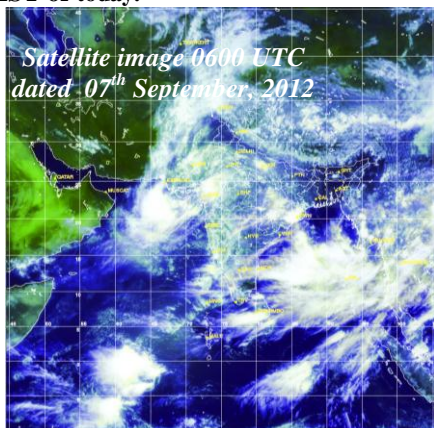


The southwest monsoon has been vigorous over Gangetic West Bengal, Jharkhand and west Madhya Pradesh and active over Odisha, Vidarbha, Gujarat region, Saurashtra & Kutch, Konkan & Goa and Madhya Maharashtra during past 24 hours ending at 0830 hours IST of today.



In the following sub-divisions moisture stress condition prevailed during earlier weeks. Even though conditions improved during recent weeks, contingent planning is continued in the agromet advisory:

- Saurashtra & Kutch:** Due to revival of monsoon in North Saurashtra zone, farmers are advised to sow semi *rabi* sesame, sesame Gujarat-2, dual purpose sorghum, castor, gram and ajwan in the areas where crop failed. Farmers are advised to spray 2% urea solution for quick boost up of growth in all crops. Also apply split dose of nitrogen irrespective of crop. Farmers in South Saurashtra Zone of Gujarat are advised to carry out gap filling in castor crop and sowing of sesame. In Kutch region, farmers are advised to carry out sowing of maize, sorghum, lucerne, bajra, cowpea etc. for green fodder and vegetables like guar, cowpea, bottle gourd and bitter gourd utilising the realised rainfall.
- Gujarat region:** In North Gujarat Zone, farmers are advised to complete sowing of castor, fodder sorghum, maize, sesame and cluster bean utilising rainfall occurred during recent weeks. In Ahmedabad district, farmers are advised to complete sowing of castor and carry out sowing of short duration varieties of cluster bean and sorghum and fodder grass.
- South Interior Karnataka:** Farmers in the Eastern dry zone are advised to undertake nursery sowing / transplanting of finger millet and gap filling and intercultural operations in early sown crops. Also undertake sowing of South African maize for fodder purpose, sowing of minor millets like foxtail millet and cowpea upto 15th September. Undertake sowing of Horse gram varieties KBH-1, PHG-9 upto 30th September.
- North Interior Karnataka:** Most of the districts of the region received rain during last week. In North Dry Zone, undertake sowing of sunflower, *rabi* jowar upto September end. Priority may be given to sowing of fodder crops such as fodder cowpea, maize and bajra. In North East Dry zone, farmers may undertake sowing of jowar, maize and bajra for fodder purpose. Castor and sunflower may be sown upto end of September and end of October, respectively.
- Madhya Maharashtra:** Farmers of Pune and Solapur districts are advised to undertake sowing of fodder crops like jowar by selecting varieties like Ruchira, Phule Amruta and also giant bajra varieties and maize by selecting varieties like African tall, Manjari Composite with realized rainfall.
- Marathwada:** Farmers are advised to make arrangement to drain out excess water from crop fields and apply plant protection measures and fertilizers and undertake intercultural operations.
- Haryana:** Farmers are advised to keep rice crop weed free and apply recommended dose of fertilizers, avoid water stagnation for extended period in existing vegetable crops, undertake propping and earthing up in late sown sugarcane, transplanting of *kharif* onion, cabbage and cauliflower in the field. Cutting of sudan grass for green fodder may be done.
- Delhi:** Transplanting of tomato, chilli, brinjal and cauliflower is continued. Sowing of coriander, spinach and radish is in progress under irrigated condition as well as utilizing the rainfall during previous weeks.
- West Rajasthan:** Good rainfall occurred during last week. As per contingent plan, sowing of carrot, planting of tomato, brinjal, onion, cabbage and chillies is continued. Farmers are advised to undertake sowing of taramira from 10th September - 15th October and undertake weeding in standing crops.
- Bihar:** Farmers are advised to start land preparation and sowing of September arhar. Application of Nitrogen @ 20 kg per hectare after hand weeding in the rice field is advised.



Issued by

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

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

Executive Summary

Significant rainfall occurred over all the districts in Saurashtra & Kutch, Konkan, Madhya Maharashtra, Marathwada, Vidarbha, Orissa, Coastal Karnataka, Kerala and Telangana, most of the districts in Arunachal Pradesh, Chhattisgarh, Uttarakhand, East Rajasthan, Gujarat region, Gangetic West Bengal, Coastal Andhra Pradesh, West Madhya Pradesh and North Interior Karnataka, many districts in Assam, Himachal Pradesh, West Rajasthan, Sub Himalayan West Bengal & Sikkim and Rayalaseema and over a few districts in Punjab, Haryana, East Madhya Pradesh, Jharkhand, East Uttar Pradesh, West Uttar Pradesh and South Interior Karnataka.

Rainfall is likely to occur at most places over Kerala, Coastal Karnataka, Konkan & Goa and Gujarat during next three days, West Madhya Pradesh and Madhya Maharashtra during next 24 hours, many places over Rajasthan, Chhattisgarh, Jharkhand, Gangetic West Bengal, Orissa, Uttarakhand, Himachal Pradesh, Jammu & Kashmir, Punjab during next three days. Farmers are advised to postpone irrigation, intercultural operation and application of fertilizers and plant protection measures in these regions. Heavy to very heavy rainfall would occur at one or two places over Gujarat, Konkan & Goa, Madhya Maharashtra, West Madhya Pradesh and South Rajasthan during next 48 hours and heavy rainfall would occur at one or two places over Coastal Orissa and Coastal Karnataka during next 48 hours. Farmers in these regions are advised to arrange for adequate drainage in standing crops.

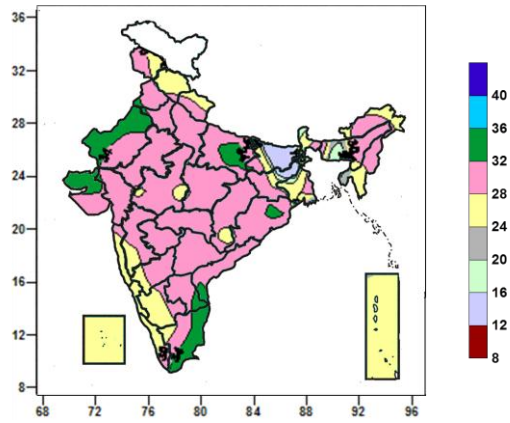
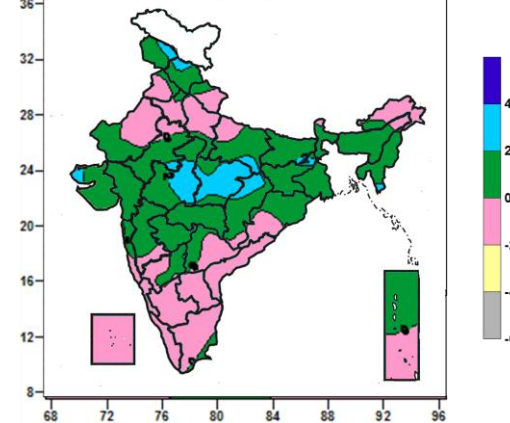
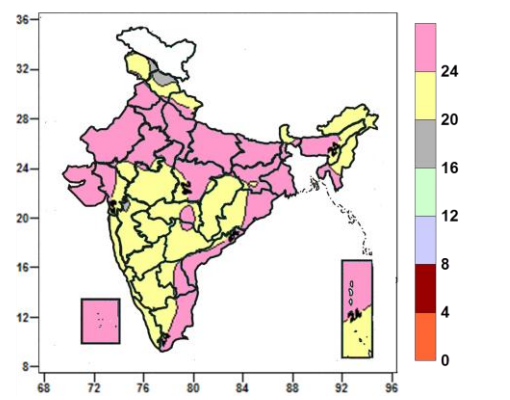
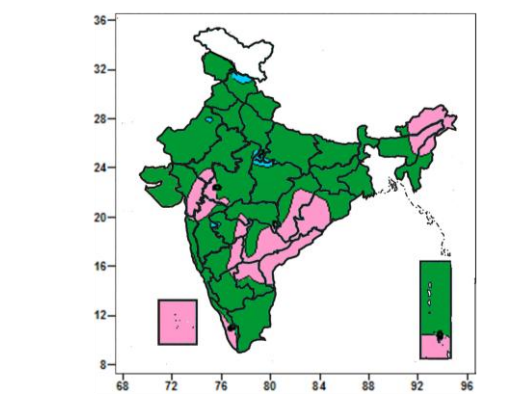
In the following sub-divisions moisture stress condition prevailed during earlier weeks. Even though conditions improved during recent weeks, contingent planning is continued in the agromet advisory:

1. **Saurashtra & Kutch:** Due to revival of monsoon in North Saurashtra zone, farmers are advised to sow semi *rabi* sesame, sesame Gujarat-2, dual purpose sorghum, castor, gram and ajwan in the areas where crop failed. Farmers are advised to spray 2% urea solution for quick boost up of growth in all crops. Also apply split dose of nitrogen irrespective of crop. Farmers in South Saurashtra Zone of Gujarat are advised to carry out gap filling in castor crop and sowing of sesame. In Kutch region, farmers are advised to carry out sowing of maize, sorghum, lucerne, bajra, cowpea etc. for green fodder and vegetables like guar, cowpea, bottle gourd and bitter gourd utilising the realised rainfall.
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3. **South Interior Karnataka:** Farmers in the Eastern dry zone are advised to undertake nursery sowing / transplanting of finger millet and gap filling and intercultural operations in early sown crops. Also undertake sowing of South African maize for fodder purpose, sowing of minor millets like foxtail millet and cowpea upto 15th September. Undertake sowing of Horse gram varieties KBH-1, PHG-9 upto 30th September.
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6. **Marathwada:** Farmers are advised to make arrangement to drain out excess water from crop fields and apply plant protection measures and fertilizers and undertake intercultural operations.
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8. **Delhi:** Transplanting of tomato, chilli, brinjal and cauliflower is continued. Sowing of coriander, spinach and radish is in progress under irrigated condition as well as utilizing the rainfall during previous weeks.
9. **West Rajasthan:** Good rainfall occurred during last week. As per contingent plan, sowing of carrot, planting of tomato, brinjal, onion, cabbage and chillies is continued. Farmers are advised to undertake sowing of taramira from 10th September - 15th October and undertake weeding in standing crops.
10. **Bihar:** Farmers are advised to start land preparation and sowing of September arhar. Application of Nitrogen @ 20 kg per hectare after hand weeding in the rice field is advised.

In remaining parts of the country, due to receipt of adequate rainfall in terms of quantity and distribution in relation to agricultural operations as well as water requirements of the crops, sowing of *kharif* crops continued normally and state of the crops are normal, which is stated below:

1. **Royalaseema:** In late sown groundnut, Red Hairy Caterpillar incidence is observed. To control the pest, farmers are advised to adopt community bonfires on evening hours. Make trench around the field.
2. **East Uttar Pradesh:** Undertake hand weeding, top dressing of N fertilizer in rice and sugarcane, sowing of late pigeon pea variety, transplanting of cauliflower, brinjal, chillies, tomato, sweet potato, plantation of fruit and timbers and earthing up and propping of sugarcane crop.
3. **West Uttar Pradesh:** Undertake hand weeding, top dressing of N fertilizer in rice, sugarcane. Sowing of late pigeon pea variety, transplanting of cauliflower, brinjal, chillies, tomato, sweet potato, plantation of fruit and timbers, earthing and propping of sugarcane crops may be undertaken.
4. **Nagaland, Manipur, Mizoram & Tripura:** Farmers in Manipur are advised maintain 10-15 cm of water level at vegetative stage of late and short duration varieties of rice. Provide good drainage system to maintain the required amount of water in the field. Undertake sowing of early cauliflower, brinjal and radish in Tripura.
5. **Arunachal Pradesh:** Nursery preparation for early cruciferous crops may be done.
6. **Assam & Meghalaya:** Undertake transplanting of Luit, Kapili, Kolong, Dishang varieties of rice during 1st week of September. In already transplanted rice, replanting of dead hills or gap filling with seedlings of similar age should be done within 7-10 days of transplanting. Undertake sowing of early cauliflower, raddish, green gram, black gram and sesame etc.
7. **Sub Himalayan West Bengal:** Farmers are advised to maintain stagnant water (2 to 3 cm) upto 10 days in rice field after transplanting with the help of rain water. Increase the depth of stagnant water with age of crop. At the time of panicle initiation, maintain 5 to 7 cm water in the field.
8. **Sikkim:** Farmers are advised to maintain 3-4 cm standing water in tillering stage of rice.
9. **Gangetic West Bengal:** Seedbed preparation may be started for sowing of early cauliflower.
10. **Orissa:** Undertake weeding in rice. Undertake sowing of vegetables like bhindi, tomato, French bean, cauliflower and cabbage etc.
11. **Punjab:** Complete sowing of vegetables like cauliflower (mid- season variety). Irrigation may be applied to rice, sugarcane and cotton.
12. **Himachal Pradesh:** Complete nursery sowing of cauliflower. In mid hill region, transplanting of cauliflower may also be completed.
13. **Jharkhand:** Farmers are advised to sow til, kulthi, green pea and African marigold or French marigold.
14. **Uttarakhand:** Drain out excess water from the crop fields to prevent root damage in maize, soybean and pulse crops.
15. **Jammu & Kashmir:** Continue nursery sowing / transplanting of knol-khol, cabbage and cauliflower and sowing of bhindi, radish, pumpkin, bitter gourd, bottle gourd, sponge gourd, carrot and turnip. Also undertake top dressing of N fertilizers in rice, maize, bajra, pulses and late sown maize.
16. **East Rajasthan:** Carry out weeding, hoeing and maintain plant population by thinning in timely sown crops like cluster bean, pearl millet, sesame, moong and groundnut after current spells of rain. Sowing of Desi carrot may be done.
17. **East Madhya Pradesh:** Prepare field for sowing of pea.
18. **West Madhya Pradesh:** Undertake intercultural operations, earthing up and application of plant protection measures in sugarcane, maize, papaya, guava etc. after current spells of rain. Undertake sowing of ladies finger, cucurbits etc. and transplanting of fruit crops and vegetable crops such as chilli, tomato, brinjal and onion etc.
19. **Vidarbha:** Farmers are advised to drain out excess water from cotton field and undertake intercultural operations to avoid leaf and floral bud fall.
20. **Chhattisgarh:** At present rice crop is at tillering stage, farmers are advised for second dose of fertilizer application at tillering stage of rice for healthy tillers.
21. **Konkan:** Farmers are advised to maintain 5 to 10 cm water level in rice field.
22. **Coastal Andhra Pradesh:** Farmers are advised to go for early *rabi* with irrigated dry crops such as jowar, maize, blackgram, greengram, groundnut, sunflower and safflower with 4-5 irrigations and normal *rabi* crops like jowar and maize etc.
23. **Telangana:** Farmers are advised to go for early *rabi* with irrigated dry crops like maize, jowar, groundnut, greengram and blackgram etc. with 4-5 irrigations.
24. **Tamil Nadu:** Undertake nursery sowing of *samba* rice.
25. **Coastal Karnataka:** Drain out excess water in rice fields.
26. **Kerala:** Undertake second top dressing of fertilisers in rice.

Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 05.09.2012

<p>Actual Mean Maximum Temperature (°C) in India for the week ending 5.9.2012</p> 	<p>Maximum Temperature (°C) Anomaly in India for the week ending 5.9.2012</p> 
<p>Actual Mean Maximum temperature ranged between 32 to 36°C over some parts of Punjab, West Uttar Pradesh, West Rajasthan, Saurashtra, Coastal Andhra Pradesh, Raylaseema, Tamil Nadu, 24 to 28°C over most parts of Himachal Pradesh, West Bengal, Tripura, Konkan & Goa, South Interior & Coastal Karnataka, Kerala, Lakshadweep, Andaman & Nicobar Islands and between 28 to 32°C over remaining parts of the country.</p>	<p>Actual Mean Maximum temperature anomaly ranged between 2 to 4°C and above over most parts of Madhya Pradesh, some parts of Jammu & Kashmir, East Uttar Pradesh, Bihar, Chattisgarh, East Rajasthan, Gujarat, Tripura, -2 to 0°C over most parts of Himachal Pradesh, Punjab, Haryana, Delhi, West Uttar Pradesh, West Rajasthan, Andhra Pradesh, Tamil Nadu, Karnataka, Kerala, some parts of East Uttar Pradesh, Sikkim, Orissa, Chattisgarh, East Uttar Pradesh, East Rajasthan, 0 to 2°C over rest of the country.</p>
<p>Actual Mean Minimum Temperature (°C) in India for the week ending 5.9.2012</p> 	<p>Minimum Temperature (°C) Anomaly in India for the week ending 5.9.2012</p> 
<p>Actual Mean Minimum Temperature ranged between 24°C and above over many parts of Northwest India (except Jammu & Kashmir, Himachal Pradesh, Uttarakhand), East (except Sikkim) Gujarat, East Madhya Pradesh, Coastal Andhra Pradesh, Coastal Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, some parts of Himachal Pradesh, Uttarkhand, Assam, Tripura, Gujarat, Telangana, Rayalaseema, Vidarbha, 16 to 20°C over some parts of Jammu & Kashmir, Himachal Pradesh and between 20 to 24°C over remaining parts of the country.</p>	<p>Minimum Temperature anomaly ranged above 2°C over some parts of Himachal Pradesh, West Rajasthan, Madhya Pradesh, -2 to 0°C over most parts of Arunachal Pradesh, Coastal Orissa, Chattisgarh, Andhra Pradesh, Lakshadweep Islands, some parts of Assam, Nagaland, Gujarat, West Madhya Pradesh, Vidarbha, Marathwada, North & South Interior Karnataka, Kerala, Andaman & Nicobar Islands, 0 to 2°C over remaining parts of the country.</p>

Distribution of rainfall of the country during week ending on 05.09.2012

State/Districts	Actual (mm)	% dep.
Arunachal Pradesh		
Anjaw	**	**
Changlang	60.0	15
East Kameng	101.0	203
East Siang	31.4	-49
Kurung Kumey	238.1	74
Lohit	**	**
Lower Dibang Valley	92.8	10
Lower Subansiri	**	**
Papumpara	30.0	-34
Tawang	64.3	-54
Tirap	68.0	-34
Upper Dibang Valley	11.3	-90
Upper Siang	191.5	69
Upper Subansiri	60.8	85
West Kameng	59.3	-42
West Siang	123.0	94
Assam		
Baksa	8.4	-91
Barpeta	9.7	-90
Bongaigaon	36.2	-62
Cachar	157.0	58
Chirang	12.2	-87
Darrang	1.0	-98
Dhemaji	79.0	-24
Dhubri	30.3	-59
Dibrugarh	70.9	-9
East Garo Hills	**	**
East Khasi Hills	102.1	-37
Goalpara	9.5	-84
Golghat	59.3	5
Hailakandi	78.5	-3
Jaintia Hills	144.0	-33
Jorhat	68.2	-2
Kamrup(Metro)	40.7	-3
Kamrup	8.5	-80
Karbi Analog	45.1	10
Karimganj	242.5	125
Kokrajhar	23.9	-81
Lakhimpur	74.2	-29
Morigaon	57.4	-5
N.C.Hills	29.1	-53
Nowgong	65.8	11
Nalbari	4.4	-93
Ribhoi	141.4	79
Sonitpur	59.9	3
Sibsagar	43.8	-24
South Garo Hills	64.0	-11
Tinsukia	96.5	6
Udalgiri	59.8	8
West Garo Hills	1.8	-98
West Khasi Hills	**	**
Himachal Pradesh		
Bilaspur	7.8	-81
Chamba	35.7	-27
Hamirpur	34.1	-44
Kangra	80.6	-7
Kinnaur	13.1	31

State/Districts	Actual (mm)	% dep.
Kullu	11.7	-55
Lahaul and Spiti	0.5	-98
Mandi	46.8	-13
Shimla	19.7	-39
Sirmaur	59.2	-2
Solan	39.1	-14
Una	13.2	-62
Punjab		
Amritsar	14.0	-54
Barnala	0.0	-100
Bhatinda	31.4	100
Faridkot	33.0	14
Fatehgarh Saheb	1.3	-94
Ferozpur	1.5	-94
Gurdaspur	54.9	21
Hoshiarpur	2.9	-91
Jalandhar	9.9	-70
Kapurthala	3.3	-84
Ludhiana	21.8	-22
Mansa	17.8	19
Moga	7.6	-71
Muktesar	0.0	-100
Nawashahar	8.5	-77
Patiala	40.8	79
Ropar	27.8	-19
Sangrur	45.6	102
Mohali	7.5	-67
TarnTaran	0.3	-99
Haryana		
Ambala	9.3	-69
Bhiwani	6.0	-67
Chandigarh	32.3	-3
Faridabad	27.6	7
Fatehabad	16.3	10
Gurgaon	52.5	64
Hissar	8.4	-56
Jhajjar	17.4	14
Jind	14.0	-47
Katihah	2.0	-92
Karnal	11.8	-50
Kurukshetra	3.6	-87
Mahendragarh	56.3	201
Mewat	46.0	23
Palwal	32.8	27
Panchkkula	63.5	39
Panipat	5.1	-76
Rewari	30.7	18
Rohtak	5.4	-81
Sirsa	42.9	488
Sonepat	0.0	-100
Yamunanagar	50.1	2
New Delhi	14.7	-64
Jammu & Kashmir		
Anantnag	7.2	-48
Badgam	10.8	19
Bandipore	**	**
Baramula	10.2	-28
Doda	15.6	11
Ganderwal	26.2	236
Jammu	83.4	94

State/Districts	Actual (mm)	% dep.
Kargil	0.0	-100
Kathua	14.6	-78
Kistwar	**	**
Kulgam	6.2	-55
Kupwara	7.0	35
Ladakh(Leh)	1.5	-27
Poonch	0.0	-100
Pulwama	6.6	-34
Rajouri	47.4	28
Ramban	4.4	-69
Reasi	78.6	18
Samba	88.3	105
Shopian	0.0	-100
Srinagar	14.4	85
Udhampur	57.4	-14
East Madhya Pradesh		
Anuppur	24.5	-63
Balaghat	137.6	54
Chhatarpur	12.3	-85
Chindwara	95.2	57
Damoh	16.7	-74
Dindori	35.2	-46
Jabalpur	12.3	-83
Katni	24.0	-62
Mandla	43.6	-44
Narsingpur	18.0	-78
Panna	26.4	-64
Rewa	27.8	-64
Sagar	58.6	-9
Satna	21.0	-67
Seoni	59.9	-5
Shahdol	7.4	-90
Sidhi	57.4	-27
Singrauli	14.0	-76
Tikamgarh	11.5	-81
Umaria	22.7	-69
West Madhya Pradesh		
Alirajpur	111.5	110
Asoknagar	48.8	-6
Badwani	69.8	64
Betul	208.7	244
Bhind	5.0	-90
Bhopal	21.6	-71
Burhanpur	111.2	101
Datia	5.7	-92
Dewas	87.0	16
Dhar	40.9	-32
Guna	26.9	-59
Gwalior	23.1	-63
Harda	31.6	-61
Hosangabad	69.4	-32
Indore	74.2	17
Jhabua	111.9	109
Khandwa	118.3	81
Khargone	104.3	56
Mandsaur	52.2	-23
Morena	34.5	-33
Neemuch	54.6	-7
Raisen	43.5	-45
Rajgarh	50.8	-30

State/Districts	Actual (mm)	% dep.
Ratlam	121.5	100
Sehore	81.3	-5
Shajapur	78.9	10
Sheopur Kalani	31.5	-30
Shivpuri	30.3	-48
Ujjain	68.1	-1
Vidisha	33.2	-49
Chattisgarh		
Bastar	110.0	46
Bijapur	169.3	95
Bilaspur	50.4	-19
Dantewara	194.8	162
Dhamtari	133.2	87
Durg	77.2	33
Janjgir	75.8	5
Jashpurnagar	53.0	-35
Kanker	185.5	160
Korba	49.2	-26
Koriya	57.1	-13
Kawardha	124.0	118
Mahasumund	58.6	-12
Narayanpur	201.8	181
Raigarh	51.7	-29
Raipur	64.0	2
Rajandgaon	123.3	66
Surguja	11.3	-84
East Uttar Pradesh		
Allahabad	23.2	-49
Ambedkar Nagar	0.0	-100
Azamgarh	11.7	-76
Bahraich	130.9	162
Ballia	27.7	-27
Balrampur	40.2	-37
Banda	3.9	-94
Barabanki	62.1	18
Basti	5.9	-89
Chandauli	7.2	-86
Deoria	9.7	-82
Faizabad	1.3	-98
Farrukhabad	21.2	-48
Fatehpur	11.2	-74
Gazipur	36.5	-21
Gonda	24.1	-54
Gorakhpur	50.5	-21
Hardoi	60.7	24
Jaunpur	6.1	-87
Kannauj	122.0	188
Kanpur City	20.5	-45
Kanpur Dehat	22.5	-55
Kaushambi	6.7	-85
Kheri	137.3	171
Kushi nagar	37.0	-30
Lucknow	42.4	-7
Maharajganj	11.3	-80
Mau	20.5	-58
Mirzapur	10.0	-81
Pratapgarh	13.3	-72
RaiBareilly	60.9	37
Sahuji		
Maharajnagar	28.0	-57
Sant Kabirnagar	0.0	-100
Sant Ravidas Nagar	0.0	-100

State/Districts	Actual (mm)	% dep.
Shrawasti	179.3	259
Sidharthnagar	58.2	12
Sitapur	113.1	93
Sonbhadra	13.6	-75
Sultanpur	3.3	-93
Unnao	12.3	-72
Varanasi	15.7	-74
West Uttar Pradesh		
Agra	28.1	-31
Aligarh	29.9	-16
Auraiya	28.3	-37
Badaun	52.2	6
Baghpat	8.8	-58
Bareilly	20.1	-62
Bijnor	1.8	-96
Bulandsahar	19.2	-43
Etah	34.7	5
Etawah	30.4	-32
Firozabad	30.1	-15
GBNagar	32.0	21
Ghaziabad	40.8	10
Hamirpur	46.9	-7
Jalaun	51.6	5
Jhansi	4.8	-92
Jotirba Phule Nagar	16.5	-57
Kanshiramnagar	76.0	56
Lalitpur	2.0	-97
Mahamaya Nagar	9.1	-70
Mahoba	5.2	-89
Mainpuri	31.2	-19
Mathura	51.5	52
Meerut	12.2	-72
Moradabad	90.4	106
Muzzaffarnagar	11.6	-68
Pilibhit	21.4	-65
Rampur	16.8	-66
Saharanpur	40.2	8
Shahjahanpur	96.4	117
Uttarakhand		
Almora	60.0	55
Bageshwar	68.1	76
Chamoli	84.9	95
Champawat	72.0	2
Dehradun	90.8	12
Garhwal Pauri	59.7	-9
Garhwal Tehri	92.5	42
Haridwar	23.3	-57
Nainital	21.2	-72
Pithorgarh	63.0	-39
Rudraprayag	121.6	51
Udham Sing Nagar	56.4	13
Uttarkashi	67.6	2
Bihar		
Araria	29.3	-56
Arwal	1.0	-97
Aurangabad	0.0	-100
Banka	0.0	-100
Begusarai	28.0	-9
Bhabua	4.9	-90
Bhagalpur	5.9	-89
Bhojpur	0.0	-100
Buxar	0.0	-100

State/Districts	Actual (mm)	% dep.
Darbhanga	3.3	-93
East Champaran	7.7	-85
Gaya	2.3	-96
Gopalganj	72.8	46
Jahanabad	7.4	-81
Jamui	14.4	-73
Kathihar	47.8	5
Khagadia	2.7	-94
Kishanganj	10.4	-89
Lakhisarai	0.0	-100
Madhepura	13.3	-78
Madhubani	17.1	-60
Monghyar	7.8	-84
Muzaffarpur	8.1	-84
Nalanda	4.7	-90
Nawada	1.1	-97
Patna	8.1	-80
Purnea	14.5	-75
Rohtas	0.3	-99
Saharsha	0.0	-100
Samstipur	4.4	-90
Saran	8.3	-85
Sheikpura	12.4	-70
Sheohar	14.0	-72
Sitamarhi	35.6	-28
Siwan	4.3	-93
Supaul	14.9	-74
Vaishali	35.7	-24
West Champaran	40.1	-42
Jharkhand		
Bokaro	27.8	-59
Chatra	7.6	-89
Deoghar	0.0	-100
Dhanbad	33.8	-46
Dumka	36.2	-39
East Singbhum	85.4	15
Garhwa	6.0	-91
Giridih	22.0	-61
Godda	13.4	-64
Gumla	32.5	-52
Hazaribagh	9.0	-85
Jamtara	28.9	-58
Khunti	30.6	-60
Koderna	4.0	-93
Latehar	22.0	-67
Lohardagga	15.7	-68
Pakur	17.7	-75
Palamau	6.0	-91
Ramgarh	28.2	-54
Ranchi	34.5	-55
Sahebganj	32.0	-36
Saraikela	74.1	9
Simdega	2.1	-97
West Singbhum	22.4	-67
East Rajasthan		
Ajmer	85.1	228
Alwar	67.6	69
Banswara	72.7	15
Baran	27.2	-51
Bharatpur	37.5	-11
Bhilwara	52.0	28
Bundi	63.6	35
Chittorgarh	42.9	-29

State/Districts	Actual (mm)	% dep.
Dausa	36.7	2
Dholpur	33.9	-17
Dungarpur	49.5	8
Jaipur	59.9	100
Jhalawar	43.3	-41
Jhunjhunu	12.9	-40
Karauli	30.5	-22
Kota	31.2	-49
Pratapgarh	65.8	-14
Rajsamand	60.1	77
Sawai Madhopur	33.8	-7
Sikar	29.6	52
Sirohi	85.9	21
Tonk	62.0	66
Daipur	60.9	31
West Rajasthan		
Barmer	31.5	85
Bikaner	37.6	141
Churu	30.5	106
Hanumangarh	14.6	13
Jaisalmer	39.6	300
Jalore	44.4	65
Jodhpur	25.7	72
Nagaur	84.4	342
Pali	53.7	63
Sri Ganganagar	16.4	12
Gujarat Region		
Ahmedabad	67.1	75
Anand	50.6	0
Banaskantha	34.5	-1
Baroda	64.5	10
Broach	68.0	36
DNH	330.4	100
Dahod	33.5	-50
Daman	358.5	117
Dangs	105.5	-22
Gandhinagar	80.2	33
Kheda	68.7	9
Mehsana	21.1	-54
Narmada	109.7	54
Navsari	153.2	46
Panchmahal	27.6	-59
Patan	52.4	50
Sabarkantha	54.8	-12
Surat	146.1	106
Tapi	97.0	13
Valsad	259.0	110
Saurashtra, Kutch & Diu region		
Amreli	115.5	308
Bhavnagar	71.0	134
Diu	61.4	186
Jamnagar	112.3	399
Junagarh	135.1	275
Kutch	55.6	170
Porbandar	57.0	55
Rajkot	94.2	291
Surendranagar	112.1	350
Maharashtra		
Konkan & Goa		
Goa	204.3	122
Mumbai	309.2	174
Raigad	378.6	153
Ratnagiri	335.4	155







State/Districts	Actual (mm)	% dep.
Sindhudurg	254.7	149
Thane	324.9	154
Madhya Maharashtra		
Ahmednagar	59.8	96
Dhule	57.7	124
Jalgaon	53.0	25
Kolhapur	135.4	122
Nandurbar	112.2	133
Nasik	102.6	94
Pune	63.3	50
Sangli	41.5	129
Satara	55.0	91
Solapur	38.8	42
Marathwada		
Aurangabad	63.8	42
Beed	65.9	48
Hingoli	97.6	48
Jalna	42.4	-11
Latur	117.5	105
Nanded	90.6	59
Usmanabad	53.8	34
Parbhani	154.2	156
Vidarbha		
Akola	134.1	205
Amraoti	184.7	261
Bhandara	118.8	52
Buldhana	62.2	56
Chandrapur	156.9	90
Gadchiroli	187.2	126
Gondia	112.7	35
Nagpur	136.3	92
Wardha	170.7	161
Washim	93.8	70
Yeotmal	121.0	110
Orissa		
Angul	73.9	6
Balasore	85.4	55
Bargarh	73.4	9
Bhadrak	66.3	26
Bolangir	116.8	54
Boudh	69.3	15
Cuttack	85.7	48
Deogarh	88.3	2
Dhenkanal	90.5	38
Gajapati	75.4	44
Ganjam	104.8	121
Jagatsingpur	50.8	2
Jajpur	96.0	54
Jharsuguda	44.3	-44
Kalahandi	124.7	124
Kandhamal	80.5	34
Kendrapara	58.3	-6
Keonjhar	69.4	11
Khurda	85.6	60
Koraput	130.3	83
Malkangiri	122.2	66
Mayurbhanj	108.8	30
Nawapara	85.7	49
Nawarangpur	136.1	58
Nayagarh	146.5	144
Puri	67.5	10
Rayagada	80.0	49
Sambalpur	60.0	-31

State/Districts	Actual (mm)	% dep.
Sonepur	89.8	21
Sundargarh	61.4	-17
West Bengal		
GWB		
Bankura	67.1	13
Birbhum	25.5	-55
Burdwan	50.3	-9
East Midnapore	190.4	121
Hooghly	66.6	-8
Howrah	62.4	-17
Kolkata	120.3	58
Murshidabad	13.0	-77
Nadia	52.7	5
24 Pargana (N)	107.4	91
Purulia	74.2	3
24 Pargana (S)	133.5	40
West Midnapore	139.3	88
SHWB		
Cooch Behar	42.5	-66
Darjeeling	125.4	10
East Sikkim	179.5	69
Jalpaiguri	99.2	-24
Malda	20.6	-63
North Dinajpur	28.1	-70
North Sikkim	136.3	26
South Dinajpur	15.6	-72
South Sikkim	91.9	-13
West Sikkim	220.0	104
Karnataka		
Coastal Karnataka		
Dakshin Kannada	340.8	248
Udupi	379.5	226
Uttar Kannada	224.8	184
North Interior Karnataka		
Bagalkote	43.9	148
Belgaum	35.2	107
Bidar	81.8	95
Bijapur	43.5	64
Dharwad	26.1	78
Gadag	28.5	62
Gulbarga	61.1	58
Haveri	28.5	113
Koppal	41.5	106
Raichur	36.5	38
Yadgir	38.3	7
South Interior Karnataka		
Bangalore Rural	16.7	-41
Bangalore Urban	6.2	-78
Bellary	48.0	143
Chamarajnar	14.6	-2
Chichballapur	29.5	20
Chickmagalur	132.3	199
Chitradurga	18.5	64
Davangere	25.4	109
Hassan	43.1	126
Kodagu	161.3	141
Kolar	20.4	-7
Mandya	4.4	-71
Mysore	21.7	57
Ramnagara	3.7	-87
Shimoga	153.9	270
Tumkur	10.8	-41
Kerala		

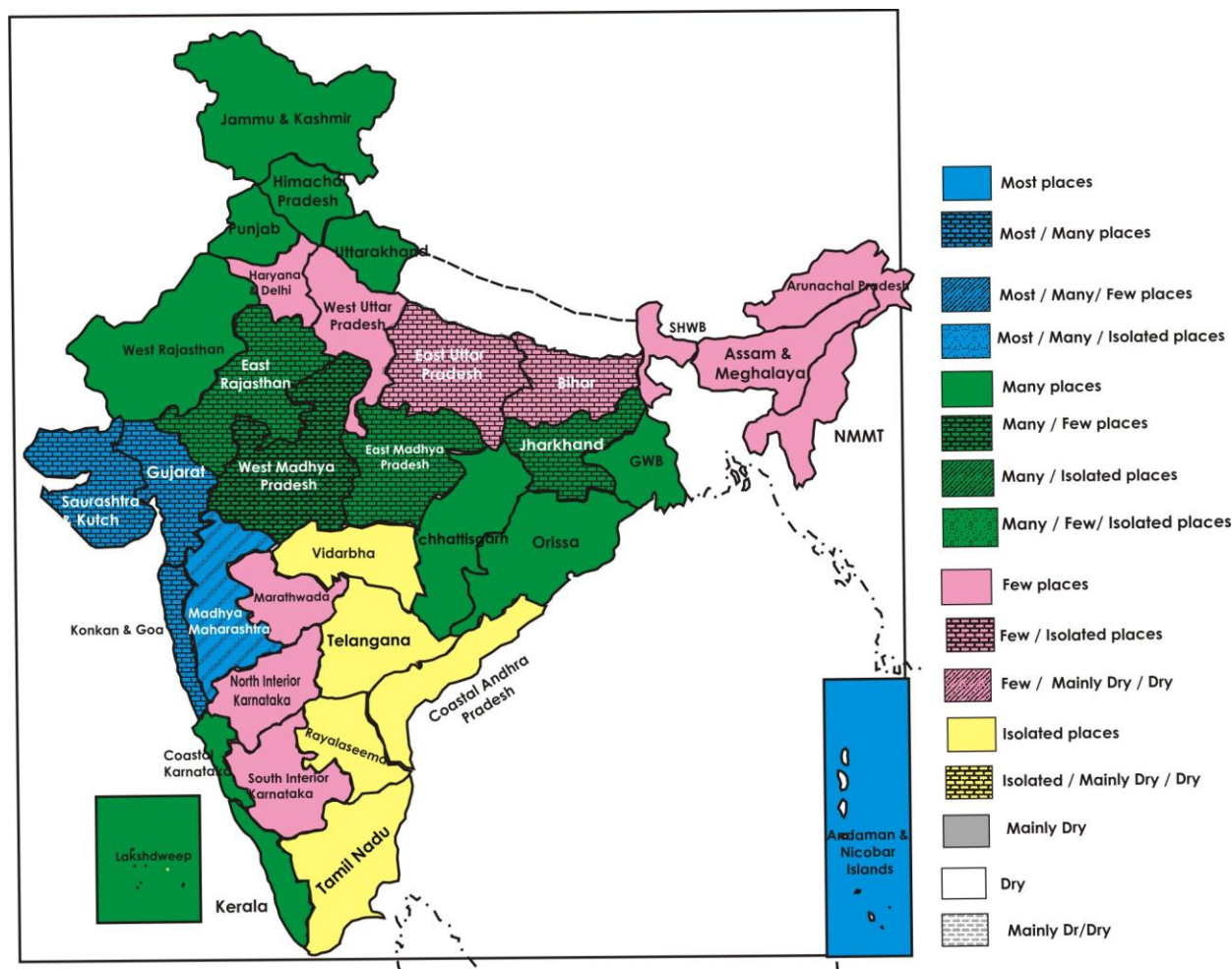
State/Districts	Actual (mm)	% dep.
Alappuzha	140.8	166
Kannur	238.5	300
Ernakulam	177.3	228
Idukki	219.7	201
Kasaragod	198.5	149
Kollam	135.0	229
Kottayam	169.5	204
Kozhikode	235.9	282
Malappuram	129.2	152
Palakkad	135.1	203
Pathanamthitta	136.4	167
Thiruvananthapuram	80.4	247
Thrissur	183.8	207
Wyanad	209.5	170
Tamil Nadu		
Ariyalur	1.5	-94
Chennai	25.2	-9
Coimbatore	20.3	150
Cuddalore	1.0	-95
Dharmapuri	7.6	-65
Dindigul	5.1	-75
Erode	1.9	-87
Kanchipuram	19.8	-28
Kanyakumari	59.5	325

State/Districts	Actual (mm)	% dep.
Karikal	0.4	-96
Karur	0.0	-100
Krishnagiri	9.1	-61
Madurai	2.0	-92
Nagapattinam	5.3	-65
Namakkal	5.8	-62
Nilgiris	168.2	389
Perambalur	6.0	-71
Puducherry	60.8	174
Pudukottai	22.8	-3
Ramanathapuram	2.0	-75
Salem	33.2	43
Sivaganga	6.7	-61
Thanjavur	15.4	-12
Theni	17.1	99
Tirunelveli	8.5	102
Tirupur	1.7	-80
Tiruvallur	32.7	14
Tiruvannamalai	18.7	-38
Tiruvarur	22.9	38
Toothukudi	0.0	-100
Trichy	1.8	-91
Vellore	18.6	-32
Villupuram	25.8	20
Virudhunagar	0.0	-100

State/Districts	Actual (mm)	% dep.
Andhra Pradesh		
Coastal Andhra Pradesh		
East Godavari	120.9	184
Guntur	92.9	210
Krishna	117.4	201
Nellore	25.9	33
Prakasam	57.4	149
Sirkakulam	84.0	92
Visakhapatnam	95.0	141
Vizianagram	107.0	144
West Godavari	138.7	194
Telangana		
Adilabad	118.4	82
Hyderabad	53.2	49
Karimnagar	109.3	131
Khammam	125.3	155
Mehabubnagar	69.9	136
Medak	58.0	47
Nalgonda	75.4	134
Nizamabad	124.6	125
Rangareddy	69.0	95
Warangal	155.7	238
Rayalaseema		
Anantapur	23.9	30
Chittoor	32.5	30
Cuddapah	21.0	5
Kurnool	65.5	156

	(20% or more) excess rainfall		(-60 to -99 %) scanty rainfall
	(-19 to +19%) normal rainfall		(-100%) no rainfall
	(-20 to -59%) deficient rainfall		** Data not available

Weather Forecast (Valid upto 0830 hours of 9th September, 2012)



Major Feature of Weather Forecast up to 0830 hours IST of 09th September, 2012

- Rain/thundershowers would occur at most places over west coast, Gujarat and Andaman & Nicobar Islands.
- Rain/thundershowers would occur at most places over west Madhya Pradesh and Madhya Maharashtra during next 24 hours and decrease thereafter.
- Rain/thundershowers would occur at many places over Rajasthan, Chhattisgarh, Jharkhand, Gangetic West Bengal, Odisha and Lakshadweep.
- Rain/thundershowers would occur at many places over western Himalayan region and Punjab.
- Rain/thundershowers would occur at a few places over Haryana, Uttar Pradesh, east Madhya Pradesh, interior Karnataka and northeastern states.
- Rain/thundershowers would occur at one or two places over rest parts of the country.

Weather Warning during next 3 days

- **Heavy to very heavy rainfall** would occur at one or two places over Gujarat, Konkan & Goa, Madhya Maharashtra, west Madhya Pradesh and south Rajasthan during next 48 hours.
- **Heavy rainfall** would occur at one or two places over coastal Odisha, Andaman & Nicobar Islands and coastal Karnataka during next 48 hours.

Weather Outlook for subsequent 4 days up to 0830 hours IST of 13th September, 2012

- Rain/thundershowers would occur at many places over west coast, Gujarat region central and adjoining east & north peninsular India.
- Rain/thundershowers would occur at a few places over northeastern states.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Most of the districts of Arunachal Pradesh except Upper Dibang Valley and many districts in Assam except Baksa, Barpeta, Chirang, Darrang, Goalpara, Kamrup, Kokrajhar, Nalbari, N C Hills, and West Garo Hills received significant rainfall during last week.
- **Rainfall Forecast:** Rain / thundershowers would occur at few places over the States of the region during the period.
- **Advisories:**
 - As most of the districts of Arunachal Pradesh except Upper Dibang Valley and many districts in Assam except Baksa, Barpeta, Chirang, Darrang, Goalpara, Kamrup, Kokrajhar, Nalbari, N C Hills, and West Garo Hills received significant rainfall during last week, farmers are advised to postpone irrigation to the crops in these districts of the States.
 - In flood affected areas of Assam, transplanting of 60-70 days old seedlings is advised upto mid September, if seedlings of the varieties like Monohar Sali, Gitesh, Andrew Sali, Prasad Bhog, Prafulla etc. are available.
 - In flood affected areas of Hill Zone of Assam, the short duration varieties of rice like Luit, Kapilee, Dichang etc. can be sown directly in puddled fields with sprouted seeds up to middle of September. Farmers can also sow green gram and black gram up to mid-September in medium and upland situation. Farmers can also raise community nursery, if individual farmer does not have suitable land for nursery due to inundation by flood water.
 - Farmers in Hill Zone of Assam are advised to continue transplanting of *sali* rice and gap filling with seedlings of *sali* rice within 7-10 days of transplanting. Farmers are also advised to undertake land preparation and sowing of black gram and green gram and transplanting of cauliflower.
 - Farmers in lower Brahmaputra Valley Zone of Assam are advised nursery sowing of early cauliflower, cabbage and *dolichos* bean and also harvesting of matured jute.
 - Farmers in Upper Brahmaputra Valley Zone of Assam are advised to undertake sowing of short duration varieties of rice. Farmers are also advised to sow radish, early cauliflower, black gram and green gram.
 - Farmers in North Bank Plain Zone of Assam are advised to continue land preparation and sowing of green gram, black gram, early cauliflower and radish.
 - Farmers in Central Brahmaputra Valley Zone are advised to undertake sowing of black gram and intercultural operation of *kharif* sesame and arhar. Harvesting of *Olorius* jute may be continued.
 - Farmers in Barak Valley Zone of Assam are advised to undertake nursery preparation of brinjal. Select upland sandy loam soil for the cultivation of early cauliflower.
 - Farmers in Sub Tropical Hill Zone of Arunachal Pradesh are advised to harvest matured black gram and green gram. Farmers are also advised to undertake nursery sowing of early cauliflower and cabbage.
 - In Mild Tropical Hill Zone of Mizoram, farmers are advised to continue land preparation and sowing of black gram and nursery sowing of tomato and cole crops and undertake harvesting of okra, bean, cowpea etc. Also undertake hand weeding and earthing up in groundnut and soybean.
 - In Mild Tropical Hill Zone of Nagaland, farmers are advised to harvest matured maize cob, cucumber, cowpea and beans. Remove the weeds around papaya plants.
 - Farmers in Sub Tropical Plain Zone of Manipur are advised to maintain 8-10 cm of water level in the rice fields at tillering stage, top dressing may be done by applying 33kg Urea/ha at 25–30 days after transplanting. Continue land preparation for nursery sowing of cauliflower and broccoli. Undertake land preparation and sowing of black gram, French bean and broad bean.
 - In Temperate Sub Alpine Zone of Meghalaya, farmers are advised to undertake nursery raising of cole crops. Water level may be maintained at 2-5cm in *ahu* rice fields and weeding followed by top dressing of urea @43kg/ha may be done.
 - In Mild Tropical Plain Zone of Tripura, farmers are advised for land preparation for transplanting the seedling of early cauliflower, radish and brinjal.
 - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.

- In Hill zone of Assam, infestation of rice hispa in *sali* rice at tillering stage may occur; Spraying with Quinalphos @ 2 teaspoonful /5 lits of water may be done if the infestation is noticed.
- In Lower Brahmaputra Valley Zone of Assam, attack of whorl maggot generally observed in rice up to 30 days after transplanting. Upon unfolding, the edge of the central leaf shows yellowish to white patches. To control this pest, farmers are advised to spray Chloropyriphos 20EC or Carbofuran 3G @ 0.2g per liter of water.
- In Mild Tropical Plain Zone of Tripura, due to prevailing weather conditions, there is chance of attack of sheath blight in upland rice and *kharif* maize. To control sheath blight spray Bavistin 50 WP @ 200 g or Tilt 25 EC or Monceren 250 SC 200 ml in 200 liters of water.
- In Sub Tropical Hill zone of Arunachal Pradesh, stem borer may infest citrus plants; apply a paste made by mixing lime, water and 5% Malathion dust on the stems of the plants up to a height of about 1 m from the ground. Fruit drop also has been reported from different corners. For management, application of Alphamethrin 0.02 % or Malathion 0.5% at 15 days interval may be done.
- In Sub Tropical plain Zone of Manipur and Mid tropical hill Zone of Mizoram, hairy caterpillar and tikka disease may be observed in groundnut and soybean. To control hairy caterpillar spray Quinalphos 25 EC or Chloropyriphos 20 EC @ 2 ml/ lit of water and Carbendazim @ 0.5g / lit of water may be sprayed to control tikka disease.
- Stages of major crops are mentioned in Annexure I.
- **Animal Husbandry**
 - In North Bank Plain Zone of Assam and Sub Tropical Plain Zone of Manipur, farmers are advised to vaccinate cattle and buffaloes against FMD, HS and BQ, pigs against swine fever. Farmers are advised to vaccinate poultry against Ranikhet and coccidiosis. Deworm goat and sheep against Fascioliasis and vaccinate against H.S.
 - In Mild Tropical Hill Zone of Mizoram, farmers are advised to deworm cattle against Fascioliasis, vaccinate poultry against Ranikhet and Coccidiosis, deworm pig and vaccinate against swine fever.
 - Farmers in Sub Tropical Plain Zone of Manipur are advised to vaccinate poultry against Ranikhet and Coccidiosis.
 - Farmers in Sub Tropical Hill Zone of Arunachal Pradesh are advised to provide clean drinking water to the birds, vaccinate poultry against Ranikhet and apply ointment (like Himex-Topical application) to goat and sheep against wound and infection.
- **Pisciculture**
 - Farmers in Upper Brahmaputra Valley of Assam are advised to feed mustard, rice polish etc. to fish. Well sieved lime, free of pebbles can also be applied to the fish ponds. Application of urea which will enhance the algal growth and eventually become feed for the fishes can also be practiced.
 - Farmers in Manipur, Mizoram are advised to maintain 1.0-1.5m water depth in fish ponds.

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

- **Realised Rainfall:** Significant rainfall occurred in all of the districts of Orissa, most of the districts in Gangetic West Bengal (except Birbhum and Murshidabad), many districts in Sub Himalayan West Bengal, Sikkim (except Malda, North Dinajpur and South Dinajpur), Dhanbad, Dumka, East Singbhum, Gumla, Khunti, Sahebganj, Ranchi and Sarikhela districts in Jharkhand and in Gopalganj, Kathihar, Sitamarhi and Vaishali districts of Bihar during last week.
- **Rainfall Forecast:** Rain / thundershowers would occur at many places over Orissa, Jharkhand and Gangetic West Bengal and at isolated places over rest of the region.
- **Warning:** Heavy rainfall would occur at one or two places over coastal Orissa during next 48 hours.
- **Advisories:**
 - As there was significant rainfall occurred in all of the districts of Orissa, most of the districts in Gangetic West Bengal (except Birbhum and Murshidabad), many districts in Sub Himalayan West Bengal, Sikkim (except Malda, North Dinajpur and South Dinajpur), Dhanbad, Dumka, East Singbhum, Gumla, Khunti, Sahebganj, Ranchi and Sarikhela districts in Jharkhand and Gopalganj, Kathihar, Sitamarhi and Vaishali districts of Bihar during last week in the States of the region, farmers are advised to postpone irrigation to the standing crops. As rain is also likely to occur at many places

over Orissa, Jharkhand and Gangetic West Bengal, farmers are advised to postpone intercultural operation and application of fertilizers and plant protection measures.

- In Bihar, in the upland areas, where paddy crop could not be transplanted, farmers can start sowing of September pigeon pea, utilizing recent monsoon rainfall. Farmers are also advised to adopt contingent crop planning such as short duration crops (sunflower, maize, urad, bhindi) on upland fields. Sowing of tobacco and vegetables may also be undertaken. Weather is congenial for planting of onion, mango, litchi and guava. Farmers are advised to prepare pits and planting of seedlings may be done.
- Farmers in North Bihar are advised to provide life saving irrigation in the standing rice crop and ensure moisture in rice crop which is in booting stage, as moisture stress at this critical stage may adversely affect the crop growth and yield.
- Farmers of East and South Eastern Coastal Plain Zone of Orissa are advised for nursery raising of tomato and planting of brinjal and papaya. Also complete planting of marigold.
- Transplanted paddy is at tillering stage (three to four week stage) in East and South Eastern Coastal Plain Zone of Orissa. Weeding should be done at this stage manually or apply 2, 4- D Sodium Salt @750g/ha at 21 days after transplanting followed by application of Urea 87 kg for long and medium duration paddy and 65 kg urea to short duration paddy /hectare.
- Farmers of North Central Plateau Zone of Orissa are advised to sow rainy season vegetables like bhindi (lady's finger), bean, French bean, tomato, cauliflower and cabbage etc.
- Farmers of North Eastern Plateau Zone of Orissa are advised to complete the transplanting of rice at the earliest and prepare the field for sowing of rainy season vegetables like bhindi (lady's finger), bean, French bean, tomato, cauliflower, cabbage etc. and also planting of brinjal.
- Farmers of Mid Central Table Land Zone of Orissa are advised to undertake lemon planting.
- In Central and North Eastern Plateau Zone of Jharkhand, farmers are advised to undertake short duration varieties of arhar, groundnut, urad, turmeric, jowar, soybean and okra for intercropping. Farmers are also advised to sow til, kulthi, potato, green pea, African marigold or French marigold.
- In Western Plateau Zone of Jharkhand, farmers are advised to complete sowing of different *kharif* crops at an early date with early duration varieties; undertake sowing of short duration varieties of different *kharif* crops like rice, urad, groundnut, arhar, maize and rainy season vegetables like bhindi, bean, French bean, tomato, cauliflower, cabbage, brinjal, chilli etc. Farmers, who have not sown *kharif* crops in upland till now, may sow kulthi or safflower. Farmers, having assured irrigation facility are advised to sow early potato and green peas.
- In Coastal Saline Zone of West Bengal, farmers are advised to undertake land preparation for cultivation of early variety of hybrid tomato and cauliflower. In uplands where paddy could not be transplanted due to deficiency of water, farmers are advised to sow black gram.
- In New Alluvial Zone and Old Alluvial Zone of West Bengal, farmers are advised to maintain stagnant water (2 to 3 cm) upto 10 days in rice field after transplanting with the help of rainwater. Increase the depth of stagnant water with age of crop. At the time of panicle initiation, keep 5 to 7 cm water in the field. In case of timely sown crop, at 3 weeks after transplanting, apply top dressing (@ 4.5 kg per bigha).
- Farmers in Laterite and Red Soil Zone of West Bengal are advised to maintain 5-7 cm depth of water in *aman* rice. Farmers may also go for planting of marigold flower.
- Farmers in Hill Zone of West Bengal are advised to start seedbed preparation of early cauliflower. Seedbed may be prepared for the sowing of late varieties of cauliflower and cabbage. Farmers are also advised to harvest of maize.
- Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
- White ant attack in groundnut has been found in dry areas of Ganjam and Puri districts of East and South Eastern Coastal Plain Zone of Orissa. Farmers are advised to go for soil drenching with 2 ml Chloropyriphos per litre water thoroughly. Leaf minor has also occurred. Spray 2 ml Chloropyriphos /litre water to control it.
- Maize crop has been infested with stem borer in North Central Plateau Zone of Orissa. Farmers are advised to apply 1 g Furadan in the leaf whorl. Otherwise spray 2 ml. chloropyriphos or 1.5 ml phosphamidon in 1 litre water. Again repeat the spraying once again after 15 days of first spraying. *Helicoverpa* infestation has been found in maize, Spray 100 L.E. NPV during morning and evening.

- White ant attack on groundnut crop has been found in low rain fall areas of North Central Plateau Zone. Farmers are advised to go for soil drenching with 2 ml Chloropyriphos in each litre water thoroughly. If tikka disease has been found, of then apply Carbendazim@ 2gm/Litre of water. Hairy caterpillar in groundnut has been found, Apply 10-12 kg Chloropyriphos or spray 400 ml quinalphos in 200 liter water. Due to high humidity and hot weather there is chances of wilt disease, then spray @ 1gm streptocyclin mixed with 15gm Carbendazim in 10 litres of water at the root and around.
- Fruit and shoot borer in brinjal has been found in Mid Central Table Land Zone of Orissa. Farmers are advised to install Pheromone traps @ 12 nos / acre. Alternately, spray 4 g Sevin WP or 2 ml Malathion in 1 litre water. Thrips in Chilli has been found. Spray 300 ml Ethion or 400 ml Carbosulphan in 200 litre water / acre.
- Infestation of thrips on groundnut crop has been occurred in Mid Central Table Land Zone and in Nayagarh district of East and South Eastern Coastal Plain Zone of Orissa. Spray 2 ml Endosulphan in 1 litre water. White ant and white grub attack has been found. Carry out thorough soil drenching with Chloropyriphos solution @ 2 ml / litre water. Bud necrosis has also been found. Spray Imidaclopid @ 4 ml / 10 litre water to control the vector.
- In Nayagarh district in East and South Eastern Coastal Plain Zone of Orissa, infestation of early shoot borer in sugarcane has been found. Release 50,000 Trychograma chilonis parasite to control the borer. Otherwise install 4 to 5 pheromone traps per acre to attract the borer or spray 400 ml Monocrotophos or Quinalphos in 200 litres of water per acre.
- Under prevailing weather situation, in New Alluvial Zone of West Bengal, leaf folder may attack *aman* rice. As a control apply Triazophos @ 0.5 ml/litre or Chlorpyriphos 50% + Cypermethrin 5% @ 1.5 ml/litre of water. Combined attack of downy mildew and mosaic may be seen in pointed and bitter gourd. Apply Ridomil –MZ @ 2 g per litre of water to control the attack. White fly has been reported in okra leading to the spread of yellow mosaic virus. Spray Difenthiuron @ 0.75g per litre of water to prevent the further spread of the disease.
- In Hill Zone of West Bengal, fruit and shoot borer may infest tomato, okra, chilli and brinjal. To manage fruit and shoot borer, spraying should be done with Malathion @ 1 ml / litre or Dichlorovos @ 1 ml / litre of water. Tea may be infested by mites. For protection, the crops may be sprayed with Dicofol @ 1 ml / litre of water. Stem borer, leaf folder, blast or brown spot may be found in rice. For protection against the stem borer and leaf folder, spray either with Chlorpyriphos @ 2.5 ml / litre or Monocrotophos @ 1.5 ml / litre of water and for blast or brown spot, spray Ediphenphos @ 1ml / litre of water.
- As there is possibility of rain and high humidity in Terai Zone of West Bengal, sheath blight and may be found in rice and collar rot in chiili. For sheath blight, spray Carbendazim 1 g per litre of water or validamycin @ 2 ml per litre of water. For collar rot spray Carbendazim 12% + Mancozeb 64%, 2 gram per lt of water. Yellow vein mosaic can be found in ladies finger. To control this white fly may be controlled. To control whitefly spray Imidaclopid 1 ml/4 lt of water.
- Stages of major crops are mentioned in Annexure I.

Animal Husbandry

- Farmers of North Eastern Plateau Zone of Orissa are advised to provide clean and concentrate feed to the cattle, and mix with dry and green fodder. Ensure for enrich diet having protein, carbohydrate, fat, vitamins. Arrange for vaccination to prevent from Foot and Mouth disease. Use potassium permanganate @ 5 ml per liter of water to clean the infected parts of the animals, as a precautionary measure. Vaccinate cattle against Anthrax disease, and arrange medicine against worm infection during rainy season. During the present monsoon season, there are low light duration due to cloudy weather condition on most of the days and hence, farmers are advised to increase light duration in poultry farms.
- Farmers of North Central Plateau Zone of Orissa are advised to give RD vaccine immediately to the chicks which are 7 days old. To prevent coccidiosis disease, spray antibiotic solution named Kohrsolin-TH in the poultry house. Periodic vaccination viz. FMD, HS & BQ may be carried out to protect the dairy animals. Clean and hygienic water should be fed to dairy animals. Keep the animal shed clean.

Pisciculture

- Farmers of North Eastern Plateau Zone are advised that to decrease the turbidity of water, apply lime @ 250 Kg/ha. Prevent the entry of predator fishes in to the pond by putting net at water entry points and go for false netting for better growth of fishes.

- Farmers of North Eastern Coastal Plane Zone and North Central Plateau Zone of Orissa are advised to purchase fish seeds from a reliable fish seed producer and stock 3000 nos. of advance fingerlings of more than 8cm size per one acre of water area. In case of three species combination, the stocking numbers should be for Catla-900, Rohu-1200 and Mrigal-900. In case of six species combination, the stocking numbers should be for Catla-800, Rohu-1200, Mrigal-500, Common carp-300, Grass carp-100 and Silver carp-100. In any situation, the average water depth of the pond should not be less than 5ft level.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** All districts of Konkan, Madhya Maharashtra, Marathwada and Vidarbha received normal to excess rain during last week. All districts except Mehsana and Panchmahal district in Gujarat region and all districts in Saurashtra and Kutch region received significant rain during last week.
- **Rainfall Forecast:** Rain/thundershowers would occur at most places over Konkan, Madhya Maharashtra during next 24 hours and decrease thereafter. Rain/thundershowers would occur at most places over Gujarat. Rain/thundershowers would occur at one or two places over Marathwada and Vidarbha.
- **Warning:** Heavy to very heavy rainfall would occur at one or two places over Gujarat, Konkan & Goa and Madhya Maharashtra during next 48 hours.

Advisories:

- As widespread rainfall is expected over Konkan and Madhya Maharashtra during next 3 days with extremely heavy rainfall at one or two places during next 48 hours, farmers are advised to make arrangement to drain out excess water from crop field and they are also advised to apply plant protection measures and fertilizers and undertake intercultural operations after current spells of rain.
- As rice is at tillering / flag leaf initiation stage in Konkan, farmers are advised to maintain 5 to 10 cm water level in already transplanted rice field. Farmers of Kolhapur, Pune and East Vidarbha region are advised to maintain 5 cm water level in already transplanted rice field.
- Farmers of South Konkan are advised to complete weeding in transplanted field and apply third dose of Nitrogenous fertilizers at flowering stage i.e. 435 g Urea per 1 R area. For finger millet, apply second dose of nitrogenous fertilizers i.e. 800 g Urea per 1 R area with better intercultural operations like hand weeding after current spells of rain.
- Farmers of Pune and Solapur districts are advised to undertake sowing of fodder crops like jowar by selecting Ruchira, Phule Amruta and gaint bajra and African tall, Manjari composite in maize with realized rainfall.
- Farmers of Madhya Maharashtra, Marathwada and west Vidarbha are advised to start plucking of already matured pod of green and black gram. They are also advised to prepare field for sowing of *rabi* jowar, safflower after harvesting of matured pulses.
- There is moderate to heavy rainfall during last 2 days in Marathwada and Vidarbha region, farmers are advised to drain out excess water from cotton field and intercultural operations may be done on vapsa condition to avoid leaf and floral bud fall.
- As cotton is at vegetative / floral bud initiation stage, farmers of North Madhya Maharashtra are advised to spray 2 % DAP for better development of cotton boll and preventive measures against read leaf may be taken.
- Due to revival of good rainfall, in the area where crop failed, in North Saurashtra zone, the farmers are advised to sow semi *rabi* sesame, sesame Gujarat-2, dual purpose sorghum, castor, gram, mustard, Ajwan and sowa. Farmers are specially advised to spray 2 % urea solution for quick boost up of growth in all standing crops. Also apply split dose of nitrogen irrespective of crop. Carry out transplanting of chilly and other vegetable crops.
- Utilizing the realized rain in Kutch district of North West Zone of Saurashtra and Kutch region, farmers are advised to carry out sowing of maize, sorghum, lucerne, bajra, cowpea etc. for green fodder and vegetables like guar, cowpea, bottle gourd, bitter gourd. Carry out inter cropping, weeding and top dressing of fertilizers.
- Farmers in South Saurashtra Zone of Gujarat are advised to carry out gap filling in castor crop and sowing of sesame Purva-1. Apply 12.5 kg N/ha and 12.5 kg P₂O₅/ha (i.e 27 kg DAP and 17 kg Urea) as basal dose in sesame. If yellowing in groundnut is found, spray Ferrous Sulphate @ 100 gm with 10 gm of Citric Acid in 10 liter of water. Apply third dose of top dressing of nitrogen @ 40 kg/ha i.e. 88 kg urea/ha 90 DAS in cotton.

- As moderate to heavy rain is likely to occur in North Gujarat Zone, avoid irrigation and chemical spraying in standing *kharif* crops. Avoid water logging in low land area of the crop field. Carryout plantation of different horticultural crops.
 - As there was good rain during last week and rain is expected, avoid irrigation in South Gujarat Zone. Prepare nursery bed for seedling of *rabi* vegetables.
 - Due to isolated heavy to medium rain in South Gujarat Heavy Rainfall Zone of Gujarat, farmers are advised to make arrangement for drainage in vegetables. Drain out excess water from the low land areas and also carry out gap filling in late sown cotton crop.
 - Carry out plantation of different horticultural crops in Bhal and Coastal Zone of Gujarat.
 - Stages of the crops are mentioned in Annexure I.
 - Prevailing weather is congenial for attack of leaf caterpillar in soybean in Marathwada, spray 5 % Neem extract or Quinolphos 20 ml or Imamectin Benzoate@3g in 10 litres water.
 - There may be incidence of blight in rice in Pune division, spray Carbendazim@ 10 ml+10 ml sticker in 10 litres water. For control of leaf folder in paddy in western ghat region, spray chloropyriphos @ 2ml per liter of water.
 - Under prevailing weather there may be attack of aphids, jassids and thrips in cotton in Vidarbha, spray Acetamiprid 20 % @4g or Acephate 75 % @ 15 g in 10 litres water.
 - Under prevailing weather, there may be infestation of blast in rice and finger millet in Konkan, spray Carbendazim@ 10 g or Copper oxychloride 25 g per 10 litre water. There may be incidence of downy mildew and powdery mildew on vegetables, spray Dithane M-45 or Dithane Z-78 each @ 2.5 g/litres of water at an interval of 10 to 15 days.
 - Weather conditions in South Gujarat Zone are favorable for incidence of mealybug in cotton. Spray Profenophos 10ml or Carbaril 50WP 40gm or Trizophos 40EC 25ml Methyl-o-Demeton 25EC 20ml or Quinalphos 20EC 20ml or Acefet 75SP 20gm or Chlorpyriphos 20EC 20ml or Thyodicarb 75% WP 15gm per 10 liter of water.
 - Cloudy condition and humid environment is favorable for outbreak of pest and disease in the crops in North Gujarat Zone. Take control measures against them after current spells of rain.
 - Due to cloudy weather, infestation of sucking pest is occurring in vegetable and other crops in Bhal and Coastal Zone of Gujarat. Spray at 10 days interval of 10 ml Dimethoate or 10 ml Methyl-o-dematone in 10 liter water.
 - Varieties of *kharif* crops are mentioned in Annexure II.
- Animal Husbandry:**
- Vaccinate the livestock as preventive measure against the prevailing diseases occurring during rainy season in South Gujarat Heavy Rainfall Zone.

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

- **Realised Rainfall:** Significant rainfall occurred in most of the districts in Uttarakhand and East Rajasthan, many districts of Himachal Pradesh and West Rajasthan, Bhathinda, Faridkot, Gurdaspur, Patiala and Sangrur districts in Punjab, Chandigarh, Gurgaon, Mahendragarh, Mewat, Palwal, Panchkkula, Rewari, Sirsa and Yamunanagar in Haryana, Bahraich, Balrampur, Barabanki, Gazipur, Gorakpur, Hardoi, Kannauj, Kheri, Kushi nagar, Lucknow, Rai Bareilly, Shraswati, Siddarth nagar and Sitapur in East Uttar Pradesh, Badaun, Etah, Etawah, Firozabad, GB Nagar, Ghaziabad, Hamirpur, Jalaun, Kanshiram nagar, Maipuri, Mathura, Moradabad, Saharanpur and Shahjahanpur in West Uttar Pradesh and Jammu, Rajouri, Reasi, Samba and Udhampur districts in Jammu & Kashmir.
- **Rainfall Forecast:** Rain/thundershowers would occur at many places over Rajasthan, Uttarakhand, Himachal Pradesh, Jammu & Kashmir and Punjab during next three days and at a few places over Haryana and Uttar Pradesh.
- **Warning:** Heavy rainfall would occur at one or two places over South Rajasthan during next 48 hours.
- **Advisory:**
 - As significant rainfall occurred in most of the districts in Uttarakhand and East Rajasthan, many districts of Himachal Pradesh and West Rajasthan, farmers are advised to postpone irrigation to the standing crops. Bhathinda, Faridkot, Gurdaspur, Patiala and Sangrur districts in Punjab, Chandigarh,

Gurgaon, Mahendragarh, Mewat, Palwal, Panchkkula, Rewari, Sirsa and Yamunanagar in Haryana, Bahraich, Balrampur, Barabanki, Gazipur, Gorakpur, Hardoi, Kannauj, Kheri, Kushi nagar, Lucknow, Rai Bareilly, Shraswati, Siddarth nagar and Sitapur in East Uttar Pradesh, Badaun, Etah, Etawah, Firozabad, GB Nagar, Ghaziabad, Hamirpur, Jalaun, Kanshiram nagar, Maipuri, Mathura, Moradabad, Saharanpur and Shahjahanpur in West Uttar Pradesh and Jammu, Rajouri, Reasi, Samba and Udhampur districts in Jammu & Kashmir received rainfall during last week. Farmers in the above mentioned districts are advised to postpone irrigation to the crops.

- As rain / thundershowers would occur at many places over Rajasthan, Uttarakhand, Himachal Pradesh, Jammu & Kashmir and Punjab during next three days, farmers in are advised to postpone weeding, intercultural operation and application of fertilisers to the standing crops in the above States of the region. In view of occurrence of heavy rainfall in one or two places over South Rajasthan during next 48 hours, arrange for adequate drainage in standing crops to avoid stagnation of water.
- Farmers in Flood prone Eastern plain zone (Bharatpur) in East Rajasthan are advised to undertake transplanting of marigold, balsom, bougainvilla and xenia. Transplanting of dhaincha (sesbania) in fallow land may be done for green manuring purpose. Undertake sowing of early radish, transplanting of onion seedlings and early cauliflower may be done. Carry out weeding and maintain plant population by thinning in timely sown crop like cluster bean, pearl millet, sesame, moong and groundnut.
- Farmers in Flood prone Eastern plain zone (Bharatpur) in East Rajasthan are advised to ensure proper drainage in standing field crops, postpone plant protection sprays for few days till weather become clear and use vegetative mulch in between rows to conserve soil moisture and control weeds.
- In (Banswara) Southern humid plain zone of Rajasthan, farmers are advised to apply last dose of urea for maize & upland paddy and also advised to burry down the green manuring crops for conservation of rain water. Water stagnation in crops may be avoided. Sowing of castor may be completed. Carry out 3-4 ploughings and planking for moisture conservation after every spell of rainfall for timely sowing mustard crop.
- Farmers in Semi Arid Eastern Plain Zone (Jaipur) in East Rajasthan are advised continue sowing of early radish, okra, spinach, sweet potato and raising nursery of cauliflower, planting of fruit crops like mango, plum, pomegranate and Aonla. Undertake hoeing and weeding and top dressing in pearl millet, maize and sorghum and irrigated groundnut
- In Transitional Plain Zone of Inland drainage (Fatehpur) of West Rajasthan, farmers are advised to undertake hoeing and weeding in timely sown *kharif* crops.
- In Arid Western Plain Zone (Jodhpur) in West Rajasthan, farmers are advised to undertake weeding to control the moisture. Sowing of Taramira may be done from 10th September - 15th October. Conserve rain water for sowing of the *rabi* crops like mustard, gram.
- In Sub Humid Southern Plain and Aravali Hill Zone (Udaipur), farmers are advised to install five pheromone traps per ha in cotton fields for assessment of bollworm incidence in cotton crop. Prepare seed for raising nursery of chilli, brinjal and tomato for *rabi* season and undertake hoeing and weeding in vegetables. Sowing of ajwain may be done.
- In irrigated northwestern plain zone (Sriganganagar), farmers are advised to give the third dose of nitrogen @ 10 gm/bigha in the form of top dressing of ammonium sulphate or urea in rice.
- In Sub tropical zone (Chatha) farmers are advised to undertake sowing of toria crop during clear weather.
- In Cold Arid Zone of Jammu & Kashmir, farmers are advised to continue sowing of legumes as fodder or pea mixed with maize and millets to enrich the soil.
- In subtropical zone (Chatha) of Jammu continue the nursery of cauliflower.
- In (Leh) cold arid zone, farmers are advised to harvest wheat, barley and mustard before shattering of pods. Farmers are also advised to harvest Alfalfa before the leaves are shed. Farmers are also advised to harvest vegetables like tomatoes, capsicum, chilli and brinjal at regular interval. Proper irrigation should be applied at regular intervals of time. Seed crop of lettuce, cabbage, chinese cabbage, carrot and radish may be harvested. Harvesting of cabbage, cauliflower, bottle gourd, cucumber, summer squash, French beans, Faba beans, methi & coriander may be done. Okra in green house may be harvested at 3 days interval. Cover the trenches and low tunnels with polythene in the night as the temperature may dip below <5°C.

- In Intermediate zone of Jammu & Kashmir, farmers are advised to continue nursery sowing / transplanting of knol-khol, cabbage and cauliflower and sowing of bhindi, radish, pumpkin, bitter gourd, bottle gourd, sponge gourd, carrot and turnip. Also advised to undertake top dressing in rice, maize, bajra, pulses and late sown maize.
- In Intermediate zone of Jammu & Kashmir, harvest the *kharif* fodder i.e jowar. Drain out excess water from the field. Do the second top dressing with 1/3rd N through urea before tassel formation and also do the sowing of toria. For leaf webber and capsule borer, control spray Carbaryl @ 0.1% or Endosulfan @ 0.07%. after current spells of rain.
- In Valley Temperate zone of Jammu & Kashmir, farmers are advised to undertake transplanting of seedlings of cole crops (cauliflower and cabbage) and sowing of root crops.
- In East Uttar Pradesh, hand weeding, top dressing of N fertilizer in rice and sugarcane may be done. Farmers are advised for intercropping of pigeon pea with jowar. Undertake weeding in early sown direct seeded and transplanted rice. Sowing of late pigeon pea variety, transplanting of cauliflower, brinjal, chillies, tomato, sweet potato, plantation of fruit and timbers, earthing and propping of sugarcane crops may be done.
- Farmers in West Uttar Pradesh are advised for transplanting of early varieties of tomato, brinjal, cauliflower and celery. Weeding, hoeing top dressing of fertilizers in sugarcane, early sown *kharif* maize, rice, sorghum and vegetables may be done.
- Farmers in Himachal Pradesh are advised to ensure 4-5 cm standing water and keep paddy crop weed free. In high hill dry temperate zones improved grasses and legumes can be planted. Intercultural operations in opla, phafra, Frenchbean may be carried out in temperate regions. Skip irrigation to the crops. Ensure drainage in maize fields and impound water in rice field. It is optimum time for sowing of cole crops in poly houses. Nursery sowing of cauliflower and tomato crop is advised so that same can be transplanted in September. In mid hill region transplanting of cauliflower can also be taken.
- In Bhabar and Tarai Zone of Uttarakhand, heavy rainfall has been received during last few days and light rainfall is also expected during this week, farmers are advised not to go for any irrigation in rice crop during this week. Complete transplanting of seasonal grasses for fodder to animals as their will be sufficient soil moisture. Farmers are advised to remove weeds from all standing field crops like soybean, maize, moong and urd etc.
- In (Ranichuri) Hill zone of Uttarakhand, farmers are advised for sowing of high yield variety of toria utilizing realized rainfall during last week.
- In Delhi, farmers are advised for weeding and hoeing may be done in all crops and vegetables. Intercultural operations in sugarcane are advised to remove the weeds. Proper drainage of water may be done from nurseries of vegetables, maize, urd, moong and lobia. Farmers are advised for hoeing and weeding in the standing crops for effective weed control and to conserve the soil moisture.
- In Western Zone of Punjab, farmers are advised to drain out excess water standing in the field as the crop is sensitive to standing water and there is possibility of rainfall. In plain Zone, farmers are advised sowing of potato, palak and transplanting of cauliflower. Also started propping up to save sugarcane crop from lodging. Apply irrigation as per crop need.
- In Western plain Zone of Punjab, farmers are advised to provide dry bedding to young calves.
- Farmers in Haryana are advised to keep rice crop weed free and apply recommended dose of fertilizers and intercultural operations may be done. Avoid water stagnation for extended period in existing vegetable crops. Propping and earthing up in late sown sugarcane, transplanting of *kharif* onion, cabbage and cauliflower in the field may be done. Cutting of sudan grass for green fodder and moisture conservation practices in dry land areas after receipt of every spell of rainfall may be done.
- In Transitional Plain Zone of Inland drainage (Fatehpur) of West Rajasthan, bacterial blight attack on green gram, moth bean and cowpea are observed. Spray Streptocyclin @ 1 gm and copper fungicide @ 20 gm per 10 litre water. Okra crop may be suffered from yellow mosaic disease. This disease is spread by white fly attack. Spray Melathion 50 EC @ 1.0 ml per litre water before & after flowering.
- In Arid Western Plain Zone (Jodhpur) in West Rajasthan, in pulses at the time of flowering there may be incidence of fruit borer due to prevailing weather. Farmers are advised to monitor the crop.
- In irrigated northwestern plain zone (Sriganganagar), to control the leaf folder, spray 0.3 ml/lit imidacloprid 17.8 SL. There is incidence of pink bollworm in few places, to control make a mixture

of carbaryl WP in 4.5 gm/lit in water and spray and apply drenching of bavistin to affected area. In desi kapas to control spotted bollworm spray endoscarb 14.5 SC 1ml/lit in water. In guar field to control BLB, spray streptomycin 12gm/100 lit in water. In early sown moong there is incidence of white fly.

- In Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh, weather is conducive for blast in paddy, for control spray the crop with Blitox 50 (Copper oxychloride) with 2.250 kg Blitox 50 or 750 g Bavistin 50 WP or 750 ml Hinosan in 750 litre of water/ha. Fruit borer is also observed in brinjal, okra and tomato, for control spray Carbaryl @ 2g /litres. Weather is conducive for attack of white fly in cucurbits, tomato and French bean, for control spray Acephate @0.05% (7g/litres of water) and direct the spray on lower leaves.
- In Mid hills sub humid Zone of Himachal Pradesh, weather is conducive for the attack of red pumpkin beetle and fruit fly in cucurbits. For control of fruit fly spray Malathion 1ml/litre + 50 gram gur or sugar. Also the ensuing weather is congenial for spread of fruit rot in tomato, chilli and Shimla mirch, for control apply Dithane M-45 @ 2-3 g per litre of water in 10-15 days interval. Fruit borer is also observed in brinjal, okra and tomato, spray carbaryl @ 2g /litre. Weather is conducive for attack of white fly in cucurbits, tomato and French bean, for control spray Acephate @0.05% (7g/litres of water) and direct the spray on lower leaves. Weather is conducive for rice blast in paddy, for control spray the crop with Blitox 50 (Copper oxychloride) with 2.250 kg Blitox 50 or 750 g Bavistin 50 WP or 750 ml Hinosan in 750 L water/ha.
- Due to humid weather conditions in Delhi, there may be increase in population of insect pests of cotton. Farmers are advised to install pest specific pheromone traps in the fields. Under present weather conditions, damage by leaf folders in paddy crop is reported by farmers. To control the pest, mechanical methods, such as rope method (to dislodge the larvae) is advised.
- In Western Zone of Punjab, attack of jassid on bhindi is observed, farmers are advised to spray 560 ml of Malathion 50 EC in 100-125 litres of water per acre.
- **Animal Husbandry**
 - In Sub humid sub tropic of Uttarakhand, it is advised to vaccinate the animals for various diseases as they are more prone to diseases in this weather. For the control of cough use Piperazine citrate @ 30-50 ml/animal. Vaccination for Ranikhet disease in poultry should be done.
 - In Barbar & Tarai zone of Uttarakhand, farmers are advised to maintain proper cleanness in animal sheds for avoiding incidence of diseases. Farmers are advised to use iron case in poultry house for birds. It will give more eggs & will increase feed efficiency of birds. Proper care should be taken for cattles because the chance of Foot Mouth disease is more during rainy season. Green forages is more available at this time but it should be mixed with wheat straw in 30: 70 ratio for feeding. Proper vaccination of all cattles and hens/bird should be during this period.
 - In Transitional Plain Zone of Inland drainage (Fatehpur) of West Rajasthan, farmers are advised to that, mastitis disease may be seen in milch animals. In this disease, mammary glands & teats become swollen & blood spots in milk may be seen. Treat the affected animal under the guidance of veterinary Doctor.
 - Farmers in Semi Arid Eastern Plain Zone (Jaipur) in East Rajasthan are advised due to changing environment milch and baby animals are likely to be affected with infection of respiratory tracts. If symptoms like droppings from nose, fever etc. are seen in animals, a three days course of Ciproflaxin, Anorflaxin or Sulpha may be given under the guidance of veterinary doctor. Deworming may be done in milch and other animals. Worms affected animal loss appetite & become weak.
 - In Arid Western Plain Zone (Jodhpur) in West Rajasthan, give vaccination of H.S/B.Q.
 - In intermediate zone of Jammu & Kashmir, vaccination of animals against FMD is advised. Weather is conducive for ticks and mites attack on animals. For control spray Butox@ 2.0 ml per litres of water. Ensure proper drainage in the surroundings of cowshed.
- **Horticulture :**
 - In Himachal Pradesh, give support to the branches of apple so that branches should not break due to fruit load. Good rains already received and also expected in next week, so keep the basins of the plants free from weeds and well drained. It is time for plantation of evergreen plants like mango, litchi, guava, citrus, loquat and amla. Plant the saplings in 3x3x3 cubic feet pit. Add 40-50kg FYM+SSP300g + Chlorpyrifos 10ml/10litres of water per pit before planting. The ensuing weather is conducive for the

attack of leaf miner in new growth of citrus. For its control, spray 10 ml Matasystox or Malathion 10 ml in 10 litre of water. The new growth appearing below bud union may be cut.

- In valley temperate zone of Jammu & Kashmir, do budding operations in apple trees. Use well grown bud material from known mother plants. Harvest apple and pear when they attain proper size and develop at least 50 % of the variety color. Harvest grapes when the berries in the bunch have attained proper size, develop variety color and sweetness.
- In sub-tropical zone (Chatha) Jammu, farmers can go for propagation of mango, guava, citrus, ber, peach can be done during these days. Harvest the guava fruit when fruit is still hard.
- In Leh cold arid zone, farmers are advised that irrigation may be done at regular intervals of time, even after harvesting fruits.
- In intermediate zone (pahalgam), farmers are advised to do the planting of litchi.
- In irrigated northwestern plain zone of Rajasthan, farmers are advised to prepare nursery for kinnow fruit.

Apiculture :

- In Sub Tropical (Chatha) Zone and Intermediate (Pahalgam) Zone of Jammu & Kashmir, farmers are advised to check ants by placing leg of bee hives stand in water pots & feed the colonies with sugar water solution in the ratio of 2:1. Check ectoparasitic mite infestation by dusting sulphur. Keep bee colonies in shade or cover with wet gunny bags. Provide ventilation by placing a small stock in between brood chamber. Kill wasps with a wooden flapper and also by dusting or spraying with insecticides.
- In Intermediate zone of Jammu & Kashmir, dust sulphur @ 1 g/frame on top bars to control ectoparasitic mite. Control wax both by fumigating frames with aluminium phosphide tablets before using them. Destroy wasp nests by dusting or spray insecticides and kill wasps colonies by wooden flappers.

• Floriculture :

- In Himachal Pradesh, it is advised to control of mites in carnation by spray of diclofol @ 1 ml per litres of water and repeat spray in 15 days interval if problem persists. In already planted summer annuals, pinching is advised. Weather is conducive for appearance of red spider mites in carnation, for control spray Cypermethrin or Nuvacron @0.05%. A heavy rain is expected so skip irrigation and ensure proper drainage to flowers beds. Weather is conducive for attack of blue beetle in roses and balsam, for control spray Metacid @ 0.05%.

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

- **Realised Rainfall:** Almost all the districts in Kerala, Telangana, Coastal Andhra Pradesh, Coastal Karnataka, most of the districts in Rayalaseema except Cuddapah, North Interior Karnataka except Gadag, Dharwad and Haveri, South Interior Karnataka except Bellary, Chikmagalur, Hassan, Kodagu and Shimoga, Kanyakumari, Nilgiris, Puducherry, Salem and Tiruvallur in Tamil Nadu received good rainfall during last week. No significant rainfall occurred over remaining parts of the region.
- **Rainfall Forecast:** Rain/thundershowers would occur at most places over Coastal Karnataka and Kerala, a few places over Interior Karnataka and at one or two places over remaining parts of the region.
- **Warning:** Heavy rainfall would occur at one or two places over Coastal Karnataka during next 48 hours.
- **Advisories:**
 - As almost all the districts in Kerala, Telangana, Coastal Andhra Pradesh, Coastal Karnataka, most of the districts in Rayalaseema except Cuddapah, North Interior Karnataka except Gadag, Dharwad and Haveri, South Interior Karnataka except Bellary, Chikmagalur, Hassan, Kodagu and Shimoga, Kanyakumari, Nilgiris, Puducherry, Salem and Tiruvallur in Tamil Nadu received good rainfall during last week, postpone irrigation to the standing crops and drain out excess water from the fields in the above States of the region.
 - Farmers in the Eastern Dry Zone are advised to take up intercultural operations in the plantation crops like, coconut, sapota, guava and pomegranate etc. and provide staking to the newly planted horticultural crops in view of high wind speed.
 - Due to continuous rains in the last three days, water was stagnated in the fields in the North East Transition Zone of Karnataka. Hence, farmers are advised to drain out excess water from the fields by providing proper drainage and harvest black gram as early as possible.

- Farmers in the North Dry Zone of Karnataka are advised to take up sowing of sunflower and *rabi* jowar by September end and undertake land preparation for sowing of *rabi* crops, since moderate rainfall has been received and forecasted in the coming days, farmers are also advised to take up transplanting and dibbling of chilli + cotton (desi).
- Farmers in the Coastal Zone of Karnataka are advised to drain out excess water from paddy fields, as heavy rains were received in some parts of the districts. Farmers are also advised to apply second dose of fertilizers to arecanut, coconut and cashew in the month of September and October, since medium to high showers are expected in next few days.
- Farmers in the North Transition Zone of Karnataka are advised to take up sowing of potato and intercultural operation and hand weeding in early sown groundnut.
- Farmers in the North East Dry Zone of Karnataka are advised to undertake sowing of jowar, maize and bajra for fodder purpose, sowing of castor and sunflower upto end of September and October, respectively and undertake *rabi* land preparation after receiving sufficient rainfall. Farmers are also advised to undertake harvesting of green gram, ploughing in sole green gram crop area after harvest and wherever green gram is sown as inter cropping with red gram, harrowing is to be done in between the red gram crop, soon after the harvest.
- Farmers in the Southern Zone of Tamil Nadu are advised to undertake sowing of pulses, cotton, maize and planting of banana and select plants which are not affected by bunchy top virus for planting.
 - Farmers in the South Zone of Tamil Nadu are advised to select drought tolerant varieties of cotton, pearl millet, sorghum, green gram and sunflower for sowing in the ensuing North East Monsoon season.(Varieties given in Annexure-I).
 - Farmers in the High Altitude Hilly Zone of Tamil Nadu are advised to adopt field sanitation and preventive sprays of fungicides, complete sowing of vegetable crops and monitor for pest and disease in the crops sown during last month.
 - Farmers in the High Rainfall Zone of Tamil Nadu are advised to undertake combined application of systemic and contact fungicides for banana to restrict the spreading of diseases, basin preparation for pepper, clove, nutmeg and cinnamon for better rain water harvest, grafting and cutting of horticultural crops and planting of pepper.
 - Farmers in the Southern Telangana Zone of Andhra Pradesh are advised to drain out excess water from the fields. Due to poor inflows into the reservoirs, farmers can plan early *rabi* with irrigated dry crops like maize, jowar, groundnut, greengram and blackgram etc. with 4-5 irrigations by carefully monitoring the reservoir inflows.
 - Farmers in the Problem Area Zone of Kerala are advised to provide adequate drainage in early sown paddy fields and apply final dose of fertilizer on late sown paddy.
 - Farmers in the Central Zone of Kerala are advised to start transplanting in rice after puddling and when the seedlings are in the optimum age or direct wet seeding can be done using pre germinated seeds. For dry sown rice it is the time for top dressing of chemical fertilizers. In adult coconut plantations, basins may be opened for sowing of green manure seeds. Planting of coconut seedlings, arecanut seedlings, pepper vines, colocasia, yams etc. can be started with the onset of rain. Coconut basins can be covered with mulch materials or coconut husk for conservation of water and the bunches can be tied.
 - Farmers in the Southern Zone of Kerala are advised to delay harvesting of paddy and drain the paddy field 10 days before harvesting, as rainfall is forecasted. In rice fields with single crop, farmers are advised to raise cucurbitaceous vegetables after the harvest of first crop and take care of tapping panels in rain guarded rubber plants.
 - In Cauvery Delta Zone of Tamil Nadu, stem borer incidence is noticed in *kuruvai* paddy. Farmers are advised to spray profenophos at 400 ml/acre (or) apply Cartarp hydrochloride 4 G @ 6 kg/ac for effective control of stem borer.
 - Phytopathra blight and sterility mosaic was noticed in the North East Transition Zone of Karnataka. Farmers are advised to rougue out the affected plants and spray M-45 @ 2g/litre of water to control phytopathra blight and Docofol @ 2.5 ml/litre of water to control sterility mosaic.
 - Due to high humidity, low temperature and frequent rains in the Coastal Zone of Karnataka, there are chances of occurrences of thrips, caseworm insect and leaf folder in paddy, phytophthora foot rot, anthracnose disease on leaves, vines etc. in pepper, yellow vein mosaic disease in lady's finger and koleroga/rotting disease in arecanut. Farmers are advised to undertake plant protection measures.
 - Farmers in the North Transition Zone of Karnataka are advised to check the vegetative growth in bt hybrids crop of 85 to 90 days old, reduce sucking pest incidence, monitor mired bug in cotton crop which is at peak square

formation stage and apply fertilizer to *desi* cotton crop sown during first week of this month @ 40:25:25 N:P:K kg/ha if not applied at the time sowing.

- Farmers in the Southern Dry Zone of Karnataka are advised to undertake plant protection measures to control sheath rot disease in banana, sheath rot, bud rot disease and black headed caterpillar in coconut and mealy bug in papaya.
 - Incidence of leaf folder and sheath blight in rice is noticed in the North East Dry Zone of Karnataka and present environmental conditions are favourable for the incidence of cercospora leaf spot in red gram and late leaf spot in groundnut. Farmers are advised to undertake appropriate plant protection measures.
 - RHC incidence is observed in late sown groundnut in the Scarce Rainfall Zone of Rayalseema. Farmers are advised to adopt community bonfires on evening hours and make trenches around the field to controlling RHC.
 - In Southern Telangana Zone of Andhra Pradesh, delayed sowing of paddy nurseries and transplanting will result in gall midge incidence. Farmers may select gall midge resistant varieties for sowing after sufficient inflows from reservoir. Incidence of semi-looper is noticed in castor, fruit fly and downy mildew is noticed in gourds and prevailing weather conditions are congenial for incidence of aphids in maize, sucking pests and spodoptera in cotton. Farmers are advised to undertake plant protection measures.
 - Farmers in the Northern Telangana Zone of Andhra Pradesh are advised to undertake plant protection measures against stem borer in maize, sucking pest in cotton, Helicoverpa in red gram, early shoot borer in sugarcane, mites and shoot and fruit borer in brinjal and thrips and mites and chaenophora blight in chillies.
 - Farmers in the High Altitude Zone of Kerala are advised to monitor attack of red palm weevil and rhinoceros beetle in coconut, stem borer, blast and brown spot diseases in paddy fields, spindle bug attack in arecanut and pseudo stem weevil infestation and sigatoka leaf spot disease in bananas and adopt strict phyto-sanitary and plant protection measures.
 - The present weather condition is most favorable for the incidence of stemborer, BPH, leaf roller, sheath blight and bacterial leaf blight disease and bud rot diseases in coconut and leaf spot and fruit fall diseases in nutmeg in the Problem Area Zone of Kerala. Farmers are advised to take appropriate plant protection measures.
 - Farmers in the Central Zone of Kerala are advised to undertake plant protection measures gall midge, leaf roller and stem borer attack in rice, sigatoka leaf spot diseases in banana.
- **Livestock**
 - Farmers of the North Dry Zone and Southern transition zone of Karnataka, Southern Telangana zone of Andhra Pradesh and North eastern zone of Tamilnadu are advised to vaccinate livestock against Foot and Mouth disease (FMD vaccination), Black Quarter disease (BC vaccination) and Haemorrhagic Septicaemia, sheep and goats against Enterotoxemia.
 - Farmers in the Eastern Dry zone of Karnataka are advised take up silkworm and poultry rearing houses to maintain optimum room temperature and take care against the rapid increase in air temperature and decrease in relative humidity.
 - Farmers in the Coastal Zone of Karnataka and Southern Transition Zone of Karnataka are advised to provide sufficient light (heat) to maintain body temperature because low temperature requires high feed to maintain body temperature.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Significant rainfall occurred in Balaghat, Chindwara, Dindori, Mandla, Sagar, Seoni and Sidhi districts of East Madhya Pradesh, West Madhya Pradesh (except Bhand, Bhopal, Datia, Guna and Gwalior) and Chhattisgarh (except Surguja).
- **Rainfall Forecast:** Rainfall is likely to occur at most places over West Madhya Pradesh during next 24 hours, many places over Chhattisgarh and at a few places over East Madhya Pradesh during next three days.
- **Warning:** Heavy to very rainfall would occur at one or two places over West Madhya Pradesh during next 48 hours.
- **Advisories:**
 - Farmers in West Madhya Pradesh and Chhattisgarh are advised to postpone irrigation to the standing crops as there was significant rainfall during last week and likely to continue during next 1-2 days. Postpone weeding, intercultural operation and top dressing of fertilisers in the region. Farmers in West Madhya Pradesh are advised to provide adequate drainage facilities in the standing crops to avoid waterlogging due to heavy rainfall.

- Farmers in Kymore Plateau and Satpura Hills region of Madhya Pradesh are advised to complete sowing of niger crop and undertake nursery sowing / transplanting of tomato, brinjal, onion, chilli and cauliflower. Farmers are also advised to do weeding in rice and arhar and apply top dressing of urea in rice. Drain the water from rice field then top dressing of urea may be done. Impound the water in the paddy field after three days after top dressing.
- Farmers in Gird Zone of Madhya Pradesh are advised to prepare field for toria and mustard. Prevailing weather is favourable for the incidence of yellow mosaic disease, spray Dimethoate 1.5ml/lit of water.
- Farmers in Jhabua Hills of Madhya Pradesh are advised to prepare drainage channels in soybean, maize, cotton, vegetables and pulses. Prepare field for rose planting and prepare nursery for winter flowers.
- Farmers in Central Narmada Valley Zone of Madhya Pradesh are advised to undertake nursery sowing/transplanting of tomato, brinjal, onion, chilli and cauliflower. Farmers are advised to undertake weeding, intercultural operations, earthing and application of plant protection measures in sugarcane, maize, papaya, guava etc. Maintain proper drainage of water in soybean, arhar and maize field.
- Farmers in Nimar Valley Zone of Madhya Pradesh are advised to apply urea in already sown *kharif* crops. Make proper drainage arrangement in maize, jowar and arhar. Farmers are also advised to complete weeding and intercultural operations in groundnut.
- In Bundelkhand region of Madhya Pradesh, there is report of attack of semi lopper in the soybean, farmers are advised to spray Quinalphos 25E.C. @ 2.0 ml per litre of water. Farmers are advised to regularly monitor the crops for the pest. There is possibility of attack of leaf feeder in urd and moong crops; If found, spray trizophas 40 E.C. @ 2.0 ml. per litre of water. Farmers are advised to prepare field for sowing of mustard and pea at end of week.
- Farmers in Malwa Plateau Zone of Madhya Pradesh are advised to provide drainage to *kharif* crops, to avoid water logging in the crop fields. Undertake sowing of ladies finger, cucurbits etc. and transplanting of fruit crops and vegetable crop such as chilli, tomato, brinjal and onion etc.
- Farmers in Satpura Plateau of Madhya Pradesh are advised to apply top dressing of urea in cotton, maize, sugarcane and jowar etc. Cultural operations like weeding, intercultural operations, earthing and application of plant protection measures may be done in sugarcane. Sowing of niger and sesame may be done as early as possible. Prepare/repair bunds for soil and water conservation. Transplanting of brinjal, tomato, cauliflower, *kharif* onion etc. may be done.
- Due to continuous raining there may be incidence of tobacco caterpillar in soybean, mung and urd in Vindhyan Plateau Zone of Madhya Pradesh. For effective control, farmers are advised to spray Quinalphos 1500 ml / hectare in 600 lit of water.
- Incidence of bihar hairy caterpillar, tobacco caterpillar and semilooper is seen in the soybean, moong, and urd crops in Kymore Plateau and Satpura Hills region of Madhya Pradesh due to prevailing weather condition. Use of light traps in the field, and if possible destroy egg and larval masses by hand picking. Spray Chlorpyrifos (20 EC) at 1.5 lit/ha; or Triazaphos at 800 ml/ha, or Quinalphos at 1.5 lit/ha on these crops.
- Present weather conditions are suitable for the sowing of nursery of early varieties of cabbage, tomato, brinjal, chilli etc. in a raised nursery of about 6 inch with proper drainage system in Chhattisgarh Plain Zone. Farmers are advised to undertake sowing / transplanting of vegetables utilizing the realized rainfall during last week.
- Due to wide spread rainfall in Chhattisgarh Plain Zone, farmers are advised to provide proper drainage in oilseed, pluses crops and transplanting of vegetable crops may be done.
- Farmers in North Hill zone of Chhattisgarh are advised to complete sowing of maize.
- Farmers in Bastar plateau zone in Chhattisgarh are advised to prepare field and undertake sowing of cowpea and *kharif* vegetables like bottle gourd, bitter gourd, okra and short duration beans, cabbage, cauliflower utilizing the realised rainfall during last week. Farmers are also advised for planting of cassava, colocasia, ginger, elephant foot yam and dioscorea and support may be given by bamboo sticks.
- Farmers in Bastar plateau zone in Chhattisgarh are advised to undertake transplanting of rice and sowing of niger, horsegram (kulthi), urad, vegetables etc. and due to availability of sufficient moisture, castor crop sowing may also be done in the marhan and tikra farming situations.

- Tobacco caterpillar is likely to damage soybean, black gram, pigeon pea etc. in Chhattisgarh plain zone. Hence farmers are advised to keep watch over the crop and it is better to collect the insect and destroy it at early stage. For effective control spraying of Quinolphos @ 1.25 l or Fenvelrate 20EC @ 375 ml per hectare is advised.
- In the maize crop, the attack of stem borer is being observed in Dantewada and Bijapur districts of Chhattisgarh. For its control, Carbofuran 3 G may be applied @ 2-3 grains/ per plant or this can also be applied @ 10 kg/ acre at the time of earthing up operation.
- Attack of caterpillars and semiloopers is being observed in Bastar Plateau Zone in Chhattisgarh in castor, spray Prophenophos @ 1-1.5 ml/ litre of water.
- **Animal Husbandry & Poultry**
 - Farmers in Central Narmada Valley Zone and Satpura Plateau Zone are advised to vaccinate cattle against Foot and Mouth Disease.
 - Farmers in Kymore Plateau and Satpura Hills region of Madhya Pradesh are advised to vaccinate cattle against Anthrax disease and provide deworming tablets against worm's infection.
 - Farmers in Bundelkand region of Madhya Pradesh are advised to vaccinate their cattle against H.F. and B.Q disease, provide deworming medicine to their animals collectively and use appropriate medicine against indigestion.
 - Farmers in Jhabua hills of Madhya Pradesh are advised to vaccinate their goats by CCPC vaccine and keep them in clean, dry and well ventilated place.

Annexure I

Major Crops

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

- Sugarcane (vegetative), sali rice (transplanting / early tillering / tillering), Capsularis and Olitorius jute for seed (sowing), ginger / turmeric (vegetative), arhar (vegetative), kharif sesame (early vegetative/branching), groundnut (vegetative / flowering / pegging), black gram, green gram (sowing), maize (vegetative), cauliflower (nursery raising/transplanting) in Assam.
- WRC rice (flowering / grain formation), okra, cucurbitaceous vegetables (fruiting / harvesting), soybean (vegetative), sesame (vegetative) in Arunachal Pradesh.
- Kharif rice (early vegetative/ tillering), soybean, groundnut (vegetative), kharif maize (cob formation/cob maturity), cucurbits, chilli and okra (fruiting / harvesting), tomato (seedling / transplanting), cauliflower (nursery sowing), rice bean, pea (sowing) in Manipur.
- Ahu rice (panicle initiation), Kharif rice (early vegetative /tillering) maize (cob formation/cob maturity), groundnut (vegetative), tomato (flowering / fruiting / maturity), potato (tuber formation), soybean (vegetative / flowering), turmeric, ginger (vegetative / rhizome formation), banana (planting / vegetative) and vegetables like bottle gourd, ash gourd (vegetative / flowering) in Meghalaya.
- Rice (vegetative / tillering), soybean, groundnut (vegetative), kharif maize (vegetative / tasseling / silking), cauliflower, tomato (nursery preparation) and ginger / turmeric (vegetative / rhizome formation) in Mizoram.
- Jhum rice (dough / maturity), Wet land rice (tillering/panicle initiation), maize (maturity / harvesting), okra (flowering / fruiting), soybean (sowing), cowpea / bean (pod formation / maturity / harvesting), papaya (vegetative) in Nagaland.
- Upland kharif rice (tillering / panicle initiation), aman rice (tillering), groundnut (vegetative / flowering), maize (tasseling / silking), sesame (vegetative / flowering), kharif vegetables like okra, kharif cucurbits (sowing / vegetative), early sown cucurbits, okra (flowering / fruiting) in Tripura.

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

- Sugarcane (vegetative), fodder crops like sorghum, bajra, maize, meth, kalai, boda and dinanath grass (sowing / early vegetative / vegetative), *kharif* rice (transplanting / tillering), urad, arhar, bajra etc. (sowing / early vegetative), onion, mango, litchi, guava (planting) in Bihar.
- Turmeric and ginger (vegetative), upland rice (tillering / panicle initiation), maize (vegetative / harvesting), pigeon pea, arhar, groundnut, rice, urad, jowar and soybean, til (sowing / vegetative), *kharif* vegetables like okra, beans, French bean, tomato, cauliflower, cabbage etc. (vegetative / harvesting), kulthi, African marigold, French marigold (sowing), urd, potato, green pea (land preparation / sowing) in Jharkhand.
- Sugarcane (grand growth), banana (vegetative), jute (harvesting), maize, groundnut, arhar, ragi, cotton, direct seeded rice, sunflower (early vegetative / vegetative), rice (transplanting / tillering), green gram, black gram, cow pea (sowing), *kharif* vegetables like okra, French bean, tomato, cauliflower, cabbage etc. (sowing / vegetative) and fruit crops (planting / seedling) in Orissa.
- *Aus* rice (maturity to harvesting), *aman* rice (transplanting / tillering / panicle initiation/ heading), jute (harvesting / retting), banana(vegetative), maize, sweet corn (vegetative / flowering / cob information), cauliflower (seedling), marigold (planting), bitter gourd and pointed gourd, cucurbits (fruiting), yam and betel vine (vegetative) in West Bengal.
- Ginger (germination / early vegetative), orange (transplanting), large cardamom (vegetative / primary flowering / secondary flowering), vegetables (vegetative), rice (tillering) in Sikkim.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- Sugarcane *adsali* (active tillering / elongation), new *adsali* (sprouting), sugarcane new pre-seasonal (active tillering), sugarcane new *suru* (active tillering in Madhya Maharashtra and Marathwada), new *adsali* (plantation), kharif rice (active tillering/flag leaf initiation in Konkan, Kolhapur division and early tillering/active tillering in Nashik, Pune and East Vidarbha division), cotton(vegetative/floral bud initiation),soybean(pod formation), groundnut (pegging/pod formation), bajra(ear head

emergence/flowering in Madhya Maharashtra and Marathwada), red gram (vegetative/primary branching) in Maharashtra.

- Cotton (vegetative / flowering / boll formation), groundnut (vegetative / flowering / pegging), kharif rice (tillering / panicle initiation), pulses (early vegetative / flowering), sugarcane (vegetative / elongation), sesamum, castor (sowing / emergence), vegetables (vegetative / flowering / fruiting), green gram, black gram (flowering / pod formation), red gram (germination / vegetative), pearl millet (panicle emergence / flowering), sorghum, cow pea (sowing / emergence) in Gujarat.

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

- Vegetables [bhindi, cucurbits], peas (vegetative/maturity), mirch, brinjal (vegetative/maturity), cucurbits viz. cucumber, summer squash, khira, bitter gourd, bottle gourd (vegetative/maturity), tur, Shimla mirch, and tomato (vegetative/maturity), apple and other temperate fruits (vegetative), radish, arbi, amaranthus, turmeric, dhaincha, chari, bajra, barley, red and white clover, bell pepper, garlic, ginger, coriander, knol khol, cabbage, cauliflower, lettuce (early vegetative/vegetative), maize(vegetative/silking), soybean (vegetative/flowering), rice (early tillering/panicle initiation) in Himachal Pradesh.
- Rice (vegetative/flowering), chilli, tomato, brinjal, cauliflower (vegetative/flowering/fruiting), spinach, coriander, radish (vegetative/ flowering/fruiting), maize, urd, moong, lobia (vegetative/tasselling), bajra, til, sorghum (vegetative/floral initiation), sugarcane (vegetative), cotton (vegetative/flowering), sugarcane (vegetative) in Delhi.
- Chilli, capsicum, cauliflower, broccolli (vegetative), sugarcane (planting), papaya (planting), sunflower (germination), maize (Normal sown -vegetative stage /reproductive stage, early sown- tassel emergence / silking stage, very late sown- vegetative stage), lobia, sunnhemp, cowpea, jowar for green fodder (vegetative), garlic, cucurbits, okra(seedling), French bean, maize (tasseling/silking), rice (Early-panicle initiation, Normal (irrigated)- vegetative stage) tillering/vegetative), summer fodder (maize + cowpea + jowar) (vegetative), maize (sowing / emergence / early vegetative / vegetative / knee high stage), kharif pulses (flowering /pod formation), radish (sowing), cabbage, cauliflower (nursery sowing), carrot, turnip (sowing), knol-khol, cole crops(transplanting), toria (sowing/emergence), vegetable crops (fruiting stage), in Jammu & Kashmir.
- Rice (panicle initiation /ear head emergence), finger millets (vegetative), groundnut, sorghum, pigeon pea, urad, moong, rajma, arhar and ginger (early vegetative/vegetative), soybean (flowering and pod formation), maize(early vegetative/cob formation) in Uttarakhand.
- Rice (tillering/panicle initiation), sugarcane (vegetative growth), sunflower (vegetative), fodder maize, lobia, (vegetative/1st cutting), Sanai, Dhaincha (early vegetative / vegetative), summer sugarcane (tillering/grand growth), cotton, soyabean and urd (early vegetative/vegetative), sunflower, jowar, bajra, arhar, (sowing/seedling), maize(tasseling to silking), vegetables [cucumber, pumpkin, tomato, brinjal, cabbage, lady's finger, chilly, cucurbits](sowing/vegetative), groundnut(early vegetative/vegetative) in Uttar Pradesh.
- Rice (tillering), spring sugarcane (sprouting / tillering), radish (germination/vegetative), carrot, turnip, cauliflower (transplanting / vegetative), tomato, sunflower (sowing/seedling), cotton (flowering), okra, chilli, brinjal (transplanting/early vegetative), maize, mung, mash, tur (sowing/seedling) in Punjab.
- Rice (tillering), sugarcane (spring season) (early vegetative/vegetative), barseem (vegetative / last cut), fodder ((maize + cowpeas) (vegetative/ 1st cutting)), moong, mash, pigeon pea (vegetative), cauliflower, cabbage, carrot, potato (transplanting), radish, cotton (vegetative), turnip (sowing/seedling) in Haryana.
- Cauliflower, cabbage, onion (transplanting / germination), sugarcane (new planting), cotton (Desi kapas, B.T. kapas, Narma kapas, American Cotton) (boll formation), pearl millet, jowar and bajra mixed with guar, Sudan grass, oats, sorghum etc. for green fodder (vegetative), maize (knee high/tasseling), mirch, simla mirch, guar, vegetable (tinda, water melon, pumpkin, cucumber, coriander, bhendi, ridge gourd) (sowing), kharif onion (transplanting), kharif, rice (tillering), other kharif crops viz. pearl millet, sorghum, maize, green gram, cowpea and groundnut (early vegetative)/peg formation, short duration moth and guar (vegetative), moong (vegetative), kinnow (new planting) in Rajasthan.

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

- Sugarcane (vegetative), rice (tillering/transplanting//panicle initiation/flowering), fodder maize (silking/tasseling), sunflower (sowing), groundnut (pegging), cowpea (sowing), vegetables

- (flowering/fruit formation), turmeric, ginger (grand growth), green gram/black gram (maturity/harvesting), soybean (flowering), pigeon pea (vegetative), maize (silking/tasseling), desi cotton (sowing/vegetative), cotton (vegetative/flowering) and chilli (flowering/fruitle) in Karnataka.
- Sugarcane (June planted) (formative), banana (vegetative), vegetables (all stages), direct seeded rice (seedling/transplanting/tillering), jowar (vegetative), bajra (vegetative/flowering), maize (vegetative/harvesting), ragi (flowering), finger millets (vegetative/flowering/harvesting), castor (seedling/vegetative/flowering), early sown groundnut (vegetative/flowering), late sown groundnut (vegetative/flowering), maize (vegetative/tasseling), green gram/black gram (flowering/pod formation), red gram (vegetative), sesamum (pod filling/harvesting), pulses (vegetative/flowering to pod formation), rainfed cotton (vegetative/flowering), Bt. cotton (vegetative / fruiting) in Andhra Pradesh.
 - Pepper (flowering/new planting), ginger (vegetative), irrigated banana (harvesting/bunching), cardamom (planting/harvesting), rubber (tapping), sugarcane (grand growth), vegetables (flowering/harvesting/planting), virippu paddy (tillering/panicle initiation/milky), paddy (harvesting), coconut (flowering) in Kerala.
 - Kuruvai rice (flowering), Samba rice (sowing/nursery), rainfed maize and cotton (sowing), rainfed groundnut (sowing/vegetative/flowering), groundnut (pegging/boll formation), cotton (vegetative/flowering/boll formation), pulses, cotton, maize (sowing), banana (planting), irrigated maize (silking/tasseling/maturity), sugarcane (grand growth stage), pulses (vegetative/flowering), vegetables (vegetative/fruitle) in Tamil Nadu.

CENTRAL INDIA [M.P., CHHATTISGARH]

- Rice (tillering/panicle initiation), maize, jowar, arhar and soybean (early vegetative/vegetative), *kharif* vegetables i.e. tomato, brinjal, chilli etc. (early vegetative/vegetative), fodder crops (vegetative), ladies finger, cucurbits (sowing/early vegetative/vegetative) in Madhya Pradesh.
- Rice (tillering), sugarcane (planting/vegetative), groundnut (pod filling), sesame (late vegetative), ginger, turmeric, papaya, mango and guava (vegetative), onion (planting), vegetables (transplanting / vegetative), millet (vegetative), tapioca, ginger, colocasia, dioscorea, elephant foot yam, cassava (planting) in Chhattisgarh.

Annexure II List of Varieties

Assam

Sali rice: Ranjit, Bahadur, Peoli, Moniram, Pankaj, Kushal, Masuri, Monohar (for typical lowland rice area), Satya and Basundhara (for medium lowland area).

Rice for flood affected areas: Profulla and Gitesh.

Short duration rice for flood affected areas: Luit, Kapilee, Dichang etc.

Traditional sali rice for flood affected areas: Sonamukhi, Manohar Sali, Bordha, Andru Sali, Solpona.

Submergence tolerance Sali rice varieties: Jalashree and Jalkuwari.

Sesame: Punjab Til No. 1, Gouri, Vinayak, Madhabi, ST-1683.

Early cauliflower: Early Kunwari, Pusa Katki, Pusa Deepali.

Dolichos bean: Asina

Green gram: T-44, Kopergaon, K-851, ML-56, ML-131.

Black gram: T-9, T-27, Pant U-19, T-122, Saonia Mah (SB123), KU 301, USJD113.

Manipur

Cauliflower: White Shot.

Orissa

Okra: Utkal Gourav, Arka Anamika, Varsha Uphar, Parvani Kranti and all available hybrid varieties.

Kharif rice:

Early maturing varieties: Parijat, Khandagiri, Vandana, Jogesh, Siddant.

Medium maturing varieties: Pratikshya, Manaswini, Tapaswini MAS, Konark, Surendra, Lalata, Kharavela, Naveen, Surendra, MTU-1001, MTU1010, Abhisek.

For flash flood areas: Swarna Sub-1, Barsadhan.

Hybrid varieties: CRHR-32, Ajay, Rajalaxmi, BS6444G, JKRH-401, ARIZE 6444G, JKRH-3333.

Green gram: PDM-11 & 54, K-851.

Black gram: T-9, Pant U-11, Pant U-19, Pant U-30.

Cowpea: SEB-2, Pusa Barsati.

Brinjal: Utkala Tarini, Utkala Madhuri, Blue Star, Green Star, Pusa Purple Cluster.

Green chilli: Pant C-1, Kala Suryamukhi, Utkala Ava, Utkala ragini etc.

Lemon: Ureka, Lisbon, Bhillafranka of lemon and Kagazi lembu, Mexican lime, Sarbati lime and Tahita of lime.

Tomato: BT-2, BT-10, BT-12, Niladri, Sadabahar, Madhuri, Maharathi, Rasmi, Naveen, etc.

West Bengal:

Cauliflower: Kanwari, Jowhar, Moti, Early Patna.

Tomato: Pusa Rubi, Pusa Early, S-2, Roma Super.

Jharkhand:

Okra: Pusa A-4, Prabhani Kranti, Arka Anamika, Versha Uphar & Hybrid varieties like Sonal and Sarika.

Urad: Pant Urad -19, Birsa Urad -1.

Til: Kanke Safed and Krishna.

Horse gram: Birsa kulthi-1, G.H.G.-20.

African Marigold: Pusa Narangi, Pusa Basanti.

French Marigold: Petite Orange, Petite Yellow, Rusty Red, Lemmon Drop.

Niger: Birsa niger – 1 or Birsa niger- 2

Green Pea: Arkel, Kashi Nandini, PE-6, Azad pea, Birsa Matar

Potato: Kufri Ashoka, Kufri Puhkraj, Kufri Pushkar and Kufri Surya

Bihar

Urd: T-9.

Arhar: Bahar, Narendra Arhar 1, Malviya 13.

Pigeon pea: Navin.

Himachal Pradesh :

Pepper : Surjmukhi,

Cauliflower: Pride of India, Shweta, Madhuri, Himrani.

Cucumber : Kiyan seedless/243, Matgaura, Maliniseeded

Pea: Ageta – 6 or Arkal pea

Jammu & Kashmir

Vegetables : Pumpkin: Arka Suryamukhi and Arka Chandan, Bittergourd: Pusa Domousami & Pusa Vishesh
Bottlegourd: Pusa Summer Prolific Long, Pusa Summer Prolific Round, Spongegourd: Pusa Chikni and Pusa
Supriya, Pusa Nasadar Radish: Japanese white, Pusa Chetki Carrot: Nantes, Pusa Kesar, Pusa Yamdagini Turnip:
Purple Top White Globe, Spinach: All green, Beans: Contender, Pusa Parvati and Arka komal, Methi: Pusa Early
Bunching and Kasuri methi., Knol-khol: White Vienna and Purple Vienna, King of Market, Cabbage: Golden Acre
and Pride of India, Pusa Mukta Brinjal: Pusa Purple Long, Pusa Purple Cluster, Cauliflower: Pusa Snowball, Pusa
Snowball K-I, Giant snow ball & Pusa synthetic

Til: Punjab Til-1

Okra: (Varsha Uphar, Parbhani Kranti and A-4), Pumpkin (Arka Suryamukhi & Arka Chandan)

Toria: local toria, RSPT-1 RSPT-2, Radish: Pusa Reshmi Minowase Japanese White, Garlic: Local Large
segmented, Agri- Found Parvati, Yamuna Safed-3, Palak : All Green, Methi :Pusa Early Bunching, Kasuri Methi

Peas: AP-1, AP-3, Bonneville, kale: Local

Punjab & Haryana

Punjab :

Okra: Punjab-8, Punjab-7 and Punjab Padmani

Radish: Punjab Ageti & Pusa Chetki.

Cauliflower: Punjab Giant 26

Delhi

Radish: Versa ki rani, summer long, long chetaki, Pusa chetaki

Spinach: All green

Coriander: Pant Haritama or hybrids

Cauliflower: Pusa sharad, Pusa hybrid-2, Pant shubra.

Sarson saag: Pusa saag-1;

Rajasthan

Vegetables : Tomato : Pusa Ruby, Pusa early dwarf, Roma, Brinjal: Pusa long, Meghdoot, Arka Bahar, Pusa summer
and prolific round, Cucumber: Balam, Pusa Sahyog, Early Radish: Pusa Chetki, Carrot: Pusa Kesar,

Early cauliflower : Pusa hybrid-2, Improved chinese and Pusa Himjyoti,

Sweet potato: Pusa Safed, Pusa Lal, Pusa Sunhari & L-20,

Mid season cauliflower: Improved Japanese, Pusa hybrid-2 & Himjyoti

Ashwaghandha : Improved varieties - Ashwaghandha-20 and Ashwaghandha-134.

Taramira: T-27, I.T.S.A, RTM-314

Ajwain: Pratap ajwain-1

Uttarakhand

Pea: VL Ageti Mater-7, Vivek Mater-10, Pant Subjee Mater-3, Azad Mater-3

Fodder Maize: African Tall, Jawahar or Kisan Variety

Tomato: Pant Bahar, Pusa Rubi, Navin

Toria: PT-303, PT-507.

Uttar Pradesh

Moong : Type-44, Pant Moong-1,2, Narendra Moong-1, PDM-11, MUM-2, Malviya Jagruti, Samrat, Pusa Vaishakhi K. , K-851,
JM-721 etc.

Urad : Azad Urd-1,2, Bhokhar-1,2, Type-9, Uttara etc. JT-9, Pant U-19, Narendra ; Pant U-35

Arhar : U.P.A.S.-120 and T 21.

Chattisgarh

Maize: Proagro-4640, 4212, Pusa Hybrid -42, MH-10, MH-11, Navjyot, HM-9.

Niger: JNC-1, JNC-6, JNC-9, GA-10, Ootakmund, KGN-2

Kulthi: AK-21, Ak-42, Bastar Kulthi, Birsa Kulthi and VLG-9

Karnataka

Finger millet: Indaf-5, Indaf-9, GPU-48, KMR-204, MR-365 and GPU-28.

Fodder Maize: Deccan-103
Sunflower : Morden, BSH-1.
Aerobic rice: MAS-946-1, Rasi and KRH-2
Redgram: BRG-1 and BRG-2.
Rice: MTU-1010, IR-64, Raksha, BPT-5204 and JGL-1798
Cotton: Jayadhar, DDHC-11 and RAHS-14, KC 3 and PA 255
Cow pea: TVX-944, KBC-1 and KBC-2.
Field bean-HA-3 and HA-4
Sorghum: K 8 and K 11
Green gram: CO 6
Sunflower and coriander: CO 4
Pearl Millet: CO (Cu) 9
Gingelly: TMV 3
Horse gram: KBH-1, PHG-9

Andhra Pradesh

Rice : (Swarna, Chatanya, Krishnaveni, Sambamasuri, Bapatlasannalu, Amara, Sriranga, NLR-T-145 (Swarnamukhi), LNLR-9674 for salt affected areas: Deepthi, Vikal, Vedagiri and Somaseela.

Tamil Nadu

Late samba and Thaladi: ADT 38, ADT 46, ADT 49, Improved white ponni, IR 20, Ambai 19, Paiyur1, Trichy 1, Trichy 3, Co 48, Co 49 and Co 50.

Gujarat

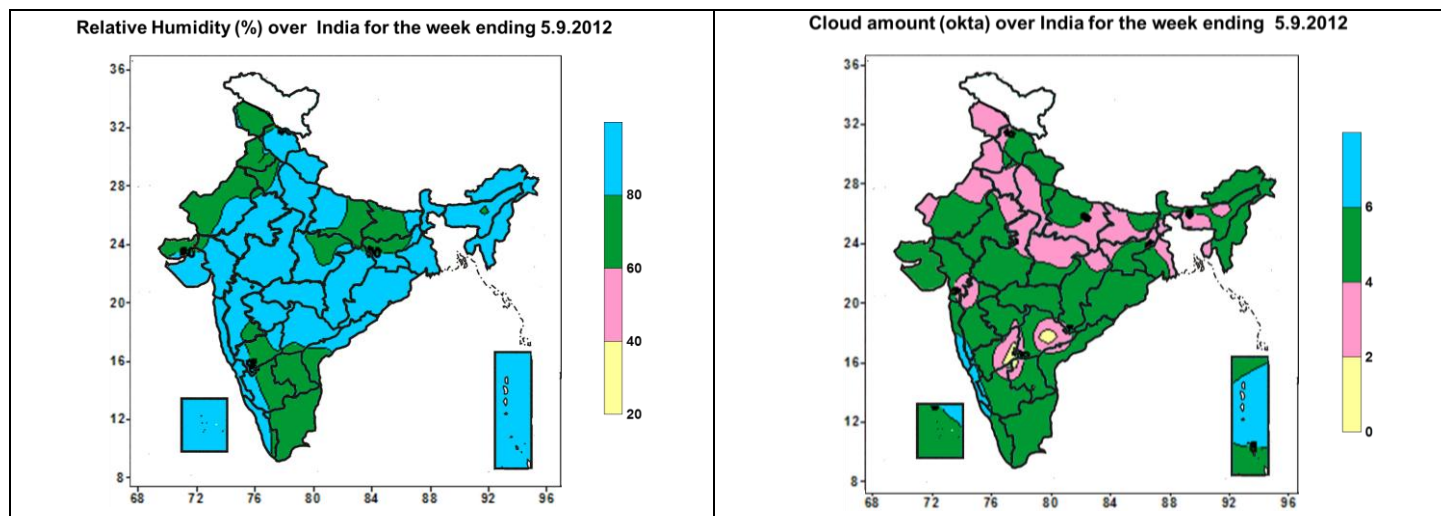
Mustard: Varuna, Gujarat mustard-1
Castor: GAUCH-1, GCH-2, 4, 5, GCH-5, 6 or 7 for dry land
Maize: GM-1, 2.
Sesamum: GT-1, 2, 3, 4, Purva-1.
Green gram: GM-3, GM-4, K-851. Meha, GG 4
Black gram: T-9, GU-1.
Urad: T- 9, GUB- 1
Sorghum: GJ-39, GJ-40 GJ-41 and GFS-4, GFS-5
Dual purpose sorghum: Gundari
Ajwan: Guj. Ajwan-1 & Guj. Ajwan-2

Maharashtra

Jowar: Ruchira, Phule Amruta and gaint bajra and African tall
Maize: Manjari composite

Annexure III

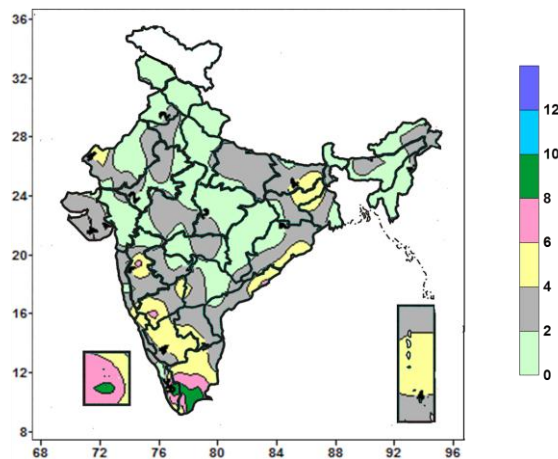
Contour maps for Relative Humidity, Cloud Amount and Wind speed for the week ending on 05.09.2012



Relative humidity ranged between 60 to 80 % over most parts of Jammu & Kashmir, West Raasthan, Punjab, Haryana, Delhi, East Utta Pradesh, Bihar, North & South Interior Karnataka, Coastl Andhra Pradesh, Raylaseema, Tamil Nadu, some parts of Saurashtra, Gujarat, Jharkhand, Assam, East Madhya Pradesh, Kerala, 80 % and above over remaining parts of the country.

Cloud amount 6 okta and above over most parts of Coastal Karnataka, Andaman & Nicobar Islands, some parts of Konkan & Goa, Kerala, Lakshadweep, 2 to 4 okta over most parts of Jammu & Kashmir, Punjab, Haryana, Delhi, Uttar Pradesh, East Madhya Pradesh, some parts of Himachal Pradesh, West Bengal, North East India(except Arunachal Pradesh), Chattisgarh, Andhra Pradesh, North & south Interior Karnataka, Marathwada, Madhya Maharashtra, Gujarat, West Madhya Pradesh, 0 to 2 okta Telangana, Raylaseema, North Interior Karnataka and 6 okta and above over remaining parts of the country.

Wind speed (knots) over India for the week ending 5.9.2012



Wind speed ranged between 8 to 10 knots and above over some parts of Coastal Tamil Nadu, 6 to 8 knots over most parts of Lakashadweep Islands, some parts of Madhya Maharashtra, South Interior Karnataka, Tamil Nadu, Kerala, and below 6 knots over remaining parts of country.