - In view of prevailing low minimum temperatures, apply Dormix @ 30 ml per litre of water on pruned branches for obtaining better bud break on grapes.
- **Plant protection:** Present weather conditions were congenial for the incidence of
  - leaf eating caterpillar in Bengalgram. To control the pest, spray the crop with 4 g carbaryl or 1 ml Methyl parathion or 2 ml Chlorpyrifos dissolved in one liter of water.
  - powdery mildew disease in sunflower, spray the crop with 1 ml Hexaconazole or 1 g Carbendazeme dissolved in one liter of water.

## Kerala

- **Realised Rainfall:** In general, the State received deficient/scanty rainfall during last week.
- **Rainfall Forecast:** Mainly dry weather is likely to occur over the State for next 48 hours and afterwards rainfall is likely at isolated places over the state.
- **Major *Kharif* Crops:** Rice
- **Crop Stage:** seedling/early vegetative (*mundakan* rice).
- **Crop Condition:** Good.
- **Advisory:**
  - Farmers are advised to undertake intercultural operations in *mundakan* rice to keep the fields weed free.
  - 2<sup>nd</sup> doze of lime @ 250kg/ha may be applied for direct sown/transplanted crop one month after planting.

- **Major Seasonal Crop:** Vegetables and plantation crops (coconut, arecanut, pepper and cashew). Time for planting of coffee and arecanut
  - Farmers are advised to apply irrigation as there was no significant rainfall during last week
  - Planting of arecanut seedling can be continued. Srimangla, sumangla and Mohitnagar are best suited and high yielding varieties.
  - Fresh planting of banana can be continued during this period in Ernakulam.
  - Protect the arecanut palms from direct sunlight by wrapping the stems with areca sheaths or white wash the exposed portion.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
  - leaf roller in rice. To control the disease adopt the following control measures. While top dressing with fertilizers farmers are advised to avoid excessive use of nitrogenous fertilizers like urea. Open the leaf folds with the help of a thorny twig and spray Quinalphos (Ekalux 25EC) @ 300ml per acre. In the initial stages restrict spraying to the infested patches only. Use of Trichogramma cards @ 2 cards per acre is an effective control measure for this pest.
  - downy mildew in cucurbits. Destroy the affected leaves and spray Indofil M.45 @ 4 g/l so that the spray fluid reaches both the surfaces of the leaves.
  - conditions are favourable for the incidence and development of red palm weevil, rhinoceros beetle, stem bleeding in coconut. Keep vigilance against red palm weevil and rhinoceros beetle attack. Start irrigation and apply fertilizers at the rate of 500 g (urea), 400g (Rock phosphate) and 500g (potash), if not done earlier. For controlling stem bleeding chisel out the affected tissues and paint the wound with hot coal tar and apply Calixin 5% @ 25 ml in 25 liters of water.
  - tea mosquito bug in cashew plantations, spray carbaryl 0.1% or quinolphos 0.05%. Apply 640 g of urea, 800 g of rock phosphate, 500 g of MOP to plantation with 5 years of age.
  - sucking pest in cowpea and bittergourd, spray the plants with neem oil emulsion. For this, dissolve 60g of bar soap on half litre of water and mix the emulsion with 1 lit of neem oil by vigorous stirring. This solution should be diluted 40 times for spraying purpose.
  - Sigatoka leaf spot in banana, pseudo stem weevil, burrowing nematode, Spray 1% Bordeaux mixture or tilt 25 EC (1ml/lit of water) to control leaf spot after cutting the severely affected leaves and burning it. Four to five sprayings at fortnightly intervals are to be given depending on the severity of the disease. Apply 25 g phorate or 20 g Carbofuran around the rhizome to control burrowing nematode. To control pseudostem weevil remove the dry outer sheaths of the pseudostem of all infested and un-infested plants and spray Carbaryl 50 WP 4gm/litre of water on pseudostem. Spray solution may be applied to leaf axils also.
  - Mahali / fruit rot in arecanut, spray 1% Bordeaux mixture (two to three times) to control Mahali disease.
  - Pollu beetle and quick wilt in pepper. Mulch the field for conserving moisture. Apply Ecalux @ 2 ml/litre if the attack of pollu beetle is found severe. Drench the soil with 1% Bordeaux mixture as a prophylactic measure to control quick wilt disease. Application of *Trichoderma viride* on the sides of standards will also control the disease.

### Tamil Nadu

- **Realised Rainfall:** Most of the districts received scanty and deficient rainfall during last week.
- **Rainfall Forecast:** Rainfall is likely at isolated places during next 24 hours and likely to increase thereafter over the State.
- **Major Kharif Crops:** Groundnut, pulses and rice
- **Crop Stage:** pod development (pulses), picking (cotton)
- **Crop Condition:** Good
- **Advisory:**
  - As there is chance of rainfall during next 5 days, farmers are advised not to apply irrigation to the crop. This is the right time to take up sowing of cotton in Kovilpatti. Select the varieties like KC 2, KC 3, PA 255, SVPR 2, Bt cotton etc. which are suitable for rainfed tracts.
  - Farmers are advised to take paddy sowing through SRI mat nursery.

- Farmers are advised to undertake sowing of *rabi* crops utilizing the current rainfall.
- **Major Seasonal Crop:** *thaladi* rice (tillering), sugarcane, banana and vegetables.
  - Undertake intercultural operations and application of fertilizers in *thaladi* rice and vegetables and sugarcane after current spells of rain.
  - Farmers are advised to take paddy nursery sowing in the current week.
  - Farmers are advised to apply top dressing of nitrogenous fertilizers based on leaf colour chart (LCC) after current spells of rain.
  - Farmers are advised to take up land preparation activities like ploughing, puddling, green manure in corporation and leveling for paddy main field.
  - In vegetable belt area, farmers are advised to spray NAA (Growth hormone) after current spells of rain for controlling of flower dropping and increase fruit selling.
  - Farmers involved in ground nut sowing are advised to choose the varieties suitable for the present season (Karthigai pattam) like VRI-6, 7 and TMV-13. Seeds (50-55 kg per acre) should first be treated with *Trichoderma viridii* (10 grams/kg of seed). Green gram varieties like Vamban-2 or Vamban-7 and black gram varieties like Vamban-4 or Vamban-5 may be preferred.
  - Place a bag of neem cake at the mouth of the irrigation channel to control insect and pest. While top dressing neem cake is mixed with urea @ 1:5 ratio to reduce pest population and to increase the yield.
  - Hand weeding is to be done on 20 & 45 DAT in *Thaladi* crop.
- **Plant Protection:**
  - In *thaladi* crop, spray Carbendazim or Tricyclozole @ 200 ml in 200 l of water to control blast and bacterial leaf spot disease and spray 20% cow dung slurry to control Bacterial Leaf Blight diseases.
  - stem borer, leaf folder and Green leaf hopper in paddy field, spray application of profenophos 50EC 1000ml/ha for controlling of above pests.
  - incidence of sphingid in the pulses crops, spray endosulfan at 1 litre / ha.
  - Spray the pesticides after current spells of rain.

## WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

### Maharashtra

- **Realised Rainfall:** Mainly dry weather prevailed all over the State during last week.
- **Rainfall Forecast:** Dry weather is likely over the State
- **Major *Kharif* Crops:** cotton, Vegetables, tur
- **Major *rabi* Crops:** *jowar*, safflower, sunflower, linseed, gram, wheat, mustard vegetables.
- **Crop Stage:** Red gram (pod development / pod maturity), *Kharif* & irrigated cotton (boll maturity / picking), and *rabi* *jowar* (vegetative growth / flag leaf initiation), safflower (vegetative growth/ initial flowering) sunflower, linseed (early vegetative growth), gram (branching / flowering), wheat (sowing/early vegetative), mustard (sowing/germination)
- **Crop Condition:** Satisfactory.
- **Advisory:** Conserve moisture in the crop field at maturity stage.
  - Complete sowing of *rabi* gram, mustard and wheat and also start preparatory tillage for sowing of *rabi* groundnut, sunflower, mustard in south Konkan.
  - Thinning and weeding may be done early sown crop.
  - Apply second dose of Nitrogen after 30 to 35 days from sowing.
  - Apply protective irrigation to standing crops.
- **Major Seasonal Crop:** Fruit crops, Sugarcane and vegetables.
  - Undertake spraying, fertilizer application in the standing crops.
  - Continue picking of fully opened cotton bolls.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
  - Pod borer on red gram, for control spray 5% Neemark. If infestation is more, spray Endosulfan 35 %WSC @ 20 ml or Quinolphos 25 % WSC @ 16 ml or Fenthioate 50% WS @ 14 ml in 10 liters of water..

- powdery mildew on all rabi crops, for control of powdery mildew spray 400 mesh Sulphur W.S. 80%, @ 3gm per liter of water or Pancozol @ 1 ml or Denocap @ 1 ml per liter of water.
- sugary disease on rabi jowar due to attack of aphids and thrips. For control of aphids and thrips, spray Dimethoate 3 EC or Dimeton 25 EC or Endosulfan 35EC @1.5 ml per liter of water.
- midge fly in mango, for control spray Monocrotophos @ 11ml/10liter or Dimethoate @10ml/10liter of water. For control of anthracnose disease on new flush and inflorescence of mango, spray Carbendazim @1gm /1lit.or Thiophinate Methyl 1gm/lit or Propinet @1gm/1liter of water.

## Gujarat

- **Realised Rainfall:** Mainly dry weather was prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely over Gujarat region and Saurashtra and Kutch.
- **Major rabi Crops:** wheat, potato, mustard
- **Crop Stage:** mustard (early vegetative), gram(flowering)
- **Crop Condition:** Crop condition is satisfactory
- **Advisory:**
  - Apply irrigation during crown root initiation stage (20 days after sowing) and tillering stage (35-40 days after sowing) of early sown wheat crop. Farmers are advised to continue sowing of wheat and select among GW-496, 366, 322, Lok-1 certified seed @ 100 kg /ha keeping 30 x 10 cm distance. Apply irrigation immediately after sowing.
  - Undertake weeding, intercultural operations in early sown mustard crop. After that apply first irrigation to the crop.
  - Undertake land preparation operations for sowing of potato.
  - Farmers are advised to apply irrigation to gram crop as it is in flowering stage.
  - Undertake sowing of wheat. For timely sowing select cultivars viz., GW- 496, GW 273 GW- 503 and GW- 322. Farmers may use seed rate @ 125 kg/ ha. Lines sowing distance- 22.5 cm and depth of sowing is 5- 6 cm for better germination. Seed treated before sowing with Endosulfan 35 EC @ 700ml per 100 kg seed to control termite in the field. Seeds are to be treated during night time before sowing. Apply FYM @ 10-15 t/hectare and basal dose of chemical fertilizers @ 60 kg Nitrogen + 60 kg Phosphorus per hectare.
  - Undertake land preparation and sowing of gram, amaranthus and cumin.
  - Undertake sowing of maize with variety GM-3 or Ganga.
  - Undertake sowing of garlic with variety Gujarat Garlic-1, Gujarat Garlic-10 or Gujarat Garlic-2 recommended @ 600-700 kg claws/ha.
- **Major Seasonal Crop:** Fruit crops, Sugarcane and vegetables
  - Undertake intercultural operation and application of fertilizer and plant protection measures. Undertake planting of different fruit crops like mango, sapota, pomegranate, lemon, guava, custard apple etc.
  - Farmers are advised for sowing of fodder sorghum.
  - Undertake top dressing in castor.
  - Continue sowing of clusterbean varieties like GC – 1, 2 at 30 cm spacing.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
  - mealy bug in cotton; to control uproot the affected plants and burn and eradicate parthenium weed as it is host plant.
  - Powdery mildew and downey mildew in cucurbits. For control of powdery mildew two to three spray of wettable Sulphur @ 25 gm. /10 lit of water at weekly interval. For control of downey mildew spray copper fungicide @ 40 gm. /10 lit of water at an 8 to 10 days interval.
  - Color rot in groundnut, spray carbendazim @ 0.2 %.
  - mealy bug on cotton, uproot the affected plants then burn and eradicate weeds surrounding field as it is host plant and spray Emidaclopride @ 5 ml + Prophenofos @ 15 ml in 10 litre of water + adding solution of oil soap @ 10 gram. Dust Methyl parathion 2 % powder surrounding the crop stem.

- mealy bug in orchard, dust Methyl Parathion 2 % powder in soil after digging near the stem and Spray Emidaclopride @ 5 ml + Prophenofos @ 15 ml in 10 litre of water + adding solution of oil soap @ 10 gram surrounding the tree stem.
- On cotton alternaria leaf spot disease, spray mencozeb + chlorothanolin @ 25 gm in 10 liters of water, for thrips spray triazophos 20 ml or methyl-o-dematon 5 ml or dimethoate 10 ml in 10 liters of water and for the control of leaf blight, spray Mencozeb 25 gm or copper oxychloride 30 gm in 10 liters of water.
- semi looper in castor, spray chlorpyripos 20 ml or endosulphan 20ml or quinalphos 20 ml in 10 liters of water.
- Shoot borer in brinjal, remove and destroy infested shoot and arrange to put at least 12 to 15 pheromone trap /ha. and spray endosalphan @ 21 ml or DDVP @ 5 ml/10 lit of water.

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

### Madhya Pradesh

- **Realised Rainfall:** Mainly dry weather was prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major rabi Crops:** wheat, pulses, gram
- **Crop Condition:** Satisfactory.
- **Advisory:**
  - Undertake sowing of potato, onion , rabi crops and vegetable crops.
  - Undertake sowing of late sown improved varieties like HI - 1454, Raj -3777, GW -173 and Lok -1., and chickpea, lentil, linseed and field pea.
  - Farmers are advised to irrigate the wheat crop at 21 days after sowing and give nitrogen fertilizer 1/4<sup>th</sup> recommended dose by urea as top dressing.
  - Undertake sowing of berseem, dhania, pyaj, and lahsun.
  - Undertake sowing of desi gram with varieties JG 130, JG 11, JG 315, JG 16.
- **Major Seasonal Crop with stage:** Sugarcane (cane development), cotton (boll development/ maturity) and vegetable crops (vegetative)
- **Crop Condition:** Good
- **Advisory:**
  - Farmers are advised to transplant cabbage and cauliflower in the field.
  - Undertake pit preparation for planting of new orchard crops.
  - Farmers are advised that suitable time for transplanting of onion.
- **Plant Protection:** Weather conditions are favourable for-
  - boll worm cotton crops, spray Profenophos 40% EC @ 3.0 ml/l.
  - pod borer in pigeonpea, spray Profenophos 50 EC @ 1.5 l/ha.
  - Mealy bug in cotton, spray Prophenophos 2 ml per litre of water.
  - Boll worm on cotton crops, farmers use pheromone traps to control male insect, if attack is increased spray Profenophos 40% EC @ 3.0 ml/l.
  - powdery mildew in vegetables farmers are advised to take up the spraying of 1.0 g Carbendazime dissolved in one liter of water.
  - fruit fly in ber, farmers are advised that they should spray Endosulphon 35 EC @ 2 ml/l and second spray after 15 days.
  - Caterpillar in cabbage, Spray Melathyon 1 ml per litre of water.
  - insect attack in Pigeon pea crop ((at flowering to Podding stage), spray Indosulphan or Quinalphas @ 2.0 ml. per liter for controlling it. Pheromone or light traps may be used.
  - blight disease in tomato farmers, spray Mencozeb 75 WP @ 2 gm/l of water.
  - Zulsa disease in potato, spray Menkozeb 2kg in 600 litre of water.
  - Caterpillar in gram and arhar, spray Endosulphan or Prophenophos 1.5 litre in 500 to 600 litre of water.

- **Animal Husbandry:** Animals are to be checked by veterinarians Cattle should be vaccinated to save them from infections/diseases like Anthrax, Galgotu, Black Quarter and FMD etc. The animals should be dewormed through deworming tablets. Take care the pregnant animals and feed them balance diet. Provide the animal's clean water and balance and nutrients rich food.

## Chhattisgarh

- **Realised Rainfall:** Mainly dry weather was prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major *rabi* Crops:** Rice,
- **Crop Condition:** Good
- **Advisory:**
  - Undertake sowing of linseed, potato, onion, gram, pea, lentil and safflower.
  - Farmers are advised to prepare the field and undertake sowing of potato. Before the sowing, dipping of seeds for 5 to 10 minutes in the 0.25% solution of Dithane M 45 is recommended.
  - **Advisory:** The temperatures become favorable for sowing of wheat, hence it is advised to undertake sowing of wheat at the earliest. GW-273, Kanchan, GW-173, Amar, Lok-1, Ratan and HD-2329 are suitable varieties for Chhattisgarh Plains zone. However, under limited irrigation sowing of Sujata variety is recommended. For sowing of wheat seed rate should be 125 kg/ha for all the varieties.
  - Proper seed treatment methods should be adopted before sowing of gram. Seed treatment with fungicides like Carbedizim @ 2.5 g/kg of seed recommended. After this seed should also be treated with Rhizobium culture @ 5 g/kg of seed. Vaibhav, JG-74, TG-315, ICC-2 (Kabuli) etc. are suitable varieties for the Chhattisgarh plains agro-climatic zone.
  - Complete sowing of safflower during this week.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative), vegetables (flowering / fruiting / harvesting),
- **Advisory:**
  - Undertake weeding and intercultural operations in sugarcane.
- **Plant Protection:**
  - aphids in mustard and vegetables and fruit/shoot borer in brinjal, farmers are advised to keep watch over the crops and if necessary spray Endosulphan or Metasystox @1.0 ml per litre of water. Care should be taken to harvest the crop at least after 10 days of spraying.
  - Pigeon pea crop is at flowering/pod formation stage. At this stage keep watch over the crop for pod borer complex due to partly cloudy weather during past week. If necessary, spray Endosulphan or Metasystox @1.5 ml per liter of water. Spraying of HNPV @ 250 LE/ha is also recommended, but while using HNPV, care should be taken that spraying should be done during morning or evening hours to avoid loss of efficacy during bright sunshine hours.
  - Weather conditions are favorable for incidence of
  - Diamond Back Moth in Cole crops. Hence it is advised to spray Endosulphan or Trizophos @ 1.5 ml/liter of water is necessary.
  - thrips and *alternaria* blight on kulthi crop, spray of copper oxychloride and monocrotophos.
  - Powdery mildew on pea, spray Kerathane (0.15%) or Sulphex (0.2%).