



National Agromet Advisory Service Bulletin



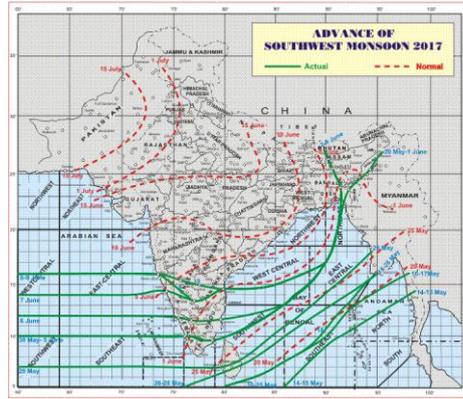
Friday 9th June 2017
(For the period 9th to 13th June 2017)



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

Weblink For
District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>
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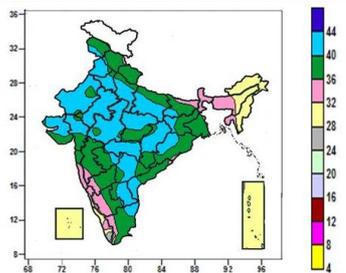
Monsoon watch dated 09.06.17



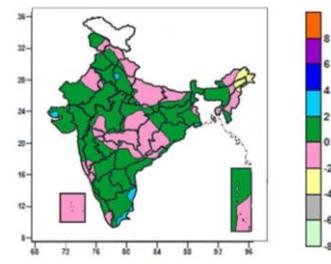
- Southwest Monsoon has further advanced into some more parts of Konkan, Interior Karnataka, Rayalaseema and Coastal Andhra Pradesh. The Northern Limit of Monsoon (NLM) passes through Lat. 16°N/Long. 60°E, Lat. 16°N/Long. 65°E, Lat. 16°N/Long. 70°E, Vengurla, Gadag, Anantapur, Nellore and Lat. 15°N/Long. 85°E, Lat. 17°N/Long. 90°E, Lat. 20°N / Long. 91°E, Agartala, William Nagar, Kokrajhar and Lat. 27°N /Long. 90°E.
- Favorable conditions are developing for further advance of southwest monsoon into some more parts of Konkan, Interior Karnataka, Rayalaseema and coastal Andhra Pradesh; some parts of Madhya Maharashtra, central & north Bay of Bengal, Tripura, Assam & Meghalaya and some parts of West Bengal & Sikkim during next 2-3 days.

Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 07.06.2017

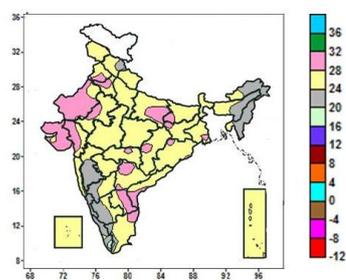
Actual Mean Maximum Temperature (°C) in India for the week ending 07.06.2017



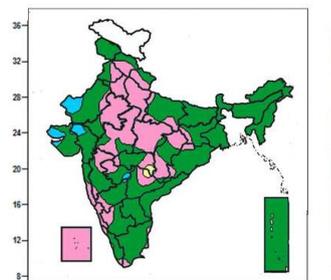
Mean Maximum Temperature (°C) Anomaly in India for the week ending 07.06.2017



Actual Mean Minimum Temperature (°C) in India for the week ending 07.06.2017

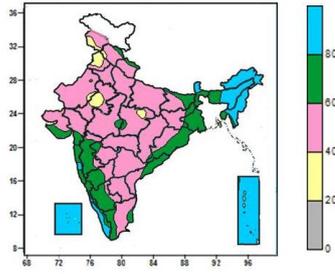


Mean Minimum Temperature (°C) Anomaly in India for the week ending 07.06.2017

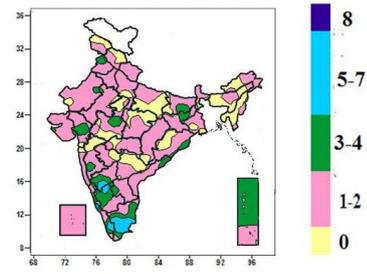


Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 07.06.2017

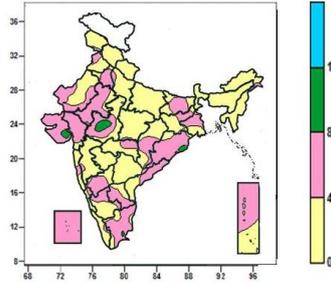
Relative Humidity (%) over India for the week ending 07.06.2017



Cloud amount (okta) over India for the week ending 07.06.2017

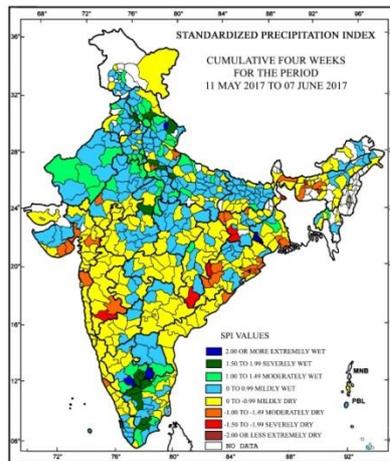


Wind speed (knots) over India for the week ending 07.06.2017



**Standardised Precipitation Index
Four Weekly for the period 11th May to 7th June 2017**

MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



Weather Forecast for next 5 days valid upto 0830 hours of 14th June 2017

- No significant change in maximum temperatures over most part of the country during next 24 hours and rise by 2-3°C over northwest India thereafter.

Weather Warning during next 5 days

- **09 June (Day 1):** Thunderstorm accompanied with gusty winds very likely at isolated places over East Rajasthan, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura. Heavy rain very likely at isolated places over Konkan & Goa, north Coastal Andhra Pradesh, Coastal Karnataka and Kerala.
- **10 June (Day 2):** Heavy rain very likely at isolated places over Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, north Coastal Andhra Pradesh, Coastal Karnataka and Kerala.
- **11 June (Day 3):** Heavy to very heavy rain very likely at isolated places over Konkan & Goa and heavy over Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, south Gujarat region, Madhya Maharashtra, north Coastal Andhra Pradesh and Coastal Karnataka.
- **12 June (Day 4):** Heavy to very heavy rain with extremely heavy falls very likely at isolated places over Konkan

& Goa; heavy to very heavy rainfall at isolated places over Madhya Maharashtra and heavy at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat region and Marathwada.

- **13 June (Day 5):** Heavy to very heavy rain very likely at isolated places over Madhya Maharashtra and heavy at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Gujarat region, Konkan & Goa and Marathwada.

Weather Outlook for subsequent 2 days from 14th to 16th June 2017

- Rain very likely at most places over west coast and northeastern states; at many places over rest Maharashtra and at a few places over east India.
- Rain very likely at isolated places over central & peninsular India and Western Himalayan region.

**Meteorological sub-division wise detailed 5 day rainfall forecast (Mid day)
9th June 2017**

Met Sub-divisions	09 June	10 June	11 June	12 June	13 June
1. Andaman & Nicobar Islands	FWS	SCT	SCT	SCT	SCT
2. Arunachal Pradesh	SCT	SCT	FWS	FWS	FWS
3. Assam & Meghalaya	SCT	FWS	WS	WS	FWS
4. N.M.M. & T.	FWS	WS	WS	WS	FWS
5. S.H. West Bengal & Sikkim	SCT	SCT	FWS	WS	WS
6. Gangetic West Bengal	SCT	SCT	FWS	FWS	FWS
7. Odisha	FWS	FWS	FWS	SCT	SCT
8. Jharkhand	SCT	SCT	SCT	FWS	FWS
9. Bihar	SCT	SCT	SCT	FWS	FWS
10. East Uttar Pradesh	ISOL	ISOL	SCT	ISOL	ISOL
11. West Uttar Pradesh	ISOL	ISOL	ISOL	DRY	DRY
12. Uttarakhand	SCT	SCT	ISOL	ISOL	ISOL
13. Haryana, Chd & Delhi	ISOL	ISOL	ISOL	DRY	DRY
14. Punjab	ISOL	ISOL	ISOL	ISOL	ISOL
15. Himachal Pradesh	SCT	SCT	ISOL	ISOL	ISOL
16. Jammu & Kashmir	FWS	SCT	SCT	ISOL	SCT
17. West Rajasthan	ISOL	ISOL	ISOL	ISOL	DRY
18. East Rajasthan	SCT	SCT	ISOL	ISOL	ISOL
19. West Madhya Pradesh	SCT	SCT	SCT	SCT	SCT
20. East Madhya Pradesh	ISOL	SCT	SCT	SCT	SCT
21. Gujarat Region	ISOL	ISOL	FWS	FWS	FWS
22. Saurashtra & Kutch	ISOL	ISOL	SCT	SCT	FWS
23. Konkan & Goa	WS	WS	WS	WS	WS
24. Madhya Maharashtra	SCT	FWS	FWS	WS	WS
25. Marathwada	SCT	FWS	FWS	WS	WS
26. Vidarbha	SCT	SCT	SCT	FWS	FWS
27. Chhattisgarh	SCT	SCT	FWS	FWS	FWS
28. Coastal Andhra Pradesh	FWS	SCT	FWS	FWS	SCT
29. Telangana	ISOL	ISOL	SCT	SCT	SCT
30. Rayalaseema	ISOL	SCT	SCT	SCT	SCT
31. Tamil Nadu & Puducherry	ISOL	ISOL	ISOL	ISOL	ISOL
32. Coastal Karnataka	WS	WS	WS	WS	WS
33. North Interior Karnataka	SCT	FWS	FWS	FWS	FWS
34. South Interior Karnataka	SCT	SCT	FWS	FWS	FWS
35. Kerala	FWS	FWS	FWS	FWS	FWS
36. Lakshadweep	FWS	FWS	FWS	SCT	SCT

% Station Reporting Rainfall

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)
No Rain	Dry		

Salient Advisories

- Southwest Monsoon has further advanced into some more parts of **Konkan, Interior Karnataka, Rayalaseema and Coastal Andhra Pradesh** and favorable conditions are developing for further advance of southwest monsoon into some more parts of Konkan, Interior Karnataka, Rayalaseema and coastal Andhra Pradesh; some parts of Madhya Maharashtra, Tripura, Assam & Meghalaya and some parts of West Bengal & Sikkim during next 2-3 days; the following agromet advisories are suggested:

Kerala

- In the Southern Zone and Central Zones, continue transplanting of *Viruppu* rice and in the Central Zone, continue sowing of rice (Uma and Kanchana varieties).
- In the Northern Zone, continue nursery sowing of rice and planting of black pepper.

Karnataka

- In **Coastal Karnataka**, undertake transplanting of rice. Drain out excess water from the rice nurseries. In Hill Zone, undertake drill sowing of rice and continue sowing of pulse crops after current spells of heavy rain. Provide adequate drainage/clean drainage channels in already sown crop fields to avoid water stagnation.
- In **South Interior Karnataka**, continue sowing of pulses like cowpea, green gram, black gram, horse gram, and field bean. In the Eastern Dry Zone, undertake land preparation and sowing of *kharif* crops like red gram, ragi, groundnut and maize.
- In **North Interior Karnataka**, undertake land preparation and sowing of jowar, pearl millet, red gram, black gram, maize, groundnut, soybean, sunflower, sesame.

Andhra Pradesh

- In **Coastal Andhra Pradesh**, in Krishna Godavari Zone, undertake land preparation for nursery sowing of rice, sowing of maize, black gram, green gram and red gram.
- In **Rayalaseema**, undertake sowing of *kharif* groundnut in Southern Zone and undertake sowing of rainfed red gram in Scarce Rainfall Zone.

Assam, Meghalaya and Arunachal Pradesh

- In **Assam**, continue nursery sowing of *Sali* rice. In high rainfall areas of Assam, farmers can prepare nursery beds for *Sali* rice cultivars like Jalashree and Jalkuwari for flood prone areas.
- In **Meghalaya**, continue nursery sowing rice and undertake land preparation for transplanting of *Sali* rice/*kharif* rice and planting of ginger/turmeric. Provide adequate drainage in ginger/turmeric fields.
- In **Arunachal Pradesh**, continue transplanting of finger millet and nursery sowing of rice, sowing of cowpea, French bean and soybean.

Nagaland, Manipur & Mizoram

- In **Nagaland**, prepare the main field for transplanting of Jhum rice.
- In **Manipur**, continue nursery raising for main *kharif* rice and sowing of *kharif* maize, soybean, groundnut and black gram and planting of ginger/turmeric. Raise community nursery in upland area so that it may be least affected with the heavy rains. Undertake main land preparation for transplanting of rice.
- In **Mizoram**, transplanting of pre-*kharif* rice.

Maharashtra

- In **Konkan**, continue sowing of rice, nagli and varai seeds in prepared nursery beds after current spells of heavy rain and provide adequate drainage in already sown fields to avoid water stagnation. In **Madhya Maharashtra** continue nursery sowing of rice/finger millet on raised beds and keep fields ready for direct sowing of rice/finger millet, sowing of *kharif* crops like Pearl Millet, Groundnut, Pigeon pea, Sunflower and Jowar.
 - In Marathwada, continue land preparation for sowing of pigeon pea, green gram black gram, groundnut and maize.
 - In **Vidarbha**, prepare nursery beds for sowing of *kharif* rice in East Vidarbha and continue land preparation for sowing of *Kharif* crops like rice, soybean, cotton, tur and moong in Central and West Vidarbha.
- Undertake land preparation for sowing of *kharif* crops like cotton, jowar, groundnut, red gram, green gram, black

gram in **Telanagana**.

- Also undertake nursery preparation for *kharif* rice in **South Gujarat, Madhya Pradesh and Chhattisgarh**.

Detailed Zonewise Agromet Advisories

SOUTH INDIA [TAMIL NADU, TELANGANA, ANDHRA PRADESH, KARNATAKA, KERALA]

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala, Vishakapatnam district of Coastal Andhra Pradesh, all districts of Rayalaseema, Mahbubnagar and Nizamabad districts of Telangana, Kanyakumari, Karaikal, Nilgiris and Vellore districts of Tamil Nadu, all districts of Coastal Karnataka, Bidar, Kalaburgi Koppal and Vijayapura districts of North Interior Karnataka, Ballari, Chikkamagaluru, Kodagu and Kolar districts of South Interior Karnataka during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Kerala:**
 - In Southern Zone and in the Central Zone, continue transplanting of *Viruppu* rice. In the Northern Zone continue Continue nursery sowing of rice.
 - In the Problem Area Zone, undertake wet sowing of rice with proper drainage facilities.
 - In the Northern Zone, continue planting of coconut seedlings and planting of black pepper.
 - In the Problem Area Zone, prevailing high humid weather is congenial for diseases like quick wilt or slow wilt in pepper gardens. Undertake prophylactic spraying of Boardaux Mixture 1% or Fytolan 0.3 % for controll after current spells of rain.
 - **Karnataka:**
 - In Coastal Zone of Karnataka, complete nursery sowing; undertake transplanting of rice. Drain out excess water from the rice nurseries.
 - In Hill Zone, undertake drill sowing of rice. Continue planting of areca nut seedlings.
 - In Southern Dry Zone, continue sowing of pulses like cowpea, green gram, black gram, horse gram, field bean and green manure crops.
 - In the Eastern Dry Zone, continue land preparation and sowing of red gram and maize; continue land preparation for sowing of castor under monocropping and ragi under double cropping; continue sowing of sesame, black gram, green gram, cowpea, groundnut and field bean under double cropping.
 - In Central Zone, continue land preparation for long duration crops like red gram and castor under monocropping and short duration crops like sesame, cowpea and green gram under double cropping utilising the realised rainfall and undertake sowing after receipt of sufficient rainfall.
 - In Southern Transition Zone, continue land preparation for sowing of *kharif* crops (rice, ragi, sunflower, horse gram, red gram, groundnut, jowar, cotton) utilising the realised rainfall. Continue sowing of ginger/turmeric.
 - In North East Transition Zone, undertake nursery sowing of rice and land preparation for sowing of jowar, red gram, black gram and soybean.
 - In North East Dry Zone, undertake nursery bed preparation for sowing of rice and land preparation for sowing of jowar, pearl millet, red gram, black gram, maize, groundnut, soybean, sunflower, sesame.
 - In North Transition Zone, continue land preparation and undertake sowing of green gram, black gram, red gram, soybean and groundnut after receipt of sufficient rainfall.
 - **Andhra Pradesh:**
 - In the North Coastal Zone, ploughings are to be initiated for planting rainfed sugarcane and continue land preparation for sowing of bajra, mesta, rainfed sugarcane etc. and green manure crops.
 - In the Krishna Godavari Zone, undertake sowing of green manure crops, land preparation for sowing of paddy, maize, black gram, green gram and red gram. Continue deep summer ploughings.
 - In the Scarce Rainfall Zone, undertake sowing of rainfed red gram, planting of banana and planting of ber and pomegranate. Continue summer ploughings.
 - In the Southern Zone, undertake sowing of *kharif* groundnut after seed treatment with Mancozeb @ 3g/litre of water.
 - In the Southern Zone, due to prevailing high temperatures and dry conditions, there is possibility of drop of flower, boll, pod and wilting of leaves in summer cotton and incidence of psotymould in mango. To control flower, boll, pod and wilting of leaves, spray 2% Potassium Nitrate or 2% Urea or 19-19-19 @ 10 g./litre of water. To control psotymould in mango, spray Hexaconazole 2 ml/litre of water after current spells of rain.
 - **Telangana:**
 - In South Telangana Zone, undertake land preparation for timely sowing of rained soybean, jowar, maize, red gram, green gram, cotton. By taking advantage of rains, take-up sowing of sunhemp and dhaincha as in-situ green manure crop preceding rice. Sow green gram as catch crop preceding rice depending on the availability of release of water.
 - In North Telangana Zone, cultivate green manure crops like sunhemp, dhaincha, pillipesara, clusterbeans and

Sesbaniarostrata, incorporate the crops into the soil after sufficient growth and continue summer ploughing.

▪ **Tamil Nadu:**

- In the Cauvery Delta Zone, undertake land preparation for nursery sowing of Kuruvai rice.
- In the Western Zone, prepare the main field for planting of Kuruvai rice by utilizing the realized rainfall. Undertake rainfall harvesting by providing basin in coconut farms. Apply fertilizer for the coconut trees more than 5 years @ 650 g urea, 1 kg Super Phosphate, 1 kg Potash per tree. And also apply 250 g of micro nutrient per tree.
- In the High Rainfall Zone, as heavy winds are expected, staking should be given to young rubber, banana and fruit trees. Avoid spraying of chemicals due to heavy wind and rain. Provide proper drainage to prevent water logging in pineapple fields.
- In the Western Zone, due to continuous rainfall and high relative humidity, ergot (sugary disease) and leaf rust may occur in cumbu. If ergot disease is noticed, spray Carbendazim @ 1 g/litre of water. If leaf rust disease noticed, apply Mancozeb @ 2 g/litre of water.
- In the South Zone, fruit fly incidence is noticed in guava and likely to increase in the prevailing weather. For control, spray Malathion 50 EC @ 1 ml/litre of water four times at 15 days interval.
- In the High Altitude Hilly Zone, due to continuous rain, there is chance of cabbage and cauliflower head rot disease incidence. To control, spray Copper Oxy Chloride @ 2g/litre of water.

• **Animal Husbandry**

- In the Cauvery Delta Zone of Tamil Nadu, provide supplementing dietary sodium and potassium to increase milk yield during the period of heat stress. Proper de-worming and vaccination schedule must be followed for maintaining the health of animal.
- In Coastal Zone of Karnataka, provide antibiotic drugs through water/feed to poultry against raniket, gumbra disease. Protect the birds from wet weather and wet floor.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Arunachal Pradesh except Tirap and Upper Subansari, all districts of Assam except Jorhat, Kamrup(Metro), Morigaon and Nagaon, all districts of Meghalaya except Ribhoi, in Aizwal, Lunglei and Serchhip districts of Mizoram, Imphal East and Imphal West districts of Manipur, Kohima district of Nagaland and all districts of Tripura during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with gusty winds very likely at isolated places over Assam & Meghalaya and Nagland, Manipur, Mizoram & Tripura on 9th June, provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds.
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - In Assam, continue nursery sowing of Sali rice and in high rainfall zones of Assam, farmers can prepare nursery beds for transplanted *Sali* rice. Rice cultivars Jalashree and Jalkuwari are recommended for sowing in flood prone areas.
 - In the Barak Valley Zone of Assam, continue nursery flood tolerant Sali rice variety viz. Swarna Sub-1, Ranjit Sub-1 and Bahadur Sub-1. Undertake planting of lemon and banana in the prepared pits.
 - In Arunachal Pradesh, continue sowing of soybean. Carry out transplanting of rice in lowlands. Avoid water stagnation in ginger and turmeric crops.
 - In Meghalaya, continue nursery sowing Sali rice/kharif rice and land preparation for transplanting of Sali rice/kharif rice. Complete planting of ginger/turmeric and provide adequate drainage in ginger/turmeric fields.
 - In Hill Zone of Assam, prevailing weather is congenial for attack of rice bugs and stem borer in Ahu rice. Spray Malathion 5% dust @ 20 kg/ha to control rice bugs and Monocrotophos 40 EC @ 0.04% or Fenitrothion 50 EC @ 0.05% to control stem borer. Undertake plant protection methods after current spells of rain.
 - In Upper Bramhaputra Valley Zone of Assam, spray Malathion 50 EC @ 10 ml and 50 gm molasses dissolved in 5 litres of water to control fruit fly in cucurbit vegetables after current spells of rain.
 - **Nagaland, Manipur, Mizoram and Tripura:**
 - In Nagaland, prepare the main field for transplanting Jhum paddy. Flood the field for 1 or 2 days before ploughing to allow water to soak in. Keep 2.5cm water level in the fields.
 - In Manipur, undertake sowing of cowpea and preparation of nursery for early cauliflower in the upland area or in rain protective structures, carry out land preparation for transplanting rice seedling of main *kharif* rice, maintain water level at 5-8 cm in pre-*kharif* rice, treat black gram and rice bean seeds with Thiram or Captan @ 2g/kg seeds before sowing.
 - In Mizoram, undertake planting of colocasia and continue planting of ginger and turmeric and transplanting of pre-*kharif* rice.
 - In Nagaland, spray neem oil to the Naga King Chilli plants to control white fly infestation. Remove plants infested with leaf curl after current spells of rain.

- In Tripura, complete sowing of maize in upland and medium upland. Avoid water stagnation in already sown cowpea fields.
- **Animal Husbandry**
- In Assam & Meghalaya, farmers are advised to keep cattle in sheds during heavy rainfall period. Do not allow the cattle for grazing during the rainy period.
- In Upper Brahmaputra Valley Zone of Assam, calves are infected more by the worms during monsoon season. Give Piperzine or Mebendazole at recommended dose in consultation with veterinary doctor.
- In Arunachal Pradesh, provide UMB/ Molasses and 10 – 30 ml of vitamin B-complex in the feed to the cattle. To control FMD, give first injection at 6 -8 weeks of age and second injection after 6 months interval.
- **Fishery**
- In Barak Valley Zone of Assam, there may be chances of bacterial disease to the fishes if ponds are filled up with the rain water. To control the disease apply lime @ 6 kg per bigha of land.
- In Tripura, check pH of pond water. Apply lime @ 50kg/ha if pH falls below 6.5. Avoid excessive manuring and feeding which may lead to oxygen depletion in cloudy weather conditions.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa except Mumbai City, Mumbai Suburban and Thane, in Ahmednagar district of Madhya Maharashtra, all districts of Marathwada except Jalna and Nanded, in Buldhana and Washim districts of Vidarbha, Rajkot district of Gujarat during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, continue sowing of rice, nagli and varai seeds in prepared nursery beds and sowing of *kharif* vegetables like okra, cucumber, bitter gourd, snake gourd, ridge gourd etc after current spells of heavy rain. Provide adequate drainage in already sown field to avoid water stagnation. Undertake plantation of fruit crops like of Mango, Cashew, Coconut, Arecanut and Sapota after current spells of heavy rain.
 - In Madhya Maharashtra, continue nursery sowing of rice/finger millet on raised beds and direct sowing of rice/finger millet. Continue sowing of *kharif* vegetables in the nursery on raised beds. Complete land preparation for sowing of *kharif* crops like Pearl Millet, Groundnut, Pigeon pea, Sunflower and Jowar.
 - In Marathwada, undertake nursery preparation for *kharif* onion. Continue land preparation for sowing of pigeon pea, green gram black gram, groundnut and maize etc. Continue land preparation for sowing of fodder maize (African tall, Ganga-5, Vijay, Manjari, Ganga safed-2 hybrids varieties).
 - In Vidarbha, prepare nursery beds for sowing of *kharif* rice in East Vidarbha and continue land preparation for sowing of *Kharif* crops like rice, soyabean, cotton, tur and moong in Central and West Vidarbha.
 - **Gujarat:**
 - In South Gujarat Heavy Rainfall Zone, continue land preparation for *kharif* rice, sweet corn and prepare nursery beds for rice.
 - In North Gujarat Zone and North West Zone of Gujarat, if irrigated B.T. cotton/hybrid cotton is sown before pre-monsoon, undertake gap filling. Complete harvesting of matured summer groundnut and pearl millet crops. Plan for ensuing *kharif* sowing and for plantation of horticultural crops. Make farm pond in lower region of field to harvest rainwater
 - In South Saurashtra Zone, if irrigation facility is available, continue early sowing of *kharif* groundnut and complete harvesting of matured green gram, black gram, groundnut and sesame.
 - In Middle Gujarat Zone, continue land preparation for sowing of irrigated hybrid cotton, Bt. Cotton and groundnut. Continue sowing of pigeon pea (green pod type). Carry out levelling of plots to increase soil moisture holding capacity. Undertake harvesting of bajra, green gram and sorghum.
 - In Bhal and Coastal Zone of Gujarat, apply irrigation in pomegranate, sapota, lemon and papaya orchards.
 - In North Saurashtra Zone of Gujarat, continue pre-sowing of groundnut with irrigation. Continue land preparation for sowing of *kharif* cotton, groundnut, sesame, pearl millet, black gram, green gram, cowpea and pigeon pea. Procure good quality seeds for sowing of *kharif* cotton, sesame, pearl millet and pulses.
 - In Middle Gujarat Zone and Bhal and Coastal Zone, construct the bunds in advance to reduce soil erosion in field and plan for khetTalavadi (Farm ponds) to collect runoff water.
- **Animal Husbandry**
 - In Gujarat, maintain optimum temperature between 18° to 29° C in poultry shed for better egg production. Put curtains on southwest side of poultry house and sprinkle water on curtains during noon time. Vaccinate animals against FMD and BQ. Provide 30-35 gm mineral mixture in daily diet of animals. Give deworming tablet to younger animals.
 - In Maharashtra, vaccinate cows, buffaloes and goats for Foot and Mouth Disease.

EAST INDIA [JHARKHAND, BIHAR, ODISHA, WEST BENGAL & SIKKIM, ANDAMAN & NICOBAR ISLANDS]

- **Realised Rainfall:** Rainfall occurred in East Champaran, Khagadia, Sitamarhi and West Champaran districts of Bihar, Bokaro, Lohardagga, Ramgarh and Ranchi districts of Jharkhand, Ganjam, Kandhamal and Mayurbhanj districts of Odisha, all districts of Andaman & Nicobar Islands, Birbhum, Burdwan, Hooghly, Murshidabad, Nadia and North 24 Parganas districts of Gangetic West Bengal, Cooch Behar, Darjeeling, East Sikkim, Jalpaiguri and North Sikkim districts of Sub-Himalayan West Bengal & Sikkim during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Odisha:**
 - In Eastern Ghat High Land Zone, complete sowing of direct seeded paddy in low land and medium low land. Undertake land preparation for sowing of medium duration (around 120 days duration or more) non-paddy crops like Groundnut, Arhar, cotton in rainfed upland. Undertake sowing of pigeon pea and vegetables.
 - In South Eastern Ghat Zone, undertake sowing of maize in North Central Plateau Zone, undertake planting of ginger and turmeric and in West Central Table Land Zone, undertake sowing of Arhar.
 - In Western Undulating Zone, undertake land preparation for sowing of *kharif* crops other than rice in bunded upland and undertake sowing after receipt of sufficient rainfall.
 - In East and South Eastern Coastal Plain Zone, the weather is optimum for transplanting of marigold.
 - In North Eastern Coastal Plain Zone, due to fluctuation in temperature, the problem of sucking pests like white fly will aggravate. To control these pests spray Imidacloprid @ 4ml/10 litres of water after current spells of rain.
 - **West Bengal:**
 - In Laterite and Red Soil Zone, continue nursery bed preparation for sowing of rice crop under upland condition and lowland condition.
 - In the New Alluvial Zone, continue sowing of jute.
 - In the Hill Zone, continue planting of large cardamom plants and harvesting of beans. Avoid stagnation of water in the maize, round chilli, ginger and turmeric fields.
 - In the New Alluvial Zone, to control chili anthracnose or chili fruit rot, spray Carbendazim @ 1gm/litre of water in the morning or evening hours after current spells of rain and repeat at 10-15 days interval. To control stem rot of Jute, drench the soil at collar region of plants with Copper Oxychloride @ 4gram/litre of water. Spray with Milbemectin 1% E.C @ 0.5 ml/litre of water for control of mite after current spells of rain.
 - In Laterite and Red Soil Zone, to control die back and fruit rot sucking pest, remove the affected plant parts and spray Carbendazim @ 1g/litre. To control shoot and fruit borer in brinjal and fruit borer in lady's finger, spray Neem oil @ 5ml/litre of water after current spells of rain.
 - In Old Alluvial Zone, to control the anthracnose/fruit rot in chillies, spray Carbendazim @ 1gm/litre of water in morning or evening hour after current spells of rain and repeat after 10-15 days interval.
 - **Andaman and Nicobar Islands:**
 - In North and Middle Andaman, continue preparing main field of rice and sow green manure Dhaincha. Harvest mature bananas and provide support to the fruit bearing banana trees as wind speed may rise to 30 kmph.
 - **Bihar:**
 - In North East Alluvial Zone, continue nursery sowing of long duration paddy. Continue sowing of turmeric as sole crop and also intercrop with mango, litchi, banana and guava orchard.
 - In North West Alluvial Plain Zone of Bihar, continue planting of turmeric and ginger. Continue land preparation for sowing of *kharif* maize and continue seed bed preparation for rice nursery.
 - In South Bihar Alluvial Zone of Bihar, continue deep ploughing of fields utilising the realised rainfall and send soil sample for testing.
 - In North East Alluvial Zone of Bihar, to control brinjal fruit & shoot borer or tomato fruit borer, apply Indoxacarb 15.8 EC @ 1ml/litre of water after current spells of rain.
 - In North East Alluvial Zone, as weather is congenial for outbreak of tomato leaf curl, so remove virus infected plants if observed and spray Imidacloprid @ 0.5ml/litre of water to check secondary spread of disease after current spells of rain.
 - **Jharkhand:**
 - In Central and North Eastern Plateau Zone, continue planting of turmeric, ginger and yam.
 - In Western Plateau Zone, continue sowing of ginger, yam and turmeric with improved variety. Undertake harvesting of matured rice and moong in clear weather conditions.
 - In South Eastern Plateau Zone, there are chances of Gundhi Bug infestation at panicle emergence stage in rice and more likely to be prone at milking stage, apply Quinalphos 1.5 per cent dust @ 10 kg per acre during evening time. High difference in day and night temperature favours Blast disease occurrence hence, spray Tricyclazole @ 0.6 g per liter of water after current spells of rain.

- In South Eastern Plateau Zone, if cloudy weather appears, spray Sulfex WP @ 3 g per liter of water to check the occurrence of disease in mango. New shoots have emerged in mango trees and leaf galls are more prone to attack on the newly emerged leaves hence, spray Metasistox 1 ml or Imidacloprid 0.5 ml should be done. Spray Malathion 50 percent @ 2 ml along with half gram Carbendazim per litre of water to control the insects attack and anthracnose disease after current spells of rain.
- **Animal Husbandary**
 - In the Terai Zone of West Bengal, undertake routine vaccination of cattle, buffalo and goat for Foot and Mouth disease (FMD).
 - In the Old Alluvial Zone, apply appropriate dose of systematic de-wormer to all live stock and poultry birds throughout pre-shining season to control parasite consignment.
 - In Andaman and Nicobar Islands, keep the day old chicks under light preferably 40 watt bulb during cloudy days and provide clean drinking water.
- **Fishery**
 - In Coastal Saline Zone in West Bengal, feed the fishes during morning and afternoon hours. Make shadow by green pana (aquatic weed) at one side of pond. Uproot weeds from the bottom of ponds for more oxygen supply.
 - In Andaman and Nicobar Islands, do breeding of IMC carps during rainy days. Breed 1:2 (female : male) ratio of body weight and inject ovaprim @ 0.5 ml/kg for female and 0.2-0.3 ml/kg for male during evening hours in hapa.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rainfall occurred in Jabalpur and Satna districts of East Madhya Pradesh, Ashoknagar and Raisen districts of West Madhya Pradesh during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - In Satpura Plateau Zone, continue field preparation for nursery sowing of rice. Undertake field preparation for sowing of soybean, maize and groundnut. Continue nursery preparation for tomato, chilli, brinjal and early cauliflower.
 - In Gird Zone, continue harvesting of matured moong in clear weather. Continue planting of turmeric. Undertake nursery preparation for rice and *kharif* vegetables.
 - In Malwa Plateau Zone, continue deep ploughing of the field and keep inputs ready for sowing of *kharif* crops. Continue nursery preparation for rainy season vegetables like brinjal, tomato, *kharif* onion, early cauliflower chili etc.
 - In Kymore Plateau and Satpura Hill Zone, undertake nursery sowing of rice with irrigation facility and sowing of red gram.
 - In Jhabua Hill Zone, continue harvesting of green gram, groundnut and matured vegetables in clear weather. Continue cultivation of ginger and turmeric. Continue nursery preparation for rice.
 - In Central Narmada Valley Zone, continue weeding in sugarcane and vegetables. Continue nursery preparation for tomato, chilli, brinjal and early cauliflower. Continue nursery bed preparation for rice. Continue harvesting of matured moong.
 - In Bundelkhand Zone, continue seed bed preparation for sowing of *kharif* onion. Undertake nursery preparation for rice with irrigation facility.
 - In Vindhya Plateau Zone, continue harvesting of matured moong and urad in clear weather. Undertake nursery preparation for rice.
 - In Grid Zone, due to cloudy weather, there are chances of fruit borer in brinjal and okra, spray Dimethoate @ 750 ml/500 litre of water on a non rainy day and repeat at an interval of 10 days.
 - **Chhattisgarh:**
 - In North Hill Zone, continue nursery preparation for long duration varieties of rice. Continue land preparation for sowing/transplanting of rainy season vegetables.
 - In Bastar Plateau Zone, undertake nursery preparation of vegetables like tomato, brinjal, and chilly.
 - In Chhattisgarh Plain Zone, undertake direct sowing of rice and nursery sowing of vegetables. Continue nursery preparation for rice.
 - In Bastar Plateau Zone, for control of leaf curl disease in lady's finger, cowpea, pumpkin, chilly and tomato, spray Dimethoate 30 EC @ 1-1.5 ml/litre of water after current spells of rain.
- **Horticulture**
 - Continue digging of pits of appropriate size and distance for planting of new orchards in Madhya Pradesh and Chhattisgarh.
- **Animal Husbandry**
 - In Madhya Pradesh, undertake vaccination to protect the animals from mouth and Jahari fever disease and to develop the immunity power.

- In Chhattisgarh, undertake vaccination of animals against the Black Quarter and Anthrax disease.

NORTH INDIA [JAMMU & KASHMIR, HIMACHAL PRADESH, UTTARAKHAND, PUNJAB, HARYANA, DELHI, UTTAR PRADESH & RAJASTHAN]

- **Realised Rainfall:** Rainfall occurred in all districts of Jammu & Kashmir except Doda, Jammu, Kargil, Kathua, Kupwara, Ladakh(Leh), Rajouri, Ramban, Samba and Udhampur, in Kullu, Mandi and Solan districts of Himachal Pradesh, Faridkot, Nawashahar, Ropar and Mohali districts of Punjab, Ambala, Chandigarh and Yamunanagar districts of Haryana, Azamgarh, Bahraich, Faizabad and Kheri districts of East Uttar Pradesh, Etah, Lalitpur, Moradabad and Saharanpur districts of West Uttar Pradesh, Almora, Chamoli, Dehradun, Nainital, Pithorgarh, Rudraprayag and Uttarkashi districts of Uttarakhand during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Jammu & Kashmir:**
 - In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, continue nursery sowing of rice. Continue land preparation for maize after the receipt of rains and try to conserve moisture for early sown maize crop under irrigated conditions. Continue land preparation for sowing of rainy season bitter melon, sponge melon, bitter melon and okra. Continue harvesting of summer moong.
 - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, continue sowing of paddy nursery in the fields under subtropical and intermediate areas of the district. Undertake sowing of maize utilising the realised rainfall.
 - In Valley Temperate Zone of Jammu and Kashmir, continue sowing of maize. Continue planting of cucurbits, cole and solanaceous crops. Continue transplanting of nursery of summer rice. Open drainage channels to avoid water stagnation in saffron field.
 - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, there is chance of incidence of bacterial wilt in tomato, brinjal, chilli and cucurbits especially under higher areas of district. If observed, apply Streptocyclin Sulphate @ 1.0 gm/10 litres of water after current spells of rain and repeat the spray at the time of flowering.
 - **Uttarakhand:**
 - In Sub Humid and Sub Tropic Zone of Uttarakhand, continue nursery sowing of rice. Undertake sowing of maize.
 - In Udham Singh district of Bhabar and Tarai Zone, continue nursery preparation for mid duration variety of rice up to 10th June. Undertake direct sowing of rice in the first fortnight of June. Undertake sowing of maize, cowpea and early maturing varieties of pigeonpea.
 - In Hill Zone, continue nursery sowing of rice. Undertake earthing-up in potato at seedling/ vegetative stage.
 - In Bhabar and Tarai Zone, there are chances of fruit borer in tomato, spray Chlorantraniliprole 18.5 SC @ 150 ml/ha and Indoxacarb 14.5 SC @ 500ml/Ha respectively on a non rainy day.
 - **Himachal Pradesh:**
 - In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, continue nursery sowing of paddy, treat the seed before nursery sowing with Bavistin @ 2.5 gm per kg of seed. In lower regions, continue sowing of cucurbits crops, early okra, spinach, coriander, fenugreek, radish, turnip. Continue nursery sowing of tomato, brinjal, chillies and capsicum crops in poly house. In High hills regions complete sowing of peas, French bean, Oola, palak, radish, turnip and carrot in addition to transplanting of cabbage, cauliflower, broccoli and exotic vegetables.
 - In High Hills Temperate Dry Zone of Himachal Pradesh, in Kinnaur and Lahaul & Spiti, continue planting of potato.
 - In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Solan, Shimla, Bilaspur, Sirmaur districts, apply third dose of Nitrogen in vegetables and undertake intercultural operations.
 - In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of cut worms and white grubs in maize crop, for control spray Chloropyrifos 20 EC @ 2 litres mixed with 25 kg sand per hectare on a non rainy day.
 - In Mild Hills Sub-Humid Zone of Himachal Pradesh, in Kullu and Mandi districts, present weather is conducive for attack of pomegranate aphid in pomegranate, for control spray Imidacloprid @ 60ml per 200 litres of water on a non rainy day.
 - **Punjab, Haryana and Delhi:**
 - In Punjab, continue sowing of rice nursery with recommended varieties i.e. PR 126, PR 124, PR 123, PR 122, PR 121, PR 116, PR 114, PR 115, PR 113.
 - In Western Plain Zone of Punjab, continue land preparation and sowing of cotton.
 - In Western Plain Zone of Punjab, complete sowing of summer moong and summer mash.
 - Complete sowing of summer moong and cotton including Bt cotton or Desi cotton with recommended varieties/hybrids (RCH 650 BG II, NCS 855 BG III, Ankur 3028 BG II, MRC 7017 BG II, MRC 7031 BG II) in Western Zone of Punjab. Continue transplanting of Chilli in Central and Western Zone of Punjab and irrigate the

- crop. In Western Zone of Punjab, prepare the field for sowing of okra.
- In Central Plain Zone of Punjab, continue planting of sugarcane with recommended varieties.
 - In Western Zone of Haryana, complete sowing of ladyfinger, bottle gourd, cucumber, ridge gourd and summer radish and apply irrigation to planted vegetable crops.
 - In Eastern Zone of Haryana, continue planting of spring season sugarcane.
 - In New Delhi, continue sowing of okra. Seed rates should be 10-15 kilogram per acre. Continue sowing of French bean, cluster bean, summer radish as present temperature is suitable for germination of seeds. Continue transplanting of young seedlings of brinjal and chilli. Complete sowing of green gram and black gram. Undertake field preparation for sowing of pigeonpea with varieties- Pusa 2001, Pusa 991, Pusa 992, Parasmanak, UPAS 120 and sowing of cotton with recommended varieties: H-777, H-974, H-1098.
 - Incidence of thrips is noticed in cotton in some areas of South-Western region of Punjab. Thrips attack at this stage can be controlled by irrigating the crops.
- **Uttar Pradesh:**
- In Central Plain Zone of Uttar Pradesh, undertake land preparation/early sowing of *kharif* hybrid maize, before sowing seed treatment thiram @ 2.5 gm/kg of seed. Complete nursery sowing of paddy by 15th June and scented paddy by 25th June. Undertake sowing of arhar in first week of June under irrigated condition or beginning of monsoon. Apply light irrigation in summer maize crop at grain formation stage, as per requirement.
 - In Eastern plain Zone of Uttar Pradesh, complete nursery sowing of mid and late variety of rice before 20th June and early variety of rice before 25th June. Undertake sowing of early maturing variety of arhar in irrigated areas. In optimum soil temperature, deep ploughing may be done in fallow fields for increasing the water holding capacity of soil. Undertake direct sowing of rice in water logged areas with improved varieties. Undertake sowing of long duration varieties of maize. Undertake sowing of dhaincha for green manuring use 50 kg seeds/ha.
 - In Bundelkhand Zone of Uttar Pradesh, continue sowing of *kharif* maize, jowar, groundnut, arhar, urad, mung, linseed and fodder crops.
 - In Western Plain Zone of Uttar Pradesh, continue field preparation for sowing of cotton and pigeon pea. Undertake sowing of paddy in nursery. Undertake land preparation for sowing of guar, bajara, maize, cluster bean, spinach, amaranthus and bhindi.
 - In North Eastern plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of blight in zaid maize, for control spray mixture of 0.2 % Mencozeb @ 400 gm or 0.2 % Carbedazim @ 400 gm in 200 litres of water on a non rainy day.
 - In Central Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of khaira disease in rice nursery, for control spray solution of Urea @ 20 g & Zinc Sulphate @ 5gm per 10 square meters on a non rainy day.
- **Rajasthan:**
- As thunderstorm accompanied with gusty winds very likely at isolated places over East Rajasthan on 9th June, provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds.
 - In Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, apply irrigation at regular interval in summer vegetables and fruits crops. Continue deep summer ploughing by MB plough in vacant field for more conserve the rain water in soil and for control of *kharif* crop insects.
 - In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, continue land preparation for sowing of irrigated groundnut. Keep inputs ready for *kharif* crops like pearl millet, sorghum, maize & cluster bean, sowing should be done after onset of monsoon.
 - In Jaisalmer and Bikaner districts of Arid Western Plain Zone, undertake land preparation for sowing of groundnut and go for sowing after receipt of sufficient rainfall. In Barmer, Churu, Jalore, Jodhpur, Pali districts of Arid Western Plain Zone, continue sowing of groundnut. Undertake sowing of okra and nursery sowing of chilli.
 - In Southeastern Humid Plain Zone, in Jhalawar, Kota, Bundi, Baran districts, apply light irrigation to standing summer crops and sugarcane crop.
 - In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, in desi cotton apply first irrigation at 30 to 40 days after sowing with apply N 45 (urea 100 kg) kg/ha at the time of first irrigation. Undertake sowing of groundnut, seed rate are 25 kg per bhiga. Continue nursery sowing of rice. Undertake sowing of guar after 15th June, seed rate of 16-20 kg/hectare
 - In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing dry weather condition is congenial for attack of mosaic in summer okra crop, for control spray Melathion 50 E.C. @ 1 ml per litre of water on a non rainy day.
 - In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhapur districts of Flood Prone Eastern Plain Zone, prevailing mainly dry weather condition is congenial for attack of leaf curl and mosaic disease in chilli crop, for control uproot & burn affected plants, spray Dimethoate 30 EC @ 1.0 ml per litre water on a non rainy day.

- In Irrigated North Western Plain Zone, Hanumangarh and Sriganaganagar, prevailing weather condition is congenial for attack of early stem borer and pyrilla in sugarcane crops, for control apply Furodon dust 3% @ 24 kg per hectare in sugarcane root just after first irrigation. Repeat the dose after 40 to 50 days.
- **Horticulture**
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of mango plant hopper, in mango trees, for control spray Buprofezin 25% SC @ 1 to 2 ml per litres of water.
- In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Solan, Shimla, Bilaspur, Sirmaur districts, undertake harvesting of matured mango and litchi.
- **Floriculture:**
- In Rajasthan, in Flood Prone Eastern Plain Zone, this is suitable time for pruning operation in ber crop. Pruning is necessary because as flower develop in axils of new shoots only.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, undertake earthing up operation in gladiolus and disbudding in carnation, transplant the bulbs of gladiolus and rajnigandha. It is optimum time for raising nursery of summer annuals like gladiolus, portulaca, gomphrina and china aster etc. Complete pinching and staking in carnation.
- **Apiculture**
- In Himachal Pradesh, insert the brood chamber without frame for ensuring aeration. Dust sulphur on sealed brood in the colony and not on larvae to control mites attack on honeybees. Also insert empty frame /combs for egg laying to the queen as the population starts builds up.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, keep colonies in shade or cover with wet gunny bags. Provide adequate space to the colonies for brood rearing and storage of nectar. To control mite, dust sulphur on top bars @ 1g/frame /oxalic acid treatment @ 3.5%/litre water.
- **Animal Husbandry**
- In Himachal Pradesh, monitor the animals for FMD and advised Vaccination. Ecto-parasite attack is expected in this weather, for control, sparyButox @ 2ml per litre in cow shed and give mixture of hay & green fodder.
- **Fishery**
- In Himachal Pradesh, maintain water level of five feet in fish ponds. Add supplementary feed (rice/wheat bran & mustard oil cake and rice/wheat bran) @ 2-3% of total fish biomass on daily basis.
- **Poultry**
- In Himachal Pradesh, replace the poultry houses with fresh litter and keep the houses clean and ensure plenty of drinking water to the birds. Normal feeding schedule should be continued. For precautionary measures spray Formaline 40% @ 1litre in 9 litres of water in outside or surrounding of farm. Increase protein by 2% in poultry diet.

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