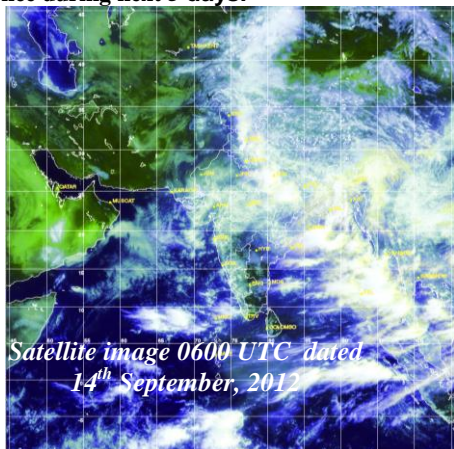


The Southwest Monsoon was active over east Uttar Pradesh, Assam & Meghalaya, Arunachal Pradesh, Andaman & Nicobar Islands and Kerala during past 24 hours ending at 0830 hours IST of today.

Withdrawal of southwest Monsoon from northwest India would not commence during next 5 days.



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:** All districts received significant rain during last week. 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 crops. In cotton, to speed up new growth, spray 10 ppm solution of giberllic acid (1 g of gibrallc acid in 100 litres of water). Farmers in South Saurashtra Zone of Gujarat are advised to carry out gap filling in castor crop and sowing of sesame (var: Purva-1).
- 2. Gujarat region:** All districts received significant rain during last week. In Middle Gujarat Zone, sowing of pigeon pea is recommended in case of failure of cotton crop. Drain out excess water from maize, sugarcane, green gram, black gram, ginger, turmeric and vegetable crop fields as stagnant water is harmful to these crops in South Gujarat Zone. Carry out intercultural operations in castor in North Gujarat Zone. Carry out transplanting of chilli, tomato and brinjal in Ahmedabad district.
- 3. South Interior Karnataka:** Most of the districts of the region received rain during last week. Farmers in the Eastern dry zone are advised to undertake transplanting of finger millet and gap filling and intercultural operations in early sown crop. Also undertake sowing of South African and Deccan-103 maize for fodder purpose, sowing of minor millets like foxtail millet and cowpea upto 15th September. Castor and sunflower may be sown upto end of September and end of October, respectively.
- 4. North Interior Karnataka:** Most of the districts of the region received rain during last week. In North Dry Zone, farmers are advised to 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. Farmers are advised to keep the land and inputs ready for sowing of chickpea, safflower and wheat. 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.
- 5. Madhya Maharashtra:** Farmers of Pune and Solapur districts are advised to undertake sowing of fodder crops like jowar by selecting Ruchira, Phule Amruta and gaint bajra varieties and maize by selecting African tall, Manjari composite with realized rainfall. As cotton is at floral bud initiation / flowering stage, farmers of North Madhya Maharashtra are advised to spray 2% DAP for better development of cotton boll. As green gram and black gram are at pod maturity stage, farmers of Madhya Maharashtra, are advised to start plucking of already matured pods. They are also advised to complete preparatory tillage and field may be kept ready for sowing of *rabi* jowar, safflower after harvesting of matured pulses.
- 6. Marathwada:** Farmers are advised to make arrangement to drain out excess water from crop field and apply plant protection measures and fertilizers and undertake intercultural operations. As green gram and black gram are at pod maturity stage, farmers of Marathwada are advised to start plucking of already matured pods. They are also advised to complete preparatory tillage and field may be kept ready for sowing of *rabi* jowar, safflower after harvesting of matured pulses.

Agromet advisroeis for remaining met subdivisions are mentioned in page no 2.



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 most of the districts in East Madhya Pradesh, Jharkhand, Gujarat region, Saurashtra & Kutch, Konkan, Vidarbha, Gangetic West Bengal and Coastal Karnataka, most of the districts in Himachal Pradesh, West Madhya Pradesh, Chhattisgarh, Rajasthan, Orissa and Kerala, many districts in Arunachal Pradesh, Assam, Jammu & Kashmir, Madhya Maharashtra, Sub Himalayan West Bengal & Sikkim, Coastal Andhra Pradesh and Telangana and over a few districts in Uttarakhand, Marathwada and South Interior Karnataka. Rainfall for the above mentioned States during last week is given in Annexure – I.

Rainfall is likely to occur at most places over East Uttar Pradesh, Bihar, Sub Himalayan West Bengal & Sikkim and North Eastern States, at many places over Uttarakhand, Himachal Pradesh, Jammu & Kashmir, West Uttar Pradesh, Chhattisgarh, Jharkhand, Gangetic West Bengal, Konkan, Coastal Karnataka and Kerala during next three days and at a few places over Punjab, Haryana, Delhi and East Madhya Pradesh during next 24 hours and increase thereafter. 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 Uttarakhand, East Uttar Pradesh, Bihar, Sub Himalayan West Bengal and Sikkim, Assam, Meghalaya and Arunachal Pradesh during next 48 hours. Farmers in these regions are advised to arrange for adequate drainage in standing crops. Weather forecast map is provided in Annexure – II.

In the following sub-divisions rainfall conditions improved during recent weeks; however contingent planning has been advised in the agromet advisory due to deficient rainfall during earlier weeks:

7. **Haryana:** Farmers are advised to keep rice crop weed free and apply recommended dose of fertilizers. Undertake propping and earthing up in late sown sugarcane, transplanting of *kharif* onion, cabbage and cauliflower in the field.
8. **Delhi:** Sowing of coriander, spinach and radish is in progress. Chrysanthemum and marigold may be transplanted in raised bed. Sowing of gladiolus may be done in prepared fields. Water logging should be avoided in nursery by doing proper drainage.
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 and planting of cauliflower, shakarkand. Undertake application of Nitrogen @ 20 kg per hectare after hand weeding in the rice field.

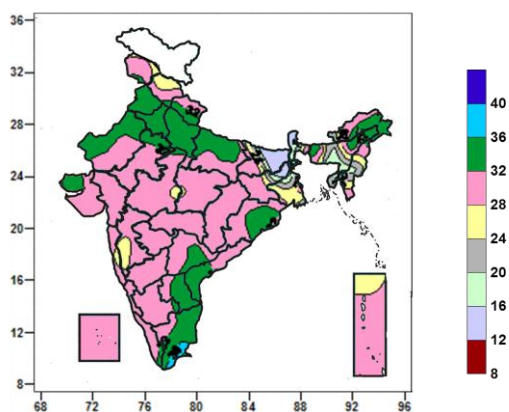
In remaining parts of the country, due to receipt of adequate rainfall in terms of quantity and distribution in relation to agricultural operations as well as water requirements of the crops, sowing of *kharif* crops continued normally and state of the crops are normal, which is stated below:

11. **Royalaseema:** In late sown groundnut, red hairy caterpillar / *S. litura* incidence is observed. To control the pest, farmers are advised spread poison bait (rice brawn @ 10kg, jaggary 1 kg, thiodicarb @ 250gm) equally in field during evening times.
12. **East Uttar Pradesh:** Excess water (if any) should be drained out especially from the fields of maize, pigeon pea and sesamum. Also advised for plantation of fruit saplings in orchards.
13. **West Uttar Pradesh:** Transplanting of brinjal and chili may be done. Drain out excess water from the field. Carry out Weeding.
14. **Nagaland, Manipur, Mizoram & Tripura:** Farmers in Manipur are advised to 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.
15. **Arunachal Pradesh:** Nursery preparation for early cruciferous crops may be done.
16. **Assam & Meghalaya:** Farmers in flood affected areas are advised for sowing of rice varieties like Luit, Kapili and Dishang. Seedlings of these varieties can also be transplanted when 20-25 days old up to middle of September. In flood affected areas, transplanting of 60-70 days old seedlings may be done upto mid-September if the seedlings of the varieties like Monohar Sali, Gitesh, Andrew Sali, Prasad Bhog, Prafulla etc. are available.
17. **Sub Himalayan West Bengal:** The places where paddy could not be grown due to deep water, cultivate waste land crop such as *Aschnomene aspera*, water chest nut etc.
18. **Sikkim:** Farmers are advised to maintain 3-4 cm standing water in tillering stage of rice.
19. **Gangetic West Bengal:** In *Aman* rice apply 4.5 kg Urea per Bigha as second top dressing.

20. **Orissa:** Complete weeding in rice. Go for top dressing of N in direct seeded rice, apply 6-8 kg N/acre under saturated condition. Undertake sowing of green gram, black gram and horse gram.
21. **Punjab:** Excess water (if any) should be drained out especially from the fields of maize, pigeon pea and sesamum. Also advised for plantation of fruit saplings in orchards.
22. **Himachal Pradesh:** Excess water may be drainage out in maize fields and impound water in rice field. Complete nursery sowing of cauliflower. In mid hill region, transplanting of cauliflower may also be completed.
23. **Jharkhand:** Farmers are advised to undertake sowing of til, kulthi, green pea and grow African marigold or French marigold. After harvesting of moong and urd, undertake sowing of toria immediately in that field.
24. **Uttarakhand:** Transplanting of cauliflower, cabbage, knoll-khol and broccoli may be done during the evening hours and also drainage out excess water. Weeding as well as thinning may be taken up in *kharif* crops.
25. **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 and late sown maize.
26. **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. Raise nursery of early cauliflower and do the planting of early radish. draining excess water from standing *kharif* crops. Sowing of Desi carrot may be done.
27. **East Madhya Pradesh:** Apply nitrogen through top dressing in rice.
28. **West Madhya Pradesh:** Drain out excess water from rice and maize fields. Undertake intercultural operations, earthing and application of plant protection measures in sugarcane, maize, papaya, guava etc.
29. **Vidarbha:** As green gram and black gram are at pod maturity stage, farmers of west Vidarbha are advised to start plucking of already matured pods on a non rainy day. They are also advised to complete preparatory tillage and field may be kept ready for sowing of *rabi* jowar, safflower after harvesting of matured pulses. Farmers of East Vidarbha region are advised to maintain 5 cm water level in transplanted rice field.
30. **Chhattisgarh:** Farmers are advised to undertake sowing of niger, horse gram and transplanting of vegetables crops.
31. **Konkan:** Farmers are advised to maintain 5 to 10 cm water level in already transplanted rice. As fairly widespread rainfall is expected over Konkan during next 3 days, farmers are advised to make an 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.
32. **Coastal Andhra Pradesh:** Where ever rice transplanting could not be done due to non availability of water farmers are advised to undertake sowing of alternate crops like maize/ jowar/ blackgram/ green gram/ rabi redgram.
33. **Telangana:** Farmers are advised to undertake sowing of early *rabi* with irrigated dry crops like maize, jowar, groundnut, greengram and blackgram etc. with 4-5 irrigations.
34. **Tamil Nadu:** Undertake nursery sowing of *samba* rice.
35. **Coastal Karnataka:** Drain out excess water in rice fields.
36. **Kerala:** Drain out water from rice field 10 days before harvesting.

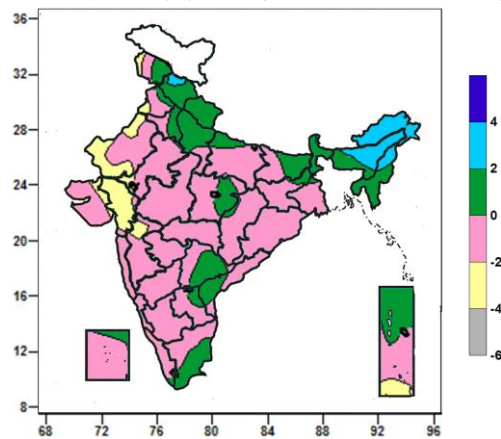
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 12.09.2012

Actual Mean Maximum Temperature ($^{\circ}\text{C}$) in India for the week ending 12.9.2012



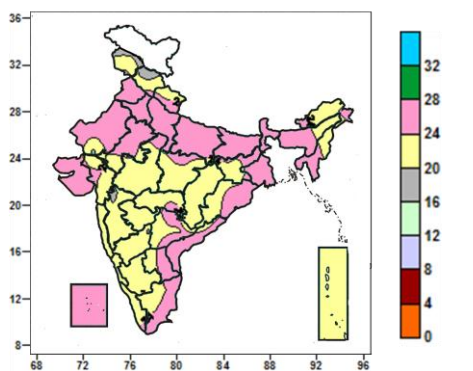
Actual Mean Maximum temperature ranged 36°C and above over some parts of Tamil Nadu, 32 to 36°C over most parts of Uttarakhand, Punjab, Haryana, Delhi, West Uttar Pradesh, West Rajasthan, Arunachal Pradesh, Andhra Pradesh, Tamil Nadu, some parts of East Rajasthan, Saurashtra, Assam, Nagaland, Coastal Orissa, Kerala, 24 to 28°C over some parts of Jammu & Kashmir, Himachal Pradesh, Bihar, Jharkhand, West Bengal, Tripura, Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Andaman & Nicobar Islands and between 28 to 32°C over remaining parts of the country.

Maximum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 12.9.2012



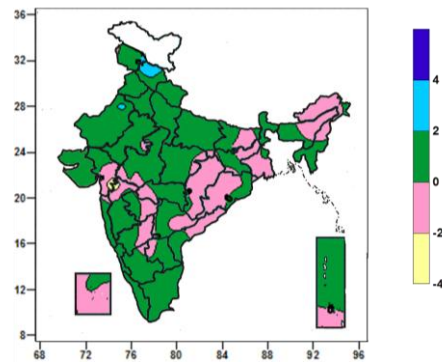
Actual Mean Maximum temperature anomaly ranged between 2 to 4°C and above over most parts of Arunachal Pradesh, Assam & Meghalaya, Nagaland, some parts of Himachal Pradesh, Manipur, 0 to 2°C over many parts of Jammu & Kashmir, Himachal Pradesh, West Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Mizoram, Tripura, some parts of Punjab, Haryana, Delhi, East Uttar Pradesh, Bihar, Jharkhand, East Madhya Pradesh, Chattisgarh, Andhra Pradesh, Coastal Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, -4 to 0°C over rest of the country.

Actual Mean Minimum Temperature ($^{\circ}\text{C}$) in India for the week ending 12.9.2012



Actual Mean Minimum Temperature ranged between 24°C and above over many parts of Northwest India (except Jammu & Kashmir, Himachal Pradesh, Uttarakhand), Assam & Meghalaya, Mizoram, Tripura, East (except Jharkhand), Saurashtra & Kutch, Lakshadweep, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Gujarat, Vidarbha, Madhya Pradesh, Andhra Pradesh, Coastal Tamil Nadu, 16 to 20°C over some parts of Jammu & Kashmir, Himachal Pradesh and between 20 to 24°C over remaining parts of the country.

Minimum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 12.9.2012



Minimum Temperature anomaly ranged above 2°C over some parts of Jammu & Kashmir, Himachal Pradesh, West Rajasthan, -2 to 0°C over most parts of Bihar, Gangetic West Bengal, Arunachal Pradesh, Coastal Orissa, Chattisgarh, Lakshadweep Islands, some parts of East Rajasthan, Jharkhand, Assam, Nagaland, Madhya Pradesh, Andhra Pradesh, Gujarat, West Madhya Pradesh, Vidarbha, Madhya Maharashtra, Marathwada, North & South Interior Karnataka, Andaman & Nicobar Islands, 0 to 2°C over remaining parts of the country.

Distribution of rainfall of the country during week ending on 12.09.2012

| State/Districts | Actual | 12.09.12 |
|--------------------------|--------|----------|
| Arunachal Pradesh | | |
| Anjaw | ** | ** |
| Changlang | 9.7 | -87 |
| East Kameng | 14.4 | -79 |
| East Siang | 90.6 | -32 |
| Kurung Kumey | ** | ** |
| Lohit | 24.3 | -66 |
| Lower Dibang Valley | ** | ** |
| Lower Subansiri | 44 | -8 |
| Papumpara | 52 | -44 |
| Tawang | 108 | -7 |
| Tirap | 31.8 | -77 |
| Upper Dibang Valley | 24 | -58 |
| Upper Siang | 64.1 | -61 |
| Upper Subansiri | 52.6 | 110 |
| West Kameng | 32.3 | -78 |
| West Siang | 70 | 26 |
| Assam | | |
| Baksa | 33.4 | -67 |
| Barpeta | 23 | -77 |
| Bongaigaon | 1.6 | -98 |
| Cachar | 75.9 | -27 |
| Chirang | 21 | -78 |
| Darrang | 0 | -100 |
| Dhemaji | 125 | 21 |
| Dhubri | 19.7 | -71 |
| Dibrugarh | 65.1 | -29 |
| East Garo Hills | ** | ** |
| East Khasi Hills | 52.5 | -65 |
| Goalpara | 14.5 | -71 |
| Golghat | 77.9 | 37 |
| Hailakandi | 65.4 | -29 |
| Jaintia Hills | 25 | -88 |
| Jorhat | 42.5 | -46 |
| Kamrup(Metro) | 64.1 | 34 |
| Kamrup | 49.2 | 3 |
| Karbi Analog | 26.5 | -54 |
| Karimganj | 75.1 | -31 |
| Kokrajhar | 15.2 | -85 |
| Lakhimpur | 91.6 | -11 |
| Morigaon | 110.2 | 85 |
| N.C.Hills | 5.2 | -78 |
| Nowgong | 41.9 | -29 |
| Nalbari | 19.8 | -50 |
| Ribhoi | 17.5 | -75 |
| Sonitpur | 53.7 | -3 |
| Sibsagar | 17.8 | -68 |
| South Garo Hills | 6.0 | -93 |
| Tinsukia | 57.1 | -39 |
| Udalgiri | 43.8 | -23 |
| West Garo Hills | 29.6 | -66 |
| West Khasi Hills | ** | ** |
| Himachal Pradesh | | |
| Bilaspur | 30.0 | -38 |
| Chamba | 49.2 | 11 |
| Hamirpur | 35.0 | -3 |
| Kangra | 63.8 | -4 |
| Kinnaur | 6.0 | -39 |
| Kullu | 38.5 | 107 |
| Lahaul and Spiti | 5.6 | -74 |
| Mandi | 32.7 | -31 |
| Shimla | 23.9 | -22 |
| Sirmaur | 59.1 | -3 |
| Solan | 31.9 | -33 |
| Una | 40.9 | 1 |
| Punjab | | |
| Amritsar | 21.8 | -8 |
| Barnala | 0.0 | -100 |
| Bhatinda | 6.3 | -69 |
| Faridkot | 3.0 | -87 |
| Fatehgarh Sahib | 2.0 | -92 |

| State/Districts | Actual | 12.09.12 |
|----------------------------|--------|----------|
| Ferozpur | 13.2 | -33 |
| Gurdaspur | 30.8 | 4 |
| Hoshiarpur | 19.0 | -41 |
| Jalandhar | 25.6 | -24 |
| Kapurthala | 23.3 | 39 |
| Ludhiana | 11.2 | -58 |
| Mansa | 3.4 | -86 |
| Moga | 0.0 | -100 |
| Muktesar | 0.0 | -100 |
| Nawashahar | 8.2 | -76 |
| Patiala | 9.9 | -67 |
| Ropar | 0.0 | -100 |
| Sangrur | 1.4 | -95 |
| Mohali | 25.0 | -16 |
| TarnTaran | 3.0 | -87 |
| Haryana | | |
| Ambala | 35.8 | -9 |
| Bhiwani | 0.5 | -97 |
| Chandigarh | 19.2 | -57 |
| Faridabad | 5.3 | -80 |
| Fatehabad | 3.7 | -77 |
| Gurgaon | 7.2 | -78 |
| Hissar | 0.7 | -96 |
| Jhajar | 2.8 | -87 |
| Jind | 4.5 | -79 |
| Katihah | 18.5 | -40 |
| Karnal | 0.0 | -100 |
| Kurukshetra | 4.5 | -83 |
| Mahendragarh | 0.1 | -99 |
| Mewat | 6.4 | -81 |
| Palwal | 8.0 | -70 |
| Panchkkula | 49.3 | 14 |
| Panipat | 0.4 | -98 |
| Rewari | 3.8 | -85 |
| Rohtak | 2.3 | -92 |
| Sirsa | 3.2 | -73 |
| Sonepat | 0.0 | -100 |
| Yamunanagar | 24.6 | -39 |
| New Delhi | 3.6 | -89 |
| Jammu & Kashmir | | |
| Anantnag | 61.5 | 307 |
| Badgam | 45.3 | 127 |
| Bandipore | ** | ** |
| Baramula | 64.8 | 338 |
| Doda | 26.6 | 6 |
| Ganderwal | 85.8 | 813 |
| Jammu | 37.9 | -13 |
| Kargil | 5.2 | -31 |
| Kathua | 20.8 | -62 |
| Kistwar | ** | ** |
| Kulgam | 68.3 | 352 |
| Kupwara | 70.4 | 577 |
| Ladakh(Leh) | 2.5 | -3 |
| Poonch | 79.0 | 43 |
| Pulwama | 25.7 | 91 |
| Rajouri | 37.6 | 59 |
| Ramban | 46.3 | 84 |
| Reasi | 44.6 | -13 |
| Samba | 9.7 | -78 |
| Shopian | 43.0 | 219 |
| Srinagar | 61.5 | 555 |
| Udhampur | 48.9 | -4 |
| East Madhya Pradesh | | |
| Anuppur | 58.9 | -18 |
| Balaghat | 74.5 | 30 |
| Chhatarpur | 44.7 | -19 |
| Chindwara | 110.9 | 146 |
| Damoh | 107.5 | 90 |
| Dindori | 49.8 | -20 |
| Jabalpur | 91.0 | 42 |
| Katni | 44.5 | -33 |
| Mandla | 87.1 | 38 |
| Narsingpur | 83.0 | 31 |

| State/Districts | Actual | 12.09.12 |
|----------------------------|--------|----------|
| Panna | 48.2 | -30 |
| Rewa | 43.2 | -38 |
| Sagar | 71.7 | 15 |
| Satna | 58.4 | -7 |
| Seoni | 79.4 | 52 |
| Shahdol | 80.2 | 30 |
| Sidhi | 78.0 | 4 |
| Singrauli | 34.9 | -44 |
| Tikamgarh | 61.0 | 52 |
| Umaria | 39.9 | -47 |
| West Madhya Pradesh | | |
| Alirajpur | 159.4 | 217 |
| Asoknagar | 82.0 | 67 |
| Badwani | 57.7 | 62 |
| Betul | 161.6 | 183 |
| Bhind | 41.3 | -16 |
| Bhopal | 40.2 | -34 |
| Burhanpur | 238.5 | 604 |
| Datia | 29.7 | -38 |
| Dewas | 211.3 | 321 |
| Dhar | 180.7 | 297 |
| Guna | 59.2 | 39 |
| Gwalior | 24.2 | -51 |
| Harda | 181.5 | 188 |
| Hosangabad | 148.5 | 88 |
| Indore | 217.1 | 381 |
| Jhabua | 223.1 | 365 |
| Khandwa | 208.7 | 360 |
| Khargone | 137.7 | 253 |
| Mandsaur | 80.9 | 81 |
| Morena | 39.4 | 1 |
| Neemuch | 65.3 | 37 |
| Raisen | 56.4 | -12 |
| Rajgarh | 65.7 | 55 |
| Ratlam | 123.0 | 120 |
| Sehore | 75.3 | 21 |
| Shajapur | 63.4 | 53 |
| Sheopur Kalani | 39.5 | 10 |
| Shivpuri | 73.1 | 57 |
| Ujjain | 152.6 | 255 |
| Vidisha | 76.8 | 55 |
| Chattisgarh | | |
| Bastar | 126.5 | 91 |
| Bijapur | 130.1 | 98 |
| Bilaspur | 105.7 | 71 |
| Dantewara | 155.7 | 149 |
| Dhamtari | 22.0 | -61 |
| Durg | 56.1 | 6 |
| Janjgir | 58.3 | -22 |
| Jashpurnagar | 92.1 | 2 |
| Kanker | 41.2 | -32 |
| Korba | 94.4 | 25 |
| Koriya | 126.0 | 89 |
| Kawardha | 63.0 | 38 |
| Mahasumund | 43.8 | -34 |
| Narayanpur | 25.8 | -60 |
| Raigarh | 105.4 | 34 |
| Raipur | 40.8 | -35 |
| Rajandgaon | 45.2 | -23 |
| Surguja | 77.3 | 2 |
| East Uttar Pradesh | | |
| Allahabad | 56.4 | -8 |
| Ambedkar Nagar | 0.0 | -100 |
| Azamgarh | 13.7 | -82 |
| Bahraich | 3.5 | -95 |
| Ballia | 3.3 | -94 |
| Balrampur | 7.0 | -86 |
| Banda | 45.3 | -9 |
| Barabanki | 21.5 | -73 |
| Basti | 4.9 | -91 |
| Chandauli | 4.6 | -94 |
| Deoria | 2.0 | -96 |
| Faizabad | 17.8 | -74 |

| State/Districts | Actual | 12.09.12 |
|---------------------------|--------|----------|
| Farrukhabad | 5.1 | -89 |
| Fatehpur | 11.1 | -82 |
| Gazipur | 15.0 | -77 |
| Gonda | 1.0 | -99 |
| Gorakhpur | 4.3 | -94 |
| Hardoi | 31.2 | -41 |
| Jaunpur | 26.0 | -64 |
| Kannauj | 11.0 | -79 |
| Kanpur City | 14.6 | -65 |
| Kanpur Dehat | 16.1 | -72 |
| Kaushambi | 50.0 | 1 |
| Kheri | 0.1 | -99 |
| Kushi nagar | 1.5 | -97 |
| Lucknow | 10.9 | -77 |
| Maharajganj | 1.0 | -98 |
| Mau | 2.0 | -97 |
| Mirzapur | 53.0 | -33 |
| Pratapgarh | 46.7 | -30 |
| RaiBareilly | 24.7 | -49 |
| Sahuji Maharajnagar | 60.0 | -10 |
| Sant Kabirnagar | 0.0 | -100 |
| Sant Ravidas Nagar | 76.0 | 3 |
| Shrawasti | 0.6 | -99 |
| Sidharthnagar | 6.4 | -89 |
| Sitapur | 8.8 | -87 |
| Sonbhadra | 45.4 | -44 |
| Sultanpur | 17.7 | -67 |
| Unnao | 17.0 | -69 |
| Varanasi | 14.6 | -81 |
| West Uttar Pradesh | | |
| Agra | 33.8 | 0 |
| Aligarh | 29.8 | -9 |
| Auraiya | 24.1 | -47 |
| Badaun | 0.4 | -99 |
| Baghpat | 2.5 | -89 |
| Bareilly | 2.2 | -96 |
| Bijnor | 26.5 | -43 |
| Bulandsahar | 12.6 | -66 |
| Etah | 30.3 | -12 |
| Etawah | 17.1 | -68 |
| Firozabad | 14.2 | -62 |
| GBNagar | 4.0 | -85 |
| Ghaziabad | 6.0 | -79 |
| Hamirpur | 36.2 | -27 |
| Jalaun | 18.0 | -62 |
| Jhansi | 18.7 | -59 |
| Jotirba Phule Nagar | 6.5 | -81 |
| Kanshiramnagar | 2.0 | -95 |
| Lalitpur | 21.0 | -56 |
| Mahamaya Nagar | 10.1 | -64 |
| Mahoba | 52.4 | 8 |
| Mainpuri | 12.0 | -69 |
| Mathura | 9.3 | -66 |
| Meerut | 7.3 | -81 |
| Moradabad | 10.6 | -78 |
| Muzzaffarnagar | 0.0 | -100 |
| Pilibhit | 0.0 | -100 |
| Rampur | 7.2 | -80 |
| Saharanpur | 5.0 | -86 |
| Shahjahanpur | 1.3 | -98 |
| Uttarakhand | | |
| Almora | 1.3 | -97 |
| Bageshwar | 26.4 | -31 |
| Chamoli | 35.8 | -21 |
| Champawat | 16.5 | -77 |
| Dehradun | 115.1 | 33 |
| Garhwal Pauri | 30.0 | -48 |
| Garhwal Tehri | 17.5 | -64 |
| Haridwar | 29.0 | -33 |
| Nainital | 6.2 | -91 |
| Pithoragarh | 58.5 | -34 |
| Rudraprayag | 44.2 | -45 |







| State/Districts | Actual | 12.09.12 |
|-----------------------|--------|----------|
| Udham Sing Nagar | 10.8 | -81 |
| Uttarkashi | 23.0 | -59 |
| Bihar | | |
| Araria | 31.3 | -60 |
| Arwal | 11.8 | -79 |
| Aurangabad | 51.9 | -18 |
| Banka | 14.4 | -71 |
| Begusarai | 17.0 | -74 |
| Bhabua | 40.1 | -45 |
| Bhagalpur | 24.2 | -58 |
| Bhojpur | 0.0 | -100 |
| Buxar | 0.0 | -100 |
| Darbhanga | 7.0 | -87 |
| East Champaran | 13.7 | -77 |
| Gaya | 34.9 | -29 |
| Gopalganj | 10.4 | -84 |
| Jahanabad | 13.0 | -75 |
| Jamui | 44.6 | -24 |
| Kathihar | 22.3 | -72 |
| Khagadia | 23.9 | -61 |
| Kishanganj | 73.6 | -24 |
| Lakhisarai | 33.0 | -47 |
| Madhepura | 20.3 | -72 |
| Madhubani | 12.3 | -71 |
| Monghyar | 26.3 | -58 |
| Muzaffarpur | 18.6 | -70 |
| Nalanda | 23.2 | -59 |
| Nawada | 29.9 | -40 |
| Patna | 18.8 | -71 |
| Purnea | 1.6 | -97 |
| Rohtas | 36.3 | -44 |
| Saharsha | 2.6 | -96 |
| Samstipur | 9.9 | -84 |
| Saran | 13.7 | -81 |
| Sheikpura | 21.7 | -61 |
| Sheohar | 11.0 | -78 |
| Sitamarhi | 7.7 | -85 |
| Siwan | 8.8 | -87 |
| Supaul | 15.6 | -78 |
| Vaishali | 41.5 | -30 |
| West Champaran | 9.6 | -86 |
| Jharkhand | | |
| Bokaro | 146.4 | 99 |
| Chatra | 38.8 | -25 |
| Deoghar | 52.0 | -17 |
| Dhanbad | 160.1 | 148 |
| Dumka | 50.7 | -25 |
| East Singbhum | 57.2 | -15 |
| Garhwa | 44.0 | -44 |
| Giridih | 88.9 | 44 |
| Godda | 39.9 | -31 |
| Gumla | 180.9 | 140 |
| Hazaribagh | 37.3 | -45 |
| Jamtara | 77.3 | -3 |
| Khunti | 80.3 | 12 |
| Koderna | 37.0 | -29 |
| Latehar | 98.2 | 36 |
| Lohardagga | 52.8 | -21 |
| Pakur | 83.0 | -4 |
| Palamau | 56.2 | -24 |
| Ramgarh | 106.4 | 57 |
| Ranchi | 126.3 | 76 |
| Sahebganj | 33.2 | -53 |
| Saraikela | 50.2 | -36 |
| Simdega | 190.7 | 130 |
| West Singbhum | 66.8 | -6 |
| East Rajasthan | | |
| Ajmer | 31.2 | 27 |
| Alwar | 22.1 | -35 |
| Banswara | 193.4 | 256 |
| Baran | 75.2 | 97 |
| Bharatpur | 46.2 | 37 |
| Bhilwara | 69.8 | 105 |
| Bundi | 44.9 | 31 |

| State/Districts | Actual | 12.09.12 |
|---|--------|----------|
| Chittorgarh | 57.9 | 47 |
| Dausa | 38.5 | 23 |
| Dholpur | 29.4 | -26 |
| Dungarpur | 242.4 | 466 |
| Jaipur | 33.3 | 31 |
| Jhalawar | 75.6 | 74 |
| Jhunjhunu | 2.7 | -85 |
| Karauli | 34.3 | 11 |
| Kota | 64.3 | 48 |
| Pratapgarh | 146.0 | 180 |
| Rajsamand | 89.0 | 196 |
| Sawai Madhopur | 32.1 | 7 |
| Sikar | 7.2 | -62 |
| Sirohi | 106.0 | 67 |
| Tonk | 41.0 | 48 |
| Daipur | 148.1 | 331 |
| West Rajasthan | | |
| Barmer | 74.2 | 347 |
| Bikaner | 46.2 | 230 |
| Churu | 6.5 | -59 |
| Hanumangarh | 19.1 | 97 |
| Jaisalmer | 48.1 | 381 |
| Jalore | 36.0 | 12 |
| Jodhpur | 68.6 | 265 |
| Nagaur | 29.9 | 81 |
| Pali | 65.9 | 111 |
| Sri Ganganagar | 82.2 | 705 |
| Gujarat Region | | |
| Ahmedabad | 81.7 | 96 |
| Anand | 112.1 | 93 |
| Banaskantha | 103.4 | 142 |
| Baroda | 121.5 | 95 |
| Broach | 98.8 | 120 |
| DNH | 147.4 | 53 |
| Dahod | 145.9 | 156 |
| Daman | 66.8 | -31 |
| Dangs | 118.7 | 21 |
| Gandhinagar | 158.3 | 175 |
| Kheda | 194.3 | 219 |
| Mehsana | 138.4 | 168 |
| Narmada | 156.3 | 186 |
| Navsari | 159.5 | 88 |
| Panchmahal | 248.7 | 295 |
| Patan | 95.0 | 184 |
| Sabarkantha | 300.7 | 474 |
| Surat | 136.0 | 118 |
| Tapi | 160.0 | 125 |
| Valsad | 159.7 | 84 |
| Saurashtra, Kutch & Diu region | | |
| Amreli | 70.6 | 272 |
| Bhavnagar | 56.6 | 84 |
| Diu | 189.5 | 750 |
| Jamnagar | 110.8 | 430 |
| Junagarh | 128.8 | 428 |
| Kutch | 126.7 | 376 |
| Porbandar | 69.2 | 255 |
| Rajkot | 81.9 | 246 |
| Surendranagar | 66.6 | 95 |
| Maharashtra | | |
| Konkan & Goa | | |
| Goa | 81.2 | 22 |
| Mumbai | 108.8 | 67 |
| Raigad | 221.0 | 132 |
| Ratnagiri | 186.6 | 116 |
| Sindhudurg | 119.9 | 78 |
| Thane | 209.8 | 153 |
| Madhya Maharashtra | | |
| Ahmednagar | 21.2 | -25 |
| Dhule | 27.6 | 33 |
| Jalgaon | 44.8 | 64 |
| Kolhapur | 67.8 | 79 |
| Nandurbar | 100.8 | 156 |
| Nasik | 99.0 | 104 |
| Pune | 44.6 | 52 |

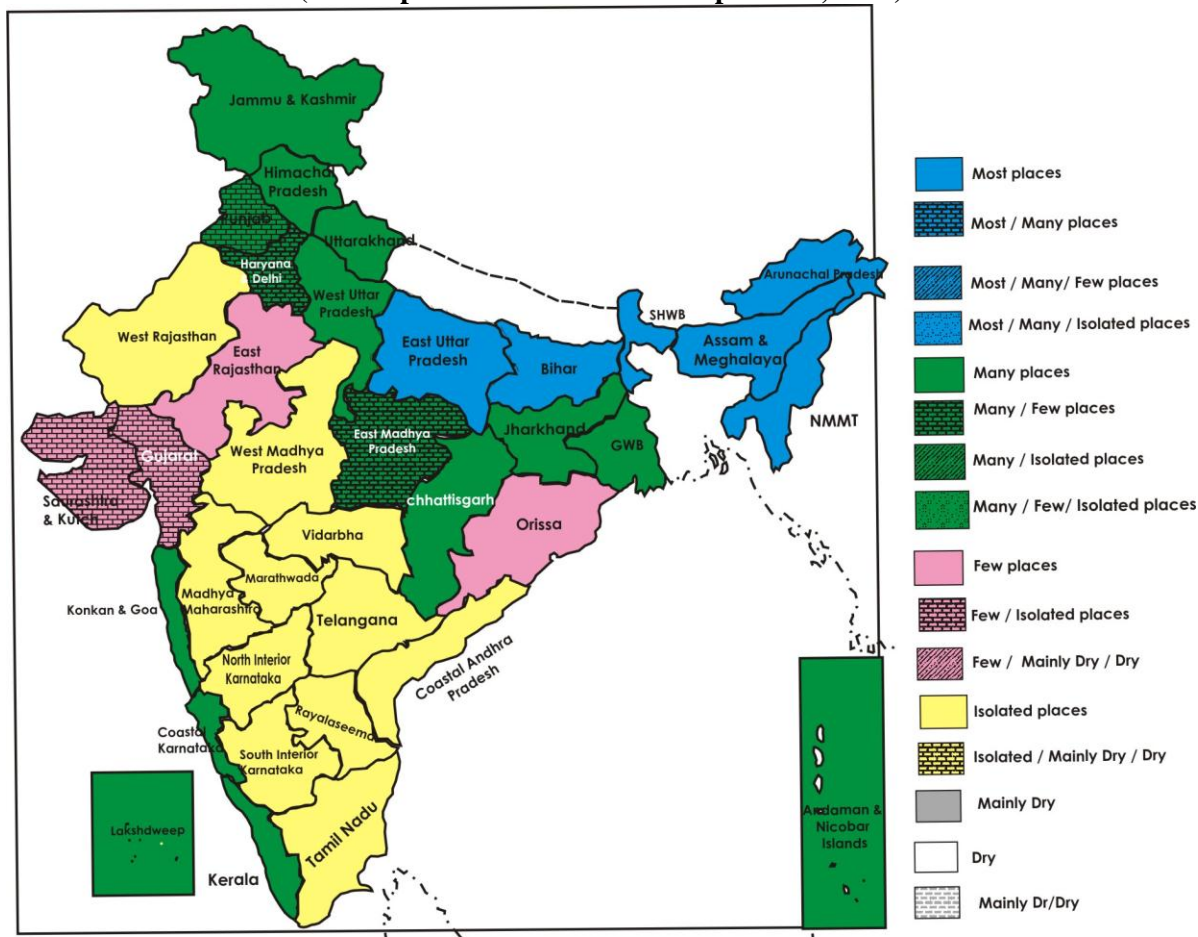
| State/Districts | Actual | 12.09.12 |
|--------------------|--------|----------|
| Sangli | 12.1 | -53 |
| Satara | 38.5 | 50 |
| Solapur | 23.5 | -33 |
| Marathwada | | |
| Aurangabad | 19.7 | -28 |
| Beed | 17.1 | -50 |
| Hingoli | 35.2 | 0 |
| Jalna | 15.8 | -38 |
| Latur | 30.2 | -29 |
| Nanded | 28.0 | -29 |
| Usmanabad | 33.6 | -15 |
| Parbhani | 21.4 | -41 |
| Vidarbha | | |
| Akola | 66.8 | 134 |
| Amraoti | 114.5 | 214 |
| Bhandara | 66.4 | 19 |
| Buldhana | 51.8 | 102 |
| Chandrapur | 43.1 | -17 |
| Gadchiroli | 66.5 | 13 |
| Gondia | 92.6 | 62 |
| Nagpur | 88.6 | 93 |
| Wardha | 99.9 | 150 |
| Washim | 32.7 | 0 |
| Yeotmal | 52.4 | 46 |
| Orissa | | |
| Angul | 82.0 | 16 |
| Balasore | 101.5 | 16 |
| Bargarh | 66.3 | -16 |
| Bhadrak | 73.5 | 13 |
| Bolangir | 65.0 | -15 |
| Boudh | 23.4 | -69 |
| Cuttack | 60.7 | -33 |
| Deogarh | 69.3 | -16 |
| Dhenkanal | 92.7 | 30 |
| Gajapati | 58.9 | 11 |
| Ganjam | 30.5 | -53 |
| Jagatsingpur | 103.1 | 43 |
| Jajpur | 41.5 | -33 |
| Jharsuguda | 110.7 | 34 |
| Kalahandi | 81.3 | -3 |
| Kandhamal | 78.8 | 3 |
| Kendrapara | 65.5 | -13 |
| Keonjhar | 107.0 | 82 |
| Khurda | 47.5 | -43 |
| Koraput | 118.8 | 48 |
| Malkangiri | 75.8 | 3 |
| Mayurbhanj | 88.3 | 26 |
| Nawapara | 43.7 | -22 |
| Nawarangpur | 86.5 | 32 |
| Nayagarh | 54.7 | -20 |
| Puri | 101.4 | 24 |
| Rayagada | 52.0 | -15 |
| Sambalpur | 82.0 | -1 |
| Sonepur | 50.9 | -48 |
| Sundargarh | 77.5 | 8 |
| West Bengal | | |
| GWB | | |
| Bankura | 80.4 | 20 |
| Birbhum | 45.9 | -31 |
| Burdwan | 62.6 | -9 |
| East Midnapore | 165.0 | 71 |
| Hooghly | 54.2 | 4 |
| Howrah | 118.2 | 85 |
| Kolkata | 102.6 | 33 |
| Murshidabad | 47.2 | -26 |
| Nadia | 43.1 | -20 |
| 24 Pargana (N) | 80.5 | 13 |

| State/Districts | Actual | 12.09.12 |
|---------------------------------|--------|----------|
| Purulia | 119.1 | 64 |
| 24 Pargana (S) | 128.6 | 54 |
| West Midnapore | 79.6 | 19 |
| SHWB | | |
| Cooch Behar | 89.4 | -22 |
| Darjeeling | 126.3 | -9 |
| East Sikkim | 73.9 | -22 |
| Jalpaiguri | 111.7 | -5 |
| Malda | 23.2 | -66 |
| North Dinajpur | 10.9 | -89 |
| North Sikkim | 104.5 | 3 |
| South Dinajpur | 13.0 | -80 |
| South Sikkim | 85.8 | -10 |
| West Sikkim | 153.0 | 51 |
| Karnataka | | |
| Coastal Karnataka | | |
| Dakshin Kannada | 98.7 | 30 |
| Udupi | 145.0 | 39 |
| Uttar Kannada | 101.0 | 63 |
| North Interior Karnataka | | |
| Bagalkote | 2.9 | -85 |
| Belgaum | 14.5 | -7 |
| Bidar | 40.1 | 1 |
| Bijapur | 6.6 | -76 |
| Dharwad | 10.3 | -28 |
| Gadag | 4.1 | -78 |
| Gulbarga | 26.6 | -30 |
| Haveri | 5.8 | -39 |
| Koppal | 3.8 | -84 |
| Raichur | 22.3 | -16 |
| Yadgir | 9.8 | -72 |
| South Interior Karnataka | | |
| Bangalore Rural | 2.4 | -92 |
| Bangalore Urban | 5.6 | -84 |
| Bellary | 0.7 | -97 |
| Chamarajnar | 11.0 | -35 |
| Chichballapur | 6.1 | -77 |
| Chickmagalur | 42.6 | 56 |
| Chitradurga | 5.1 | -57 |
| Davangere | 5.0 | -62 |
| Hassan | 14.5 | 16 |
| Kodagu | 65.2 | 51 |
| Kolar | 0.9 | -97 |
| Mandya | 16.6 | -12 |
| Mysore | 18.0 | 32 |
| Ramnagara | 2.1 | -93 |
| Shimoga | 53.2 | 116 |
| Tumkur | 7.1 | -68 |
| Kerala | | |
| Alappuzha | 37.7 | -39 |
| Kannur | 130.2 | 157 |
| Ernakulam | 71.0 | 3 |
| Idukki | 48.2 | -22 |
| Kasaragod | 86.6 | 29 |
| Kollam | 24.1 | -41 |
| Kottayam | 31.2 | -48 |
| Kozhikode | 133.2 | 140 |
| Malappuram | 82.3 | 96 |
| Palakkad | 52.2 | 54 |
| Pathanamthitta | 37.3 | -33 |
| Thiruvananthapuram | 13.5 | -58 |
| Thrissur | 76.1 | 27 |
| Wyanad | 107.7 | 134 |
| Tamil Nadu | | |
| Ariyalur | 36.8 | 3 |
| Chennai | 44.0 | 80 |

| State/Districts | Actual | 12.09.12 |
|-------------------------------|--------|----------|
| Coimbatore | 9.7 | 15 |
| Cuddalore | 22.9 | -24 |
| Dharmapuri | 16.5 | -50 |
| Dindigul | 9.3 | -62 |
| Erode | 10.2 | -42 |
| Kanchipuram | 27.8 | -21 |
| Kanyakumari | 0.1 | -99 |
| Karikal | 27.2 | 8 |
| Karur | 3.7 | -81 |
| Krishnagiri | 1.7 | -93 |
| Madurai | 7.9 | -75 |
| Nagapattinam | 35.2 | 33 |
| Namakkal | 26.5 | 0 |
| Nilgiris | 39.6 | 60 |
| Perambalur | 18.5 | -29 |
| Puducherry | 10.0 | -70 |
| Pudukottai | 29.9 | 15 |
| Ramanathapuram | 20.3 | 99 |
| Salem | 54.0 | 67 |
| Sivaganga | 23.8 | -5 |
| Thanjavur | 16.8 | -37 |
| Theni | 4.7 | -49 |
| Tirunelveli | 0.0 | -100 |
| Tirupur | 0.0 | -100 |
| Tiruvallur | 42.2 | 54 |
| Tiruvannamalai | 19.0 | -50 |
| Tiruvarur | 22.1 | -21 |
| Toothukudi | 0.0 | -100 |
| Trichy | 7.6 | -74 |
| Vellore | 15.6 | -52 |
| Villupuram | 13.4 | -61 |
| Virudhunagar | 4.2 | -73 |
| Andhra Pradesh | | |
| Coastal Andhra Pradesh | | |
| East Godavari | 101.5 | 205 |
| Guntur | 3.6 | -89 |
| Krishna | 50.2 | 45 |
| Nellore | 17.8 | -8 |
| Prakasam | 2.9 | -86 |
| Sirkakulam | 89.0 | 65 |
| Visakhapatnam | 101.4 | 138 |
| Vizianagram | 92.9 | 83 |
| West Godavari | 98.7 | 154 |
| Telangana | | |
| Adilabad | 59.6 | 49 |
| Hyderabad | 24.9 | -36 |
| Karimnagar | 55.5 | 43 |
| Khammam | 92.0 | 113 |
| Mehabubnagar | 6.7 | -79 |
| Medak | 28.1 | -26 |
| Nalgonda | 14.0 | -60 |
| Nizamabad | 31.6 | -32 |
| Rangareddy | 20.8 | -52 |
| Warangal | 39.5 | 6 |
| Rayalaseema | | |
| Anantapur | 1.5 | -93 |
| Chittoor | 16.3 | -40 |
| Cuddapah | 2.9 | -87 |
| Kurnool | 5.2 | -81 |

| | | | |
|---|----------------------------------|---|--------------------------------|
|  | (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 16th September, 2012)



Major Feature of Weather Forecast up to 0830 hours IST of 16th September, 2012

- Rain/thundershowers would occur at most places over east Uttar Pradesh, Bihar, SubHimalayan West Bengal & Sikkim and northeastern states.
- Rain/thundershowers would occur at many places over Western Himalayan region, west Uttar Pradesh, Chhattisgarh, Jharkhand, Gangetic West Bengal, west coast, Lakshadweep and Andaman & Nicobar Islands.
- Rain/thundershowers would occur at a few places over east Rajasthan, Gujarat and Odisha.
- Rain/thundershowers would occur at a few places over Punjab, Haryana, Chandigarh & Delhi and east Madhya Pradesh during next 24 hours and increase thereafter.
- 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 Uttarakhand, east Uttar Pradesh, Bihar, SubHimalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh and Andaman & Nicobar Islands during next 48 hours.

Weather Outlook for subsequent 4 days up to 0830 hours IST of 20th September, 2012

- Rain/thundershowers would occur at many places over western Himalayan region, Indo Gangetic plains and northeastern states.
- Rain/thundershowers would occur at a few places along west coast, east Madhya Pradesh, Chhattisgarh Jharkhand and Odisha.
- Rain/thundershowers would occur at one or two places over rest parts of the country.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Most of the districts of Arunachal Pradesh except Changlang, East Kameng and many districts in Assam except Bongaigaon, Chirang, Dhubri, Goalpara, Jaintia hills, Darrang, Kokrajhar, N C Hills, Nalbari, Ribhoi, Sibsagar, West Garo Hills and South Garo Hills received significant rainfall during last week.
- **Rainfall Forecast:** Rain / thundershowers would occur at most places over the States of the region during the period.
- **Warning:** Heavy to very heavy rainfall would occur at one or two places over Assam & Meghalaya and Arunachal Pradesh during next 48 hours.
- **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 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 Lower Brahmaputra valley zone, transplanting of 60-70 days old seedlings may be done upto mid-September if the seedlings of the varieties like Monohar Sali, Gitesh, Andrew Sali, Prasad Bhog, Prafulla etc. are available.
 - Farmers in Hill Zone of Assam are 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 for nursery sowing of mid cauliflower, early cabbage, pumpkin and brinjal and also harvesting of matured jute may be done.
 - 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 undertake 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. Farmers are also advised to undertake nursery bed preparation for early cole crops and raddish. Harvesting of *Olitorius* jute may be continued.
 - Farmers in Barak Valley Zone of Assam are advised to undertake nursery preparation of brinjal and land preparation for autumn planting of sugarcane. 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, soybean, ginger and turmeric.
 - In Mild Tropical Hill Zone of Nagaland, farmers are advised to harvest *jhum* rice as soon as it matures and harvest matured maize. 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. Farmers are also advised land preparation for nursery sowing off-season tomato and capsicum.
 - In Temperate Sub Alpine Zone of Meghalaya, farmers are advised to undertake nursery raising of cole crops and nursery sowing of French bean and dolichos bean. 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. Farmers are also advised to undertake land preparation and sowing of pea, mustard and garlic in high altitude region. Sowing of *rabi* maize may be initiated in low and medium altitude region.
 - 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 Quinolphos @ 2 teaspoonful /5 lits of water may be done if the infestation is noticed.
- In Lower Brahmaputra Valley Zone of Assam, attack of case worm and blast are observed in rice. For control case worm Quinolphos 25 EC (0.025%) or Monocrotophos 40EC (0.04%) is effective and for control blast, Spray carbendazim @ 1g/lit of water at tillering stage and subsequently give two sprays of Edifenphos @ 1ml /lit of water at panicle initiation stage.
- In Mild Tropical Plain Zone of Tripura, due to prevailing weather conditions, there is chance of attack of sheath blight in upland *rice*, *Aman 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. Powdery mildew attack may be in bitter gourd and pointed gourd. Dinocap 48% EC @ 2ml or Triadimefon 25% WP @ 0.3gm per liter of water may be sprayed to manage the attack.
- 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, rhizome rot and shoot borer may infest in turmeric and ginger and Diamond Back Moth in cauliflower/ broccoli. Spray Dithane M-45 @ 2.5g/ lit of water for rhizome rot. For shoot borer spraying of Monocrotophos @ 0.5 ml/ lit + Dichlorovos @ 1 ml/ litre of water at 10 days interval is advised. Spray Dichlorovos 76 EC @ 0.5 ml/ lit of water if Plutella(DBM) is observed in the crop.
- In Mid Tropical Hill zone of Mizoram, there is chance of attack of hairy caterpillar and tikka disease in groundnut. If incidence of hairy caterpillar is observed, then spray Quinolphos 25 EC or Chloropyriphos 20 EC @ 2 ml/ lit of water. 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 and Mid Tropical Zone of Tripura, farmers are advised to vaccinate cattle and buffaloes against FMD, HS and BQ, deworm pigs and vaccinate 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 and Sub Tropical Plain Zone of Manipur, farmers are advised to deworm cattle against Fascioliasis and Endoparasite vaccinate poultry against Ranikhet and Coccidiosis, deworm pig and vaccinate against swine fever.
 - 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 fishponds. 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 districts of Jharkhand, Gangetic West Bengal, Sub Himalayan West Bengal, Sikkim (except Malda, North Dinajpur and South Dinajpur), Orissa (except Boudh) and Araria, Aurangabad, Bhabua, Gaya, Jamui, Kishanganj, Lakhisarai, Rohtas and Vaishali districts of Bihar during last week.
- **Rainfall Forecast:** Rain / thundershowers would occur at most places over Bihar, Sub Himalayan West Bengal and Sikkim, many places over Gangetic West Bengal and Jharkhand and at a few places over Orissa.
- **Warning:** Heavy to very heavy rainfall would occur at one or two places over Bihar, Sub-Himalayan West Bengal & Sikkim during next 48 hours.
- **Advisories:**

- As there was significant rainfall occurred in all districts of Jharkhand, Gangetic West Bengal, Sub Himalayan West Bengal, Sikkim (except Malda, North Dinajpur and South Dinajpur), Orissa (except Boudh) and Araria, Aurangabad, Bhabua, Gaya, Jamui, Kishanganj, Lakhisarai, Rohtas and Vaishali districts of Bihar during last week, farmers are advised to postpone irrigation to the standing crops. As rain is also likely to occur at most places over Bihar, Sub Himalayan West Bengal and Sikkim, many places over Gangetic West Bengal and Jharkhand, 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.
- In North Bihar, farmers are advised for preparation of field and sowing of september arhar. Weather condition is congenial for planting of cauliflower and shakarkand. Farmers are advised to prepare field and sow these crops.
- Farmers of East and South Eastern Coastal Plain Zone of Orissa are advised to go for sowing of pre-rabi pulse crops like green gram, black gram, horse gram in the fallow up land and up-medium lands. Farmers are also advised for planting of brinjal.
- Farmers of Western Undulating Zone of Orissa are advised that necessary arrangement should be made to drain out excess water from maize, arhar, cotton and SRI transplanted field. If spraying is necessary mix sticker 0.5ml/lit of water along with the pesticide.
- Farmers of North Central Plateau Zone are advised for hoeing, weeding and earthing up in pulses at eight to nine week stage. Drain out excess rain water from the field as the crop is susceptible to water stagnation. In fallow uplands, farmers are advised to go for sowing green gram and black gram as soon as possible.
- Farmers of North Eastern Plateau Zone of Orissa are advised to plug the hole and repair the bunds and bund trimming to further store and conserve the rain water for better water management in rice fields. Farmers are also advised that it is time for sowing of rainy season vegetables like bhindi (lady's finger), bean, French bean, tomato, cauliflower, cabbage etc. Prepare the field for its sowing. They are also advised for planting of brinjal.
- 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 inter cropping. 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. After harvesting of mung and urd, farmers may sow toria immediately.
- In Coastal Saline Zone of West Bengal, farmers are advised to cultivate waste land crop such as *Aschnomene aspera*, water chest nut, where paddy could not be grown due to deep water.
- In New Alluvial Zone and Old Alluvial Zone of West Bengal, farmers are advised to sow winter vegetables like onion, capsicum, raddish, broccoli etc. For those fields where *kharif* rice was sown, apply 4.5 kg Urea per Bigha as second top dressing when panicle initiation will start.
- Farmers in Laterite and Red Soil Zone of West Bengal are advised to go for nursery preparation for winter vegetables like capsicum and cabbage etc. Farmers are also advised to maintain 5-7 cm depth of water in *aman* rice and drain out excess water.
- 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 maize.
- As there is possibility of moderate rainfall in Old Alluvial Zone of West Bengal, keep 2-3cm stagnant water in the field of *aman* rice and increase the level of water with the age of the crop. Weeding followed by topdressing of urea should be done at 3 weeks after transplanting.
- Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.

- In Western Plateau Zone of Jharkhand in timely sown rice there may be attack of gundhi bug. To control , dusting of Chlorpyrifos / Quinolphos / Methyl parathion dust @ 10 kg per acre is advised. In some pockets rice are infested by leaf eating insects and arhar are attacked by leaf roller insects, spray insecticide Chlorpyrifos @ 1 ml per litre of water for rice and Endosulfan @ 1 ml per litre of water.
- Infestation of Early shoot borer in sugarcane has been occurred in North Eastern Ghat Zone of Orissa. Farmers are advised to release 50,000 *Trychogramma 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 litre water.
- White ant attack in groundnut has been found in dry areas in Puri district of East and South Eastern Coastal Plain Zone of Orissa. The farmers are advised to go for soil drenching with 2 ml Chloropyrifos in each litre water thoroughly.
- There is incidence of *Alternaria* blight and bacterial leaf spot on cotton crop in some places of Western Undulating Zone of Orissa. The farmers are advised to Spray Mancozeb@2.5 g per one lit water for *Alternaria* blight and for bacterial leaf spot spray Steptocycline@0.1g with copper oxychloride 2.5g per one litre water. Spray 500 litre of these spray solution for one hectare area.
- There is infestation of whorl maggot and leaf folder in paddy. The farmers of Western Undulating Zone of Orissa are advised to spray Monocrotophos @2ml/lit of water. Ensure that 500 liters of pesticide solution should be sprayed for one hectare area.
- Under prevailing weather situation, in New Alluvial Zone of West Bengal, BPH may attack *aman* rice. If the number of insect is more than 15 per plant, apply 0.75 ml Nuvan or Vapona per litre of water or dust quinolphos 1.5%/ carbaril 4% at lower portion of the stem. Fungal leaf spot disease may attack in vegetables. To prevent apply 2.5 gm Indofil-M-45 or 'Kavach' mixed with one lit of water. 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 Chlorpyrifos @ 2.5 ml / litre or Monocrotophos @ 1.5 ml / litre of water and for blast or brown spot, spray Ediphenphos @ 1ml / litre of water.
- Due to favourable weather conditions in Laterite and Red Soil Zone and Terai Zone of West Bengal, sheath blight may be found in rice and collar rot in chili. For sheath blight, spray Carbendazim 1 g per litre of water or validimycin @ 2 ml per litre of water. For collar rot spray Carbendazim 12% + Mancozeb 64%, 2 gram per lit of water. Yellow vein mosaic incidence is likely in ladies finger. To control this white fly may be controlled. To control whitefly, spray Imidacloprid 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. Insure 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.

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 Plain 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 in Gujarat State, Konkan, Vidarbha and all districts in Madhya Maharashtra (except Ahmednagar, Dhule, Sangli, Solapur) and Hingoli, Latur, Usmanabad in Marathwada received significant rain during last week.
- **Rainfall Forecast:** Rain/thundershowers would occur at many places over Konkan, at a few places over Gujarat and Saurashtra & Kutch region and at one or two places over rest parts of the region.
- **Advisories:**
 - As fairly widespread rainfall is expected over Konkan during next 3 days, farmers are advised to make an 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 transplanted rice field. Farmers of Kolhapur, Pune and East Vidarbha region are advised to maintain 5 cm water level in transplanted rice field.
 - Farmers of North Madhya Maharashtra are advised to spray 2 % DAP in cotton at vegetative / floral bud initiation stage for better development of cotton boll.
 - 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.
 - 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.
 - 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 rain occurred in North Gujarat Zone, avoid irrigation and chemical spraying in standing *kharif* crops. Avoid water stagnation in gram/cowpea and sesame crop field for longer period. Carryout plantation of different horticultural crops. Carry out inter-culturing and hand weeding operations in castor and apply supplementary dose of nitrogen @ 40 kg/ha. Harvest the matured gram and cowpea pods by hand picking and matured fruits of vegetables.
 - As excess rain occurred in all districts of South Gujarat Zone during last week, drain out excess water from maize, sugarcane, green gram, black gram, ginger, turmeric and vegetable crop fields as stagnant water is harmful to these crops.
 - 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. Use runoff water to recharge wells or store in farm pond. Remove weeds from standing paddy crop. Maintain water level up to 5-7 cm in paddy field. As cotton crop is at flowering stage, drain out excess water from field. Farmers are advised to harvest the matured pods (green gram and cowpea) by hand picking and avoid water logging in the field, where crops are at flowering/pod development stage. Taking advantage of recent rainfall, undertake transplanting of winter chilly, brinjal and tomato. Propping in sugarcane may be done to avoid lodging due to speedy winds.
 - Carry out plantation of different horticultural crops like amla, custard apple, pomegranate, mango, sapota and papaya in Bhal and Coastal Zone of Gujarat. Ahmedabad and Bhavnagar districts received significant rain during last week. Avoid irrigation and chemical spraying in the standing *kharif* crops. Carry out transplanting of chillies, tomato and brinjal.
 - In middle Gujarat Zone, farmers are advised to apply insecticide and split application of fertilizer on non rainy days. Sowing of pigeon pea is recommended in case of cotton crop failure. Carry out transplanting of tobacco @ 90 cm X 75 cm spacing before 3rd week of September to control nematode problem.
 - 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. In cotton to speed up new growth, spray 10 ppm solution of gibrallac acid (1 gm of gibrallac acid in 100 litres of water).

- Farmers in South Saurashtra Zone of Gujarat are advised to carry out gap filling in castor crop and sowing of sesame (var: Purva-1).
- Stages of the crops are mentioned in Annexure I.
- Prevailing weather is congenial for occurrence of leaf folder and blast in rice in Konkan, spray Monocrotophos 36 % @ 12 ml/10 litres water against leaf folder and spray Carbendazim @10 g or Copper oxy chloride @ 25 g in 10 litres water for control of blast.
- Under prevailing weather there may be attack of woolly aphids and white grubs in pre seasonal and *suru* sugarcane in Kolhapur and Sangli districts, remove the lower dried leaves and apply Themate 4 kg/acre in the field where crop is up to 9 months old.
- Due to cloudy weather there may be attack of grain caterpillar in jowar in Marathwada, dust Methyl Dimeton 2% @ 25 kg/ha.
- There are chances of downey mildew in pearl millet and maize due to cloudy weather condition in Middle Gujarat Zone, spray Carbendazim 3g/litre.
- 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 observed in vegetable and other crops in Middle Gujarat Zone of Gujarat. Spray 10 ml Dimethoate or 10 ml Methyl-o-dematone in 10 liter water at 10 days interval.
- Varieties of *kharif* crops are mentioned in Annexure II.
- **Animal Husbandry:**
- Keep the animal in the cattle shed during rainfall/ thunderstorm in Bhal and Coastal Zone of Gujarat.

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

- **Realised Rainfall:** Significant rainfall occurred in most of the districts in Himachal Pradesh, West Rajasthan and East Rajasthan, many districts in Jammu & Kashmir, at a few districts in Uttarakhand and one or two districts in rest of the States of the region.
- **Rainfall Forecast:** Rainfall is likely to occur at most places over East Uttar Pradesh, at many places over Uttarakhand, Himachal Pradesh, Jammu & Kashmir and West Uttar Pradesh during next three days and at a few places over Punjab, Haryana and Delhi during next 24 hours and increase thereafter. Rainfall is likely at a few places over East Rajasthan and isolated places over West Rajasthan.
- **Warning:** Heavy to very heavy rainfall would occur at one or two places over Uttarakhand and East Uttar Pradesh during next 48 hours.
- **Advisory:**
 - As significant rainfall occurred in most of the districts in Himachal Pradesh, West Rajasthan and East Rajasthan, many districts in Jammu & Kashmir, farmers are advised to postpone irrigation to the standing crops in the region.
 - As rainfall is likely to occur at most places over East Uttar Pradesh, at many places over Uttarakhand, Himachal Pradesh, Jammu & Kashmir and West Uttar Pradesh during next three days and at a few places over Punjab, Haryana and Delhi during next 24 hours and increase thereafter, farmers are advised to postpone irrigation, weeding, intercultural operation and application of fertilisers to the standing crops. In view of occurrence of heavy rainfall in one or two places over Uttarakhand and East Uttar Pradesh during next 48 hours, arrange for adequate drainage in standing crops to avoid stagnation of water.
 - Farmers in Flood Prone Eastern plain zone of East Rajasthan are advised to prepare nursery for early cauliflower and undertake planting of early radish, transplanting of marigold, balsom, bougainvillea and xenia.
 - Farmers in Semi-arid zone of Jaipur and Southern humid plain zone of East Rajasthan are advised to drain out excess water from the field.
 - In arid western plain zone of West Rajasthan, farmers are advised to do intercultural operations utilizing relatively dry weather likely during the period.
 - In Transitional Plain Zone of Inland drainage of West Rajasthan, farmers are advised to undertake hoeing and weeding in late sown kharif crops.
 - In Arid Western Plain Zone of West Rajasthan, farmers are advised to undertake weeding. 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 of Rajasthan, farmers are advised to install five pheromone traps /ha in cotton fields for assessment of bollworm incidence. Prepare nursery bed for 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 of Rajasthan, 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 of Jammu and Kashmir, farmers are advised to continue sowing of pole type beans. Sowing of toria and preparation of nursery of cauliflower, cabbage and knol-knol may be continued.
- 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 greenhouse 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 and lower intermediate zone of Jammu & Kashmir, farmers are advised to continue sowing of potato, radish, carrot, turnip, garlic, methi and nursery sowing of cauliflower and cabbage. Harvest the kharif fodder. 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. To control leaf webber and capsule borer, spray Carbaryl @ 0.1% or Endosulfan @ 0.07% after current spells of rain.
- In Valley Temperate zone of Jammu & Kashmir, farmers are advised to postpone irrigation, and harvesting and thinning in root crops as rain is likely at many places during the period.
- In East Uttar Pradesh, farmers are advised to apply 30 kg N/ha in rice in early and medium duration varieties. Apply the fertilizers in rice and pigeon pea. Excess water (if any) should be drained from the fields of maize, pigeon pea and sesamum. It is peak period of afforestation, hence advised for plantation of fruit and forest/timbers plants.
- In West Uttar Pradesh, farmers are advised to apply top dressing of 1/4 urea in maize crops at morning or evening. Drain out excess water from the pearl millet, pigeon pea.
- Farmers in Himachal Pradesh are advised to ensure 4-5 cm standing water and keep paddy crop weed free. In high hill dry temperate zone, improved grasses and legumes can be planted. Intercultural operations in ojala, 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. Harvest the apple, liliun bulbs and gladiolus spikes.
- In (Palampur) Sub-Montane & Low Hills Sub-Tropical Zone and (Seobagh) Mild Hills Sub Humid Zone of Himachal Pradesh, farmers are advised to sow toria before 20th September. Maintain 4-5cm of water level in rice field for good yield. It is optimum time for transplanting of tomato seedlings in raised bed and planting of onion bulbs in 30X 10 cm spacing for harvesting green onion in October.
- In Bhabar and Tarai Zone of Uttarakhand, remove weeds from all vegetable crops. Top dress Urea as per the need and stage of the vegetable crops. Continue transplanting of seasonal grasses for fodder to animals utilising realized rainfall. Remove weeds from all standing field crops including soybean.
- In (Ranichuri) Hill zone of Uttarakhand, farmers are advised for sowing of high yielding variety of toria utilizing realized rainfall during last week.
- Farmers in Delhi are advised to plant potato and carrot. Transplant onion seedling in the prepared fields. Nurseries should be prepared in raised bed. Water logging should be avoided in nursery by doing proper drainage. This is suitable time for sowing of sarson saag, radish, spinach, coriander and turnip. Chrysanthemum and marigold may be transplanted in raised bed. Sowing of gladiolus should be done in prepared fields.
- 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. Undertake sowing of desi varieties of radish, turnip, carrot, toria and late season varieties of cauliflower.
- In Western plain Zone of Punjab, farmers are advised to give irrigation to cotton crop as per demand during flowering and fruiting stages, undertake sowing of potato, palak and transplanting of cauliflower and start propping up to save sugarcane crop from lodging.
- In Central plain Zone and Montane Undulating Zone of Punjab, farmers are advised to start propping up to save sugarcane crop from lodging. Maintain adequate water supply to the maize crop particularly at tasseling and silking stages. Undertake sowing of toria.
- 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 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 of water.
- In Himachal Pradesh, prevailing weather is favorable for appearance of rice hispa, leaf folder and leaf miner for control spray Metacid 50 EC 1ml/litre or Chloropyrophos @2ml/l of water. Weather is conducive for the attack of red pumpkin beetle and fruit fly in cucurbits. Weather is conducive for appearance of red spider mites in carnation, for control spray Cypermethrin or Nuvacron @0.05%. Weather is conducive for attack of blue beetle in roses and balsam, for control spray Metacid @ 0.05%.
- Farmers in Delhi are advised to use light trap to keep a check on pest population. This causes less damage to useful insects. Present weather conditions in Delhi are highly favorable for infection of blast disease, brown plant hopper (BPH) in paddy and stem borer in maize. Farmers are advised to monitor the crop and take proper plant protection measures.
- In Western Zone and Western Plain Zone of Punjab, attack of stem borer and leaf folder on rice is observed, farmers are advised to spray 350 ml of Coroban 20 EC or 560 ml of Monocil 36 SL or one litre of Chlorguard/Durmat 20 EC in 100 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. 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. 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 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 in East Rajasthan are advised to keep shed dry and make arrangement for draining of water for milch and domestic animals.
 - Farmers in Semi-arid zone of East Rajasthan, farmers are advised to avoid direct contact of milch animals and other domestic animals with rains. Keep their shed dry and make arrangement for draining of water.
 - In Arid Western Plain Zone of West Rajasthan, give vaccination to animals against 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.
 - In Western plain Zone of Punjab, farmers are advised to provide dry bedding to young calves.
- **Horticulture :**
 - In sub-tropical zone (Chatha) Jammu, farmers are advised to apply second dose of fertilizer to apple fruit trees in foothill areas. Put net on cherry trees if not done so far. White wash fruit trees. Farmers are also advised to go for planting of litchi.
 - In intermediate zone (Pahalgam), farmers are advised to do the planting of litchi.
 - In valley temperate zone of Jammu and Kashmir, undertake harvesting of apple and walnut. Maintain orchard sanitation.
 - In irrigated northwestern plain zone of Rajasthan, farmers are advised to prepare nursery for kinnow fruit.
 - Farmers in Flood prone Eastern plain zone (Bharatpur) in East Rajasthan are advised to prepare check basin around the young plants for efficient rain water utilization.
- **Apiculture**
 - 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 in seed crop of marigold rouging is required to maintain the health of flowers. When the seasonal flowers attain height of 10-15cm then do pinching of terminal growing buds 1-2 cm so as to encourage the side branching for profuse flowering.
 - Farmers in Flood prone Eastern plain zone (Bharatpur) in East Rajasthan are advised to transplant marigold, balsom and xenia. Plant cuttings of bougainvillea, mogra and chameli.
 - In sub-tropical zone (Chatha) in Jammu, farmers are advised to prepare the beds for transplanting of summer flowering annuals. Irrigate lawns, flowering beds and pot plants as and when required. Propagate chrysanthemum

and carnation by stem cuttings. Continue desuckering of budded roses. Apply fertilizer around trees and shrub plants after ensuring that the soil is weed free and moist enough.

- In valley temperate zone of Jammu and Kashmir, all dead/damaged blooms, stalks and leaves may be removed from the beds as and when seen. Mowing of lawns may be continued. Nursery beds should be dug up and manure to sow the seeds of spring flowering annuals and herbaceous perennials. Procure the spring flowering seeds and bulbs if do not have their own. Start collecting seeds of summer annuals as and when matured. Cacti plants may be repotted and manured. Watering should be also provided. Desuckering of budded plants of roses should be continued. Continue to trim quick growing hedges.

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

- **Realised Rainfall:** Almost all the districts in Coastal Karnataka and Kerala except Thiruvananthapuram, most of the districts in Coastal Andhra Pradesh except Guntur and Nellore districts and Prakasam, Adilabad, Karimnagar, Khammam, Nizamabad and Warangal districts in Telangana, Bidar in North Interior Karnataka, Chikmagalur, Kodagu and Shimoga in South Interior Karnataka, Ariyalur, Nilgiris, Chennai, Nagapattinam and Thiruvallur 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 many places over Coastal Karnataka and Kerala and at one or two places over remaining parts of the region.
- **Advisories:**
 - As almost all the districts in Kerala except Thiruvananthapuram, Coastal Karnataka, most of the districts in Coastal Andhra Pradesh except Guntur, Nellore and Prakasam, Adilabad, Karimnagar, Khammam, Nizamabad and Warangal in Telangana, Bidar in North Interior Karnataka, Chikmagalur, Kodagu and Shimoga in South Interior Karnataka, Ariyalur, Nilgiris, Chennai, Nagapattinam and Thiruvallur in Tamil Nadu received good rainfall during last week, postpone irrigation to the standing crops and drain out excess water from the fields. Apply irrigation to the crops in the remaining parts of the region, as no significant rainfall occurred.
 - Farmers in the Eastern Dry zone are advised to undertake transplanting of finger millet and gap filling and intercultural operations in early sown crop. Also undertake sowing of South African and Deccan-103 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.
 - Farmers in the North East Transition Zone of Karnataka are advised to harvest black gram as early as possible and after harvesting green gram and black gram from inter cropping with red gram, take up intercultivation and keep the red gram land free from weeds.
 - 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 keep the land and inputs ready for sowing of chickpea, safflower and wheat. Priority should be given to fodder crops such as fodder cowpea, maize and bajra to avoid shortage of fodder to animals.
 - Farmers in the Coastal Zone of Karnataka are advised to apply second dose of fertilizers to arecanut, coconut and cashew in the month of September and October, since low to medium showers are expected in the next few days.
 - 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 with the received 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. Present cloudy and high humid conditions are congenial for the incidence of late leaf spot and its spread on the groundnut crop which is at pegging stage. Spray Mancozeb @ 3g or Hexaconazole @ 2ml/litre of water for efficient control of late leaf spot.
 - Farmers in the Cauvery Delta Zone of Tamil Nadu are advised to arrange for proper drainage and plan *kuruvai* paddy harvest accordingly, since light rainfall is expected for next 5 days.
 - 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 arrange crop rows in north south direction for maximum interception of solar radiation for good crop growth and yield, undertake pre-monsoon sowing of crops like cotton and sorghum, since pre-monsoon sowing helps to overcome labour shortage and complete sowing in time and crop may suffer due to moisture stress under late sown

conditions and sow cotton and sorghum in Sep 4th week, maize and pulses in Oct 2nd or 3rd weeks and sunflower and pearl millet in Oct 4th week.

- Farmers in the North Western Zone of Tamil Nadu are advised to irrigate the well grown tapioca plants either by drip irrigation (two hours daily) or bed and channel irrigation (once in 7-10 days) to get maximum yield, under prevailing weather conditions.
 - Farmers in the High Rainfall Zone of Tamil Nadu are advised to apply mulching to perennial trees and undertake staking for rubber young plants and propping for banana.
 - 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 Krishna Godavari Zone of Andhra Pradesh are advised to go in for alternate crops like maize/jowar/blackgram/greengram/rabi redgram, wherever transplanting could not be done due to non-availability of water .
 - Farmers in the Central Zone of Kerala are advised to drain the paddy field 10 days before harvest, as the first crop is ready for harvesting, continue intercultural operation and weeding in coconut gardens and go for the application of second dose of fertilizer to coconut and pepper, since light rain is expected .
 - Farmers in the Southern Zone of Kerala are advised to give propping to bunched banana plants, ensure drainage in already planted tissue culture banana, plant new TC banana only after rain and start preparation for Mundakan crop.
 - Thrips incidence is noticed in the samba paddy nursery in Cauvery Delta Zone of Tamil Nadu. Farmers are advised to spray profenophas @ 2ml/lit of water to control thrips and harvest the kuruvai paddy at ground level to avoid stem borer infestation in the thaladi season.
 - Phytophthora blight and sterility mosaic in pigeon pea and Heliothis in sorghum was noticed in the North East Transition Zone of Karnataka. Farmers are advised to rouge out the affected plants and spray M-45 @ 2g/litre of water to control Phytophthora blight, Dicofol @ 2.5 ml/litre of water to control sterility mosaic and dusting of Malathion @ 8 kg per acre to control Heliothis.
 - There is problem of gundhi bug in paddy crop in the Coastal Zone of Karnataka due to cloudy weather. Farmers are advised to go for dusting of melathion @ 8-10 kg/ acre or spray the same @ 2 ml/lit of water to control gundhi bug.
 - Intermittent rains and cloudy weather are favourable for the incidence for pest and disease in rice in the Problem Area Zone of Kerala. Farmers are advised to keep close watch on the paddy fields for the occurrence of insect pest like brown plant hopper, since the prevailing weather condition is favourable for the incidence. Draining the field will control the spread of the insect to a certain extent. In the prevailing climatic condition, there is chance of leaf roller, brown plant hopper and sheath blight occurrence in the fields where the plant population is high. Farmers are advised to remove the severely affected plants in order to provide air circulation into the crop canopy to reduce the spread of the disease to the nearby plants. In areas where Lakshmi disease was observed during the previous season, prophylactic methods for checking severe infection is needed. Farmers are advised to drain off the field completely. Spraying chemicals in the fields during the flowering stage should be restricted to after 3 pm
 - Farmers in the Central Zone of Kerala are advised to undertake plant protection measures against rice bug in late planted paddy fields, gall midge, leaf roller and stem borer attack in rice, sigattoka leaf spot diseases in banana.
 - Farmers in the Southern Zone of Kerala are advised to take precaution against bud rot in coconut and stem borer, leaf roller attack and rice bug population and apply fertilizer after heavy rain to prevent disease incidence in vegetables.
- **Livestock**
 - Farmers of the North Eastern Zone of Tamil Nadu are advised to undertake pre monsoon vaccination of calves above 6 months, adult cattle and buffaloes against Hemorrhagic Septicemia and Black Quarter diseases, vaccinate kids and lambs 3 months and adults for Enterotoxaemia, routine deworming of dams, kids and lambs and avoid stagnation of water nearby animal shed and clean the bushes to avoid multiplication of flies to prevent vector borne diseases like anaplasmosis, theileriosis, babesiosis and trypanosomiasis.

- Farmers in the Coastal Zone of Karnataka are advised to undertake de-worming of animals and vaccinate the cattle's against black quarter, foot and mouth disease, mastitis and other diseases.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Significant rainfall occurred in all district of East Madhya Pradesh, most of the districts of Chhattisgarh (except Dhamtari and Narayanpur) during last week.
- **Rainfall Forecast:** Rain/thundershowers would occur at many places over Chhattisgarh, at a few places over East Madhya Pradesh during next 24 hours and increase thereafter and one or two places over West Madhya Pradesh.
- **Warning:** Nil.
- **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. Weeding, intercultural operation and top dressing of fertilisers in after current spells of rain in Chhattisgarh and East Madhya Pradesh.
 - 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, for its control 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. Attack of semi-looper and gram pod borer is increasing in this area, farmers are advised to monitor the crops and if 3 caterpillars in one meter row are observed spray Trizophos @ 800 ml/ha or Profenophos @ 1.5 l/ha (3.0 ml/l) soon. Farmers are also advised to give remaining 1/3 dose of recommended nitrogen through urea in late sown.
 - Farmers in Gird Zone of Madhya Pradesh are advised to prepare fields for *rabi* crops like mustard, gram, pigeonpea and potato. Conserve moisture in the field. Arrange seeds of toria for sowing and sow after the end of monsoon season.
 - 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 Bundelkhand region of Madhya Pradesh are advised to arrange the drainage in soybean, moong and urd crops to protect from root rot. 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 urad 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 in *kharif* crops to avoid water logging in the fields. Weather is favourable for attack of caterpillar and girdle beetle attack in soybean, apply Chloropyrephos @ 2 ml /lit. Also weather is favourable for the fruit fly attack in ber so apply Nuone @ 1.5 ml/lit. Spray should be done at morning or evening time as the attack is sporadic, apply where attack is there. Apply fertilizer to chilli, tomato, brinjol, cabbage, cauliflower, onion etc. There may be the attack of leaf minor on vegetable crops, apply rogor or confidore @ 1ml/ lit. to control the attack.
 - 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 Quinolphos 1500 ml / hectare in 600 lit of water. Farmers are also advised to do weeding and intercultural operations in *kharif* fields.
 - 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. For its control use 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 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.
- Farmers are advised for land preparation in the upland sloping fields in Chhattisgarh Plain Zone for sowing of niger, horsegram during second fortnight of this month and transplanting of vegetables crops with proper drainage system.
- 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.
- Infestation of different insect pests like stem borer, gall midge, brown hopper etc. are common. Farmers are advised to keep watch on the crop and if the infestation is above ETL, use recommended insecticides. Farmers are advised to keep watch over the crops and use light traps in that fields between 7 pm to 9 pm for initial control of pests. In case of heavy incidence of stem borer, farmers are advised for application of Carbofuran 33 kg/ha. or Fartera 10 kg/ha and after the treatment, water in the field should not be drained out at least 2-3 days in Chhattisgarh Plain Zone.
- Leaf folder is likely to attack rice field in Chhattisgarh Plain Zone, farmers are advised to keep watch over the crop and if more than one leaf damaged per plant by leaf folder, spray Chlorpyrifos 1 lit / hectare in 500 lit water.
- 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 Quinalphos @ 1.25 l or Fenvelrate 20EC @ 375 ml per hectare is advised.
- In rice and finger millet crops, blast disease and brown spot disease is being observed in Bastar Plateau Zone. For its control, Hinosan @ 1 mg/ litre should be sprayed. In the cucurbitaceous vegetables, attack of red pumpkin beetle is observed. For its control, neem oil 5 ml or Carboryl 50 WP @ 2.5 grams per litre should be mixed and sprayed.
- In cucurbitaceous vegetables like bottle gourd and bitter gourd, attack of fruit fly is being observed in Dantewada and Bijapur districts of Chhattisgarh. For this, poison traps should be hanged.
- There may be occurrence of tikka disease in groundnut in Chhattisgarh Plain Zone, farmers are advised to spray metalyxil 0.15%.

• **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 cattle for FM disease. Animal and birds should be kept in clean, dry and well ventilated place.

Annexure I

Major Crops

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

- Sugarcane (vegetative), *sali* rice (tillering), *Capsularis* and *Olorius* 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 (tillering/ panicle initiation) maize (cob formation/cob maturity), groundnut (Flowering to pegging), tomato (flowering / fruiting / maturity), cole crops (nursery), soybean (vegetative / flowering), turmeric, ginger (Root & shoot development), *rabi* maize (sowing) and French bean and dolichos bean(branching) in Meghalaya.
- Rice (vegetative / tillering), soybean, groundnut (vegetative), *kharif* maize (vegetative / tasseling / silking), cauliflower, tomato (nursery preparation) and ginger / turmeric (vegetative / rhizome formation), okra, bean and cow pea (harvesting) in Mizoram.
- *Jhum* rice (ripening), Wet land rice (milk development stage), maize (maturity / harvesting), okra (flowering / fruiting), soybean (vegetative), banana/soybean (vegetative), papaya (vegetative) in Nagaland.
- Upland rice (flowering), *aman* rice (flowering), groundnut (vegetative / flowering), *Kharif* maize (grain filling), sesame (vegetative / flowering), bitter gourd and pointed gourd (vegetative/flowering), banana (vegetative) 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 (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, toria, tomato, cauliflower and cabbage (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 (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 (panicle initiation / flowering/ milking stage), 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* (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(floral bud initiation/flowering),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 (flowering / boll formation), groundnut (vegetative / flowering / pegging), *kharif* rice (panicle initiation/ flowering), pulses (early vegetative / flowering), sugarcane (vegetative / elongation), sesamum, castor (flowering / capsule formation), vegetables (vegetative / flowering / fruiting), winter vegetables (sowing / transplanting), green gram, black gram (flowering / pod formation / harvesting), red gram (germination / vegetative), pearl millet (flowering / ear head emergence), sorghum, cow pea (vegetative) in Gujarat.

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

- Vegetables [bhindi, cucurbits], peas (vegetative/maturity/harvesting), mirch, brinjal (vegetative /maturity/ harvesting), cucurbits viz. cucumber, summer squash, khira, bitter gourd, bottle gourd (vegetative/ maturity/ harvesting), tur, Shimla mirch, and tomato (vegetative/maturity/harvesting), 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 -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), potato (sowing), 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/flowering), fodder maize, lobia, (vegetative/1st cutting), Sanai, Dhaincha (early vegetative / vegetative), summer sugarcane (tillering/grand growth), cotton, soyabean and urd (vegetative/flowering), sunflower, jowar, bajra, arhar, (sowing/seedling), maize(tasseling to silking), vegetables [cucumber, pumpkin, tomato, brinjal, cabbage, lady's finger, chilly, cucurbits](vegetative/maturity), groundnut(early vegetative/vegetative) in Uttar Pradesh.
- Rice (tillering), spring sugarcane (sprouting/tillering), radish, carrot, turnip, (Sowing germination/vegetative), cauliflower (transplanting/vegetative), tomato, sunflower (sowing/seedling), cotton (flowering/fruiting), okra, chilli, brinjal (transplanting/early vegetative), maize, mung, mash, tur (sowing/seedling), toria(sowing), maize (tasseling/silking) in Punjab.
- Rice (tillering/flowering), sugarcane (grand growth) (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 (panicle initiation/flowering), early planted paddy (flowering), late planted paddy (post-tillering), fodder maize (silking/tasseling), sunflower (sowing), groundnut (pegging), cowpea (sowing), vegetables (flowering/fruit formation), green gram/black gram (maturity/harvesting), soybean (flowering), pigeon pea (vegetative), sorghum (ear head emergence), maize (silking/ tasseling), desi cotton (sowing/vegetative), cotton (vegetative/flowering) and chilli (flowering/fruited) in Karnataka.
- Sugarcane (June planted) (formative/grand growth), banana (vegetative), vegetables (all stages), direct seeded rice (transplanting/tillering), jowar (vegetative), bajra (vegetative/grain development), maize (cob development), ragi (flowering), finger millets (harvesting), castor (seedling/vegetative/flowering), early sown groundnut (vegetative/ flowering), late sown groundnut (flowering/pod development), maize (taselling), green gram/black gram (pod formation), red gram (early vegetative), sesamum (pod filling/harvesting), pulses (flowering to pod formation), rainfed cotton (vegetative/flowering), mesta (vegetative/flowering), Bt. cotton (vegetative / fruited) in Andhra Pradesh.
- Pepper (flowering/new planting), ginger (fertilizer application), irrigated banana (bunching), nendran banana (harvesting), cardamom (planting/harvesting), rubber (tapping), vegetables (harvesting/planting), virippu paddy (harvesting), mundakan paddy (cultivation), in Kerala.
- Kuruvai rice (maturity/harvesting), Samba rice (sowing/nursery), rainfed maize and cotton (sowing), rainfed groundnut (sowing/ flowering), groundnut (pegging/pod formation), cotton (vegetative/flowering/boll formation), pulses, cotton, maize (sowing), banana (planting), irrigated maize (silking/tasseling/maturity), sugarcane (grand growth), pulses (vegetative/flowering), vegetables (vegetative/fruited) in Tamil Nadu.

CENTRAL INDIA [M.P., CHHATTISGARH]

- Rice (active 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

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.

Pre-*rabi* non-paddy crops

(a) Sesame: Kanak, kalika, Uma, Usha, Tilottama, Neelima and Prachi

(b) Green gram : K -851, PDM -54, PDM -11, OUM 11-5

(c) Balck gram : T-9, Pant-U-19. Pant –U-30, Pant –U-11

(d) Niger : Deomali

(e) Horsegram : Urmi, DS 1-2-2, DS 1-2

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
Toria: T-9, Panchali, Bhawani, PT-303
Tomato: Pusa ruby, Swarna Sampda, Swarn Lalima
Cabbage: Golden Acre, Pride of India, Early Drum Head
Cauliflower: Pusa Depali, Patna Early, Hazipur Extra Early, Pusa Ketki

Bihar

Urd: T-9.
Arhar: Bahar, Narendra Arhar 1, Malviya 13, Pusa-9, Sharad
Pigeon pea: Navin
Cauliflower: Aghani, Pusi, Early Snowball, Patna main and Pusa Shuvra
Shakarkand: Rajendra Shakarkand 5, Rajendra Shakarkand35, Rajendra Shakarkand 43, Rajendra Shakarkand 47, Kalmegh and Rajendra Shakarkand 92.

Assam

Rice for flood affected areas: Profulla and Gitesh.
Short duration rice for flood affected areas: Luit, Kapili, Dishang 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.

Gujarat:

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

Rabi Safflower: Bhima, Phule Kusuma, Sharda, Girna or DSH-129

Rabi Jowar: Maldandi-35-1, Phule Vasudha, Phule Revati, Phule Yashoda and Mauli

Himachal Pradesh :

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

Cucumber : Kiyani 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, 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, Peas: AP-1, AP-3, Bonnevilleae, kale: Local

Punjab :

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

Radish: Punjab Ageti & Pusa Chetki, Punjab Pasand & Punjab Safed

Turnip: L-1 & 4-white

Carrot: PC-34

Palak: Punjab Green

Cauliflower: Punjab Giant 26, late season varieties: Snow-Ball-16, Pusa Snow ball 1 & Pusa Snow ball K-1.

Toria: PBT 37/ TL

Delhi

Potato: Kufri Badshah

Carrot: Pusa Rudhira and Pusa Kesar.

Chattisgarh

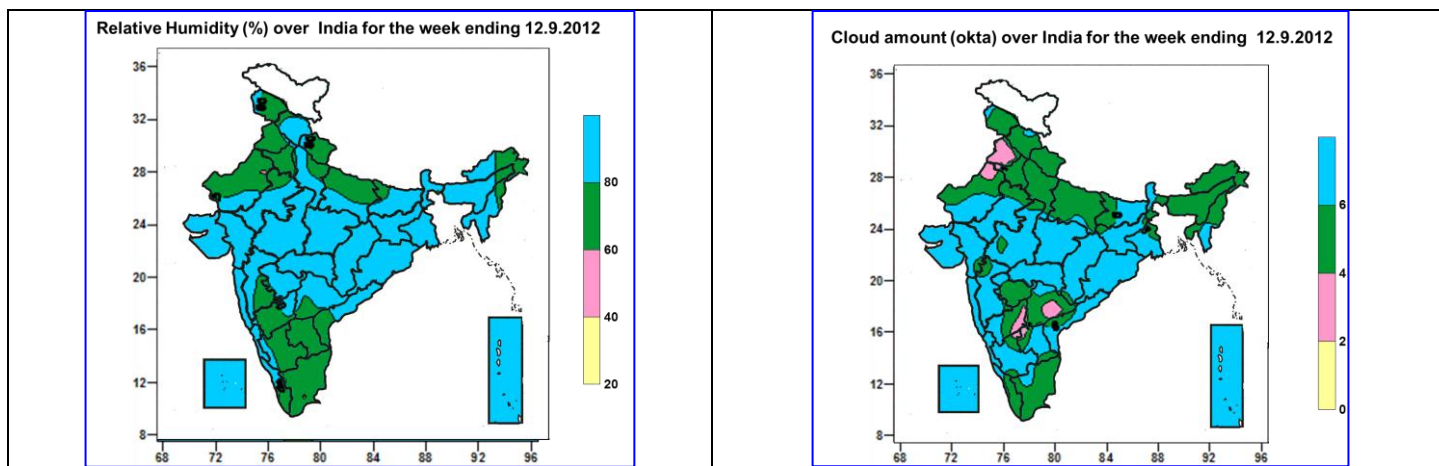
Maize: Proagro-4640, 4212, Pusa Hybrid -42, MH-10, MH-11, Navjyot, HM-9.

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

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

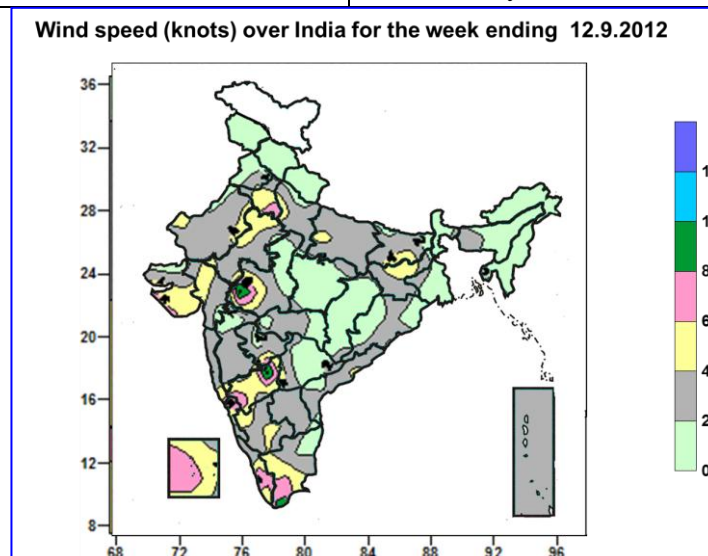
Annexure III

Contour maps for Relative Humidity, Cloud Amount and Wind speed for the week ending on 12.09.2012



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

Cloud amount 4 okta and above over most parts of Jammu & Kashmir, Punjab, Haryana, Delhi, Uttar Pradesh, North East India(except Tripura), Tamil Nadu, Kerala, South Interior Karnataka, some parts of Rajasthan, Madhya Pradesh, Bihar, West Bengal, Tripura, Andhra Pradesh, North Interior Karnataka, 2 to 4 okta over most parts of Punjab, some parts of West Rajasthan, Telanagana, Raylaseema, North & South Interior Karnataka and 6 okta and above over remaining parts of the country.



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