



राष्ट्रीय कृषि मौसम परामर्श सेवा बुलेटिन

National Agromet Advisory Service Bulletin

शुक्रवार दि. 22 सितम्बर 2023

(अवधि : 22 से 26 सितम्बर 2023)

Friday 22nd September 2023

(For the period 22nd to 26th September 2023)



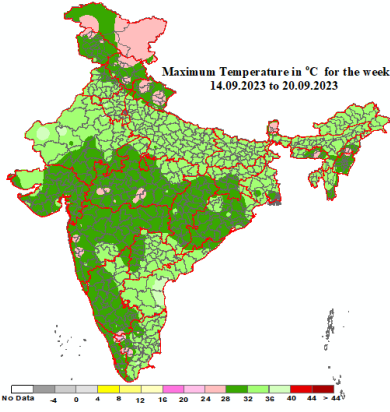
कृषि मौसम विज्ञान प्रभाग,
भारत मौसम विज्ञान विभाग, पुणे
द्वारा जारी

Issued by
Agricultural Meteorology Division,
India Meteorological Department, Pune.

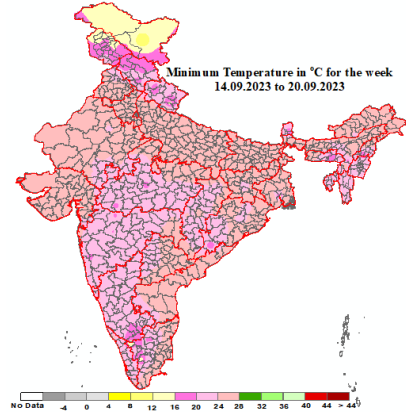


Spatial distribution of weather parameters for the week 14.09.2023 to 20.09.2023

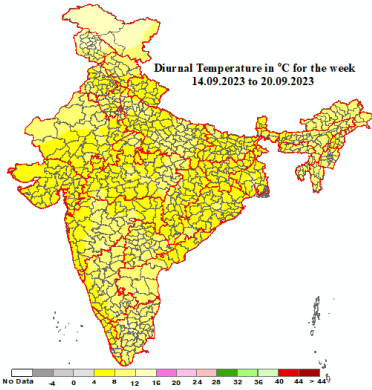
**Mean Maximum Temperature (°C) for the week
14.09.2023 to 20.09.2023**



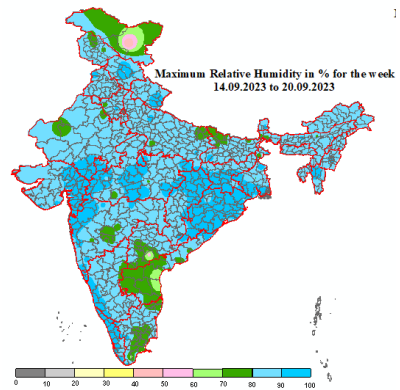
**Mean Minimum Temperature (°C) for the week
14.09.2023 to 20.09.2023**



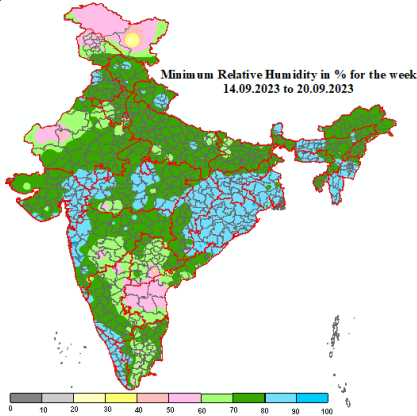
**Mean Diurnal Temperature Variation (°C) for the week
14.09.2023 to 20.09.2023**



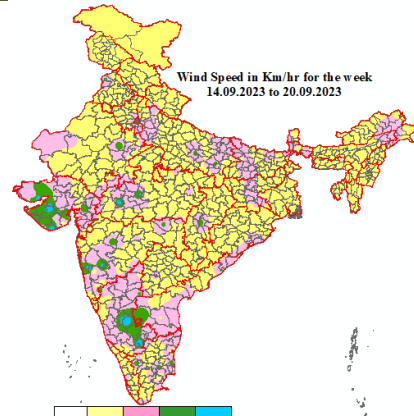
**Mean Maximum Relative Humidity (%) for the week
14.09.2023 to 20.09.2023**



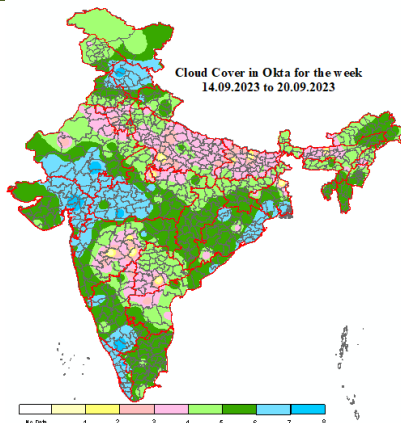
**Mean Minimum Relative Humidity (%) for the week
14.09.2023 to 20.09.2023**



**Mean Wind Speed (km/hr) for the week
14.09.2023 to 20.09.2023**

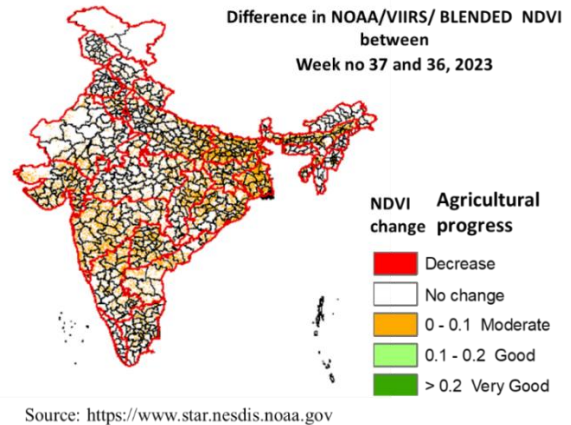
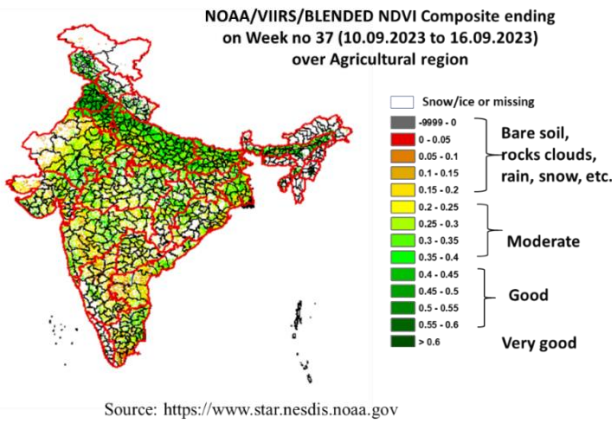


**Mean Cloud Cover (okta) for the week
14.09.2023 to 20.09.2023**



NOAA/VIIRS/BLENDED NDVI composite for the week number 37 (10.09.2023 to 16.09.2023) over Agricultural regions of India

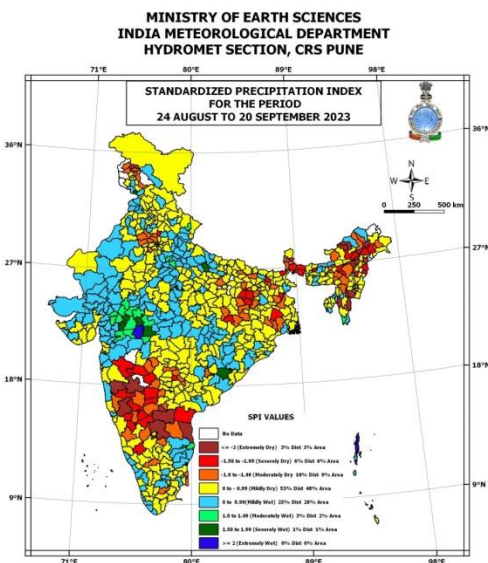
Difference in NOAA/VIIRS/BLENDED NDVI between week number 37 and 36, 2023



Agricultural vigour was good over most places of Jammu & Kashmir, Punjab, Himachal Pradesh, Uttarakhand & North Eastern States; at few places of Haryana, Uttar Pradesh, Bihar, Sub Himalayan West Bengal, Chattisgarh, South Konkan, East Rajasthan and South Saurashtra..

Good difference in agricultural vigour was observed at isolated places of North Eastern states, Himachal Pradesh and North Coastal Andhra Pradesh.

Standardised Precipitation Index for the period 24th August to 20th September 2023



- Extremely/Severely Wet conditions exist in Samba district of Jammu; Indore, Jhabua, Khandwa, Khargaon districts of West Madhya Pradesh; Koraput district of Orissa; Barabanki district of Uttar Pradesh; North-Middle district of Andaman & Nicobar Islands.
- Extremely/Severely Dry conditions exist in Anantpur, Kurnool, Nellore, Prakasam districts of Andhra Pradesh; East-Siang, Kradaadi, Kurung-Kumey districts of Arunachal Pradesh; Bongaigaon, Demaj, Dibrugarh, Hojai, Jorhat, Nlakhimpur, Majuli, Nagaon, Tinsukia districts of Assam; Arwal, Aurangabad, Gaya, Kishanganj, Saharsa districts of Bihar; Bandipora district of Jammu; Bagalkote, Belgaum, Bellary, Dharwad, Gulbarga, Hassan, Haveri, Koppal, Yadgiri districts of Karnataka; Ahmednagar, Bid, Latur, Sangli, Satara, Sholapur districts of Maharashtra; Churachandpur, Pherzawl districts of Manipur; Champhai, Mamit districts of Mizoram; Kiphire, Kohima, Mon, Tuensang districts of Nagaland; Shamli district of Uttar Pradesh; Alipurduar, Bankura districts of West Bengal; East-District districts of Sikkim; Chatrai, Pakaur districts of Jharkhand; Surguja district of Chhatisgarh; Jogulambha, Rajanna-Sircilla districts of Telangana.
- Moderately wet to moderately dry conditions were experienced in remaining districts of the country.

Weather Forecast for next 5 days upto 0830 hours IST of 27th September 2023

- ❖ Meteorological sub-division wise detailed 5 days rainfall forecast is given in table below.
- ❖ No significant change in maximum temperatures likely over most parts of country during next 5 days.

5 Days Rainfall Forecast

S. No.	Subdivision	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep
		Day 1	Day 2	Day 3	Day 4	Day 5
1	ANDAMAN & NICOBAR ISLANDS	FWS	WS	WS	WS	WS
2	ARUNACHAL PRADESH	WS	WS	FWS	FWS	SCT
3	ASSAM & MEGHALAYA	WS	WS	FWS	FWS	FWS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	WS	FWS	FWS	FWS	FWS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	WS	WS	WS	FWS	FWS
6	GANGETIC WEST BENGAL	WS	FWS	FWS	FWS	SCT
7	ODISHA	FWS	FWS	SCT	SCT	SCT
8	JHARKHAND	WS	FWS	FWS	SCT	SCT
9	BIHAR	WS	WS	FWS	SCT	SCT
10	EAST UTTAR PRADESH	FWS	SCT	SCT	ISOL	SCT
11	WEST UTTAR PRADESH	SCT	SCT	ISOL	ISOL	ISOL
12	UTTARAKHAND	SCT	SCT	ISOL	ISOL	ISOL
13	HARYANA CHANDIGARH & DELHI	ISOL	SCT	ISOL	DRY	DRY
14	PUNJAB	SCT	SCT	ISOL	DRY	DRY
15	HIMACHAL PRADESH	ISOL	ISOL	ISOL	DRY	DRY
16	JAMMU & KASHMIR AND LADAKH	SCT	ISOL	ISOL	DRY	DRY
17	WEST RAJASTHAN	ISOL	ISOL	ISOL	ISOL	ISOL
18	EAST RAJASTHAN	SCT	SCT	ISOL	ISOL	ISOL
19	WEST MADHYA PRADESH	FWS	FWS	FWS	SCT	SCT
20	EAST MADHYA PRADESH	WS	WS	FWS	FWS	FWS
21	GUJARAT REGION	SCT	FWS	SCT	SCT	FWS
22	SAURASHTRA & KUTCH	ISOL	SCT	FWS	SCT	ISOL
23	KONKAN & GOA	WS	WS	WS	WS	WS
24	MADHYA MAHARASHTRA	WS	FWS	FWS	FWS	FWS
25	MARATHAWADA	WS	FWS	FWS	FWS	FWS
26	VIDARBHA	WS	WS	FWS	FWS	FWS
27	CHHATTISGARH	WS	FWS	FWS	FWS	FWS
28	COASTAL ANDHRA PRADESH & YANAM	FWS	FWS	FWS	SCT	SCT
29	TELANGANA	FWS	FWS	SCT	SCT	SCT
30	RAYALASEEMA	SCT	SCT	SCT	SCT	SCT
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	SCT	SCT	SCT	SCT
32	COASTAL KARNATAKA	WS	WS	FWS	FWS	FWS
33	NORTH INTERIOR KARNATAKA	FWS	SCT	SCT	SCT	SCT
34	SOUTH INTERIOR KARNATAKA	FWS	FWS	SCT	SCT	SCT
35	KERALA & MAHE	WS	FWS	FWS	FWS	FWS
36	LAKSHADWEEP	WS	FWS	SCT	SCT	SCT

Legend	Category	% Stations
WS	Widespread/Most Places	76-100
FWS	Fairly Widespread/Many places	51-75
SCT	Scattered/ A Few Places	26-50
ISOL	Isolated Places	1-25
DRY	No Rain	0

Weather Warning during next 5 days

22 September (Day 1): -

- ❖ **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Bihar; **Heavy to very heavy rainfall** at isolated places over Madhya Pradesh, Vidarbha, Sub- Himalayan West Bengal & Sikkim, Jharkhand, Konkan & Goa, Arunachal Pradesh, west Assam & Meghalaya and **heavy rainfall** at isolated places over Jammu division, south Uttar Pradesh, East Rajasthan, Chhattisgarh, Gangetic West Bengal, Odisha, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, south Gujarat Region, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, North Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Thunderstorm with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Kerala & Mahe and **with lightning** at isolated places over Uttar Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Gujarat state, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** likely over Southwest and adjoining Westcentral Arabian Sea. **Fishermen are advised not to venture into these areas.**

23 September (Day 2): -

- ❖ **Heavy to very heavy rainfall** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Bihar and Assam & Meghalaya and **heavy rainfall** at isolated places over East Rajasthan, Madhya Pradesh, Vidarbha, Jharkhand, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Gujarat Region, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, Tamil Nadu, Puducherry & Karaikal.
- ❖ **Thunderstorm with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Kerala & Mahe and **with lightning** at isolated places over Uttarakhand, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Gujarat state, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
Squally wind speed of 45-55 kmph gusting to 65 kmph likely over Southwest and adjoining Westcentral Arabian Sea. **Fishermen are advised not to venture into these areas.**

24 September (Day 3): -

- ❖ **Heavy rainfall** very likely at isolated places over East Madhya Pradesh, Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim, Bihar, Arunachal Pradesh, Assam & Meghalaya.
- ❖ **Thunderstorm with lightning** very likely at isolated places over Uttarakhand, Uttar Pradesh, Rajasthan, East Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, Gangetic West Bengal, Jharkhand, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe.
Squally wind speed of 45-55 kmph gusting to 65 kmph likely over Southwest and adjoining Westcentral Arabian Sea. **Fishermen are advised not to venture into these areas.**

25 September (Day 4): -

- ❖ **Heavy rainfall** likely at isolated places over Andaman & Nicobar Islands.
- ❖ **Thunderstorm with lightning** likely at isolated places over Uttarakhand, East Uttar Pradesh, Andaman & Nicobar Islands and Konkan & Goa, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry &

Karaikal, Kerala & Mahe.

Squally wind speed of 45-55 kmph gusting to 65 kmph likely over Southwest and adjoining Westcentral Arabian Sea. **Fishermen are advised not to venture into these areas.**

26 September (Day 5): -

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Andaman & Nicobar Islands and **heavy rainfall** at isolated places over Konkan & Goa and Madhya Maharashtra.
- ❖ **Thunderstorm with lightning** likely at isolated places over Konkan & Goa, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal.

Squally wind speed of 45-55 kmph gusting to 65 kmph likely over Southwest and adjoining Westcentral Arabian Sea. **Fishermen are advised not to venture into these areas.**

Advisory for Fishermen

- As **squally wind speed of 45-55 kmph gusting to 65 kmph** likely over Southwest and adjoining Westcentral Arabian Sea during next 5 days, **fishermen are advised not to venture into these areas.**

Salient advisories

- As **rain/thundershowers** at **many/most** places very likely over Odisha and Telangana during next 48 hours; over Bihar, Jharkhand, West Madhya Pradesh and Coastal Andhra Pradesh during next 72 hours; over Kerala & Mahe, Coastal Karnataka, Maharashtra, Chhattisgarh, East Madhya Pradesh, West Bengal & Sikkim, Andaman & Nicobar Islands, Assam & Meghalaya, Arunachal Pradesh and Nagaland Manipur Mizoram & Tripura during next 4-5 days with **heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Bihar during next 24 hours; **heavy to very heavy rainfall** at isolated places over Madhya Pradesh, Vidarbha, Jharkhand, Konkan & Goa and Arunachal Pradesh during next 24 hours; over Sub- Himalayan West Bengal & Sikkim and Assam & Meghalaya during next 48 hours; over Bihar on 23rd and over Andaman & Nicobar Islands on 26th and **heavy rainfall** at isolated places over Jammu division, south Uttar Pradesh, Chhattisgarh, Gangetic West Bengal, Odisha, Marathwada and Kerala & Mahe during next 24 hours; over East Rajasthan, Nagaland Manipur Mizoram & Tripura, Gujarat Region, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and Tamil Nadu Puducherry & Karaikal during next 48 hours; over Madhya Maharashtra on 22nd, 23rd & 26th; over East Madhya Pradesh and Arunachal Pradesh on 23rd & 24th; over Sub-Himalayan West Bengal & Sikkim, Bihar and Assam & Meghalaya on 24th; over Andaman & Nicobar Islands on 24th & 25th and over Konkan & Goa on 26th September 2023, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Drain out excess water from standing crop fields to avoid waterlogging.
 - **Arunachal Pradesh** - Avoid fresh sowing of maize. Cover already sown fields with local mulching materials to avert the impact of heavy rains. Maintain proper drainage in fields of rice, other standing crops and orchards to avoid water stagnation. Postpone the application of fertilizers and insecticides.
 - **Assam** - In **Hill Zone**, drain out excess water from nursery beds or newly transplanted vegetables. In **Upper Brahmaputra Valley Zone**, postpone transplanting of early varieties of cauliflower. Postpone top-dressing of Urea in standing rice crop.
 - **Nagaland** - Postpone sowing of winter crops in nurseries. Provide mechanical support to banana plants. Maintain proper drainage facility in ginger fields and orchards.
 - **West Bengal** - In **Hill Zone**, maintain adequate drainage channels in standing crop fields. Postpone spraying operations during rainy days. In **Coastal Saline Zone**, prevent water stagnation in rice and vegetable fields.
 - **Madhya Pradesh** - In **Satpura Plateau Zone**, postpone sowing of early peas and planting of potato.

Make proper arrangements for draining out excess water from maize, soybean and okra fields in **Satpura Plateau Zone**; from soybean in **Kymore Plateau and Satpura Hill Zone & Nimar Valley Zone**; from pearl millet, green gram, black gram, sesame and vegetables in **Gird Zone** and from standing crops in **Vindhya Plateau Zone**.

- **Maharashtra** – Arrange adequate drainage for standing crops, vegetables and orchards in **Ratnagiri** and **Raigad** districts of **Konkan** and Ghat areas of Pune district in **Madhya Maharashtra**; for maize, cotton, pigeon pea, soybean, rice (in East Vidarbha), vegetables and orchards in Vidarbha.

➤ As **thunderstorm with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Kerala & Mahe during next 48 hours and **with lightning** at isolated places over Sub Himalayan West Bengal & Sikkim, Bihar, Odisha, Assam & Meghalaya, Nagaland Manipur Mizoram & Tripura, West Madhya Pradesh, Gujarat state, Telangana, Rayalaseema, Karnataka and Lakshadweep during next 48 hours; over West Uttar Pradesh, East Rajasthan, East Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand and Coastal Andhra Pradesh & Yanam during next 72 hours; over Uttarakhand and Andaman & Nicobar Islands during 23rd to 25th; over West Rajasthan on 24th; over Kerala & Mahe on 24th & 25th September 2023 and over East Uttar Pradesh, Madhya Maharashtra, Marathwada and Tamil Nadu Puducherry & Karaikal during next 4-5 days, keep the harvested produce at safer places, provide mechanical support to young fruit plants and vegetables to prevent them from lodging due to strong winds; postpone irrigation and fertilizer applications during gusty winds, avoid standing in the open or working in the fields and keep farm animals indoors during thunderstorm/lightning periods.

➤ **Sowing/harvesting**

- picking of matured cotton bolls; transplanting of *Samba* rice and sowing of green gram and black gram in Tamil Nadu
- harvesting of matured soybean and plucking of urad & moong in Madhya Pradesh
- harvesting of matured pearl millet, green gram and black gram in Rajasthan
- sowing of green gram, black gram and sesame in Assam
- harvesting of matured WRC/Jhum rice in Arunachal Pradesh
- harvesting of matured rice in Kerala
- nursery sowing of rice and sowing of groundnut & black gram in Andhra Pradesh
- sowings of rabi groundnut, castor, red gram, green gram, black gram and sorghum in Telangana
- sowing of niger, black gram, green gram, sesame and fodder crops in Odisha
- plucking of matured rajmash pods and harvesting of matured barley in Himachal Pradesh
- harvesting of matured rice, onion, maize and potato; sowing of toria and planting of garlic in Jammu & Kashmir
- picking of matured pods of black gram & green gram; sowing of niger, winter green gram and cowpea in Chhattisgarh

➤ **Management of Pest & Disease**

- In Madhya Pradesh, spray Profenophos + Cypermethrin @ 1.25 litre per hectare during clear weather on incidence of tobacco leaf eating caterpillar in soybean.
- In Rajasthan, spray Propiconazole 25 EC @ 2.5ml or Hexaconazole @ 5 EC @ 2ml per litre of water for the management of sheath blight and brown spot diseases in rice.
- In Telangana, spray Novaluron 5.25 % + Indoxacarb 4.5 % @ 330 ml per acre in clear weather to control Spodoptera litura in soybean.
- In Gangetic West Bengal, spray Propiconazole or Hexaconazole @ 1g/litre of water on a sunny day to control blast, sheath blight & brown spot disease in rice.
- In Bihar, spray Imidacloprid @ 0.3ml/litre of water or Triazophos 40 EC @ 1ml /litre of water during clear weather if infestation of yellow vein mosaic virus (YMV) disease are found in green gram and black gram.

Detailed Agromet Advisories

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

Realised Rainfall: Significant rainfall occurred in Alluri Sitharamraju, Anakapalli, Parvathipuram Manyam, Srikakulam, Visakhapatnam, Chittoor & Tirupati districts of Andhra Pradesh; in J. Bhupalpally, Kumaram Bheem, Mancherla & Mulugu districts of Telangana; in all the districts of Kerala; in Chengalpattu, Chennai, Dindigul, Kallakuruchi, Kanchipuram, Kanyakumari, Krishnagiri, Namakkal, Nilgiris, Puducherry, Pudukottai, Ranipet, Salem, Sivganga, Theni, Thirupathur, Thiruvallur, Thiruvannamalai, Vellore & Villupuram districts of Tamil Nadu and in Dakshina Kannada, Udipi, Uttara Kannada, Bangalore Rural, Bangalore Urban, Chikaballapur, Chikkamagaluru, Kodagu, Kolar & Shivamogga districts of Karnataka.

Advisories:

- As **rain/thundershowers** at **many/most** places very likely over Telangana during next 48 hours; over Coastal Andhra Pradesh during next 72 hours; over Kerala & Mahe and Coastal Karnataka during next 4-5 days with **heavy rainfall** at isolated places over Kerala & Mahe during next 24 hours; over Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and Tamil Nadu Puducherry & Karaikal during next 48 hours, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Drain out excess water from standing crop fields to avoid waterlogging.
- As **thunderstorm with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Kerala & Mahe during next 48 hours and **with lightning** at isolated places over Telangana, Rayalaseema, Karnataka and Lakshadweep during next 48 hours; over Coastal Andhra Pradesh & Yanam during next 72 hours; over Kerala & Mahe on 24th & 25th September 2023 and over Tamil Nadu Puducherry & Karaikal during next 5 days, keep the harvested produce at safer places, provide mechanical support to young fruit plants and vegetables to prevent them from lodging due to strong winds; postpone irrigation and fertilizer application during gusty winds, avoid standing in the open or working in the fields and keep farm animals indoors during thunderstorm/lightning periods.

Kerala

- In Thiruvananthapuram districts, undertake harvesting of matured rice as early as possible. Open basin of coconut palms to hold more rain water.
- In Allapuzha and Kottayam districts, ensure drainage in paddy fields and strengthen bunds due to anticipated heavy rainfall.
- In Ernakulam district, undertake nurse preparation for second Paddy (*Virippu*) crop.
- In Palakad district, blast disease in rice has been observed in some nurseries. Spray Isoprothiolane 40 EC @ 1.5ml per liter of water in clear weather.
- In Kozikode, Kannur and Kasargod districts, drain out water completely from rice fields to hasten grain hardening process in late sown crop.

Karnataka

- In South Interior Karnataka, intercultural operation recommended for conserving soil moisture and removal of weeds. To control *tikka disease* in groundnut, spray Carbendazim @ 1 g/litre of water. To control brown plant hopper in paddy, spray Imidacloprid 17.8 SL @ 0.5 ml or Thiamethoxam 25 WP @ 0.7 g in 1 litre of water in clear weather. In **Chamarajanagar** district, to manage Fusarium wilt disease in red gram, uproot and destroy all diseased plants, drench diseased plant's area, and base of adjacent plants with Carbendazim @ 1 g/litre of water to avoid further spread of the disease.
- In North Interior Karnataka, in late transplanted paddy, for the management of leaf blast disease, spray Carbendazim @ 1g/litre of water. In **Bidar** district, when green gram and black gram crop reach the physiological maturity stage, spray Paraquat @ 5ml/lit of water for easy pod harvesting. In **Ballari & Yadgiri** districts, for management of sterility mosaic disease in red gram, spray Dicofol @ 2.5 ml/litre of water and remove affected plants from field. For the control of flower drop in cotton, spray Planofix @ 0.25 ml per litre of water.
- In Coastal Karnataka, apply 18.75 kg nitrogen per hectare as a second top dressing in 50-55 days old paddy

crop. To manage weeds in coconut orchard, spray Glyphosate (Ammonium salt) 71 sg @ 4g per litre of water. Maintain sanitation in areca nut orchard by collecting and destroying dried inflorescence, pest and disease infected nuts.

Andhra Pradesh

- In Nellore district, undertake nursery sowing of rice, sowing of groundnut and black gram after recommended seed treatment.
- In Visakhapatnam district, continue transplanting of rice at a spacing of 20x15 cm and 2-3 seedlings per hill and 33 hills per square meter. Avoid transplanting of nursery above 45 days in BPT 5204 and above 55-60 days in RGL 2537.
- In East Godavari district, undertake plant protection measures during clear weather. Apply a booster dose of fertilizers after completing weeding and earthing up operations in the standing *kharif* crops.
- In Krishna district, apply 50 kg urea+ 25 kg MOP/acre in turmeric at vegetative stage.
- In Prakasam district, deficiency of boron may cause flower and boll drop in cotton, spray Borax@1-1.5g per litre of water.
- In Kurnool district, at present cotton crop is in flowering to 1st picking stage. Prevailing weather conditions are favourable for sucking pest incidence. To control aphids, jassids and whitefly; spray Acephate @ 300 g or Acetamiprid @ 40 g or Afidopyropen @ 400 ml or Dimethoate @400 ml or Thiamethoxam @ 40 g per acre.
- In Ananthpur district, undertake thinning and intercultural operation in red gram and castor crop to remove weeds and to conserve soil moisture. Also, open conservation furrows in red gram and castor crop.
- In Chittoor district, farmers who are taking up sowings in September are advised to take up alternate crops like horse gram, cowpea and field bean.
- In Srikakulam district, to control leaf webber in groundnut, spray Quinalphos @ 400 ml or Monocrotophos @ 320 ml or Chlorpyrifos @ 500 ml/ ac.

Telangana

- In Southern Telangana, utilizing optimum soil moisture undertake sowing of Yasangi green gram, black gram, groundnut, sunflower, red gram, maize and castor crops under irrigated situation. Also, undertake sowing of green gram, black gram, red gram, jowar, maize, groundnut, sunflower and castor depending upon the water available in areas where water is not sufficient to take the rice crop.
- In Khammam district, undertake sowing of *yasangi* groundnut and green gram.
- In Warangal rural, Jangoan, Jayashankar and Mahabubabd districts, if the rice crop is at the panicle initiation stage, apply 30 kg of urea and 20 kg of Murate of potash to improve quality of rice grains, increase grain weight.
- In Mahabubnagar and Nagarkurnool districts, provide drainage channels to drain out excess water from the crop fields.
- In Jogulamba gadwal district, undertake sowings of groundnut, castor, red gram, green gram, black gram and sorghum as *rabi* crops under irrigated conditions.
- In Mancheerial, Kumarbheem, Jagtiyal, Karimnagar, Peddapalli and Rajanna Sircilla districts, prevailing weather conditions are favourable for stem borer in paddy. At tillering stage, spray of Cartap hydrochloride 50 SP @ 2 g per litre of water and at boot leaf stage, spray Chlorantraniliprole@ 0.3 ml per litre of water.
- In Nizamabad and Kamareddi districts, incidence of *spodoptera litura* in soybean crop has been found in many places of the districts, spray Novaluron 5.25 % + Indoxacarb 4.5 % @ 330 ml per acre.

Tamil Nadu

- In Western Zone, undertake transplanting of *Samba* rice. Undertake harvesting of matured millets and groundnut. Prevailing cloudy weather with high relative humidity with drizzling is favorable for the sigatoka leaf spot in turmeric; hence monitor the crop and if required spray Chlorothalonil @ 2g per litre of water or Propiconazole @ 2ml per litre of water.
- In High Rainfall Zone, runner shoots of pepper may be protected from spreading on ground by coiling it

on supports. As rainfall is expected, harvested rice grains should be stored in dry place.

- In Cauvery Delta Zone, spread rice straw over nursery bed to avoid scattering of sown seeds due to expected rain. Considering expected rainfall, pick the matured cotton bolls before rain.
- In South Zone, prevailing weather is conducive for fall armyworm incidence in early maize crop, spray Chlorantraniliprole 18.5% SC @ 0.4ml/ litre of water or Flubendiamide 480 SC @ 0.4 ml/ litre of water in clear weather. Use only hand sprayer and direct spray towards whorl region.
- In High Altitude Hilly Zone, provide adequate drainage facility in ginger field.
- In North Western Zone, give foliar spray to turmeric at vegetative stage with turmeric booster @ 5 g / litre of water twice at 60 and 90 days after planting.
- In Southern Zone, undertake land preparation for sowing of rainfed maize. Undertake sowing of green gram and black gram.

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

Realised Rainfall: Significant rainfall occurred in Tirap, Upper Siang and Upper Subansari districts of Arunachal Pradesh; in Dibrugarh, Goalpara, Hailakandi, Jorhat, Kamrup(Metro), Karbi Anglong, Kokrajhar, Morigaon, Sibsagar and Tinsukia districts of Assam; in East Khasi Hills, West Khasi Hills, South West Khasi Hills and East Jaintia Hills districts of Meghalaya; in all districts of Manipur except Champhai and Mamit districts of Mizoram; Chandel, Imphal West and Senapati; in Dimapur, Mokokchung and Wokha districts of Nagaland and in all districts of Tripura except Khowai and West Tripura.

Advisories:

- As **rain/thundershowers** at **many/most** places very likely over the region during next 5 days with **heavy to very heavy rainfall** at isolated places over Arunachal Pradesh during next 24 hours; over Assam & Meghalaya during next 48 hours and **heavy rainfall** at isolated places over Nagaland Manipur Mizoram & Tripura during next 48 hours; over Arunachal Pradesh on 23rd & 24th; over Assam & Meghalaya on 24th September 2023, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Drain out excess water from standing crop fields to avoid waterlogging.
- As **thunderstorm with lightning** at isolated places over Assam & Meghalaya, Nagaland Manipur Mizoram & Tripura during next 48 hours, keep the harvested produce at safer places, provide mechanical support to young fruit plants and vegetables to prevent them from lodging due to strong winds; postpone irrigation and fertilizer application during gusty winds, avoid standing in the open or working in the fields and keep farm animals indoors during thunderstorm/lightning periods.

Arunachal Pradesh

- Considering forecast of mostly moderate rain and warning of heavy rain in some places, avoid fresh sowing of maize seeds in coming week. Cover the already sown field with local mulching materials to avert impact of heavy rain. Maintain proper drainage in the field of rice and other standing crop fields and orchards to avoid water stagnation. Postpone use of fertilizers and insecticides in coming week.

Assam

- In Hill Zone, due to rain in past week, drain out excess water from the nursery bed or newly transplanted vegetables. Continue sowing of green gram and black gram. As the sesame crop is in juvenile to pre-reproductive stage (first bud to 50% open flower) in which the crop is very sensitive to weed competition, advice for weeding as and when necessary. Drainage is also very important as rainfall occurred during last week.
- In Lower Brahmaputra Valley Zone, continue sowing of radish, cauliflower, green and black gram. Continue land preparation/ sowing of *rabi* maize. Due to favourable weather condition, there is chance of stem borer and swarming caterpillar in the *Sali* rice field; to control, apply Fipronil 5SC @ 1.5 to 2ml/litre of water in the clear weather condition only.
- In Upper Brahmaputra Valley Zone, postpone transplanting of early varieties of cauliflower due to rainfall forecast in the coming 5 days. As moderate rainfall is predicted in the coming 5 days, repair the bunds in the paddy fields to conserve rain water and maintain standing water of 5±2 cm depth in rice field during panicle

initiation stage. It is advised to postpone top-dressing of urea fertilizer in standing rice crop.

- In Barak Valley Zone, undertake weeding and maintain height of the bund to conserve requisite water within rice field. Complete sowing of black gram. Due high humidity and light rainfall, infestation of stem borer and leaf folder may be seen during the tillering stage of *Sali* rice. To control the pest, spray Flubendiamide @ 2.4g/bigha (39.35% SC @0.1%) during fair weather.
- In Central Brahmaputra Valley Zone, complete sowing of black/green gram at the earliest. Undertake sowing of *rabi* maize. Continue nursery sowing/transplanting of broccoli, cabbage, knol khol, cauliflower and radish. Present Weather condition is favourable for severe infestation of leaf folder and Stem borer in the *Sali* rice crops during tillering stage. To control leaf folder infestation, spray Quinalphos 25 EC @ 2ml/litre of water or Chlorpyrifos 20EC @ 1.5 ml per litre of water. Stem borer infestation may also occur which may be controlled by draining out of excess water or applying Chlorantraniliprole 0.4G @ 10kg/ha or Flubendiamide 20% SG @125g/ha.
- In North Bank Plain Zone, complete sowing of black/green gram and sesamum. Present weather condition is favourable for severe infestation of rice hispa in *Sali* rice during tillering stage along with other insects like leaf folder, case worm, etc., spray Chlorpyrifos 20EC or Monocrotophos 40EC @ 1.5ml per litre of water in clear weather.

Meghalaya

- In Meghalaya, after transplanting of *Sali/Kharif* rice (lowland), maintain a thin layer of 2-3 cm stagnant water in the field. Continue sowing of cole crops (cabbage, cauliflower, broccoli, lai patta, kholkhol). Continue harvesting of matured cucurbits (pumpkin/bottle gourd/ash gourd/squash/cucumber/bitter gourd), brinjal and chilli. During maximum tillering stage of *Sali/Kharif* Rice (Lowland), spray bioagent, *Pseudomonas Trichoderma* @ 4g/litre of water at 30 days interval against blast disease and when blast is severe, spray Tebuconazole @ 1ml/10litre of water when weather is clear.

Manipur, Mizoram, Tripura and Nagaland

- In Manipur, undertake land preparation for planting of early potato crop after the rains in foothills and upland area. Spray Dithane M-45 @ 2ml/ litre water to control tikka disease in groundnut during pod development stage. Spray Hexaconazole 5% EC @ 2ml/ litre water against rust in soybean during fruiting stage. During panicle initiation to flowering stage of rice, spray Copper Hydroxide 53.8 % DF @ 3g/ litre against bacterial leaf blight disease.
- In Nagaland, as there is possibility of rain in coming days, postpone sowing of winter crops in the nursery. In the prevailing weather, provide mechanical support to banana plants, make necessary arrangement to drain out excess water from the orchards. Maintain proper drainage facility in the field of ginger to avoid soft rot disease.
- In Mizoram, undertake harvesting of maize. Maintain drainage channel to remove excess water from the base of Upland rice as the crop reaches its flowering stage, which may cause crop lodging. To control infestation of Gundhi bug, use Ethofenprox10EC @ 1 ml as foliar spray mixed with 1 litre of water or Malathion 5D @ 10 kg/acre can be dusted uniformly during morning hours.
- In Tripura, *Aman* rice is at tillering stage. Blast disease may occur due to cloudy and humid weather. To manage attack, spray Tricyclazole @ 0.6 g per litre water. For control of rodents, bunds should be kept clean.

Animal Husbandry

- In Assam, during monsoon season the calves should be vaccinated against Black Quarter (BQ) disease. Pregnant cows should be fed with mineral mixture along with feed to increase production of milk.

Fishery

- In Arunachal Pradesh, netting around fish ponds recommended to prevent fish from escaping from pond in case of heavy rain.

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

Realised Rainfall: Significant rainfall occurred in all districts of Andaman and Nicobar Islands; in all districts of Gangetic West Bengal except Birbhum, Hoogly, Murshidabad and Nadia; in East Sikkim district of Sub-Himalayan West Bengal & Sikkim; in all districts of Odisha; in Bokaro, Dhanbad, East Singhbhum, Garhwa, Gumla, Hazaribagh, Khunti, Latehar, Palamau, Ramgarh, Ranchi, Saraikela, Simdega and West Singhbhum districts of Jharkhand and in Aurangabad and Bhabua districts of Bihar. Weather remained mainly dry over rest of the region.

Advisories:

- As **rain/thundershowers** at **many/most** places very likely over Odisha during next 48 hours; over Bihar and Jharkhand during next 72 hours; over West Bengal & Sikkim, Andaman & Nicobar Islands during next 4-5 days with **heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Bihar during next 24 hours; **heavy to very heavy rainfall** at isolated places over Jharkhand during next 24 hours; over Sub-Himalayan West Bengal & Sikkim during next 48 hours; over Bihar on 23rd and over Andaman & Nicobar Islands on 26th and **heavy rainfall** at isolated places over Gangetic West Bengal and Odisha during next 24 hours; over Sub-Himalayan West Bengal & Sikkim and Bihar on 24th; over Andaman & Nicobar Islands on 24th & 25th September 2023, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Drain out excess water from standing crop fields to avoid waterlogging.
- As **thunderstorm with lightning** at isolated places over Sub Himalayan West Bengal & Sikkim, Bihar and Odisha during next 48 hours; over Jharkhand during next 72 hours; over Andaman & Nicobar Islands during 23rd to 25th September 2023, keep the harvested produce at safer places, provide mechanical support to young fruit plants and vegetables to prevent them from lodging due to strong winds; postpone irrigation and fertilizer application during gusty winds, avoid standing in the open or working in the fields and keep farm animals indoors during thunderstorm/lightning periods.

Bihar

- In North East Alluvial Zone, monitor for *gundhi* bug in early sown rice crop field; to control, apply Folidol powder @ 10-15 kg/ha in the early morning or late evening during clear weather. In **Khagaria** district, if the attack of fall army worm is seen in *kharif* maize crop, spray Lambda-cyhalothrin @ 1ml per litre of water only when the weather remains clear. In **Purnia** district, carry out harvesting of jute.
- In North West Alluvial Plain Zone, apply 30 kg Nitrogen/hectare in paddy crop during clear weather. Monitor for diamond back moth (DBM) in cauliflower; to control, spray Spinosad 1ml/4 litres of water during clear weather. In **Begusarai** district, continue sowing of pigeon pea crop at optimum soil moisture conditions. Monitor for yellow vein mosaic virus (YMV) disease in green gram and black gram; if infestation is found, spray Imidacloprid @ 0.3ml/litre of water or Triazophos 40 EC @ 1ml/litre of water during clear weather.
- In South Bihar Alluvial Zone, undertake sowing of early pea and transplanting of cabbage & cauliflower. Carry out land preparation for sowing early mustard. In present weather conditions, termites may damage crops and vegetables; to control, spray Chlorpyrifos 20 EC @ 4ml/litre of water during clear weather. In **Sheikhpura** district, undertake sowing of vegetables like spinach, carrot, pointed gourd, tomato, chilli, cauliflower and cabbage. In **Aurangabad** district, to control fruit and shoot borer infestation in okra, spray Malathion 50 EC @ 1ml/litre of water during clear weather.

Jharkhand

- In South Eastern Plateau Zone, current weather is favorable for outbreak of stem borer in paddy; to prevent, spray Quinalphos 25 EC @ 1ml per litre of water during clear weather. Weather is favorable for leaf blight in maize crop; spray Tebuconazole 25 EC or Propiconazole 25 EC @ 1ml per litre of water during clear weather.
- In Central & North Eastern Plateau Zone, monitor for infestation of brown plant hopper in rice; to control,

spray Imidacloprid @ 0.3ml per litre of water under clear weather conditions. Undertake nursery preparation of improved cabbage and cauliflower varieties.

- In Western Plateau Zone, to control leaf blight in maize, spray Azoxystrobin + Mancozeb @ 300g/acre during clear weather. In **Ramgarh** district, bacterial leaf blight disease may attack vegetables like tomato, and okra; to control, spray mixture of Streptocycline (1g/5 litres of water) and Blue copper (2g/litre of water) during clear weather.

Odisha

- In Western Undulating Zone, if leaf blast is observed in rice field, spray Tebuconazole 50% + Trifloxystrobin 25% WG @ 2g/5 litres of water or Isoprothiolane 40 EC @ 1.5ml per litre of water during clear sky; repeat the spray at 7-10 days interval. To reduce leaf reddening in waterlogged areas in cotton field, spray 10g Magnesium sulphate mixed with 10g Urea in one litre of water.
- In East and South Eastern Coastal Plain Zone, if paddy crop is affected by submergence, don't apply Nitrogenous fertilizer immediately; wait for new tillers to come; maintain about 5-10 cm standing water during panicle initiation stage. Drain out excess water from the non-paddy field and carry out hand weeding. There is a chance of bacterial leaf blight infestation in paddy; to control, spray Copper Hydroxide 53.8% DF @ 600g/acre or 200g Plantomycine along with Copper Oxy Chloride 50% WP @ 600g/acre. To manage stem rot disease in groundnut, spray Validamycin 3% L @ 400ml/acre or Captan 70 %+ Hexaconazole 5% @ 300g/acre during clear sky. There are chances of wilt disease in brinjal and chilli crops; to manage, uproot and destroy affected plants; drench the root zone of the plant with 200ml of Tebuconazole mixed with 20g of Streptocycline per acre.
- In West Central Table Land Zone, continue sowing of vegetable seeds or transplanting of seedlings. Apply Neem based insecticides in vegetable fields to control pests and diseases.
- In North Eastern Ghat Zone, to control blast disease in paddy, withhold application of Nitrogen fertilizers and pesticides; to manage sheath rot disease, spray Tebuconazole 50% + Trifloxystrobin 25 % WG @ 80g/acre or Propiconazole 25% EC @ 200ml/acre during clear weather. To control infestation of fall army worm in maize, spray Emamectin Benzoate 5 % S.G @ 80g/acre during clear weather.
- In North Central Plateau Zone, harvest the matured maize cobs and store in a safer place. Harvest the tomato fruit if it is seen reddish in color; to control fruit borer, spray Bacillus thuringiensis @ 2g/litre or Quinalphos 25% EC @ 1ml/litre of water during clear weather. To control pod borers in green gram, apply Emamectin benzoate 5% SG @ 80-90g/acre during clear sky.
- In North Western Plateau Zone, complete the sowing of niger crop at earliest; maintain seed rate @ 4 kg for one acre; maintain row to row distance @ 30 cm. Due to cloudy weather and humidity, there may be bacterial leaf blight in paddy; to manage, apply Streptocycline @ 1g + Copper oxychloride @ 30g in 10 litres of water during clear sky. To manage the capsule borer in sesame crop, apply Profenophos @ 2ml/litre of water.
- In Mid Central Table Land Zone, to control blast disease in rice crop, drain out excess water from the paddy field; remove the weeds and keep the field clean. Harvest the maize crop if cob-sheath turns yellowish, grains become hard and they do not contain more than 30% moisture. There are chances of red rot disease infection in sugarcane crop; to manage, drain out excess water from field and spray Carbendazim 12%+ Mancozeb 63 % WP @ 400g/acre or Metalaxyl 8 % + Mancozeb 64 % WP @ 400g/acre by mixing it in 200 litres of water.
- In South Eastern Ghat Zone, apply 35 kg Urea/acre for high yielding rice varieties and 42 kg of Urea/acre for hybrids at tillering stage; current weather may favour blast disease in rice; to control, spray Tebuconazole 50% + Trifloxystrobin 25% WG @ 0.4g/litre of water or Tricyclazole 45% + Hexaconazole 10% WG @ 1g/litre of water. Fall army worm may be observed in maize field; to control, spray Emamectin benzoate 5% SG @ 0.4g/litre of water or Chlorantraniliprole 18.5% SC @ 0.4ml/litre of water during clear weather.
- In North Eastern Coastal Plain Zone, infestation of leaf folder and yellow stem borer in rice crop may increase after rain; to control, apply Cartap hydrochloride 50 SP@ 400g/acre or Fipronil 5 SC @ 400ml/acre. For leaf blight, leaf spot, vine rot and downy mildew infestation in pointed gourd and other cucurbits, apply

Metalaxyl + Mancozeb @ 400g or Chlorothalonil @ 300g or Azoxystrobin @ 160ml in 200 litres of water per acre. To trap the vector (whitefly) of papaya leaf curl virus, drain out excess water from the root zone of plant and install yellow sticky traps.

- In Eastern Ghat High Land Zone, utilizing recent rainfall, take up short duration low water requiring crops like black gram, green gram, sesame, fodder crops, etc. in fallow uplands. Root and stalk rot may be observed in maize; to control, spray Validamycin 3% L @ 2ml/litre of water or Carbendazim 50% WP @ 1.5g/litre of water during clear weather. Use polythene cover above the vegetables nursery to avoid the seedlings from rainfall. Continue weeding and apply mulching in ginger and turmeric crops.

West Bengal & Sikkim

Sub-Himalayan West Bengal

- In Hill Zone, maintain adequate drainage channels in the field. Postpone pesticide spraying operations during rainy days. In case of blast disease infestation in kharif paddy, avoid top dressing of Nitrogenous fertilizer; apply Potassium @ 5-6 kg per bigha as top dressing; to control infestation, spray Tricyclazole 0.5g or Isoprothiolane @ 1ml/litre of water during clear sky. To avoid the attack of red ant in cardamom plant, apply a mixture of water, cow urine and Neem oil (8 litre + 2 litre + 50 ml) @ 100ml/plant at weekly interval.
- In Old Alluvial Zone, rice crop is at maximum tillering stage in field; to control *khaira* disease in rice (caused due to Zn deficiency), spray Chelated Zinc @ 0.5-1g/litre of water during clear sky. To control postemergence weeds in green gram crop, spray Imazethapyr @ 200ml/acre. In **Maldah** district, present weather conditions may cause blight and sucking pest infestations in vegetables; drain out excess water from field as it may cause root rot; spray Mancozeb 75% WP @ 2g/litre for blight and Imidacloprid 17.8% SL @ 0.25ml/litre for sucking pests. Postpone all pesticide applications till the cessation of current spells of rainfall.
- In Terai Zone, rice crop is at maximum tillering stage in field; to control the stem borer or sucking pest in rice, spray Nimastra solution. To control fruit and shoot borer in okra, remove and burn all the infected plant parts; install light and Pheromone trap @ 1-2/bigha; spray Bacillus thuringiensis 5% W.P @ 1.5g/litre of water. In **Jalpaiguri** district, weather condition is favourable for leaf folder in paddy field; for effective control of pest, spray Quinalphos 25 EC @ 1ml per litre of water during fair weather situation. Postpone all pesticide spraying operations till the cessation of current spells of rainfall.

Gangetic West Bengal

- In Coastal Saline Zone, prevent water stagnation in rice and vegetable fields. *Aman* paddy (wet seeded) is at tillering/peak tillering stage; to control sheath blight, apply Carbendazim 50 WP @ 1g per litre of water during sunny days.
- In New Alluvial Zone, rice crop is in vegetative stage; to control leaf folder or stem borer, spray Cartap Hydrochloride 50 SP @ 2g/litre or Chlorpyrifos 20 EC @ 2ml/litre of water. Utilizing rain water of last few days, continue retting of jute; add Crijaf-Sona powder to reduce the retting time and improve the quality of jute fiber. In **24 Pargana (N)** district, to protect brinjal crop from fruit and shoot borer, apply Emamectin Benzoate @ 5g/10 litres of water. In **Murshidabad** district, prevailing weather is favourable for blast, sheath blight, brown spot disease in rice; to control, spray Propiconazole or Hexaconazole @ 1g/litre of water on a sunny day.
- In Laterite and Red Soil Zone, to prevent brown plant hopper in the rice field, spray Carbaryl 50% @ 2.5g per litre of water. To control tikka disease in groundnut, spray Mancozeb + Metalaxyl @ 2.5g/litre of water on a sunny day. In **Birbhum** district, apply Boron 20 @ 2g/litre of water in the rice field as micro-nutrient.

Andaman & Nicobar Islands

- Drain out excess water from the paddy field and maintain opening of bunds at 15 cm height. To protect vegetable crops grown in low lying areas, remove the excess water. Carry out weeding in vegetable field. Collect the fallen nuts & leaves of coconut and remove them from the field.

Animal Husbandry

- In Andaman and Nicobar Island, keep day-old chicks under Electric bulb or lamp as a source of heat up to 3

weeks of age to avoid mortality.

- In West Bengal, de-worm the adult cows with Bolus Albendazole @ 1.5g per 150 kg body weight; 7-10 days old calves should be de-wormed with Piperazine Adipate powder @ 10mg per kg body weight. Carry out mass vaccination to control PPR disease in goats. Vaccinate livestock against foot and mouth disease (FMD), black quarter disease (BQ).
- In Odisha, vaccinated animals against FMD, Haemorrhagic Septicaemia, Black Quarter, Enterotoxaemia, etc.; provide sufficient food and clean drinking water to the animals. Keep the sheds clean & dry to protect animals from diseases and insects.
- In Bihar, provide mineral mixture @ 50-60g per day to animals and keep them under shade; floor should be dry and clean. If green fodder is not available for animals, they should be given Vitamin A injections.

Fishery

- In Andaman and Nicobar Island, harvest the weed fishes in brooding ponds that might have entered through flooding of rain water.
- In Odisha, bamboo or nylon mesh screens should be erected at the inlets and outlets to prevent loss and entry of unwanted fish. If “EUS” infection is observed in fish, apply “Cifax” @ 400 ml mixed with 400 litres of water in one-acre pond.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Realised rainfall: Significant rainfall occurred in all the districts of Konkan and Goa; in all districts of Madhya Maharashtra except Ahmednagar, Pune, Sangli, Satara and Solapur; in all the districts of Vidarbha except Buldhana, Washim and Yeotmal and in all districts of Gujarat except Bhavnagar and Botad. Weather remained dry over the rest of the region.

Advisories:

- As **rain/thundershowers** at **many/most** places very likely over Maharashtra during next 4-5 days with **heavy to very heavy rainfall** at isolated places over Vidarbha and Konkan & Goa during next 24 hours and **heavy rainfall** at isolated places over Marathwada during next 24 hours; over Gujarat Region during next 48 hours; over Madhya Maharashtra on 22nd, 23rd & 26th and over Konkan & Goa on 26th September 2023, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Drain out excess water from standing crop fields to avoid waterlogging.
- As **thunderstorm with lightning** at isolated places over Gujarat state during next 48 hours; over Vidarbha during next 72 hours; over Madhya Maharashtra and Marathwada during next 4-5 days, keep the harvested produce at safer places, provide mechanical support to young fruit plants and vegetables to prevent them from lodging due to strong winds; postpone irrigation and fertilizer application during gusty winds, avoid standing in the open or working in the fields and keep farm animals indoors during thunderstorm/lightning periods.

Maharashtra

- In **Konkan**, maintain 5-10 cm water in rice fields (panicle initiation/flowering stage). As moderate to heavy rainfall is expected at isolated places in Raigad and Ratnagiri districts, make arrangement to drain out excess water from standing crops, orchards and vegetables, postpone fertilizer and pesticides/ insecticides application. Due to intermittent rainfall and cloudy weather during past few days, there is possibility of incidence of blast in finger millet, to control spray Tricyclazole 75% WP @ 10 g per 10 litres of water during clear weather.
- In **Madhya Maharashtra**, as light to moderate rainfall at few places/many places, with heavy rainfall at isolated places is expected in Ghat areas of Pune district, provide adequate drainage facilities in *kharif* crops, vegetables and orchards. Maintain 5-10 cm water in rice fields. In Solapur district, continue matured pod picking of green gram and black gram and keep at safer places, apply light irrigation to soybean at pod filling stage, if crop experiences moisture stress, continue sowing of *rabi* sorghum and safflower, undertake sowing of rainfed chickpea. In Nandurbar district, due to continuous rain, dropping of flowers and squares observed in cotton, spray Naphthalene Acetic Acid (Planofix) @ 100 ml mixed with 500 litres of water per ha during

clear weather. If incidence of viral diseases like ring spot or mosaic and aphids is observed on papaya, spray Dimethoate 10 ml or Neem ark 10 ml in 10 litres of water at an interval of 15 days during clear weather. Continue harvesting of green gram, black gram and pearl millet during clear weather and keep the harvested produce at safer places. High humidity and cloudy weather is favourable for occurrence of rust in soybean, for control spray Propiconazole or Hexaconazole 10 ml per 10 litres of water during clear weather. In Sangli district and central and east parts of Kolhapur and Satara districts, apply protective irrigation if water stress conditions are observed in maize and pearl millet, continue land preparation for sowing of *rabi* sorghum and chickpea. High humid condition is favourable for the occurrence of tikka and rust diseases in groundnut, to control spray Flubendiamide 3.5% + Hexaconazole 5% W.G. 25 g per 10 litre of water during clear weather.

- In **Marathwada**, keep the harvested green gram, black gram and groundnut at safer places. Due to last week cloudy & humid weather square dropping is observed in cotton, for its management spray NAA (Naphthalic Acetic Acid) @ 2 to 2.5 ml per 10 litre of water during clear weather. For management of leaf spot, rhizoctonia aerial blight, pod blight and other fungal diseases in soybean, spray Tebuconazole 10% + Sulphur 65% @ 500 g or Tebuconazole 25.9% @ 250 ml or Pyraclostrobin 20% @ 150 to 200 g or Pyraclostrobin 13.3% + Epoxiconazole 5% @ 300 ml per acre during clear weather. For management of fall armyworm in *kharif* sorghum, spray Emamectine Benzoate 5% @ 4 g or Spinetoram 11.7 SC @ 4 ml per 10 litre of water during clear weather. For management of rhizome fly in turmeric, spray Quinalphos 25 % @ 20 ml or Diamethoate 30 % @ 15 ml per 10 litre of water during clear weather with an interval of 15 days.
- In **Vidarbha**, in view of realized rainfall and expected light to moderate rainfall at many / most places during next 3 days, with heavy rainfall at isolated places during next 48 hours, keep the harvested green gram, black gram, fruits and vegetables at safer places, make arrangement to remove excess water from *kharif* crops like maize, cotton, pigeon pea, soybean, vegetables and orchards. Remove excess water from the fields of cotton, pigeon pea, soybean, turmeric, vegetables and orchards, postpone intercultural operations, fertilizers and pesticides application in *kharif* crops. In cotton, spray 2% urea at flowering stage and 2% DAP at boll development stage after current spell of rain. Due to recent continuous rain or cloudy weather and water logging, para wilt symptoms observed in cotton, for control undertake drenching of Copperoxychloride 50 WP @ 25 g + urea @ 100 g in 10 liters of water at symptomatic plants after current spell of rain. Wilting/blight symptoms are observed in *kharif* pigeon pea, for control undertake drenching with copper oxychloride 50% WP@ 25 g or captan 75% WP @ 20 g in 10 liters of water after current spell of rain. In soybean crop incidence of pod blight is observed, for control spray Tebuconazole 250 EC @ 1.25 ml per litre of water after current spell of rain.

Gujarat

- In Middle Gujarat, to control blast disease in rice, apply 2 to 3 sprays of Tricyclazole 75 WP @ 6g or Iprobenfos 48 EC @ 10ml in 10 litres of water. Carry out interculturing, weeding and earthing up operations at vapsa condition in newly planted crops. To control thrips in chilli, spray neem seed oil @ 30 to 50ml in 10 litres of water.
- In Saurashtra & Kutch, complete threshing of harvested groundnut, black gram, pearl millet and sesame crops. To control whitefly in brinjal, spray 500ml of 5 % neem seed extract or 50ml neem oil with Difenthiuron 50 WP @ 16g in 10 litres of water.
- In North Gujarat, to control leaf spot disease in groundnut, spray Tebuconazole 18.3 % SC @ 10ml in 10 litres of water. To control thrips in vegetable crops, spray Profenofos @ 20ml with 500ml of 5 % neem seed extract or neem seed oil @ 50ml in 10 litres of water.
- In South Gujarat, considering the forecast of rain during next few days, postpone application of pesticides and fertilizers in fields. Drain out stagnant water from the field for management of whitefly in sugarcane crop. Inter-culturing and hand weeding may be carried out in vapsa condition. To control sucking pest in cotton, spray Beauveria Bassiana @ 40g or Thiamethoxam 25 WG 0.01 % @ 4g in 10 litres of water during clear weather.

Animal Husbandry

- In Gujarat, spray phenyl in the animal shed to avoid flies and mosquitos. Spray Deltamethrin or Amitraz 2 ml/litre of water for the control of ticks. Provide adequate quantity of balanced feed to cows considering the milk production and maintenance.

CENTRAL INDIA [M.P., CHHATTISGARH]

Realised Rainfall: Significant rainfall occurred in all districts of Madhya Pradesh except Damoh, Asoknagar, Bhind, Datia, Morena, Sheopur Kalani and Shivpuri and in all districts of Chhattisgarh except Bastar and Dantewara.

Advisories:

- As **rain/thundershowers** at **many/most** places very likely over West Madhya Pradesh during next 72 hours; over Chhattisgarh and East Madhya Pradesh during next 4-5 days with **heavy to very heavy rainfall** at isolated places over Madhya Pradesh during next 24 hours and **heavy rainfall** at isolated places over Chhattisgarh during next 24 hours; over West Madhya Pradesh on 23rd and over East Madhya Pradesh on 23rd & 24th September 2023, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Drain out excess water from standing crop fields to avoid waterlogging.
- As **thunderstorm with lightning** at isolated places over West Madhya Pradesh during next 48 hours; over East Madhya Pradesh and Chhattisgarh during next 72 hours, keep the harvested produce at safer places, provide mechanical support to young fruit plants and vegetables to prevent them from lodging due to strong winds; postpone irrigation and fertilizer application during gusty winds, avoid standing in the open or working in the fields and keep farm animals indoors during thunderstorm/lightning periods.

Madhya Pradesh

- In Satpura Plateau Zone, in view of moderate to heavy rain forecast, do not sow early peas and potato till weather is clear. Make proper drainage arrangements in maize, soybean & okra field. In some areas, due to excess moisture in maize crop, infection of sheath blight has been reported, to prevent apply Carbendazim@ 1.5 g/litre or Propiconazole@ 1ml/litre of water.
- In Malwa Plateau Zone, to control fall army worm in maize, spray Emamectin benzoate @ 10ml/pump in clear weather. To control sucking pest in Bt cotton, spray Thiomethoxam 5.0-7.5 g/pump (0.35–0.5 g/l); to control Fusarium wilt, drench with Tebuconazole @ 1ml/litre at root zone. For monitoring borer insect in tomato, use pheromone trap @ 3-4/acre. If insect population is above ETL, spray Spinosad@ 1 ml/4 litre of water against fruit borer and diamond back moth in clear weather.
- In Kymore Plateau and Satpura Hill Zone, prepare drainage channels to drain out excess water from soybean field. For control of stem borer in paddy, spray Chlorpyrifos @ 2 ml per litre of water or Cartap Hydrochloride 50 SP @300 g per acre in 150 litres of water in clear weather. To control attack of white fly and stem borer simultaneously in soybean, spray Chlorantraniliprole 09.30 % + Lambda-cyhalothrin 04.60 % ZC @200 ml/ha or Thiamethoxam + Lambda Cyhalothrin@125 ml/ha or Beta cyfluthrin +Imidacloprid @ 350 ml/ha in clear weather.
- In Jhabua Hills Zone, to control shoot & fruit borer in tomato, brinjal, chilli & okra, spray Emamectin benzoate @ 10ml/pump. To control tobacco leaf eating caterpillar, semi looper & girdle beetle in soybean, spray Lambda cyhalothrin 4.9 CS @ 300 ml or Emamectin benzoate 1.9 EC @ 425 ml/ha in clear weather.
- In Nimar Valley Zone, make necessary drainage arrangement in order to maintain the quality of the soybean produces at maturity; undertake harvesting of early maturing soybean crops & keep harvested produce at safer place.
- In Gird Zone, make proper arrangements for draining out excess water from pearl millet, green gram, black gram, sesame and vegetables. There may be possibility of pod borer in green gram & black gram, keep constant vigil and to control, spray Spinosad@ 175 ml per hectare in 500 to 600 litres of water. Undertake planting of mango, guava, lemon etc. in the prepared pits.
- In Vindhya Plateau Zone, make proper drainage arrangements in standing crop fields. In Damoh district,

undertake harvesting of *urad*, *moong* in view of possibility of moderate rain. On incidence of tobacco leaf eating caterpillar in soybean, spray Profenophos + Cypermethrin @1.25 litre per hectare in clear weather.

- In Bundelkhand Zone, undertake harvesting matured *urad* & *moong* and keep harvested produce at safer place. In Chhatarpur district, there is a possibility of outbreak of leaf spot and anthracnose on soybean crop, spray Tebuconazole sulfur @2 g / litre of water or Thiophanate methyl or Carbendazim @1 g / litre water in clear weather.

Animal Husbandry

- Cattle should be kept in dry place and provide clean and fresh water two times in a day. Vaccinate cattle for control of FMD and HS disease.

Chhattisgarh

- In North Hill Zone, in Korea district, in view of hot and humid weather condition blast may occur in rice crop, keep watch over the crop and if the incidence is more spray Tricyclazole @6 gm per 10 litre of water Undertake sowing of niger, winter green gram and cowpea in clear weather. In pigeon pea, undertake inter-cultural operation to control weeds.
- In Bastar Plateau Zone, in view rainfall in coming week, delay harvesting of matured
- vegetable crops and harvested vegetables should be store in safe and dry place. Apply 25% potash top dressing to increase rice grain quantity and quality in clear weather. There may be a chance of leaf folder infestation in early transplanted/direct sown rice crop due to cloudy weather; to control, spray Chlorantraniliprole 18.5% SC @ 3 ml/10 litres of water.
- In Chhattisgarh Plain Zone, in view of light to moderate rainfall in coming days drain out excess water from paddy, black gram, green gram and soybean field. In paddy field, to control bacterial leaf blight disease drain out excess water from the field; apply 25 Kg Potash per hectare after 3-4 days. First picking of matured pods should be done in black gram and green gram in clear weather. If leaf caterpillar and girdle beetle is observed in soybean crop, apply Profenophos 50 EC @ 1.25 litre/ha in clear weather.

Animal Husbandry

- In Chhattisgarh, cattle shed should be kept well protected from flies to maintain milk production and prevention from diseases.

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

Realised Rainfall: Significant rainfall occurred in all the district of Himachal Pradesh except Kinnaur, Lahaul & Spiti and Shimla; in Jammu, Kathua, Rajouri, Reasi, Samba and Udhampur districts of Jammu & Kashmir and in all the districts of Uttarakhand except Chamoli, Champawat, Rudraprayag and Udham Singh Nagar; in Chandigarh, Ambala, Kaithal, Kurukshetra, Sirsa & Yamunanagar districts of Haryana; in East Delhi and North East Delhi districts of Delhi; in Amritsar, Fatehgarh Sahib, Faridkot, Ferozepur, Gurdaspur, Hoshiarpur, Pathankot, Kapurthala, Jalandhar, Ludhiana, Mansa, Muktesar, Sangrur, Patiala & Taran Taran districts of Punjab; in all the districts of Rajasthan except Alwar, Baran, Bharatpur, Dausa, Jhunjhunu, Karauli, Hanumangarh and Jaisalmer; in Ambedkar Nagar, Ayodhya, Balrampur, Barabanki, Chitrakoot, Gonda, Kheri, Maharajganj, Mau, Pratapgarh, Sidharthnagar and Sonbhadra districts of East Uttar Pradesh and in Badaun, Bareilly, Bijnor, Kasganj, Lalitpur, Meerut, Moradabad, Muzzaffarnagar, Pilibhit, Rampur, and Saharanpur districts of West Uttar Pradesh. Weather remained dry over rest of the region.

Advisories:

- As **rain/thundershowers** at **many/most** places very likely over East Uttar Pradesh during next 24 hours with **heavy rainfall** at isolated places over Jammu division and south Uttar Pradesh during next 24 hours; over East Rajasthan during next 48 hours, postpone irrigation, inter-cultural operations and application of plant protection measures & fertilizers to the standing crops. Drain out excess water from standing crop fields to avoid waterlogging.
- As **thunderstorm with lightning** at isolated places over West Uttar Pradesh, East Rajasthan during next 72 hours; over Uttarakhand during 23rd to 25th; over West Rajasthan on 24th and over East Uttar Pradesh during

next 4-5 days, keep the harvested produce at safer places, provide mechanical support to young fruit plants and vegetables to prevent them from lodging due to strong winds; postpone irrigation and fertilizer application during gusty winds, avoid standing in the open or working in the fields and keep farm animals indoors during thunderstorm/lightning periods.

Himachal Pradesh

- In High Hill Temperate Dry Zone, undertake plucking of matured rajmash pods and harvesting of matured barley. Undertake harvesting of curds of cauliflower as soon as the curds attain maturity and compactness.
- In Mid Hills Sub Humid Zone, undertake field preparation for planting of garlic. Prepare nursery beds for sowing of cole crops. Fall army worm is a serious pest of maize now days. For the monitoring of this pest, install pheromone traps @ 4 traps per acre. Destroy eggs and larvae by crushing them. If the infection is more than 10 percent, then spray neem seed kernel extracts @ 5ml/litre or Coragen (Chlorantraniliprole) 18.5 SC @ 0.4 ml/litre in early morning during clear weather.
- In High Hills Sub Temperate Wet Zone, carry out hoeing and weeding in cauliflower and broccoli. Harvest mature cucurbitaceous crops in the morning and evening and after harvesting, keep them in shade. Undertake sowing of spinach and direct sowing of crops like radish, turnip, coriander, beetroot, and *methi*. Undertake field preparation for planting of garlic. Carry out hoeing and weeding in maize and kidney beans.

UTs of Jammu & Kashmir and Ladakh

- In Sub Tropical Zone, apply irrigation to rice as per requirement. Undertake harvesting of matured pulses during clear weather. Undertake sowing of toria at optimum soil moisture condition. Prepare beds for direct sowing of fenugreek, spinach, beetroot, coriander, radish and carrot. To control, fall army worm in maize, apply Chlorantraniliprole 18.5 SC (Coragen) @ 7.5ml/kanal or Thiomethoxam @ 0.4ml/litre of water in whorl in early morning. The treatment will control attack of stem borer too.
- In Cold Arid Zone, undertake harvesting of onion and potato. Undertake planting of garlic.
- In Intermediate Zone, stop irrigation and drain out water from those rice fields where the crop is near maturity stage. Cover the maize cobs with tassel bag or paper bag to avoid parrot attack. To avoid bird attack, install bird scaring tape around the field. Undertake sowing of toria. Undertake sowing of root crops like carrot and radish on ridges during dry weather conditions. Apply irrigation to vegetables as per the requirement.
- In Valley Temperate Zone, continue harvesting of maize cobs. Undertake harvesting of rice, where the crop has reached maturity. After harvesting, keep the produce in safe place, to reduce grain moisture to 12-14%. Continue harvesting of *kharif* fodder crops viz. fodder maize, sorghum, bajra and other temperate perennial grasses in areas where crop has attained 50 percent heading stage. Delayed harvesting can lead to poor quality and production.

Uttarakhand

- In Bhabar and Tarai Zone, in view of rainfall forecast, maintain proper drainage system in rice, sugarcane, maize, green gram, black gram, soybean and vegetable fields.
- In Hill Zone, undertake harvesting of barnyard millet. Undertake land preparation for sowing leafy vegetables. Undertake land preparation for planting of garlic in mid to high hill region and potato in lower hills.
- In Sub-Humid Sub Tropic Zone, carry out propping of sugarcane. Make proper drainage system in low land sugarcane field to avoid water logging. Undertake land preparation for sowing of toria.

Punjab

- In Western Zone, undertake planting of early varieties of potato. For control of jassids in cotton, use Kee fun 15 EC (Tolfenpyrad) or Osheen 20 SG @ 60g per acre or Ulala 50 WG @ 80g/acre in 125-150 litres of water. Avoid irrigation to the crops and avoid any chemical spray during the period. Pre-harvest fruit drop in citrus can be reduced with the spray of 2, 4-D sodium salt of horticulture grade (5 g) in 500 litre of water
- In Western Plain Zone, weather is suitable for attack of stem borers in rice. If more than 5% dead hearts appear, spray Fame 480 SC @20 ml or Mortar 75 SG@170 g or Sutathion 40 EC@ 350 ml or

Monocrotophos 36 SL @560 ml or chlorpyrifos 20 EC @ one litre in 100 litres of water per acre. Heavy rainfall followed by bright sunny days can result in para wilt incidence in cotton, spray cobalt chloride (10 mg per litre of water) only on affected plants within 24 hours of symptoms appearance. To prevent lodging in sugarcane, prop up crop using trash twist method.

- In Undulating Plain Zone, weather would be congenial for attack of sheath blight. To save the rice crop from sheath blight, keep bunds clean by removing grasses. If the symptoms of disease appear, spray Puls@ 150 ml or Epic@ 26.8 g or Nativo@ 80 g or Amistar Top or Tilt or Folicur/Orius @ 200 ml in 200 litres of water per acre in clear weather. Remove excess rain water from maize and sugarcane field. The attack of maize borer can be checked by spraying with Coragen 18.5 SC (Chlorantraniliprole)@ 30 ml in 60 litres of water per acre with knapsack sprayer.
- In Sub Montanae Undulating Plain Zone, monitor the crops (soybean, moong, mash) for appearance of sucking pests. Spray Malathion 50 EC @ 375 ml or Rogor 30 EC @ 250 ml (Dimethoate) using 80-100 litres of water per acre. Control blister beetle in arhar by spraying Decis 2.8 EC (deltamethrin) @ 200 ml or King doxa 14.5 SC (indoxacarb) @ 200 ml per acre using 80-100 litres of water. Spray crop on pest appearance in the evening hours and repeat spray after 10 days, if necessary.
- In Central Plain Zone, undertake sowing of radish, turnip, carrot and planting of early varieties of potato. To save rice crop from sheath blight, spray Pulsor @150 ml or Epic@ 26.8 g or Nativo@ 80 g or Amritsar Top @200 ml or Tilt 25 EC @ 200 ml per acre. Attack of maize borer can be checked by spraying with 30 ml of Coragen 18.5 SC (Chlorantraniliprole) in 60 litres of water per acre with knapsack sprayer.

Haryana

- In Western Zone of Haryana, carry out picking of fully opened desi cotton bolls in the third week of September. Continuous monitor pests and diseases in rice. Considering the changeable weather and excess moisture in the environment, there may be an outbreak of insects and diseases in the rice crop. For the control of stem borer, use pheromone trap 3-4 per acre. Brown plant hopper may also attack the paddy crop, spray Buprofenzin 25 SC @1.5 ml or Flonicamid 50 WG @ 0.3 g or Pymetrozine 50 WG @ 0.6 or Thiamethoxam 25 WG 0.2 g per litre of water in clear weather. For control of leaf folder in paddy crop, apply Chlorantraniliprole 18.5 SC @144 ml or Cart up Hydrochloride 4 G @18 kg/ha on a clear day. Irrigate after use and keep water standing in the field after 2-3 days.
- In Eastern Zone of Haryana, harvest the cucurbits and other vegetables like tomato, chilli, brinjal and okra at regular intervals. Outbreak of pink bollworm is found in cotton crop. Monitor the outbreak of pink bollworm in cotton crop. Constantly monitor brown plant hopper (BPH) in paddy, spray Imidacloprid 17.8 % SC@ 1.0 ml / 3 litre of water. Due to high moisture content, there may be symptom of leaf folder in paddy, monitor the field continuously. There may be possibility of mosaic disease in cucurbits vegetables, monitor the field continuously.

Delhi

- In Delhi, present weather conditions are suitable for sowing of early pea. Undertake sowing of carrot. In present weather conditions termites may damage crops and vegetables, spray Chlorpyrifos 20 EC @ 4 ml/litre of water with irrigation water. Monitor the fields regularly. Spray Imidacloprid 17.8 % SC@1 ml / 3 litre of water against white fly and other sucking pests in all crop and vegetables when sky remains clear. In present weather conditions, false smut may appear in paddy, spray Blitox 50 @ 500g per acre at 10 days interval (2-3 times).

Uttar Pradesh

- In Western Plain and Tarai Zone, start land preparation for planting of autumn sugarcane. In Bijnor and adjoining region, make proper arrangements for drainage of water in all vegetable crops. Rot is a terrible disease of sugarcane, so remove and burn the clumps affected by red rot and do not plant affected cane sets. To control fruit borer in pigeon pea, sprinkle Dimethoate 30 EC @.03% per hectare by dissolving in 650-700 litres of water. Apply 200 to 250 quintal cow dung at time of field preparation for onion cultivation. When preparing for transplanting, mix 35 kg nitrogen, 50 kg phosphorus and 40 kg potash per

hectare before final ploughing.

- In SW Semi-arid Zone and Central Plain Zone, prepare field for sowing rapeseed mustard and make sure to get soil tested before sowing. If red grains are seen in the paddy crop, it has become an outbreak of rust disease. For its prevention, spray Propiconazole@ 200 ml/acre mixed with 250 litres of water. Use fertilizers based on soil test at the time of sowing of mustard. For outbreak of yellow mosaic disease in *urad* crop, use Dimethoate 30 EC@ 1.0 litre/ha or Oxydemeton-methyl 25 EC. @ 1 litre/ha in 500-600 litres of water in clear weather. For prevention of stem borer insect in maize crop, apply Emamectin benzoate 5% SG @ 250 g/hectare in 500-600 litres of water. Postpone the irrigation & Pesticide application for next 3-4 days. Avoid water logging and maintain proper drainage in maize crop. Groundnut crop is in flower initiation stage; apply urea@ 8kg per acre area. Harvest & process the green gram & black gram (moong & urad) crop.
- In Bundelkhand Zone, drain out excess rainwater from green. Pick matured pods of green gram and black gram crop as early as possible. As per weather forecast, field preparation should be start for sowing of *rabi* crops mainly toria and mustard. Use good quality seed for sowing of crops. As per weather forecast, farmers are advised to prepare field for early sowing vegetable pea. Sowing should be done in first or second week of October. As per weather forecast, farmers are advised to remove and destroy the leaf curl disease affected plant in the field of chilli, tomato and papaya, after that spray Flonicamid @ 0.4 g per litre of water at 15 days interval.
- In North Eastern Plain zone, in i early sown paddy crop, apply top dressing @ 30 kg of Nitrogen per hectare. Do regularly monitoring for stink bug in the paddy crop which has reached milk stage. Complete sowing of pigeon pea. At the time of sowing, apply 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare. Keep monitoring the pigeon pea crop sown in June-July for insect diseases. Sowing of carrot can be done on raised bed. Do constant monitoring for brown plant hopper (BPH) in paddy field. Farmers are advised to enter into the middle of the crop field and see mosquito like insect at the basal portion of the plant. If insect population is above ETL, spray Osen (Dinotefuran)@ 100 g /200 litre water per acre. Field preparation may be done for early pea crop.
- In Eastern Plain and Vindhya Zone, in paddy crop, for control of Khaira disease, apply zinc sulphate@ 25kg/ha as basal. Top dressed 1/4th dose of nitrogen. Irrigate the crop as per requirement. For control of stem borer, brown plant hopper, gall midge, leaf folder and jassids, apply Quinalphos 25 EC @ 1litre/ha. Apply 1/4th dose of nitrogen as top dressings after hand weeding and thinning in sorghum crop. In pigeon pea crop, complete weeding and thinning. False smut may appear in basmati (paddy) crop. Symptoms include increase in grains size with brown colored fungus inside then spray of Blitox 50 @ 2 g per litre of water at 10 days interval (2-3 times). Use light trap in paddy to keep a check on pest population. This causes less damage of useful insects. Field preparation may be done for early pea crop. Arrangement for quality seeds should be done (cultivars- Pusa pragati, Pant matar-3, Arkil etc.). Monitor insect pest and disease infestation in pearl millet and sorghum, cauliflower, brinjal etc crop, if it crosses ETL, apply recommended control measures. If there are golden spots on the leaves of urad/moong or the entire leaf has turned yellow, then it is yellow chromosomal disease, uproot diseased plants from the field and bury them in ground. To control white fly, use Dimethoate 30 EC@ 01 litre or methyl o-demeton (25 EC) @01 litre per hectare or Imidacloprid@ 1 ml/ litre water, two-three times.

Rajasthan

- In Humid Southern Plains Zone, continue transplanting of cabbage & cauliflower. Place 12-15 yellow sticky strips per hectare for prevention of yellow mosaic in black gram crop; uproot and destroy the affected plants; apply Imidacloprid 17.8 SL @ 200ml in 400-500 litres of water. For the management of fungal and bacterial soft rot in standing ginger crop, carry out drenching with Ridomil MZ 72 @ 4g per litre of water + Streptocycline @ 1g per 3 litres of water.
- In Flood Prone Eastern Plains Zone, carry out field preparation for early mustard and rapeseed. Prepare nursery for winter season brinjal. Carry out harvesting of pearl millet & black gram crops and keep the

produce in a safer place. As soon as the symptoms of mosaic disease are observed in okra crop, carry out four sprays of Diafenthiuron 50 WP @ 1.0g or Acetamiprid 20 SP @ 0.2g per litre of water at an interval of 15 days.

- In Hyper Arid Partially Irrigated Western Zone, late July-sown pearl millet, cluster bean, moth bean, etc. are in advance stage of maturity; due to prevailing high temperature, crops will be under forced maturity; apply life-saving irrigation to kharif crops showing wilting symptoms. Groundnut crop is at pod formation and pod maturity stage; apply irrigation as and when required. It is optimum time for sowing improved varieties of *taramira* in fallow land under proper soil moisture conditions. In irrigated areas, prepare land for sowing of fodder crops for use in the rabi season.
- In Arid Western Plains Zone, timely-sown green gram crop is at maturity stage; harvest the crops at physiological maturity stage and keep in safe place. It is optimum time for sowing improved varieties of *taramira* in fallow land under proper soil moisture conditions. For the control of stem borer in castor crop, spray Quinalphos 25 EC @ 1 liter per hectare.
- In Humid South Eastern Plains Zone, for the management of sheath blight and brown spot diseases in rice, spray Propiconazole 25 EC @ 2.5ml or Hexaconazole @ 5 EC @ 2ml per litre of water; in case of bacterial blight, spray Streptocycline @ 150PPM + Copper oxychloride @ 2g/litre of water.
- In Irrigated Northwestern Plains Zone, prepare the field for timely sowing of mustard; 5th October to 20th October is the optimum period of sowing; before sowing, treat the seeds with Metalaxyl 35SD 6g/kg seeds for white rust and Imidacloprid 70WS @ 5g/kg seeds for painted bug. Carry out timely harvesting of green gram to prevent shattering; follow it up with sun-drying and threshing.
- In Sub-Humid Southern Plains & Aravalli Hill Zone, spray of Emamectin benzoate 5 SG @ 0.4g or Chlorantraniliprole 18.5 SC @ 0.4ml or Spinosad 45 SC @ 0.3ml per litre of water for the control of fall army worm in maize. In order to prevent root rot disease in the standing B.T. cotton crop, carry out drenching with Dithane M-45, @ 3g/liter of water.

Animal Husbandry

- In Rajasthan, administer Lyspot anthrax vaccine to animals for prevention of different diseases. Keep sick animals separate from healthy animals.

Horticulture

- Himachal Pradesh - In High Hill Temperate Dry Zone, support the heavy fruit laden branches of apple plants with a wooden stick or rope. Carry out weeding and apply irrigation to the apple beds. In Mid Hills Sub Humid Zone, collect the dropped, damaged & rotten fruits from the apple and pomegranate orchards and bury them in deep pits to avoid the spreading of any disease in the fruit trees. Keep the orchards neat and clean after fruit harvesting. In High Hills Sub Temperate Wet Zone, take proper care of the grafted apple plants. Do not allow any sucker to grow from the rootstock. Also, remove all water/stock sprouts from apple plants for maximum success.
- Jammu & Kashmir - In Sub Tropical Zone, spray Streptomycin 500mg/litre of water against citrus canker during clear weather, after pruning and repeat at 15 days interval. Destroy infected shoots. Collect and destroy all fallen guava fruits. To control fruit fly in fallen fruits, harvest fruit when hard. Keep the area free of weeds. Spray 2,4-D @ 10ml/litre of water to control citrus drop in bearing plants. In Intermediate Zone, to check if the walnuts are ready for harvest, crack a few open. Start harvesting when at least 85% of the walnuts can be easily removed from the tree. After harvesting, hull the nuts with pocket knife. Wash the hulled nuts and let them dry in a single layer. Stir the nuts around on daily basis to promote drying. Store the nuts in a cool, dry area to extend their shelf life.
- Uttarakhand - In Hill Zone, spray Copper Oxychloride @ 3g per litre of water to protect guava from fruit rot or fruit canker diseases.

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