



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

Validity: (11th to 24th October 2019)

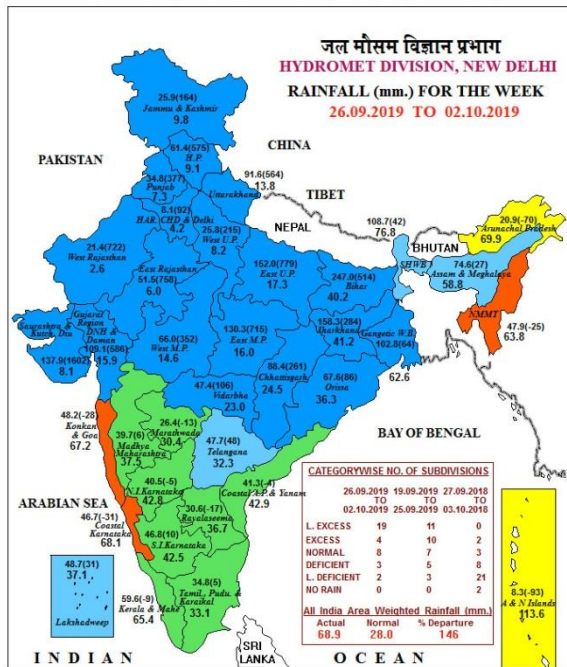
Date of issue: 11th October 2019

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&
Earth System Science Organization
India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall (26th September to 9th October, 2019)

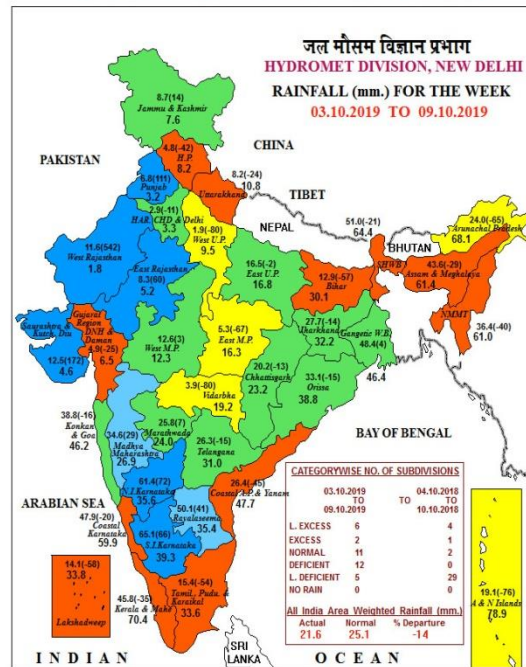
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



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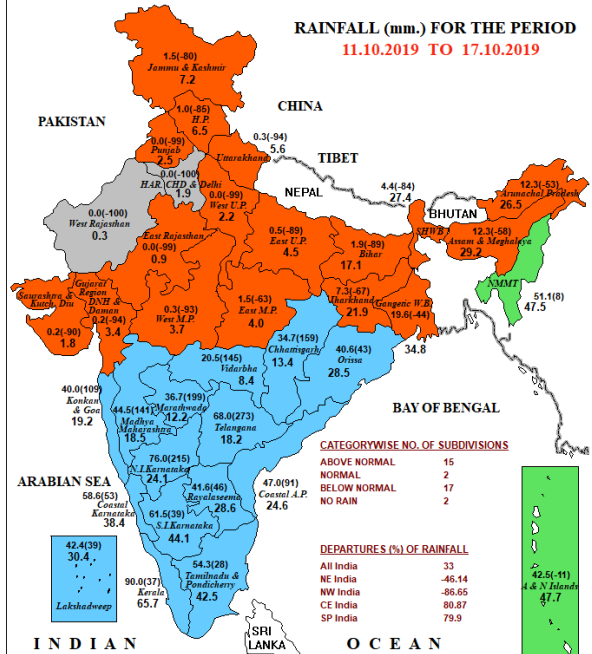
- Normal or above normal rainfall occurred in both the weeks in Jammu & Kashmir, Punjab, Haryana, Chandigarh & Delhi, East Rajasthan, West Rajasthan, Saurashtra & Kutch, West Madhya Pradesh, Chhattisgarh, East Uttar Pradesh, Jharkhand, Gangetic West Bengal, Odisha, Madhya Maharashtra, Marathwada, Telangana,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

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 09 October) (11th to 24th October 2019)

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Rainfall Forecast Map - Normal RF Based Categories

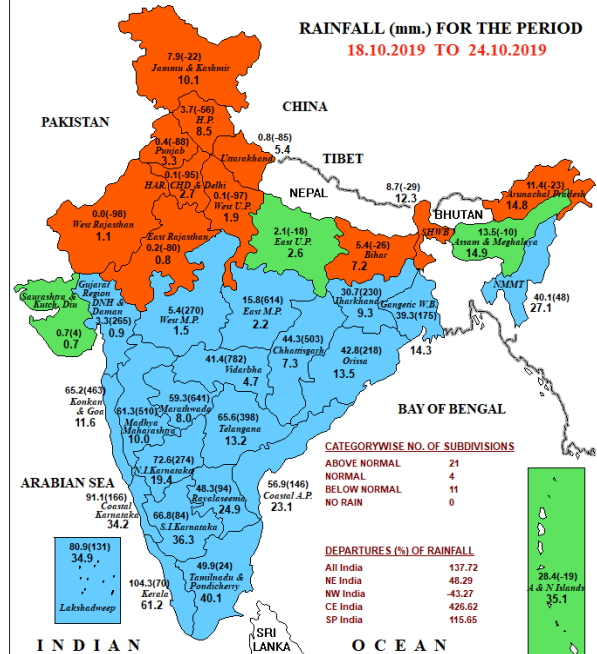


LEGEND: ■ ABOVE NORMAL (+20% OR MORE) ■ NORMAL (+19% TO -19%)
■ BELOW NORMAL (-20% TO -99%) ■ NO RAIN (-100%) □ NO DATA

NOTES:
 [a] Rainfall figures are based on MME Forecast data.
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Rainfall Forecast Map - Normal RF Based Categories

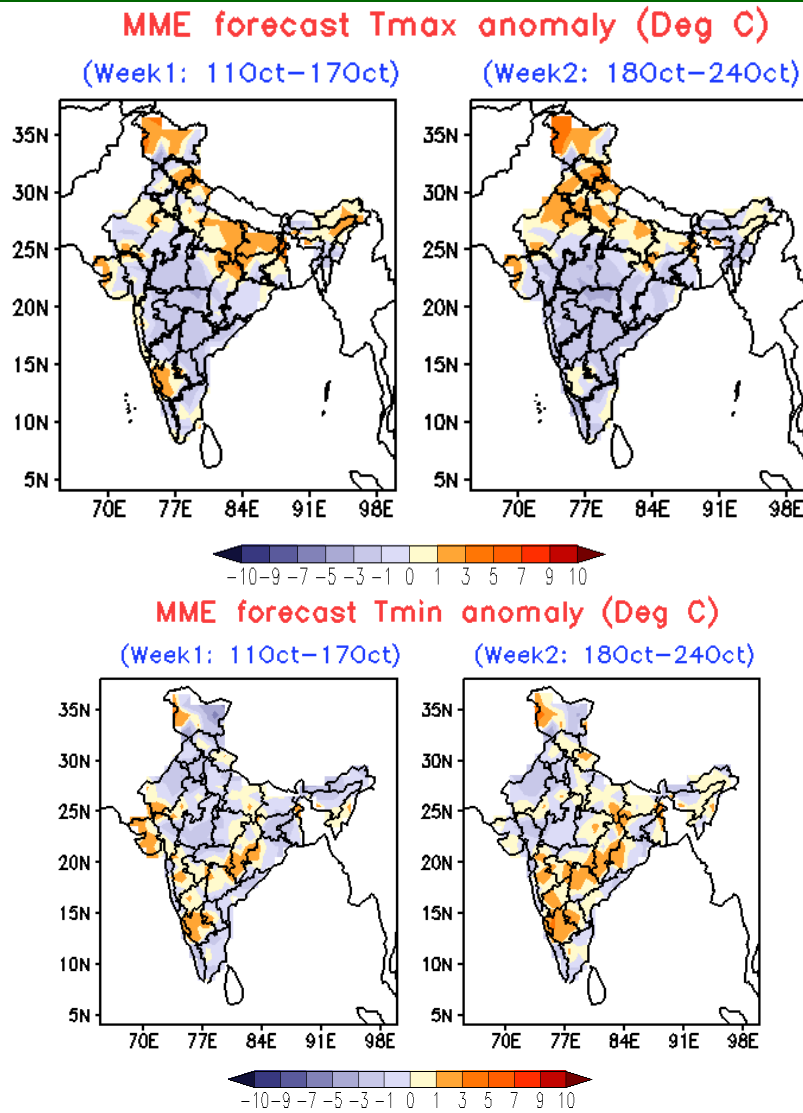


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- **Week 1 (11.10.2019 to 17.10.2019):** Though the rainfall is reduced from previous week, positive rainfall anomaly is noticed in week 1 forecast over Northwest India.
- **Week 2 (18.10.2019 to 24.10.2019):** Northwest and central India rainfall decreases substantially. However, rainfall over south peninsula increases in week 2 to week 4. (Possibility of early commencement of northeast monsoon)

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 09 October)
(11th to 24th October 2019)**



Maximum Temperature (Tmax)

- Week 1 (11.10.2019 to 17.10.2019) and Week 2 (18.10.2019 to 24.10.2019): Tmax anomaly is mostly negative over India during the period except some parts over Indo-Gangetic region and adjoining northern India.

Minimum Temperature (Tmin)

- Week 1 (11.10.2019 to 17.10.2019) and Week 2 (18.10.2019 to 24.10.2019): Slightly above normal Tmin over northern and north-western parts of India during the period and weak negative anomaly over rest of the region.

Strategic Agricultural Planning based on rainfall during next two weeks till 24th October 2019

Agromet Advisories

Kerala

Amount of rainfall received over Kerala during the period from 01st October to 11th October 2019 is 59.6 mm (-34% deficit). The extended range weather forecast for next two weeks (11th to 17th October and 18th to 24th October 2019) is above normal for week-1 and week-2.

- During rainy season, there is a chance of fruit rot and leaf fall in nutmeg. It is advised that as a prophylactic measure, apply Trichoderma mixture. Add 2 kg Trichoderma to a mixture of 90 kg FYM and 10 kg Neem cake 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 is recommended.
- During winter season, there is a chance of powdery mildew in vegetables. It is advised to spray 20g pseudomonas per one litre of water.
- Due to prolonged rainfall, it is advised to take phyto-sanitary measures to manage capsule rot (Azhukal disease) and spray 1% Bordeaux mixture (half to one litre/plant). As a prophylactic measure to control rhizome rot, drench the soil with 2 to 3 liters of Copper oxychloride (0.25%) solution. Apply mulch and clean the drainage channels.

Tamil Nadu

Amount of rainfall received over Tamil Nadu is 20.6 mm (-52% deficit) during the period of 01st October to 11th October 2019. The extended range weather forecast for next two weeks (11th to 17th October and 18th to 24th October 2019) is above normal for week-1 and week-2.

- Farmers are advised to monitor fall army worm incidence in maize. The larvae scrapping the leaves, makes small to medium elongated pin holes and causes loss of top portion of leaves. It also feeds on tassel. If symptoms were noticed, spray Azadirachtin 1 EC @ 2 ml/l (or) Thiodicarb 75 WP @ 2 g/litre or Emamectin benzoate 5 SG @ 0.4 g/litre or Spinetoram 12 SP @ 0.5 ml/litre.
- It is advised to keep the sorghum field free of weeds from second week after germination till 5th week. If sufficient moisture is available spray Atrazine 0.25 kg/ha as pre-emergence application within 3 days after the receipt of the soaking rainfall for sole sorghum and for sorghum based intercropping system with pulses, use Pendimethalin at 0.75 kg/ha.

Maharashtra

Rainfall received over Madhya Maharashtra is 39.2 mm (11% normal), over Marathwada is 28.3 mm (-12% deficit), Vidarbha is 6.5 mm (-76% large deficit) and Konkan region 42.4 mm (-30% deficit) during 01st October to 11th October 2019. The extended range weather forecast for next two weeks (11th to 17th October and 18th to 24th October 2019) over Madhya Maharashtra, Marathwada, Konkan, Vidharbha are above normal for week-1 and week-2.

Konkan

- Because of forecast of moderate to heavy rain, by observing rainfall situation, harvest mature early

rice varieties in morning hours only with 'Vaibhav sickle' near to ground level and follow immediate threshing. The threshed grains should be sun dry for 2 to 3 days before storage.

- Due to forecast of increase in temperature, the fungal growth will increase and result in dieback of branches in mango. For control of disease, collect and destroy all diseased infected leaves, branches and apply bordo paste to cut portions of branches. After cleaning of orchard, spray Metalaxyl 8% + mancozeb 64% combination fungicide @ 20 g/10 litre of water.

Madhya Maharashtra

- It is advised to prepare ridges and furrows or compartmental bunds of 6X6 meter size in the fallow land for *rabi* sowing. It will help to conserve more rain water and will help to increase yield of *rabi* sorghum.
- If sufficient water is available, it is advised for planting of recommended varieties of pre seasonal sugarcane before mid of October.

Marathwada

- It is advised that water stagnate should be avoided in the sugarcane field. For management of attack of stem borer in sugarcane crop, take a spray of Chloropyriphos 20% @ 30 ml/10 litre of water. Soil application of Metarhizium anisopliae @ 4 kg/acre should be done for management of white grubs in sugarcane crop.
- Farmers are advised to remove excess amount of water from the grape orchard. Application of fertilizer should be done before October. Pruning in grape orchard is also advised.
- It is advised to select CSH-15 R, CSH-19 R, M-35-1, SPV-1411, SPV-1549, CSV-18, Phule Chitra, Phule Vasudha, Phule Revati etc. varieties for sowing of *rabi* sorghum. Before sowing treat the seed with 300 mesh sulphur at 4 g/kg should be done. Seed treatment with Imidacloprid 48% @ 14 ml/kg should be done. Azatobactor + PSB @ 5 ml/kg seed should be used for seed treatment.

Vidharbha

- It is advised that sowing of rainfed safflower (Bhima, AKS-207, PKV-Pink, Nari-6) should be completed at the earliest to escape the damage caused by aphid incidence in later stage, however, avoid sowing during moderate to heavy rain forecast period.
- It is advised to sow the rainfed chickpea (Jaki 9218, Vijay, PDKV Kanchan up to first fortnight of October. Seed treatment with Rhizobium+ PSB (each 20 g/kg seed) and bio fungicide Trichoderma @ 4g/ kg seed is advisable.
- Farmers are advised for preparatory tillage for *rabi* crop sowing in harvested fields of greengram/blackgram and *kharif* unsown fields preferably with minimum tillage to avoid excess moisture loss from field.

Rajasthan

Rainfall received during 01st October to 11th October 2019 over East Rajasthan was 28.5 mm (338% large excess). The extended range weather forecast for next two weeks (11th to 17th October and 18th to 24th October 2019) over east Rajasthan is below normal for week-1 and for week-2.

- It is advised to harvest maize cobs and ear head of bajra and spread in shade for drying.

- It is advised to harvest the pulses at physiological maturity and vacant the field as early as possible so that *rabi* sowing can be taken up.
- Start sowing of *rabi* crops where fields are under sowing conditions. Use improved varieties of gram viz. Dahod yellow, GNG-146, GNG-1581, RSG-44, RSG-888, RSG-902, RSG-895 and Pratap Chana-1, Pratap raj chana, improved varieties of mustard: RGN-73, Bio-902 (Pusa Jaikisan), Aashirwad, RH9304 (Vasundhara), RH-9802 (Swarn Jyoti), RH-8812 (Laxmi), Pusa sarso-30. Use improved varieties of Taramira are: T-27, Narender tara, RTM-314.

Haryana

Rainfall received during 01st October to 11th October 2019 in Haryana 3.8 mm (-10% deficit). The extended range weather forecast for next two weeks (11th to 17th October and 18th to 24th October 2019) is no rain for the week-1 and below normal for week-2.

- Apply requirement based irrigation in existing vegetable crops and monitor for insect-pests.
- It is advised for picking of opened bolls after evaporation of dew from boll surface in the morning.
- It is advised to provide plenty of clean drinking water and green forage to the animals as per requirement. Recommended vaccination schedule may also be taken up.

Punjab

Rainfall received during 01st October to 11th October 2019 in Punjab is 8.8 mm (131% large excess). The extended range weather forecast for next two weeks (11th to 17th October and 18th to 24th October 2019) is below normal for the week-1 and week-2.

- If rice crop is ready to harvest, farmers are advised to harvest the mature rice crop, as clear weather expected during coming days.
- It is the optimum time for the sowing of barseem and shaftal, lucerne, oats and senji. It is advised that is for getting higher yield from first cutting, sow barseem and lucerne in mixture with oats and sarson.
- It is the optimum time for transplanting of mid-season cauliflower. This is best time for sowing of root and leafy vegetables.

Jammu

Rainfall received during 01st October to 11th October 2019 in Jammu 16.6 mm (86% large excess). The extended range weather forecast for next two weeks (11th to 17th October and 18th to 24th October 2019) is below normal for the week-1 and for week-2.

- It is advised to harvest the early maturing varieties of rice 80% grains in panicle turn golden colour. Present weather condition is favourable for sheath blight and glume discolouration in late transplanted basmati rice crop. If observed, apply Carbendazim @ 0.1% and Mancozeb @ 0.25%, respectively.
- It is advised for sowing of berseem crop (Mascavi, Pusa giant, BL-1) with seed rate @ 25 -30 kg/ha.
- The present weather condition is favorable for sheath blight and glume discoloration in late transplanted basmati rice crop. If observed, apply Carbendazim @ 0.1% and mancozeb @ 0.25%, respectively.

Assam

Rainfall received during 01st October to 11th October 2019 in Assam 80.1 mm (8% normal). The extended range weather forecast for next two weeks (11th to 17th October and 18th to 24th October 2019) is below normal for the week-1 and normal for week-2.

- At milky and dough stage, gundhi bug infestation may be observed in sali rice field. So, farmers are advised to take plant protection measures against gundhi bug based on economic threshold level and spray apply Malathion 5% dust @20 kg/ha.
- Farmers are advised to sow the seeds of improved brinjal varieties like Pusa Kranti, Pusa Purple Long, Pusa Purple Round, Pusa Purple Cluster, Pusa Vairab, Kuchia, Pant Samrat, JC-1, JC-1 etc.
- It is advised that in already sown green gram and black gram crops, remove excess water from the fields. One weeding should be done at 20 days after sowing by khurpi or hoe. The crop should be thinned out simultaneously to maintain the required spacing within the rows.

Uttarakhand

Rainfall received during 01st October to 11th October 2019 in Uttarakhand 30.4 mm (113% large excess). The extended range weather forecast for next two weeks (11th to 17th October and 18th to 24th October 2019) is below normal for the week-1 and week-2.

- Spray with Imidacloprid @0.5% or Neem oil@2-2.5ml during clear weather in non rainy days to check the population of white fly. In pulses use light trap during night to protect against pests on cucurbits.
- Field sanitization is advised before sowing of onion nursery. Apply seed treatment with fungicides, insecticides or bio agents before sowing. Give water as needed because excess water makes the plant susceptible to disease.
- In the areas where paddy crop is about to mature, irrigation should be stopped before harvesting. After harvesting, crop should be dried in the field for 2-3 days and thereafter threshing should be done. Grains should be properly dried to right moisture level before storing.

Jharkhand

Amount of rainfall received over Jharkhand is 34.4 mm (-18% deficit) during 01st October to 11th October 2019. The extended range weather forecast provided for next two weeks (11th to 17th October and 18th to 24th October 2019) over Jharkhand is below normal for week-1 and above normal for week-2.

- In upland, most of the timely sown crops are at maturity/harvesting stage. It is advised to harvest them accordingly during sunny days. After harvesting of crops, immediately plough the land to utilize residual moisture of the soil and sow the *rabi* crops like rainfed wheat, table pea, potato or different vegetables, if having assured irrigation facility otherwise proceed for rapeseed (toria) cultivation.
- It is advised to maintain the bunds of field under rice to keep submerged. Broadcast urea after 40-45 days of transplanting. However, before broadcasting weeding is must. If transplanted rice crops are attacked by blast disease (in which boat shaped brown spot appears on the leaves. The spots have

ash colour in centre and deep brown stripes on margin) immediately spray the fungicide Beam @ 5 gram/10 litre of water during clear weather.

- Under assured irrigation facility, go for sowing of pea with recommended varieties Arkel, Kashi Nandani, P.E. – 6, Birsa Matar with seed @ 30-35 kg/acre. Before seeding, the seeds must be treated with Rhizobium culture.

Chhattisgarh

Amount of rainfall received over Chhattisgarh is 27.5 mm (-8% deficit) during 01st October to 11th October 2019. The extended range weather forecast provided for next two weeks (11th to 17th October and 18th to 24th October 2019) over Chhattisgarh is above normal for week-1 and for week-2.

- It is advised that farmers can start field operations in fallow fields in October month for *rabi* crops. Tractor drawn rotorator or cultivator can be used and shallow ploughing should be done. In October month, horsegram, moong, urd, toria, maize, sunflower and forage crops can be taken.
- It is advised that poultry farmers who are following deep litter method, poultry beds should be turned upside down during rainy season. Damped type beds should not be used.

Odisha

Amount of rainfall received over Odisha is 37.7 mm (-24% deficit) during 01st October to 11th October 2019. The extended range weather forecast provided for next two weeks (11th to 17th October and 18th to 24th October 2019) over Odisha is above normal for week-1 and for week-2.

- It is advised for sowing of rainfed groundnut in river bank. Recommended high yielding varieties are Smruti, TAG-27, TAG-24 and JL-24. Use 60 kg pods/acre. Treat the seeds with 1.5 g Carbendazim or 3 g Thiram/kg of seeds one week before sowing.
- It is advised to go for pisciculture as the reservoirs are full of water. Release the fingerlings in the ponds and keep a bag full of FYM or paddy husk. Depending upon the size of the ponds, apply 5-10 kg of limes to newly developed pisciculture.

Himachal Pradesh

Amount of rainfall received over Himachal Pradesh is 17.6 mm (91% large excess) during 01st October to 11th October 2019. The extended range weather forecast provided for next two weeks (11th to 17th October and 18th to 24th October 2019) over Himachal Pradesh is below normal for week-1 and for week-2.

- It is advised that before sowing of *rabi* crops, clean the fields and add well decomposed FYM or for improvement of physical and biological properties of soil and thus increases the water retention capacity as well as nutrient status of the soil.
- Farmers are advised to continue picking in green tea at 8-10 days interval to maintain the quality and productivity. Lopping of shade tree is advised in order to ensure better penetration of light in tea gardens.
- As night temperature has started falling in the region, farmers are advised to protect their milch

animals and their young ones from morning/evening cold by covering them with gunny bags during night and ample exposure to sunlight during day time to avoid pneumonia.

Gujarat

Amount of rainfall received over Gujarat is 50.2 mm (452% large excess) during 01st October to 11th October 2019. The extended range weather forecast provided for next two weeks (11th to 17th October and 18th to 24th October 2019) over Gujarat is below normal for week-1 and above normal for week-2.

- Under prevailing weather condition of high temperature and low humidity, infestation of thrips and jassids are likely in cluster bean. It is advised to spray Imidacloprid 17.8 % 5 ml or Thiomethoxam 6g in 10 litre of water for control of thrips and jassids.
- In okra, it is advised to harvest tender pod regularly in morning. Keep crop weed free. Apply irrigation @ 10-12 days interval. Spray Acetamiprid @ 5g/10 litre of water against sucking pest. or spray any neem based insecticides.
- For the control of purple blotch blight disease in *kharif* onion, make 3 alternate spray of Mancozeb 27 g and Thiophanate methyl 15g/10 litre of water at 10 days interval.

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