



National Agromet Advisory Service Bulletin

Friday 1st September 2017
(For the period 1st to 6th September 2017)



Issued by
India Meteorological Department

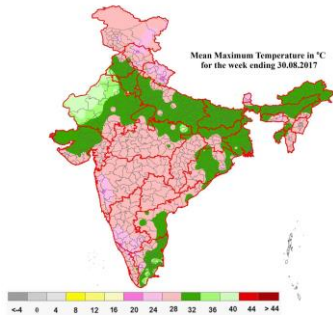
Weblink For

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

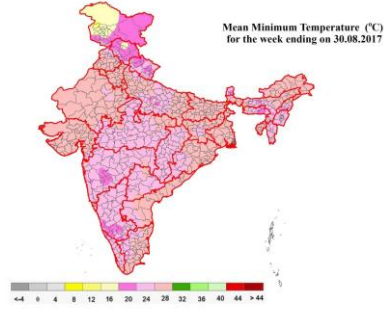
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending 30.08.2017

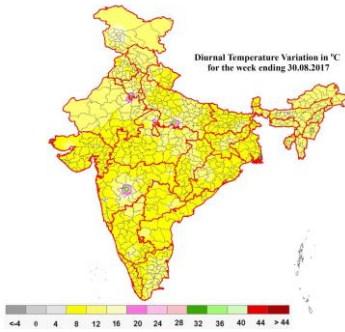
Mean Maximum Temperature (°C) for the week ending 30.08.2017



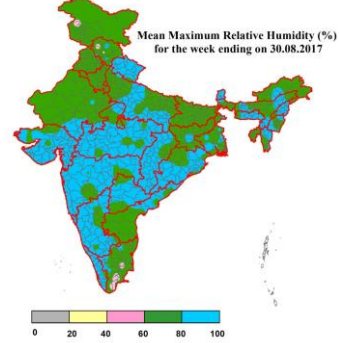
Mean Minimum Temperature (°C) for the week ending 30.08.2017



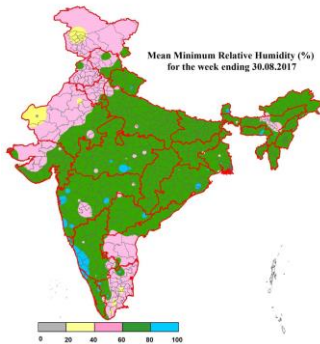
Diurnal Temperature Variation (°C) for the week ending 30.08.2017



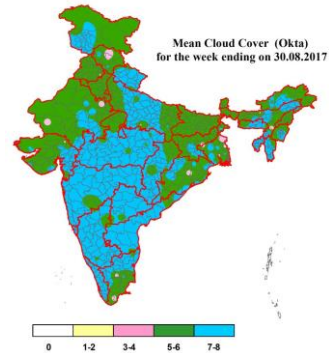
Mean Maximum Relative Humidity (%) for the week ending 30.08.2017



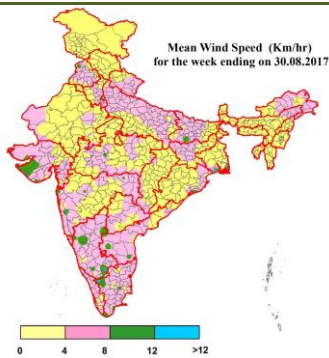
Mean Minimum Relative Humidity (%) for the week ending 30.08.2017



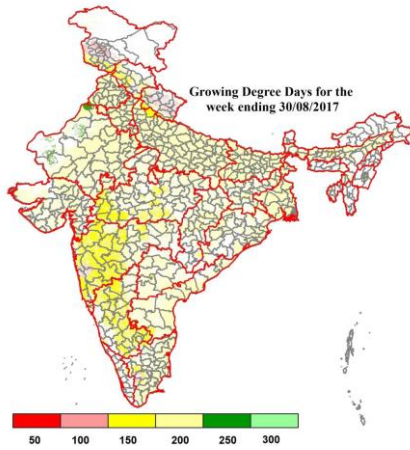
Mean Cloud Cover (okta) for the week ending 30.08.2017



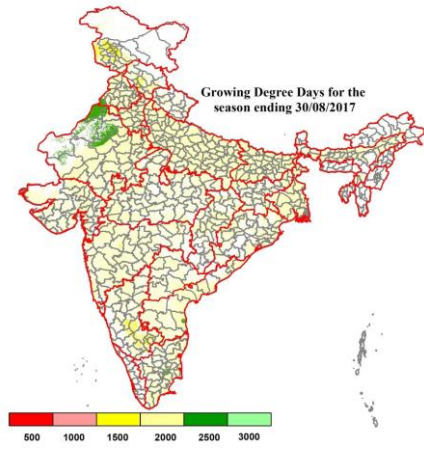
Mean Wind Speed (km/hr) for the week ending 30.08.2017



Growing Degree Days for the week ending 30.08.2017

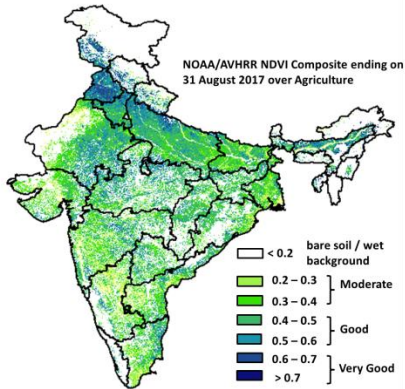


Growing Degree Days for the season ending 30.08.2017

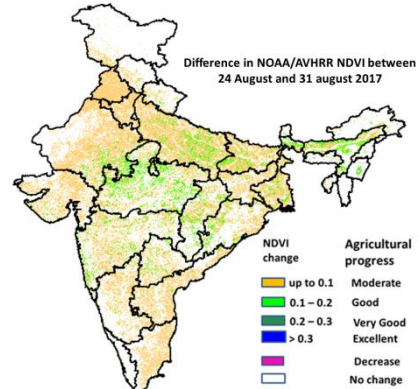


*Base temperature for *Kharif* Season is taken as 10⁰ C

NOAA/AVHRR NDVI composite ending on 31st August 2017 over Agricultural regions of India



Difference in NOAA/AVHRR NDVI between 24th and 31st August 2017



Standardised Precipitation Index Cumulative 13 weeks for the period 1st June 2017 to 30th August 2017

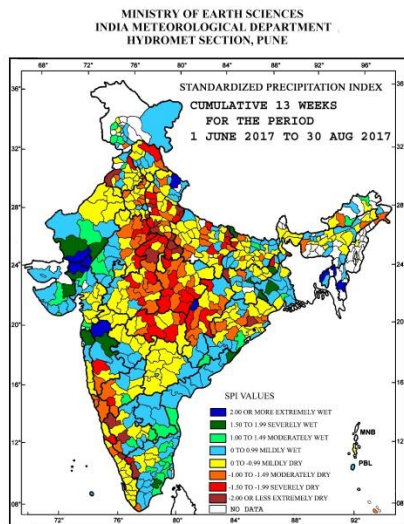


Fig : ACTUAL SPI CONDITIONS FOR THE PERIOD 1 JUNE TO 30 AUGUST 2017

Standardised Precipitation Index Cumulative 14 weeks forecast for the period 1st June 2017 to 6th September 2017

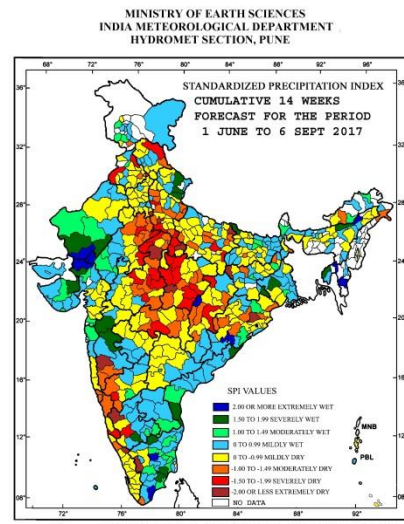
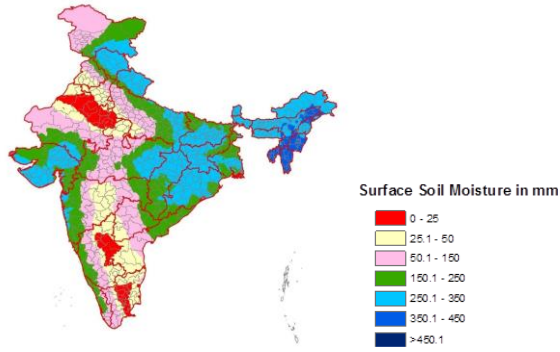
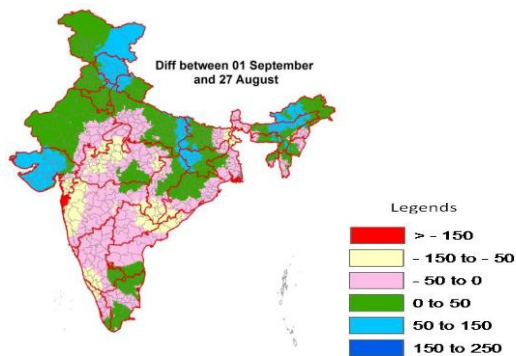
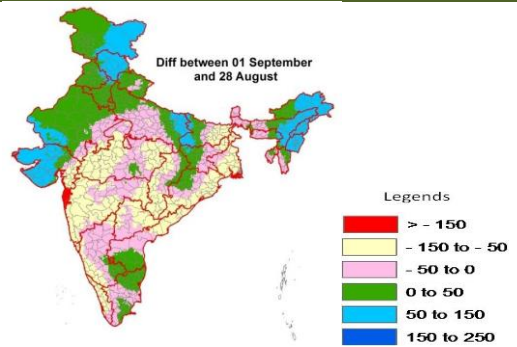
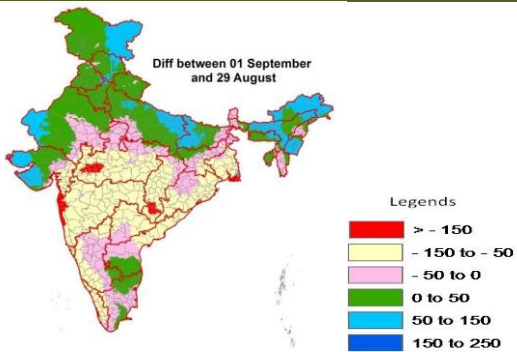
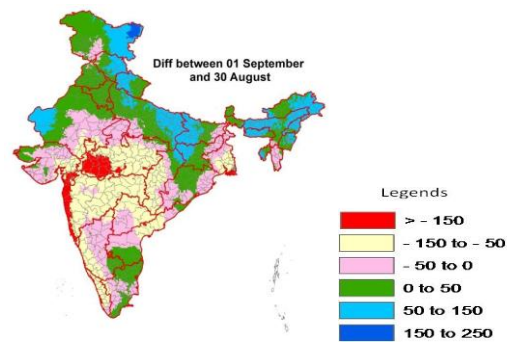
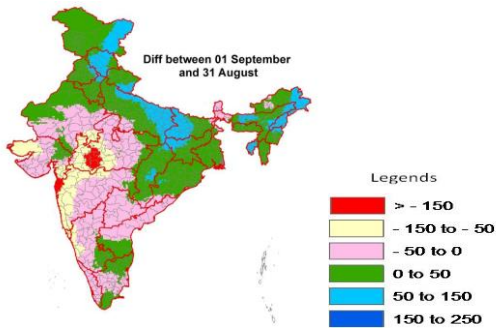


Fig : FORECAST SPI CONDITIONS FOR THE PERIOD 1 JUNE TO 6 SEPT 2017

Daily Soil Moisture (mm) for 1st September 2017



Difference of Soil Moisture (mm)



Weather Forecast for next 5 days valid upto 0830 hours of 6th September 2017

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- No significant change in maximum and minimum temperatures very likely over the country during next 2-3 days.

5 Day Rainfall Forecast (Mid-day)

1st September 2017

Met-Sub-Division	01-Sep Today	02Sep Sat	03Sep Sun	04Sep Mon	05Sep Tue
1. Andaman & Nicobar Islands	SCT	SCT	FWS	FWS	FWS
2. Arunachal Pradesh	WS	WS	FWS	FWS	FWS
3. Assam & Meghalaya	WS	WS	WS	WS	FWS
4. N. M. M. & T.	WS	FWS	WS	WS	WS
5. S.H. West Bengal & Sikkim	WS	WS	WS	WS	FWS
6. Gangetic West Bengal	WS	FWS	FWS	FWS	FWS
7. Odisha	FWS	SCT	SCT	SCT	FWS
8. Jharkhand	FWS	SCT	SCT	SCT	FWS
9. Bihar	WS	WS	FWS	FWS	FWS
10. East Uttar Pradesh	FWS	FWS	FWS	SCT	SCT
11. West Uttar Pradesh	WS	FWS	FWS	SCT	ISOL
12. Uttarakhand	WS	WS	FWS	FWS	FWS
13. Haryana, Chd & Delhi	WS	WS	SCT	ISOL	ISOL
14. Punjab	WS	FWS	SCT	ISOL	ISOL
15. Himachal Pradesh	WS	WS	SCT	SCT	SCT
16. Jammu & Kashmir	WS	FWS	SCT	ISOL	ISOL
17. West Rajsthan	SCT	ISOL	ISOL	ISOL	ISOL
18. East Rajasthan	SCT	ISOL	ISOL	ISOL	ISOL
19. West Madhya Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
20. East Madhya Pradesh	ISOL	ISOL	ISOL	SCT	SCT
21. Gujarat Region	ISOL	ISOL	ISOL	ISOL	ISOL
22. Saurashtra & Kutch	SCT	ISOL	ISOL	ISOL	ISOL
23. Konkan & Goa	FWS	FWS	FWS	FWS	FWS
24. Madhya Maharashtra	ISOL	ISOL	ISOL	ISOL	SCT
25. Marathawada	ISOL	ISOL	ISOL	ISOL	ISOL
26. Vidharbha	ISOL	ISOL	ISOL	SCT	SCT
27. Chhattisgarh	ISOL	ISOL	SCT	SCT	FWS
28. Coastal Andhra Pradesh	SCT	SCT	FWS	FWS	FWS
29. Telangana	ISOL	ISOL	SCT	FWS	FWS
30. Rayalaseema	SCT	SCT	FWS	FWS	FWS
31. Tamilnadu & Puducherry	FWS	WS	WS	FWS	FWS
32. Coastal Karnataka	FWS	FWS	FWS	FWS	FWS
33. North Interior Karnataka	ISOL	ISOL	ISOL	SCT	SCT
34. South Interior Karnataka	FWS	FWS	WS	WS	WS
35. Kerala	FWS	FWS	WS	FWS	FWS
36. Lakshadweep	SCT	SCT	FWS	FWS	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		

Weather Warning during next 5 days

- **01 September (Day 1):** Heavy to very heavy rain very likely at isolated places over Uttarakhand, West Uttar Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura and heavy at isolated places over Jammu & Kashmir, Himachal Pradesh, Haryana, Chandigarh & Delhi, Punjab, East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Arunachal Pradesh, Rayalaseema and Tamilnadu & Pudducherry. Thunderstorm accompanied with gusty wind & lightning very likely at isolated places over Jharkhand and Odisha.
- **02 September (Day 2):** Heavy to very heavy rain very likely at isolated places over Sub-Himalayan West Bengal & Sikkim and heavy at isolated places over Himachal Pradesh, Uttarakhand, Haryana, Chandigarh & Delhi, Uttar Pradesh, Bihar, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Rayalaseema, Tamilnadu & Puducherry and Kerala.
- **03 September (Day 3):** Heavy rain at isolated places very likely over East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, South Interior Karnataka, Tamilnadu & Puducherry and Kerala.
- **04 September (Day 4):** Heavy rain very likely at isolated places over Sub-Himalayan West Bengal & Sikkim,

Assam & Meghalaya, South Interior Karnataka, Tamilnadu & Puducherry and Kerala.

- **05 September (Day 5):** Heavy rain very likely at isolated places over Jharkhand, Odisha, Assam & Meghalaya, South Interior Karnataka and Tamilnadu & Puducherry.

Weather Outlook for subsequent 2 days from 6th to 8th September 2017

- Rain at most places likely over east and northeast India and southern most peninsular India.
- Isolated to scattered rain likely over rest of the country.

Salient Advisories

- As per the forecast table and warning mentioned above, in the regions likely to receive rainfall at most/many places and heavy/heavy to very heavy rainfall, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in standing crop fields.
- As thunderstorm accompanied with gusty wind & lightning very likely at isolated places over **Jharkhand** and **Odisha** on 1st September, provide support to banana, young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Undertake propping in sugarcane.
- In South Konkan Coastal Zone of **Konkan & Goa**, drain out excess water and maintain water level of 5 cm in the rice fields. Drain out excess water from vegetables fields.
- In the Lower Brahmaputra Valley Zone of **Assam**, farmers in the flood affected areas may undertake sowing of short duration HYV rice varieties like Luit, Kapili, Kolong, Dishang etc. within 1st week of September. Transplant one month old seedlings of finger millet in the 1st week of September. Undertake sowing of improved varieties of Black gram such as T9, T27, Pant U 19, T122, Saonia mah (SB123), KU 301, USJD113 and Green gram such as T44, Kopergaon, K851, ML56, ML131, SG1 (Pratap), SG21-5, etc. undertake nursery sowing of early cauliflower after current spells of heavy rain. In the Upper Brahmaputra Valley Zone, farmers in the flood affected areas may undertake sowing of sprouted seeds of extra early duration varieties like Luit, Kopilee, Culture-1 and Disang in puddled soil up to mid September. Undertake sowing of black gram and green gram after current spells of heavy rain.
- In the Old Alluvial Zone of **West Bengal**, if the transplanted paddy seedlings are completely damaged in flood affected areas, farmers can go for cultivation of short duration paddy varieties like IET-4094, Lalat, IET-4786, GB-1 etc. using direct seedling technology after receding of water level. Drain out excess water from turmeric field to avoid rotting of rhizomes.
- Heavy infestation of semilooper is observed in castor in North Saurashtra Zone of **Gujarat**; spray Chlorpyrophos @ 30 ml in 10 liters of water for control. Under present weather condition, infestation of thrips and aphids is also observed in cotton; spray Imidacloprid 17.8 % @ 5 ml or Thiomethoxam @ 3 g or Dimethoate @ 10 ml in 10 litres of water in clear weather. For monitoring of pink bollworm infestation in cotton crop, use 6-8 pheromone traps/ha.

Detailed Zonewise Agromet Advisories

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

- **Realised Rainfall:** Rainfall occurred in all the districts of Kerala except Thiruvananthapuram; in all districts of Coastal Karnataka, in Bidar, Kalaburgi, Koppal, Raichur, Vijayapura, Yadgir districts of North Interior Karnataka, in most of the districts of South Interior Karnataka except Chamarajanagar, Chikaballapura, Chitradurga, Mandya, Ramanagara and Tumakuru; in Chennai, Coimbatore, Kancheepuram, Nilgiris, Tiruvallur and Vellore districts of Tamil Nadu; in all districts of Coastal Andhra Pradesh and Telangana and in all districts of Rayalaseema except Anantapur during the week

and weather remained mainly dry over rest of the region.

• **Advisories:**

- As rainfall is very likely at most/many places over Coastal & South Interior Karnataka, Kerala and Tamil Nadu during the period, at many places over Coastal Andhra Pradesh and Rayalaseema from 3rd to 5th, over Telangana on 4th and 5th September, along with heavy rain at isolated places over Tamil Nadu & Puducherry during the period, over South Interior Karnataka from 3rd to 5th, over Rayalaseema on 1st and over Kerala from 2nd to 4th September, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops.

▪ **Kerala:**

- In the Northern Zone, since heavy rainfall is expected during the next 3 days, ensure good drainage in banana and vegetable fields. Postpone application of second dose of fertilizer to tree crops for a few days.
- In the Problem Area Zone, in areas where BPH attack is noticed on rice, drain water from the field and apply Acephate @ 800g/ha. There are chances of bud rot in coconut due to high relative humidity. For the control of bud rot, cut and remove all affected tissues of the crown and apply Bordeaux paste and protect it from rain until normal shoot emerges.
- In the Central Zone, proper drainage should be ensured to control erwinia rot incidence in bananas. As a precaution, apply lime in the banana basin or bleaching powder in the irrigation channels. To improve the disease resistance, drench the basin with Pseudomonas @ 20g per litre of water. Affected plants can be protected by drenching the basin with Copper Hydroxide @ 2g/ litre of water. Severely affected plants should be cut and removed to prevent the spread of disease.
- In Kollam district of the Southern Zone, spray and drench with Pseudomonas and apply bleaching powder to control incidence of bacterial wilt in brinjal after current spells of rain.
- In the Northern Zone, apply Kerosene emulsion @ 15 ml kerosene mixed with 1 L soap solution) to control blue beetle incidence in paddy.

▪ **Karnataka:**

- In the Southern Dry Zone, undertake sowing of short duration varieties of ragi like GPU-28, GPU-48, Indaf-9, Indaf-5, KMR-204 and KMR-301.
- In Central Dry Zone, undertake harvesting of matured onion and second earthing-up in 45-60 days old groundnut crop after current spells of rain.
- In Central Dry Zone, if attack of leaf webber is seen in redgram, spray Chlorpyrifos @ 2 ml/litre after current spells of rain.
- In North East Transition Zone incidence of sucking pests is noticed in vegetable ecosystem; for effective management, spray Thiamethoxam @ 0.5 g /litre of water on a non rainy day.

▪ **Andhra Pradesh:**

- In the North Coastal Zone, there are chances for severe incidence of viral diseases in sugarcane (formative stage). To control, apply 50 kg urea + 20 kg potash per acre and spray Diamethoate @ 2.0 ml/litre of water after current spells of rain.
- In the Scarce Rainfall Zone of Rayalaseema, pink boll worm incidence was noticed in cotton. For effective control, install pheromone traps @ 4 -6 per acre to monitor the incidence. If noticed, immediately spraying of Quinalphos @ 2ml/litre or Chlorpyrifos @ 2.5 ml/litre or Thiodicarb @ 1g/litre is recommended. For the control of the early stage (Egg) spray Neem oil 5ml/litre of water after current spells of rain.
- In Chittoor district of the Southern Zone, in vegetable crops like tomato, bhendi and green pea, there is possibility of jassid incidence. To control, young stage larvae and eggs can be discarded by spraying 5% Neem decoction. If incidence is more, spray Thiodicarb @ 1g/litre of water after current spells of rain.

▪ **Telangana:**

- In South Telangana Zone, continue transplanting of rice. In areas where prolonged dry spell has been followed by heavy rains, sudden wilting of cotton plants was noticed. To control, drain out excess water and follow inter cultivation as early as possible. For better recovery, spray Potassium Nitrate @ 10 g/ litre of water twice a week.
- In North Telangana Zone, spray Acephate @ 1.5 g/litre of water to control incidence of thrips in black gram and green gram.

▪ **Tamil Nadu:**

- In the Cauvery Delta Zone, continue land preparation/sowing of samba rice.
- In the Western Zone, by utilizing the expected rainfall, maize crop can be sown in both under irrigated as well as rainfed condition. Since moderate rainfall is expected, irrigation to the crops may be avoided or postponed. Since wind speed above 18 km is expected, prop 5 months old banana and sugarcane against lodging.
- In the North Western Zone, continue cultivation of sorghum, minor millets, green gram, red gram and black gram utilizing the realized rainfall.
- In the High Altitude Hilly Zone, drainage facilities should be created in the field to drain excess water. Due to cloudy weather, there may be chances for the spread of fungal diseases in hilly vegetable crops.
- In the Western Zone, prevailing cloudy and humid weather condition is congenial for leaf spot disease in turmeric. To control, spray Mancozeb @ 2.5 g/litre of water current spells of rain.

- In the High Rainfall Zone, spray Chlorpyrifos 20% EC @ 1.25 litre/ha to control the stem borer attack in rice after current spells of rain.
- **Animal Husbandry**
- In the Problem Area Zone of Kerala, avoid moist conditions in cattle shed to prevent incidence of foot rot.
- In the Central Zone of Kerala, adopt mosquito control measures. Cattle should not be allowed graze in water logged areas for avoiding diseases.
- In the Western Zone of Tamil Nadu, present weather is conducive for initiation of foot and mouth disease in dairy animals and cattle. Provide medicines to control the disease.

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

- **Realised Rainfall:** Rainfall occurred in East Siang, Lohit, Lower Dibang Valley, Papumpara, Tirap and West Kameng districts of Arunachal Pradesh, Barpeta, Bongaigaon, Cachar, Chirang, Dhemaji, Dhubri, Gopalpara, Golaghat, Hailakandi, Karimganj, Lakhimpur, Morigaon, N.C.Hills, Nagaon, Sibsagar and Udalguri districts of Assam, East Garo Hills, East Khasi Hills, Ri-Bhoi and West Garo Hills districts of Meghalaya, Aizwal, Lunglei and Serchip districts of Mizoram, Imphal East, Imphal West, Senapati and Thoubal districts of Manipur, Dimapur, Kohima, Phek and Wokha districts of Nagaland, all districts of Tripura during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rainfall is very likely at most/many places over Assam & Meghalaya, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura during the period, along with heavy to very heavy/heavy rain at isolated places over Assam & Meghalaya during the period, over Nagaland, Manipur, Mizoram & Tripura and Arunachal Pradesh from 1st to 3rd September, avoid 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.
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In the Central Brahmaputra Valley Zone, in already sown sesame crops, take measures to drain out excess water from the fields. Undertake land preparation for early Cole crops and raddish. Carry out nursery bed preparation and sowing of winter brinjal crop with varieties like Pusa Kranti, Pusa Purple Long, Pusa Purple Cluster, Pusa Bhairav, JC-2, BWR-12 etc.
 - In the Lower Brahmaputra Valley Zone, farmers in the flood affected areas may undertake sowing of short duration HYV rice varieties like Luit, Kapili, Kolong, Dishang etc. within 1st week of September. Transplant one month old seedlings of finger millet in the 1st week of September. Undertake sowing of improved varieties of Black gram such as T9, T27, Pant U 19, T122, Saonia mah (SB123), KU 301, USJD113 and Green gram such as T44, Kopergaon, K851, ML56, ML131, SG1 (Pratap), SG21-5, etc. undertake nursery sowing of early cauliflower after current spells of heavy rain. Foliar spray of 0.05 g Streptocycline and 0.05 g Copper Sulfate per litre of water may be done for control of bacterial leaf blight in Sali rice after current spells of rain.
 - In the Upper Brahmaputra Valley Zone, farmers in the flood affected areas may undertake sowing of sprouted seeds of extra early duration varieties like Luit, Kopilee, Culture-1 and Disang in puddled soil up to mid September. Undertake sowing of black gram and green gram after current spells of heavy rain. Complete sowing of seeds of early cauliflower varieties in the seedbed with recommended early varieties such as Early Kunwari, Pusa Dipali, Pusa Katki etc. Treat the seeds with fungicide like Thiram or Captan @ 3 gm/kg of seeds before sowing.
 - In Barak Valley Zone of Assam, apply top dressing of 5 kg Urea at the time of tillering stage of Sali rice, i.e., 20 -30 days after transplanting of seedlings. For leaf miner and stem borer attack in the Sali rice field, apply Chlorpyrifos @ 2ml per litre of water. Undertake nursery bed preparation for winter vegetables. For controlling mosaic and leaf curl disease in papaya plant, either rouge out the affected plants or spray with Rogar @ 0.1% after current spells of rain.
 - In the North Bank Plain Zone, farmers in the flood affected areas may undertake sowing of sprouted seeds of extra early duration varieties like Luit, Kopilee, Culture-1 and Disang in the main field by 1st week of September. Long duration cultivars like Monohar Sali and Gitesh can be transplanted with 60 days seedling, where as Prafulla can be transplanted with 90 days old seedlings. Undertake sowing of green gram, black gram, cowpea, cauliflower and radish after current spells of heavy rain.
 - In Arunachal Pradesh, undertake nursery preparation for winter vegetables. Give support to banana bunches to protect them from falling due to heavy rain. Remove the male flower in banana bunches to attain better finger/fruit size. Spray Triazophos 40EC @ 4ml/litre water against leaf folder in rice crop after current spells of rain.
 - **Nagaland, Manipur:**
 - In Manipur, undertake land preparation for planting potato for early crop and also for production of seed after the rains in foothills and upland areas. Undertake sowing/planting of onions in upland areas. Undertake land preparation for cabbage, cauliflower and broccoli. Undertake land preparation for sowing of french beans, broad beans and pea. Harvest mature maize crop and dry it properly before storage. Provide proper drainage in maize, soybean, groundnut, black gram and rice bean fields. In kharif rice, spray Streptocycline @ 2g/15 litres of water (at least three pumps per sangam) for bacterial leaf blight, Spray Fipronil @ 2g/pump or Imidachloprid 17.8 SL @ 7 ml/ 15 litres for aphids and Coragen @ 3ml/15 litre of water or Lambdacyhothrin @ 15ml/15 litre of water for borer, leaf folder

& brown plant hopper, after rains. For control of red hairy caterpillars in soybean, groundnut, black gram and rice bean crops, dust 5% Malathion @ 20 kg/ha or spray Dichlorovos 7.6 EC 0.05% (0.6ml/litre of water) after current spells of rain.

➤ In Nagaland, first weeding in TRC/WRC rice should be done within 2–3 weeks after establishment and the second in another 2–3 weeks. Carry out timely harvesting of green gram and okra in clear weather. Carry out timely weeding and earthing up operation in brinjal, Naga king chilli, groundnut, ginger and turmeric crops.

● **Animal Husbandry**

➤ In Northeastern states, immunizations against FMD, Anthrax, HS and BQ in cattle & buffaloes and swine fever in pigs may be carried out during monsoon season. Vaccination (RDF1) against Ranikhet disease in one week old chicks and against Gamboro disease in two weeks old chicks may be carried out.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

● **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa, all districts of Madhya Maharashtra except Sangli, all districts of Marathwada, all districts of Vidarbha except Washim, all districts of Gujarat except Kutch during the week.

● **Advisories:**

▪ **Maharashtra:**

➤ In South Konkan Coastal Zone, drain out excess water and maintain water level of 5 cm in the rice fields. To control the weeds on field bunds, spray herbicide Gramoxzone @ 3 ml per litre of water after current spells of rain. Drain out excess water from vegetables field wherever necessary. Apply second top dressing of urea @ 720 to 870 g per Are area (100 m) to vegetable crops after current spell of rain. Protect the new flush of mango from mango hoppers, leaf eating caterpillars, shoot borer and midge fly. If incidence is noticed, spray Dimethoate 25 EC @ 12 ml or Monocrotophos 36 WSC @ 11 ml per 10 litres of water as per need. after current spell of rain.

➤ In Western Ghat Zone, maintain water level up to 5 cm in rice and finger millet crop at tillering stage. In Pomegranate black spots are occurred due to incidence of fungal disease, spray fungicide like Hexaconazole @ 1 ml per liter of water. To control the rust & tikka diseases in groundnut, spray Mancozeb @ 25 g + Carbendazim @ 10 g per 10 liters of water.

➤ In Western Maharashtra Plain Zone, for rabi season prepare broad bed furrows as it will help in percolation of rain water. In rice maintain 5 cm of water level at tillering stage in western parts of Pune. Due to prevailing cloudy and humid weather, there may be incidence of tikka leaf spot and rust disease in groundnut, spray Mancozeb @ 25 g + Carbendazim @ 10 g per 10 litre of water. For control of rust disease in soybean, spray Propiconazole or Hexaconazole @ 10 ml per 10 litres of water. For control of pink boll worm in cotton spray 5% neemark or Prophenophos 50 EC @ 30 ml or Spinosad 45 SC @ 3.5 ml per 10 liters of water.

➤ In Sub Monate Zone, for control of brown hoppers in rice, spray Cypermethrin @ 4 ml/10 liters on the lower region (stem portion) of rice crop. For control of leaf eating caterpillar in soybean, install Pheromone trap and monitor it, if 5-7 fly are observed spray Cypermethrin @ 4 ml / 10 liters or Chlorpyrifos @ 20 ml/liters of water. There are chances of incidence of rust in sugarcane, if noticed spray Mancozeb 0.3 % @ 3g/ litre of water.

➤ In Marathwada, third top dressing dose of Nitrogen with the help of 50 kg Nitrogen per hectare should be done in turmeric crop. To control yellowing of leaves take a spray of Grade-2 Micronutrients @ 50 gm per 10 liter of water. To control Girdle beetle and Tobacco eating caterpillar in soybean crop take a spray of Triazophos 40 % @ 20 ml per 10 liter of water. To control Pod blight take a spray of Mancozeb 25 gm per 10 liter of water.

➤ In Vidarbha, due to dry and cloudy weather, the incidence of army worm may observed on rice crop. If incidence occurs, then spray Cypermethrin 10 EC @ 6 ml/10 litres of water on a non rainy day.

▪ **Gujarat:**

➤ In South Gujarat Heavy Rainfall Zone, maintain optimum water level in transplanted rice.

➤ In South Gujarat Zone, undertake seed bed preparation for *rabi* vegetables like chilli, tomato and brinjal

➤ In North West Zone of Gujarat, carry out gap filling in castor.

➤ In South Saurashtra Zone, undertake interculture operations and hand weeding in groundnut.

➤ In South Saurashtra Zone, for the control of pink bollworm in cotton, spray Deltamethrin @ 10 ml or Trizophos/10 litres of water.

➤ Heavy infestation of semilooper observed in castor in North Saurashtra Zone; spray Chlorpyrophos @ 30 ml in 10 liters of water for control. Under present weather condition, infestation of thrips and aphids is observed in cotton; spray Imidacloprid 17.8 % @ 5 ml or Thiomethoxam @ 3 g or Dimethoate @ 10 ml in 10 litres of water in clear weather. For monitoring of pink bollworm infestation in cotton crop use 6-8 pheromone traps/ha.

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

● **Realised Rainfall:** Rainfall occurred in North Middle Andaman & South Andaman Districts of Andaman & Nicobar Islands, all districts of Gangetic West Bengal, all districts of Sub-Himalayan West Bengal & Sikkim except South Dinajpur, in Araria, Bhagalpur, Buxar, Gaya, Jamui, Katihar, Kishanganj, Lakhisari, Nawada, Purnea, Samastipur and

Vaishali districts of Bihar, all districts of Jharkhand except Chatra, Deogarh, Dhanbad, Garhwa, Giridih, Jamtara, Koderma and West Singhbhum, all districts of Odisha except Boudhgarh, Jharsuguda and Sundargarh during the week and weather remained mainly dry over rest of the region.

- **Advisories:**

- As rain/thundershowers very likely at most/many places over West Bengal & Sikkim and Bihar during the period, at many places over Andaman & Nicobar islands from 3rd to 5th, over Odisha and Jharkhand on 1st and 5th, along with heavy to very heavy/heavy rain isolated places over Sub-Himalayan West Bengal & Sikkim from 1st to 4th, heavy rain at isolated places over Bihar on 1st and 3rd, over Gangetic West Bengal on 1st, over Odisha and Jharkhand on 5th September, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in maize, pulses and vegetable fields to avoid water stagnation in the crop fields.

- As thunderstorm accompanied with gusty wind & lightning very likely at isolated places over Jharkhand and Odisha on 1st September, provide support to banana, young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Undertake propping in sugarcane.

- **Odisha:**

- In North Central Plateau Zone, maintain about 2-3 cm standing water in rice during tillering stage. Undertake sowing of arhar after seed treatment. Do not allow water stagnation in maize fields.

- In South Eastern Ghat Zone, complete sowing of green gram and black gram in uplands. Due to high humidity and cloudy weather there is chance of bacterial leaf blight in rice, spray the crop with 1 g Streptocycline along with 20 g Copper oxychloride in 10 litres of water after current spells of rain.

- In North Central Plateau Zone, prevailing weather is conducive for tikka disease in groundnut. For control, apply Carbendazim @ 2gm/litre of water. Also due to high humidity and hot weather, there is chances of Wilt disease, if noticed, spray @ 1gm streptocyclin mixed with 15gm Carbendazim in 10 litres of water at the root and around soil for control. Undertake plant protection methods after current spells of rain.

- **Bihar:**

- In North East and North West Alluvial Zone of Bihar, in flood affected areas, drain out excess water from the standing crop fields. To protect from damping - off of vegetable seedlings in nursery bed, spray Copper oxychloride 50WP @ 3g/litre of water +Streptocycline @ 1g/10 litres of water after current spells of rain.

- In South Bihar Alluvial Zone, continue transplanting of brinjal, tomato, chilli, cauliflower and cabbage on raised beds. Prevailing weather is congenial for attack of leaf folder/stem borer in rice. Farmers are advised to monitor their fields regularly, if observed, then broadcasting of Cartap 4% granules @ 10 kg/acre is recommended. Also in maize fields, constant monitoring of stem borer should be done, if insect population is above ETL, spray Carbrayl @ 2 gm/ litre of water after current spells of rain.

- 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.

- **Jharkhand:**

- In South Eastern Plateau Zone, in fallow sloppy lands, go for the cultivation of September Pigeonpea, Kulthi { Birsa Kulthi 1, seed rate- 8 kg per acre }, Nige { Birsa Niger 1, 2 and 3, seed rate- 16 kg per acre }, Rice bean { R B L 1, seed rate- 8 kg per acre} after Seed treatment with Fungicide: Bavistin or Thiram- 2g/kg seed followed by Rhizobium culture @ 5g/kg seed. Farmers may start preparation of land for the cultivation of short duration early potato hence, advised for the selection of varieties viz. Kufri Ashoka and Kufri Pukhraj, Kufri Surya and Kufri Puskar of 80-90 days crop.

- In Western Plateau Zone, in fallow uplands, continue sowing of kulthi and arhar (with short duration variety like UPAS-120) after current spells of heavy rain. Select improved varieties of kulthi like V.L.G.-19 or Birsa kulthi-1. Before sowing, seeds must be treated with Rhizobium culture.

- In South Eastern Plateau Zone, in the prevailing weather, chance of occurrence and spreading of Blast disease in rice is more. Hence, spraying of Bavistin @ 1 g or Beam (Tricyclazole) @ 6 g per 10 liter of water by mixing Teepol @ 0.5 ml per liter of water is advised on a non rainy day.

- **West Bengal:**

- In Laterite and Red Soil Zone, give proper bunding to hold the water the direct-seeded paddy fields.

- In the Hill Zone of West Bengal, provide proper drainage to ginger, turmeric and Mandarin orange. Keep the large cardamom field weed free and remove diseased plants from the field. Carry out hand weeding according to the weed infestation and maintain 2-3 cm of water in the rice field. Drainage system should be maintained properly to remove excess water from rice field. Carry out regular harvesting of bhindi and round chilli crops.

- In the Old Alluvial Zone, if the transplanted paddy seedlings are completely damaged in flood affected areas, farmers can go for cultivation of short duration paddy varieties like IET-4094, Lalat, IET-4786, GB-1 etc. using direct seedling technology after receding of water level. Undertake seedbed preparation and sowing of cabbage and cauliflower.

- In Terai Zone, drain out excess water from the brinjal, chilli, legume vegetables, ginger and turmeric fields.

- In Terai Zone, apply Tricyclazole @ 1g/litre of water for brown spot and blast and Hexaconazole @ 1ml/lit.of water for control of sheath blight in paddy. In cucurbit, apply (Metalaxyl + Mencozeb) @ 2g/litre of water against rotting

of fruits or vines and Acetamiprid @ 1ml/litre water for control of white fly or hoppers. Undertake spraying of chemicals after current spells of rain.

- In Hill Zone, spray Tricyclazole 75% WP @ 0.5 gm/litre of water for incidence of blast disease after a current spell of rain.
- In Coastal Saline Zone, spray Kopiconazole @ 1.5ml/litre of water with sticker if sheath blight found above threshold level in high yielding variety of Aman paddy and spray Spinosad @ 1.5ml/liter of water for fruit and shoot borer in brinjal and okra after current spells of rain. Drain out excess water and arrange proper aeration in betel vine field.
- **Andaman and Nicobar Islands**
- In North, Middle and South Andaman, keep rice field bunds open at 15 cm height to remove excess rain water. Provide drainage facility in the vegetable field and collect the fallen fruits to avoid fruit fly infestation.
- In the Nicobar Islands, do intercultural operations in coconut community garden as the weather is conducive.
- **Animal Husbandry**
- In North Central Plateau Zone of Odisha, periodic vaccination viz. FMD, HS & BQ may be carried out to protect the dairy animals. Keep the animal sheds clean and dry. RD vaccine should be given immediately to the chicks which are 7 days old. To prevent coxidirosis disease spray antibiotic solution named Kohrsolin-TH in the poultry house.
- In Jharkhand, do not allow animals to graze around waterlogged/swampy/wet land and deworm and vaccinate animals against infectious disease like, Anthrax and Galaghotu. For milch animals, provide mineral mixture and concentrates of groundnut/mustard/linseed, salt with clean green and dry fodder. Keep animal shelter floors dry. In Poultry, more chance of occurrence of fungal diseases in poultry birds because of high humidity, hence, lime should be mixed thoroughly in poultry litter.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rainfall occurred in all districts of East Madhya Pradesh except Damoh, all districts of West Madhya Pradesh except Bhand and Vidisha, all districts of Chhattisgarh during the week.
- **Advisories:**
 - **Madhya Pradesh:**
 - In Satpura Plateau Zone, undertake sowing of kodo, kutki and ramtil.
 - In Malwa Plateau Zone, continue transplanting of onion, brinjal, tomato, chilli, cauliflower and cabbage on raised bed. Continue nursery preparation of cauliflower for mid season (Oct-Nov.).
 - In Central Narmada Zone, undertake weeding in rice and remove excess water from crop fields.
 - In Bundelkhand Zone, continue transplanting of brinjal, tomato, chilli, cauliflower and cabbage on raised bed.
 - In Jhabua Hill Zone, due to cloudy weather there are chances of attack of sucking pest in cotton, spray thiamethoxam or Acetamiprid @ 0.35-0.45 gm/litre of water.
 - In Gird Zone, due to cloudy weather there are chances of attack of fruit borer in brinjal and okra, spray Dimethoate @ 750ml per hectare dissolved in 500-600 litres of water.
 - In Central Narmada Valley Zone, due to cloudy weather, infestation of white fly may be seen in soybean crop, apply Thiomethoxam 25 WG @ 100 gram or Imidachlorprid 17.8 SL @ 200 ml per hectare.
 - **Chhattisgarh:**
 - In North Hill Zone, raise the seedlings of winter vegetables like cauliflower, cabbage, chilli, tomato, brinjal. Complete sowing of niger and horsegram.
 - In Bastar Plateau Zone, maintain 5-7 cm water in rice fields for better growth and to suppress weeds. Continue nursery preparation for papaya and custard apple. Undertake sowing of niger, kulthi, urad and vegetable crops.
 - In Chhattisgarh Plain Zone, in low rainfall regions (deficit rainfall), farmers should prepare the fields and go for sowing of post-kharif crops like niger and horsegram. Continue nursery preparation for capsicum and transplanting of onion. Undertake nursery sowing of medium duration cauliflower.
 - In North Hill Zone, attack of blast is observed in rice crop, spray Tricyclazole @ 120 gram per acre on a non rainy day and repeat after 10-12 days as per requirement.
- **Animal Husbandry**
- In Madhya Pradesh, vaccinate the poultry birds to prevent Ranikhet disease.
- In Chhattisgarh, cattle sheds should be well protected from flies and mosquitoes.

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

- **Realised Rainfall:** Rainfall occurred in Kathua, Rajouri, Reasi, districts of Jammu & Kashmir, all districts of Himachal Pradesh except Kinnaur, Kullu, Lahaul & Spiti, Shimla, all districts of Uttarakhand except Champawat, Uttarkashi, in Gurdaspur, Moga, districts of Punjab; in Mewat district of Haryana; in Central Delhi, New Delhi, North East Delhi, South Delhi, South West Delhi, West Delhi of Delhi, all districts of East Uttar Pradesh except Ballia, Balrampur, Chandauli, Deoria, Ghazipur, Gonda, Gorakhpur, Kanpur city, Kushinagar, Maharajganj, Mau, Mirzapur, Sant Kabir

Nagar, Sonbhadra, in Auria, Bijnour, Etah, Etawah, Firozabad, Hamirpur, Jalaun, Jhansi, Jotiba Phule Nagar, Lalitpur, Mahoba, Mainpuri, Moradabad, Rampur, Shahjahanpur districts of West Uttar Pradesh, all districts of East Rajasthan except Bharatpur, Jhunjhunu, Karauli, Kota, Sikar, in Nagaur, Pali districts of West Rajasthan during the week and weather remained mainly dry/dry over rest of the region.

- **Advisories:**

- As rain is very likely at most places over Himachal Pradesh, Haryana, Chandigarh & Delhi on 1st and 2nd at most/many places over Uttarakhand during the period, over Uttar Pradesh from 1st to 3rd, over Jammu and Kashmir and Punjab on 1st and 2nd September, along with heavy to very heavy/heavy rain at isolated places on 1st and 2nd over Uttarakhand and Uttar Pradesh, heavy at isolated places over Haryana, Chandigarh & Delhi on 1st and 2nd, over East Uttar Pradesh on 1st and 3rd, over Jammu & Kashmir, Himachal Pradesh and Punjab on 1st September, avoid irrigation, intercultural operation, application of fertilizers and plant protection methods in standing crops.

- **Jammu & Kashmir:**

- In Sub Tropical Zone, in Intermediate Zone and Valley Temperate Zone, follow alternate wetting and drying of field up to physiological maturity in rice crop. Restrict irrigation after the advanced dough stage in rice crop. Harvest the paddy crop at physiological maturity stage when leaves and panicles turn yellow in color. This is essential to avoid shedding of grains. Undertake land preparation for transplanting of cole crops and sowing of onion seed.

- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, undertake land preparation for transplanting of cole crops and planting of saffron corms.

- In Valley Temperate Zone of Jammu and Kashmir, for planting saffron, select healthy, disease free corms (above 8 gms) followed by corm treatment with combination of Carbendazim (50g in 50 litres) and Mancozeb (150g in 50 litres). Treated corms should be shade dried overnight. Before planting, apply split dose of UREA @ 2.4, DAP @ 6.6, MOP @ 4.15 kgs/kanal and Well rotted FYM @ 5q/kanal and vermin compost @ 25kgs/kanal.

- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, to control stem borer in paddy, install pheromone traps (yellow stem borer luren) @ 20/hectare from 10 – 15 days. Spray Tricyclazole @ 0.06% or 1 ml in 1.5 liters of water to control blast disease in paddy. Undertake spraying after current spells of rain.

- **Punjab, Haryana and Delhi:**

- In Western Zone of Punjab, start sowing “desi” varieties of radish (Punjab Pasand), turnip (L-1) and carrot (Punjab Black Beauty, Punjab Carrot Red and PC 34), using 4-5 kg seed rate of radish and carrot and 2-3 kg seed rate of turnip per acre. Keep ridges 45 cm and plants 7.5 cm apart. Cultivation of root crops on ridges help in better growth and development of roots and easy harvest. Also the weather conditions are ideal for sowing early varieties of potato.

- In Undulating Zone, avoid water stagnation in maize and pulse fields. Cover tomato nursery with polythene sheets to protect from heavy rains.

- In Western Plain Zone of Punjab, monitor cotton fields regularly for attack of whitefly. If the whitefly reaches 6 whiteflies per leaf in the upper canopy, spray the crop with Ulala 50 WG 80 g/acre or Lano 10 EC @ 500 ml/acre or 200 ml/acre Oberon in 125-150 litres of water/acre on a non rainy day.

- In Eastern Zone of Haryana, continue planting of fruit trees like mango, pears (gauva), jamun, orange, ber, phalsa etc.

- **Rajasthan:**

- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing continuous cloudy sky weather condition is congenial for attack of leaf spot in groundnut crop, for control spray Bavistin @ 0.5 gm or Mencozeb @ 2 gm per litre of water.

- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of leaf curl & mosaic disease in chilli crop, for control uproot & burn affected plants & spray Dimethoate 30EC @ 1.0 ml per litre of water in clear weather.

- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, prevailing weather condition is congenial for attack of sucking pests in pulse crops, for control spray Dimethoate 30 EC @ 1 litre/ha.

- **Horticulture:**

- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of leaf curl & mosaic in papaya, for control uproot & burn the affected plants and spray Dimethoate 30 EC or Methyl Demeton 25 EC @ 1 ml per litre of water.

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