



# *National Agromet Advisory Service Bulletin*

**Friday 2<sup>nd</sup> June 2017**

**(For the period 2<sup>nd</sup> to 6<sup>th</sup> June 2017)**



**Issued by**

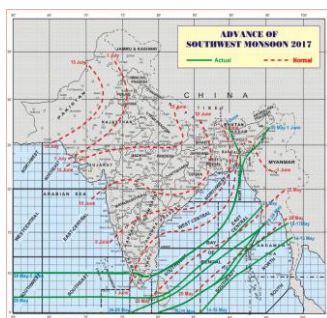
**National Agrometeorological Advisory Service Centre,  
Agricultural Meteorology Division,  
India Meteorological Department, Shivajinagar, Pune.**

**Weblink For**

**District AAS Bulletin:** <http://www.imdagrimet.gov.in/node/3545>

**State Composite AAS Bulletin:** <http://www.imdagrimet.gov.in/node/3544>

## Monsoon watch



- Southwest monsoon has further advanced into some more parts of northeast Bay of Bengal, remaining parts of Arunachal Pradesh, Nagaland, Manipur & Mizoram and most parts of Tripura and Assam & Meghalaya. The Northern Limit of Monsoon (NLM) passes through Lat.10.0°N/Long.60.0°E, Lat.10.0°N/Long.70.0°E, Kochi, Tondi, Lat.14.0°N/ Long.87.0°E, Lat.17°N/ Long.90.0°E, Lat.20.0°N/Long. 91.0°E, Agartala, William Nagar, Kokrajhar and Lat. 27.0°N/Long. 90.0°E.
- Conditions are favourable for further advance of southwest monsoon into remaining parts of south Arabian Sea, Lakshadweep area and Kerala, some parts of central Arabian Sea, coastal & south interior Karnataka and Rayalaseema and some more parts of Tamilnadu during next 48 hours. Conditions are likely to become favourable for further advance of southwest monsoon into some more parts of south Peninsula, Arabian Sea and Bay of Bengal around 7<sup>th</sup> June.

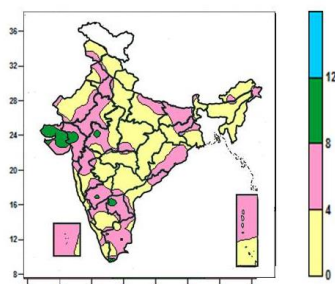
### Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 31.05.2017

Actual Mean Maximum Temperature (°C) in India for the week ending 31.05.2017	Mean Maximum Temperature (°C) Anomaly in India for the week ending 31.05.2017
Actual Mean Minimum Temperature (°C) in India for the week ending 31.05.2017	Mean Minimum Temperature (°C) Anomaly in India for the week ending 31.05.2017

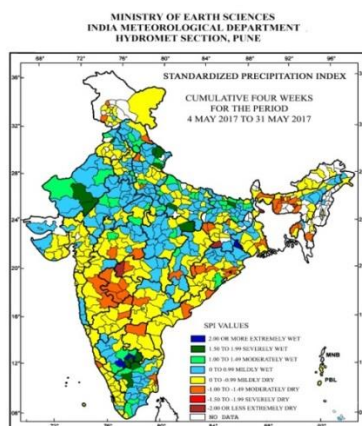
### Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 31.05.2017

Relative Humidity (%) over India for the week ending 31.05.2017	Cloud amount (okta) over India for the week ending 31.05.2017

### Wind speed (knots) over India for the week ending 31.05.2017



### Standardised Precipitation Index Four Weekly for the period 4<sup>th</sup> May to 31<sup>st</sup> May 2017



### Weather Forecast for next 5 days valid upto 0830 hours of 7<sup>th</sup> June 2017

- Maximum temperatures very likely rise by 2-3°C over Rajasthan, Bihar, Jharkhand and Interior Odisha and no significant change over rest parts of the country during next 2-3 days.

#### Weather Warning during next 5 days

- 02 June (Day 1):** Thunderstorm accompanied with squall very likely at isolated places over Gangetic West Bengal. Thunderstorm accompanied with gusty winds very likely at isolated places over Vidarbha, Chhattisgarh, east Bihar, Jharkhand, Odisha and Madhya Maharashtra. Heavy to very heavy rain very likely at isolated places over Assam & Meghalaya, Coastal Karnataka & Kerala; heavy rain at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, South Interior Karnataka & Lakshadweep.
- 03 June (Day 2):** Thunderstorm accompanied with gusty winds very likely at isolated places over Gangetic West Bengal. Heavy to very heavy rain very likely at isolated places over Assam & Meghalaya and Kerala; heavy rain at isolated places over Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Coastal Karnataka, South Interior Karnataka & Lakshadweep. Heat wave conditions very likely at a few places over West Rajasthan; at isolated places over East Rajasthan.
- 04 June (Day 3):** Thunderstorm accompanied with gusty winds very likely at isolated places over Madhya Maharashtra. Heavy very likely at isolated places over Assam & Meghalaya and Kerala. Heat wave conditions very likely at a few places over West Rajasthan; at isolated places over East Rajasthan.
- 05 June (Day 4):** Heavy very likely at isolated places over Vidarbha and Marathwada. Heat wave conditions very likely at isolated places over West Rajasthan.
- 06 June (Day 5):** Thunderstorm accompanied with squall & hail very likely at isolated places over Jammu & Kashmir. Thunderstorm accompanied with squall very likely at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh & East Rajasthan. Thunderstorm accompanied with gusty winds very likely at isolated places over West Rajasthan. Heavy rain very likely at isolated places over Vidarbha, Sub-Himalayan West Bengal & Sikkim, Marathwada, south Konkan & Goa, Coastal Karnataka and Andaman & Nicobar Islands.



### Weather Outlook for subsequent 2 days from 7<sup>th</sup> to 9<sup>th</sup> June 2017

- Rain/thundershower very likely at many places over Lakshadweep, Andaman & Nicobar Islands, northeastern states & adjoining East India; at a few places over western Himalayan region, central and peninsular India and at isolated places over rest of the country.

### Meteorological sub-division wise detailed 5 day rainfall forecast (Mid day) 2<sup>nd</sup> June 2017

Met Sub-divisions	02 June	03 June	04 June	05 June	06 June
1. Andaman & Nicobar Islands	SCT	SCT	SCT	FWS	WS
2. Arunachal Pradesh	WS	WS	FWS	SCT	SCT
3. Assam & Meghalaya	WS	WS	WS	FWS	FWS
4. N.M.M. & T.	WS	WS	WS	FWS	SCT
5. S.H. West Bengal & Sikkim	WS	FWS	SCT	FWS	FWS
6. Gangetic West Bengal	SCT	SCT	SCT	SCT	FWS
7. Odisha	SCT	ISOL	ISOL	ISOL	SCT
8. Jharkhand	ISOL	ISOL	ISOL	ISOL	SCT
9. Bihar	ISOL	ISOL	ISOL	ISOL	SCT
10. East Uttar Pradesh	DRY	DRY	DRY	DRY	SCT
11. West Uttar Pradesh	DRY	DRY	DRY	DRY	ISOL
12. Uttarakhand	ISOL	DRY	DRY	ISOL	SCT
13. Haryana, Chd & Delhi	DRY	DRY	DRY	DRY	ISOL
14. Punjab	DRY	DRY	DRY	DRY	ISOL
15. Himachal Pradesh	DRY	DRY	DRY	ISOL	SCT
16. Jammu & Kashmir	DRY	DRY	DRY	ISOL	FWS
17. West Rajasthan	DRY	DRY	DRY	DRY	DRY
18. East Rajasthan	DRY	DRY	DRY	ISOL	SCT
19. West Madhya Pradesh	ISOL	ISOL	ISOL	SCT	SCT
20. East Madhya Pradesh	ISOL	ISOL	ISOL	SCT	SCT
21. Gujarat Region	ISOL	ISOL	ISOL	ISOL	ISOL
22. Saurashtra & Kutch	ISOL	ISOL	ISOL	ISOL	ISOL
23. Konkan & Goa	FWS	SCT	SCT	SCT	FWS
24. Madhya Maharashtra	SCT	SCT	FWS	FWS	FWS
25. Marathwada	SCT	SCT	SCT	FWS	FWS
26. Vidarbha	SCT	SCT	SCT	FWS	FWS
27. Chhattisgarh	ISOL	ISOL	ISOL	SCT	SCT
28. Coastal Andhra Pradesh	ISOL	ISOL	ISOL	SCT	SCT
29. Telangana	ISOL	SCT	SCT	SCT	FWS
30. Rayalaseema	ISOL	ISOL	SCT	SCT	SCT
31. Tamil Nadu & Puducherry	ISOL	ISOL	ISOL	SCT	ISOL
32. Coastal Karnataka	WS	WS	WS	WS	WS
33. North Interior Karnataka	SCT	SCT	FWS	FWS	FWS
34. South Interior Karnataka	WS	WS	WS	WS	FWS
35. Kerala	WS	WS	WS	WS	FWS
36. Lakshadweep	WS	WS	WS	WS	FWS

#### % 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

- In view of the advancement of Southwest monsoon over **Kerala** and **coastal & south interior Karnataka**, Arunachal Pradesh, Nagaland, Manipur & Mizoram and most parts of Tripura and Assam & Meghalaya, the following agromet advisories are suggested:

#### In Kerala

- In the Southern Zone of **Kerala**, prepare main field and undertake transplanting of *Viruppu* rice.
- In the Northern Zone, continue nursery/direct sowing of rice and undertake planting of black pepper and.
- In the Central Zone, continue sowing of rice crop (Uma and Kanchana variety).

#### Karnataka

- In Coastal Zone of **Karnataka**, continue nursery sowing of rice. In Hill Zone, undertake sowing of green manure crops or pulse crops utilizing the realised rainfall and cleaning of all drainage channels.
- In South Interior Karnataka, undertake land preparation and strengthening bunds with fodder grass to facilitate conservation of rainwater. Ploughing across the slope will facilitate *in situ* soil moisture conservation.
- In Southern Dry Zone, continue sowing of pulses like cowpea, green gram, black gram, horse gram, and field bean utilizing available soil moisture.
- In Southern Transition Zone, continue land preparation for sowing of *kharif* crops. Continue land preparation and sowing of ginger/turmeric.
- In the Eastern Dry Zone, Undertake land preparation for sowing of *kharif* crops like red gram, ragi, groundnut and maize.

#### Tamil Nadu

- In the Western Zone of **Tamil Nadu**, continue sowing of *Kuruvai* rice nursery. In the North Western Zone, undertake land preparation for groundnut cultivation making use of realised rainfall (drought resistant varieties such as Co-6, Co-7, K-6, K-9).

#### Assam, Meghalaya and Arunachal Pradesh

- 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 Meghalaya, continue nursery sowing rice and undertake land preparation for transplanting of *Sali* rice/*kharif* rice and planting of ginger/turmeric after current spells of heavy rain
- In Arunachal Pradesh, continue planting of ginger/turmeric, finger millet. Continue sowing of soybean and nursery sowing of rice and transplanting of rice in lowlands after current spells of heavy rain.

#### Nagaland, Manipur & Mizoram

- In **Nagaland**, undertake planting of ginger, turmeric after current spells of heavy rain.
- In **Manipur**, continue nursery raising for main *kharif* rice and sowing of *kharif* maize, soybean, groundnut and black gram and planting of ginger/turmeric after current spells of heavy rain. 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**, continue planting of ginger and turmeric and transplanting of pre-*kharif* rice after current spells of heavy rain.

### Detailed Zonewise Agromet Advisories

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

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala, Coastal Karnataka, Dharmapuri, Erode, Kanyakumari, Krishnagiri, Namakkal, Nilgiris, Salem, Sivaganga and Vellore districts of Tamil Nadu, all districts of South Interior Karnataka except Ballari, Chikkamagaluru, Chitradurga, Davangere and Shivamogga, in Vizianagaram district of Coastal Andhra Pradesh during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
  - As rain/thundershowers likely at most/many places over Kerala, South Interior Karnataka and most places over Coastal Karnataka during the period, at many places over North Interior Karnataka from 4<sup>th</sup> to 6<sup>th</sup> and over

Telangana on 6<sup>th</sup> June, along with heavy to very heavy rain at isolated places over Kerala on 2<sup>nd</sup> and 3<sup>rd</sup>, over Coastal Karnataka on 2<sup>nd</sup>, heavy rain at isolated places over Coastal Karnataka on 3<sup>rd</sup> and 6<sup>th</sup>, over South Interior Karnataka on 2<sup>nd</sup> and 3<sup>rd</sup> and over Kerala on 4<sup>th</sup> June, postpone intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crops and vegetables to avoid water stagnation.

▪ **Kerala:**

- In Southern Zone, undertake transplanting of *Viruppu* rice, chilli and brinjal, planting of coconut seedlings. Continue planting of new suckers of robusta, palayankodan, njalipoovan bananas after current spells of heavy rain.
- In the Problem Area Zone, continue planting of new coconut seedlings with moderate soil wetness and planting of perennial intercrops like cocoa and nutmeg.
- In the Northern Zone, continue nursery sowing of rice, planting of black pepper. Remove the mulches at the onset of monsoon and spread lime in black pepper, coconut and arecanut basins to protect them from fungal diseases.
- In the Central Zone, undertake planting of ginger and turmeric and continue land preparation and sowing of rice (Uma and Kanchana varieties) after current spells of heavy rain.
- In the Problem Area Zone, spray Oberon @ 0.8 ml/litre of water to control mite infestation and drench the leaf axils and bore holes on pseudo stem with Chlorpyrifos 2 ml/litre of water to control pseudostem weevil in bananas after current spells of rain.

▪ **Karnataka:**

- In Coastal Zone of Karnataka, undertake nursery bed preparation for sowing of rice.
- In South Interior Karnataka, undertake land preparation and strengthening bunds with fodder grass to facilitate conservation of rainwater. Ploughing across the slope will facilitate *in situ* soil moisture conservation.
- In Hill Zone of Karnataka, undertake sowing of green manure crops or pulse crops utilizing the realised rainfall and cleaning of all drainage channels.
- In Southern Dry Zone, continue sowing of pulses like cowpea, green gram, black gram, horse gram, field bean and green manure crops after current spells of heavy rain. Take up the repair of bunds and check dams so as to reduce the runoff and to check the soil erosion.
- In Southern Transition Zone, continue land preparation for sowing of *kharif* crops utilising the realised rainfall. Continue harvesting of matured rhizomes of ginger and turmeric. Continue land preparation and undertake sowing of ginger/turmeric. In the Eastern Dry Zone, undertake land preparation for sowing of *kharif* crops like red gram, ragi, groundnut and maize. Under double cropping, continue sowing of sesame, black gram, green gram, cowpea and field bean. Strengthen the bund with fodder grass, which will facilitate conservation of rain water.
- In Central Zone and North East Dry Zone, continue deep ploughing of land across the slope and land preparation for *kharif* sowing utilising the expected rainfall.
- In North East Transition Zone, continue summer deep ploughing. Procure seeds and other inputs required for *kharif* sowing. Take up the repair of bunds and check dam so as to reduce the runoff and to check the soil erosion.

▪ **Andhra Pradesh:**

- In the North Coastal Zone, continue land preparation for sowing of sesamum, bajra, mesta, rainfed sugarcane etc. and green manure crops. Continue deep summer ploughings and keep inputs ready for *kharif* sowing in the Krishna Godavari Zone.
- In the Scarce Rainfall Zone and High Altitude Tribal Zone, continue summer ploughings in areas which have received sufficient rainfall and cover banana bunches/peduncle with flag leaf to avoid the direct incidence of the sunrays/ to avoid the scorching effect.
- In Scarce Rainfall Zone, spray Malathion @ 10ml /10 litres of water to avoid bruchid damage in groundnut on a non rainy day.
- In Kadapa district of the Southern Zone, present weather conditions are favourable for attack of viral diseases in banana and papaya. To control, spray Dimethioate @ 2 ml/litre of water on a non rainy day and control weeds in and around the fields.

▪ **Telangana:**

- In South Telangana Zone, keep inputs ready like seeds, fertilizers and pesticides for timely sowing of rained crops, dig the pits for planting new orchards and continue summer ploughing to control weeds, hibernating pests and disease spores that may damage *kharif* crops.
- In North Telangana Zone, cultivate green manure crops like sunnhemp, dhaincha, pillipesara, clusterbeans and *Sesbania rostrata*, incorporate the crops into the soil after sufficient growth and continue summer ploughing. Prevailing high temperatures may cause damage to the newly planted banana. Protect by covering mulch/providing shade.

▪ **Tamil Nadu:**

- In the Western Zone, continue nursery sowing of Kuruvai rice. As scattered rainfall is expected, sowing of green manure crops may be taken up in ploughed fields. Cloudy weather may cause early shedding of buds and squares in cotton. Spray NAA @ 40 mg dissolved in one litre of water to prevent shedding and to increase yield. Provide

adequate drainage to recently planted turmeric fields to prevent rhizome rot.

- In the South Zone, undertake summer ploughing by utilizing the recent rainfall and give support to banana and propping for sugarcane as winds with high speed is expected in the coming days.
- In the North Western Zone, undertake land preparation for groundnut cultivation (drought resistant varieties such as Co-6, Co-7, K-6, K-9 ) utilizing the realized and expected rainfall.
- In the Cauvery Delta Zone, incidences of mealy bug and white flies are noticed in rice fallow cotton and irrigated blackgram. To control, spray Azadirachtin 0.03% @ 3 ml/litre of water along with sticking agent in the morning or evening using hand sprayer, If damage is more spray Imidacloprid 200 SL @ 40ml/acre on a non rainy day.
- In the South Zone, red spider mite is noticed in cotton. To control, spray Dicofol 18.5% SC @ 2700- 4050 ml/ha on a non rainy day.
- **Animal Husbandry**
  - In the Cauvery Delta Zone of Tamil Nadu, increase the quantum of amino acids, vitamins and mineral content of cattle feed so as to compensate the less quantity of feed consumed by cattle in summer season.
  - In Karnataka, maintain proper ventilation for free circulation of air in the animal sheds.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Arunachal Pradesh, Assam, all districts of Meghalaya except West Khasi Hills, in Aizwal, Lunglei, Saiha and Serchhip districts of Mizoram, Imphal East, Imphal West districts of Manipur, Dimapur, Kohima, Phek, Wokha districts of Nagaland and all districts of Tripura during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
  - As rain/thundershowers likely at most/many places over Assam & Meghalaya during the period, over Nagaland, Manipur, Mizoram & Tripura from 2<sup>nd</sup> to 5<sup>th</sup> and over Arunachal Pradesh from 2<sup>nd</sup> to 4<sup>th</sup> June, along with heavy to very heavy rain very likely at isolated places over Assam & Meghalaya on 2<sup>nd</sup> and 3<sup>rd</sup>, heavy rain at isolated places over Nagaland, Manipur, Mizoram & Tripura and Arunachal Pradesh on 2<sup>nd</sup> and 3<sup>rd</sup>, over Assam & Meghalaya on 4<sup>th</sup> June, postpone intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of crops and keep harvested produce at safer places. Provide adequate drainage in standing crops and vegetables to avoid water stagnation.
  - **Assam, Meghalaya & Arunachal Pradesh:**
    - 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 Lower Brahmaputra Valley Zone of Assam, continue sowing of jute and nursery sowing of *Sali* rice and undertake planting of banana after current spells of heavy rain.
    - In Upper Brahmaputra Valley Zone, Central Brahmaputra Valley Zone, North Bank Plain Zone, and Hill Zone of Assam, continue nursery sowing of *Sali* rice after current spells of heavy rain.
    - In flood affected areas of Barak Valley Zone of Assam, farmers are advised to grow flood tolerant Sali rice variety viz. Swarna Sub-1, Ranjit Sub-1 and Bahadur Sub-1.
    - In Central Brahmaputra Valley Zone of Assam, continue harvesting of *boro* rice after current spells of heavy rain.
    - In Meghalaya, continue nursery sowing and land preparation for transplanting of Sali rice/*kharif* rice and planting of ginger/turmeric after current spells of heavy rain.. Complete sowing of maize in high and mid altitudes.
    - In Arunachal Pradesh, continue planting of ginger/turmeric, finger millet. Continue sowing of soybean and nursery sowing and transplanting of rice in lowlands after current spells of heavy rain.
    - In Hill Zone of Assam, spray Malathion 50 EC @ 1-1.5 litre/ ha in 500-700 litre of water against aphids, jassids and flea beetle in summer green gram and black gram and spray Carbofuran 3G@ 30 kg/ha or Phorate 10G @ 10kg/ha to control stem borer in transplanted normal *ahu* rice, also spray Carbendazim @ 1g/litre at tillering stage in transplanted early *ahu* rice against blast disease after current spells of rain.
    - In Upper Brahmaputra Valley Zone of Assam, due to high humidity and rainfall in the last few days ‘Gummosis’ disease may be observed in the citrus orchard. To control this disease, the affected portion should be scraped out with a small portion of healthy tissue without injuring the wood and smear with Bordeaux paste. Maintain proper drainage facilities.
    - In Lower Brahmaputra Valley Zone of Assam, spray Mancozeb (2.5g/litre) or Hexaconazole 5EC (2 ml/litre) against sheath blight disease in early *ahu* rice at dough stage. Also, there is chance of attack of fruit sucking moth insect in citrus. Destruction and disposal of fallen fruits and baiting with Malathion 50 EC (0.1%) with molasses (1%) and fruit juice help in controlling fruit sucking moth insect after current spells of rain.
  - **Nagaland, Manipur, Mizoram and Tripura:**
    - In Nagaland, undertake planting of ginger, turmeric after current spells of heavy rain.
    - In Manipur, continue nursery raising for main *kharif* rice. Raise community nursery in upland area/terrace so that it may be least affected with the heavy rains. Continue main land preparation for transplanting of rice. Continue

sowing of *kharif* maize, soybean, groundnut and blackgram after current spells of heavy rain. Maintain water level at 5-8 cm in pre *kharif* rice field. Drain out excess water if accumulated in the rice field due to rains.

- In Mizoram, continue planting of ginger and turmeric and transplanting of pre-*kharif* rice after current spells of heavy rain.
- In Tripura, continue harvesting of *boro* rice and *rabi* maize. Also continue field preparation and sowing of maize in upland and medium upland and groundnut after current spells of heavy rain. Don't allow the water to stagnant in the field of standing crops.
- In Manipur, spray Lambdacythothrin 5% @ 15 ml/15 litre of water against case worm infestation in pre-*kharif* rice after current spells of rain.
- **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, undertake immunizations against FMD, HS and BQ in cattle & buffaloes and pigs during this time. During monsoon season the calves are infected more by the worms. To reduce the problem, it is advised to give Piperzine or Mebendazole at recommended dose in consultation with veterinary doctor.
  - In Tripura, piglets are susceptible for swine fever due to change in weather and feed. The disease may be managed by Furazolidone, streptomycin etc. Taking advice of veterinary practitioner before providing of medicine is compulsory for confirmation and dosages.
- **Fishery**
  - In Central Brahmaputra Valley Zone of Assam, prepare the fingerling rearing tanks and nurseries by cleaning them and applying agricultural lime for raising fingerlings. Apply cowdung at the rate of 500 gm per sq m. at least 15 days ahead of releasing fingerlings into the tanks. Farmers may release fish prawn in their ponds during this period.
  - In Tripura and Nagaland, apply lime in the fish pond after checking the pH. If the pH falls below 6.5, liming should be done @ 50kg/ha. Avoid excessive manuring and feeding which can lead to oxygen depletion in cloudy weather, hence both should be avoided.

#### WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rainfall occurred in Sindhudurg, Ratnagiri, North and South Goa districts of Konkan & Goa, Kolhapur district of Madhya Maharashtra during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
  - As rain/thundershowers likely at many places over Konkan & Goa on 2<sup>nd</sup> and 6<sup>th</sup>, over Madhya Maharashtra from 4<sup>th</sup> to 6<sup>th</sup>, over Marathwada and Vidarbha on 5<sup>th</sup> and 6<sup>th</sup> June, along with heavy rain at isolated places over Vidarbha on 5<sup>th</sup> and 6<sup>th</sup>, over Marathwada on 5<sup>th</sup>, over South Konkan & Goa on 6<sup>th</sup> June, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crops and vegetables to avoid water stagnation. Keep harvested produce at safer places.
  - As thunderstorm accompanied with gusty winds very likely at isolated places over Madhya Maharashtra on 2<sup>nd</sup> and 4<sup>th</sup> over Vidarbha on 2<sup>nd</sup> June, provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping up in sugarcane.
  - **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. Sow the seed on raised beds @ 50 kg per ha for bold varieties, 40 kg per ha for fine varieties and 20 kg per ha for hybrid varieties. Plough the rice fields at vapasa condition and sow the seed of Dhaincha (Green manure crop) @ 40 kg seed per ha. For new plantation of cashew dig the pits of 0.6 x 0.6 x 0.6 m size at the distance of 7 x 7 m. Fill the pits with mixture of soil, 30 to 40 kg of FYM or compost and 1kg single super phosphate.
    - In Madhya Maharashtra, complete preparatory tillage operations such as ploughing, harrowing, land leveling and bunding for *kharif* sowing. Continue sowing of *kharif* vegetables nursery on raised beds. As there is forecast of heavy rain care may be taken that water logging should not be there around papaya plants.
    - In Marathwada, complete tillage operations like ploughing, harrowing, mixing of FYM in field for sowing of soybean and Pearl millet. Weeding should be done in suru sugarcane crop. Select African tall, Ganga-5, Vijay, Manjari, Ganga safed-2 hybrids for sowing of maize crop for fodder purpose.
    - In Vidarbha, as there is forecast of rain, keep harvested summer rice and groundnut at safer place. Prepare nursery beds for sowing of *kharif* rice. Land preparation may be done for sowing of *kharif* crops.
  - **Gujarat:**
    - In South Saurashtra Zone, if irrigation facility is available, undertake early sowing of *kharif* groundnut and complete harvesting of matured green gram, black gram, groundnut and sesame.
    - In South Gujarat Heavy Rainfall Zone, continue land preparation for *kharif* rice and prepare nursery beds. Procure seeds of improved variety for timely sowing.



- In North Saurashtra Zone of Gujarat, undertake land preparation for sowing of *kharif* cotton, sesame, pearl millet, black gram, green gram, cowpea and pigeon pea. Continue sowing of groundnut with irrigation after seed treatment. Procure good quality seeds for sowing of *kharif* cotton, sesame, pearl millet and pulses. In view of prevailing high temperature, apply irrigation in summer vegetable, lemon orchards and fodder crops during evening hours.
- In North Gujarat Zone and North West Zone of Gujarat, continue land preparation for sowing of irrigated B.T. cotton/hybrid cotton. Continue harvesting of matured summer groundnut, green gram 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. Continue harvesting of matured fruits of mango, papaya, sapota, lemon, pomegranate etc. Provide support to tall marigold plants.
- In Middle Gujarat Zone, undertake land preparation for sowing of irrigated hybrid cotton and Bt. cotton. Apply irrigation in groundnut (pegging stage). Provide staking in banana to counteract the effect of wind speed. Continue sowing of pigeon pea (green pod type). Carry out levelling of plots to increase soil moisture holding capacity.
- In Middle Gujarat Zone and Bhal and Coastal Zone, construct the bunds in advance to reduce soil erosion in field and plan for khet Talavadi (Farm ponds) to collect runoff water.
- Due to prevailing temperature, mites infestation in lemon orchard is observed in North Saurashtra Zone; to control, spray Propargite 57 % EC @ 1 ml/litre of water.
- **Animal Husbandry**
- In Gujarat, keep animal shed hygienic and clean to avoid flies and mosquitoes. Regular check-up for disease (like, Anthracis, milk fever and Brucellosis) infected animals be done. Put curtains on southwest side of poultry house and sprinkle water on curtains during noon time.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands, all districts of Gangetic West Bengal except Bankura, Hooghly and 24 Parganas South, all districts of Sub-Himalayan West Bengal & Sikkim except North and South Dinajpur, in Bokaro, Deogarh, Dhanbad, Dumka, East Singhbhum, Hazaribagh, Jamtara, Pakur, Ramgarh, Ranchi, Saraikela and West Singhbhum districts of Jharkhand, Balasore, Gajapati, Jajpur, Jharsuguda, Keonjhar, Koraput, Mayurbhanj, Rayagada and Sundargarh districts of Odisha, Araria, Banka, Begusarai, Bhagalpur, Buxar, Darbhanga, East Champaran, Jamui, Katihar, Khagadia, Kishanganj, Madhepura, Madhubani, Monghyar, Muzaffarpur, Patna, Purnea, Saharsha, Samstipur, Saran, Sheikpura, Sheohar, Sitamarhi, Siwan, Supaul, Vaishali and West Champaran districts of Bihar during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
  - As rain/thundershowers likely at most/many places over Andaman & Nicobar Islands on 5<sup>th</sup> and 6<sup>th</sup>, over Sub-Himalayan West Bengal & Sikkim on 2<sup>nd</sup>, 3<sup>rd</sup>, 5<sup>th</sup> and 6<sup>th</sup>, at many places over Gangetic West Bengal on 6<sup>th</sup> June, along with heavy rain at isolated places over Sub-Himalayan West Bengal & Sikkim on 2<sup>nd</sup> and 6<sup>th</sup> June, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of crops and keep harvested produce at safer places. Provide adequate drainage in standing crops and vegetables to avoid water stagnation.
  - As thunderstorm accompanied with squall verly likely at isolated places over Gangetic West Bengal on 2<sup>nd</sup>, thunderstorm accompanied with gusty winds very likely at isolated places over Bihar, Jharkhand, Odisha on 2<sup>nd</sup>, over Gangetic West Bengal on 3<sup>rd</sup> June, provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping up in sugarcane.
  - **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 West Central Table Land Zone, continue sowing of okra.
    - In North Eastern Coastal Plain Zone, continue deep summer ploughing utilising the pre-monsoon rain. Continue harvesting of summer rice.
    - In North Eastern Ghat Zone, present weather may increase the caterpillar attack in groundnut, to control, spray Quinalphos 20% EC or Dichlorvos 76% EC @ 2 ml/litre of water. Alternaria leaf spot reported in the groundnut field, spray Mancozeb 75% WP @ 3 g/litre of water on a non rainy day.
    - In North Central Plateau Zone, due to wider gap between day and night temperature there is possibility of Aphid attack in mustard. Spray Thiomethoxam @ 1g/3 litre of water if the infestation crosses the ETL on a non rainy day.
  - **West Bengal:**
    - In the New Alluvial Zone, continue sowing of jute. In Laterite and Red Soil Zone, undertake nursery raising for sowing the rice crop under upland condition.
    - In the Old Alluvial Zone, continue harvesting of rice after current spells of heavy rain.

- In the Hill Zone, continue pit preparation for planting of Mandarin orange. Undertake pit preparation for new plantation of large cardamom plants.
- In the New Alluvial Zone in prevailing weather conditions there is chance of attack of stem borer in boro rice. Apply Cartap 4 G @ 25 Kilogram per hectare or Phorate 10 G @ 10 Kilogram per ha. Also, there is chance of attack of leaf-rolling in sesame. Uproot the infected plants. Apply Urea (@ 3-3.5 kg / bigha) as top dressing after current spells of rain.
- In Old Alluvial Zone, to control the anthracnose/fruit rot in chillies, spray Carbendazim @ 1gm/litre of water on morning or evening hour at 10-15 days interval after current spells of rain.
- In Terai Zone, in case of brown colour spots in leaves in rice, apply Tricyclozole @ 0.75 gram per litre of water or Hexaconazole @ 1 ml per litre of water. If crop is in milking stage, protect it from Gundi bug by spraying Fipronil 5 SC @ 1 ml per litre of water after current spells of rain.
- **Andaman and Nicobar Islands:**
  - In North and Middle Andaman, undertake nursery raising of rice and before final preparation of nursery field apply farm yard manure @ 2 t/ha and neem cake @ 500 kg/ha. Transplant already grown vegetable seedlings of brinjal and chilli in upland area or BBF with well drainage facility.
  - In Nicobar, clean the crown of coconut tree to avoid the attack of Rhinoceros beetle in coconut field.
- **Bihar:**
  - In North East Alluvial Zone, continue nursery sowing of long duration rice.
  - In North East Alluvial Zone, continue planting 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 on a non rainy day.
- **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 on a non rainy day.
  - 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 on a non rainy day.
- **Animal Husbandary**
  - In the Terai Zone of West Bengal, undertake routine vaccination of cattle, buffalo and goat for Foot and Mouth disease (FMD).
  - In Andaman and Nicobar Islands, provide the day old chicks with RD vaccine as eye drops and 10-days old chicks with IBD vaccine as nasal/eye drops. To cure anaemia in piglets, provide ferrous sulphate @ 0.5 kg dissolved in 10 litre of hot water.
- **Fishery:**
  - In Coastal Saline Zone in West Bengal, increase water level in fish ponds and supply less feed to prevent low oxygen. Dip fishes in solution of 30-40 gram salt @ 20 litres of water to prevent wounds at tail.

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

- **Realised Rainfall:** Rainfall occurred in Chhindwara, Singrauli and Umaria districts of East Madhya Pradesh, Ashoknagar and Ujjain districts of West Madhya Pradesh, Bastar, Kabirdham and Narayanpur districts of Chhattisgarh during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
  - **Madhya Pradesh:**
    - In Satpura Plateau Zone, undertake field preparation for nursery sowing of rice. Continue nursery preparation for tomato, chilli, brinjal and early cauliflower. Continue digging up of matured onion and garlic.
    - In Nimar Valley Zone, continue deep summer ploughing and keep seeds ready for sowing of Bt. Cotton and

- soybean and in Gird Zone, undertake harvesting of matured moong.
- 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.
- In Jhabua Hill Zone, continue picking up of matured pods of green gram and groundnut. Continue cultivation of ginger and turmeric. Keep inputs ready for sowing of *kharif* crops. Continue harvesting of matured vegetables.
- In Central Narmada Valley Zone, apply irrigation in vegetables and continue weeding in sugarcane. Continue nursery preparation for tomato, chilli, brinjal and early cauliflower. Continue nursery bed preparation for rice. Undertake harvesting of matured moong.
- In Bundelkhand Zone, continue seed bed preparation for sowing of *kharif* onion. Keep inputs ready for sowing of *kharif* rice.
- In Vindhya Plateau Zone, continue harvesting of matured moong and urad. Undertake deep summer ploughing.
- In Grid Zone, 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:**
  - As thunderstorm accompanied with gusty winds very likely at isolated places over Chhattisgarh on 2<sup>nd</sup> June, provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping up in sugarcane.
  - In North Hill Zone, continue harvesting of matured rice and groundnut. Continue nursery preparation for long duration varieties of rice. Treat seed with Carbendazim (2 gm/kg of seed) fungicide before sowing in nursery.
  - In Chhattisgarh Plain Zone, keep inputs ready for sowing of *kharif* crops. Continue field preparation for sowing of tuber crops like ginger, turmeric and yam. Undertake sowing of bottlegourd and roundgourd in polybags.
- **Horticulture**
  - Continue digging of pits of appropriate size and distance for planting of new orchards in Madhya Pradesh.
  - In Chhattisgarh Plain Zone, cover the fruits of papaya and banana by using leaves or Jute bags to protect the fruits from sun scorching. Undertake digging of pits for planting of orchards in rainy season.
- **Animal Husbandry**
  - In Madhya Pradesh, keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking.
  - In Chhattisgarh, special attention should be given to milch animals. Give lot of clean water to the animals and keep them in the shaded place.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Himachal Pradesh except Kinnaur, Lahaul & Spiti, all districts of Uttarakhand except Bageshwar, Haridwar, Udham Singh Nagar, in Jalandhar, Kapurthala, Nawashahar, Ropar districts of Punjab; in Faridabad, Mahendragarh districts of Haryana, Ambedkarnagar, Bahraich, Ballia, Basti, Deoria, Fatehpur, Gazipur, Gorakhpur, Maharajganj, Sant Kabir Nagar districts of East Uttar Pradesh, Bijnor, Jotibaphule Nagar, Shahjahanpur districts of West Uttar Pradesh, in Churu district of West Rajasthan during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
  - As thunderstorm accompanied with squall very likely at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh & East Rajasthan on 6<sup>th</sup>, thunderstorm accompanied with gusty winds very likely at isolated places over West Rajasthan on 6<sup>th</sup> June, provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping up in sugarcane.
  - **Jammu & Kashmir:**
    - As rain/snow likely at many places over Jammu & Kashmir on 6<sup>th</sup> June, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
    - As thunderstorm accompanied with squall & hail very likely at isolated places over Jammu & Kashmir, use hail net or hail cap for orchard crops and fruit vegetables to protect from mechanical damage, provide support to banana, young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds.
    - In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, farmers are advised to go for nursery sowing of Basmati 370 and Ranbir Basmati without any further delay. Undertake land preparation for maize after the receipt of rains and try to conserve moisture for early sown maize crop under irrigated conditions.
    - 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.
    - 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.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, to control high infestation of fruit and shoot borer on brinjal, clip off shoots/fruits infected with borer and bury them inside the soil. Spray mixture of Profenfos + Cypermethrin (4:40) @ 1ml/litre of water after current spells of rain.
- **Uttarakhand:**
  - In Sub Humid and Sub Tropic Zone of Uttarakhand, continue nursery sowing of early rice.
  - In Udham Singh district of Bhabar and Tarai Zone, undertake nursery preparation for mid duration variety of paddy like - Narendra-359, Pant dhan-18, HKR-147, PR-113 etc. up to 10<sup>th</sup> June.
  - In Hill Zone, continue nursery sowing of rice and transplanting of tomato, brinjal, capsicum cucurbits in poly houses.
- **Himachal Pradesh:**
  - In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, apply light irrigation in vegetable crops as per requirement. 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 continue sowing of peas, French bean, Oola, palak, radish, turnip and carrot in addition to transplanting of cabbage, cauliflower, brocoli 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, Sirmour districts, undertake nursery sowing of tomato, capsicum, brinjal seeds for rainy season crops.
  - In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Solan, Shimla, Bilaspur, Sirmour districts, present weather is conducive for attack of canker disease in lemon trees, for control spray Copper Oxichloride @ 600 gm in 200 litres of water on a non rainy day.
  - In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Solan, Shimla, Bilaspur, Sirmour districts, present weather is conducive for attack of apple scab, alternaria blight, core rot diseases in apple for control spray mixture of Mancozeb @ 500 gm + Carbendazim @ 100 gm or Propineb @ 600 gm or Dodin @ 150 gm in 200 litres of water 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 stigma blight in stone fruits, for control spray Captan @ 600 gm / Cavach @ 400 gm. in 200 litres of water after the fruit set 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, complete nursery sowing of paddy upto 15<sup>th</sup> June and scented paddy upto 25<sup>th</sup> June. Undertake sowing of groundnut, apply 80-100 kg seed/ha for spreading and 60-80 kg/ha for branching varieties of groundnut. Undertake sowing of maize in irrigated areas. Undertake sowing of arhar in irrigated area in 1<sup>st</sup> week of June.
  - In Eastern plain Zone of Uttar Pradesh, continue nursery sowing of rice. Continue direct sowing of rice in irrigated



areas. Undertake sowing of maize in sufficient moisture condition. Continue nursery sowing of *kharif* onion. In Bundelkhand Zone of Uttar Pradesh, continue land preparation for sowing of *kharif* maize, jowar, groundnut, arahar, urad, mung, linseed, and fodder crops. Apply light irrigation in summer sown urad, moong as per requirement. Apply irrigation to spinach, fenugreek, radish, carrot and cabbage, cauliflower, tomato, chilli, brinjal crop as per requirement.

- In Western Plain Zone of Uttar Pradesh, continue field preparation for sowing of cotton and pigeon pea.
- In North Eastern plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of aphid in bottle gourd (Lauki) at flowering or fruiting stage, for control spray mixture of Mencozeb 0.2 % @ 400 gm or Carbendazim 0.2 % @ 400 gm and Monocrotophos 0.2 % @ 200 ml in 200 litres of water in one acre field of bottle Gourd on a non rainy day.
- In Central Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of leaf spot disease in urad and mung, for control broadcast Copper Oxichloride @ 3 kg, 2 to 3 times on a non rainy day and repeat at 10 days interval.

#### ▪ **Rajasthan:**

- As heat wave conditions very likely at a few/isolated places over West Rajasthan on 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup>, at isolated places over East Rajasthan on 3<sup>rd</sup> and 4<sup>th</sup> June, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave conditions, undertake mulching with straw/polythene to conserve soil moisture.
- In Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, due to increase in temperature 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. Prepare field by one ploughing by soil inverting plough & 2-3 harrowing. Undertake nursery sowing of *kharif* onion. Treat seeds with Diethane M-45 @ 2 g or Thiram @ 2 g per kg of seeds. Use 10 kg seed for raising nursery for one hectare.
- In Jaisalmer and Bikaner districts of Arid Western Plain Zone, it is right time for sowing of American cotton, use 16 kg seed with 65-70 cm row to row and 20-25 cm plant to plant spacing. Apply 50 kg nitrogen and 40 kg phosphorus per ha as basal application at the time of sowing. For green fodder production grow jawar/bajra mixed with guar. In Barmer, Churu, Jalore, Jodhpur, Pali districts of Arid Western Plain Zone, continue land preparation for sowing of groundnut. Undertake hoeing and weeding operation in cotton crop.
- 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 Sriganaganagar, apply first irrigation in desi cotton 30 to 40 days after sowing along with urea @ 25 kg per bhiga. Undertake sowing of groundnut, seed rate are 25 kg per bhiga. Continue nursery sowing of rice.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing dry weather condition is congenial for attack of fruit borer in summer okra crop, for control spray Melathion 50 E.C. @ 1 ml per litre of water or Carbaryl 50 WP @ 4 gm per litre of water on a non rainy day.
- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur 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.

#### • **Horticulture**

- In Central Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of leaf spot or leaf rot in banana trees, for control spray Bavistin or Carbendazim @ 1 gm per litre of water.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing dry weather condition is congenial for attack of bark eating caterpillar in mango, ber & guava plants, for control spray Malathion 50 E.C. @ 1 ml per litre of water on a non rainy day.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganaganagar, prevailing dry weather condition is congenial for attack of fruit sucking pest in kinnow orchard, for control, spray Methyl Dimeton @ 2.5 ml or Acitamidrid (20 SP) @ 0.4 ml or Thiochlorpride (240 SC) @ 1 ml per liter of water.
- 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.

#### • **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 after current spells of rain.

- **Animal Husbandry**

- In Rajasthan, in view of heat wave conditions, keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking. Grazing/feeding of cattle/goats may be done during morning/evening hours. In poultry, arrange sprinklers and feed poultry birds with wet mash to increase the feed intake. Proper ventilation should be maintained for free circulation of air in the sheds.
- In Himachal Pradesh, monitor the animals for FMD and advised Vaccination. Ecto-parasite attack is expected in this weather, for control, spray Butox @ 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.

Detailed NAAS Bulletin is available in [www.imdagrimet.gov.in](http://www.imdagrimet.gov.in)