



National Agromet Advisory Service Bulletin
Based on
Extended Range Weather Forecast (ERFS)

Validity: 06 September to 19 September 2019

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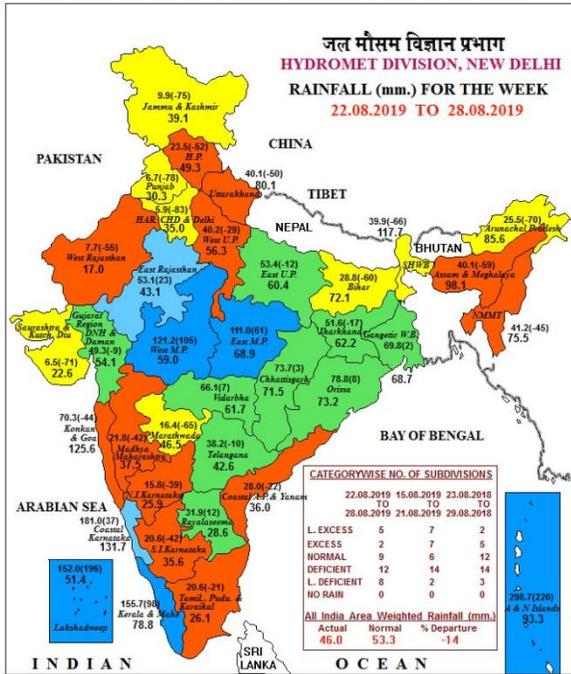
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&
Earth System Science Organization
India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall

(22nd August to 4th September, 2019)

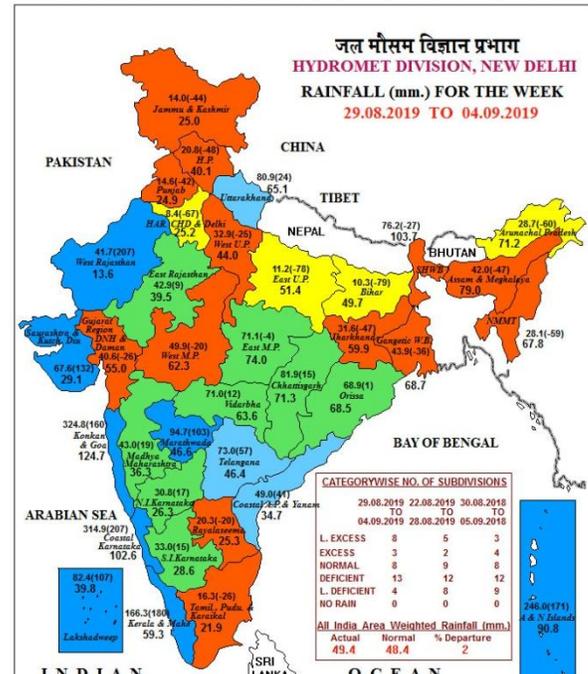
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



LEGEND: L. EXCESS (+60% OR MORE) EXCESS (+20% TO +59%) NORMAL (+19% TO -19%) DEFICIENT (-20% TO -59%) L. DEFICIENT (-60% TO -99%) NO RAIN (-100%) NO DATA

NOTES:
[a] Rainfall figures are based on operational data.
[b] Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
Percentage Departures of Rainfall are shown in Brackets.

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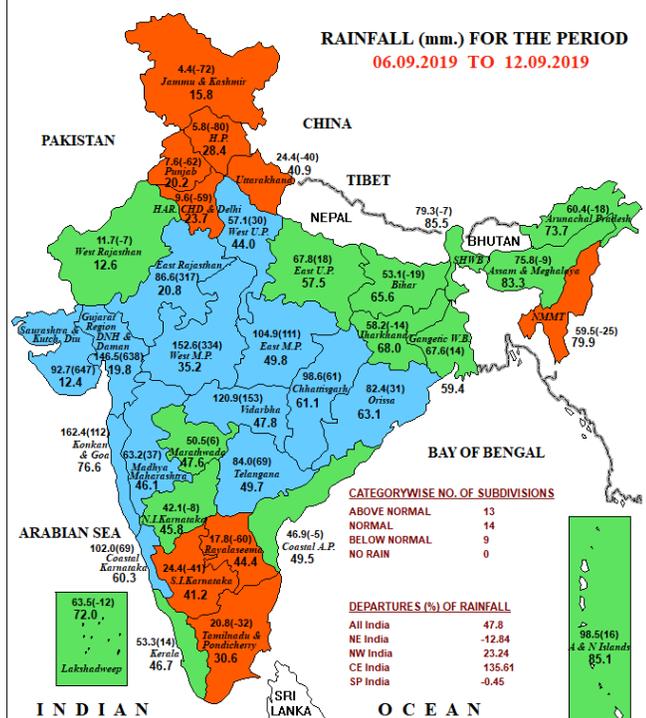
- Normal or above normal rainfall occurred in both the weeks in East Rajasthan, East Madhya Pradesh, Chhattisgarh, Vidarbha, Odisha, Coastal Karnataka, Telangana, Kerala & Mahe, Lakshadweep and Andaman & Nicobar Islands.
- Normal or above normal rainfall occurred in either of the two weeks in Uttarakhand, East Uttar Pradesh, West Rajasthan, Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra, Marathwada, West Madhya Pradesh, Jharkhand, Gangetic West Bengal, Coastal Andhra Pradesh & Yanam, Rayalaseema, North Interior Karnataka and South Interior Karnataka.
- Below normal rainfall occurred in both the weeks in Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura (NMMT) and Tamil Nadu Puducherry & Karaikal.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 4 September) (6th to 19th September 2019)

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Rainfall Forecast Map - Normal RF Based Categories

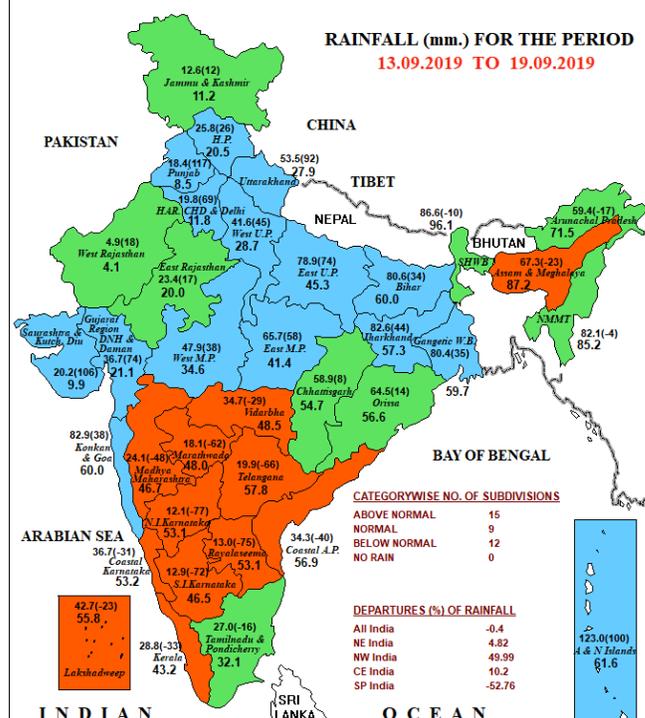


LEGEND: ■ ABOVE NORMAL (+20% OR MORE) ■ NORMAL (+19% TO -19%)
■ BELOW NORMAL (-20% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

NOTES:
 [a] Rainfall figures are based on MME Forecast data.
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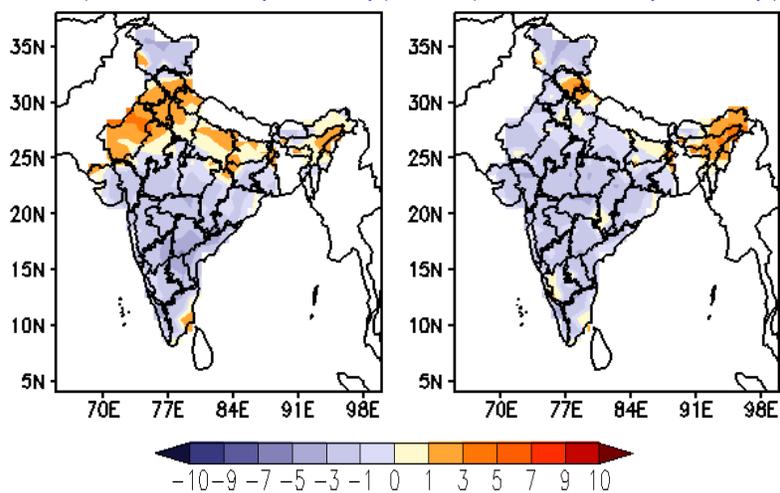
- **Week 1 (06.09.2019 to 12.09.2019):** Mainly above normal rainfall over central parts of India (Odisha, Chhattisgarh, Madhya Pradesh, northern parts of Maharashtra, Gujarat etc) and western coast of India. The northern, eastern and southern part will have below normal rainfall.
- **Week 2 (13.09.2019 to 19.09.2019):** Eastern parts of the country and adjoining Indo-Gangetic region will have above normal rainfall and rest regions will have normal to below normal rainfall during the period.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 4 September)
(6th to 19th September 2019)**

MME forecast Tmax anomaly (Deg C)

(Week1: 06Sep–12Sep)

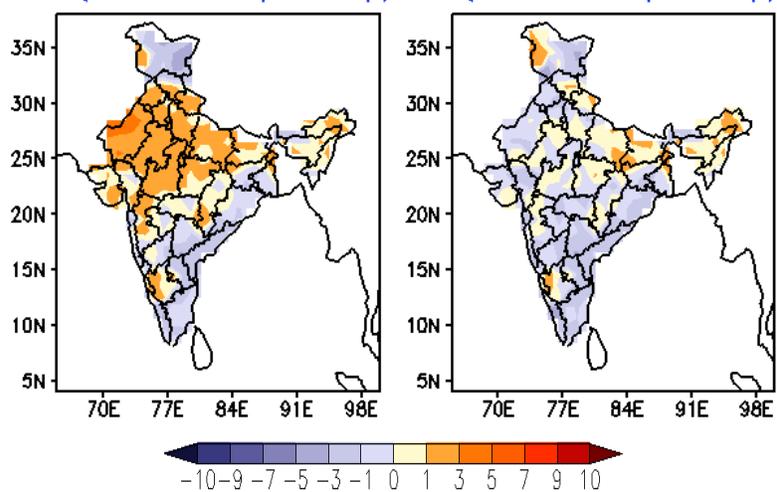
(Week2: 13Sep–19Sep)



MME forecast Tmin anomaly (Deg C)

(Week1: 06Sep–12Sep)

(Week2: 13Sep–19Sep)



Maximum Temperature (Tmax)

- **Week 1 (06.09.2019 to 12.09.2019) and Week 2 (13.09.2019 to 19.09.2019):** Tmax anomaly is likely to be positive over northern parts of India and along the Indo-Gangetic region during week 1. During week 2, it is mainly below normal over most parts of India.

Minimum Temperature (Tmin)

- **Week 1 (06.09.2019 to 12.09.2019) and Week 2 (13.09.2019 to 19.09.2019):** Above normal Tmin over northern and adjoining central parts of India during week 1 and mostly normal to below normal during week 2.

Strategic Agricultural Planning based on weather during next two weeks till 05th September 2019

Agromet Advisories

Kerala

Amount of rainfall received over Kerala during the period from 01 June to 06 September 2019 is 1982.7 mm (9% excess). The extended range weather forecast for next two weeks (06 - 12 September and 13 - 19 September) is normal for week-1 and below normal for week-2.

- There is a chance of incidence of rice bug in paddy. To control, spray 2 ml malathion per one litre of water. Pesticides application should be done either before 9 am or after 3 pm. Otherwise, the pesticide application will adversely affect the pollination.
- Due to prolonged rains, there is a chance of bud rot in coconut. Keep three perforated Mancozeb sachets (5 g per packet) around spindle leaves as a prophylactic measure against bud rot..
- Due to heavy rains in monsoon season, there is a chance of quick wilt disease in pepper. To control quick wilt and pollu disease, drench the soil with 0.2 % Copper oxychloride and spray the aerial part(plant) with 1% Bordeaux mixture as a prophylactic measure. Application Trichoderma/ Psuedomonas culture will control the quick wilt infestation.
- High rainfall during this month may cause fruit rot and leaf fall in nutmeg. As a prophylactic measure, apply Trichoderma mixture (Add 2 kg Trichoderma to a mixture of 90 kg FYM and 10 kg Neemcake and keep for two weeks with sufficient moisture). Basal application of 2.5 kg of this mixture followed by foliar spray with Pseudomonas (20g/litre) or 1% Bordeaux mixture can control the fruit rot.
- There is a chance of mahali disease in arecanut due to heavy rainfall. The conidia of the fungus carried by wind and rainwater is favourable for disease spread. Prophylactic spraying of Bordeaux mixture (1%) or Copper Oxychloride 50WP (2g/l) with sticker is recommended.
- Due to prolonged rains/ cloudy days, there is a chance of incidence of fungal diseases on leaves and buds in Rubber. To control, spray Indofil M45 4g/ litre.
- There is a chance of erwinia rot in banana due to heavy rainfall in this season. As a precaution, apply lime in the banana basin or bleaching powder in the irrigation channels. To enhance the disease resistance, drench the basin with Pseudomonas @ 20g per litre of water. Affected plants can be protected by drenching the basin with 5 g bleaching powder or 3 g Copper oxychloride or 2g Copper hydroxide per one litre of water. Severely affected plants should be cut and removed to prevent the spread of disease.

Karnataka

Amount of rainfall received over North Interior Karnataka is 471.1 mm (28 % excess), South Interior Karnataka is 653.8 mm (18 % excess) and Coastal Karnataka is 3356.5.1 mm (18 % excess) during 01

June to 06 September 2019. The extended range weather forecast for next two weeks (06 - 12 September and 13 - 19 September) over south interior Karnataka is below normal for both the weeks whereas in North interior Karnataka, it is above normal for week-1 and below normal for week-2.

North Interior Karnataka

- As moderate rainfall has been received in some of the districts and forecast of isolated light rainfall is issued by India Meteorological Department in most of the districts, wherever possible sowing of crops like Sunflower, Maize, Bt. Cotton, Sesamum, Navane and fodder crops may be taken up on preference. Before sowing, soak every one Kg of sunflower seeds in a solution prepared by dissolving 30 g of Calcium Chloride in 1.5 liter of water for 6 hours, shade dry and treat with Imidachloprid @ 5.0 g and Azospirillum @ 40 g per Kg of seed. This will improve the germination percentage, vigour of the seedlings and yield. In addition, it will induce drought resistance in the crop and also help to save 25 percent Nitrogen requirement of the crop.

Tamil Nadu

Amount of rainfall received over Tamil Nadu is 234.6 mm (1 % deficit) during the period of 01 June to 06 September 2019. The extended range weather forecast for next two weeks (06 - 12 September and 13 - 19 September) is below normal for week-1 and normal for week-2.

- Incidence of boll worm in cotton is expected. To control, spray Phosalone 35% EC@ 2.5 l/ ha or Quinalphos 25 EC@ 2.0 l/ha (or) Emamectin benzoate 5% SG @190-220 g/ha.
- Conditions are favorable for Yellow mosaic virus in pulses. To control, spray Dimethoate 30 EC @500 ml / ha or Thiamethoxam 75 WS @1 g/ lit.
- Shoot and fruit borer occurrence is noticed in Brinjal. To control, remove the affected fruits, terminal shoot showing boreholes and spray Neem Seed Kernel Extract 5 %.
- There is a chance of occurrence of red spider mite in bhendi. To control, spray Neem Seed Kernel Extract 5 %.

Maharashtra

Rainfall received over Madhya Maharashtra is 939.5 mm (52% excess), over Marathwada is 439.0 mm (18% deficit), Vidarbha is 807.6 mm (-2% excess) and Konkan region 3615.3 mm (40% excess) during 01 June to 06 September 2019. The extended range weather forecast for next two weeks (06 - 12 September and 13 - 19 September) over Madhya Maharashtra and Vidarbha is above normal for week-1 and below normal for week-2 whereas Konkan is above normal for both week-1 and week-2.

Marathwada

As there is rainfall forecast during next five days, there is a chance of Anthracnose incidence in soybean. To control, spray Tebuconazole 10 % WP + Sulfur 65 % WG @ 10 g per 10 litre of water. During water stress condition in soybean, spray Potassium Nitrate @ 150 gm per 10 liter of water.

Vidarbha

- Present weather conditions are favorable for infestation of aphids and jassids in cotton. To control, spray Azadirachtin 1500 ppm @ 25 ml or Azadirachtin 0.03% (300 ppm) @ 50 ml or Imidacloprid 17.8% SL 2.5 ml or Profenofos 50% EC @ 20 ml per 10 litres water.
- For monitoring the incidence of stem fly in soybean, erect yellow sticky trap @ 4 per acre, and remove/destroy damaged plant parts.
- For surveillance and control of pink boll worm incidence, erect 4 to 5 pheromone traps/ha in cotton fields. Collect and destroy rosette flowers-buds before application of insecticides. Upon 5% infested flowers-buds, spray Quinolphos 25% AF @ 25 ML OR Chlorpyrifos 20% EC @ 25 ml per 10 litres of water.

Jharkhand

Jharkhand received 616.9 mm rainfall which is 28 % deficit during 01 June to 06 September 2019. The extended range weather forecast for next two weeks (06 - 12 September and 13 - 19 September) is normal for week-1 and above normal for week-2.

- Broadcast urea after 20-25 days of planting in late planted crop (paddy) and 40-45 days after planting in timely planted crop. In some places, crops are attacked either by stem borer or leaf eating insects. To control broadcast granular insecticides like Carbofuran 3G (at 12 kg per acre) or Phorate 10G (at 4 kg per acre).

Jammu

Rainfall received during 01 June to 06 September 2019 over Jammu was 409.1 mm, which is 14% deficit. The extended range weather forecast for next two weeks (06 - 12 September and 13 - 19 September) is below normal for week-1 and normal for week-2.

- Due to presence of conducive weather, there may be attack of sheath blight in paddy. Under such conditions, spray Carbendazim @ 0.1%..
- The present weather conditions are favourable for attack of leaf blight in maize crop, under such situation spray mancozeb 75WP @ 0.25% or Zineb @0.02 %. If attack of stem borer is noticed, then apply the Carbofuran 3G @ 20kg/ha directly into the whorles.
- Weather is favorable for the attack of stem borer in maize. Under such conditions, application of Carbofuran/ Cartap granules @ 5g /whorl is recommended to control the pest.

Uttar Pradesh

Rainfall received during 01 June to 06 September 2019 over Western Uttar Pradesh was 445.7 mm (26% deficit) and for Eastern Uttarpradesh was 566 mm (17% deficit). The extended range weather forecast for next two weeks (06 - 12 September and 13 - 19 September)over Western UP is above normal for both

week-1 and week-2 whereas in Eastern UP, above normal for week-1 and normal for week-2.

Faizabad

- Under prevailing weather conditions there is a possibility for attack of yellow vein mosaic in urd bean. Hence farmers are advised to follow suitable plant protection measures.

Andhra Pradesh

Rainfall received during 01 June to 06 September 2019 over Coastal Andhra Pradesh and Yanam was 452.4mm (2% excess) whereas in Rayalaseema 246.9mm (14 deficit). The extended range weather forecast for next two weeks over Coastal Andhra Pradesh and Yanam (06 - 12 September and 13 - 19 September) is normal for week-1 and below normal for week-2. Over Rayalaseema, it is below normal for both the weeks.

- As the prevailing conditions are favourable for incidence of blast and sheath blight in Rice crop in East Godavari, Srikakulam, Vishakhapatnam, Vizianagaram, Ananthapuramu, Kurnool districts. Farmers are advised to spray Isoprothioline@1.5ml/L of water for control of blast and hexaconazole@2ml/L or Propiconazole@1ml/L of water for control of sheath blight.
- There is a chance for early shoot borer incidence in sugarcane in Srikakulam, Vizianagaram and Vishakhapatnam districts. Farmers are advised to spray Chlorpyrifos@2.5ml/L or Monochrotophos@1.6ml/L for control.

Assam

Rainfall received during 01 June to 06 September 2019 over Assam and Meghalaya was 1266.1mm (14% deficit). The extended range weather forecast for next two weeks (06 - 12 September and 13 - 19 September) is normal for week-1 and below normal for week-2.

- Due to favourable weather condition, there may be outbreak of rice swarming caterpillar in the farmers field. At initial stage, hand eradication or kerosene application in the field may be beneficial but if 25% of the field gets infested than spray Chlorophyriphos 20EC or Quinalphos 25EC @1ml/litre.
- In the affected plant, dark staining of the bark occurs which becomes olive brown in colour with water soaked appearance. In advanced stages, the bark cracks, strips off lengthwise and gum exudates resulting yellowing and die back. The affected portion should be scraped out with a small portion of healthy tissue without injuring the wood and smear with Bordeaux paste.

Punjab

Rainfall received during 01 June to 06 September 2019 over Punjab was 379.5 mm (6% deficit). The extended range weather forecast for next two weeks (06 - 12 September and 13 - 19 September) is below normal for week-1 and above normal for week-2.

- Prevailing weather is favourable for the onset of false smut. To protect, spray 500 ml Kocide in 200 litres of water per acre at boot stage.
- Regularly monitor the rice fields for plant hopper infestation. If 5 or more plant hoppers per hill are observed, spray Chess 50 WG @ 170 g/acre or Confidor 200 SL @ 40 ml/acre.
- If incidence of whitefly nymphs are observed, spray Lano 10 EC (Pyriproxyfen) @ 500 ml or Oberon/Voltage 22.9 SC (Spiromesifen) @ 200 ml/acre.

Chhattisgarh

Rainfall received during 01 June to 06 September 2019 over Chhattisgarh was 968.2 (0% deficit). The extended range weather forecast for next two weeks (06 - 12 September and 13 - 19 September) is above normal for week-1 and normal for week-2.

- Current weather is congenial for incidence of stem borer. Farmers are advised to use light traps in fields between 07:00 pm to 09:00 pm for effective control of pests. In case of heavy incidence, apply Fipronil / Cartap @ 25 kg/ha.
- If leaf caterpillar is observed in soybean crop, apply Trizofas @ 2 ml/ acre or Flubendiamide @ 0.5 ml/liter of water.

Rajasthan

Rainfall received during 01 June to 06 September 2019 over East Rajasthan was 749.3mm (41% excess). The extended range weather forecast for next two weeks (06 - 12 September and 13 - 19 September) over east Rajasthan is above normal for week-1 and normal for week-2.

- As there is a forecast of humid weather conditions, there may be increase in population of insect pest of cotton. Farmers are advised to install pest specific pheromone traps in the fields for monitoring the insect. If sucking pest's population is above ETL, spraying of Imidacloprid 17.8 % SC @ 1.0 ml / 3 litre or Trizophos 40 EC @ 1.0 ml/litre of water is advised against all type of borers.
- Pearl millet is at ear head emergence stage and there is a chances of incidence of ergot disease. To control, spray Zineb @ 2.5 kg/ha.

Himachal Pradesh

Rainfall received during 01 June to 06 September 2019 over Himachal Pradesh was 601.3 mm, which is 9% deficit. The extended range weather forecast for next two weeks (06 - 12 September and 13 - 19 September) is below normal for week-1 and above normal for week-2.

- The current weather is congenial for fruit blight and fruit rot disease in pomegranate, To control, spray Mancozeb 600g and Carbendazim 100 g @ 200 litre of water.
- To control the fruit rot in tomato, remove the yellow leaves 15 to 20 cm near the ground and bury them into the soil and spray Mancozeb 250g or Redomil 250 g @ 100 litre of water at an interval of 8-10 days.
- Prevailing weather conditions are favorable for blast and brown spot incidence. To control, spray Carbendazim @ 2 gram per litre of water.

***Disclaimer:** The predictability of weather depends on many factors which are dynamic in nature. The success of agromet advisories provided here depends on the accuracy of the forecasts. In no event will India Meteorological Department (IMD) and Indian Council of Agricultural Research (ICAR) be liable to the user or to any third party for any direct, indirect, incidental, consequential, special or exemplary damages or lost profit resulting from any use or misuse of the information on this bulletin.*